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Financial flow of Grant-oriented Projects

N.M. Lesconi Frumușanu, A. Breuer, C.E. Pereș

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Abstract
The present paper presents a survey of the legal stipulations and of the applicant’s guide regarding the methodology of the financial flow performance of the grant-financed projects (structural funds) within a newly founded company. The opportunity and the importance of the paper is obvious, due to the fact that the grants represent an important source for the newly founded companies, especially for the coverage of the expenses afferent to the investment of equipments (assets, generally). Furthermore, the paper is very practical, marking out a case study that can constitute an example for the companies that want to access these types of funds in order to finance certain investments.

Keywords: financial flow, structural funds, project, investments, EFARD, NPRD.

Introduction
Investment activities consist of the purchase and disposal of fixed assets in the long term as well as of other investments not included in cash equivalents. Cash flows of this type of activity show expenses with resources designed to generate future income and cash flows, providing information on how a company ensures its continuity and growth.

In order to be considered financial, a project must be sustainable also from a financial point of view, i.e. there is no danger of running out of cash during the implementation period. The performance of unrealistic financial projections is encountered among the beneficiaries’
mistakes, so the achievement of project cash flow when signing the financing contract represents a very important element.

The method used in developing the financial cost-benefit analysis, the investment projects, is the "net updated cash flow". In this method the non-monetary flows, such as depreciation and provisions are not taken into consideration.

Also, in the opinion of some authors, the unpredicted expenses from the general expenditure estimate will be considered only if they are included in the eligible project costs. They will not be taken into account in the determination of the finance, as long as it is not considered an effective expense, but only a risk loss measure. The financial flow must be designed from the moment of the project conception, but as in Romania the evaluation period is long, and the purchase procedures are very difficult, the financial flows will suffer major change.

For the investment projects in general and agriculture in particular, it is necessary to determine and analyse the effectiveness on two plans: on the investor level (micro) and the national economy level (macro).

The project financial flow means the method in which the cash will be carried out between financer and recipient (entries/inputs), and between financer and suppliers (outputs). As regards inputs, we refer to pre-financing and expenses refunds, and as regards the outputs, we refer to payments made in order to cover the project expenses.

The financial flow (not to be confused with cash flow), the main tool used in achieving the project's financial projection, represents the difference between current receipts and current payments of an entity. We should take into account the following aspects:

- the contractual stipulations regarding the granting of pre-financing and refund of expenses, amount and terms;
- schedule of activities, particularly acquisitions to be performed through the project;
- project budget and the estimated schedule for the submission of expenses refund applications;
- the value of eligible costs and the period in which their payment will be made;
- value of co-financing;
- the lagging each month of payments that will be performed by third parties.

Given the above issues, we can identify the months in which the project runs out of cash and therefore financial resources have to be
identified in order to cover the costs of the project. Also we should take into account the fact that VAT is considered ineligible and therefore these amounts will be paid by the beneficiary as well, applying its refund from the state budget.

In order to cover these expenses, most times the beneficiaries resort to credit plans, commercial banks providing a range of banking products in this respect. In this context, the financial crisis had a negative impact on the absorption of structural funds, the beneficiaries often receding from the allotted funding, due to the lack of cash to cover co-financing, VAT and expenses often eligible until refund.

**Financial flow of an investment project – case study**

To achieve financial projection of an investment project, we present the methodology used to achieve financial predictions for a project funded by the National Program for Rural Development, Measure 312 Support for the establishment and development of micro-enterprises, submitted by a newly-founded company.

The overall objective was the development of a purchase (an excavator and two backhoes) aimed at developing the business and creating jobs. The total project value was of 1,464,040 lei VAT, the eligible value being of 1,230,286 lei and the value of ineligible expenditure was of 233,754 lei. In projects funded under this measure, in order to assess the reliability of a project, a feasibility study (for projects involving construction-assembly) and an Explanatory Memorandum (for projects not involving construction-assembly) will be prepared.

Implementing an investment project in agriculture using the financial instrument European Fund for Agriculture and Rural Development involves the calculation and analysis of mandatory indicators that are calculated based on revenue and expenditure flows, flows of results, cash flows and cash - flow.

In the case of a project, case study, there will not be performed any construction-assembly, thus an explanatory memorandum will be filled out. Annex no. 3 of the financing application of the project financed from EAFRD (European Agricultural Fund for Rural Development), named explanatory Memorandum, includes, in section 9, financial projections and financial indicators, which will demonstrate the eligibility criteria regarding the viability of the investment.

In this part of the explanatory memorandum, based on the assumptions that led to the decision of the funding application, financial projections will be elaborated with regard to the legal nature of the applicant, i.e. the authorized person, individual enterprises, family
businesses, legal entities. In this case study these projections will be elaborated for a legal person, private entity, respectively.

The assumptions that elaborated the financial projections are the following:
- the total value of the project is of 1,464,040 lei with VAT, the eligible value being of 1,230,286 lei and the value of ineligible expenses being 233,754 lei;
- the period for which the prediction is set is of 5 years after the implementation (2011-2015);
- VAT, an ineligible expense, at the moment the project was performed, will be sustained by the beneficiary, being recovered from the state budget;
- The data regarding the main indicators that will influence the elaborated projections were gathered from the studies performed by the National Commission of Prediction.

Another factor was the temporary character of the excavation works in order to prepare the field for plumbing. Thus we expect a volume of works by quarters, as follows:
- trimester I -20% of the executed works;
- trimester II -25% of the executed works;
- trimester III -40% of the executed works;
- trimester IV -15% of the executed works.

The incomes and expenditure of each quarter will be affected directly, by the share of work presented above. Thus, revenues derive from the basic activity only (execution of works), so for the revenue forecasts we considered the following:
- the ability to execute and contract the works will be of an average of 12/13 contracts/year, which means about a contract each month, the works predicted for the first year will be: first quarter - two works, the second quarter - three works, third quarter - 5 works, fourth quarter - 2 works;
- the incomes will follow the annual trend set by the National Commission of Prognosis;
- the value of a contract for execution works will be on average of 40,000 euros (172,240 lei), the trade margin representing 20%, the rest representing the execution costs;
- the execution ability is strongly influenced by the number of employees. Thus, the company aims to increase the number of employees depending on the expected works so that the use of the execution capacity will be: first quarter - 25%, second quarter - 60%, third quarter - 100%, fourth quarter - 60%;
- contracting will be achieved through participation to auctions
tenders and direct contracting.

Below we present cash flow - investment forecasts for the
project described above.

### Table no.1. Cash flow – predictions
Investment activity, year 1

<table>
<thead>
<tr>
<th>Cash flow – previsions – LEI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>OPERATION/PERIOD</strong></td>
</tr>
<tr>
<td><strong>I. INVESTMENT AND FINANCING ACTIVITY</strong></td>
</tr>
<tr>
<td>I. <strong>A. Total cash flow input from: (A1+A2+A3+A4)</strong></td>
</tr>
<tr>
<td>A1. Share of the company capital (loans from shareholders/associates)</td>
</tr>
<tr>
<td>A2. Assets sales, including VAT</td>
</tr>
<tr>
<td>A3. Long term loan, from which: (A.3.1 + A.3.2.)</td>
</tr>
<tr>
<td>A.3.1. Loan – project <em>cofinancing</em></td>
</tr>
<tr>
<td>A.3.2. Other medium and long term loans, leasing, other financial debts</td>
</tr>
<tr>
<td>A4. EFARD grant</td>
</tr>
<tr>
<td><strong>B. Total investment cash flow outcome: (B1+B2+B3)</strong></td>
</tr>
<tr>
<td>B1. Acquisition of tangible fixed assets, including VAT</td>
</tr>
<tr>
<td>B2. Acquisitions of intangible fixed assets, including VAT</td>
</tr>
<tr>
<td>B3. Increase of on-going investments</td>
</tr>
<tr>
<td><strong>C. Total financing cash flow input (C1+C2)</strong></td>
</tr>
<tr>
<td>C1. Medium and long term, leasing, other financial debts from which: (C.1.1 + C.1.2.)</td>
</tr>
<tr>
<td>C.1.1. Loan rate – <em>cofinancing</em></td>
</tr>
<tr>
<td>C.1.2. Other medium and long term credit rate, leasing, other financial debts</td>
</tr>
<tr>
<td>C2. Interest payments at medium and long term loans, from which: (C.2.1 +C.2.2.)</td>
</tr>
<tr>
<td>C.2.1. Loan – <em>cofinancing</em></td>
</tr>
<tr>
<td>C.2.2. Other medium and long term loans, leasing, other financial debts</td>
</tr>
<tr>
<td><strong>D. Cash flow from the investment and financing activity (A-B-C)</strong></td>
</tr>
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</table>
Table no. 2. Cash flow – predictions
Exploitation activity, year I

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<th>II.</th>
<th>EXPLOITATION ACTIVITY</th>
<th>Year I</th>
</tr>
</thead>
<tbody>
<tr>
<td>E.</td>
<td>Cashing from the exploitation activity, including VAT</td>
<td>2.542,001</td>
</tr>
<tr>
<td>F.</td>
<td>Cashing from the short term financing activity</td>
<td></td>
</tr>
<tr>
<td>G.</td>
<td>Short term loans</td>
<td></td>
</tr>
<tr>
<td>H.</td>
<td>Total cash input (E+F+G)</td>
<td>2.542,001</td>
</tr>
<tr>
<td>I.</td>
<td>Payments for the exploitation activities, including VAT (as it is the case), from which:</td>
<td>1,924,545</td>
</tr>
<tr>
<td>11.</td>
<td>Materials</td>
<td>1,249,471</td>
</tr>
<tr>
<td>12.</td>
<td>Other materials</td>
<td>6,248</td>
</tr>
<tr>
<td>13.</td>
<td>Energy and water</td>
<td>38,128</td>
</tr>
<tr>
<td>14.</td>
<td>Merchandise</td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Afferent to the employed staff</td>
<td>184,840</td>
</tr>
<tr>
<td>16.</td>
<td>Insurances and social protection</td>
<td>56,839</td>
</tr>
<tr>
<td>17.</td>
<td>External services</td>
<td>389,019</td>
</tr>
<tr>
<td>18.</td>
<td>Taxes and assimilated payments</td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Other exploitation payments</td>
<td></td>
</tr>
<tr>
<td>J.</td>
<td>Gross flow before the payments for profit taxes/turnover and adjustment VAT (H-I)</td>
<td>617,456</td>
</tr>
<tr>
<td>K.</td>
<td>Payments/cashing for taxes and contributions (K1+K2+K3)</td>
<td>391,833</td>
</tr>
<tr>
<td>K1.</td>
<td>VAT payments</td>
<td>639,600</td>
</tr>
<tr>
<td>K2.</td>
<td>VAT refunds</td>
<td>307,280</td>
</tr>
<tr>
<td>K3.</td>
<td>Profit tax/ turnove</td>
<td>59,513</td>
</tr>
<tr>
<td>L.</td>
<td>Short term loans refunds</td>
<td></td>
</tr>
<tr>
<td>M.</td>
<td>Interest payments for short term loans</td>
<td></td>
</tr>
<tr>
<td>N.</td>
<td>Dividends</td>
<td></td>
</tr>
<tr>
<td>O.</td>
<td>Total payments, excepted the exploitation ones (K+L+M+N)</td>
<td>391,833</td>
</tr>
<tr>
<td>P.</td>
<td>Cash flow from the exploitation activity (J-O)</td>
<td>225,623</td>
</tr>
<tr>
<td>III.</td>
<td>CASH FLOW (CASH FLOW)</td>
<td></td>
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<tr>
<td>Q.</td>
<td>Net cash flow of the period (D+P)</td>
<td>534,425</td>
</tr>
<tr>
<td>R.</td>
<td>Available cash of the preceding period</td>
<td></td>
</tr>
<tr>
<td>S.</td>
<td>Available cash at the end of the period (Q+R)</td>
<td>534,425</td>
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</table>
### Table no. 3. Cash flow – predictions
#### Investment activity, years subsequent to the investment

<table>
<thead>
<tr>
<th>Cash flow - predictions - LEI</th>
<th>OPERATION/PERIOD</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>C.</td>
<td>Total cash outcome from finance ((C1+C2))</td>
<td>112.202</td>
<td>102.606</td>
<td>93.009</td>
<td>83.413</td>
</tr>
<tr>
<td>C1.</td>
<td>Medium and long term loans refunds, from which: ((C.1.1. + C.1.2.))</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
</tr>
<tr>
<td>C.1.1. (\text{Cofinancing})</td>
<td>loan rates(\text{project})</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
</tr>
<tr>
<td>C.1.2. (\text{Rates at other medium and long term loans, leasing, other financial debts})</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
<td>73.817</td>
<td></td>
</tr>
<tr>
<td>C2.</td>
<td>Payments of interests at medium and long term loans, from which: ((C.2.1+C.2.2.))</td>
<td>38.385</td>
<td>28.789</td>
<td>19.192</td>
<td>9.596</td>
</tr>
<tr>
<td>C.2.1. (\text{Project cofinancing})</td>
<td>loan rates(\text{project})</td>
<td>38.385</td>
<td>28.789</td>
<td>19.192</td>
<td>9.596</td>
</tr>
<tr>
<td>C.2.2. (\text{Other medium and long term loans, leasing, other financial debts})</td>
<td>38.385</td>
<td>28.789</td>
<td>19.192</td>
<td>9.596</td>
<td></td>
</tr>
<tr>
<td>D.</td>
<td>Cash flow from the investment and financing activities ((A-B-C))</td>
<td>-112.202</td>
<td>-102.606</td>
<td>-93.009</td>
<td>-83.413</td>
</tr>
</tbody>
</table>

### Table no. 4. Cash flow – predictions
#### Exploitation activity, years subsequent to the investment

<table>
<thead>
<tr>
<th>EXPLOITATION ACTIVITY</th>
<th>Year 2</th>
<th>Year 3</th>
<th>Year 4</th>
<th>Year 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>E. Cashing from the exploitation activity, including VAT</td>
<td>2.542.001</td>
<td>2.746.966</td>
<td>2.746.966</td>
<td>2.746.966</td>
</tr>
<tr>
<td>F. Cashing from the short term financial activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>G. Short term loans</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>H. Total cash input ((E+F+G))</td>
<td>2.542.001</td>
<td>2.746.966</td>
<td>2.746.966</td>
<td>2.746.966</td>
</tr>
<tr>
<td>I. Payments for the exploitation activity, including VAT (as it is the case), from which:</td>
<td>2.039.706</td>
<td>2.096.816</td>
<td>2.149.237</td>
<td>2.198.671</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<tr>
<td>---</td>
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<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>13.</td>
<td>Energy and water</td>
<td>39.500</td>
<td>40.605</td>
<td>41.620</td>
</tr>
<tr>
<td>14.</td>
<td>Merchandise</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Afferent to the employed staff</td>
<td>191.495</td>
<td>196.856</td>
<td>201.778</td>
</tr>
<tr>
<td>16.</td>
<td>Insurances and social protection</td>
<td>58.881</td>
<td>60.529</td>
<td>62.043</td>
</tr>
<tr>
<td>17.</td>
<td>External services</td>
<td>448.911</td>
<td>461.480</td>
<td>473.017</td>
</tr>
<tr>
<td>18.</td>
<td>Taxes and assimilated payments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19.</td>
<td>Other exploitation payments</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>J.</td>
<td>Gross flow before the payments for profit taxes/turnover and adjustment VAT (H-I)</td>
<td>502.295</td>
<td>650.150</td>
<td>597.729</td>
</tr>
<tr>
<td>K.</td>
<td>Payments/cashing for taxes and contributions (K1-K2+K3)</td>
<td>125.762</td>
<td>170.341</td>
<td>156.052</td>
</tr>
<tr>
<td></td>
<td>K1. VAT payments</td>
<td>405.866</td>
<td>438.591</td>
<td>438.591</td>
</tr>
<tr>
<td></td>
<td>K2. VAT refunds</td>
<td>325.667</td>
<td>334.786</td>
<td>343.155</td>
</tr>
<tr>
<td></td>
<td>K3. Profit tax/turnover</td>
<td>45.564</td>
<td>66.536</td>
<td>60.616</td>
</tr>
<tr>
<td>L.</td>
<td>Short term loans refunds</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>M.</td>
<td>Interest payments for short term loans</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>N.</td>
<td>Dividends</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>O.</td>
<td>Total payments, excepted the exploitation ones (K+L+M+N)</td>
<td>125.762</td>
<td>170.341</td>
<td>156.052</td>
</tr>
<tr>
<td>P.</td>
<td>Cash flow from the exploitation activity (J-O)</td>
<td>376.533</td>
<td>479.809</td>
<td>441.677</td>
</tr>
<tr>
<td>III.</td>
<td>CASH FLOW (CASH FLOW)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q.</td>
<td>Net cash flow of the period (D+P)</td>
<td>264.331</td>
<td>377.203</td>
<td>348.668</td>
</tr>
<tr>
<td>R.</td>
<td>Available cash of the preceding period</td>
<td>534.425</td>
<td>798.756</td>
<td>1.175.958</td>
</tr>
<tr>
<td>S.</td>
<td>Available cash at the end of the period (Q+R)</td>
<td>798.756</td>
<td>1.175.958</td>
<td>1.524.627</td>
</tr>
</tbody>
</table>
Conclusions

Given the results achieved following up the cash flow performed for the investment project, which aims the purchase of the equipment necessary to develop the activity of the newly established company, we can say that the project is viable and should be submitted to funding.

Given the overall objective of the project - the performance of certain acquisitions (an excavator and two backhoes) that aims the development of the company and the creation of new jobs and due the fact that much of the funds necessary for the investment may be reimbursable, we consider this paper an example for those who wish to access such funds.

Starting from the requirements of the financier, we see that the assumptions (revenue and expenditure) underlying the prediction aim:

- the use of the production capacity and how it evolves over time (in our case - 5 years), stating the existing physical output and the expected physical output following up the investment for the existing companies;
- correlation between expenditure, projected sales, respectively, the use of production capacity and closed/to be closed pre-contracts/contracts of conveyance;
- correlation of information provided in the financial flow and other documents required in financing file;
- any other information which formed the basis of forecasting or influence the cost prediction, the influence being relevant;
- how other expenses and incomes were projected.

In the a cash flow, made in the previous study, our intent was to correlate the predicted flows as inputs and outputs with the other documents from the financing file taking into account any information which formed the basis of prediction or relevantly influences the prediction of the cash flow elements.

Bibliography


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Human Resource Management and Employee Job Satisfaction: Evidence from the Nigerian Banking Industry

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Abstract
The paper examines the effect of human resources management (factors) on employees’ job satisfaction using data collected from two banks in the Nigerian banking industry. The study attempts to determine the effect of training and development on employee job satisfaction; to determine the influence of working conditions on employee job satisfaction; and to determine the impact of human resources factors on employee job satisfaction. The survey instrument used in the collection of data was the questionnaire. The population of the study covered the entire staff of Intercontinental and Ecobank and the sample size of 200 employees were selected, using the simple random sampling techniques. Correlation and Regression analysis was adopted and the data generated was in line with the objectives of the study. The hypotheses were tested, and valid result was achieved i.e. Human Resources Management has an effect on employee job satisfaction. This suggests that for organization to develop, it must invest more in the human capital. The business environment is dynamic and there is need for organizations to adopt strategies to motivate and equip their staff, so as to ensure their loyalty and be source of competitive advantage.
Keywords: Training & Development, Working Condition, Job Satisfaction

1. Introduction

The Nigerian Banking Sector witnessed shocks and distress in the recent past as a result of the economic meltdown in the western hemisphere. The meltdown and the consequent restructuring in the banking sector has had significant effect on the human resource management practice and employees elements employed in the sector. Indeed, the sector has been characterized by reduction in the number of banks and uncertainties, which further aggravated the security of jobs in the sector (CBN Financial Stability Report, 2010). This espoused situation has had significant effect on human resource management (HRM) in the sector. External pressure on this sector has created need to train and re-train the workforce to cope with the changing needs. The intervention of the regulatory authorities, the multi-faceted demand on the sector employees required that not only should they be trained, but a conscious effort is needed to secure their job satisfaction, in order to secure maximum contribution to the banking sector’s growth. Therefore, the need to secure willing contributions from employees places HRM functions at the centre of organizational performance improvement effort. However, in the recent past, it is been recognized that managers focus more on output rather than developing and training their employees with skills so as to be more productive and satisfied (Gazioglu & Tansel, 2006; Barrows & Wesson, 2000). It is evident that with the development in the sector staff that lacks proper training in the evolving competitive landscape would become redundant with their old knowledge and skill being obsolete.

Due to the dynamic and competitive nature of the banking environment, an innovative HRM practices have to focus on equipping employees with new and diverse skills, and also to ensure flexibility of employees so as to be able to respond to change. HRM practices need to consciously revolve around provision of issues that not only enhance job security but make the employee satisfied on the job with increased job security and satisfaction (Barrows & Wesson, 2000). This derives from the fact that the best asset in an organization is the people, and not just people, skilled and competent people which need to be managed effectively to ensure job satisfaction. However, the situation in the Nigerian Banking Sector have potentials for high attrition rate due to
lack of job security and satisfaction occasioned by adjustments in the industry. There have been many justifiable factors that affect retention, which are company image, learning opportunities, performance recognition and rewards and working conditions (Abraham & Medoff, 1984). The retention policy involves strategies put in place to make employees comfortable at work so as to improve their job satisfaction to enable the workforce remains in that organization (Abraham & Medoff, 1985). Any other practice otherwise would reduce the satisfaction of employees. Consequently, this research is undertaken to address the problems of HRM and seeking how job satisfaction can be achieved by employees through an effective human resource management, and also determining solutions to the prevailing problem. The paper investigates the effect of HRM such as Training and Development; Staffing Level; and Working Condition, which form major concepts of HRM functions in the Nigerian Banking Industry. In order to achieve these research objectives the paper reviews literature on HRM and Job satisfaction; Staffing Level and Job Satisfaction; Training & Development and Job Satisfaction; and Working Conditions and Job Satisfaction.

2. Review of the Literature

2.1. Human Resource Management and Job Satisfaction

The concept of HRM underpins the human side of the management and enterprises and employees’ relations with their organizations and its purpose is to ensure that the workforce of companies are effectively and efficiently utilized in a way that the employer obtains the greatest possible benefits from their abilities and similarly, the employees obtain both material and psychological rewards from the services rendered. Businesses rely on effective human resource management to ensure that they hire, train and develop good employees and that they are able to respond to the grievances of employees in order to have some satisfaction on their jobs. Human Resource Management specialists determine the number and type of employees that a business will need over its first few years of operation. In addition they are responsible for staffing, which involves recruiting employees to occupy newly created positions and in some cases to replace vacant positions (Huselid, Jackson, & Schuler, 1997). A division of HRM engages in
training of its staff in order to encourage workers satisfaction on the job (Laursen, & Foss, 2003). Similarly, Human Resource Administrators implement and manage compensation plans and benefits packages for employees. Essentially, this aspect has been argued to be part of the substantive issues link with employees’ dissatisfaction, if not timely and adequately addressed (Guest, 2002; Marchington, & Zagelmeyer, 2005).

Human Resource Management is a set of interrelated policies with an ideological and philosophical underpinning and these policies are classified under four aspects vis-a-vis (i) constellation of beliefs and assumptions; (ii) strategic thrust informing decisions about people management; (iii) the central involvement of line managers; and (iv) reliance upon a set of ‘levers’ to shape employment relationship (Storey, 1989). The human resource management activities can be summarized briefly under five major domains: (i) organizational design; (ii) staffing; (iii) performance management appraisal; (iv) employment training and organization development; and (v) reward systems, benefits and compliance (Berdamine, 2004). The overall purpose of human resource management is to ensure that the organization is able to achieve success through people (Armstrong, 2006). As obtained in the literature, Ulrich and Lake (1990) argue that Human Resource Management systems can be the source of organizational capabilities that allow firms to learn and capitalize on new opportunities. However, as obtained in the literature, HRM is said to be concerned with achieving the following: organizational effectiveness; human capital management; knowledge management; reward management; employee relations and meeting various needs (Armstrong, 2006).

Generally, high job satisfaction is connected with high productivity, low turnover rate and low absenteeism (Hackman & Oldham, 1975). Wong (1989) in his study on the impact of job satisfaction among secondary school teachers in Hong Kong opines that low level of commitment and productivity among the teachers is directly linked with the level of job satisfaction, which was lower than expectation. Further, Wong recorded that teachers were willing and ready to change jobs as soon as opportunity presents itself; it is evident therefore, that job satisfaction plays an important role in employee’s decision to change job. Emphasis is placed on the employers’ expectation regarding employee’s high performance and it is essential to bring it to fore that employees’ satisfaction is a function of employee
Human Resource Management and Employee Job Satisfaction: Evidence from the Nigerian Banking Industry

performance and organization performance (Shen, 2010). With this understanding, we shall proceed further to discuss job satisfaction.

The authors in literature of job satisfaction have defined job satisfaction in various ways. Job satisfaction is a combination of cognitive and affective reactions to the differential perceptions of what an employee wants to receive compared to what he or she actually receives (Boyt, Lusch, & Naylor, 2001). Job satisfaction is an individual’s cognitive, affective, and evaluate reactions towards his or her job (Greenberg and Baron, 1997). Job satisfaction is a state where one’s needs and one’s outcomes match well (Locke, 1976). Job satisfaction is argued to be reaction to one’s job emotionally (Kreitner and Kinicki, 1992). It is a singular idea that could be interpreted only in monetary terms (Lazear, 2000). It has been argued that employees generally appreciate rewards on one hand while on the other hand repugnant effort. Therefore, a better wage/salary for same level of effort, will suggest a decision to quit job with lower wage, which will increase the level of satisfaction. Essentially, there is need to see employment demands beyond the exchange of services for salaries. Though, employment demands is seen as economic relation in nature, but it is important to note that it has a strong affiliation to social and psychological views (Baron and Kreps, 1999). An employee may be satisfied with the monetary rewards and express some level of dissatisfaction with one or two aspects of his employment demands such as managerial policies (Festinger, 1954; Adams, 1965), either because they stand as hurdles to fulfil his needs (Salansik and Pfeffer, 1977) or values (Locke, 1976) or because his expectations were not met by the monetary rewards. We hypothesize that:

**Hypothesis 1: Human Resource factors have impacts on Employees Job Satisfaction.**

*Training & Development and Job Satisfaction*

One of the goals of organizations is to succeed in their respective domains. Similarly, the task of Human Resource Management (HRM) has been acknowledged as an essential concept of corporate strategy. In addition, it has been argued that training and development is regarded as one of the most essential HRM concepts (Jennings, Cry, & Moore, 1995). From the Japanese companies’ point of
view, lifetime employment is of a great importance, which gives employees unique skill acquiring and learning opportunities (Drost, Frayne, Lowe, and Geringer, 1999). It has been argued that Training and development should be done in a systematic manner and follows a discipline process in every organization at every level (Brown, Nakata, Reich, & Ulman, 1997). Training and development practices in both white collar and collar Japanese employees are similar (Koike, 1991, 1993). In similar direction, Korean companies adopt human resources as the central phenomena through which organizations achieve their corporate goals. The focus of training and development in Korea is different from the West, where gaining job related skill is emphasized (Koch, Nam, and Steers, 1995). Koch et al (1995) argue further that Korean companies focus and pay attention on preparing current and future managers to able to conform to the organization culture rather than current job skills. In addition, the main organizational goal is build a total employee termed “all around man” who would be loyal and dedicated to the organization and good inter-personal relationship with colleagues (Koch et al., 1995). Training and development is said to be one of the ways in which organization can attain its corporate goals. However, some organizations adopt training and development as a means of promotion & compensation (Lee & Teo, 2005; McConville, 2006). Top level managers in some organizations do take promotional examination in order to be promoted (Chan & Chang, 1994). Organizations have been able to reduce turnover among managers, which makes training and development a worthwhile exercise (Farh, 1995). Essentially, training and development programme that covers both job related skills and general skills such as interpersonal skills, communication skills, etc., have been argued to be an avenue to reduce turnover rates and increase productivity (Teagarden, Butler, Von Glinow, & Drost, 1995). As obtained in the literature, training and development has been argued to be a concept that organizations should adopt in order to reduce turnover rates and increase productivity. However, this study goes further to fill the gap in the literature regarding the training and development as it relates to job satisfaction. Therefore, we hypothesize that:
Hypothesis 2: “Training and Development have impacts on Job Satisfaction.

2.2. Working Conditions and Job Satisfaction

Working conditions is working environment provided by the employer/organization and also known to be the non-pay aspects of conditions of employment, which include the following; amenities, degree of safety, health, well-being, etc (Bockerman and Ilmakunnas, 2006). Working conditions is the conditions in which employee works and activities such as training; working time, work-life balance, etc., (Majid, 2001). Essentially, there is a distinct difference between employees and jobs. Employers may choose to provide different working conditions for different employees regarding the type of employment offered; contract or permanent. However, the study shall take some of the components into consideration such as safety at work, flexible arrangement, overtime, with no preference to any. Work flexible arrangements have impact on employee family conflict (Kossek et al., 2005). Overtime plays a vital role (Peters, 2000; Robert Reich, 1992). Employees demand more friendly work flexibility (Fleetwood, 2007); they demand employee-friendly flexibility, where they determine how much, when and where they work, which include voluntary part-time work, flexible working hours, etc. Unfavorable working conditions greatly increase the level of job dissatisfaction (Bockerman and Ilmakunnas 2006).

Hypothesis 3: Influence of working conditions on the Employees Job Satisfaction

3. Data, methodology and results

The study is focused on the Nigerian Banking Industry and it is also a comparative research studying two different banks (Eco Bank Plc & Intercontinental Bank Plc). These banks have branches across the West African region. Therefore, their results can be extrapolated for decisions across West Africa. The objectives of this study, therefore, are to: determine the relationship between staffing levels, and the job satisfaction of employees; the effect of training and development on the job satisfaction of employees; determine the influence of working conditions on job satisfaction.
Data on human resource management and job satisfaction were gathered through a self-administered questionnaire, which was distributed January, 2011. Respondents were ensured that individual responses were anonymous. The respondents were asked to provide demographic information such as gender, age, position and work experience as part of the questionnaire. However, information regarding age bracket is in 10-year increments; position level (less than supervisor, manager and supervisor categories); work experience groups within 5-year bracket. However, in the second part of the questionnaire, respondents were required to indicate their opinion by rating the extent/degree of their satisfaction or dissatisfaction with the study variables.

Analysis of the administered questionnaire is presented in Table 1.

<table>
<thead>
<tr>
<th></th>
<th>Intercontinental Bank</th>
<th>ECO Bank Plc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No of Questionnaire</td>
<td>Percent</td>
</tr>
<tr>
<td>Harvested</td>
<td>86</td>
<td>86.0%</td>
</tr>
<tr>
<td>Not Returned</td>
<td>14</td>
<td>14.0%</td>
</tr>
<tr>
<td>Total:</td>
<td>100</td>
<td>100.0%</td>
</tr>
</tbody>
</table>

**Source:** Field Survey, 2011

In addition to the demographic data, the questionnaire included twenty seven (27) questions item which were classified into sections regarding different aspects of human resource management (recruitment, transfer, training and development, performance evaluation, promotion, work relationship, etc.). Hence, we have considered the following variables: performance, training, satisfaction, security, staff retention etc. The demographic makeup of the respondents is detailed in table below.
Table 2: Respondents Demography

<table>
<thead>
<tr>
<th>Demographic Variables</th>
<th>Intercontinental Bank Plc</th>
<th>ECO Bank Plc</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Items</td>
<td>Frequency</td>
</tr>
<tr>
<td>Gender</td>
<td>Male</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>37</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Age</td>
<td>&lt;25</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>25 – 34</td>
<td>48</td>
</tr>
<tr>
<td></td>
<td>35 – 44</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>45 – 54</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>55+</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Position</td>
<td>&lt; Supervisor</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td>Senior Manager</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>Supervisor</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100.0</strong></td>
</tr>
<tr>
<td>Work Experience</td>
<td>&lt; 5</td>
<td>39</td>
</tr>
<tr>
<td></td>
<td>6 – 10</td>
<td>27</td>
</tr>
<tr>
<td></td>
<td>11 – 20</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>21 – 30</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>31+</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>85</strong></td>
<td><strong>100.0</strong></td>
</tr>
</tbody>
</table>

Source: Field Survey, 2011

Respondents’ demographic table above shows that there are more male respondents than their female counterparts in the sampled banks. 56.5% represents male and 43.5% represents female; 53.7% represents male and 46.3% represents female respectively. The age category of the respondents suggests that most of the respondents fall within the age bracket of 25 – 34 (56.6% and 50.0% respectively). The significant representation of the respondents’ age group may be due to the nature of the job and the policies that exist in the banking industry. In similar direction, majority of the respondents occupies position less
than the supervisory grade (junior employees) this could be attributed to the recent past downsizing in the banking industries as part of the impact of the economic meltdown where several Bankers were relieved of their jobs. In addition, work experience classification suggests that approximately 50% (45.9%) of respondents have less than five years of work experience (Intercontinental Bank Plc); while 36.6% out of 82 respondents from ECO Bank Plc fall under the same category. However, it could be partly because of the fact that the industry is being revitalized, which brought recruitment of new employees.

4. Results

Table 3: Effect of Training and Development on the Employees Job Satisfaction

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.670(a)</td>
<td>.449</td>
<td>.435</td>
<td>1.283649</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Performance, Training
b Dependent Variable: Satisfaction

Table 4: ANOVA (b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>107.264</td>
<td>2</td>
<td>53.632</td>
<td>32.549</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>131.820</td>
<td>80</td>
<td>1.648</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>239.084</td>
<td>82</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Performance, Training
b Dependent Variable: Satisfaction

The results show that the variables for the independent variable which is training and development are learning more skills to improve performance and also having good opportunities to improve skills. R2 being 0.435 (43.5%) of job satisfaction can be explained by the variables captured in this model. It could be inferred that satisfaction on current job can be achieved through learning more skills to perform very well and having good opportunities to get more training and also achieving human resource goals.
Table 5: Influence of working conditions on the Employees Job Satisfaction

<table>
<thead>
<tr>
<th>Model Summary (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Security
b Dependent Variable: Satisfaction

Table 6: ANOVA (b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>20.192</td>
<td>1</td>
<td>20.192</td>
<td>7.465</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>221.808</td>
<td>82</td>
<td>2.705</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>242.000</td>
<td>83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Security
b Dependent Variable: Satisfaction

It is evident in table 6 above that the variable for the independent variable which is working conditions is job security assurance. R2 being 0.083 (8.3%) for satisfaction with the current job satisfaction. It could be inferred that satisfaction on current job is achieved through job security assurance for employees.

Table 7: Impact of Human Resource factors on Employees Job Satisfaction

<table>
<thead>
<tr>
<th>Model Summary (b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Staff Retention
b Dependent Variable: Satisfaction
Table 8: ANOVA (b)

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>113.598</td>
<td>2</td>
<td>56.799</td>
<td>36.608</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>122.571</td>
<td>79</td>
<td>1.552</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>235.169</td>
<td>81</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a Predictors: (Constant), Staff Retention  
b Dependent Variable: Satisfaction

The results show that it could be inferred from table 7 above that satisfaction on current job is achieved through maintaining adequate staff level in the organization, employee retention and also achieving human resource goals.

5. Conclusions
The goal of this study is to identify the human resources factors that affect employee job satisfaction. The study examined the relationship between staff levels and employee satisfaction, the effect of working conditions on employee satisfaction, the impact of training and development on employee satisfaction and finally, the influence of human resources factors on employee satisfaction in both banks. The strong significant relationship between the examined variables and job satisfaction suggest how efficient and effective employees could be when highly satisfied on the jobs. Therefore, it is evident that organizations need to apply these tested variables: training and development, working conditions, staff retention in their strategies in order to make employees satisfy on their jobs, which in turn will reduce turnover rate and help achieve organizational goals. As a result of our findings and recommendation it can be concluded that equitable rewards system such as pay, working conditions, training and development, fair treatment, and fair human resources practices are determinants of employee job satisfaction.

References


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Tax-saving, Innovative Incentives for Small and Medium-Sized Enterprises in Hungary

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Abstract
The small-and medium-sized enterprises in the Hungarian economy have been playing a decisive role. Among the difficulties they face during their activities one of the most serious is to raise funds for their labour costs. They try to reduce their tax wedge burden, which is regarded one of the highest in Europe, in various ways. In order to keep the adequate workforce they can provide fringe benefits supplementing to wages and salaries. The cautious application of the referring acts enables companies to motivate workforce and reduce the tax and contribution burdens at the same time. Our research aimed to find an answer how SMEs take these advantages and what factors support or hinder the use of the system.

Keywords: labour costs, benefits, tax optimisation, motivation

SMEs in Hungary
In recent years, the fundamental structural characteristics of SMEs have undergone only a small change in most areas. Due to the high labour costs and low capital investments, they do not operate with the appropriate efficiency. In Hungary almost two-thirds of the employees belong to this sector. SMEs contribute to the GDP by nearly 50%. 40% of their revenues are realised by large corporations, 20% by medium-sized companies, and a further 40% by small and micro enterprises. The business structure of the Hungarian economy is similar
to that of the developed market economies. However, the performance of the domestic SMEs seriously lags behind the EU average. By strengthening they could have a considerable stabilising function in the national economy.

**The problems of employment**

The rate of employment by far lags behind the European average. The small activity of the labour market is influenced by a lot of factors. They include the low employment level of people over 55, women (especially with small children), those living in small settlements and/or in regions with disadvantage, people with low educational level, as well as, first of all, due to the extension of study periods, people under 25.

It is also a common problem that employers reduce their labour costs, which are regarded quite high in comparison with other countries, by decreasing the working hours – mostly on paper. Analysing data from recent years the national tax wedge is one of the highest [Borsi B. - Farkas L. - Udvardi A. - Viszt E., 2009]. The tax wedge shows the proportion of taxes and contributions in relation to the total labour costs, therefore this ratio can be a decisive factor in terms of competitiveness. For example, in Austria only incomes over 7,500 euro has a larger burden than in Hungary [Ambrus Attiláné, 2010]. The supporters of the tax reform for reducing the tax and contribution burdens argue for its beneficial effect on the employment, although the relation of cause and effect is more complex. SMEs lacking capital are on an inescapable path; therefore - in addition to a weak attitude toward taxation - a part of employers react in a peculiar way: they get the necessary staff from the grey or black economy. Their employment “policy” is fundamentally determined by the fact that they are not able to or willing to take the excess burdens, thus they declare fewer employees than they have in reality, in lower working hours and/or at lower wage.

**A special group of labour costs: the cafeteria**

For employers there is a legal solution to supplement wages in a cost-effective way, with the implementation of which employers may give several fringe benefits to workers from the available resources.

Cafeteria is an English word meaning self-service restaurant. In Hungarian technical jargon its meaning can be best described by the following definition: it refers to the flexible system of fringe benefits
that can be chosen. In practice, eligibility and the flexibility of the system do not always prevail. Employers and employees, first of all, prefer those possibilities which require less tax and contribution.

The 4 most important factors affecting fringe benefits [Poór J., 2007] include:
- Legal regulation
- Social aspects
- Management aspects
- Tax regulation

The social so-called income supplement function may play a role in sectors offering lower wages, (as it is not a benefit in proportion to wages, it “compensates” people with lower incomes). In the Hungarian practice it has a more decisive effect on tax optimisation and loyalty.

Cafeteria has been an organic part of the Hungarian wage system since 1996. First, it was used for replacing and modernising in-kind benefits, among which payments into voluntary pension funds had utmost importance. Its application was largely affected by legal regulation: the Act on Personal Income Tax Section 69, Clause 1 Paragraphs d)-e) provided tax exemption for employees with 400,000Ft maximum wage per annum. Compared with the previous system, a great advantage of cafeteria was the fact that it enabled employees to choose within the limits of the ensured sum as opposed to the inflexible in-kind contributions [Kovács P., 2009].

When launching the cafeteria system companies did not use any additional resources; they ensured coverage for the individual limit amounts by regrouping the existing benefit expenses. However, the possibility of choice in itself meant a positive change for the employees.

The application of the cafeteria system also enabled companies to differentiate among workers. Groups can be formed according to the type of the labour contract (for definite or indefinite time), full or part-time employment, or the actual state (being active, on long-lasting sick-leave, unpaid holiday, or child-care leave).

In general, the cafeteria system is set by employers in a way that they remain within the limits exempt from taxation. The more complicated systems also consist of 8-10 elements and operate in a flexible way, although the majority of companies cannot afford them.
Among the currently used models the most popular is to choose from packages due to the easier administration compared to other ones. The more simple versions comprise fewer elements and are determined in the same way for each employee concerning both the amount and type of benefit.

**Tendencies of using cafeteria in practice**

In spite of the fact that a large proportion of companies’ expenses is made up of wages and their contributions, approximately 50% of companies take advantage of the cafeteria system. One of the largest problems is missing information. In 2010 Hungarian companies were questioned about it. By examining their answers we have known they need advising very much [Kaufman, 2011].

Among fringe benefits the supporters of the cafeteria system explain its introduction by cost efficiency, tax optimisation and motivation. Adapting to the changes in the 2010 tax regulations clearly indicates that among the above listed factors efforts to reduce tax have a leading role. Companies reacted to the changes by reducing the amount, transferring the increased tax burdens (at least partly) to the employees, and regrouping the “package”, of course, by increasing the proportion of benefits with more favourable tax conditions.

**Figure 1: The distribution of cafeteria elements within the annual limit**

![Figure 1: The distribution of cafeteria elements within the annual limit](image)

**Source:** Survey by NEXON Kft.²

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¹ TÁMOP 4.2.1.B-09/1/KONV-2010-0006 Szellemi, szervezeti és K+F infrastruktúra fejlesztés a Nyugat-magyarországi Egyetemen című projekt keretében folyó kutatás
Figure 1 shows a fall in elements and other facilities the tax and contribution burden of which is higher than it was the previous year. Only those companies took on the excess burden as a result of changes in law where cafeteria is regarded as a tool for motivation [Ambrus Attiláné, 2010].

The statistics of the survey made by NEXON Kft. in 2011 shows that compared to 2010 the average cafeteria limit amount has decreased by 10%; it hardly exceeds the 2009 amount. The fall is often due to the fact the employer reduced the amount of fringe benefits when deciding on keeping the workforce. However, a part of companies is reluctant to use the cafeteria system, first of all, due to the related administration burden and their costs. There are also benefit elements with little administration which can be used efficiently [Fata L., 2008]. The launch of fringe benefits is also made difficult by the fact that the exact knowledge of the terms and conditions requires great care and the complex study of several acts and governmental regulations. A key to the successful introduction of cafeteria is IT background closely related to the system. Companies developing and trading with office management software – being aware of the possibilities – are constantly enlarging their choice. As based on experience, cafeteria is, first of all, based on reducing tax, the dynamic change in the legal background forces software users constantly supplement and renew these at additional costs. Companies can choose from different construction according to their needs and on the basis of their resources: renting, leasing, outsourcing or the so-called cloud hosting service.

Adapting to the constant change in tax regulations is not an easy task for companies. No doubt, the strict conditions also hinder the spread of cafeteria systems. In 2010 the different taxation of cold and warm meal vouchers caused some problem; the actual measures affect the holiday vouchers. Favourable taxation cannot be implemented for holiday vouchers issued after 1st October 2011, thus if the employer is not willing to pay excess tax, it has to change the cafeteria limit. The Széchenyi Recreation Card (SZÉP Card) replacing the holiday voucher

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2 http://hvg.hu/kkv/20100427_melegetel_udulesicsekk_egeszsegpenz
3 http://www.nexon.hu/cafeteria-tendenciak
will provide not only holidays but also health preserving services and it can also be used instead of the previous culture voucher (e.g. theatre ticket, entrance fees into museums).

According experts the main obstacle to the spread of the card is the fact that paper-based vouchers may be used in more places by employees. Employers would not mind its use; therefore service-providers accepting the card are continuously widening their choice.

Based on the above mentioned facts, it is actually clear why more SMEs do not join the circle of the users, in spite of the fact that for them it would be utmost important to take advantage of the benefits of cafeteria. For investigating the relationships primary research has been carried out, whose findings will be detailed in the following chapters.

**Research method**

Following the secondary research a survey based on questionnaire was made in the 4thQ of 2010 in which Hungarian companies were questioned about their cafeteria systems and the factors affecting them.

751 companies were involved in the survey (based on the national mailing list). With the help of the Lymesurvey programme the link of the questionnaire was sent out to the e-mail addresses. The responses were processed by SPSS, software for statistical analysis. The survey can be regarded representative, because out of the contacted companies 156 filled in the questionnaire, out of which 141 could be evaluated. Approximately 60% of the respondents use the cafeteria system.

92% of the responding companies were established 5 years ago; only 2% were founded within a year. 32% of the companies had the same revenue, 34% reported about an increase and the same percent about a decrease in revenues.

Regarding the number of employees the responding companies reflect the national distribution (Figure2). 33% stated that they had reduced the number of their employees in the past 3 years, while 20% had raised it.
Tax-saving, Innovative Incentives for Small and Medium-sized Enterprises in Hungary

**Figure 2:** The number of employees at responding companies

![Pie chart showing the distribution of employees across different categories: Less than 15 employees (49%), 15-50 employees (28%), 50-100 employees (6%), More than 100 employees (17%).]

*Source: Primary research, survey with questionnaire*

**The findings of primary research**

Cafeteria benefits are provided by respondents instead of pay rise due to more favourable taxation. According less than 25% of the respondents regarded it as an aim to motivate workers, 14% as an aim to increase commitment.

**Figure 3:** The most characteristic aim of cafeteria at the responding companies

![Pie chart showing the distribution of aims: Stimulation of employees (61%), Commitment to company (14%), Instead of wages, tax cuts (23%), Keep talented employees (2%).]

*Source: Primary research, survey with questionnaire*
Based on the above facts it does not seem surprising that only 16% of the companies differentiate cafeteria benefits, 59% provide the same benefits for their employees (25% did not give an answer).

The priority of tax conditions is supported by the fact that 62% of companies’ decisions were influenced by the changes in tax laws, while 38% did not change the previous system (due to them). Companies which adjust their packages to the changes in tax laws do not follow the same direction. Many of the companies increased their cafeteria benefits, a part of them decreased them, while 18% did not modify the sum, only the type of vouchers (unfortunately, 45% of the companies did not answer this question).

**Figure 4: The effect of tax laws on the annual cafeteria limit**

![Pie chart showing the effect of tax laws on the annual cafeteria limit](image)

**Source: Primary research, survey with questionnaire**

In the past 3 years lunch vouchers have been the most popular cafeteria element, followed by holiday vouchers and travel vouchers. In case of the majority of respondents (69%) administration excess burdens have not affected decisions on cafeteria.

In the examined period 51% of the responding companies kept their annual cafeteria limit unchanged, or increased it (Figure 5) even in spite of the fact that the tax conditions of fringe benefits have strengthened. The difficulty due to the financial crisis encouraged companies to think over the structure of their expenses.
The number of companies introducing cafeteria is not expected to grow significantly, because among companies without cafeteria service at the moment, only three stated they would have the intention of launching it.

**Evaluation of data**

Based on the responses to questionnaire, cross tabulation analyses have been made with the help of SPSS software, the overview of which enabled us to find the following relationships:

1. Companies which are more than 5 years old use cafeteria benefits in a much larger proportion than younger companies. These companies introduced the fringe benefits when they were exempt from tax and contribution, and by increasing the tax burdens they have not withdrawn them from the employees. At these companies cafeteria has remained a part of the benefit package in general, but due to the changes in the conditions, it has undergone a significant change.

2. There is also a strong relation between the number of companies’ employees and the existence of cafeteria. While in case of companies employing less than 10 workers the introduction of cafeteria

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**Figure 5: The change in the amount of fringe benefits in the past 3 year**

<table>
<thead>
<tr>
<th>Percentage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>40%</td>
<td>Increased</td>
</tr>
<tr>
<td>36%</td>
<td>Increased</td>
</tr>
<tr>
<td>15%</td>
<td>Remained</td>
</tr>
<tr>
<td>9%</td>
<td>Decreased</td>
</tr>
<tr>
<td>1%</td>
<td>No answer</td>
</tr>
</tbody>
</table>

**Source:** Primary research, survey with questionnaire
is less frequent, in case of companies employing more than 100 people the proportion in terms of cafeteria is considerably larger. More employees require a more rational human resources management and an adequate administrative system, smaller companies more often lack these.

3. A larger part of companies do not provide cafeteria on by differentiation. Among the vouchers lunch vouchers play the most important role. Findings have also revealed that in most cases pay rise is substituted by this method and for the sake of differentiation lunch vouchers are supplemented by further vouchers (travel, Internet). The cafeteria package is the most complex if the major aim is motivation.

4. The amount of the cafeteria limit and the content of the package have been influenced to a larger extent by amendments in laws than the changes in revenue. An increase in revenue does not involve a parallel growth in cafeteria benefits, whereas in case of stable or decreasing revenue, it would be reasonable for companies to establish an adequate cost structure.

Conclusion

The development of the cafeteria systems is influenced both by internal and external factors. Among the external factors there should be a special focus on the legal environment, while among the internal ones the number of employees, the corporate culture, and the IT background play a decisive role. The introduction of the majority of benefits is related to the advantage of the more favourable tax conditions; the aim to motivate workers is often pushed into the background.

For SMEs it is a difficult task to raise funds for the labour costs. In addition to the low tax morality, the black and the grey economy is often regarded as a possible way to preserve and achieve competitiveness. The cafeteria system means an alternative for reducing tax and costs legally; its launch (and maintenance) also depends on companies’ load-bearing capacity. Within the framework of the new Széchenyi Plan, in addition to new machines and equipment, micro-, small- and medium-sized enterprises can apply for subsidies to develop information and communication technology. In addition to giving of advice is important. A wider use of fringe benefits may only be possible if the legal environment is stable and predictable.
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Relationship of Service Quality with Customer Satisfaction: Empirical Evidence from Pakistan

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Abstract
Study Objective: This study determines the association between service quality and customer satisfaction in telecommunication sector of Pakistan.
Research Methodology: Survey questionnaires were delivered to the respondent to collect the data regarding service quality and customer satisfaction with their current service providers. Stepwise regression technique was utilized to measure the data.
Findings: The results proposed that service quality has positive association / relationship with customer satisfaction in telecommunication industry of Pakistan.
Practical Implications: As the study suggest, the management of cellular industry should focused on the service quality due to its effect on customer satisfaction which ultimately leads to customer retention and loyalty.
Originality / Value: This study endow with unique approach which describes the factors affecting customer’s satisfaction. The findings of the current study can also provide insights for the managers to develop and maintain the customer’s desired service quality.
Keywords: services quality, customer satisfaction, telecommunication industry, banking sector, Pakistan
Introduction

The speedy growth and cut-throat competition in service industries e.g., telecommunication industry in developed and developing countries made it significantly essential element for measuring and evaluating service quality (Brown and Bitner, 2007). Today, service quality has become the rhetoric of each business but also take distinguished position in every discourse. Without customer satisfaction and loyalty, no company can survive in today’s competitive environment; similarly no organization can generate high sales without meeting the customer needs. Service quality play a vital role in building a strong and ever lasting relationship between customers and organization and it is a two-way flow of value.

Numerous empirical studies had conducted on service quality and customer satisfaction (Cronin and Taylor, 1992; Spreng and Mackoy, 1996; Jones and Suh, 2000; Coyles and Gokey, 2002; Ranaweera and Prabhu, 2003; Choi et al., 2004), and predictor of the financial strength of the organization (Greising, 1994; Rust et al., 1995; Duncan and Elliott, 2002; Duncan and Elliott, 2004; Yasin et al., 2004; Wiele et al., 2002; Yeung et al., 2002). But these studies were conducted in developed world like United State of America, United Kingdom and Japan which shows that there is lack of relevant literature in developing countries, including Pakistan which has yet to be covered by research especially in telecommunication industry where very little attention had been given. Its mean the impact of service quality on customer satisfaction in the telecommunication sector has not received sufficient research in Pakistan. This study looks for the relationship between service quality and customer satisfaction and in telecommunication industry of Pakistan which fills the gap in literature and provides more empirical evidence regarding effect of service quality on the satisfaction of customers.

Service quality is defined as “the delivery of excellent or superior service relative to customer expectations” (Cronin and Taylor, 1992; Oliver, 1993; Zeithaml, Berry and Parasuraman, 1993; Santos, 2003). Service quality had three key features: “outcome quality”, “interaction quality”, and “physical service environment quality” (Brady and Cronin, 2002; Rust and Oliver, 1994). Numerous researchers explained these three broad dimensions of renowned construct of service quality (SERVQUAL) have five dimensions: “tangibles”, “reliability”, “responsiveness”, “empathy” and “assurance”
(Parasuraman et al., 1988). The first dimension (tangibles) has commenced with physical environment, the reliability corresponds with service outcome and remaining three deals with interaction quality aspect. Service quality is precursor of the theory customer satisfaction (Lee et al., 2000; Buttle, 1996; Zeithaml and Bitner, 1996; Gotlieb et al., 1994) and relationship between loyalty and service quality intervened by satisfaction (Caruana, 2002; Fullerton and Taylor, 2002). The five aspects of service quality can be defines as follows;

1. Tangibles involve “appearance of physical facilities, including the equipment, personnel, and communication materials”.
2. Reliability involves “ability to perform the promised service dependably and accurately”.
3. Responsiveness involves “willingness to help customers”.
4. Assurance involves “knowledge and courtesy of employees and their ability to convey trust and confidence. This assurance includes competence, courtesy, credibility and security”.
5. Empathy involves “provision of caring, individualized attention to customers”.

Recently, the attention of conceptualization and measuring service quality in telecommunication sector increased due to sharp increase in penetration rates around the world. Van der Wal et al. (2002) used SERVQUAL measures to determine the service quality in telecommunication sector in South Africa and confirmed that this instrument can be used to assess service quality in that industry. Johnson and Sirikit (2002) was also employed SERVQUAL instrument to investigate service quality perceptions in the Thai telecommunications industry and showed that these measures is suggested for process-driven service provider companies such as telecommunications, retaining, health, banking etc. Another flow of researches focused to develop service quality measurement tools by targeting mobile telephony sector specifically (Aydin and Ozer, 2005; Gerpott et al., 2001; Kim et al., 2004; Lee et al., 2001; Lim et al., 2006). In the study of Choi et al. (2007) the mobile telephony quality measuring dimensions recognized the work categorized into coverage of network, mobile device, billing system, convenience, value-added services, and price structure. The causal relationship between service quality and customer satisfaction verified in various sectors and also in the telecommunication sector and confirmed the positive relationship of
service quality on satisfaction (Kim et al., 2004; Lee et al., 2001; Lim et al., 2006).

More than two decades, customer satisfaction had intensively discussed subject area of market and consumer research. Recently, customer satisfaction has reaped new attention within the framework of the paradigm change from transactional to relationship marketing (Martin, Adrian and David, 2002), which refers “to all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges” (Yi and La, 2004). The satisfaction’s emotional state “leads to an overall, global attitude about [service] quality” (Dabholkar, 1993), which is only based on some kind of inner expectation standard. A wide consensus on customer satisfaction is that “satisfaction is a person’s feeling of pleasure or disappointment resulting from comparing a product’s perceived performance (or outcome) in relation to his or her expectations” (Kotler, 2003, p. 36). Thus, satisfaction is closely connected to customers’ expectations. Customer satisfaction can be measured on a single-item scale or as multi-item scale assessing the satisfaction level for each factor of the service e.g. Cronin and Taylor (1992) measured customer satisfaction on one-item scale covers the overall feelings towards an organization while 6-item construct was used by Anderson and Srinivasan (2003) for measuring customer satisfaction for each service quality of the organization.

Customer satisfaction also considered as fundamental determinant of customer loyalty. Satisfaction improves repeat purchases and produce positive word of mouth (Reichheld and Sasser, 1990; Wirtz, 2003). Same results had reported in the telecommunications services literature, where satisfaction had emerged as strong predictor of customer loyalty. Gerpott et al. (2001) in German cellular telecommunications, Kim et al. (2004) in Korea and Lee et al. (2001) in France results highlighted the causal relationship of customer satisfaction and loyalty. Commonly, two general conceptualizations of satisfaction exists, namely, transaction-specific satisfaction and cumulative satisfaction (Jones and Suh, 2000; Yi and La, 2004). “Transaction-specific satisfaction is a customer’s evaluation of his or her experience and reactions to a particular service encounter (Boshoff and Gray, 2004)”, and “cumulative satisfaction refers to the customer’s overall evaluation of the consumption experience to date (Cook, 2008)”. 
Research Design
Survey questionnaires were used to collect the data from the respondents. Following research design was utilized to test the hypotheses presented hereunder.

Research Hypothesis: There is a positive relationship between service quality and customer satisfaction.

Sampling & Procedure
There are two types of users exists in telecommunication sector of Pakistan e.g. prepaid and postpaid. The key respondents of this research are the postpaid users because they are the key clients of telecommunication industry and usually use one network. The questionnaires were distributed to the students of Executive MBA studying in Government College University, University of Punjab, COMSATS Institute of Information Technology and University of Engineering and Technology in February, 2010. From multi-follow ups two hundred and eighty five (285) questionnaires were returned with the response rate of 81% which is highly appreciable. Stepwise regression analysis was employed to determine the service quality impact on the satisfaction of the customers. In this study, all six determinants of service quality treated as independent variables whereas overall customer satisfaction was served as dependent variables.

Survey Instrument
Following instruments were used:
(1) Service quality. Choi et al. (2007) summarized and classified the quality factors recognized in research of telecommunication sector. Therefore, service quality conceptualized as:
➢ Network (two items). Clarity of voice and the area coverage are factors according to Kim et al. (2004) and Lim et al. (2006).
➢ Value-added services (three items). As value-added services can considered as intangible objects like SMS and MMS, WAP, GPRS, news, ring tones etc (Kim et al., 2004).
➢ Mobile devices (three items). This variable was measured by the variety, quality, and design of different mobile devices, which were adapted from Kim et al. (2004).
Customer service (four items). This dimension estimates the success of problem resolution, the courtesy offered by customer service representatives, help provided by service/call-centers and the provision of consistent advice. All items adopted from Lim et al. (2006).

Pricing structure (three items). Reasonable prices, variety in pricing schemes and the extent of liberty to choose pricing scheme, this measured was used by Kim et al. (2004).

Billing system (three items). This dimension includes the provision of correct billing, ease in resolving the billing issues and the speed of resolving the billing problem, as suggested by Lim et al. (2006).

(2) Customer satisfaction. Single item scale was used to determine the overall customer satisfaction.

Analysis & Interpretations

Respondent sample, descriptive statistics and stepwise regression analysis was used to interpret this section.

Table nr. 1

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage (%)</th>
<th>Characteristics</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender:</strong></td>
<td></td>
<td></td>
<td><strong>Age:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>172</td>
<td>60</td>
<td>Below 30</td>
<td>67</td>
<td>24</td>
</tr>
<tr>
<td>Female</td>
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<td>32</td>
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<td></td>
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<td></td>
<td></td>
<td>Above 50 years</td>
<td>54</td>
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<td>29</td>
<td><strong>Service-Users Since:</strong></td>
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<td>24</td>
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<td>14</td>
<td>More than 3 years</td>
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</tr>
<tr>
<td>Ufone</td>
<td>26</td>
<td>10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Zong</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table nr. 1 shows the demographic character of the respondents of five different telecommunication service providers. Male respondents were 60% and females accounted for 40%. For age, 24 percent participants were below 30 years, 32 percent were 31-39 years, 26 percent were 40-49 years and 18 percent were more than 50 years of age. As for service users of the companies, 29% using postpaid services
of Mobilink, 24% Telenor, 23%, Warid, 14% Ufone and 10% are currently using the postpaid services of Zong. About 29 percent were using the services up to 1 year, 39 percent used 2-3 years, and 32 percent used their current services for more than 3 years.

Table nr. 2
Descriptive Statistics (N=285)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Mean</th>
<th>Std. Deviation</th>
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<tbody>
<tr>
<td>Network</td>
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<td>0.78</td>
</tr>
<tr>
<td>Value-added Services</td>
<td>3.60</td>
<td>0.67</td>
</tr>
<tr>
<td>Mobile Device</td>
<td>3.52</td>
<td>0.74</td>
</tr>
<tr>
<td>Customer Service</td>
<td>4.04</td>
<td>0.82</td>
</tr>
<tr>
<td>Pricing Structure</td>
<td>4.14</td>
<td>0.75</td>
</tr>
<tr>
<td>Billing System</td>
<td>3.98</td>
<td>0.81</td>
</tr>
<tr>
<td>Customer Satisfaction</td>
<td>4.02</td>
<td>0.81</td>
</tr>
</tbody>
</table>

Table nr. 2 shows the mean and standard deviation (descriptive statistics) of different variables of service quality and customer satisfaction.

Table nr. 3
Pearson Correlation Matrix

<table>
<thead>
<tr>
<th></th>
<th>NTW</th>
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<th>MD</th>
<th>CS</th>
<th>PS</th>
<th>BS</th>
<th>CSat.</th>
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<td></td>
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<td></td>
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<tr>
<td>MD</td>
<td>0.31*</td>
<td>0.32*</td>
<td>1.00</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CS</td>
<td>0.40*</td>
<td>0.30*</td>
<td>0.33*</td>
<td>1.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>PS</td>
<td>0.42*</td>
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<td>0.37*</td>
<td>0.32*</td>
<td>1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BS</td>
<td>0.32*</td>
<td>0.37*</td>
<td>0.35*</td>
<td>0.30*</td>
<td>0.31*</td>
<td>1.00</td>
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<td>0.31*</td>
<td>0.40*</td>
<td>0.33*</td>
<td>0.37*</td>
<td>1.00</td>
</tr>
</tbody>
</table>
Table nr. 3 shows the Pearson inter-item correlations of service quality dimensions and customer satisfaction. All the items are moderately correlated with each other and significant at 0.01 level and there is also no problem of co-linearity so all the variables are fit for regression analysis.

Table nr. 4

<p>| Model Summary (Dependent Variable: Overall Customer Satisfaction) |
|--------------------|-----------------|-----------------|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R²</th>
<th>Adjusted R²</th>
<th>Std. Error of Estimate</th>
<th>R² Change</th>
<th>F Change</th>
<th>Durbin-Watson</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>.39</td>
<td>.38</td>
<td>0.41</td>
<td>0.39</td>
<td></td>
<td>53.32*</td>
</tr>
<tr>
<td>2</td>
<td>0.70b</td>
<td>.48</td>
<td>.047</td>
<td>0.38</td>
<td>0.09</td>
<td>14.50*</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>0.74c</td>
<td>.59</td>
<td>.58</td>
<td>0.37</td>
<td>0.11</td>
<td>12.63*</td>
<td>1.78</td>
</tr>
</tbody>
</table>

*c. Predictors: (constant), Value-added Service, Customer Service and Pricing System*

Table nr. 4 showed stepwise regression analysis which reflects that about 59% variance (adjusted R² = .58) in customer satisfaction was explained by the model which consists of value added service, customer service and pricing system. This results was consistent with the study research hypothesis that service quality have impact on customer satisfaction

Table nr. 5

<p>| ANOVA (dependent Variable: Overall Customer Satisfaction) |
|-----------------|-----------------|-----------------|-----------------|-----------------|</p>
<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
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<td>3</td>
<td>4.22</td>
<td>33.35</td>
<td>.000b</td>
</tr>
<tr>
<td>Residual</td>
<td>1.28</td>
<td>82</td>
<td>0.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>23.97</td>
<td>85</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*c. Predictors: (constant), Value-added Service, Customer Service and Pricing System*
ANOVA results (table nr. 5) indicated the predictive strength ($F_{3, 82} = 33.35, p<.000$) of the model to explain variance in customer satisfaction.

### Table nr. 6

<table>
<thead>
<tr>
<th>Coefficientsa</th>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(Constant)</td>
<td>2.03</td>
<td>.38</td>
<td>5.48</td>
<td>.000</td>
<td>.73</td>
</tr>
<tr>
<td></td>
<td>Value Added Service</td>
<td>.28</td>
<td>.30</td>
<td>.31</td>
<td>3.06</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Customer Service</td>
<td>.37</td>
<td>.40</td>
<td>-.32</td>
<td>4.77</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Pricing System</td>
<td>.23</td>
<td>.32</td>
<td>.13</td>
<td>3.55</td>
<td>.019</td>
</tr>
</tbody>
</table>

- **Dependent Variable:** behavioral responses

The beta coefficients table nr. 6 shows the impact of service quality on customer satisfaction such as value-added services, customer service and pricing value. As the table shows, value added service ($b = .28, t = 3.06, p<0.000$), customer service ($b = 0.37, t=4.77, p<0.000$) and pricing system ($b = .23, t = 3.55, p<0.05$) had positive relation with the customer satisfaction in telecommunication industry of Pakistan.

### Conclusions and recommendations

The main purpose of this research was to determine the effect of service quality on customer satisfaction, in the Pakistani telecommunication sector. The results of this study shows that service quality is major predictor of customer satisfaction with three determinants out of the six quality dimensions of selected instrument (value added service, customer service and pricing system) have significant positive effects on customer satisfaction. This pointed out that the users of mobile telephony pay more attention to core service issues, such as customer care, value added service and pricing schemes, than advanced phone devices. The results of this study largely agree with other researches found in literature. Customer support was found to...
be an important customer satisfaction predictor by Kim et al. (2004) and also found no evidence which explain the effect the dimension of mobile devices on customer satisfaction. Lim et al. (2006) research proved that pricing plans have effect on customer satisfaction. On the other hand, previous studies also confirmed positive effect of value-added services on satisfaction (Kim et al., 2004; Lim et al., 2006). In addition, Lee et al. (2001) found that heavy-users reveal strong affiliation with value-added services which ultimately increased their satisfaction.

Customer satisfaction is a key factor of paramount importance in mature markets of service sectors, such as telecommunication sector in Pakistan. Moreover, the best of my knowledge this kind of research has not done yet in Pakistani context. The findings produced by this research can utilize by the management of telecommunication companies towards the improvement and implementation of those practices that will lead customer satisfaction which in return gives you the loyalty of the customers. Research findings shows that the customer satisfaction positively affected by service quality improvement tactics. Furthermore, customer satisfaction improvement tactics should closely deals with service quality aspect related with financial issues. Findings showed that the reasonable prices, variety in pricing schemes and degree of freedom to choose an scheme and provision of accurate billing, ease and speed of resolving billing issues requires great attention of the managers.

The limitations of this research are also exists. Due to non-probability sampling results cannot be generalized to whole the population and future research could look into the possible mediation role of switching costs on the link between satisfaction and service quality and finally this research is only done in one industry and in one geographical boundary which is also a limitation of this study.

**Bibliography**


Farm Organization, Ownership and Food Productivity in Nigeria

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Abstract
African food production is in crisis. Today, despite Africa’s vast physical and climatic potentials to produce food, most African States depend on food importation. Africa’s capacity to deal with its food battles is severely constrained by its political instability, its early stage of scientific and institutional development, and a rapidly changing and complex global environment. In Nigeria and in most developing economies, there is a fundamental lack of political commitment to come grips with poverty, malnutrition and access to food. Because of these barriers, traditional economics is a rather limited tool to understand food production and other related variables. Poverty, hunger, malnutrition, famine and starvation in developing economies are just as much a function of political, macroeconomic, and institutional barriers as lack of technology. Illustrations from the agrarian chaos in Sudan, Ethiopia, Somalia, Chad and others are too numerous to conclude otherwise. The aim of this paper is to determine and analyze economics incentives and strategies, which could stimulate commercial agriculture in Nigeria. The analysis is based on the premise that the form of production organization in Nigerian agriculture is the major constraint to commercialization. The paper concludes that output price subsidy is the over-riding factor in the commercialization of agriculture in Nigeria.

Keywords: commercialization, economy, development, food, production, strategies
Introduction

Throughout most of sub-Saharan Africa, agriculture is in critical state. Frequent ecological problems, poor incentives to farmers, lack of improved varieties, growing expenditures on food imports and other numerous factors have been cutting into living standards and growth prospects. (Oguzor 2009). The implications have been pervasive, not only on incomes of food producers, who include most African’s poor, but also on supplies of food and raw materials for industry, on employment, savings, and government revenues, and on the demand for goods and services produced outside agriculture. Yet, policy changes and planning for the resumption of growth in agriculture are hampered.

Traditionally, agriculture has been recognized as the Achilles’ heel of the economic development of sub-Saharan Africa. Agricultural sector has been a major source of raw materials to growing industrial sector as well as constituting a source of foreign exchange earning. The output of the agricultural sector springs from forestry, Livestock, production, and major agricultural commodities etc. Agriculture contributes meaningfully to the Gross Domestic Product (GDP) of Nigeria. In view of the fact that agriculture contributes to the GDP and also serves; as a source of foreign exchange earning, there exist a functional relationship between foreign exchange and agricultural export, rainfall, labour force, technological development/progress and government expenditure on agricultural production.

Perspectives on Food Production

From the earliest of times Nigeria has been known as a rural agricultural economy. There are vast areas of arable land which almost all types of tropical crops could grow on account of varied climatic conditions. Cocoa, palm produce, cotton, and the famous groundnut pyramids of Kano provided clear evidence of the agricultural capacity of Nigeria. More than 80 per cent of the population in the 1960s engaged in agriculture and allied activities. A couple of decades ago agricultural sector was the single most important sector in view of its contribution to the GDP and foreign exchange earnings.

Agriculture has been the largest revenue earning source for most Nigerians living in the rural areas and formed more than 80 per cent of the country’s population. Even those engaged in small businesses such as pottery, weaving, carving and tool making also still supplement their livelihood from farming (Adebola and Oguzor, 2009). Agriculture
accounted for more than 70 per cent of the country’s revenue before independence and contributed over 60 per cent of the country’s GDP. This was a prominent position due to the fact that farmers were motivated not only to produce for domestic consumption but also for commercial purposes. Thus, over 85 per cent of all foreign exchange earnings in 1960 were derived from agricultural product, principally, cocoa, palm produce, groundnuts, rubber, wood, livestock and forest products. The performance of agriculture up to the 1960s was much attributable mostly to the concentration of control in the regional government, who funded and also shared a greater percentage of the revenue. In 1961 for instance, about 20 per cent of the country’s total export estimated at two hundred million pounds sterling was derived from cocoa in the Western region. Groundnuts from the Northern region topped with over one million tones, while palm produce and palm kernel from the Eastern region exceeded 20 per cent of total export.

Discovery of crude oil in 1958 has had auspicious implications on food production. This subsequently increased revenue from crude oil production. By 1962/1963 agriculture contributed 65 per cent of the country’s Gross Domestic Product (GDP) as against 13 per cent from the manufacturing. Agriculture thus began its decline in contribution to the economy as oil revenue increases. By mid-1970, its contribution fell to 20 per cent of GDP. And by the end of the 1970’s the agricultural sector was contributing a mere 12 per cent of the GDP. Since then, the contribution of the agricultural sector has been rising but at a very slow pace.

A decline of agricultural output was sealed in 1973 during the Arab-Israeli war. At the instance of their Arab members, the Organisation of Petroleum Exporting Countries (OPEC) increased oil price with the view to forcing western oil consuming nations to review their support for Israel in the conflict. The outcome of that price increase was the unprecedented oil revenue that accrued to Nigeria. The oil boom made Nigeria euphoric. This provided the country with huge financial means at its disposal. Food importation became government priority in preference to development in agriculture as all manner of food including the agricultural product previously exported were now imported. Between 1970 and 1982 annual production of major agricultural product; cocoa, groundnut, rubber and cotton fell drastically between 47 and 65 per cent respectively, while the share of agricultural
imports in the total imports of the country increased from 3 per cent in the late 1960s to 7 per cent in the early 90s.

Although the Nigeria agricultural policy has been criticized at the micro economic level for this deficiency in failure to encourage private price setting and marketing channels, failure to a satisfactory credit system to finance farming, support services and processing units, and in its failure to create infrastructure and an economic environment that will support private services in machinery manufacture/maintenance, spares and training, government no doubt showed interest and effort at least in designing various agricultural policy to sustain a viable agricultural economy most especially soon after the nation found itself in food crises. Government among others designed and created.

- The Agricultural Development Project (ADP) with the assistance of the World Bank.
- The River Basin Development Authority and the National Accelerated Food Production Programme (NAFPP).
- The Directorate of Food, Roads and Rural Infrastructure (DFRRI).

Other agricultural policies and programmes of the government include, Operation Feed the Nation (OFN), established in 1977 and rechristened the Green Revolution in 1980.

In establishing the above programmes, particularly the OFN, government was concerned with the rising import bills of foods. The programme was thus meant to reverse the continuing slide in agricultural production and to revive people’s interest in farming. Its more revolutionary objective was rather to encourage former public officers who had either been retired or dismissed from office by government to engage in food production. Green Revolution, another programme of government on agriculture like Operation Feed the Nation deferred only in implementation. The program like others, failed largely due to corruption, bad conception and mal-administration.

Agriculture in Nigeria is largely dependent on human muscles as its primary motive power and the result is the low productivity per man and the large number of men per acre. Similarly, there has been loopsided allocation of foreign exchange resources to this sector in spite of its potential to sustain the economy. Of the total of $2472 million, $2870 million, $26085 million, $3010.2 million and $3720.7 million foreign exchange allocated to the visible sector of the economy; comprising industrial, agricultural, finished and capital goods sector,
between 1989 and 1991, agriculture got a mere $12 million, $204 million, $866 million, $96.3 million and $76.7 million respectively. These figures represent 0.49 per cent, 0.71 per cent, 3.32 per cent, 3.2 per cent and 2.06 per cent of total foreign exchange allocation to the sector. It is obvious that such allocation cannot make any appreciable contribution to agricultural development of the country.

Technological development is vital for a country's developmental process. Thus, agricultural output is bound to increase at adequate technological capabilities. Technological innovation in respect of the agricultural sector is a *sine qua non* in order to aid greater productivity. Put simply, the provision of farm tool and or embarking on mechanized farming thereby promoting agricultural production on commercial basis devoid of subsistence contribute greatly to the Gross Domestic Product of Nigeria. It aids agricultural to be a major source of foreign exchange earnings. Thus technology is an independent variable having a functional relationship with agriculture, labour force, rainfall, government expenditure in agriculture and foreign exchange.

Policy makers consider the application of science and technology the panacea for increasing output and productivity and commercializing agriculture. They contend that agricultural production in Nigeria is constrained by the physical absence of improved inputs and modern production techniques (Abalu and D'silva, 1980). As a result the focus of agricultural development policy and programmes over the years has been on the development and introduction of exotic breeds of livestock, high yielding and disease resistant varieties of crop plants, new grades of chemical fertilizers, pesticides, irrigation equipment and farm machinery. The basic assumption of Nigeria’s Green Revolution (GR) programme for instance, was that the constraint to agricultural production was essentially technical in nature (Abalu et.al; 1981). Based on this assumption, the programme’s emphasis was on farm mechanization. Tractors and allied implements were acquired on a large scale and distribution to agro service centers in various locations across the country. New institutions were also created to implement and administer the mechanization programme (Mabawonku, 1986).

Despite the huge investment in science and technology agricultural production in Nigeria has remained subsistence oriented. This probably indicates that the constraints to commercialization, may not necessarily, be purely technological. Our concern in this paper
therefore is to identify and analyze economic incentives and strategies with potentials for stimulating commercialization of agricultural production in Nigeria. The analysis is based on the argument that the form of production organization in Nigerian agriculture is the major constraint to commercialization.

**Enterprise Ownership and Organization**

Enterprise ownership is referred to as production organization. The family farm is the dominant form of production organization in Nigeria agriculture. The male head of the farm family is usually the proprietor. He provides all the capital, land, and management. Most of the labour required on the farm is provided by the farm family. Farm size is small and access to land is limited by indigenous tenure systems. The prices of farm products are relatively low. Low prices imply low incomes, which adversely affect savings and investment. Agricultural production itself is seasonal due to lack of irrigation infrastructure. The seasonality of production constrains the generation of a continuous flow of income for the farm family.

Generally, the farm family considers agricultural production as a ‘way of living’. As a result most family farms are not organized as business enterprises. A business enterprise is an economic unit, which takes decisions on the proper allocation and combination of resources with a view to choosing or selecting production activities, which generate “maximum continuous flow of income”. The generation of maximum continuous flow of income presupposes commercialization. Commercialization is considered deliberate production for the market. It is not “merely the production of a surplus crop”. On the other hand, the selection one production activity instead of the other is predicated on profitability. The profitability of the farm business implies that the cash receipts on the farm must on the average exceed the cash payments. Profitability is not an indication of the level of efficiency. A profitable farm business need not be the most efficient in its group or area or even be highly efficient (Olayide and Heady, 1982).

Most small holders in Nigeria are neither profitable nor commercially oriented. To induce family farms to become commercially and profit oriented, a number of measures need to be taken. These measures are the subject of the next section.
Towards improved food productivity

Price subsidies
Price incentive can be used to induce farm families to commercialize production and earn higher incomes and profits. The incomes and profits of farm families depend on the prices at which they sell their products. The prices at which farm families sell their products depend on where and when they sell their products. Two prices can be identified as prevailing in the agricultural product market—the farm gate price and the consumer or market price. From the spatial point of view, farm gate prices are usually low. From a temporal point of view farm gate prices are usually low during season. Since agricultural production in Nigeria is seasonal, farm gate prices are therefore always low. This implies low incomes for farm families.

Consumer prices are always high due to spatial differences. Temporally, consumer prices are low during season (when there is a glut of farm products) but relatively higher than farm gate prices due to the spatial effect (Place utility). Since the spatial effect is brought about by the activities of middlemen, the margin between the farm gate price and the consumer price accrues to the middlemen. For Farm families to earn higher incomes and profits through higher prices, an output price incentive (subsidy) scheme is imperative. To be successful the scheme should specify minimum output levels, which qualify a farm family to benefit from the scheme. This will ensure that only commercially oriented farm families will benefit from the scheme. The prospects for higher incomes and profits through subsidy will predispose farmers to invest more and produce more. The scheme will require an implementing agency. The agency will require adequate storage; preservation and marketing facilities to enable it cope with handling of bulk quantities of farm products from producers. The business of the agency should be to purchase products from family farms at the subsidy price, which should be higher than the market price and resell to consumers at the market price. The agency will need to have collection centers. Agro service centers scattered in very many rural areas across the country can be used as collection centers and retail outlets.

Technical and managerial incentives
To ensure proper selection and combination of production activities, proper allocation and adequate utilization of resources and the
adoption and use of modern farm management techniques and practices with a view to generating a continuous flow of income, over and above production costs, family farms require full time technical and management expertise. Most family farms cannot afford the cost of hiring skilled manpower (technical and managerial) except through the intervention of government. Graduates of agriculture on call to national service under the National Youths’ Service Corps Scheme (NYSC) can be seconded to farmers on a fulltime basis on primary assignment.

**Human capacity incentives**

The personal characteristics of family farm proprietors also play a major role in commercialization. Personal characteristics relate to attitudes, motivations and behavioural patterns (Hinderink and Starkenberg, 1987). Attitudes, motivations and behavioural patterns are likely to influence innovation adoption, sensitivity to risk (investment behaviour) and the managerial approach of family farm proprietors. Vocational education and training schemes will likely, significantly and positively influence attitudes and motivations and predispose farmers to commercialization.

To compliment these incentives, the following strategies are suggested:

**a. Diversification**

Agricultural production deals with plant and animal life processes. As a result the production process involves a waiting time or gestation period. During this period when the family farm is not yielding any income, the proprietor has to provide for the living expenses of the farm family. In the absence of alternative sources of income, the farm family may be exposed to hunger and starvation. Diversification of production activities on the family farm will ensure a continuous stream of income for the farm family, throughout the year. Mixed farming and forward linkages are forms of diversification, which lend themselves to activity or enterprise combinations that ensure regular income for the farm family. Higher product prices, the availability of skilled manpower, adequate investment capital, and economic concessions for forward linkages can predispose family farms to diversification and commercialization.

**b. Exchange and Mergers**

Large-scale production is highly desirable in commercial agriculture because of the scale economies, which it confers. The
evolution of large-scale commercial agriculture especially in the eastern part of the country is constrained by indigenous land tenure systems, despite the 1978 land reform. The chances that large-scale family farms will evolve through land reform are limited given the people’s traditional attachment to the land. However it is possible for emerging commercial family farms to increase size and scale by exchanging and merging fragmented and scattered family plots. This will enhance commercialization and the profitability of the family farm by ensuring that farm size and scale of production are economically adequate to support the farm family and to provide surplus cash for the purpose of expanding production.

Conclusion
The importance of commercial agriculture in Nigeria cannot be over emphasized. The commercialization of agricultural production will depend on economic incentives such as the introduction of output price subsidy, the provision of skilled manpower and the introduction of vocational education and training schemes for family farm proprietor coupled with strategies such as diversification of production activities and exchange and mergers of family plots. Output price subsidy however appears to be the over-riding factor in commercializing Nigeria agriculture. Higher prices for farm products will reduce the price disparity between agriculture and industry and attract investment resources and entrepreneurship to agriculture and consequently stimulate commercialization. Output price subsidy will resolve the policy conflict between the objectives of stimulation commercialization through higher product prices and making food available to the people at cheaper prices.

Bibliography


The Relationship between Corporate Governance and Value of the Firm in Developing Countries: Evidence from Bangladesh

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Abstract
This paper aimed to examine the relationship between four corporate governance mechanisms (board size, board independent director, chief executive officer duality and board audit committee) and value of the firm (performance) measures (return on assets, ROA and return on equity, ROE). The paper is based on a sample of 93 listed non-financial companies in Dhaka Stock Exchanges (DSE) 2006. Using OLS as a method of estimation, the results provide evidence of a positive significant relationship between ROA and board independent director as well as chief executive officer duality. The results further reveal a positive significant relationship between ROE and board independent director as well as chief executive officer duality. The study, however, could not provide a significant relationship between the value of the firm measures (ROA and ROE) and board size and board audit committee.

Keywords: Corporate governance, Value of the firm, Return on assets, Return on equity

Introduction
It is widely believed that good corporate governance is an important factor in improving the value of the firm in developing countries. However, the relationship between corporate governance and the value of the firm differs in the different countries due to disparate corporate governance structures resulting from the dissimilar social, economic and regulatory conditions in these countries. There is a need
to understand the differences, which affect the value of the firm for academic investigations, financial, and management practices and public regulation of markets and corporations (Abdurrouf, et al, 2010). The relationship between corporate governance and the value of the firm is important in formulating efficient corporate management and public regulatory policies. According to Black (2001), Klapper and Love (2004), Gompers, et al., (2003) and Beiner and Schmid (2005), corporate governance plays an important role in improving the value of the firm and there is a direct relationship between the two in both developing and developed countries. However, there are differences in the nature, direction, magnitude and processes of operation of the relationship between developed and developing countries due to differences in their economic, social, regulatory framework and market behavior (Hermalin and Weisbach, 1991; Ahunwan, 2003). Although, it is important especially for developing countries to incorporate these differences into the analysis of corporate governance and value of the firm relationship for an appropriate understanding of the role of corporate governance in influencing corporate value and formulating regulatory framework, these differences have not been systematically discussed in the existing literature.

This study will be analyzed and empirically investigated the nature of these differences in the relationship between corporate governance and value of the firm in developing country. For this purpose, the financial market of Bangladesh (developing) is selected in this study for the relationship measurement between corporate governance and value of the firm. The specific objectives of the proposed study are: (i) To measure the level of value of the firm (financial performance) made by the listed companies in Bangladesh. (ii) To examine the association between corporate governance and value of the firm (financial performance) of listed companies in Bangladesh.

**Corporate Governance**

Researchers have defined corporate governance in a variety of ways and the most widely cited definitions follow.

According to Cadbury (1992), corporate governance is the mechanism used to discipline organizations. Morin and Jarrell (2001) argue that corporate governance is a framework that controls and safeguards the interest of the relevant players in the market. The players of the corporate governance mechanism include managers, employees,
customers, shareholders, executive management, suppliers and the board of directors.

Corporate governance is the set of processes, customs, Polices, laws, and institutions affecting the way a corporation (company) is directed, administered or controlled. Corporate governance also includes the relationships among the many stakeholders involved and the goals for which the corporation is governed. The principal stakeholders are the shareholders management, and the board of directors. Other stakeholders include employees, customers, creditors, suppliers, regulators, and the community at large (Mahboob Uddin, 2006). Perfect corporate governance can strengthen intra-company control and can reduce opportunistic behaviors and lower the asymmetry of information, so it has a positive impact on the high quality of disclosed information (Li and Qi, 2008).

Corporate Governance (CG) is the relationship between corporate managers, directors and the providers of equity, people and institutions who save and invest their capital to earn a return.

The literature on corporate governance in developing and developed markets suggest that the roles of a regulatory authority, board, management, suppliers, customers and creditors are important in improving the value of the firm. Good corporate governance is focused on the protection of the rights of shareholders and plays an important role in the development of capital markets by protecting their interests (Abdurrouf, et al, 2010).

Obviously good corporate governance practices are more and more essential in determining the cost of capital in a capital market. Bangladeshi companies must be prepared to participate internationally and to maintain and promote investor confidence both in Bangladesh and abroad. On an examination of corporate governance practices in Bangladesh, it appears that the country stands at a position of weakness. Therefore, it is essential that these practices are reviewed to ensure that they continue to reflect local and international improvement so as to position Bangladesh in line with the best practice.

The value of the firm can be defined as the amount of utility/benefits derived from the shares of a firm by the shareholders. Some of the important measures to value of the firm in the existing literature are as follows.
Tobin’s Q is defined as the ratio of the market value of assets (equity and debt) to the replacement value of assets. Tobin’s Q is also used to value the firm in the financial markets as Himmelberg, et al. (1999), Palia (2001) and Bhagat and Jefferis (2002) used Tobin’s Q in their studies to value of the firm.

Board size influences the value of the firm. Small board size is generally believed to improve the value of the firm because the benefits by larger boards of increased monitoring are outweighed by the poorer communication and decision making of larger groups. Lipton and Lorsch (1992) suggest an optimal board size between seven and nine directors. In this respect, empirical studies have shown that the value of firms with relatively small board sizes (Eisenberg et al, 1998). Hence, as board size increases board activity is expected to increase to compensate for increasing process losses. Yermack (1996) find negative correlation between board size and profitability. Mak and Kusnadi (2005) report that small size boards are positively related to high firm value. In a Nigerian study, Sanda et al (2005) report that value of the firm is positively correlated with small, as opposed to large boards. The argument is that large boards are less effective and are easier for a CEO to control. The cost of coordination and processing problems is also high in large boards and this makes decision-taking difficult. On the other hand, smaller boards reduce the possibility of free-riding and therefore have the tendency of enhancing value of the firm. I measure the size of the board by the number of directors serving on such boards and expect this to have a negative relationship with value of the firm.

A board is generally composed of inside and outside members. Inside members are selected from among the executive officers of the firm. Outside directors are members whose only affiliation with the firm is their directorship. The role independent director on the board of directors is to effectively monitor and control firm activities in reducing opportunistic managerial behaviors and expropriation of firm resources. The proportion of independent directors is positively correlated to value of the firm (Agrawal and Knoeber, 1996). Increasing the level of the proportion of independent directors simultaneously increase firm performance as they are more effective monitors of managers (Mehran, 1995). Some researchers found that although the proportion of independent directors on the board is high, the level of board independent and professionalism is not necessary good (Chen, et al.2007). The relationship between the proportion of independent
The relationship between corporate governance and value of the firm was found to be negative (Klein, 1998; Yermack, 1996). It has been further argued that there is no relationship between the proportion of independent directors and superior firm performance (Hermalin and Weisbach, 1991). Based upon the literature, the relationship between proportion of independent directors and value of the firm will be investigated in the study.

Within the context of corporate governance, the central issue often discussed is whether the chair of the board of directors and CEO positions should be held by different persons (dual leadership structure) or by one person (unitary leadership structure). Jensen (1993) shows a deep concern that a lack of independent leadership creates a difficulty for boards to respond to failure in top management. In this regard, Kajola (2008) also argue that concentration of decision management and decision control in one individual hinders boards’ effectiveness in monitoring top management. It is argued that there is conflict of interest and higher agency costs when the same person occupies the two positions (Brickley et al, 1997) and this leads to the suggestion that the two positions should be occupied by two persons. Yermack, 1996) and Sanda et al, 2005) show that firms are more valuable when the CEO and the chairman of the board positions are occupied by different persons. However, (Daily and Dalton, 1992; Kajola, 2008) does not find a positive relation on the separation of the position of CEO and board chair. Based upon the literature, the relationship between CEO duality and value of the firm will be investigated in the study.

The role of audit committee is important in implementing corporate governance principles and improving the value of the firm. The principles of corporate governance suggest that audit committee should work independently and perform their duties with professional care. In case of any financial manipulation, the audit committee is held accountable for their actions as the availability of transparent financial information reduces the information asymmetry and improves the value of the firm (Bhagat and Jefferis, 2002).

The agreement has been advanced that perhaps the audit committee is the most entity to safeguard public interest. The board usually delegates responsibility for the oversight of financial reporting to the audit committee to enhance the breadth of relevance and reliability of annual report. Thus, audit committees can be a
monitoring mechanism that improves the quality of information flow between firm owners (shareholders and potential shareholders) and managers. Klein, (1998) and Anderson, et al. (2004) reported a positive relationship between audit committee and value of the firms (earnings management). On the other hand, Kajola (2008) shows that there is no significant relationship between audit committee and value of the firm. Based upon the literature the following hypothesis is tested:

**Material and Method**

**Sample/ Research Design**

The data used for this study were resulted from the audited financial statements of the firms listed on Dhaka Stock Exchange (DSE) in 2006. The sample of the firms were selected using the combination of non-probability sampling technique (firms with the required information were initially selected) and stratified random technique (firms were then selected based on their sectorial classification). A total of 93 non-financial firms were finally used as sample. The method of analysis is that of multiple regressions and the method of estimation is Ordinary Least Squares (OLS).

**Hypotheses:**

\[ H_1: \text{The size of the board is negatively related to value of the firm.} \]

\[ H_2: \text{Independent directors have a positive relationship with value of the firm.} \]

\[ H_3: \text{The separation of CEO and Board chair positions has a positive relationship with value of the firm.} \]

\[ H_4: \text{The audit committee has a positive relationship with value of the firm.} \]

**Model Specification**

The economic model used in the study (which was in line with what is mostly found in the literature) is given as:

\[ Y = \beta_0 + \beta F_i + e_{it} \quad (1) \]

Where, \( Y \) is the dependent variable. \( \beta_0 \) is constant, \( \beta \) is the coefficient of the explanatory variable (corporate governance mechanisms), \( F_i \) is the explanatory variable and \( e_{it} \) is the error term (assumed to have zero mean and independent across time period).
It is important to state that this study employs two financial ratios (ROA and ROE) to measure the value of the firm. In the empirical literature, Tobin’s Q (the market value of equity plus the market value of debt divided by the replacement cost of all assets) has been used extensively as a proxy for measuring value of the firm. It is however difficult to get the required information relating to the market value of equity issued by Bangladeshi companies, since these are not usually disclosed in their financial reports. In order to mitigate this problem, many scholars (Miyajima, et al., 2003, and Sanda et al, 2005) used modified form of Tobin’s Q. This study does not follow their line of assumption, because the various modifications made on the original Tobin’s Q are considered to be subjective, and in line with the dictates of the writers and may influence the outcome of the study. Himmelberg, et al.(1999), Palia (2001) and Demsetz and Villalonga (2001) that use managerial compensation as the only corporate governance mechanism; Kim, et al.,(2004) that examine leverage only; Bhagat and Black (2002) and Coles, et al.,(2008) that examine board characteristics only, this study examines four corporate governance mechanisms together. By adopting the economic model as in equation (1) above specifically to this study, equation (2) below evolves.

\[ VF = \beta_0 + \beta_1 BSIZE + \beta_2 BIND + \beta_3 CEOD + \beta_4 BACOM + eit \]  

**(Variable Description)**

**Table 1a: Dependent and Independent variable and their descriptions as used in the study**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description/measurement</th>
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<tbody>
<tr>
<td>ROA = Return on Assets</td>
<td>(Net profit after tax divided by total assets)×100</td>
</tr>
<tr>
<td>ROE = Return on Equity</td>
<td>(Net profit after tax divided by total equity)×100</td>
</tr>
<tr>
<td>BSIZE = Board Size</td>
<td>Total number of directors on the board</td>
</tr>
<tr>
<td>BIND = Board Independent</td>
<td>Proportion of independent directors sitting on the board</td>
</tr>
<tr>
<td>CEOD = CEO Duality</td>
<td>Value zero(0) for if the same person occupies the post of the chairman and the chief executive and one (1) for otherwise</td>
</tr>
<tr>
<td>BACOM = Board Audit Committee</td>
<td>Board audit committee, 1 for yes or 0 No</td>
</tr>
</tbody>
</table>
Analysis of Data

In order to obtain the objectives of the research study, statistical tools like average, standard deviation, co-efficient of variance, correlation, regressions and T tests, F tests have been used to analyze and interpretation of the data through the Statistical Packages for Social Science(SPSS)14.0 for windows and Tables have been used for data presentation.

Results and Discussion

Descriptive Statistics

Table 2 shows the descriptive statistics of all the used in the study. The mean of ROA of the sampled firms is about 2.73% and the mean of ROE is 4.55% in Taka. The average board size is 6.68 with a standard deviation of 2.05 and it ranges 3 to 13 members. The average independent directors are 10.57% with standard deviation 13%. This indicates that independent director approximately 11% of the board. The result also indicates that 72% have separate persons occupying the post of the chief executive and the board chair, while 18% have the same person occupying the two posts. A majority of the firms (68%) have audit committee of the sample firms.

Table 2: Descriptive statistics

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>ROE</th>
<th>BSIZE</th>
<th>BIND</th>
<th>CEOD</th>
<th>BACOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>2.725</td>
<td>4.552</td>
<td>6.68</td>
<td>10.57</td>
<td>.72</td>
<td>.68</td>
</tr>
<tr>
<td>Median</td>
<td>2.100</td>
<td>5.870</td>
<td>6.00</td>
<td>13.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Minimum</td>
<td>-120.94</td>
<td>-120.94</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Maximum</td>
<td>72.11</td>
<td>71.42</td>
<td>13</td>
<td>38</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

Note: ROA= Return on Assets; ROE= Return on Equity; BSIZE = Board Size; BIND = Board Independent Director; CEOD = Chief Executive Officer Duality; BACOM = Board Audit Committee

Correlation Analysis

Tables 3a and 3b present the correlations among the variables. Table 3a indicates that ROA is positively correlated with the board independent director and chief executive officer duality at 1% level of significant. ROA has a negative relationship with board size and board audit committee. Table 3b also indicates that ROE is positively correlated
with the board independent director and chief executive officer duality at 1% and 5% and level of significant respectively. However, ROE also has a negative relationship with board size and board audit committee.

Table 3a: Correlations (Pearson)-ROA as a value of firm (N=93)

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>BSIZE</th>
<th>BIND</th>
<th>CEOD</th>
<th>BACOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td>0.102</td>
<td>0.379(**)</td>
<td>0.408(**)</td>
<td>0.175</td>
</tr>
<tr>
<td>BSIZE</td>
<td>0.102</td>
<td>1</td>
<td>0.217(*)</td>
<td>0.207(*)</td>
<td>0.094</td>
</tr>
<tr>
<td>BIND</td>
<td>0.379(**)</td>
<td>0.217(*)</td>
<td>1</td>
<td>0.423(**)</td>
<td>0.338(**)</td>
</tr>
<tr>
<td>CEOD</td>
<td>0.408(**)</td>
<td>0.207(*)</td>
<td>0.423(**)</td>
<td>1</td>
<td>0.390(**)</td>
</tr>
<tr>
<td>BACOM</td>
<td>0.175</td>
<td>0.094</td>
<td>0.338(**)</td>
<td>0.390(**)</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Note: ROA = Return on Assets; BSIZE = Board Size; BIND = Board Independent Director; CEOD = Chief Executive Officer Duality; BACOM = Board Audit Committee

Table 3b: Correlations (Pearson)-ROE as a value of firm (N=93)

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROE</th>
<th>BSIZE</th>
<th>BIND</th>
<th>CEOD</th>
<th>BACOM</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROE</td>
<td>1</td>
<td>0.047</td>
<td>0.324(**)</td>
<td>0.261(*)</td>
<td>0.159</td>
</tr>
<tr>
<td>BSIZE</td>
<td>0.047</td>
<td>1</td>
<td>0.217(*)</td>
<td>0.207(*)</td>
<td>0.094</td>
</tr>
<tr>
<td>BIND</td>
<td>0.324(**)</td>
<td>0.217(*)</td>
<td>1</td>
<td>0.423(**)</td>
<td>0.338(**)</td>
</tr>
<tr>
<td>CEOD</td>
<td>0.261(*)</td>
<td>0.207(*)</td>
<td>0.423(**)</td>
<td>1</td>
<td>0.390(**)</td>
</tr>
<tr>
<td>BACOM</td>
<td>0.159</td>
<td>0.094</td>
<td>0.338(**)</td>
<td>0.390(**)</td>
<td>1</td>
</tr>
</tbody>
</table>

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

Note: ROE = Return on Equity; BSIZE = Board Size; BIND = Board Independent Director; CEOD = Chief Executive Officer Duality; BACOM = Board Audit Committee

Multiple Regression Analysis

Table-4 shows the results of the multiple regressions and indicates a positive relationship between ROA and board independent director at 5% level of significant and between ROE and board independent director also. This result is similar with Agrawal and Knoeber, (1996); Mehran, 1995). This result is dissimilar to Klein, (1998); Yermack, (1996). The relationship between the ROA and chief executive officer duality is positive and statistically significant at 10%
level and ROE with chief executive officer duality is also positively significant at 1% level. This outcome has the support of Yermack, (1996) and Sanda et al, 2005). This result is dissimilar to Daily and Dalton, (1992); Kajola, 2008). However, both board size and board audit committee show no significant relationship with ROA and ROE at 1%, 5% and 10% levels.

Table 4: Multiple Regression Results (N=93)

<table>
<thead>
<tr>
<th>Variables</th>
<th>ROA</th>
<th>ROE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Beta Coefficient</td>
<td>t-value</td>
</tr>
<tr>
<td>BSIZE</td>
<td>-0.043</td>
<td>-0.419</td>
</tr>
<tr>
<td>BIND</td>
<td>0.264</td>
<td>2.321</td>
</tr>
<tr>
<td>CEO</td>
<td>0.152</td>
<td>1.312</td>
</tr>
<tr>
<td>BACOM</td>
<td>0.015</td>
<td>0.133</td>
</tr>
</tbody>
</table>

R Square = 0.125 ; Adjusted R square = 0.086; F value =3.15 ; F significance = 0.018; Durbin Watson =1.883
R Square = 0.219; Adjusted R square = 0.189; F value =6.17 ; F significance = 0.000; Durbin Watson =2.016

* P<0.1, two-tailed, ** P<0.05, two-tailed, *** P<0.01, two-tailed

Conclusion
This study examines the relationship that exists between four corporate governance mechanisms (board size, board independent director, chief executive officer duality and board audit committee) and value of the firm, using two proxies, (ROA and ROE) . A sample size of 93 non-financial firms listed on the Dhaka Stock Exchange (DSE) in 2006 is used. Panel data methodology is employed; the method of analysis is multiple regressions and the method of regression is OLS. The result of the study indicate that a positive and significant relationship between ROA and board independent director at 5% level and a positive and significant relationship between ROA and chief executive duality at 10% level but there is no significant relationship board size and board audit committee with ROA at 1%, 5% and 10% level. On the other hand, a positive and significant relationship between ROE and board independent director at 5% level and a positive and significant relationship between ROE and chief executive officer at 1% level but there is no significant relationship board size and board audit committee with ROE at 1%, 5% and 10% level.
Limitation
There are a number of limitations of this study as well. First limitation of the study is used only non-financial companies as a sample. So, the results may not extend across all companies in Bangladesh. Second, the study considers data of only one year. The results may differ across different years if multiple years are considered for analysis. Regarding future line of research, efforts should be put at increasing the sample size and the corporate governance variables, particularly the inclusion of ownership structure.

Bibliography


Foreign direct investment in Black Sea region

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Abstract:
This paper analyzes policies to attract Foreign Direct Investment (FDI) International competition to attract foreign direct investment (FDI) has increasingly intensified. After this study the conclusion is that the Black Sea presents great opportunities that remain largely unrealized.

Keywords: foreign investment, business climate, management

Policies to attract Foreign Direct Investment (FDI) have become standard in most countries, irrespective of their level of development, geographical location or industrial structure. Some analysis shows which variables impact economically and statistically significant on inward FDI stock it does not give an impression which of the (policy) variables should be altered to attract FDI given a country's relative position with respect to the various policy measures, i.e. whether a country is below or above the "best practice policy" values. An analysis based on the gap between estimated and potential FDI also shows which FDI attraction policies should be carried out by a particular country in a particular industry.

There are promising trends in global foreign direct investment (FDI) flows for developing and transition economies. Each year more and more FDI is flowing not only from developed into developing economies but also from one developing or transition economy to another. Indeed, developing and transition economies’ share of global FDI inflows rose from roughly 19 percent in 2000 to 52 percent in 2010 - for the first time
Foreign direct investment in Black Sea region

Foreign direct investment in Black Sea region

In the past few decades, hundreds of theoretical and empirical studies have attempted to pinpoint the main factors in investors’ decisions on where to invest. Most empirical work has found that multiple factors are significantly associated with FDI inflows and that in some cases they interact. The determinants identified as significant vary depending on the countries, sectors, years, and types of investment studied. And many studies have been unable to overcome econometric identification challenges. Thus, a definitive understanding of what drives investment decisions would require an understanding of the context for each FDI project.

The experts said that while the presence of natural resources remains a key FDI driver to Black Sea, investment climate variables such as economic, political, and policy options matter as well in attracting investment.

The Black Sea basin is strategically important region at the crossroads between Europe, the Middle East, and Asia. The region serves as a pivotal East-West and North-South corridor and a crossroad of geopolitics, commerce, energy, and culture where the interests of four major international actors overlap: the European Union (EU), the United States (U.S.), NATO, and Russia. It is a very dynamic area that presents various challenges and offers numerous opportunities. As a result, its development requires special consideration by policymakers.

The Black Sea (known as the Euxine Sea in antiquity) is an Inland Sea between southeastern Europe and Asia Minor. Countries bordering the Black Sea are Romania, Ukraine, Russia, Georgia, Turkey, and Bulgaria. Important cities along the coast include Constanța, Yalta, Odessa, Sevastopol, Kerch, Novorossiysk, Sochi, Sukhumi, Batumi, Trabzon, Samsun, Istanbul, Burgas, Varna.

Intense commercial activity around the Black Sea dates back to Antiquity. Since the end of the Cold War, the Black Sea states have intensified regional cooperation. Beyond oil and gas trade, regional electricity trade in Southeast Europe and Turkey will become increasingly important in the medium term. Both Romania and Bulgaria have surplus refining capacity, which, if adequately upgraded, could sell products to the entire Southeast European market.

All the country in the Black Sea region requires massive foreign investment to develop their energy production, transport and
distribution sectors. Political stability and economic reform are required for these countries to compete successfully with other regions of the world for scarce investment dollars.

Since the end of the Cold War, the Black Sea region has no longer been a static border between the West and the East. Western institutions focused primarily on the transition of Central and Eastern Europe and did not view the Black Sea region as a distinct zone. For about a decade after 1989, the Black Sea area largely remained outside the reform and integration agenda of the European project. The Black Sea region is re-emerging from the periphery and establishing itself as a part of the Euro Atlantic project.

All this countries Romania, Bulgaria, Turkey, Georgia, but also Russia and Ukraine are competing to establish themselves as energy transit countries. They also offer potential opportunities in the refining and distribution sector. The gas market is expected to grow substantially in all riveran states.

The energy profiles of the six countries are very diverse: Bulgaria, Romania and Turkey are trying to reduce their heavy reliance on domestic coal by increasing gas imports. Romania – with its Canadian-design plant – and Bulgaria – with two more recent reactors – will continue to rely on nuclear energy. Turkey plans to build a nuclear plant as well. These countries are net importers, ranging from Romania, which imports 39% of Total Primary Energy Supply, to Georgia 80% of TPES imported.

Thereby the attraction of Foreign Direct Investment (FDI) is of paramount importance to the countries of the Black Sea Region. The benefits arising from FDI are the obvious ones stemming from the influx of capital and creation of new jobs. However, of equal if not greater importance, especially for the Transition Economies of that Region, is the linkages and the other spill over effects they can generate. The term linkages refer to the connection of the supply chains of Multinational Companies (MNC) to the supply chains of local Small and Medium Enterprises SMEs. This connection, for example in the form of an SME becoming a supplier of the MNC, will help the SMEs in Region harvest the benefits of the globalize economy instead of just suffering through the competitive pressures it brings. As to the other spill over effects, these include the transfer of new technologies of production and distribution, new management and corporate practices, new working methods, even new mentalities.
However, at the time where FDI is needed the most the global outlook is dim. In the last few years the global flows have decreased. However more and more developing countries try to attract foreign investments in a hugely competitive environment, in which the developed countries have traditionally been getting the lion’s share.

The FDI that the Black Sea Region has been attracting in the last few years has been insignificant. Investors had turned away from the Region. In contrast, Central and Eastern Europe (Hungary, Poland and Czech Republic etc.) have been getting a steady larger stream of global FDI flows.

A good business climate is of primary importance to the attraction of FDI and, unfortunately, in the Black Sea Region it’s easy to find barriers and disincentives for businesspeople. Bureaucracy, frequently changing rules of the game, corruption continues making the life of local and foreign businesspeople difficult in many places within the Region. The primary strategy countries should develop is the improvement of the business climate. What is needed, however, is first and foremost political will for the enforcement and implementation of legislation that is already largely in place. The 16% flat tax introduced in Romania in 2005 is a good example that hopefully the business climate is changing and will attract investors.

Second importance has the market. Questions prospective investors have about a country are: Is there a market for my products? Or, is there access to markets for my products? The answer to this question brings into sharp focus the value of the regional cooperation. By establishing a regional market it can be showed to the global investors that investing in any of these countries automatically gives them access to a huge market of one third of a billion people. It is therefore imperative to bring down as many as possible non-tariff barriers within the Region and thus increase our internal trade flows.

Apart from the above two general overriding needs – favourable business climate, access to markets – each investor has other important needs of specific nature that Governments must understand thoroughly.

Conclusions
Both a review of the empirical literature and analysis using new data sources suggest that business opportunities - as represented by, for example, the size and growth potential of markets - are by far the most powerful determinants of FDI. But investment climate features such as
strong institutions and investor-friendly regulations also matter for
developing and transition economies seeking to attract additional FDI.
In a poor investment climate foreign investors and host economies may
not be able to benefit fully from business opportunities created by
market size and growth potential. An economy that has a poor
investment climate is therefore likely to attract both less FDI and lower-
quality FDI than it otherwise could.

Regarding economic development, privatization, attracting FDI,
and modernization of infrastructure should be at the forefront of all
government agendas. In addition, restructuring the inefficient industries
and encouraging entrepreneurship will stimulate growth and decrease
the large current account deficits of the states in the Black sea area.

The Black Sea Region has been out of the international investors’
paths for several years and all Black Sea countries must cooperate to put
the Region firmly again on the investors map. It is only to be hoped that
we will now start seeing more and more FDI flows coming into those
countries.

Bibliography

Economics of Transition 13 (1): 77–103
Cointegration Analysis of the Economic Growth, Military Expenditure, and External Debt: Evidence from Pakistan

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Abstract
This paper attempts to examine the relationship between real military spending (RME), level of economic activity (RGNP), and real external debt (RED) by using a Johansen multivariate cointegration framework. The analysis is carried out using time series data over 1980-2008. The study investigates the long-run effects and short-run dynamics of the effect of rise in RGNP and RME on RED Pakistan. The quantitative evidence shows that external debt is more elastic with respect to military expenditure in the long run, whereas, there has been insignificant effect in the short-run. In the long-run, 1.00% increase in military expenditure leads to an increase in external debt by almost 3.96%. On the other hand, 1.00% increases in economic growth decreases external debt by 2.13%. In the short run, 1.00% increase in economic growth reduces external debt by 2.90%. The results presented in this study reinforce the importance to government, academic, and policy makers.

Keywords: military expenditure, external debt, national income, cointegration, impulse response function, Pakistan.

Introduction
The relationship between military expenditure-economic growth and external debt- economic growth has been the focus of many studies. Mostly the impact of military expenditure and external debt on
economic growth is debated. However, the impact of economic growth and military expenditure on external debt has received less attention in the literature.

Military expenditure can be expected to have a positive effect on external debt through three channels. First, military expenditure is a budget item that needs to be financed. If taxation is not sufficient to finance military expenditure, a budget deficit will ensue. If the means to finance deficits domestically is limited, budget deficits may create a need for foreign borrowing and thus debt accumulation. Second, a component of military expenditure may be allocated to arms imports, which will require foreign exchange. If the country lacks foreign exchange, it will need to borrow externally, contributing to external debt (see Dunne et al, 2004). Third, indigenous arms production may generate demand for foreign exchange in the form of high-tech imported intermediate inputs and machinery (Gunluk-Senesen, 2004).

In countries with large military expenditure, the role of military spending in contributing to external debt is important because of the potential adverse economic effects of external debt. While foreign borrowing need not harm economic growth, excessive foreign debt accumulation can cause deterioration in the terms of trade, an overvaluation of the domestic currency and slower economic growth. Since the seminal contribution by Benoit (1973, 1978) several studies have examined the effect of military expenditure on economic growth including Deger and Sen, (1995), Ram (1995), Dunne (1996) and Dunne et al (2005). The empirical evidence of the military expenditure-economic growth nexus varies across countries and time and is sensitive to the theoretical framework. Conceptually military expenditure could have a positive or negative effect on economic growth. On the one hand, military expenditure could have a positive effect on economic growth through Keynesian-type aggregate demand stimulation and the creation of positive externalities from human capital and infrastructure. Studies which have found that military expenditure has a positive effect on economic growth include Mueller & Atesoglu (1993), MacNair et al. (1995), Chlestos & Kollias (1995), Dunne et al (2001) and Yildirim & Sezgin (2002). Equally military spending may have a negative effect on economic growth through reducing the availability of public funds for spending in the supposedly more productive civilian sector and creating inflationary pressures. Deger (1986) found negative relationship between military expenditure and growth in the less developed countries.
(LDCs), citing that defense expenditure takes resources away from productive investments and fails to mobilize and create additional savings. Studies which have found that military expenditure retards economic growth include Antonakis (1997), Heo (1998), Dunne & Mohammed (1995), Linden (1992) and Dunne et al (2002). Yildirim et al (2006) examined the issue of arms race between India and Pakistan and its relation to each country’s economic growth. They found that there is a unidirectional causal relationship between military expenditure of India and Pakistan. AbupBader and AbupQarn (2003) found negative effect between military burden and economic growth in Egypt, Israel and Syria. They also found that civilian expenditure caused positive economic growth in Israel and Syria. In a study carried out by Dunne et al (2003) no evidence was found that military burden had any impact on the evolution of debt in Argentina and Brazil, but some evidence that military burden tended to increase debt in Chile.

Hartley and Sandler (1990) and Hatler (1991) opines that in specialist defense firms, the government dominates and determines the firm's culture and that culture tends to be one of dependence on the government rather than an enterprise culture responsive to changing market demands. It is not unknown for defense contractors in non-competitive markets to be criticized for high costs, cost escalation, delays, unsatisfactory equipment performance, waste and excessive profits. In addition, Sandler and Hartley (1995) provide an extensive survey of the field of defense economics and the study of defense and peace issues with the application of economic analysis and methods. These works point out that Military Expenditure are associated with a variety of factors: a) The level of GNP, b) The level of relative defense price (if available), c) the aggregate military expenditure of other allies (if any) and finally d) the threat perception (i.e military spending of the enemy). Other factors are associated with public opinion, international events and inter-service rivalries. Kennedy (1989) in his book “the rise and fall of the great powers: economic change and military conflict from 1500-2000) describes how the past 500 years shows that nations which became great powers had to decline as their growth rate slowed and their spending on defense continued to increase and explains how this can be eased or worsened by clever or short-sighted policy decisions. Winter (1975) in his book “war and economic development” describes about wars, or collective violence which came in many forms
and sizes. The widespread devastation and global reach of the second world war to the limited and confined actions of many insurgency campaigns. However, local the consequences of wars, they invariably have a major effect on the lives of those individuals and institutions they touch.

McNeil (1982) in his book “the pursuit of power: technology, armed force, and society since A.D. 1000” argued that commercial transformation of world society in the eleventh century caused military activity to respond increasingly to market forces as well as to the commands of rulers. McNeill emphasizes the power of market forces and the incredibly stimulating effect the early markets of Western Europe had on technological development. By the time he wrote "Pursuit of Power," McNeill had come to see the return of command innovation where technological change is driven by the direction and investment of sprawling state bureaucracies, much as the feudal lords of Medieval Europe controlled military technology. Barber and Harrison (2000) in his book “The Soviet Defense-Industry Complex from Stalin to Khrushchev” argue that the notion of a military-industrial complex does not adequately describe the conditions of Soviet society, because the relations among defense enterprises, the military, and the government were fundamentally different from the corresponding relations in capitalist countries. Civilian enterprises often took pains to avoid having to accept military production and the problems it often entailed. Hence, although the military and security organs play an important role in this study, the authors' focus is on the defense-industry complex - the enterprises and design bureaus that produced military goods.

In this paper an analysis has been carried out to find a statistical relationship between military expenditure, economic growth and external debt in Pakistan using secondary data from 1980 to 2009. This paper does not include all dimensions and factors of the military expenditure-growth problems but limited to the following variables:

- **Military Expenditures**: According to UN report (1977), military capability as the ability to apply organized military force against an external military threat or an external armed enemy. However, the scope and content of military expenditures varies significantly according to the objective sought.
- **Economic Growth**: There are two opposing views regarding the trade-off between military spending and economic growth. The first
one believes in the positive trade-off between military spending and economic growth. Higher aggregate demand generated by military expenditure leads to the creation of employment opportunities and the construction of infrastructure (Benoit, 1973; Brumm, 1997; Melman, 1988). The second view i.e. defense expenditure diverts resources away from productive activities and leave adverse impact on economic growth (Lim, 1983; Klein, 2004).

- External Debt: According to Brzoska (1983) and Looney and Frederiksen (1986) suggest that borrowing to finance military expenditure will have a negative effect on a country’s growth rate if it faces constraints on international borrowing. Consistent with the ‘guns butter trade-off’, the rationale is that arms purchased with scarce foreign exchange reduces resources available for importing intermediate and investment goods that promote sustainable long-run economic growth (Looney, 1989; Dunne, Perlo-Freeman & Soydan, 2004).

In the light of above discussion, the more specific objectives are:

i. To estimate whether there is a long-run relationship between real military expenditure, real income, and real external debt in Pakistan.

ii. To estimate the long-run and short-run effects of real military spending and real income on real external debt in Pakistan.

A Johansen’s methodology is used to (a) test for cointegration, (b) estimate the long-run parameters, and (c) examine the short-run dynamics. Impulse Response Function (IRF) and Variance Decomposition techniques are used for forecasting. The study used a sophisticated econometric technique with additional tests of forecasting framework to examine the effect of military expenditure on external debt over a 10 year period.

This paper is organized in five sections. Section 2 shows a brief overview of economic growth, military expenditure, and external debt in Pakistan. Section 3 provides data source and methodological framework. The empirical results are presented in Section 4, while the final section concludes the study.

**Overview of economic growth, military expenditure and external debt in Pakistan**

**Economic Growth:** Pakistan’s economy has gone through a various stages of decline and high economic growth over the first six
decades (1960 - 2010) which provides an interesting case study. A view of economic growth during the first six decades as mentioned in the following Table 1.

<table>
<thead>
<tr>
<th>Decades/Year</th>
<th>Economic Growth (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960s</td>
<td>6.8</td>
</tr>
<tr>
<td>1970s</td>
<td>4.8</td>
</tr>
<tr>
<td>1980s</td>
<td>6.5</td>
</tr>
<tr>
<td>1990s</td>
<td>4.6</td>
</tr>
<tr>
<td>2000s*</td>
<td>4.8</td>
</tr>
</tbody>
</table>


Despite the various efforts, Pakistan failed to achieve a sustainable growth. “The unsustainable economic growth has been blamed mainly on the high inflation rate, a mounting fiscal deficit, increasing foreign debt and debt servicing, weak foreign demand for Pakistani products, low level of physical and human capital, unfavorable weather, political instability, and, among other factors, a deteriorating law and order situation in the country” (Iqbal and Zahid, 1998). The following figure 1 shows a clear picture of real GNP from 1980-2008.

* Source: Economic Survey of Pakistan (2009-2010)
Military Expenditure: The share of current expenditure out of total expenditures has declined from 88% in 1999-2000 to 81.4% in 2007-08, mainly because of an enormous fall in interest related expenditure. In absolute terms, current expenditure stood at Rs. 1858 billion in 2007-08 and is budgeted at Rs. 2066 billion for 2008-09. Defense, the second largest component of the current expenditure, remained stagnant at around 3.89 % of GNP during the last six years (2003-2008). Real military expenditures for period of 1980-2008 gives a clear picture as shown in Figure 2 below:

Figure 2: Trend analysis of real military expenditure (RME)

External Debt: In the decade of the 1980s, Pakistan’s debt stock more than doubled from US $ 11.4 billion in 1980-1981 to US $ 22.35 billion in 1989-1990. In terms of its share of GDP, the debt stock increased from around 40 per cent to 56 per cent of the GDP during the same time period. During the 1990s, the debt stock increased from US $ 25 billion to US $ 34 billion and the debt stock-GDP ratio increased to 61 per cent in 1998-99 (Sayeed and Rashid, 2003).

Pakistan has experienced serious debt problems in the 1980s and accordingly deterioration in the macroeconomic environment, leading to
deceleration in investment rate and economic growth and the associated rise in the incidence of poverty. In real terms, External Debt Liabilities (EDL) increased from US $ 5136 million to $ 7314 million between 2000 and 2008. During the same period, EDL as a percentage of GNP decreased by 9.0% to 4.9%. However, the last two years (2008 and 2009) have seen an increase in the rate of growth of EDL, as external debt and liabilities have been increasing not only in absolute terms, but also as a percentage of some major economic indicators. This shift in momentum shown in figure 3 which highlighted the crucial role played by current account deficit and exchange rate stability on a country’s debt burden (Economic Survey, 2008-09).

**Figure 3: Trend analysis of real external debt (RED)**

\[ \text{US$ million} \]

Source: Economic Survey of Pakistan (2009-2010)

In 1980, defense expenditure together with debt servicing have accounted for around 80% of current expenditure (Looney, 1995).

**Data and methodology**

The data of military expenditures are taken from the Stockholm International Peace Research Institute (SIPRI, 2009) and the data of GNP and external debt were taken from Economic Survey of Pakistan (2009-10) for the period of 1980-2009. Defense expenditure data for
Pakistan is available from 1980 onwards. Due to this limitation, we have used the limited data of thirty years. All of the dependent and explanatory variables were deflated by the consumer price index (CPI), whereby the year 2000 was treated as the base year ($2000 = 100$). Furthermore, all of the series were transformed into log form. Log transformation can reduce the problem of heteroscedasticity because it compresses the scale in which the variables are measured, thereby reducing a tenfold difference between two values to a twofold difference (Gujarati, 2003). In this research, a recent technique, the Johansen’s co-integration technique, is employed to find a long-run relationship between the variables.

**Conceptual Framework**

The study used the Production Function (PF) analytical framework to estimate the external debt attributable to economic growth and military expenditure. A production function describes the transformation of the factors of production (inputs) into outputs with its existing technology. Formally, the effect of economic growth and military expenditures on external debt can be expressed as follows:

$$ED = f(GNP, ME)$$  

where: GNP is the real Gross National Product, ME is the military expenditure and ED is the external debt.

Equation (i) shows the effect of ME on ED, holding the effect of GNP. If military spending increases, it puts up the burden on the developing economies like Pakistan in the form of borrowing external debt. In other words, if the state cuts the military budget, a lot of firms go bankrupt, the unemployment rate increases and the GNP decreases. The coefficient for ME variable would be expected to assume a negative sign. The effects of the explanatory variables on the dependent variable (GDP) are unlikely to be linear; thus, in this study we shall estimate Cobb-Douglas production function of the following form:

$$ED = a GNP^{\beta_1} ME^{\beta_2} e$$  

(ii)
Taking the logarithms of both sides of equation (ii), we obtain the following log-log (or double-log, log-linear or constant elasticity model):

\[ \log(ED) = \log(a) + \beta_1 \log(GNP) + \beta_2 \log(ME) + e \]  

(iii)

where: \( \log \) is the natural log (i.e. log to the base \( e \), where \( e \) equals 2.718); \( a \) is the intercept term (i.e. the debt, if all the explanatory variables included in the model were equal to zero); \( \beta \)'s are the coefficients of elasticity, which can take any value between 0 (perfectly inelastic) to \( \infty \) (perfectly/infinitely elastic); and \( e \) is a random (stochastic) error term capturing all factors that affect external debt but are not taken into account explicitly in the model.

**Econometric Framework**

**Econometric model:** Comparable to all other techniques, that utilize time series data, it is essential to distinguish that unless the diagnostic tools used account for the dynamics of the link within a sequential 'causal' framework, the intricacy of the interrelationships involved may not be fully confined. For this rationale, there is a condition for utilizing the advances in time-series version. The study follows the framework of Smyth and Narayan (2009). The following model is estimated:

\[ D\ln(RED) = C + \alpha_0 D\ln(RGNP) + \alpha_1 D\ln(RME) + \alpha_2 \ln(RED(-1)) + \alpha_3 \ln(RGNP(-1)) + \alpha_4 \ln(RME(-1)) + \varepsilon \]

(1)

where:
- \( \ln \) = Natural Logarithm
- \( RED \) = Real External Debt (US$ in millions)
- \( RGNP \) = Real Gross National Product (US$ in millions)
- \( RME \) = Real Military Expenditure (US$ in millions)
- \( -1 \) = First lag value
- \( D \) = First Difference
- \( \varepsilon \) = Error Term

Estimation of equation (1) with sample data will provide fairly accurate long-run external debt, economic growth, and military
Cointegration Analysis of the Economic Growth, Military Expenditure, and External Debt: Evidence from Pakistan

expenditure elasticity’s. Augmenting lagged terms will add formation to the dynamics. The following sequential procedures are adopted as part of methodology used.

**Univariate test:** In order to confirm the degree, these series split univariate integration properties; we execute unit root stationarity tests. The DF (Dickey & Fuller, 1979 and 1981) and the non-parametric Phillips-Perron (PP) type tests developed by Phillips & Perron (1988) are suitable testing procedures, both based on the null hypothesis that a unit root exists in the autoregressive representation of the time series. The Phillips-Perron statistics are shown to perform badly over small samples.

**Setting the appropriate lag length of the model:** The most common procedure in choosing the optimal lag length is to estimate a VAR model including all our variables in non-differenced data. This VAR model should be estimated for a large number of lags, then reducing down by re-estimating the model for one lag less until we reach zero lags. In each of these models we inspect the values of AIC and the SBC criteria. The model that minimizes the AIC and the SBC is selected as the one with the optimal lag length.

**Choosing the appropriate model regarding the deterministic components in the multivariate system:**

In general five distinct models can be considered. Although the first and the fifth model are not that realistic and they are also implausible in terms of economic theory, therefore, the problem reduces to a choice of one of the three remaining models (model 2, 3 and 4).

- **Model 1:** No intercept or trend in CE or VAR.
- **Model 2:** Intercept (no trend) in CE, no intercept or trend in VAR.
- **Model 3:** Intercept in CE and VAR, no trends in CE and VAR.
- **Model 4:** Intercept in CE and VAR, linear trend in CE, no trend in VAR.
- **Model 5:** Intercept and quadratic trend in the CE intercept and linear trend in VAR.

**Determining the ranks of Π or the number of cointegrating vectors:** For the intention of investigating the long-run relationship
among the variables, they must be co-integrated. In the multivariate case, if the I(1) variables are linked by more than one co-integrating vector, the Engle-Granger (1987) procedure is not applicable. The test for co-integration used here is the likelihood ratio put forward by Johansen and Juselius (1990), indicating that the maximum likelihood method is more appropriate in a multivariate system. Therefore, this method is used in this study to identify the number of co-integrated vectors in the model. The Johansen and Juselius method has been developed in part by the literature available in the field and reduced rank regression, and the co-integrating vector ‘r’ is defined by Johansen as the maximum Eigen-value and trace test. There is ‘r’ or more co-integrating vectors. Johansen and Juselius (1990) propose that the multivariate co-integration methodology can be defined as:

\[
\ln (\text{RED}_t) = \ln (\text{RGNP}, \text{RME}) \ldots \ldots 
\]

which is a vector of \( P = 2 \) elements. Considering the following autoregressive representation:

\[ \text{RED}_t = \pi + \sum_{i=1}^{K} \pi_i \text{RED}_{t-i} + \mu_t \]

Johansen’s method involves the estimation of the above equation by the maximum likelihood technique, and the testing of the hypothesis \( H_o: (\pi = \Psi \xi) \) of ‘r’ co-integrating relationships, where ‘r’ is the rank or the matrix \( \pi(0 \leq r \leq P) \), \( \Psi \) is the matrix of weights with which the variable enters co-integrating relationships and \( \xi \) is the matrix of co-integrating vectors. The null hypothesis of non-cointegration among variables is rejected when the estimated likelihood test statistic \( \phi = -n \sum_{t=r+1}^{p} \ln(1 - \hat{\lambda}_t) \) exceeds its critical value.

Given estimates of the Eigen-value \( \hat{\lambda}_t \) the Eigen-vector \( \hat{\xi}_t \) and the weights \( (\Psi_i) \), we can find out whether or not the variables in the vector \( \text{RED}_t \) are co-integrated in one or more long-run relationships among the dependent variables.

If the time series are integrated at first difference, then one could run regressions in their first differences. However, by taking first differences, we drop the long-run correlation that is stored in the data. This means that one needs to use variables in levels as well. Error
Correction Model (ECM) incorporates variables both in their levels and first differences. ECM depicts the short-run disequilibrium as well as the long-run equilibrium adjustments between variables. ECM term having negative sign and value between “0 to 1” specifies convergence of the model towards long run equilibrium.

**Impulse Responses:** A shock to the $i$-th variable not only directly affects the $i$-th variable but is also transmitted to all of the other endogenous variables through the dynamic (lag) structure of the VAR. An impulse response function traces the effect of a one-time shock to one of the innovations on current and future values of the endogenous variables (EViews 5 User’s Guide, 2010).

**Variance Decomposition:** While impulse response functions trace the effects of a shock to one endogenous variable on to the other variables in the VAR, variance decomposition separates the variation in an endogenous variable into the component shocks to the VAR. Thus, the variance decomposition provides information about the relative importance of each random innovation in affecting the variables in the VAR (EViews 5 User’s Guide, 2010).

**Results and discussion**

The preliminary step in this analysis is to establish the degree of integration of each variable. To get reliable results for equation 1, the implicit assumption is that the variables in equation 1 are $I(1)$ and co-integrated. We test for the existence of a unit root in the level and the first difference of each variable in our sample using the Augmented Dickey Fuller (ADF) and Phillips-Perron (PP) test. Both ADF and PP test statistics check the stationarity of series. The results in Table 2 reveal that all other variables are non-stationary in their level data. However, stationarity is found in the first differencing level of the variables i.e., Real External Debt (RED), Real Economic Growth (RGNP) and Real Military Expenditure (RME).

Now the issue of finding the appropriate lag length is very important because we want to have Gaussian error terms. The most common procedure in choosing the optimal lag length is to estimate a VAR model including all three variables in levels (non-differenced data). The study tested for the existence of long-run relationships. As
the study use annual data, the maximum number of lags was set equal to 1 showing in Table 3.

Table 2: Unit Root Estimation

<table>
<thead>
<tr>
<th>Variables</th>
<th>ADF Test</th>
<th>Phillips-Perron (PP) Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>Level</td>
</tr>
<tr>
<td>RED</td>
<td>Constant</td>
<td>Constant</td>
</tr>
<tr>
<td></td>
<td>-1.924 (1)</td>
<td>-1.724 (2)</td>
</tr>
<tr>
<td>RGNP</td>
<td>4.539 (0)</td>
<td>4.136 (1)</td>
</tr>
<tr>
<td>RME</td>
<td>4.479 (0)</td>
<td>4.021 (1)</td>
</tr>
<tr>
<td></td>
<td>Constant and Trend</td>
<td>Constant and Trend</td>
</tr>
<tr>
<td></td>
<td>-2.103 (1)</td>
<td>-1.862 (2)</td>
</tr>
<tr>
<td></td>
<td>1.446 (0)</td>
<td>1.195 (1)</td>
</tr>
<tr>
<td></td>
<td>1.456 (0)</td>
<td>1.299 (1)</td>
</tr>
<tr>
<td></td>
<td>Constant and Trend</td>
<td>Constant and Trend</td>
</tr>
<tr>
<td></td>
<td>-7.254* (0)</td>
<td>-7.109* (2)</td>
</tr>
<tr>
<td></td>
<td>-2.380 (0)</td>
<td>-2.239 (2)</td>
</tr>
<tr>
<td></td>
<td>-3.911* (0)</td>
<td>-2.241 (2)</td>
</tr>
<tr>
<td></td>
<td>-3.835* (0)</td>
<td>-3.587**(2)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RED</td>
<td></td>
<td>* Significant at 1%; ** significant at 5% level respectively. Bracket shows lag length for ADF test and Bandwidth for PP test.</td>
</tr>
</tbody>
</table>

Table 3: VAR Lag Order Selection Criteria

<table>
<thead>
<tr>
<th>Lag</th>
<th>Log L</th>
<th>LR</th>
<th>FPE</th>
<th>AIC</th>
<th>SC</th>
<th>HQ</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>-606.2541</td>
<td>NA</td>
<td>2.25e+18</td>
<td>50.77118</td>
<td>50.91843</td>
<td>50.81024</td>
</tr>
<tr>
<td>1</td>
<td>-586.3903</td>
<td>33.10631*</td>
<td>9.19e+17*</td>
<td>49.86586*</td>
<td>50.45489*</td>
<td>50.02213*</td>
</tr>
<tr>
<td>2</td>
<td>-577.5178</td>
<td>12.56944</td>
<td>9.69e+17</td>
<td>49.87648</td>
<td>50.90728</td>
<td>50.14995</td>
</tr>
<tr>
<td>3</td>
<td>-569.8079</td>
<td>8.994889</td>
<td>1.20e+18</td>
<td>49.98399</td>
<td>51.45656</td>
<td>50.37466</td>
</tr>
<tr>
<td>4</td>
<td>-560.9003</td>
<td>8.165301</td>
<td>1.52e+18</td>
<td>49.99169</td>
<td>51.90603</td>
<td>50.49956</td>
</tr>
</tbody>
</table>

* indicates lag order selected by the criterion
LR: sequence modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike Information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

The relationship between dependent variable (Real External Debt) and the independent variables (Real Military Expenditure and Real GNP) is observed using the multivariate cointegration
methodology proposed by Johansen (1988) and Johansen & Juselius (1990). The Johansen’s Cointegration Test designates at least one cointegrating vector. Thus, long run relationship is maintained by the data generating method. Using Johansen and Juselius (1990) multivariate cointegration tests the study finds that a statistically significant relationship exists between independent variables on external debt (RED). The following cointegrating vector has been determined in Table 4, 5 and 6 respectively.

**Table 4: Cointegration Test Results (Model 2)**

<table>
<thead>
<tr>
<th>HO</th>
<th>H1</th>
<th>TEST STATISTIC</th>
<th>0.05 CRITICAL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>λ trace</td>
<td></td>
<td>Λ TRACE</td>
<td></td>
</tr>
<tr>
<td>r=0*</td>
<td>r&gt;0</td>
<td>37.68516</td>
<td>35.19275</td>
</tr>
<tr>
<td>r≤1</td>
<td>r&gt;1</td>
<td>18.24465</td>
<td>20.26185</td>
</tr>
<tr>
<td>r≤2</td>
<td>r&gt;2</td>
<td>6.24124</td>
<td>9.16454</td>
</tr>
</tbody>
</table>

Model 2: Intercept (no trend) in CE, no intercept or trend in VAR

This study starts with the null hypothesis of no co-integration \((r=0)\) among the variables. It is found that the trace statistic of 37.68 exceeds the 95 per cent critical value \((35.19)\) of the \(\lambda\) trace statistic. It is possible to reject the null hypothesis \((r=0)\) of no co-integration vector in favor of the general alternative \(r > 0\). The null hypotheses of \(r > 1, r > 2\) cannot be rejected at 5 per cent level of confidence. Consequently, we conclude that there is 1 co-integration relationships involving the variables log (RED), log (RGNP) and log (RME). Now we take model 3 to check the cointegration vector.

**Table 5: Cointegration Test Results (Model 3)**

<table>
<thead>
<tr>
<th>HO</th>
<th>H1</th>
<th>TEST STATISTIC</th>
<th>0.05 CRITICAL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>λ trace</td>
<td></td>
<td>Λ TRACE</td>
<td></td>
</tr>
<tr>
<td>r=0*</td>
<td>r&gt;0</td>
<td>45.51222</td>
<td>29.79707</td>
</tr>
<tr>
<td>r≤1</td>
<td>r&gt;1</td>
<td>22.15526</td>
<td>15.49471</td>
</tr>
<tr>
<td>r≤2</td>
<td>r&gt;2</td>
<td>10.96425</td>
<td>3.841466</td>
</tr>
</tbody>
</table>

Model 3: Intercept in CE and VAR, no trends in CE and VAR
In Table 5, we start with the null hypothesis of no cointegration \((r=0)\) among the variables. It is found that the trace statistic of 45.51 exceeds the 95 per cent critical value (29.79) of the \(\lambda\) trace statistic. It is possible to reject the null hypothesis \((r=0)\) of no cointegration vector in favor of the general alternative \(r > 0\). The null hypotheses of \(r > 1, r > 2\) are also rejected at 5 per cent level of significance. Consequently, we conclude that there are 3 cointegration relationships involving the variables log (RED), log (RGNP) and log (RME). Similarly, we bring model 4 for further investigation for cointegration vector.

**Table 6: Cointegration Test Results (Model 4)**

<table>
<thead>
<tr>
<th>(\lambda) trace</th>
<th>H1</th>
<th>TEST STATISTIC</th>
<th>0.05 CRITICAL VALUES</th>
</tr>
</thead>
<tbody>
<tr>
<td>(r=0^\ast)</td>
<td>(\Lambda) TRACE</td>
<td>46.3454</td>
<td>42.91525</td>
</tr>
<tr>
<td>(r \leq 1)</td>
<td>(r &gt; 1)</td>
<td>18.3510</td>
<td>25.87211</td>
</tr>
<tr>
<td>(r \leq 2)</td>
<td>(r &gt; 2)</td>
<td>7.1581</td>
<td>12.51798</td>
</tr>
</tbody>
</table>

Model 4: Intercept in CE and VAR, linear trend in CE, no trend in VAR

Table 6 indicates that there is only one cointegrating vector as the trace statistic of 46.34 exceeds the 95 per cent critical value (42.91) of the \(\lambda\) trace statistic. It is possible to reject the null hypothesis \((r=0)\) of no cointegration vector in favor of the general alternative \(r > 0\). The null hypotheses of \(r > 1, r > 2\) cannot be rejected at 5 per cent level of confidence. Consequently, we conclude that there is an only 1 cointegration relationship involving the variables log (RED), log (RGNP) and log (RME). In the next step, we combined the trace statistics for all three models together in order to choose which model is appropriate. The results are shown in Table 7.

**Table 7: The Pantula Principle Test**

<table>
<thead>
<tr>
<th>R</th>
<th>n-r</th>
<th>model 2</th>
<th>model 3</th>
<th>model 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3</td>
<td>37.68516*</td>
<td>29.79707*</td>
<td>46.3454*</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>18.24465</td>
<td>15.49471*</td>
<td>18.3510</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>6.24124</td>
<td>3.841466*</td>
<td>7.1581</td>
</tr>
</tbody>
</table>
From the above results it is shown that model 3 is appropriate because there are greater numbers of cointegrating vectors as compared to other models results. In order to check the stability of the long-run relationship between the log (RED) and their independent variables, we assess the Error Correction Model in Table 8 (a) and 8 (b) respectively.

**Table 8 a): Empirical Results of the Error Correction Model**

<table>
<thead>
<tr>
<th>Variables</th>
<th>Short-run and Long-run elasticity’s (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>-8.369 (0.152)</td>
</tr>
<tr>
<td>D Log (RGNP)</td>
<td>-2.902* (0.001)</td>
</tr>
<tr>
<td>D Log (RME)</td>
<td>-1.734 (0.315)</td>
</tr>
<tr>
<td>Log(RED(-1))</td>
<td>-0.936* (0.000)</td>
</tr>
<tr>
<td>Log(RGNP(-1))</td>
<td>-2.139* (0.004)</td>
</tr>
<tr>
<td>Log(RME(-1))</td>
<td>3.963* (0.000)</td>
</tr>
<tr>
<td>ECM</td>
<td>-0.681 (0.000)</td>
</tr>
</tbody>
</table>

(*) shows significant probability values at 5 % level of C.I

These consequences bring to light some features for inferences regarding the external debt in Pakistan over the sample period. In the short run, a 1% increase in national income reduces external debt by 2.902%, while military expenditures found to be insignificant over this time period. Growth and military expenditure, as a component of the long-term cointegrating relationship through the lagged error-correction term jointly influence external debt over the long term. In the long-run, GNP decreases external debt almost 2.139%, whereas, military expenditures increases external debt by 9.963%. It indicates that the impact of military expenditures in increasing external debt is a somewhat greater than that of economic growth in reducing external debts of Pakistan. This result clearly supports the conventional view which suggests that a rise in RME affects RED positively, while the effect of a rise in RGNP is negative. The results are in consistent with the previous work of Karagol (2005) and Karagol and Turhan (2008) in which they find the positive impact of military expenditures on external debt in case of Turkey. The results are quit similar with the Panel data
work of Dunne et al (2004) and Smyth & Narayan (2009). Further, Winter (1975) and McNeil (1982) provide selective information regarding military expenditures are inversely associated with the economic development across history. The error-correction term is significant with an adjustment coefficient of -0.681, indicating that external debt adjusts to its long-run equilibrium level with 68.1% of the adjustment taking place within the first year. The sign of the ECT coefficient also specifies that changes in the external debt adjust in an opposite direction to the previous period's deviation from equilibrium. Diagnostic tests are presented in Table 8 (b).

**Table 8 (b): Diagnostic Statistics**

<table>
<thead>
<tr>
<th>Statistics test</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>SSR</td>
<td>1.412</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.817</td>
</tr>
<tr>
<td>Adjusted R-squared</td>
<td>0.654</td>
</tr>
<tr>
<td>Durbin-Watson stat</td>
<td>1.967</td>
</tr>
<tr>
<td>F-statistic</td>
<td>5.021*</td>
</tr>
</tbody>
</table>

**Serial Correction**

| LM 1                      | 0.512 |

**Functional form**

| RESET                     | 0.121 |

**Heteroscedasticity test**

| White Test                | 1.871 |
| ARCH                      | 2.721 |

**Normality test**

| Jarque – Bera (JB-test)   | 0.812 |

*Note: SSR refers to the sum of squared residuals. LM(t) tests for the null of 1st order serial correlation amongst the residuals; Het: a test based on regression of squared residuals on a constant and squares of the fitted values; ARCH: a test for first-order autoregressive conditional Heteroscedasticity effects; RESET: Ramsey's Regression Specification Error/²-test with (m, n) degrees of freedom; and the Jarque-Bera X2(2) LM test for normality of residuals. * indicate significance at the 5% levels.*

The empirical results, given in Table 8 (b), appear to be very good in terms of the usual diagnostic statistics. The value of $R^2$ adjusted indicates that 65.4% variation in dependent variable has been explained by variations in independent variables. F value is higher than its critical
value suggesting a good overall significance of the estimated model. Therefore, fitness of the model is acceptable empirically. The Durbin Watson Test is almost equal to 2, therefore, there has no such problem of serial correlation in the model. The model also seems to be robust to various departures from standard regression assumptions in terms of residual correlation, Heteroscedasticity, Autoregressive Conditional Heteroscedasticity (ARCH), misspecification of functional form, or non-normality of residuals. This result tends to suggest that the impact of any structural change over the entire sample period does not appear to be significant at least in terms of model stability. Stability tests suggest that the estimated model is stable over the sample period.

Detecting Granger causality is restricted to within sample tests which are useful in describing the plausible Granger exogeneity or endogeneity of the dependent variable in the sample period but are unable to deduce the degree of exogeneity of the variables beyond the sample period. To examine this issue, we consider the generalized impulse response functions. Figure 4 presents the impulse response functions. The figures plot the response of the log (RED) to shocks in log (RGNP) and log (RME).

**Figure 4: Impulse Response of log (RED) to One-standard Deviation Shocks in Log (RGNP) and Log (RME)**

![Impulse Response Graphs](image-url)
Figure 4 plots the response of log (RED) to shocks in log (RGNP) and log (RME). A shock in external debt has a negative effect on economic growth while positive effect on military expenditures over the 10 years. A shock to economic growth has a negative effect on external debt while a positive impact on military expenditure during subsequent years. Similarly, the response of military expenditure to shocks in external debt has negative effect, while a positive effect has been observed on economic growth over a ten year period (see, appendix, Table 7).

**Figure 5: Variance Decomposition**

Variance Decomposition: The variance decomposition results are summarized in figure 5 over a 10-year period. The variance decomposition analysis indicates that external debt is the exogenous variable. A high proportion of its shock is explained by the own
innovations compared to the contributions of own shocks to innovations for economic growth and military expenditure variables. At the end of 10 years, the forecast error variance for external debt explained by their own innovations is 43.6%, while the forecast error variance for economic growth and military expenditure explained by their own innovations are 30.0% and 14.6% respectively (see, appendix, Table 8).

**Conclusion**

This paper has estimated the impact of economic growth and military expenditure on external debt in the context of Pakistan using time series data from 1980-2008 by employing Johansen Cointegration approach. Defense expenditure data for Pakistan is available from 1980 onwards. Due to this limitation, we have used the limited data of twenty-nine years. The result reveals that there is strong positive relationship between military expenditure and external debt while strong negative relationship between economic growth and external debts in the long run. As shown in results, in long run, 1.0% increase in military expenditure leads to an increase in external debt by 3.96%. On the other hand 1.0% increases in economic growth decreases external debt by 2.13% respectively. In the short run, a 1% increase in national income reduces external debt by 2.90%.

The error-correction term is significant with an adjustment coefficient of -0.681, indicating that external debt adjusts to its long-run equilibrium level with 68.1% within the first year. The results of impulse response function indicates that a shock in external debt has a negative effect on economic growth while positive effect on military expenditures over the 10 years. Consistent with the results of the decomposition of variance results, a large proportion of the variance in external debt is explained by its own innovations.

The overall conclusion is that military expenditure increases external debt in relation with economic growth by almost 4% in Pakistan. If military expenditure is reduced by 1.0%, it will reduce external debt by 3.96%, and the same time it will increase income which helps the economy to pay off their external debt.
Bibliography
Cointegration Analysis of the Economic Growth, Military Expenditure, and External Debt: Evidence from Pakistan


**APPENDIX**

**Table 7:** Impulse Response Generalize One SD

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### Table 8: Variance Decomposition

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The Influence of the Internet on globalization process

A. Borcuch, M. Piłat-Borcuch, U. Świerczyńska-Kaczor

Artur Borcuch, Magdalena Piłat-Borcuch, Urszula Świerczyńska-Kaczor

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Abstract
We are being influenced by the rush of economic and social forces. Internet is perhaps the most visible aspect of globalization and in many ways its driving force. The process of globalization can be understood as the global reach of communications technology and capital movements. The globalization of financial markets means that the movement of exchange rates, interest rates, and stock prices in various countries are intimately interconnected. From the social point of view, globalization is changing the nature of global social relations. The aim of this article is to demonstrate (in a few examples), how does Internet affect the process of globalization?

Keywords: globalization, Internet, economics, sociology

1. Introduction
There has been a great deal of discussion in recent years about globalization. Evidence of globalization is seen in our daily lives. We are being influenced by the rush of economic and social forces. Internet is perhaps the most visible aspect of globalization and in many ways its driving force. Globalization tends to be most perceptible and observable in almost every facet of life mainly due to the emergence of internet technology. The internet technology is globally integrates the people of the world.

The aim of this article is to demonstrate (in a few examples), how does Internet affect the process of globalization?
2. Globalization and Internet

2.1. History of Globalization process and a few contemporary definitions

Based on T. Friedman book, “The Lexus and the Olive Tree”, three eras of globalization can be delimited. The first era (called era Globalization 1.0) lasted from 1492 - when Columbus set sail, opening trade between the Old World and the New World - until around 1800. It shrank the world from a size large to a size medium.

The second era - Globalization 2.0, lasted from 1800 to 2000, interrupted by the Great Depression and World Wars I and II. This era shrank the world from a size medium to a size small. In Globalization 2.0, the key agent of change, the dynamic force driving global integration, was multinational companies. These multinationals went global for markets and labor, spearheaded by the expansion of the Industrial Revolution. In the first half of this era, global integration was powered by falling transportation costs, thanks to the steam engine and the railroad, and in the second half by falling telecommunication costs thanks to the diffusion of the telegraph, telephones, the PC, satellites, fiber-optic cable, and the early version of the World Wide Web. The dynamic forces behind this era of globalization were breakthroughs in hardware - from steamships and railroads in the beginning to telephones and mainframe computers toward the end.

Around the year 2000, a new era started - Globalization 3.0. Globalization 3.0 is shrinking the world from a size small to a tiny size. And while the dynamic force in Globalization 1.0 was countries globalizing and the dynamic force in Globalization 2.0 was companies globalizing, the dynamic force in Globalization 3.0. And the lever that is enabling individuals and groups to go global so easily and so seamlessly is not horsepower, and not hardware, but software- all sorts of new applications-in conjunction with the creation of a global fiber-optic network.

The Influence of the Internet on globalization process

Figure 1. Three stages of globalization


In opinion of J. D. Sachs, by the early twentieth century, Europe largely dominated the world. European empires controlled essentially all of Africa and large parts of Asia, and loomed large in financing and organizing Latin America’s trade as well. From his point of view, this was the first age of globalization - an era of global trade, an era of global communications over telegraph lines, an era of mass production and industrialization (in short, what would seem to be an era of inevitable progress). And it was globalization under European domination, but World War I ended this era¹.

By the end of World War II, the pre-1914 global system had gone to pieces. International trade was moribund. National currencies were not convertible one to another, so even the basic payments mechanisms for international commerce had broken down. Still, standing on the ruins of World War II, the benefits of a global marketplace - with a global division of labor, a peaceful spread of technology, and open international trade - looked long gone, buried under the rubble of two world wars and a great depression².

2.2. Globalization and social sciences (economics and sociology)

The process of globalization can be understood as the global reach of communications technology and capital movements. Globalization has several distinct elements – trade, foreign direct investment, short term capital flows, knowledge, movements of labor. At the top of the list is localized globalization of knowledge, the free flow of ideas that has followed the lowering of communication costs and the closer integration of societies. The transfer of that knowledge, which globalization has facilitated, is likely to prove one of the strongest forces for growth in emerging markets in coming decades. This globalization of knowledge not only entails technical knowledge, but also ideas which transform societies and knowledge that forms the basis not only of the adoption of policies which serve to enhance growth but also of institutions.

The global economy is based on free movement of goods, services, capital, and ideas. The globalization of financial markets means that the movement of exchange rates, interest rates, and stock prices in various countries are intimately interconnected. The globalization of markets means that in many cases we are directly profiting from the economic and social conditions in other parts of the world.

In a narrow sense economic globalization is the expansion of foreign trade and investment. One of components of economic globalization concerns the growing digitization of economic activity, particularly in the leading information industries such as finance and specialized corporate services. The speed of transactions made possible by the new technologies is creating orders of magnitude, for instance in

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1 Bardhan P., Does Globalization Help, Scientific American 2006, Volume 294, p. 84.
5 Bardhan P., Does Globalization Help, Scientific American 2006, Volume 294, p. 84.
the foreign currency markets, that escape the governing capacities of private and government overseers\(^1\).

Economical movement for globalization:
- Trading of goods and services, e.g. exports and imports globally across countries with global positioning view;
- Marketing and advertisement including pricing and quality of products and services among countries in the world with consistent and uniform approach that views global customers as a single entry point;
- Capital Investment globally to conduct global business considering unique approach;
- Uniformity and consistency in domestic subsidies, tariff, and customs duty globally;
- Open market sustainable with competition, no protectionism\(^2\).

From the social point of view, globalization is changing the nature of global social relations, intensifying the obsolescence of the “society of states” model, and demanding a fundamental change in the social theory of international law towards a global society of persons\(^3\).

Social movement for globalization:
- Labor/people migration inward or outward across countries;
- Technology transfer, branding, diffusion, and international research & development flow across countries considering open boundaries;
- Cultural adaptation and mobility throughout the world\(^4\).

Many economic reform programs may be falling into the trap on a global scale: the great contradiction of the capitalism system is that if too much capital is concentrated in one sector, the rest of the system is at risk of collapse. By not giving the majority access to expanded markets, these reforms are leaving a fertile field for class confrontation -


a capitalist and free market economy for the privileged few who can concretize their property rights, and relative poverty for a large undercapitalized sector incapable of leveraging its own assets. The problem remains of how we settle the disparities that come with the benefits of capitalism and globalization¹.

Overview/Globalization and Poverty:

- The expansion of international trade and investment is one of the dominant trends of our time, but policymakers and advocates tend to discuss it without carefully examining the evidence available in social science;
- Because the modern era of globalization has coincided with a sustained reduction in the proportion of people living in extreme poverty, one may conclude that globalization, on the whole, is not making the poor poorer. Equally, however, it cannot take much credit for the decrease in poverty, which in many cases preceded trade liberalization;
- Countries that get the economic basics right—improving infrastructure, ensuring political stability, carrying out land reform, providing social safety nets, addressing market failures such as impeded access to credit—tend to succeed at reducing poverty. Although globalization can help, it is only one factor among many².

2.3. Major social changes in the context of globalization

Globalization is a phenomenon that clearly exemplifies the difference between the industrial and the connectivity ages. Many people think of it as just a rapid expansion of cross-border trade and investment. These people would be surprised when learning that the current ratio of international trade to world production is approximately equal to that prevailing 100 years ago. Industrialization prompted an enormous expansion of international trade and capital movements during the nineteenth century that went as far as the current expansion has gone in terms of trade and further in terms of capital flows³.

The Influence of the Internet on globalization process

Here are the seven macro-trends to list:

1. Development of the population and settlement density of the world. Every year there are 85 million more people on the earth. In 2050 the United Nations estimates the world population at 9 billion people, more than 50% of them living in large cities. There is no doubt that there are insufficient supplies for 6 billion or more people if they were to be sustained by the early hunting and collecting culture. New technologies and processes are needed to ensure that the natural foundations which are the basis for the existence of mankind shall not be destroyed;

2. Culture and nature: hazards to the environment at the global level. Mankind has changed and influenced the environment for the past 40,000 years and has caused thousands of environmental catastrophes. The situation is now different from what it was in the past. For about the past 50 years, people have impacted the global geological, physical and biochemical circles of the earth. Ecological calculations show that we are approaching an absolute limit;

3. Global markets. We live in a world of globalized markets. The forerunners are those who can offer better quality merchandise and services at a better price. The question of “where” production takes place is no longer significant. The place and time (where, when) as far as production, commerce and communication are concerned, are less and less important in globalization today;

4. Knowledge as a main factor. The “information explosion” is not the key element of our knowledge society. It is more decisive that the so-called “half-life” of applied knowledge is continuously decreasing;

5. Consumption of resources. The poor countries consume only a fraction of the resources which the inhabitants of the industrialized countries use. If a lifestyle of the rich people were to become generalized for all people of the world the available resources would be consumed in a relatively short time. The same is true for the distribution of income. The gap between rich and poor people within one country as well as between poor and rich countries is growing. If the postulate for equal opportunity is to be valid for all people, there is no other way than the redistribution by the rich countries;

6. Development of new functional subcultures with global effects. A survey of special groups of people in Australia, South-America, Europe and Canada has shown that each individual group
shares more common features, independent of the country or culture, than people from different groups within one country. This indicates that national identity is becoming less important;

7. Identity of people: cultural dimension of technical change

The organization of the global-universal society is needed because such a society must regulate deficiencies in the global capitalistic system. Since global markets reduce everything to commodities, we can have a market economy but we cannot have a market society. Globalization increases the demands on the state to provide social nets while reducing its ability to do so. This creates the seeds of social conflict. Global open society is governed by the rule of law: respect for human rights, respect for diversity, respect for minorities and minority opinions, division of power; and a market economy in the electronic environment. Of course, the e-global-universal society is organized around information and by networks and around common-complementary values of universal-complementary civilization. This society requires many alliances (including virtual) that will establish a code for international patterns of expected behavior. Such alliances will apply information, computerized networks to disseminate and enforce these standards. This global society should be open and communicated, which means that it will be effective if it works as an e-global-universal society. This means that it should be based on democratic principles and global justice for all inhabitants and their natural surroundings.

2.4. Globalization and Internet

In the 1960’s and 70’s, telecommunications began to play a significant role in production, public service, and in management. In the 1980’s, information became an accepted production factor, together with labor and capital. In the 1990’s, the effect of globalization, the increasing significance of information in production processes, rapid changes in technology, and increases in demand have proved the importance of ICT for competition and economic growth. In recent years, it has been accepted that ICT are significant inputs to economic

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growth. Moreover, the efficiency of ICT in the development of international competitive power, health and education, and the power of ICT in creating new job possibilities have been assumed as a significant component determining the socio-economical structure of countries and as a way of decreasing poverty in developing and underdeveloped countries.

The Internet’s impact on inequality will extend beyond national boundaries to the world economy where the question of access to the latest technologies will shape globalization’s greatest challenge, the growing gaps in income and living standards between rich and poor nations. The rich countries have a vested interest in extending easy internet access across the globe, not least because of network externalities from increased use and benefits accruing from a freer flow of information in the tackling of global problems, such as environmental protection or epidemics. Their e-businesses will surely want to have the option of reaching millions of newly middle-class consumers in the emerging market economies of Latin America, Africa and Asia. The Internet can also serve as useful communication and organization tool for democratic movements’ intent on improving the governance of their societies, just as it will surely boost grass-roots initiatives for political reform and corporate accountability in advanced capitalist societies. Most promising is the prospect of new telecommunication technologies, based on satellites, fiber optics and cable, giving poor countries instant internet-delivery capacity for a reasonable price and so offering them the chance to skip or shorten several stages in their industrialization process.

Analyzing the future of Internet development in the context of globalization, the following features may be feasible by 2020:

- Wireless Internet available worldwide to middle and upper classes, including developing countries and rural areas;
- Wearable computers expanded to control medical devices, appliances, and entertainment systems;

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• Massive databases (hopefully with robust security) holding personal information such as history and log of information viewed or processed, as well as such items as medical records and genomic information;
• Small and inexpensive devices storing massive data such as voice, video, and Web pages;
• Increasingly improved search capabilities to locate not only text phrases but semantic phrases, pictures, and video through both meta representations and exemplars (without which the data storage would be useless);
• RFID tags to track commercial goods, consumer buying patterns, and even individual movement for security and targeted advertising;
• Biometrics (e.g., fingerprints, iris scans) widely required for travel, for security access to computers and locations, and, perhaps, for commerce;
• Small ubiquitous cameras and widespread sensor networks with increasingly small size and unobtrusiveness;
• Hands-free machine interfaces and input devices (e.g., light scanned directly to the retina)\(^1\).

4. Conclusions

The impact of Internet on globalization has diversified aspects. The positive impact of Internet on globalization includes the modernization and improvement in the business sector on a WWW. Businesses improve their global competitiveness and productivity with more efficient electronic transaction processing and instant access to information. The market is now more competitive with consumers having greater choices.

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Study regarding the Consulting Services in relation to the National Rural Development Program

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Abstract

**Study objective:** This study shows how important is to access European Funds in order to increase the added value of the agricultural products.

**Research methodology:** case study, statistical analysis.

**Findings:** The result shows that the accessing of European funds is very important for Romania in order to achieve its development targets.

**Practical implications:** It is needed to accelerate the implementation of the State diagram centered on the regional development stimulation by investments directed to ways of processing agricultural products to obtain non-agricultural products.

**Originality/Value:** The study presents a concrete case study that is representative for highlighting the importance of accessing European Funds.

**Keywords:** European funds, agro-food products, agriculture, consulting services.

Introduction

Romania enjoys an important yet underexploited development potential. With an area of 238 thousand km² and a population of 19 million inhabitants, Romania is the second largest new member state, after Poland. It accounts for 6% of the total EU area and 4% of its population.

Investments and competitiveness in Romania still need to be improved in order to accelerate economic growth and secure income convergence with the EU. In 2005, Romania accounted less than 1% of the Community GDP, with the GDP per capita growing rapidly but still only
representing 34% of the EU25 average (NSI – Romanian Statistical Yearbook, 2006). These gaps are diminishing as a result of the integration into the EU. The Romanian economy is growing faster and the GDP per capita is catching up. After significant falls towards late 90s, the Romanian economy vigorously resumed its growth starting with 2000 and registered an average rate of about 5% per year. The peak was reached in 2004, with a GDP growth rate of 8.5% against the previous year.

The agriculture - as a main economic sector - has a descending trend. Despite this, Romania is one of the Central and Eastern European countries with the least significant fall in agricultural production since the transition began. Agricultural output (as measured by Gross Agricultural Output, GAO), has remained relatively constant since 1980. The situation was particularly difficult in 1992, when the cooperative farms were broken up and the sector suffered from adverse weather conditions. During the first year of transition, the Gross Value Added (GVA) in agriculture declined less than of the industry. But since 2000, the industrial sector has enjoyed a continuous growth, while the agricultural sector has experienced significant fluctuations due to its sensitivity to droughts. Agriculture contributed 14.06% to the total GVA in 2004 (down from an approximate contribution of 20% during 1990 - 1995), while the primary sector (agriculture, forestry and fishery) contributed with 14.1%, down from 16.03% in 1998.

As we can observe from the chart below, from 2004 to 2009 there was an almost constant decreasing of the agriculture contribution into the GVA, getting a minimum of 6.51% in 2007.

![Chart showing the contribution of agriculture to GVA from 1995 to 2009](image)

**Source:** National Institute of Statistics – Romanian Statistical Yearbook, 2010
A growing agro-food trade deficit mirrors the decrease of competitiveness. The structural changes that occurred over the transition period transformed Romania into a net importer of agro-food products. The agro-food trade deficit reached 1.3 billion euros in 2005, with exports of 673.3 million euro and imports of 2,021.9 million euro.

The deterioration of the agro-food trade balance is largely due to a poorly performing food industry. In 2005, the produces/sectors for which there was a positive balance of trade (totaling 430 million euro), were: barley, wheat, maize, livestock (cattle, sheep, horses), sunflower and soybean oil, wines, cheese, honey, canned meat and meat products, pressed sunflower seeds and nuts. Regarding the products for which there was a negative balance of trade (totaling 1,779 million euro), more than half of that (1,041 million euro) came from products from which the domestic production does not cover consumption, examples are: live pigs and pork, flowers, fresh vegetables out of season, orchard fruit, sugar, malt, lard, canned fruit and vegetables, hops, tobacco.

For major crops, output is unstable and well below potential. Roughly two-thirds (69%) of the cultivated area (NSI, 2006) is devoted to cereals, mostly wheat and maize. For both crops, the surface fluctuated greatly over the transition period, to reach now levels that are slightly higher than in the late 80s. Over 2000-2005, the average yield for wheat was 2,508 kg/ha, while for maize it was 3,150 kg/ha. This is below pre-transition levels and, according to experts, only reflects 40% of the wheat and respectively 39.4% the maize agronomic potential.

Food industry in Romania is the main market for primary sector products. The number of food industry enterprises has increased during the 1998-2006 period with 585 units, to approximately 11,000 today. The percentage share of the food industry within the processing industry has been relatively high, of about 12% from the value of the industrial production in 2005, but in a gradual decrease, with 4% compared to 1998, which means that the food sector, along with the entire processing sector is going through a restructuring period.

The production of the main food products has had different evolutions during the referred period. Thus, there have been registered growths in (physical) production for some groups of products, such as: meat, cheeses and fresh milk products, edible oils, fruit and vegetable cans, milk, wheat and rye flour.
Under these circumstances, micro-enterprises and small and medium sized enterprises, especially those with a good position (which produce as well as process raw materials), play an important part in the production of higher value-added products.

The improvement of raw material quality and the restructuring of the agricultural and food units have become main objectives during Romania’s pre-accession to the European Union. The Commission has granted a transition period until the 31st of December 2009, for the milk and meat processing units, in order to be aligned to the Community hygiene requirements and to improve the raw materials quality. That way, it is possible to obtain products that are eligible for the intra-Community exchanges. Moreover, consumers’ demand for higher quality products has been increasing in the following period.

Thus the situation in June 2007 regarding the securing of observance in the meat production and processing (red meat and poultry) shows that from a total of 425 units, 123 units are classified according to the European Union regulations and are authorized for intra-Community exchanges; 302 units have received approval for the transition period until 31.12.2009.

In the milk and dairy sector, the total number of units is 259, out of which 52 units are classified according to the European Union regulations and authorized for the intra-Community changes and 207 have received approval for the transition period until 31.12.2009.

The deficit of the trade balance of agro-food products, of approximately 1.3 billion Euro (for the year 2005), as well as an analysis of the structure of food product exports shows that there is a higher percentage of unprocessed products as compared to the processed ones due to their poor competitiveness.

Food industry companies are still under-specialized, with low productivity, low use of innovations, inappropriate technical level and incompliance with the Community standards. The use of renewable energy sources is an alternative for reducing production costs and increasing economic efficiency for processors.

Improved marketing is also a prerequisite for increased competitiveness. Therefore, the increase and development of a system for collecting and storing raw materials, mainly promoted by associative structures (e.g. producer groups) has become an urgent need in order to meet market requirements of product quality and quantity.
Companies have difficulties in managing the waste products resulted from productive activities. In order to mitigate the negative impact of waste on the environment, processors must exercise more care in making investments, in order to increase the added value of resulted sub-products.

During 2000-2006, a financial aid amounting 379.51 million euro (public funds) was granted through measure 1.1 “Improvement of processing and marketing of agricultural and fishery products” of the SAPARD Program for setting up and modernization of processing and marketing units for agricultural and fishery products. Most investments targeted the implementation of the Community acquis requirements needed to be met by the accession date.

Out of the 202 investment objectives made as part of measure 1.1 “Improvement of processing and marketing of agricultural and fishery products”, in new objectives and upgrades, 85 belong to the “Meat and eggs” sector, 48 to the “Milk and dairy products” sector, 27 to the “Cereal” sector, 24 to the “Wine” sector”, 17 to the “Vegetables, fruit and potatoes” sector and 1 to the “Oilseeds” sector. Thus, a number of 2,232 employment places have been created, the majority of them in the meat (1,243) and milk (515) processing sector.

Although the food industry has benefited during the pre-accession period of financial support through the SAPARD Program and also through national programs; this sector continues to have lack of consistency with the Community standards, with the international quality management systems and with the Hazard Analysis and Critical Control Point (HACCP).

The agro-food processing sector plays an important role not only regarding the creation of new opportunities for labor force placements, but also in the nutrition and public health.

A large number of rural communities from forest-rich areas rely significantly on the processing of wood and non-wood forestry products. As different from wood, which is the main forest product rewarded by the existing markets, non-wood forestry products may include seeds, fruits, leaves, resins, tannin, mushrooms, medicinal plants or the like. However, the sector of harvesting and processing forestry products is not well developed, as enterprises involved are often small-sized and limitedly equipped, so that further investments are needed to meet EU standards on product quality, environment protection and
occupational safety. The existing units for the processing of forestry products are facing problems caused by outdated harvesting, transporting and processing machineries, low added value of the products and low volume of sales, which impact directly on the labor productivity and the general socio-economic output. In addition, there is limited use of the waste material resulting from processing operations (e.g., sawdust) for energy purposes, which create additional environmental problems. Thus, there is need to invest for purchasing equipments and machineries to improve the production technologies, which will increase the added value and the quality of forestry products, as well as the general efficiency of this economic activity.

It is foreseen that an increase of the added value of forestry products at the micro-enterprises level, will lead to an increase of the contribution of the forestry sector to the local and regional rural economy.

Taking into account the current national situation, the support granted by the before mentioned measure will encourage investments in the processing and marketing of agro-food and forestry products (wood and non-wood), with the purpose of increasing the value of products by means of observing the quality and food safety conditions, as well as adjusting to the market requirements. In addition, in order to optimize the agro-food and forestry sectors, the processing of agricultural and forestry products should be made, as far as possible, in the local areas where the products are obtained, in order to avoid additional expenditures with transportation and also the increase of gas emissions.

**Case study**

In order to show the positive relationship between the accessing of the European Funds and the economic growth, we choose in our study a firm that applied to such a source of financing and benefited from consultancy during the entire procedure.

Midanif is a company founded in 2001. Work is done in Carpinis village, commune Carpinis in Timis county, at a distance of 28 km from Timisoara. Its main activity is the manufacture of cocoa, chocolate and other sugar products.

Midanif identified an opportunity to diversify the business activity, namely the production of wafers and cornets for ice cream.

To finance the investments required, the Midanif management team decided to apply for a grant.
As the main customer of new products would be another company, a famous ice cream maker owned by an acquaintance, the Midanif management have consulted with him; he recommended contacting a consultant.

The recommendation was made based on an earlier collaboration between the companies, to obtain a grant which did not materialize into a consulting contract because of the quite long period of time from submission to obtain funding grant, in contrast with the relatively urgent need for investment capital to potential clients.

The management team had a first meeting with the general manager of a consultancy company, in which it was established that the activity for which they wanted to invest is eligible for the National Rural Development Programme (NRDP).

In the second meeting, preliminary aspects of the proposed project were discussed.

Based on an approximate description of the production flow, the activity of producing ice cream waffles was identified as being eligible in the State Aid Scheme no. N578/2009. The customer was explained by the consultancy team that he could get a financial support grant covering 50% of the eligible investment. To evaluate the approximate value of support, it was discussed each proposed investment, compared with the list of eligible expenses under the scheme. Also, it was explained how they establishes the consulting fee and that they need a technical consultant (design firm) to prepare documentation for the construction component of the investment.

For the first phase, the information provided was enough to create an overview of the project, so Midanif management team have requested a period of analysis.

It was recommended Midanif to establish investment location and to contact at least three suppliers of equipment for production of wafers, in order to obtain bids to estimate their cost.

The third phase of consultancy mission had four fulfilled objectives:
1. determining eligibility based on company documents provided by client;
2. analysis of the selection criteria that the project proposed by the client could perform, with recommendations for its amendment in
order to obtain a score as good as possible and thus a real chance to obtain the grant;

3. estimated value of the project and analysis of private co-financing capacity of the investment based on information about the company's financial situation.

4. negotiating the consultancy contract for the development and implementation of the project.

It was discussed a detailed list of documents needed to prepare documentation for funding and establishing responsibilities to these documents for each party involved - the Midanif and consultant.

Along with the publication of the beginning of the project application session, there was also published on the website of the Paying Agency for Rural Development and Fishing (PARDF - implementing agency of National Rural Development Plan) the final version of the Guidelines for Applicants for State Aid Scheme No. N578/2009.

The deadlines initially set with both the Midanif and the consultant’s project team were reviewed and they concluded that they can meet the deadline for completion of the project, recovering the delay during the project preparation.

Together with the project team and with the help from the design team chosen by the Midanif company, they were able to submit the project during the submission session from July 2010 (in fact the only one of that year), one day earlier than the deadline they have initially proposed.

In November 2010, the project was completed with some clarifications requested by the experts of the Regional Payments for Rural Development and Fisheries 5 West Timisoara, and in February 2011, the client received from the PARDF, the notification of the project selection.

Midanif was just an example regarding the accessing of European Funds in Romania. There are a lot of many other companies who are eligible and can follow the same procedure in order to receive the necessary grant.

The situation of grants submits is presented in the following table:
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<table>
<thead>
<tr>
<th>Measure</th>
<th>Submitted projects</th>
<th>Selected projects</th>
<th>Contracts</th>
<th>Payments (Euro)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nr. Public Value</td>
<td>Nr. Public Value</td>
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<td>Public Value</td>
</tr>
<tr>
<td>123 and State diagram</td>
<td>1337 1.164.860.300</td>
<td>928 750.037.474</td>
<td>682 499.720.419</td>
<td>119.120.604</td>
</tr>
</tbody>
</table>

The table shows that until 2010 there were many submitted projects on this sector. There were selected 928 projects out of 1.337 proposed projects that mean a percent of 69.40% from the total number of proposed projects. There were also 682 projects signed for financing. Regarding the payments, 23.83% of the public value was paid till the present time.

As far from Midanif, its project was selected and meanwhile it is passing through the implementation process.

**Conclusions and recommendations**

The main purpose of this study was to determine the importance of accessing European Funds for increasing the added value on agricultural and agro-food products. The result of this study shows that it is very important for the economy (from the financial point of view, from labor market and processing prospective etc.) that potential economic agents would access European funds.

It is needed to accelerate the implementation of the State diagram centered on the regional development stimulation through the process of investing in agricultural products to obtain non-agricultural products. The consultancy service is important in this process.

It is also needed to eliminate the differences between the other European states in the agro-food sector, by stimulating the implementation of new technologies and activity diversification.

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Public goods, individual action and social context

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Abstract
Starting from the premise of a rational human behavior, the article develops an analysis of this type of conduct referring to public assets. In the first section, we will debate different individual strategies concerning the anticipated utility in case of agreement, insisting upon the advantages, disadvantages and risks generated by different types of strategies. The second section approaches the theory of public assets and the importance generated by different sorts of reasoning connected to "the clandestine passenger". The last section of the article points out the importance of the social contract through the state's double role: that of being a "protective" and a "productive" state at the same time.

Keywords: Buchanan, public goods, individual behavior, productive state, the limits of freedom.

Theoretical premises
The founder of the School of Public Elections, James M. Buchanan has the merit of bringing into attention the multiple analyses of the relationships which are instituted between the political sphere and economical sphere, as well as the extension of the research tool typical to economical science at the analysis and the interpretation of political phenomena and processes.

Seen from a general point of view, Buchanan's research highlight the idea that both the collective and individual choices stand under the sign of the individual following his own interests, a fact which
explains the behavior of the politician or the public worker of being preoccupied rather by their personal interests, than by those of the "public good".

Secondly, Buchanan's work focuses on the thoroughness of certain aspects connected to the access to public goods and to the financing of these goods through taxes, the behavior of social actors which intervene in the economical and political sphere, the functioning system of the rules at the different levels of structuring the economical and social life, or the definition of the intervention limits of the state in the economical life and regarding individual liberties.

Thirdly, the analyses conducted by Buchanan make a distinction between the holistic and individualistic methodologies of approaching these issues. Thus, if the holistic theories analyze social phenomena and processes from the perspective of the social as a whole, the methodological individualism states that the sphere of the social can only be understood by taking into account the actions developed by the individual actors.

Starting from these premises, we will hereby analyze Buchanan's conception regarding the public goods and the practical significance of the social contract, as they are presented in an important work of economical and political science - *The Limits of Freedom. Between Anarchy and Leviathan*.

**The anticipated utility and the strategies of interaction**

In the first analysis, Buchanan is concerned about the contractual relations between the partners of an agreement whose decisions are motivated by individual interests, as well as the way in which the negotiation of these interests may lead to a settlement acceptable to both parties. The starting idea is the presumption of rationality of the subjects in interaction. This means that people have preferences regarding to the items they intend to perform, that they have the freedom of choice in terms of objectives; they choose the actions which can help them achieve their goals and that people know they do not choose in isolation from one another, but in a society of other elector subjects. (cf. King, 2005, p.125).

Analyzing the logic governing the selection of a strategy for action, Buchanan acknowledges that "for each person there is an advantage to violate the law, not to comply with the limits of behavior set out in the contract", but all those involved in an action will see their
increased usefulness if the terms of the agreement are respected as they were established (1997, p.54).

The author illustrates this through a simple matrix with two persons A and B, the numbers on the left of each cell representing the utility indicators or the value of the net reward for person A, and the numbers on the right the utility values for person B.

As can be seen from Fig. 1, both person A and person B can choose between two alternatives: they can comply with the agreement, which involves respecting the rights set to the other person or, successively, each person may violate the agreement acting in its own interest. If both parties refuse to undergo the established contract (cell IV) the result equals a loss for both A and B (9 utility units for A, respectively, 2 for B), unlike the situation of compliance with the contract (cell I) when both parties are in advantage (19 utility units for A and 7 units for B). As shown by the numbers of cells II and III, each person is tempted to violate the agreement relying on maximizing their own utility: cell III is preferred by A, who violates the agreement, while B respects it; cell II is the favorite position for B, where A has complied with the agreement, but B violates it.

The four possible situations of compliance (R) or violation (I) of the Agreement, and the choices made by each of the two people can be represented as a matrix in Fig. 2.
Reporting the data in this matrix to the utility anticipated by each of the two parties, the preference order of person A and that of person B is distributed as follows:

Person A: ÎR>RR>ÎÎ>RÎ
Person B: RÎ>RR>ÎÎ>ÎR

As shown, the violation of the agreement is the most advantageous conduct that may be adopted by each of the two parties but, as noted, this type of action makes possible the emergence of the possibility to counteract the unwanted effects of actions aiming only personal interest. In a situation limited to two people, says Buchanan, "either one or both people may refrain from violating the contract because they can reasonably anticipate that the reaction of the other would force the rapid return to pre-contractual state of nature" (1997, p. 55).

The key of individual behavior is cell I (contractual situation), because none of the two parties can not rely on a better result than that from a cooperation agreement based on respect, any infringement or violation of the contract contributing to a worsening of their own situation. "Each person, writes Buchanan, will recognize that the unilateral abdication can not succeed and that any attempt to do so will cause the regression of the system in a position less desired by both, than that achieved by the contracting perspective" (1997, p. 104).

Even if the formal characteristics considered remain unaltered, the stability suggested by the matrix in Fig.1 tends to disappear as the number of participants in the interaction increases. Such a change is assimilated by the author by passing from the exchange of private goods to the exchange of public goods, whose particularity is “the social contract”.

Involving all the members of the community in the negotiations, “social contracting” takes place in two stages: a stage of constitutional contract, where the agreement is achieved on account of an allocation of individual rights and a postconstitutional stage, where the individuals reach an agreement upon the parts of the cost of goods or services used commonly. At the same time, the contractual arrangement between two parties reduces the transaction costs to the minimum, while the increase of the number of participants multiplies the alternatives one can resort
Public goods, individual action and social context

to and limits the possibilities of dispute between the partners to the exchange.

This second aspect represents the “strong point” of the theory of public goods, a theory where we are dealing with the individual’s position regarding the accepted norms for the development of the collective action.

What are public goods?

Public goods are that category of goods used by all the members of society and their consumption by an individual can not diminish the part which gets to be consumed by the other members of society. Moreover, of the public good was produced, nobody can be excluded from using it, whether we are referring to ensuring public order, access to an education institution, medical or judicial assistance, or to public lighting, the use of radio and television services or of the railway system. As a consequence of the impossibility to exclude the potential consumers, the entrepreneurs on a free market aren’t motivated to produce public goods because of a very simple reason – they couldn’t commercialize them.

The costs of a transaction in the case of public goods being much higher because of the increased number of involved in the same negotiation or exchange process lead to the appearance of “free-riders”, namely those people whose interest is to make sure that the benefits of certain services or goods consumed in common, without participating to their afferent costs. The fear of the solicited person to contribute to the accomplishment of the public good is that he will spend from his own resources, but the public good will be also used by those who had no contribution to it. As the exclusion from the use of a public good of the consumer with no cooperation to its realization is impossible, the best individual solution seems to be that of not getting involved in the spending of their own resources. However, multiplying this strategy after the conduct principle to all the members of society, it will eventually lead to negative results, the public good not being able to be produced any more (cf. Gilbert, 2006).

Starting from the conclusion that market economy can not produce public goods and services with efficient results and from the existence of free-riders who generate a “failure of the market”, Buchanan develops the following argumentation:

• In deciding to participate to the creation of a public good,
the individual needs to know the benefits and the costs of contribution to the different levels of cooperation, as well as the number of people estimated not to take part to the creation of the given product. If within a small group the individual realizes that his own behavior will also affect the others, in large groups he won’t consider that his action can exercise any influence upon the actions of the other members of the group.

- In the process of social interaction there are actions which have consequences only for those who control them and actions which have external consequences or externalities for the individuals who don’t have control over the activities. If for the negative externalities the question asked is that of limiting the action, in the case of positive externalities the problem is how and when to encourage them. A special situation where there are positive externalities is the payment of the cost of a public good, when the action of each individual brings positive consequences for the others, thus actually getting to the creation of the public good.

- The contribution to the creation of a public good also used by those who exclude themselves from financing it, makes those who cooperate have lower benefits than the cooperation costs. According to the principle of rational choice, the individual is tempted to maximize his usefulness “by refraining from independently contributing to the supply and financing of the goods and services used in common” (1997, p.69). In these conditions, the public good can be created only if there are sufficient contributors so that the benefits can overpass the costs assumed by each individual.

- The behavior of those who benefit from a collective good, without getting involved in the costs generates an externality compensated by imposing taxes and rates to cover the production costs of the given good. Although the abstraction from paying the taxes is rational for the individual, from an economic point of view, such a behavior creates “public damage”. “The person in question imposes an external dis-economy to the other members of the group, to all the potential beneficiaries of the consumed good or of the service financed from this tax”, the failure of ensuring “the public good” being equal to the production of “public damage” (1997, p.172).

- Although it is desired that all those who don’t cooperate to the creation of the public good to be sanctioned, the people who contribute to the afferent costs of the public good prefer to remain
The reason is a practical one: the costs of monitoring and applying the punishment are high, and the benefits from the punishment are low, because they are split to all the participants to the creation of the public good. The exclusion of free-riders from participating in the benefits of public goods would involve a partial or total “exclusion” from the community they belong to, and in other cases it would be extremely costly for those in the group of participants to the costs of creating the public good.

- The creation of public goods and services involves instituting a taxing system, the rule of humanity from the collective action being substituted with the rule of the majority. This change equals with the passage from the constitutional control which defines individual rights and the rules of the collective decision, to the post-constitutional contract through which we have the possibility to analyze the political processes which involve exchange of public goods. The problem emerged in this context is that of the necessity of “defining ‘the rights’ or limits of the person who takes the decisions for the collectivity, as well as those of afferent to the people in the collectivity” (1997, p.82).

- The constraints upon the collective action need to have a constitutional basis, because in its absence the individuals are stimulated to invest resources in ensuring control upon the collective decisions. The people who control the collective decisions are motivated to use these means in order to create the private goods and less for the production of public goods that can be used by all the people in the given collectivity.

From Buchanan’s argumentation two extremely important aspects result. Firstly, a norm or a rule is functional within the interaction only when the participants are capable of sharing adequately the costs involved by the production of a public service or good, as well as to generate sanctions for those who sustain themselves from contributing to the creation of the public good.

Secondly, we must remember that the individual optimum doesn’t coincide with the social one, or, in other words, each individual is tempted to plead only for his own interests, without taking into account the costs of this behavior for the other members of the given group or community.

Since within a larger or smaller collectivity someone has to take on responsibilities, the question posed is the following: which would be
the means through which the actions of the individuals can reach the social optimum? The discussion of the solutions envisaged by Buchanan and by other authors preoccupied with the idea of social optimality will be done in the following pages.

**The stages of the social contract and the role of the state**

From Buchanan’s perspective, the distinction between the constitutional and post-constitutional stages of the social contract gives us the possibility to interpret the functions of the state through two distinctive roles. In the constitutional stage, the state is an institution with a protective role, having the responsibility of applying the rights of the individual and of the contracts which involve the changes voluntarily negotiated within the members of society. This type of states can not be conceived as an embodiment of community ideals “above the individuals’ accomplishments”, its meaning being that of imposing rights upon property and surveying the conformation to the contracts. The main characteristic of the “protective” and judicial state is that of not constituting in a decisional body and, consequently, not making “choices” for the members of society. In such a context, the judicial system which is applied is the one specified through the so-called initiated contract of the “imposing structure”, regardless of the aspects of the collectivity’s decision. However, the “protective” state also has an alienating dimension for the human condition, especially when the people with different roles in the social hierarchy drift away from the established rules to increase their power or to promote moral objectives chosen on subjective criteria. These make the state to be eventually regarded from its repressive side, and the compliance of the rules to be done only thorough the perspective of the sanctions imposed to the individuals.

In the post-constitutional stage, the state reaches the situation where the citizens accomplish their objectives in common, “each of them entering in the contractual or exchange process with rights allocated in the fundamental judicial structure” (1997, p.142). Such a state is “protective” because it permits the government to take significant political decisions, to assure the participation of the members of society to the collective option, to extend the global limits of economic well-being and to supply public goods and services. Definitive for the “protective” state is the fact that “the decision-making process at the governmental level involves understanding upon the
quantities and the sharing of the costs”, and the solving of the conflicts of interests is obtained by using different methods of compensation and through promoting compromises among groups and people. The result is the edification of a double function of the state – that of making the constitutional order respected and of supplying public goods.

The problem raised by Buchanan is that of the mechanisms through which the individual expresses his preferences for a certain option and the way in which these preferences are taken into consideration within the public decisions. From this point of view, two possible actions should be taken into consideration. One of them consists in the organization of the direct vote or of the referendum, an aspect difficult to achieve due to the costs it involves, as well as the set of actions envisaged by public decisions: regulations regarding the functioning of markets, the elaboration of social programs, negotiations for deciding budget allocations, the application of the policies of taxes and rates and so on. Another possibility is that referring to the decision system through representation, according to which the different aspects of economic policy are formulated in the programs of political parties, brought to the awareness of the electors on the occasion of electoral campaigns and put into application by the state administrative system on the basis of a decisional flux as the one represented in Fig.3.

Buchanan draws attention upon the fact that the collective decision is based on the rule of the majority, a certain part of the members of society being in the situation to accept the conditions of the social contract, even if they suffer losses in terms of opportunity costs. At the same time, the “productive” state’s assumption of responsibilities for the exchange process which ensures the supply of public goods makes it rare that the “medium” citizen should support the budgetary scheme which he is required to support and pay. The practice of
participating to the public decision shows that “the individual losses of opportunity increase with the increase of centralizing the public sector, similar to the increase of the budget in terms of size and complexity. In return, the individual’s feeling of participation to the collective option “is relatively larger in local structures (...), because the influence of a single person upon the decision group is inversely proportional to the size of the group” (1997, p.150).

After the decisions regarding the financing of public goods and services have been taken, they become compulsory for all the members of society, the “productive” state finding itself in the situation of appealing to its complement – the “protective” state with its whole system of laws and regulations. The costs-benefits analysis regarding the behavioral constraints imposed by law reveal an extremely interesting aspect: if the individuals focus on respecting the law, the maximization norms of utility give birth to surprising adhesions, even in the absence of the constraint instrument, the institutions with roles of imposing and constraint acquiring a secondary importance. However, the constrictive institutions are necessary for the simple reason that “individuals don’t freely pay taxes, even if their personal benefits from public expenses surpass the nominal level of the taxes (1997, p.172).

The “productive” and “protective” function of the state doesn’t have to lead to the deterioration of individual liberties, and the constitutional order supported by Buchanan should take into consideration two fundamental premises: a) the existing institutions and those which are to be created for the public election need to “be analyzed in the terms of certain criteria of promoting an ‘improvement’, well defined by the potential and independent agreement by any description done beforehand” (1997, p.232); b) a more detailed description of the significance of public good or “a good society”, beyond the agreement detected or anticipated between different social groups.

Conclusions

As one can conclude, Buchanan’s analysis suggests numerous perspectives and offers the possibility of interesting and surprising debate. Leaving the reader to decide between choosing one approach or the other, I would highlight two aspect which seem especially important for our discussion and upon which the author repeatedly insisted in his paper.
First of all, I am referring to the fact that the governmental action and the democratic institutions mustn’t be preoccupied with producing “public good” or by the “welfare policy”, because these involve the extension of the sphere of bureaucratic control, the increase of social costs, wasted resources, uncovered transfers of rights between individuals and groups, the search for personal or group profits by use of the political mechanism, all having negative consequences upon the arrangements specific to the state of right.

Secondly, in a market economy the state is nothing but the aggregate of individual actions, while the theories which prevail in “welfare economy” are based on an organiciste perspective upon the state. It is represented by a super-national entity which acts for the common good or is hidden behind “the function of social welfare”, seen as the collective equivalent of the functions of individual utility.

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JOURNAL OF ECONOMICS AND BUSINESS RESEARCH

A biannual peer-reviewed journal edited by

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