Business Administration and Business Economics

Reliability of Level Three Valuations and Credit Crisis

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Abstract: This research paper evaluates the impact of level three valuations in accordance with FAS 157 and its impact on investors, auditors' work, and valuation. The objective of this research is to demonstrate that the fair value measurements should not be suspended. The standards provide for measurement of fair value in all market conditions. Therefore, level 3 measurements or mark-to-model is an answer for many issuers that are not sure how to measure their assets and liabilities at the fair value. The paper concludes that fair value measurement has not caused the current crisis and has no pro-cyclical effect and suggests several recommendations for policy makers and regulators.

Keywords: Level three valuations; mark-to-model; FAS 157; financial reporting; disclosures;

JEL Classification: M40, M41, M49

1. Background Information

1.1. Fair Value and the Crisis

As the financial crisis started to show up, financial market stakeholders reacted defensively. Namely, they reacted by selling or trying to sell their financial and other assets that were purchased as a result of 'Housing Bubble'.[3] Consequently, a lot of assets, especially real estates, were available for sale on the market, creating an oversupply of houses against demand for the same. As a result, housing prices started to drop, as opposite of the bubble when they went up rapidly. For a high number of individuals who had mortgage loans, house price was lower than what they owed to the banks. Therefore, those individuals were not willing to pay their future installments so banks had to take those houses under their custody and try to sell them as foreclosures.

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[3] "Dean Baker, "The Housing Bubble and the Financial Crisis", *real-world economics review*, issue no. 46, 20 May 2008, pp. 73-81.

Downturn in the housing prices did not affect only the real estate market. It had a high negative impact on the financial markets as well. Value of the all types of securities was negatively affected. In particular, Mortgage Backed Securities (MBS), securities whose cash flows are backed by pools of mortgage loans, collapsed and dropped in value. It was a result of bad performance of mortgage loans as there were a lot of subprime loans included in those MBSs. Although there was a higher historical price paid for the MBS, their value sank as no market participant was willing to buy them. As a result, businesses holding such securities had to revaluate them in order to represent the fair value (market value) of those assets in their financial statements.

As the future share price of a business is determined by its current income and the future earnings and cash flows, decrease in the value of the assets held by businesses and inability to produce earnings and positive cash flow was reflected on their share prices. Share prices of the businesses holding MBSs fell down thus making firms look less valuable than before the crisis.

Marking-to-market of the assets that dropped in value does not have a negative effect only to the businesses holding them (DAVIS-FRIDAY, P. Y., 2004). It has also a negative effect to all the investors, shareholders and creditors of those particular companies. And, as the shareholders and other security holders reacted by offering their securities for sale, financial markets were flooded by available-for-sale securities. Therefore, decrease in the value of the assets had a chain effect to all financial market participants. As the financial turmoil was going on, determining the fair value of assets and liabilities in the distressed markets was of a big concern of the financial analysts, auditors and investors.

Determining the fair value of assets and liabilities in a stable financial market would not represent a big challenge. However, determining the fair value of the assets and liabilities in distressed and illiquid markets, it is rather difficult whereas the process faces a lot of challenges. In this regard, FAS 157 sets guidelines on the methods that firms should use when determining the fair value of their assets and liabilities. According to FAS 157, there are three levels in the evaluating hierarchy which are used for measurement of the fair value of assets and liabilities. Further, the FAS 157 hierarchy is described.

1.2. FAS 157 Hierarchy

FAS 157 on Fair Value Measurement aims to set standards regarding the asset and liability fair value measurement which would be consistent amongst different industries and business sizes. Its primary objective is that all assets and liabilities shown in the balance sheet should be presented at their fair value.

Based on the information available pertaining to the assets and liabilities, each particular asset or liability may fall under level 1, level 2 or level 3 valuation techniques. It is the information availability and its reliability pertaining to each asset or liability that decides whether it falls under level 1, level 2 or level 3 valuation techniques.

- Level 1 inputs are all the inputs which can be taken from the active market for the identical assets and liabilities. Such inputs are quoted prices of identical assets and liabilities in the markets where there is enough frequency of transactions and the quoted price is taken as the basis for valuation. However, if there is no quoted price in an active market for the identical assets and liabilities, than the asset or liability would be evaluated based on level 2 inputs.

- Level 2 inputs are all the observable inputs pertaining to the assets and liabilities to be evaluated. In addition, inputs from the active markets for similar assets and liabilities are used in case there is no active market for the identical assets and liabilities. Further, these inputs are additionally adjusted in order to come up with the fair value of the assets and liabilities. Any significant adjustment needed would move the asset or liability up to level 3 measurement.

- Level 3 inputs are all the inputs which do not fall under level 1 and level 2 inputs. Namely, level 3 inputs are all the unobservable inputs used in order to determine the value of an asset or liability when there is no active market for the identical or similar assets or liabilities and there are no observable inputs available. As a result, business entities should come up with the most suitable valuation model for each asset and liability. These models should reflect the market participant assumptions about the assets or liabilities for which the fair value determination is intended. In these models, they should use all the available information which can be reasonably collected without incurring undue costs.

2. Reliability of Level Three Measurements

2.1. Weaknesses

Level 3 valuation models are based on using unobservable information, i.e. firm-supplied estimates in determining the value of an asset or liability. Having considered the current market condition there are several questions that need to be addressed before applying the level 3 measurements or mark-to-model method.

The first question is how to actually determine when markets become inactive; second, how to determine if a transaction or group of transactions is forced; third, how, when and to what extent should illiquidity be considered in the valuation of an asset or liability; fourth, how should the impact of a change in credit risk on the value of an asset or liability be estimated; fifth, when should observable market information (e.g. discount rate) be supplemented with unobservable information in the form of management estimates; sixth, how to confirm that assumptions utilized are those that would be used by market participants and not just by a specific entity?

As a result of the level 3 valuations the fair value of an asset or liability is derived using models which are mainly based on fundamental value concept (e.g. discounted cash flow) and the value in-use concept. The inputs used in the level 3 models are based on the assumptions of the market participants would have used in measuring the fair value of those assets or liabilities.

However, there are two main weaknesses of the mark-to model that we have observed. First, the market assumptions on the expected future cash flows may not be the same with the assumptions of the management (IMHOFF, E.A., 1991). Second, what is the adequate discount rate to be used in the model? This question is crucial to the extent that it serves to determine the ratio between two components of the risk associated with the fair value determination i.e. the liquidity risk that is present in distressed markets and the credit risk that is associated with uncertainty of future cash flows (Ahmed, Anwer, Carolyn Takeda, et.al 1999). Determination of the discount rate in determining the fundamental value presents a serious problem. If the current risk rate is used to discount future cash flows, the fundamental value tend to converge the present value. On the other hand, if a lower discount rate is used level 3 measured fair values may become a tool for "window dressing" in which the real credit risk is hidden.

As a consequence of the above weaknesses, the level 3 or mark-to-model is to be used in combination with full disclosure (Brunnermeier, Markus K. 2009). It ensures that investors and other users of financial statements are made aware of the assumptions used in establishing the fair value of assets or liabilities.

2.2. Impact on Auditor's Work

Another impact of the level 3 valuation model is on the complexity and volume of the auditors work. We need to stress that auditors should be aware that when they audit clients that are using level 3 valuation models, they should be more cautious when performing audit procedures.

As the level 3 valuation models are based on the unobservable inputs, they involve a lot of judgments and assumptions (Landsman, Wayne R. 2007). Involving

judgments in creating valuation models certainly increases the complexity of the work that auditors should perform. In addition to that, auditors should challenge the managements' judgments and assumptions used to determine the value of the assets based on mark-to-model method.

Moreover, auditors should pay more attention to the information disclosed on the notes to financial statements as they contain all the judgments, assumptions and data used by the management on determining fair value of the assets.[1] As a consequence, auditors will be spending more time on notes to financial statements and will try to test the reasonability behind the assumptions used by the management.

2.3. Impact on Investors

It is the general consensus among the investors that the application of the fair value measurement concept in financial statements as provided in FAS 157 should not be suspended (Plantin, Guillaume, Haresh Sapra, and Hyun Song Shin. 2008). Vast majority of investors share the opinion that the fair value allows them to assess the value of their investments and take necessary decisions. Most of the investors also do not think that the fair value measurement has a pro-cyclical effect on the market. In other words fair value measurement is only a reflection of economic events that occurred with relation to financial markets (FASB). Therefore, the fair value measurement has actually helped them in taking investment decisions (Allen, Franklin, and Elena Carletti. 2008). However in the light of level 3 model measurements the investors expect more transparency in disclosures i.e. full transparency with regard to assumptions used in determining the fair value using this mark-to-model method. Full disclosure is important especially having in mind the current market situation that for the most of market participants is considered to be an inactive or distressed. Financial statements need to incorporate the assumptions used for building the model and clear definition of risk components (Dechow, Patricia M., et. al 2009). The investors expect clear picture on the measurement of the liquidity and credit risk incorporated in the mark-to-model fair value measurement for assets and liabilities. Besides, full disclosure in the notes to the financial statements it is expected from the management of the issuers to analyze and further disclose details on the inputs used in applying mark to model measurement method in the annual MD&A.

[1] According to the research paper "*Recognition v. Disclosure, Auditor Tolerance for Misstatement, and the Reliability of Stock-Compensation and Lease Information*" by *Robert Libby, Mark W. Nelson and James E. Hunton,* auditors allow more misstatement and tolerate higher materiality thresholds in disclosed amounts (disclosures) than in recognized amounts.

2.4. Level Three Valuation Disclosures

FAS 157 requires issuers to annually disclose the inputs and techniques used to measure fair value. It also requires disclosure of the discussions regarding the changes in the inputs and techniques in case any change occurred during the reporting period. We deem the required disclosure as a value relevant variable[1] because users of the financial statements properly place their primary reliance on the published financial statements. Besides investors, financial analysts as well predict future earnings based on issuer's published financial statements (NELSON, M. W., et al 2002). However, we believe that current disclosures requirements are not be sufficient to address the issue of inactive markets, where level 3 valuations must be used by issuers who hold "hard-to-value" assets or liabilities (AICPA). Our opinion is based on the following facts:

- FAS 157 does not require disclosure of the controls in place regarding the valuation of assets or liabilities in financial statement (notes or MD&A). As a consequence some of the big financial institutions such as AIG, Morgan Stanley, etc, have disclosed restatements[2] of fair value measurements due to the lack of controls in place associated with these measurements. Restatements of the financial statements may have great influence on investors and analyst. As a result they will decrease their expectations about the companies earning quality (*loss of credibility on the fair value process*) consequently affecting company's stock price.

- FAS 157 also does not require companies to perform sensitivity analysis of fair value estimates and disclose them into the notes of financial statements, respectively in the risk management part. Since fair value estimates rely on input assumptions, the fair values derived are highly sensitive to potential changes in some of the assumptions made. The disclosure of these analyses is highly important for investors, financial analysts and other interested parties. It provides them with the additional information which helps measure the real effect that change in these inputs (e.g. increase or decrease in the discount rate) has on the overall performance of the issuer. Such disclosures should be mandated as it increases the reliance that current and potential investors have on the mark-to-model valuations.

3. Recommendations

Having considered the need for additional application guidance for determining fair value in inactive markets using the level 3 measurements, the standard setter should consider the following:

[1] A variable is considered value relevant if it is informative for evaluating firms' performance and assessing firm's future earnings.

[2] http://www.ft.com/cms/s/0/06245606-e99c-11dd-9535-0000779fd2ae.html

- Additional requirement for full disclosure and presentation of the assumptions used in the model when determining the fair value and their effect in financial statement.

- Requirement for explicit quantification of risk components used in mark-to-model measurement i.e. liquidity vs. credit in order to ensure full transparency for financial statements users.

- Consider suspension of application of the OTTI for a limited period of time (in our opinion one reporting period) for assets and liabilities measured at fair value due to uncertainties in market i.e. there is no possibility to estimate the liquidity risk and credit risk and use level 3 measurement in order to protect the companies from having to book OTTI that may be caused by illiquidity. This measure has to be implemented carefully, accompanied with full disclosure by issuers and has to be closely monitored by SEC for compliance to avoid any "window dressing" tendency.

- It is proposed that some of the reservation to adopt Level 3 of FAS 157 comes from references in the standard to "management judgment." But, as discussed earlier in this paper, it is recommend that FAS 157 be revised and include two additional disclosure requirements which will increase the quality of information to the public regarding level 3 measurements. Disclosure of controls regarding fair value measurements should be mandatory for all firms holding assets and liabilities at fair value which are significant to the financial statements. Lastly, disclosure of the effect of alternative assumptions used in valuation models for unobservable inputs. In other words, issuers should disclose the results of the sensitivity analysis, which currently are mandatory for companies following IFRS 7.[1]

4. Conclusion

In this research I considered the market conditions, weaknesses of the mark-to-model, the effect on users of financial statements as well as possible improvements to be implemented by standard setters. As a conclusion, it is considered that the fair value measurements should not be suspended. The standards provide for measurement of fair value in all market conditions. Therefore, level 3 measurements or mark-to-model is an answer for many issuers that are not sure how to measure their assets and liabilities at the fair value. Therefore, fair value measurement has not caused the current crisis and has no pro-cyclical effect. It only reflects the substance of the economic events and transactions in the financial statements. Blaming the fair value measurement for reflecting the bad news is not correct. Calls for suspension of the standards requiring use of fair value would only

[1] See the appendix A

deepen the crisis and temporarily hide losses. Even though this temporary relief would help some market participants, it would diminish the transparency which in long run would discourage the investors. That would, in turn, cause greater crisis with enormous threats to global economy what we may call the "the calm before the storm".

Table 1 Effect of Changes in Significant Non-Observable Assumptions to Reasonably Possible Alternatives

	Reflected in Profit/(Loss)		**Reflected in Equity**	
At December, 31, 2007	Favorable Changes	Unfavorable Changes	Favorable Changes	Unfavorable Changes
Derivatives/Trading assets/Trading liabilities	602	(415)	–	–
Financial Assets/Liabilities Designated at Fair Value	30	(30)	–	–
Financial Investments: Available-for-Sale	–	–	529 (591)	
At December, 31, 2007				
Derivatives/Trading assets/Trading liabilities	69	(72)	–	–
Financial Assets/Liabilities Designated at Fair Value	16	(16)	–	–
Financial Investments: Available-for-Sale	–	–	165	(165)

Source: HSBC Holdings PLC, Form 20-F for the fiscal year ended December, 31, 2007

Note:

The table above shows an example of sensitivity analysis of fair values for reasonably alternative assumptions used. This additional disclosure is currently not required by FAS 157.

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Romanians Civil Servants between New Public Management and Neo Weberian Principles. Some Perspectives

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Abstract: This paper aims at outlining the contents of the special issue on Romanian civil servants, making a comparative analyze of the principles applicable: can we discuss about New Public Management (NPM) approaches or, taking into consideration the Romanian civil service reform, we have a Neo Weberian model? The article provides reviews of the scientific literatures in this special issue. The argument is that the work performance of civil servants are based on a set of goals determined by the citizens-clients needs and the market movements, but, in the mean time, it is about the quality of work in terms of citizens satisfaction and the innovative solutions for the administrative problems. The special issue, of which this article provides an overview, make an incursion in the literature providing analyze on the Romanians civil servants based on the steps of actual reform and putting on the questions the managerial and bureaucratic principles. Research limitations include the width of the phenomenon under discussion. We state that the work and performance means not only NPM principles, but have instead chosen to adopt the Neo Weberian approach.

Keywords: new reforms; civil service; managerial principles.

JEL Classification: M12; M38; H83

1. Introduction

Early 2007 meant for Romania's efforts for realization of EU integration. Not easy, difficult, with ups and downs, the process of European integration was the subject of debate for the entire Romanian society. State and its authorities have undergone a long process of transformation and change to meet new socio-political context has been foreshadowed since 1952. An important role of the executive went to the Romanian state, which has established policies and government strategies to meet the requirements of the Union. In this context, public administration is established as the fundamental structure through which to carry out their missions and objectives of state power.

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The current European context required for effective strategic decision making, streamlining and improving work performance of civil servants. Centralism characteristic of socialist Romania was predominantly manifested by flattening of the state administrative structures and authoritarian state building. Administrative decoupling occurred after the Revolution of 1989 marked a new era for the Romanian public administration. Public administration reform in Romania started in 1991 by adopting regulations first by identifying and establishing the principles of organization and operation, local autonomy, decentralization and de-concentration of public services. Public administration reform in Romania meant primarily a review of the institutional, organizational, and especially, of the human structures. Structural and functional changes are its practical purpose if they are correlated with the diversity of the human factor in order to improve efficiency and its professionalization. Specialization and professionalization are strategic objectives of administrative reform in Romania, from the beginning until today. Creating a body of civil servants to demystify the traditional image of public administration, the simple execution of policy decisions and turn it into a new administration, public policy underlying it became an imperative.

The aim of our work is to analyze and provide a perspective on the work performance of civil servants in Romania in terms of management theories and models discussed in the literature (Lynn: 2004, Peters: 2001, Pollitt and Bouckaert: 2011, Brown 1978): New Public Management and Neo Weberian Model. Romanian public administration reform have as central element the transformation of public service and of civil servant by the agent of the state who execute the political decision and a representative of state coercion, of an agent of change who aimed at valuing their work and obtain performance. New Public Management objectives are reflected in measuring public servants work through performance indicators that relate to quality and quantity of work done. It is important to identify whether the principles established by the New Public Management respond to market or better said, are able to meet the needs of the citizen-client and work as civil servants influence on performance? We need a reconsideration of government in Romania, for the purposes of defining the quality of work of civil servant? Neo-Weberian model is able to provide solutions to new problems on work performance of civil servants from redefining the role of state?

2. New Public Management and Neo Weberian Principles. A Point of View

De-bureaucratization, decentralization, market orientation of public administration, public-private partnerships, performance management are just some of the guidelines proposed by New Public Management and civil service reform embraced in Romania.

It is important for our argument to discuss about the emergence and development of the New Public Management (NPM) concept. The New Public Management is a response to changes in the early twentieth century in rural traditional bureaucratic organizations. Concepts are introduced and new roles in public sector actions. Hood (Matei: 2006) summarized the basic principles of new public management:

a. introducing the performance standards in the business of government, under which work of officials must be appreciated;
b. control of the results and comparison with quantitative performance indicators;
c. shift from unified management systems to decentralize public sector organizations;
d. promotion of professional management and the "freedom in management";
e. encourages competition in public services;
f. introduction of management techniques and methods from the private sector;
g. applying the principles of the 3E: economy, efficiency and effectiveness.

The literature discusses a new trend called Neo Weberianism, as current reforms proposed by the new public management. The term Neo-Weberianism was used in political science, sociology and public administration since 70s of last century. Neo Weberian analysis brings into question the interpretation of the classic Weberian model by reconsidering the government machinery in terms of power relations within the administrative system or as an instrumental rationality. Deprecating, Neo-Weberian administration was seen as a threat to liberal democracy. Sociologist Philip Selznick played Neo Weberianism from the organizational perspective. The starting point consisted of "the black organization" that "could be undermined by informal and illegitimate patterns of authority in decision-making" (Hinings and Greenwood: 2002).

Pollitt and Bouckaert considered the Neo-Weberianism as a model centered on the state administration. Elements of "neo" refers to citizens' needs, the external guidance, consultation and cooperation, are achievements of administrative elites and governments. In this sense, Neo Weberianism is an influence of global capitalism and administrative elites, the legal rule itself, as well as supranational entities as the European Union. However, we cannot appreciate the state or supranational authorities are necessarily positive or progressive. Conversely, there are critics who believe that would undermine the democratic principles of governance.

In this context, the old interpretations of administration are replaced by a new flexible form, which redefines the role of government in society. Citizens want government institutions to meet their interests through effective and rational use of public resources, becoming a *lait reason* for public-private partnerships (meeting public interests can be achieved through an agreement between the public and private company). New Public Management principles are different from those of

the bureaucratic model, based on centralization, hierarchy and control. It required the discovery of new methods and techniques to investigate the public sector, other than those used by public and conventional budget process (Lane, 2006), and changing perceptions of public sector employees by enhancing their role and relations with the public.

3. Some Discussions Concerning the Work Performance of Romanian Civil Servants

It is estimated that over-legalization and over-regulation, normally do not offer the efficiency, economy and effectiveness (Nemec, Sagat: 2011), but in states decoupled from a centralized economy, like Romania, it is necessary and appropriate. Improving government performance by adopting additional laws, rules and regulations, without specifying and implementing procedures and practice, without finding correspondence (market-type approaches) there is nothing more than to create an additional task for the environment business and citizens. From this point of view, the performance of Romanian civil servants is done by the regulation and law and could not be demonstrated. The evaluation of work performance of Romanian civil servants is made following a formal procedure based on rules and the results don't show the real situation about the civil servants capabilities. It is more Neo-Weberian model than NPM one.

One of the principles governing public office is the constitutional principle of freedom of access to public office. For the first time this principle was enshrined in Article 6 of the *Universal Declaration of Human Rights and Citizen* and settled principle derives from the functioning of modern states, namely equality before law and equal rights. In this context, any person who meets the legal conditions of access to public office can compete for a position in public administration. Civil service reform aimed at from this perspective, flexible access to public office by establishing legal requirements such as citizenship, reading and writing knowledge of Romanian language, the age at which it acquires legal capacity to legal acts (18), moral probity, health certified by a proper examination. These conditions are followed by a series of specifications related to expertise that public officials must prove through tests and interviews, both at entry into the civil service and throughout their work. Performance is the degree to which work tasks, the direct result of official efforts, the perception and understanding of its tasks.

Catalytic role of governments (central or local) (Gaebler and Osborne) explained the need for public services to be provided both through public services, but also NGOs and private services. This guidance is based on the belief that traditional bureaucracies cannot provide sufficient incentives for public officials to perform efficiently and effectively. This is because the central value is based on faith in the virtues of competition. And competition is the key market factor. Therefore,

managers should have greater freedom and flexibility to introduce performance indicators for public servants, such as adaptability, responsibility, ability to solve problems, ability to implement solutions, the ability to self-improvement and recovery experience, analysis and synthesis capability, creativity and leadership, capacity, coordination and control, strategic analysis and planning capacity. Enrolled in this direction and the Law no. 188/1999 on the status of civil servants as an important step in reforming the civil service, followed by the adoption of numerous laws, including those aimed at establishing criteria for individual performance appraisal of civil servants (synthetic mentioned above). We can argue that these capacities are demonstrated by the Romanian civil servants all the time in their activities, but, sometimes, seems to be necessary to create a methodological framework which can be applied in various situations (and not only a formal one offer through the rules).

However, there can be no real marketization of public administration in Romania, as it is not enough without setting performance indicators to identify concrete ways of measuring them. Citizen-customer satisfaction is measured in difficult conditions in the persisting practice of passivity toward the administrative act. Citizen participation should be reconsidered in the new context. It thus creates serious management problems between performance values "and democratic values" concerning participation in the administrative process. It should be noted however that, in this respect, the Romanian legislation is in full compliance with international and European law. It is necessary to find resources management of the citizen-client involvement in the governance, risk arising from marketization approach is that only the organizational activities that can be quantified and can be analyzed and interpreted in terms of performance.

Participation, principle of NPM, is a major issue for public administration reform in Romania and is considered an effective means of motivating civil servants and, therefore, increase work performance. Quality of services is much better if we take into account citizen participation in decision making. However, there is no direct involvement of citizens in the administrative decision making and Romanian public servants work efficiency is strictly determined by the amount of solutions delivered, not quality. The inefficiency in solving citizen problems timely is done by the long term administrative procedures. Public-private partnership, as a more efficient delivery of quality public services, has found the answer until 2011, by adoption of regulating in the matter. Local government and hence, civil servants, were repeatedly blamed inertia in terms of initiating such projects, identified the main reason being the lack of knowledge and skills in planning, organizing, implementing and evaluating such projects.

Flexibility is another principle of NPM evoked like a response to criticisms of traditional rigidity of public administration. "Flexibility refers to the capacity of governments and agencies to make appropriate policy responses to environmental

change" (Peters: 2001). In Romania, civil servants enjoy stability in function, which allows it to follow a career in public office. From this point of view, flexibility implies the ability to adapt the official, but it creates the possibility to pursue their own interests at the expense of achieving state power and authority. From this particular point, the code of behavior in administrative body reclaim the persons with moral and ethical attitude (it is a reality that the corruption is an important problem for the Romanian public administration; it is necessary to increase the control and to implement the sanctions at all levels of government).

4. Conclusion

Work performance of the Romanian public servants is one of the priorities of governments after December 1989. Although, important steps have been made in reforming the civil service through the adoption of numerous measures concerning the conditions of access to public office, stability and continuity at work, remain methods and tools of centralized administration regarding the evaluation of work and performance of civil servants. Romanian administrative system instability caused by the numerous changes in legislative, political and economic changes (the current global economic crisis led to harsh measures taken at government level by blocking positions and wages, which leads to bad and the dissatisfaction of civil servants, and thus, citizens) need the reinterpretation of its role and functions.

Introduced as performance targets in the civil service reforms, NPM principles find their relevance mainly in theoretical analysis, the reality demonstrating that, often, centralism and formalism which characterized the state and its authority are predominant. What is lacking the human factor in the Romanian administration to be efficient in its activity (within results measurable and quantifiable) is the determination and involvement, followed by motivation. Neo-Weberian principles with focus on organizational structures seem most appropriate based on the authority of the civil animated by the desire to be better, but, constrained by the formalism of power.

Concretism of administrative reality in Romania will provide answers to the problem of future job performance of public officials. Maybe new managerial models will answer theoretical and practical priority of government objectives.

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The Human Being – He Is Still ... the Living Resource of the Company

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Abstract: Almost every day, and quite often, we hear about how important the data, the information or the knowledge at work is. The saying "The one who has information, also has control" is more current than ever; it provides reliability, it awakens passion and determines you to store everything. We almost become machines, systems of these universal keys represented by knowledge. We tend to appreciate this ambulant knowledge, these bearers of knowledge and we lose sight of the essence - the human being. But isn't he, the human being, who brought us to this moment? Isn't it that all his needs, which became more and more refined, stricter, and more precise that caused this transformation? We believe that this may continue, at least in accounting, far beyond the moment when the great economists labelled the human being as a factor of production that advances towards the human being who brings performance then towards the possible ... human being as an asset, equity, debt. Perhaps, as in the case of great denials which have become truths, if not absolute, at least there will come a day when we are able to compress the time ... the space ...., a day when we have the necessary instruments to trade equity, assets and human liabilities... But until then, with your permission, we will deal with the human factor that brings performance, which is, we will be present both in reality and especially in thought, having the cliché of the transcendality of the human being towards new horizons of knowledge.

Keywords: performance; human; accounting; measurement

JEL Classification: M41; M14

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1 Introduction

We are seeking an approach that promotes the human being in all his complexity, in terms of the objectives assigned to him, in close interdependence with the objectives, resources and means of the systems in which he is integrated. The effect of this approach is the multilateral analysis of relations and processes in which the human resource takes part, which is reflected in the multidisciplinary nature of managerial knowledge, directly subordinated to obtaining the company's performance. In social science, the word „performance" has two meanings (Calisti, & Karolewicz):

- ✓ *Social performance,* which can be defined as the intensity with which each individual adheres to collaborate on business objectives, or more generally, the level of satisfaction achieved by individuals who participate in business life. Social performance reflects the social policy implications on employees' attitudes towards the company where they work.
- ✓ *Human performance***,** which is analyzed according to the result of the employees in relation to the work performed by them. This result is expressed in terms of wealth, the added value, value supplement produced per unit etc.

The two concepts are different because:

- ✓ social performance reflects the ability to enhance staff satisfaction, to improve the social climate and living conditions;
- ✓ human performance involves optimizing the social cost to obtain a given result, or maximizing this result.

Social performance can be achieved by optimizing human resources management and human performance by developing initiatives concerned with making the knowledge permanent.

Today people often speak of *sustainable development* of the human resources. This concept associates the term of human resources with sustainable development. The sustainable development has three major objectives (Depoers, 2005): the increase of the financial performance of the company, the development of the effectiveness of its environment and the promotion of social development. The aim of the sustainable development of human resources is the improvement of the performance of the company and its social responsibility, by taking into account the ecological and social environment in order to protect future generations. The objective of the sustainable development of human resources is not to shift social performance to financial performance but to switch from performance to durable performance. To do this, companies must not be only concerned about their economic profitability and growth but also about the impact on ecological and social environment.

The sustainable development of human resources is a responsibility and mutual commitment of all parties involved. The company is committed to its environment and its partners in order to develop the financial performance by creating global value and not by destroying resources. In return, the partners and the employees are committed to become socially responsible towards themselves, their environment and business.

1. Research Methodology

This paper is related to financial reporting and it presents the basic research. The objective is to examine in time and space the theories related to performance and the way they are reflected in accounting. In terms of epistemological discourse, this approach is of a regulatory type. As technical research, we use the procedure of reviewing the literature. In this respect, we focus on the research of the documents of literature regarding previous research and also on documentation related to the work performed by financial accounting standard board.

Our approach for the presentation of human capital as a support to ensure business performance is divided into three sub-paragraphs: the human capital management, the disclosure of human capital and the recognition of human capital in accounting.

2. The Human Capital Management

The man is the richest resource in the company. The performance of company is born by coordinating elements of human resources. Therefore, companies should establish as objectives both social and human performance. But you can't drive a man like a car. His complexity, which is variable in time, is added to the complexity of relationships between people. A company which does not integrate social criteria, not only may jeopardize its image, its functioning, its continuity, but more importantly, by its capital, it will not develop confidence to its partners.
To make wealth and value results not only from the intrinsic qualities of a product, but also from the constituents of ordered intangible benefits that accompany it. The way in which people communicate and work together determines the performance of an organization. Human dimension reflects the need to use or not a human resort represented by knowledge. Man doesn't entirely handle the knowledge he possesses. There may be cases in which he forgets something. Moreover, it is possible for him to remember all his knowledge regarding a particular case. The access to the knowledge that people have is influenced: by the desire of people to use their knowledge because their interest may be different from the interest of the company; and by people's capacity to use the science available for them. This capacity depends both on the actions conducted by the company to improve its potential (training, documentation, availability of information, the knowledge

enrichment and the whole the action of training) and on the people's ability to apply and transfer the knowledge they possess.

Human resource management is crucial to the financial performance of the company. A study by the U.S. Office Advice Watson Ayatt states that the best companies in managing their human capital create twice more value than others. There are five reasons which each individual pursues at work (Levering & Moskowitz, 1993) remuneration, professional development, workplace environment, esteem and consideration, and working interest. The company which wants to have performance must consider these reasons and must focus the human resource management towards the achievement of the following objectives: to gradually integrate new employees, to participate actively in the integration and formation of the youth, to participate in the integration of persons with disabilities, to constantly update internal resources, to practice a responsible and equitable management of jobs and promotions, to show flexibility in work organization, to take into account individual aspirations, to ensure the people's safety, to support employees in difficulty, to value individual wealth, to recognize individual and collective work, to practice a fair remuneration for employees, to fairly protect results, to promote cooperation with local bodies, to interfere with academics, to gradually manage resignations.

The relation between employees and their work transforms them from providers into clients. The current social environment transforms the place of work into a place of life as if the society is like a second family. The XXI century education must meet four objectives: learning to know, learning to do, learning to be, learning to live together, and the company must take into consideration this new approach for performance and for its employees. The chronology of expectations in relation to the world of work can be summarized as in Table 1 (Detrie, 2005).

Table 1. The chronology of expectations in relation to the world of work (Detrie, 2005)

	Yesterday	**Today**	**Tomorrow**
Beneficiary	Country	Market	Society
Type of demand	Basic needs satisfaction	Consumption, Caution	Responsibility, Relationship, Attention
Purpose (aim)	Each one	Future	Others
The expected result	Equipment, Improvement	Sustainable development	Sharing, Contribution
Wealth	Gross wealth	Wealth without poverty	Wealth useful to everybody

As we said above, human performance is achieved through the development of initiatives that are concerned to make knowledge permanent, that is to implement a knowledge management. Knowledge management, also known as the capitalization of knowledge, involves considering the knowledge used and produced by the

company as a set of wealth which represents a capital from which one can extract interests that contribute to the increase of the value of this capital.

There are two specific categories of knowledge: explicit knowledge and tacit knowledge (Boughzala & Ermine, 2004). The explicit knowledge characterizes the abilities to govern, to study, to develop, to sale and support its products and services. The tacit knowledge characterizes the capabilities of action and adaptation. This individual knowledge is tacit. It may not be expressed. It becomes collective knowledge when it is shared with others. Tacit knowledge is specific to each individual; it includes, on the one hand, informal technical expertise and on the other hand, the personal beliefs and aspirations, considered as a private form of knowledge. Tacit knowledge forms the essence of business knowledge, which is in the "mind" of its employees. This capital can be both individual and collective and lives along with knowledge networks of the company.

3. The Disclosure of Human Capital

France was the first country to adopt regulation (Act of July 12, 1977) to present social information in a social balance. The word balance should not be understood only in its accounting purposes, as the social balance sheet summarizes in a single document the important information that allows the evaluation of a company's situation in the social domain, the recording of the achievements made and the measuring of changes that took place in both the current year and the preceding two years in the social domain. Consequently, the social balance sheet contains information about work, wages and social costs, hygiene and safety conditions, other working conditions, training etc.. The social balance sheet is addressed to employees, their representatives as well as to trade unions and shareholders. Act of May 15, 2001 and decree no. 221/20 February 2002 requires listed companies in France and the companies that have more than 300 employees to publish social information. The objectives of social balance are to improve social information system for various stakeholders (employees, unions, shareholders), to plan human resources management, to promote dialogue and to compare data over time. This document is determined by the following logic (Decock Good & Georges, 2003):

- It is focused on the accounting and financial approach regarding the independence of exercises, being annually determined;
- It is part of a fully analytical approach. Social balance does not lead to positive or negative balance on social policy of the company but is rather a situation of organization's ties, a representation of the existent.
- It allows to easily know the costs of human resources and the wage mass of the company. However, it is very difficult to judge the social policy and the impacts of this policy on enrichment and value creation for the organization.

The data presented are mostly quantitative in order to avoid subjective assessments. Indicators which should be presented (approximately 170) are established by the State and they cover working conditions, information on jobs and specialty, training, remuneration, salary policy, etc. The only penalty provided by the State appears when the social balance sheet is not done and not when some indicators are not presented. The creation of the social balance is not the result of a well-established procedure as in the case of the accounting balance sheet. Staff services are responsible for preparing the social balance having as guidance the indicators published by the State.

The social balance is a difficult document to read. The abundance of figures is not accompanied by comments, which leaves an impression of figures collection without analysis. Moreover, data are presented independently of any strategic and economic context: the external constraints are completely ignored. For this reason, it is difficult for any foreign investor to make a judgement on the led wage policy and on the social climate. The social balance is not prospective because it doesn't favour the presentation and following of the company's policies, from which an incomplete information tool results. The indicators used to create the social balance are characterized by their heterogeneity: they can be expressed numerically (number of persons employed with indefinite employment contract), as money (salaries, costs of improving working conditions), social indicators (the seriousness of the rate of accidents at work), and several indicators of binary form (whether or not of security plans). The amount of information available in the social balance requires making a choice, the social indicators presented in the balance sheet being classified on five major components: remuneration, training, working conditions, social climate, structure and the work place.

Tabel 2. The most indicator of the social balance sheet

Concepts	**Explanatory Variables**
The remuneration	Wage costs
	The amortization of the average remuneration of workers in relation to TESA staff
	The average remuneration of TESA staff
	The average remuneration of workers
	10 higher wages
The training	The ratio of training expenditure
The working conditions	The severity rate of accidents at work
	The social expenditure
	The duration of work
The social climate	The absenteeism rate
	The resignation rate
	TESA staff resignation rate
	The resignation rate of workers
	The deviation pay of men in relation to women

The structure and the work place	The total personnel
	Employees with permanent contract
	Employees with fixed-term contract
	The proportion of TESA staff
	The employment rate
	The licensees rate

The studies have demonstrated that only three out of five concepts are important to the employees, namely: the social climate, the remuneration policy and training policy. That is why we recommend that the profit and loss in wage costs and social expenditure should be detailed in the Annex, at the following categories: wage costs, expenditure on social benefits, training and development expenditure, social expenditure (including here the benefits given to the employees, as defined in the tax code). However, other information must also be presented, such as: relative information on any plans to reduce the number of personnel, reclassification efforts, rehabilitation and counseling measures; the hygiene and safety conditions, the training, the insertion of the disabled; the manner in which the company takes into account the territorial impact of its activities on employment and regional development.

At present, there is a tendency to present information on employees with information on the natural environment. A very important body in this field is GRI (Global Reporting Initiative), which was created in 1997 by some of the companies and organizations that belong to CERES (Coalition for Environmentally Responsible Economies), with the mission to develop global guidelines for economic, social and environmental performance reporting, initially for corporations, and now also for small and medium-sized entities, governmental or nongovernmental organizations. Currently, GRI is the best known framework for voluntary reporting on environmental and social terms, being used worldwide (in over 65 countries). The purpose of GRI is to harmonize the many existing reporting systems and to provide a platform for an active dialogue about what sustainable performance is. GRI was created taking into account the U.S. financial reporting system FASB, which has sought to expand it in terms of depth (global), purpose (social, economic and environmental performance indicators), flexibility (descriptive and quantitative indicators) and in terms of public interest (industry, financial sector, accounting profession, civil society, NGOs working on human rights and environment and other stakeholders) (Brown et al, 2009). The main reason why such a project developed was the lack of current instruments reporting of what was really happening in the entities and the lack of highlighting the concerns and concrete actions undertaken by them.

4. The Recognition of Human Capital in Accounting

In order to make an accounting of the human capital, firstly we must find the relevant methods for assessing this capital. The human capital represents the totality of the skills, knowledge and intelligence of the employees. Although it is of a paramount importance in achieving business performance, the human capital does not appear in the balance sheet along with the intangible assets. The financial accounting records only the costs of staff salaries once the work was done. But the human capital is valuable and this value, although it satisfies the definition of an asset, is not recognized in the balance sheet because it cannot be estimated in a reliable manner.

Many researches, having as aim the integration of human factor issues in the balance sheet and in the process of evaluating the performances, were achieved starting with the 1960-1970s. The need of an accounting of the human resources lies in the incompleteness of financial information and in the financial statements in making decisions. This accounting puts into question the economic and financial evaluation of the human capital that the firm uses. The human capital accounting must respect the principle of the independence of exercises, by distinguishing personnel expenses which can be considered costs of the period, from the investments in personnel which should be immobilized and amortized over time. Obviously, the costs incurred by the company to ensure the services of its staff are treated in accounting in a classic way as expenses of the period and they are recorded on the principle of historical cost. But, some of these expenses such as recruitment costs, training costs, training and work organization costs, undertake productive effects over several periods: this argument justifies the activation of such costs on order to be amortized over time.

We can make an assessment of the human capital having as support the 4 bases of assessment recommended by the general accounting, resulting thus four models for assessing the human capital:

- human capital assessment based on historical cost;
- human capital assessment based on current cost;
- human capital assessment based on realizable value;
- human capital assessment based on present value.

Human Capital Assessment Based on Historical Cost

As the historical cost of an asset represents in most cases its cost of acquisition or production, for the human capital also, it represents the totality of expenses incurred by the company to acquire and develop the human potential: recruitment costs, training costs, integration costs and organization costs which are invisible, but often important. Recruitment costs and training costs are direct and do not involve difficulties in determining their value. Instead, the costs of integration and

organization are indirect and difficult to measure. If we can determine the amount of these costs, then we must resort to bases of sharing in order to calculate the individual cost.

The recognition of investments in human resources raises the question of depreciation of these assets. The life expectancy of human investments depends on numerous factors such as: the lifetime of the employees, their health, the retirement age, the social climate, the likelihood of breaking the contract of employment, the depreciation of the accumulated knowledge. There have been proposed two ways to measure this time (Marquès, 1974) one, which is of a statistical nature and involves the creation of career curves on staff categories, starting from historical data, and another one, of a behavioral nature, which examines the game of the variables that determine an individual to abandon the work in the enterprise.

Following a research conducted by a group of American professors (Brummet, 1968), Barry Corporation, a medium sized company, has implemented a human capital accounting. In the accounting system of human capital held by Barry Corporation, period costs include costs of consumed services and the amortization of investments in the human capital. The investment costs include the costs of recruitment, hiring, induction, training, training and development of experience. The cost of such investments is amortized over the likely duration of employment of the employee in the company. The amount which is not amortized is shown in assets, in the net investment section in the human capital position. The regulatory constraints and the accounting practices do not allow the publication in financial statements, especially in assets, of the investments in the human resources. Therefore, between 1969-1973, Barry Corporation realized a double presentation of the balance sheet and of the profit and loss. Furthermore, we intend to present the balance sheet and the profit and loss of this company for 1969.

Tabel 3. The balance (after division) of the Barry Corporation company with and without "the immobilization" of the human capital - in 1969 ($ millions).

	Financial items with human capital integration	**Financial items without human capital integration**
ASSETS		
Current assets	10.004	10.004
Net property	1.771	1.771
Intangible assets	1.188	1.188
Net investments in human resources	986	
Other assets	106	106
Total	**14.055**	**13.069**
LIABILITIES		
Current liabilities	5.715	5.715

Long-term debts	1.935	1.935
Deferred tax	63	63
Deferred taxes (related to human capital)	493	
Subtotal	***8.206***	***7.713***
Capital and bonuses	2.616	2.616
Reserves:		
- financial	2.740	2.740
- related to human capital	493	
Total	**14.055**	**13.069**

Tabel 4 The profit and loss of Barry Corporation company with and without "the immobilization" of the human capital - in 1969 ($ millions)

	Financial items with human capital integration	**Financial items without human capital integration**
Net turnover	25.310	25.310
The cost of goods sold	16.275	16.275
Gross margin	***9.035***	***9.035***
Administrative and distribution expenses	6.737	6.737
Operating profit	***2.298***	***2.298***
Financial expenses	953	953
Profit before tax	***1.345***	***1.345***
Net investment in human capital in 1969	173	
Adjusted profit before tax	***1.518***	***1.345***
Tax	730	644
Net profit after tax	***788***	***701***

The recognition of some of the costs as net investment in human capital, in the financial statements, is translated by a total of the higher assets and a profit before tax, also higher. To ensure consistency between the presentation of the two sets of financial statements, but also to comply with the regulatory constraints and the practices related to determining net income, this increase in earnings is recorded in the balance after deducting the related deferred tax, in a post of non-distributable reserves (deferred tax has been calculated at a rate of 50%). Along with the recognition of human capital, Barry Corporation has completed this social accounting by a policy of management staff as quarterly and annual budgets,

investments in human resources. However, the assessment of the human capital based on historical cost does not reflect its true value.

Human Capital Assessment based on Current Cost

This assessment was initiated by Likert (Vatteville, 2000) and starts with the hypothesis that the company would lose its entire staff, except for its management. The question is: What is the cost of replacing the entire staff? The surveys revealed that the cost varies from 1 to 20 times more than its original cost. Yet, such an assessment, with such subjective results may not be subject to the evaluation of human capital. Another variant involves determining the current cost of recruiting, training, integration of personnel, etc., thus leading to an opportunity cost. This is the method of assessment that we suggest for the recognition of the human capital.

Human Capital Assessment Based on Realizable Value

We consider that such assessment is not suitable for human capital because the man is a being who may not be sold.

Human Capital Assessment Based on the Present Value

This assessment involves updating the future cash flows generated by the value of human capital as:

$$VA = \sum_{i=1}^{n} \frac{S_i}{(1+a)^n}$$

where:

VA - The present value of human capital;

S - future wages paid to the employee which are determined by comparison with salaries paid by the company to the staff having the same age and qualifications;

n - the period in which the employee will work in the company;

a - the discount rate that may be represented by the equity.

But this approach and also those aforementioned lose sight of the relationships between employees and teams, which in most cases are the most valuable. Another solution is required, namely the assessment of the company from the global point of view. Thus, the difference between the market value of a company and its overall value is represented by the amount of goodwill and the value of relationships that exist between employees. Here comes another problem: what is the percentage of goodwill and what is the percentage of the value of human relationships? This is a sensitive issue which we intend not to address in this work because it requires a separate and complex field of study. However there is a field

where people are recognized as assets: in the case of sports clubs and professional players. They are recognized as fixed assets because they meet two conditions necessary for recognition: it is probable that future economic benefits associated with restraint to enter the company and the restraint cost may be reliably estimated.

5. Conclusions

The difficulty of implementing an accounting of human capital lies in the difficulty of carrying out assessments or carrying out very subjective assessments. Bary Corporation's experience led to academic presentations in the reviews „The Accounting Review" and „Management Accounting" and served as support for the development of case studies at Stanford University.

But this first serious attempt should provoke a great interest in the academic world to find appropriate models for implementing human capital accounting. Rey (1979) noted: "Few companies use an accounting system so sophisticated as that of Barry Corporation, but many carefully follow the costs of recruitment, hiring and training, through an organized set of indicators, tool of social pilotage or of social management control ".

The studies which were conducted in the field of recognition of human capital in accounting have tried to implement only the cost of human capital which is reflected by acquisition and training cost or by maintaining a private resource - labour - and not the resource itself - the human being.

Human value is obviously higher than accepted accounting costs, and only when we know how to calculate the value of the man, we can speak of a true human capital accounting. The recognition on human capital is useful not only to external recipients of the entity, but also within the entity. It is useful for everything that is management, for everything that is socio – professional conditions, for everything that is human resource.

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The Implication of Effectiveness of Demand for Money on Economic Growth

Muritala Taiwo[1]

Abstract: The demand for money plays a major role in macroeconomic analysis, especially in selecting appropriate policy. This brings in the demand for money function which expresses a mathematical relationship between the quantity of money demanded and its various determinants; interest rate, income, price level, credit availability, frequency of payments etc. Aggregate demand will be affected only in so far as consumption or investment is affected by the change in the interest rate. Against this background, the task in this paper is to empirically analyze and examine the implication of the effectiveness of demand for money on economic growth performance within the Nigerian context between the periods of 1970-2008 through the use of the application of Ordinary Least Square method, the multiple linear regression analysis on E-views 7.0. The paper therefore concludes that money demand has a major effect on the aggregate demand which accounts for the GDP of the economy. This implies that by ensuring efficiency in demand for money, aggregate demand would be achieved and adequately sustained growth that will ensure that inflation is at minimum will be achieved in the economy.

Keywords: Demand for money; monetary policy; interest rate; economic growth.

JEL Classification: F1; F16; F13

1 Introduction

The demand for money plays a major role in macroeconomic analysis, especially in selecting appropriate policy. It is a very crucial instrument in the conduct and determination of the effectiveness of monetary policy. The demand for money represents the desire of households and businesses to hold assets in a form that can be easily exchanged for goods and services. Spendability, or liquidity, is the key aspect of money that distinguishes it from other types of assets. For this reason, the demand for money is sometimes called the demand for liquidity or liquidity preference, and the demand for money theory deals with the desire to hold money rather than other forms of wealth (for example stocks and shares).

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Money is regarded as important because it is thought to influence the level of aggregate demand by affecting spending either directly through the availability of credit or indirectly through the induced changes in the rate of interest. If aggregate demand does vary directly with the supply of money, then central bank of Nigeria could seek to operate their stabilization policy by varying the supply of money. Economic agents may hold money either as an inventory to smooth differences between income and expenditure, or for its yield on asset in a portfolio. Either motive suggests a specification in which the demand for money depends on a scale variable such as real income or wealth and the rates of returns to money and to alternative assets.

In open economy macroeconomics, money is considered as a part of portfolio, which consists of domestic financial assets, and foreign assets. The return on the domestic money is the own rate of interest. The return on real assets is the expected rate of inflation. According to Friedman (1956), the purchasing power of money erodes quickly under high inflation, while the value of real assets is maintained, and as a result, economic agents may wish to switch into real assets when the inflationary expectations are strong.

There is, and has always been, considerable dis-agreement among economists over what determines the levels and rates of growth of output, prices and employment. The appropriate tool for macro-economic stabilization depends on the underlying theory in use. Keynesians would go for fiscal policy while monetarists would clamour for monetary policy. Monetary policy refers to the use of interest rates, money supply and credit availability to achieve macro-economic objectives. The use of monetary policy as a tool for macro-economic stabilization depends largely on the behaviour of the demand for money or real cash balances in the hands of economic agents. This brings in the demand for money function which expresses a mathematical relationship between the quantity of money demanded and its various determinants; interest rate, income, price level, credit availability, frequency of payments etc. The stability of these relationships (elasticities) is vital for determining the appropriateness and effectiveness of the tools or instruments of monetary policy.

An excess demand for money: If a single firm or household is short of money balances, it can sell some of its bonds and immediately replenish its shock of money. On the other hand, if the firm or household has excess stocks of money, it can invest these forthwith by buying bonds on the open market. If everyone tries to do this simultaneously, however, it will not be possible unless there are changes in the stock of money or bond. If the stock of money and bond are fixed in size, then general attempt to add or subtracts from bond holdings will only succeed in altering their price. Assume, for example, that the money supply is reduced so that all firms and households are short of money. They try to sell bonds and add to their

money buildings. This causes the price of bonds to fall. A fall in the price of bonds is the same thing as a rise in interest rate.

As the interest rate rises, people will try to economize on cash holdings; they will also tend to reduce speculative balances of cash, since bonds now seem like very good investments. Eventually, the rate will rise high enough so that people will no longer be trying to add to their cash balances by selling bonds. The demand for money will again equal the supply. There will no longer be an excess supply of bonds, so the interest rate stop rising. The net effect of the original excess demand for money will have been an increase in the rate of interest. Aggregate demand will be affected only in so far as consumption or investment is affected by the change in the interest rate.

Against this background, the task in this paper is to empirically examine within the Nigerian context the implication of the effectiveness of demand for money on economic performance between the periods of 1970-2008. In testing for the empirical analysis of the implication of efficiency of demand for money on economic performance, one hypothesis is drawn and the hypothesis to be tested given the above objectives is to test the implication of effectiveness of demand for money on economic growth performance. Thus,

H_O : bo = bi (Null hypothesis).

H_I : bo = bi (Alternative hypothesis).

If the null hypothesis (H_O) is accepted it means that effectiveness of money demand does not have a significant impact on the economic growth performance of Nigeria economy.

1. Literature Review

The conventional money demand equation has been one of the most widely studied relationships in macroeconomics. It generally features real money balances being affected by contemporaneous levels of real income as a proxy for transactions, and a nominal interest rate that describes the opportunity cost of holding money. The variables that enter the demand function for money, and the definition of the quantity of money appropriate for the demand function, has received substantial attention in economic literature.

First, there is the question of the constraint that is imposed on money balances, whether the appropriate constraint is a measure of wealth or income, or some combination of the two. The second issue in most literature has centred on the importance of interest rates and price changes as arguments (independent variables) in the demand function. The third issue is the question of the definition of money balances. Is a more stable demand function obtained if money is defined inclusive

or exclusive of time and/or savings deposits, and perhaps other assets that have value fixed in money terms? That is either M1 or M2.

A rich tradition exists on the estimation of money demand in the United States than in any other country. Going by economic literature, the differences in the specification of the variables in the money demand function have produced important differences in implications or results. Tobin (1956) and Baumol (1952) as cited in Odularu and Okunrinboye (2008), separately considered the transactionary demand for money as a problem in capital theory and each obtained a demand function for cash balances which depends on costs and yields. Both Baumol and Tobin deduced from their models that there are economies of scale in holding transaction balances. An income or wealth elasticity less than unity would confirm this implication.

However going by empirical literature, most economists seem to accept Friedman's empirical result in preference to those of Baumol (1952) and Tobin (1956) as cited in Odularu and Okunrinboye (2008), though there seems to be some debate over the specification of the variables in Friedman's money demand function. Specifically, Friedman's use of per capita permanent income combines wealth, interest rates, population, and lagged income into a single variable which combines and masquerades their separate effects.

Tobin (1958) as cited in Odularu and Okunrinboye (2008) accorded the rates of return on financial and non-financial assets an important role in his theory of asset choice. Friedman's essay on the quantity theory stresses a view of the quantity theory as a theory of the demand for money. He uses bond and equity yields as direct arguments in the demand function. But his empirical findings suggest the importance of per capita permanent income and exclude interest rates as direct arguments of the function or assign them a role of second order of importance. Bronfenbrenner and Mayer (1960) as cited in Odularu and Okunrinboye (2008), estimated the separate effects of wealth and interest rates along with income and lagged money balances. Their results show that interest rate, income, and lagged money balances are statistically significant by the usual tests, but the wealth variable is non-significant.

In terms of econometric work, Courchene and Shapiro (1964) as cited in Odularu and Okunrinboye (2008), identified certain dynamic problems with early literature on the demand for money; difficulties with autocorrelation arising from the presence of the lagged money stock which possessed a significant role. Thus, the distinction between the long-run and short-run demands for money surfaced. Chow (1966) as cited in Odularu and Okunrinboye (2008), argued that short-run money demand adjusted slowly toward long-run equilibrium; this stock-adjustment specification has weathered significant storms and remains the centre piece of many money demand studies. The stock-adjustment specification did not go

unchallenged, however. Feige (1967) as cited in Odularu and Okunrinboye (2008), demonstrated that a model of the long-run demand for money produces equations similar to those emanating from the stock-adjustment model without requiring slow adjustment of money demand when the determinants of demand are permanent, rather than current, values. No distinction exists between long-run and short-run demands for money.

The long-run money demand depends on permanent (long-run) values of the determinants of money demand. To the extent that permanent variables can be modeled with distributed lags of measured values, the inclusion of measured, rather than permanent, variables into money demand mimics the stock-adjustment specification. Second, the stock-adjustment model implies unusual dynamic adjustment when the money stock is exogenous. The determinants of money demand must overshoot their long-run (permanent) values to clear the money market on a period-by-period basis (Walters, 1966) and (Starleaf, 1970) as cited in Odularu and Okunrinboye (2008).

This demand for money specification has received renewed attention in the 1990s with econometric advances in the area of cointegration. A large body of literature has emerged that investigates long-run properties of the conventional money demand equation for various countries. Evidence with regard to a long run money demand relationship in the United States, particularly with M1 during the postwar period, is mixed. Miller (1991), Hafer and Jansen (1991), Friedman and Kuttner (1992), Stock and Watson (1993), and Norrbin and Reffett (1995a) as cited in Dutkowsky and Atesoglu (2001) find little support for cointegration for the conventional static money demand equation with M1.

Several studies have been carried out on the demand for money in Nigeria though not all made explicit attempts at investigating the stability of the money demand function as regards financial innovation. Asogu and Mordi (1987) as cited in Busari (2005) examine the monetary sector in general to uncover some of the main determinants of the money demand function. Ikhide and Fajingbesi (1998) as cited in Busari (2005) also examine whether deregulation of interest rate in Nigeria under the Structural Adjustment Programme (SAP) of 1986 has had any significant impact on the demand for money in Nigeria. Studies like Essen et al. (1996) as cited in Busari (2005) have dwelt extensively on issues relating to money demand in a liberalizing but heavily indebted economy using Nigeria as case study. The study observed that indebtedness could signal to private economic agents, the direction of government fiscal and monetary policy which in turn influences the demand for money in the domestic economy. Audu (1988) as cited in Busari (2005) represents one of the first post-regulation era efforts to examine the stability of money demand function. Using selected West African countries, the study observed mixed results but was quick to observe a stable money demand relationship for Nigeria.

The study by Nwaobi (2002) as cited in Busari (2005) has also made efforts to examine the stability of the demand for money in Nigeria. Using a relatively simple model that specifies a vector valued autoregressive process (VAR), the money demand function was found to be stable and the author suggests that income is the appropriate scale variable in the estimation of money demand function in Nigeria. In another study, Anoruo (2002) as cited in Busari (2005) explores the stability of the M2 money demand function in Nigeria during the Structural Adjustment Program (SAP) period. In the study it was observed that the M2 money demand function in Nigeria is stable for the study period. Further it was argued that M2 is a viable monetary policy tool that could be used to stimulate economic activity in Nigeria.

2.1. Theoretical Framework

The demand for money is often broken into two distinct categories: the transactions demand and the speculative demand.

2.1.1 Transactions Demand for Money

The primary reason people hold money is because they expect to use it to buy something sometime soon. In other words, people expect to make transactions for goods or services. How much money a person holds onto should probably depend upon the value of the transactions that are anticipated. Thus, a person on vacation might demand more money than on a typical day. Wealthier people might also demand more money because their average daily expenditures are higher than the average person.

However, changes in GDP are very likely to affect transactions demand such that anytime GDP rises, there will be a demand for more money to make the transactions necessary to buy the extra GDP. If GDP falls, then people demand less money for transactions. The GDP here is nominal GDP. This means GDP measured in terms of the prices that currently prevail, (GDP at current prices where real GDP corresponds to a quantity of goods and services produced after eliminating any price level changes that have occurred since the price level base year. To convert nominal to real GDP, simply divide nominal GDP by the current price level, $P_{\$}$, thus

Real GDP = Nominal GDP / P

If we use the variable Y to represent real GDP, and rearrange the equation we can get,

Nominal GDP = P Y

By rewriting in this way we can now indicated that since the transactions demand for money rises with an increase in nominal GDP, it will also rise with either an increase in the general price level or an increase in real GDP.

Thus, if the amount of goods and services produced in the economy rises while the prices of all products remain the same, then total GDP will rise and people will demand more money to make the additional transactions. On the other hand, if the average prices of goods and services produced in the economy rises, then even if the economy produces no additional products, people will still demand more money to purchase the higher valued GDP, hence the demand for money to make transactions will rise.

2.1.2 Speculative Demand for Money

The second type of money demand arises by considering the opportunity cost of holding money. Recall, that holding money is just one of many ways to hold value or wealth. Alternative opportunities include holding wealth in the form of savings deposits, certificate of deposits, mutual funds, stock, or even real estate. For many of these alternative assets interest payments, or at least a positive rate of return, may be obtained. Most assets considered money, such as coin and currency and most checking account deposits do not pay any interest. If one does hold money in the form of a NOW account (a checking account with interest) the interest earned on that deposit will almost surely be less than on a savings deposit at the same institution.

Thus to hold money implies giving up the opportunity of holding other assets that pay interest such that the interest one gives up is the opportunity cost of holding money. Since holding money is costly, i.e., there is an opportunity cost, people's demand for money should be affected by changes in it's cost. Since the interest rate on each person's next best opportunity may differ across money holders, we can use the average interest rate. Such that high interest rate would undoubtedly lead individuals and businesses to reduce the amount of cash they held, preferring instead to shift it into the high interest yielding time deposits. The same relationship is quite likely to hold even for much smaller changes in interest rates. This implies that as interest rates rise (fall) the demand for money will fall (rise). The speculative demand for money, then, simply relates to component of the money demand related to interest rate effects.

Therefore, money demand will depend positively on the level of real GDP and the price level due to the demand for transactions. Money demand will depend negatively on average interest rates due to speculative concerns. We can depict these relationships simply using the following functional representation.

$M^D = f (P^+ , Y^+ , i^-)$

Here M^D is the aggregate, economy-wide money demand, P is the current price level, Y is real GDP, and 'i' is the average interest rate. The "+" symbols above the price level and GDP levels mean that there is a positive relationship between changes in that variable and changes in money demand. For example, an increase (decrease) in P would cause an increase (decrease) in M^D. A "-" symbol above the interest rate indicates that changes in 'i' in one direction will cause money demand to change in the opposite direction.

For historical reasons, the money demand function is often transformed into a real money demand function as follows. First, rewrite the function on the right-hand side to get,

$$M^D = P^+ L (Y^+, i^-)$$

In this version, the price level, P, is brought outside the function f and multiplied to a new function labeled L, called the liquidity function. Note that L is different from f since it contains only Y and i as variables. Since P is multiplied to L it will maintain the positive relationship to M^D and thus is perfectly consistent with the previous specification.

Finally, by moving the price level variable to the left-hand-side we can write out the general form of the real money demand function as,

$$\frac{M^D}{P} = L (Y^+, i^-)$$

This states that real money demand, M^D/P, is positively related to changes in real GDP (Y) and the average interest rate (i) according to the liquidity function. We can also say that the liquidity function represents the real demand for money in the economy. That is, the liquidity function is equivalent to real money demand. Therefore, since any real variable represents the purchasing power of the variable in terms of prices that prevailed in the base year of the price index. Thus, real money demand can be thought of as the purchasing power of money demanded in terms of base year prices.

An English economist John Maynard Keynes (1882-1946), distinguished three motives for holding money: the transaction motive (to meet day-to-day needs); the speculative motive (in anticipation of a fall in the price of assets); and the precautionary motive (to meet unexpected future outlays). The amount of money held is determined by the interest rate and the level of national income. Keynes formulated his theory of demand in his well known book, "The General Theory of Employment, Interest and Money" in 1936. According to him, the demand for money arises out of its liquidity; liquidity refers to the convertibility of an asset into cash. He then identified three motives for holding money.

2.2 Keynes's Motive for Holding Money

2.2.1 Transaction motive

This arises out of money's medium of exchange role and arises out of the need for bridging the gap between periodic receipts and payments. Keynes recognized both the income motive for households and business motives for firms. Given the society's basic institutional and technical customs and practices which govern income receipt and the flow of expenditures, the transactions demand depends on personal income and business turnover. It thus varies in direct proportion to changes in money income. Symbolically it is written as: $L_t = k_t\ (Y)$

Where

L_t : Transactions demand for money

K_t: The fraction of money income society desires to hold as transaction balances.

Y: money income

2.2.2 Precautionary motive

This arises out of unforeseen circumstances or expectations regarding the uncertain future by economic agents. Keynes posited that households sometimes keep money for unexpected contingencies such as medical emergencies or events while firms held balances above transactionary balances based on expectations about the economy e.g. a boom or depression. Keynes held that the level of precautionary balances varied with income and not interest rate changes.

Symbolically: $Lp = kp\ (Y)$

Where;

L_p : Precautionary demand for money

K_p : The fraction of money income society desires to hold as precautionary balances.

Keynes usually lumped both motives together as they were both affected by the same institutional factors which he assumed given and fairly stable in the short run adding to the fact that they were both interest inelastic.

Mathematically: $L_1 = L_t + L_p = k\ t(Y) + k_p\ (Y) = k(\ Y)$

Where;

L_1 : Demand for active balances

2.2.3 Speculative motive

This falls under the idle balances held by economic agents according to Keynes. He posited that people hold or hoard money above their active balances for the

purpose of being able to earn some form of gains by speculating on bond prices. Since individuals knew that an inverse relationship exists between bond prices and interest rate, they held money for the opportunity to partake in such speculative activities so as to earn some form of interest. According to Keynes, there thus existed an inverse relationship between speculative demand for money and interest rates. Functionally, this is expressed as: $L_2 = f(i)$

Where;

L_2 : Speculative demand for money i : interest rate

Keynes concluded by positing that the total demand for money consists of demand for active balances (L_1) and that of idle balances (L_2). Thus, $L = L_1 + L_2$

$L = k(Y) + f(i)$

However, Keynes demand for money theory has been criticized for unnecessarily bifurcating aggregate demand for money into transactions and speculative demand. The transactions demand for money depended on income level (but Keynes had assumed a constant relation between money holdings and income). His speculative demand was based on portfolio approach which considered the yields of assets viz-a-viz their competition with money held in individuals' portfolio. Again, he further limited his analysis to two assets; money and bonds. The combination of demand motives with two different approaches is inconsistent (Paul, 2004).

3. Methodology

In order to examine the impact of injection and withdrawal of money stock on the growth of Nigeria's economy, there is need to specify an evaluating criterion. The ordinary least square method of simple regression models will be used to analyze the implication of the effectiveness of demand for money on economic growth performance. In line with this assertion the Ordinary Least Square (OLS) method of estimation is used. In order to carry out an effective statistical analysis of the regression results, the following statistical tools were adopted; coefficient of determination (r^2), adjusted coefficient of determination (r^2), student t – test, analysis of variance (f-test).

3.1 Sources of Data & Explanation

The data used for this study was collected mainly from the secondary source. This information is collected to assist in order to be able to draw conclusions on the study. The data collected is mainly from the Central Bank of Nigeria Golden Jubilee Statistical Bulletin which is the annual statistical publication of the Central Bank of Nigeria in 2008. The dependent variable used is GDP which represents economic growth. It is obtained from the statistical bulletin and it is divided by the consumer price index to obtain the real GDP. The independent variables in the

models are M^D which represents the demand for money in the economy. The money demand use in this paper is nominal M2 which money supply or stock in an economy. This is because when the economy is at equilibrium, M2 equals M^D which is divided by consumer price index (CPI) to obtain the real money demand in the economy and a positive relationship is expected between the dependent variable and the independent variable. And 'i' which represents the interest rate in the economy. Since interest rate has a negative influence on money demand m^d and a positive relationship is expected between m^d and RGDP, therefore a negative relationship is expected between interest rate and RGDP.

3.2 Model Specification

The model specified below will be use to achieve the objectives of the study and to test the hypothesis of the study. As indicated above that the transactions demand for money rises with an increase in nominal GDP, it will also rise with either an increase in the general price level or an increase in real GDP. Therefore, real money demand can also influence the real GDP of the economy. Thus:

Model 1;

$$RGDP_t = f\ (m^d_t) \tag{1}$$

Where; RGDP= Real Gross Domestic Product

m^d = Real Demand for Money

Since money demand depend positively on the level of real GDP and the price level due to the demand for transactions. Money demand also depends negatively on average interest rates due to speculative concerns. On this note, interest rate will also influence the impact of Money Demand on GDP. So therefore, equation (1) can be rewritten as;

$$RGDP_t = f\ (m^d_t\ i_t) \tag{2}$$

Where; i = Interest Rate

In order to express the model to be estimated in linear form and also interpret the outcomes or the parameters in terms of elasticity, equation (2) is log transformed, and it is written as follows:

$$LnRGDP_t = \alpha_t + \beta_1 \ln m^d_t + \beta_2 \ln i_t + \varepsilon_t. \tag{3}$$

A priori expectation

$\beta_1 > 0, \beta_2 > 0$

Where, μ = standard error term

Equation (3) is used to capture the objective of the paper using the OLS regression method and one hypothesis is drawn to analyse this objective.

3.3. Tables

Table 1. Showing Regression Result

Dependent Variable: LOG(RGDP)

Method: Least Squares

Sample: 1981 2008

Included observations: 28

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(m^d)	0.775034	0.105563	7.341896	0.0000
LOG(I)	0.456974	0.139941	3.265479	0.0032
C	2.195417	1.140444	1.925054	0.0657
R-squared	0.699842	Mean dependent var		10.87316
Adjusted R-squared	0.675829	S.D. dependent var		0.419267
S.E. of regression	0.238714	F-statistic		29.14467
Sum squared resid	1.424612	Prob(F-statistic)		0.000000
Log likelihood	1.965987			
Durbin-Watson stat	0.583630			

3.4. Interpretation of Result

Recall that equation (3) captured the objective of this paper. Thus, based on the result in the table above, equation (3) can be written as

$$\ln RGDP_t = 2.195417 + 0.775034 \ln m^d_t - 0.456974 \ln i_t$$

Also;

S.E.= [1.140444] [0.105563] [0.139941]

$t_{\cdot stat}$ = [1.925054] [7.341896] [3.265479]

The figures in the above parentheses are standard error and t-statistics respectively.

R^2 = 0.699842

Adjusted R^2 = 0.675829

Durbin Watson = 0.583630

F-statistics = 29.14467

The objective of the model specification presented above is simply to ascertain how efficiency of demand for money has impacted on economic growth performance of the economy. The regression result summarized above has proved that the a priori economic expectation has been fully satisfied since it tallies with the a priori expectation which expects a positive relationship between RGDP and m^d also a negative relationship between RGDP and i. From table1 above, the result shows that a positive relationship exists between m^d and RGDP which is significant at t* = 7.3 and P> 0.05, also, F* = 29.1 and P > 0.05 level of significance. The value of the parameter β_1 which is 0.775034 shows that a 1 % unit change in real demand for money would induce 78 % unit change in the total RGDP at 5% and 1% level of significance. This signifies a positive relationship between the two variables has explained above. Also, the negative value of the parameter β_2 which is –0.456974, shows that a 1 % unit change in interest rate would induce –45 % unit change in the total RGDP at 5% and 1% level of significance which signifies a negative relationship.

From the table above, the value of the adjusted coefficient of determination (adjusted R^2) is 0.675829. This means that at least 68% of what happens to the dependent variable is accounted for by the independent variable when the degree of freedom is taken into consideration. Also, the comparism between the tabulated t-value of 1.708 and the computed β_1 and β_2 t-statistic value of 7.34 and 3.27 respectively, shows that the independent variable is significant at 5% and 1% level of significance. And, from the F-table the value of $F_{0.05}$ = 4.24 and from the regression table the value of F* = 29.14467 i.e. F*> $F_{0.05.}$ Therefore, we reject the null hypothesis and do not reject the alternative which states otherwise.

4. Conclusion and Recommendation

This paper has examined the implication of efficiency of demand for money on economic growth performance, using Nigeria as a case study. One hypothesis was postulated and analysis was carried out in line with the hypothesis using multiple regression analysis. It was used to specify the relationship that exists between real demand for money, interest rate and real GDP.

From the analysis above, the paper observed that money demand has a major effect on the aggregate demand which accounts for the GDP of the economy. This implies that by ensuring efficiency in demand for money will stimulate aggregate demand which will positively influence the real GDP. Efficiency in demand for money occur at equilibrium where money demand equal money supply, which implies that aggregate demand and aggregate output are also at equilibrium such

that what is demanded is produced. Invariably this implies that equilibrium efficiency of money demand will be achieved and adequate and sustained growth that will ensure that inflation is at minimum will be achieved in the economy.

Therefore, the Central Bank of Nigeria should put in place monetary policy that would ensure that the volume of money in circulation does not exceed the demand for money. This will bring about efficiency in the demand for and supply of money and which will result into equilibrium in aggregate demand and aggregate output with the multiplier effect of sustainable economy growth on the economy as a whole.

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Cash Management and Corporate Profitability: A Study of Selected Listed Manufacturing Firms in Nigeria

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Abstract: Cash has always being disregarded in financial decision making since it involves investment and financing in short term period. However, it is an important component in firm financial management decision. This study therefore investigates empirically the relationship between cash management and profitability in listed manufacturing companies in Nigeria. Cash conversion cycle is used as the measure for cash management as used in Raheman and Nasr (2007). Current ratio, debt ratio and sales growth were used as control variables. This study utilizes secondary data while Pearson's correlation and regression analysis were used in analyzing the data for a sample of 15 listed manufacturing companies in Nigeria between 2005-2009.The results of the empirical findings show that there is a strong negative relationship between cash conversion cycle and profitability of the firms. It means that as the cash conversion cycle increases it will lead to decreasing profitability of the firms. The study therefore recommends that managers can create a positive value for the shareholders by reducing the cash conversion cycle to a possible minimum level and also accounts receivables should be kept at an optimal level. This study will also help companies in nigeria see the need for cash mangement techniques.

Keywords: cash conversion cycle; cash equivalent; profitability; investment

JEL Classification: G30; G32

1. Introduction

Over the years, the manufacturing sector in Nigeria has been a victim of high production costs which invariably reduces profitability. As argued by Akinbuli

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(2006), poor management is the main reason for business failure as many corporate organizations went into liquidation in Nigeria because of poor management. In a study carried out by Peavler (2009) it was observed that most failed businesses (up to 60%) were of the opinion that all or most of their failures were due to cash flow problems.

The importance of cash flow is particularly pertinent when access to cash is difficult and expensive. When the real economy slips into recession, businesses face the additional risk of customers running into financial difficulty and becoming unable to pay invoices. This can lead to scarcity of cash from non-operational sources such as bank loans.

Thus, for manufacturing operations to be run effectively and efficiently, optimum cash management techniques must be adopted as cash shortage can disrupt the firm's manufacturing operation, while excessive cash can simply remain idle, without contributing anything in terms of return towards the firm's profitability.

In Nigeria, many organizations that are profitable on paper are forced into liquidation due to the inability to meet short term debts when they fall due. In order to remain standing, it is essential that organizations effectively manage cash. In practice, the difficulty of predicting cash flows and because there is hardly any synchronization between inflows and outflows spurs the necessity of cash management.

In 2006, a study conducted by BDRC on behalf of ABN AMRO on 101 companies around Europe, USA and Canada found that 48% of companies have centralized liquidity management, that is, a large number still have the opportunity to efficiently manage their cash, hence the need for the study on cash management is a global issue (Jutur, 2006).

Although, several studies have been carried out on working capital management and its impact on performance of companies (Deloof, 2003; Eljelly, 2004; Shin and Soenan, 1998; Rahemen and Nasr, 2007), but to the best of the researcher's knowledge, there is dearth of literature on studies that examine the relationship between the most important component of working capital; cash management and profitability in a developing economy like Nigeria. As a result, this study examined if there is a significant relationship between cash management and profitability of companies in the Nigerian manufacturing industry.

Research Hypothesis

For the purpose of this study, the hypothesis to be tested is stated below in null form:

1) H_0: There is no significant relationship between cash management and profitability of manufacturing companies in Nigeria.

Literature Review

Cash Management Defined

The aim of cash management is to maintain adequate control over cash position to keep the firm sufficiently liquid and to use excess cash in some profitable ways. Cash management has therefore been defined by **Johnson and Aggarwal (1988)** to involve managing the money of the firm in order to attain maximum interest income on idle funds. The Chartered Institute of Bankers of Nigeria (2000) also explained that the role of cash management is to plan, monitor and control the cash flows and the cash position of a company maintaining its liquidity. Akinsulire (2006) further opines that cash management involves the efficient collection, disbursement and temporary investment in cash.

In addition, Pandey (2005) opined that cash management is significant because it constitutes the smallest portion of the total current assets, yet management considerable time is devoted in managing it. Pandy further discussed that the recognition of cash as both a valuable resource and an operational necessity for business is core to cash management in the short and long term. If there is a shortage of cash, a company must be able to find the shortfall, preferable at the lowest possible cost. If there is a cash surplus, the money should be put to profitable use or paid out as dividends to shareholders.

From the above definitions, we therefore define cash management as a means of knowing when cash needs occur; knowing what the best sources are for meeting additional needs and being prepared to meet these needs when they occur, by keeping good relationships with bankers and other creditors.

2. Importance of Cash Management

Cash management assumes more importance than other current assets because cash is the most significant asset that a firm holds. Cash is unproductive unlike fixed assets or inventories; it does not produce goods for resale, notwithstanding management's considerable time is devoted to managing it. The importances of managing cash to a manufacturing concern as identified by Alfred (2007) are:

1) Management of cash aids the achievement of liquidity and control.
2) It brings about proper planning with regard to cash disbursement and receipts over cash positions to keep the firm sufficiently liquid and to use excess cash in some profitable venture
3) The management of cash is also significant since we cannot rightly predict accurately cash flow behavior in the future.
4) Through cash management appropriate strategies are developed thereby providing innovation for cash receipts and payments.
5) It also aid maintaining adequate control over cash position to keep the firm sufficiently liquid and to use excess of cash in some profitable ventures.

The primary purpose of cash management is therefore to reduce cost. However, a cost-benefit analysis of cash management is also needed. Such costs of cash management include cost of interest payments, cost of collection, cost of disbursement of funds, etc

Prior Studies

Shin and Soenen (1998) researched on the relationship between working capital management and value creation for shareholders. The standard measure for working capital management is the cash conversion cycle (CCC). They examined this relationship by using correlation and regression analysis, by industry, and working capital intensity. Using a COMPUSTAT sample of 58,985 firm years covering the period 1975-1994, they found a strong negative relationship between the length of the firm's net-trade cycle and its profitability. Eljelly (2004) also empirically examined the relationship between profitability and liquidity, as measured by current ratio and cash gap (cash conversion cycle) on a sample of 929 joint stock companies in Saudi Arabia. Using correlation and regression analysis, a

significant negative relationship was also found between the firm's profitability and its liquidity level, as measured by current ratio.

In a similar result, Raheman and Nasr (2007) studied the effect of different variables of working capital management including average collection period, inventory turnover in days, average payment period, cash conversion cycle, and current ratio on the net operating profitability of Pakistani firms. They selected a sample of 94 Pakistani firms listed on Karachi Stock Exchange for a period of six years from 1999 - 2004 and found a strong negative relationship between variables of working capital management and profitability of the firm.

In Nigeria, Falope and Ajilore (2009) used a sample of 50 Nigerian quoted non-financial firms for the period 1996 -2005. Their study utilized panel data econometrics in a pooled regression, where time-series and cross-sectional observations were combined and estimated. They found a significant negative relationship between net operating profitability and the average collection period, inventory turnover in days, average payment period and cash conversion cycle.

Furthermore, Mathuva (2009) examined the influence of working capital management components on corporate profitability by using a sample of 30 firms listed on the Nairobi Stock Exchange (NSE) for the periods 1993 to 2008. The study used Pearson and Spearman's correlations, the pooled ordinary least square (OLS), and the fixed effects regression models to conduct data analysis. The key findings of his study were that there exists a highly significant negative relationship between the time it takes for firms to collect cash from their customers (accounts collection period) and profitability.

On the other hand, Lazaridis and Tryfonidis (2006) conducted a cross sectional study by using a sample of 131 firms listed on the Athens Stock Exchange for the period of 2001 - 2004 and found statistically significant relationship between profitability, measured through gross operating profit, and the cash conversion cycle and its components (accounts receivables, accounts payables, and inventory).

In summary, the literatures reviewed indicate that cash management is majorly studied as part of working capital management components. In filling the gap in literature, this study therefore studied specifically the relationship that exists between cash management and profitability which is proxied by cash conversion cycle (CCC).

Methodology

This study examined the relationship between cash management and profitability of companies in the manufacturing sector in Nigeria. The focus is on fifteen (15) listed companies randomly selected within this industry. These companies are Nigerian Breweries Plc, Lafarge Cement Wapco Nigeria, Cadbury Nigeria Plc, Guinness Nigeria Plc, Nestle Plc, PZ Plc, Unilever Nigeria Plc, Nigeria Enamelware Company, First Aluminum, A.G Leventis (Nigeria) Plc, Vita Foam Nigeria Plc, 7-Up Bottling Company, Flour Mills Nigeria Plc, Cement Company of Northern Nigeria and Benue Cement Company Plc. The study focused on listed companies due to easy accessibility to the financial information of the selected firms. The study covers a period of five years between 2005 and 2009.

Panel data methodology was adopted because it combined period and cross sectional data. To analyze the panel data, the researcher used Pearson's Product Moment Correlation Coefficient and regression analysis which is used to describe and evaluate the relationship between the given variables.

Using the Formula: $y = mx + c$

The unknown parameters is denoted as m; the independent variable is x while the dependent variable is *y*. The dependent variable is firm's profitability hence; proxied by Operating Income (OI).

Variable Description

In order to analyze the effects of cash management on the firm's profitability, Operating Income is given as the dependent variable, while the independent variables, cash management was measured by cash conversion cycle (CCC). CCC focuses on the length of time between when a firm makes payment and when firm receives cash inflow.

CCC is calculated as the number of days of average trade debtors (ATD) plus the number of days of average trade inventories (ATI) minus the number of days of average trade creditors (ATC).

In this respect, ATD is calculated as Average trade debtors/ (sales/365). ATD represents the number of days that a firm takes to collect payments from its customer. ATI is calculated as Average trade inventories/ (cost of sale/365). This variable reflects the average number of days of stock held by a firm. ATC is calculated by Average trade creditors / (cost of sale/365). This measure indicates the average time firm takes to pay their suppliers.

Control Variables

Control variables are introduced as the growth in firm sales and its leverage. Sales growth (SG) is calculated as: (Sales1 – Sales0)/Sales0. The leverage (DR) measured by debt ratio is calculated thus: Total debt divided by Total asset. In addition, current ratio (CR) which is calculated by dividing current asset by current liability was included as one of the control variables.

The Equation is thus:

Operating Income= *F (Cash Conversion Cycle; Current Ratio; Debt ratio and Sales Growth)*

The Econometric Model is as follows: $OI = b_0 + b_1CCC_t + b_2CRatio_t + b_3DRatio_t + b_4SG_t$

Decision Rule

If the calculated value is less than the tabulated value, we accept H_0 but if otherwise, reject H_0.

3. Results and Discussions

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Operating Income	75	-.04542	.49027	.1786098	.12414367
Cash Conversion Cycle	75	-230	184	34.12	75.257
Current Ratio	75	.07326	3.18086	1.2229419	.55653774
Debt Ratio	75	.24550	1.11822	.6302424	.19142402
Sales Growth	75	-.38319	2.00610	.1964643	.29325020
Valid N (listwise)	75				

Computed by researcher from annual reports using SPSS 15

The results from the descriptive statistics show the average operating income for the whole sample at17.86% with a standard deviation of 12.41%. The CCC portrays an average of 34 days with a standard deviation of 75 days. This indicates that on the average it takes 34 days before cash is collected from sales measured from when the inventory is actually paid for in the manufacturing industry. The

average current ratio is 1.2 with a standard deviation of 0.56. On average the manufacturing firms' Sales growth is also seen to be 19.64%.

Table 2. Correlation Result

		Operating Income	Cash Conversion Cycle	Current Ratio	Debt Ratio	Sales Growth
Operating Income	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	75				
Cash Conversion Cycle	Pearson Correlation	-.228(*)	1			
	Sig. (2-tailed)	.049				
	N	75	75			
Current Ratio	Pearson Correlation	.036	.527(**)	1		
	Sig. (2-tailed)	.759	.000			
	N	75	75	75		
Debt Ratio	Pearson Correlation	-.152	-.107	-.653(**)	1	
	Sig. (2-tailed)	.193	.362	.000		
	N	75	75	75	75	
Sales Growth	Pearson Correlation	.245(*)	-.222	-.199	-.056	1
	Sig. (2-tailed)	.034	.056	.088	.634	
	N	75	75	75	75	75

Computed by researcher from annual reports using SPSS 15

From table 2, the correlation coefficient between cash conversion cycle and operating income is negative (-0.228), this Implies that the lower the cash conversion cycle, the higher the operating income, this also corresponds to the a priori expectation. Also debt ratio is negatively correlated to profitability with the correlation coefficient at -0.152. However, the current ratio and Sales growth are positively correlated to profitability with the coefficient of .036 and 0.245 respectively.

Table 3. Regression Result

	Coefficient	Significant value
Constant	0.13015	0.23904
CCC	-0.00049	0.03945
CRatio	0.04827	0.25804
DRatio	-0.01937	0.85418
SG	0.09319	0.06497
R-squared	0.1336	
Adjusted	0.0841	
F-statistic	2.699	
Sig. (F-statistic)	0.0375	

Computed by researcher from annual reports using SPSS 15

From table 3, the regression coefficient relating CCC (Cash Conversion Cycle) to OI (Operating Income) is -0.00049. The result confirms a negative relationship between the cash conversion cycle and firm profitability. This negative relationship is significant at 5% and 10% (0.03945). This confirms the a priori expectation of the research that as Cash Conversion Cycle reduces, Profitability of manufacturing firms increases. Based on the significant relationship recorded, we therefore accept the alternate hypothesis at the expense of the null hypothesis.

The implication of this is that a firm with a relatively shorter period of cash conversion cycle is more profitable. Therefore, reducing the firm's CCC is a potential way for the firm to create additional shareholder's value. This is in line with Deloof (2003), Eljelly (2004), Shin and Soenan(1998) and Rahemen and Nasr (2007) who found a strong negative relationship between Cash Conversion Cycle and Profitability. For conventional measure of liquidity, the current ratio is positively related to profitability (0.04827). This relationship is though not consistent with the study of Shin and Soenon (1998), however the positive relationship is also not significant.

Furthermore, profitability is negatively associated with leverage (-0.01937) which is measured by debt ratio. It is further interpreted that if the firm increases its debt financing, it will lead to decreasing profitability of the firm in terms of financial cost. This debt ratio coefficient exhibits a non significant relationship.

For the sales growth, evidence is positively related to profitability (0.09319) and also significant at 10%. This is consistent with prior studies (Dess and Robinson

(1984) and Markman and Gartner (2002), that growth is part of the feature for firm profitability and the creation of shareholder's value.

4. Conclusion and Recommendations

The study therefore concludes that the need for efficient cash management cannot be over emphasized. This is because, the research work showed that the overall profitability and shareholders' value in the Nigerian manufacturing industry is enhanced if cash is properly managed as measured by the cash conversion cycle. The study further conclude that the shorter the cash conversion cycle, the more efficiently cash is managed and ultimately the more profitable the firm as less borrowing cost is involved. On the other hand, the longer the cash conversion cycle, less cash is available and ultimately decreasing profitability due to increased borrowing cost.

The study therefore recommends that to ensure better cash management, that is shorter CCC, which would invariably lead to better profitability in the manufacturing industry, the duration of time that goods are held in inventory should be reduced. This can be accomplished by improving the inventory control process. Also, accounts receivable should be collected more quickly by improving the efficiency of the collection process as debt should be collected in line with the agreed credit terms.

However, future research should put effort in increasing the trend of analysis to determine the effect of cash management on profitability overtime and also use a different model to prove the significant negative relationship between cash conversion cycle and profitability. The scope of further research may also be extended to the working capital components management including marketable securities, receivables and inventory management.

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Financial, Public and Regional Economics

The Influence of International Parity on the Exchange Rate: Purchasing Power Parity and International Fisher Effect

Oana Mionel[1]

Abstract: This article assesses the impact of the inflation and interest rates on the exchange rates. The analysis tests the relation between the inflation rate and the exchange rate by applying the Purchasing Power Parity Theory, while the relation between the interest rate and the inflation rate is tested by applying the International Fisher Effect Theory. In order to test the Purchasing Power Parity the study takes into account the period of time between 1990 – 2009, and the following countries – the USA, Germany, the UK, Switzerland, Canada, Japan and China. As for testing the International Fisher Effect Theory the period of time is the same, 1990 – 2009, but a few countries are different – the USA, Germany, the UK, Switzerland, Canada, Australia and New Zeeland. Thus, both theories analyse the USA as home country.

Key words: exchange rate; inflation rate; interest rate.

JEL Classification: F31; G14; G15.

1. Introduction

The analysis of the exchange rate influence factors was always based on the economic theories which take into account *the invisible hand theory* which was invented by Adam Smith. In theory, following the model of the prices of goods and services which are set by the demand and supply, the exchange rate of a currency should be set accordingly. However, *the shifts* within the business environment and the exchange market, starting with 1970, determine the creation of exchange rates on the one hand, and their conditioning to meet the *economic-financial factors* on the other. These factors are the inflation rate, the interest rate, the differences of economic growth, the different manner of applying monetary policies, the economic relations between different countries, the goods prices, the fluctuations of business cycles, the tendency of international currency portfolios, the direction of international equity flows and the change of vision on the part of the investors due to the economic, political and social future.

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2. Purchasing Power Parity and International Fisher Effect testing

The inflation and interest rates may have a significant impact on the exchange rate. That is why the market participants who are not protected against the exchange risk have to understand the relation between the exchange rate, the interest and inflation rates in order to find out why the fervent debates regarding the inflation rate in the financial media may or may not influence the exchange rate.

2.1. Purchasing Power Parity (PPP) testing

Purchasing Power Parity (PPP) is one of the most popular but also debated theory in international finance. This theory supports its financial forecast of the exchange movement on the inflation rate differential between countries.

There are two versions of the Purchasing Power Parity Theory: the Purchasing Power Parity in its *absolute version* and the Purchasing Power Parity in its *relative version*. As PPP in its absolute version analyses the situation where there are no barriers and no fares in world commerce, which is not a real situation, I shall present the PPP analysis in its relative version.

2.1.1. The data

Table 1. Inflation rates for 1999 – 2009

	USA	Germany	United Kingdom	Switzerland	Canada	Japan	China
1990	5.419	2.687	7.036	5.404	4.780	3.067	3.100
1991	4.216	3.474	7.413	5.860	5.626	3.401	3.400
1992	3.042	5.046	4.297	4.037	1.490	1.644	6.400
1993	2.970	4.476	2.497	3.293	1.865	1.314	14.700
1994	2.596	2.717	2.071	0.852	0.136	0.599	24.100
1995	2.805	1.729	2.625	1.800	2.189	-0.099	17.100
1996	2.937	1.193	2.442	0.812	1.580	0.099	8.300
1997	2.338	1.533	1.816	0.520	1.612	1.885	2.800
1998	1.547	0.602	1.561	0.018	0.987	0.584	-0.800
1999	2.193	0.635	1.317	0.806	1.744	-0.290	-1.400
2000	3.367	1.400	0.867	1.559	2.738	-0.777	0.400
2001	2.817	1.904	1.182	0.989	2.507	-0.685	0.725
2002	1.596	1.355	1.274	0.643	2.276	-0.887	-0.767

2003	2.298	1.031	1.363	0.638	2.742	-0.298	1.167
2004	2.668	1.790	1.344	0.803	1.841	0.000	3.900
2005	3.379	1.920	2.041	1.172	2.230	-0.299	1.817
2006	3.222	1.784	2.300	1.060	2.018	0.300	1.467
2007	2.860	2.276	2.346	0.732	2.131	0.000	4.767
2008	3.798	2.754	3.629	2.428	2.378	1.396	5.900
2009	-0.391	0.135	2.166	-0.446	0.292	-1.377	-0.685

The use of the Purchasing Power Parity Theory lets us evaluate the impact of inflation on the exchange rate. In order to test this theory the author has used the inflation rate data from the USA (i.e. the American dollar), Germany (the euro), the UK (the pound sterling), Switzerland (the Swiss franc), Canada (the Canadian dollar), Japan (the yen) and China (renminbi). The period of time taken into account was 1990 – 2009, and the data was provided by the *International Monetary Fund – World Economic Outlook Database.*

Table 2 The calculation of the inflation rate differential and of the percentage change for Germany, the UK, Switzerland and Canada

	$\frac{(1+I_{USA})}{(1+I_{Germany})}-1$ (%)	$I_{USA}-I_{Germany}$ (%)	$\frac{(1+I_{USA})}{(1+I_{U.K.})}-1$ (%)	$I_{USA}-I_{U.K.}$ (%)	$\frac{(1+I_{USA})}{(1+I_{Switz.})}-1$ (%)	$I_{USA}-I_{Switz.}$ (%)	$\frac{(1+I_{USA})}{(1+I_{Canada})}-1$ (%)	$I_{USA}-I_{Canada}$ (%)
1990	2.397	2.732	- 1.762	- 1.617	- 0.241	0.015	0.352	0.639
1991	0.717	0.742	- 2.976	- 3.197	- 1.552	- 1,.644	- 1.334	- 1.41
1992	- 1.907	- 2.004	- 1.203	- 1.255	- 0.956	- 0.995	- 1.468	1.552
1993	- 1.441	- 1.506	0.461	0.473	- 0.312	- 0.323	1.084	1.105
1994	- 0.117	- 0.121	0.514	0.525	1.729	1.744	2.456	2.46
1995	1.057	1.076	0.175	0.18	0.987	1.005	0.602	0.616
1996	1.723	1.744	0.190	0.495	2.107	2.125	1.335	1.357
1997	0.792	0.805	0.512	0.522	1.808	1.818	0.714	0.726
1998	0.939	0.945	- 0.013	- 0.014	1.528	1.529	0.554	0.56
1999	1.548	1.558	0.864	0.876	1.375	1.387	0.444	0.449
2000	1.939	1.967	2.478	2.5	1.780	1.808	0.612	0.629
2001	0.895	0.913	1.615	1.635	1.810	1.828	0.302	0.31
2002	0.237	0.241	0.317	0.322	0.946	0.953	- 0.664	- 0.68
2003	1.648	1.267	0.922	0.935	1.649	1.66	- 0.432	- 0.444
2004	0.862	0.878	1.306	1.324	1.850	1.865	0.812	0.827
2005	1.431	1.459	1.311	1.338	2.181	2.207	1.123	1.149
2006	1.412	1.438	0.901	0.922	2.139	2.162	1.180	1.204
2007	0.571	0.584	0.502	0.514	2.112	2.128	0.713	0.729
2008	1.016	1.044	0.163	0.169	1.337	1.37	1.387	1.42
2009	- 0.525	-0.526	- 2.502	- 2.557	0.055	0.055	- 0.681	- 0.683

Table 3. The calculation of the inflation rate differential and of the percentage change for the Japanese and Chinese currencies

	$\frac{(1+I_{USA})}{(1+I_{Japan})}-1$ (%)	$I_{USA}-I_{Japan}$ (%)	$\frac{(1+I_{USA})}{(1+I_{China})}-1$ (%)	$I_{USA}-I_{China}$ (%)
1990	2.282	2.352	2.249	2.319
1991	0.788	0.815	0.789	0.816
1992	1.375	1.398	- 3.156	- 3.358
1993	1.634	1.656	- 10.226	- 11.73
1994	1.985	1.997	- 17.327	- 21.504
1995	2.906	2.904	- 12.207	- 14.295
1996	2.830	2.838	- 4.951	- 5.363
1997	0.440	0.453	- 0.449	- 0.462
1998	0.950	0.963	2.365	2.347
1999	2.490	2.483	3.644	3.593
2000	4.170	4.144	3.367	2.967
2001	3.530	3.502	2.076	2.092
2002	2.500	2.483	2.384	2.363
2003	2.600	2.596	1.117	1.131
2004	2.668	2.668	-1.185	- 1.232
2005	3.689	3.678	1.534	1.562
2006	2.913	2.922	1.729	1.755
2007	2.86	2.860	- 1.820	- 1.907
2008	2.368	2.402	- 1.984	- 2.104
2009	0.999	0.986	0.296	0.294

2.1.2. The Applied Methodology

This analysis considers the USA as the home country (*home country - h*), while Germany, the UK, Switzerland, Canada, Japan and China are analysed as foreign countries (*foreign country - f*). We have calculated the inflation rate differential *(*Δ *INF*) and the percentage change for the currency (e_f) for each group of countries and we took into account the relations according to the purchasing power parity:

a) $\Delta \text{ INF} = I_h - I_f$ **b)** $e_f = \frac{1+I_h}{1+I_f}-1$

Thus, according to the Purchasing Power Parity Theory we may assess the inflation impact on the exchange rate. The coordinates of each point in the figures are given by the percentage change of the rate differential between the home country and the foreign country as well as by the percentage change of the exchange rate. In theory, PPP says that if the inflation rate differential is *X%* , then the percentage change of the exchange rate should be the same *X%* . If the exchange rate does not change

according to the PPP theory, then there must be disparities regarding the purchasing power of the two analysed countries.

The diagonal that connects all these points is known as *the PPP line*. Thus, the outcome may be compared according to the PPP line:

- The points which are above the PPP line present the relation $I_h - I_f > e_f$, which describes the situation where foreign goods become cheaper for the home country;
- The points which are below the PPP line present the relation $I_h - I_f < e_f$, which describes the situation where foreign goods become more expensive compared to the those in the home country.

If the points are extremely distant from the PPP line, then the percentage change for the currency value was not influenced by the inflation rate differential, as the PPP theory says.

Moreover, the *regression model* was also applied to the data. The analysis of *the regression* presupposes the description and assessment of the possible relation that exists between a dependent and an independent variable (Spircu & Ciumara, 2007, p. 27). In this respect, the most facile technique which illustrates the linear dependence between two or more variables is known as *linear regression*.

In order to describe a model a general regression, we take Y as the variable whose modification we wish to explain, with the help of k variables, $X_{1,}X_{2,\ldots\ldots,}X_k$. The table below presents the terminology used for this variable in the literature (Spircu & Ciumara, 2007, p. 29):

Table 4 Names of variables

Names of Y	**Names of** $X_{1,}X_{2,\ldots\ldots,}X_k$
The dependent variable	Independent variables
The regressant	Regressors
The effect variable	Causal variables
The explained variable	Predictor variables

Within this analysis the dependent variable is the exchange rate (e_f), while the independent variable is the inflation rate differential ($I_h - I_f$ or Δ INF). Thus, according to the data, the unifactorial econometric model is built as: $y_i = f(x_i) + u_i$, where:

- y_i is the real values of the dependent variable;
- x_i is the real values of the independent variable;
- u_i is the residual variable, which represents the influences of the other factors of the y_i variable, and which are not specified in the model; they are considered random factors with insignificant influences on the y_i variable.

According to the described economic process, the data analysis from tables 19 and 20 leads to the following specification: y_i is the exchange rate, and it represents the dependent variable; x_i is the inflation rate differential, and it represents the independent variable, that is the factor of influence on the exchange rate, as it is considered by the hypothesis.

To specify an econometric model also presupposes choosing a mathematical function $(f(x))$ by the help of which we may reveal the connection between the two variables. The most frequently used procedure in the case of a unifactorial model (the study uses only one dependent and one independent variable) is the graphic representation of the two rows of values with the help of the *correlogram* (Tănăsoiu & Iacob, 2005, p. 35). Thus, if we have n pair observations $(y_{i,} x_i), i = 1,2,...,n$, on the variables Y and X , then the model of linear regression may be written such as: $y_i = \alpha + \beta x_i + e_i$, where:

- α is the interceptor (the place on the line where the regression line intersects OY). According to the direction and steepness of the α line it may be either positive or negative.
- β is the regression coefficient (the quantity that modifies y when x is modified by one unit).

2.1.3. Outcome

Thus, after accomplishing the correlograms we may comment on the distribution of points in a system of axes which have the coordinates OX and OY. The visual analysis of the cloud form offers important hints on the relation between the two variables, the exchange rate and the inflation rate differential. In this respect, we may notice the linear associations first. In order to synthesise the manner in which the changes of Y (the exchange rate) are associated with the changes of X (the inflation rate differential), the mathematic method used here is “the methods of the

smallest squares". This method finds "the most suitable" line for a set of analysed data. When the collected data are represented as points in the graphic and seem to gather close to the line that was drawn in the middle, the distance between the line and the points varies according to the line. The average of the square distances is considered to be a measure of "perfect fitting" to this line. The straightest line is that for which the square deviation is minimum. It is desirable that the line pass the arithmetical average (x, y) from the matrix. The term that is used for this line is *the regression line*. According to the Purchasing Power Parity Theory, if the points do not significantly deviate from the line – for the graphics showing the relation between the USA and Germany, the UK, Switzerland and Japan – then it is clear that during that time the rate differential was an influential factor for the exchange rate. The regression slope for the relation USA – Germany ($y = 1{,}0327x - 0{,}0228$), USA – UK ($y = 1{,}0234x + 0{,}0113$), USA – Switzerland ($y = 1{,}0064x + 0{,}0111$), USA – Japan ($y = 1{,}0391x - 0{,}1152$) points out the following: the value of β is positive, therefore the dependence between the two variables is in direct proportion; thus, an increase of the inflation rate differential with a unit has determined the foreign currency to be higher.

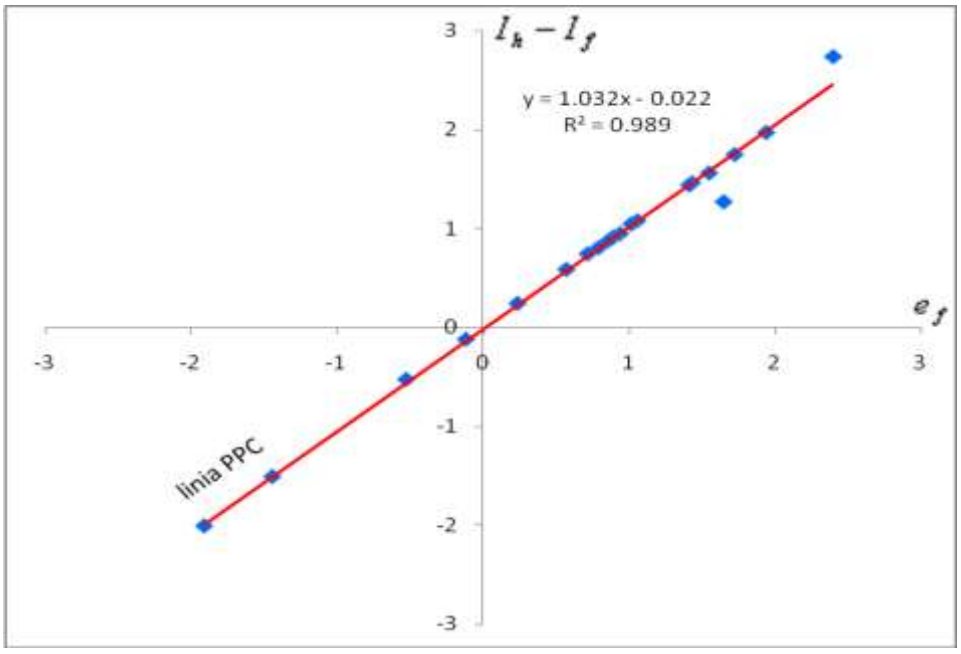

Figure 1. USA - Germany (PPP)

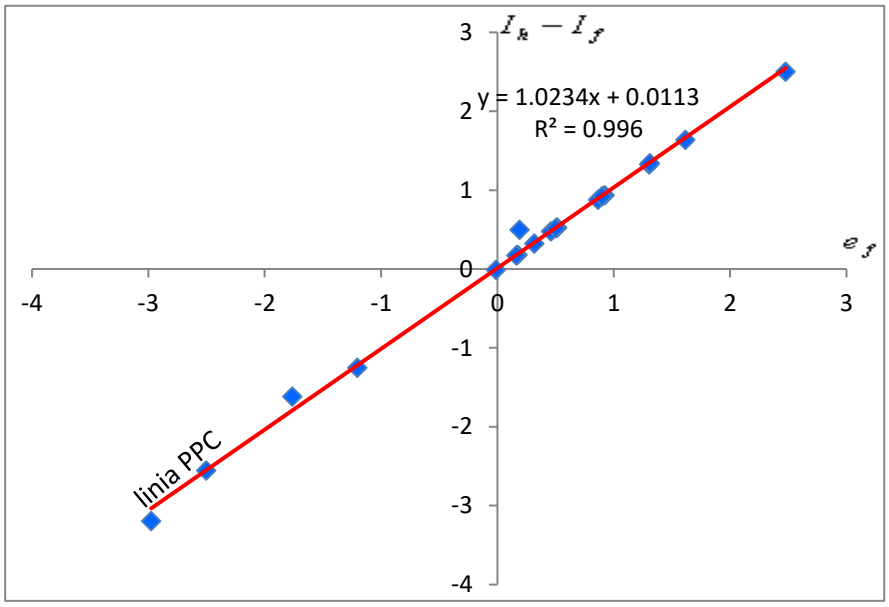

Figure 2. USA – UK (PPP)

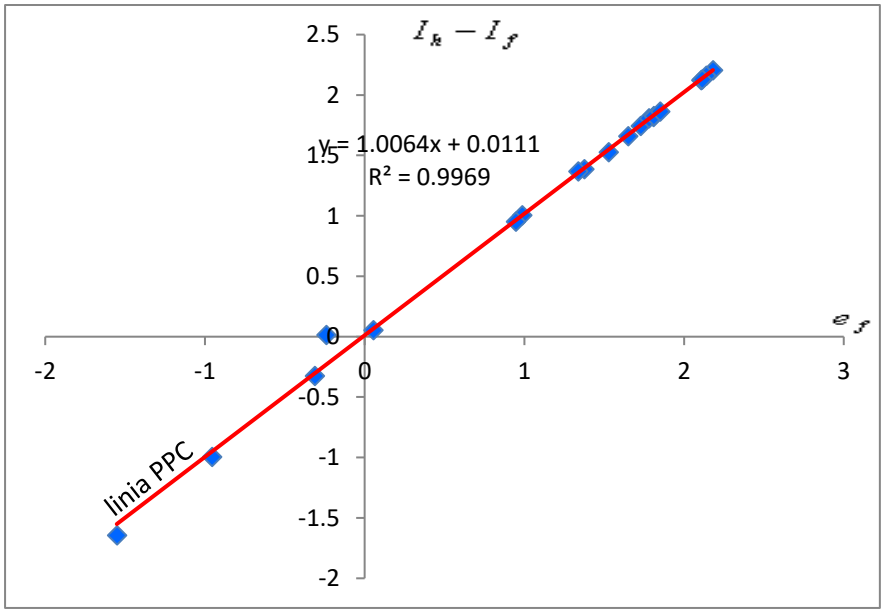

Figure 3. USA – Switzerland (PPP)

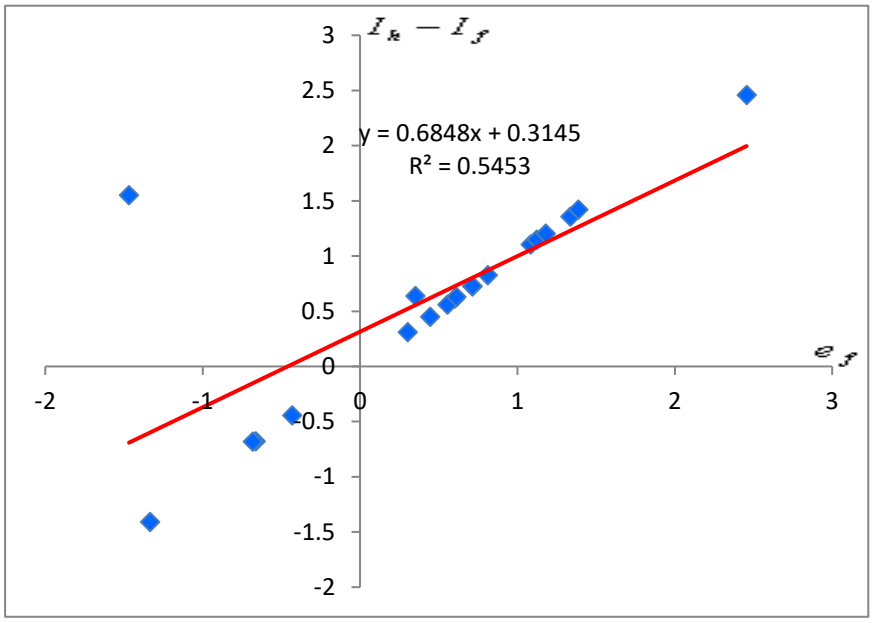

Figure 4. USA – Canada (PPP)

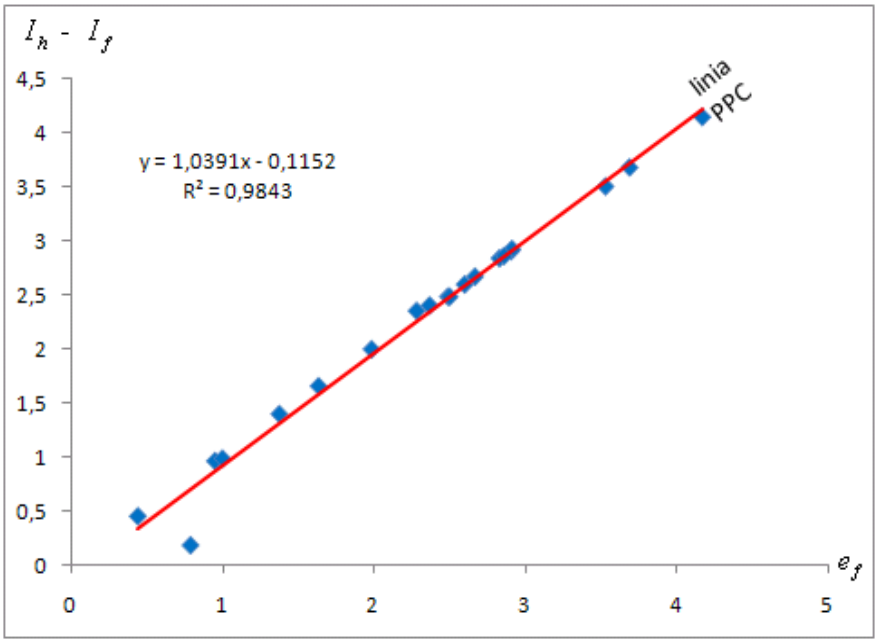

Figure 5. USA – Japan (PPP)

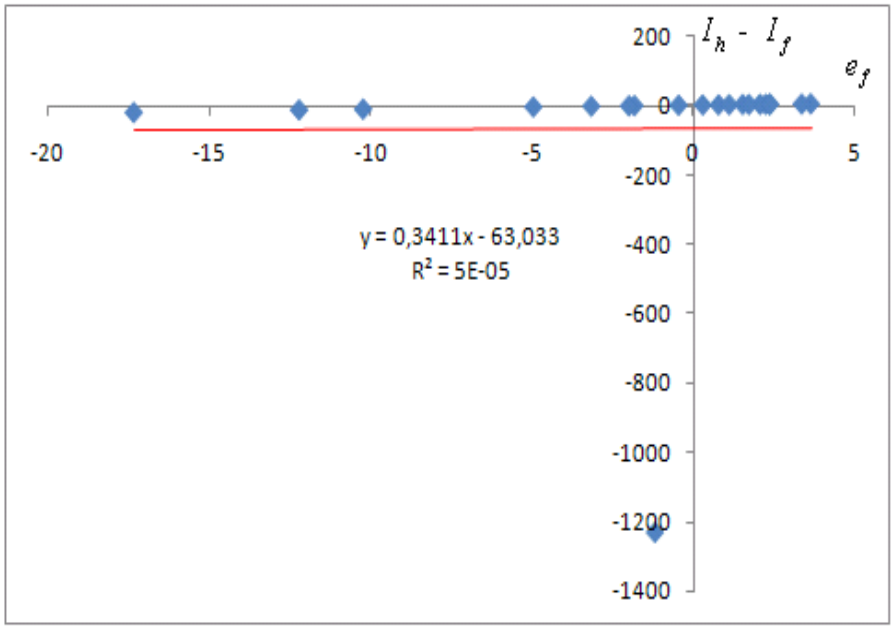

Figure 6. USA – China (PPP)

Another hint of the association between the two variables – the exchange rate and the inflation rate differential – is given by *the correlation coefficient* (R^2). This coefficient varies between –1 and +1. Thus, the closer it gets to +1, the stronger the dependence between the two variables. However, when the index tends to –1, the coefficient shows the reverse correlation. But when it is equal to 0, it shows the lack of any correlation. The correlation coefficient is defined as follows:

$$R^2 = \frac{\Sigma\left(x_i - \bar{X}\right)\left(y_i - \bar{Y}\right)}{\sqrt{\left(\Sigma\left(x_i - \bar{X}\right)^2\right)\left(\Sigma\left(y_i - \bar{Y}\right)^2\right)}}$$

As we can see in the graphics above, the correlation coefficient (R^2) for USA – Germany, USA – UK, USA – Switzerland, USA – Japan is 0,9894, 0,996, 0,9969 and 0,9843. These results are very close to +1, which shows the influence exercised by the inflation rate differential on the exchange rate.

The graphic representation of the relation USA – Canada, and of the corresponding regression line suggest the fact that the errors resulted from the regression linear pattern are substantial (we may take the determination coefficient into account, as it is low – 0,5453). The outcome analysis shows that the inflation rate differential did not influence the exchange rate during the analysed period for the relation USA

– Canada. Moreover, the correlogram for the relation USA – Canada demonstrates that there is no correlation between the inflation rate differential and the exchange rate. The conclusion is that the Chinese exchange rate is manipulated by the Chinese authorities, even if China announced a new free flow exchange rate system since July 21 (Ferrington, 2007, p. 8).

2.2. International Fisher Effect (IFE) testing

Besides Purchasing Power Parity Theory there is also another important theory in international finance – International Fisher Effect Theory (IFE). In order to explain the movement of the exchange rate, this theory uses *the interest rate*. IFE is connected to PPP as the interest rates are connected to the inflation rates. Thus, the countries which have high inflation rates also have high nominal interest rates – both as a means to counterattack the inflation pressure and to counterattack high inflation so as to offer the real yield rate to the investors. With the help of the International Fisher Effect Theory we may assess the impact of the interest rate on the exchange rate.

2.2.1. The data

In order to test the IFE theory the author has used the interest rate data from the USA (the American dollar), Germany (the euro), the UK (the pound sterling), Switzerland (the Swiss franc), Canada (the Canadian dollar), and New Zeeland (the New Zeeland dollar). The period of time which was taken into account was 1990 – 2009, and the data was provided by the *Organisation For Economic Cooperation and Development.*

Table 4. Short term interest rates for 1999 – 2009

	USA	Germany	UK	Switzerland	Canada	Australia	New Zeeland
1990	8.148	8.488	14.769	8.918	13.008	14.54	13.89
1991	5.835	9.247	11.523	8.214	9.031	10.23	9.97
1992	3.682	9.518	9.623	7.854	6.669	6.47	6.73
1993	3.174	7.295	5.940	4.906	5.040	5.15	6.33
1994	4.629	5.364	5.502	4.189	5.546	5.66	6.74
1995	5.917	4.532	6.681	2.948	7.126	7.73	9.01

1996	5.390	3.305	6.023	2.020	4.452	7.15	9.30
1997	5.616	3.325	6.828	1.638	3.556	5.40	7.66
1998	5.467	3.544	7.338	1.549	5.059	5.00	7.35
1999	5.330	2.964	5.449	1.409	4.916	5.01	4.83
2000	6.456	4.392	6.107	3.173	5.696	6.18	6.52
2001	3.687	4.262	4.972	2.863	3.995	4.90	5.74
2002	1.726	3.319	3.993	1.128	2.621	4.75	5.67
2003	1.151	2.333	3.666	0.329	2.965	4.90	5.42
2004	1.563	2.106	4.571	0.485	2.311	5.48	6.13
2005	3.512	2.185	4.698	0.810	2.810	5.64	7.11
2006	5.153	3.079	4.798	1.557	4.177	5.99	7.55
2007	5.268	4.278	5.954	2.572	4.618	6.67	8.33
2008	2.965	4.634	5.491	2.483	3.307	6.97	8.02
2009	0.556	1.228	1.200	0.363	0.692	3.43	3.03

Table 5. The calculation of the interest rate differential and of the percentage change for the German, British, Swiss and Canadian currencies

	$\frac{(1+i_{USA})}{(1+i_{Germ.})}-1$ (%)	$i_{USA}-i_{Germ.}$ (%)	$\frac{(1+i_{USA})}{(1+i_{U.K.})}-1$ (%)	$i_{USA}-i_{U.K.}$ (%)	$\frac{(1+i_{USA})}{(1+i_{Switz.})}-1$ (%)	$i_{USA}-i_{Switz.}$ (%)	$\frac{(1+i_{USA})}{(1+i_{Canada})}-1$ (%)	$i_{USA}-i_{Canada}$ (%)
1990	-0.313	- 0.34	-5.768	-6.621	-0.706	-0.77	-4.3	-4.86
1991	-3.123	- 3.412	-5.100	-5.688	-2.198	-2.379	-2.931	-3.196
1992	-5.328	-5.836	-5419	-5.941	-3.868	-4.172	-2.8	-2.987
1993	-3.840	-4.121	-2.610	-2.766	-1.651	-1.732	-1.776	-1.866
1994	-0.697	-0.735	-0.827	-0.873	0.422	0.44	-0.868	-0.917
1995	1.324	1.385	-0.716	-0.764	2.883	2.969	-1.128	-1.209
1996	2.018	2.085	-0.597	-0.633	3.303	3.37	0.898	0.938
1997	2.217	2.291	-1.134	-1.212	3.913	3.978	1.989	2.06
1998	1.857	1.293	-1.743	-1.871	3.858	3.918	0.388	0.408
1999	2.297	2.366	-0.112	-0.119	3.866	3.921	0.394	0.414
2000	1.977	2.064	0.328	0.349	3.182	3.283	0.719	0.76
2001	-0.551	-0.575	-1.224	-1.285	0.801	0.824	-0.296	-0.308
2002	-1.418	-1.593	-2.179	-2.267	0.591	0.598	-0.872	-0.895
2003	-1.155	-1.182	-2.426	-2.515	0.819	0.822	-1.761	-1.814
2004	-0.531	-0.543	-2.876	-3.008	1.072	1.078	-0.731	-0.748
2005	1.298	1.327	-1.132	-1.186	2.680	2.702	0.682	0.702
2006	2.012	2.074	0.340	0.355	3.540	3.596	0.936	0.976
2007	0.949	0.99	-0.647	-0.686	2.628	2.696	0.621	0.65
2008	-1.595	-1.669	-2.394	-2.526	0.470	0.482	-0.331	-0.342
2009	-0.663	-0.672	-0.636	-0.644	0.192	0.193	-0.135	-0.136

Table 6. The calculation of the interest rate differential and of the percentage change for the Australian and New Zeeland currencies

	$\frac{(1+i_{USA})}{(1+i_{Australia})}-1$ (%)	$i_{USA}-i_{Australia}$ (%)	$\frac{(1+i_{USA})}{(1+i_{NewZeeland})}-1$ (%)	$i_{USA}-i_{NewZeeland}$ (%)
1990	-5.580	-6.392	-5.041	-5.742
1991	-3.987	-4.395	-3.760	-4.135
1992	-2.618	-2.788	-2.855	-3.048
1993	-1.879	-1.976	-2.968	-3.156
1994	-0.975	-1.031	-1.977	-2.111
1995	-1.682	-1.813	-2.837	-3.093
1996	-1.642	-1.76	-3.577	-3.91
1997	0.204	0.216	-1.898	-2.044
1998	0.444	0.467	-1.754	-1.883
1999	0.304	0.32	0.476	0.5
2000	0.259	0.276	-0.060	-0.064
2001	-1.156	-1.213	-1.941	-2.053
2002	-2.886	-3.024	-3.732	-3.944
2003	-3.573	-3.749	-4.049	-4.269
2004	-3.713	-3.917	-4.303	-4.567
2005	-2.014	-2.128	-3.359	-3.598
2006	-0.789	-0.837	-2.228	-2.397
2007	-1.314	-1.402	-2.826	-3.062
2008	-3.744	-4.005	-4.679	-5.055
2009	-2.778	-2.874	-2.401	-2.474

2.2.2. Applied Methodology

In the process of testing the IFE theory, the USA was considered the home country (*h*), while Germany, the UK, Switzerland, Canada, Australia and New Zeeland were analysed as foreign countries (f). For each group of counties the author has calculated the interest rate differential *(*Δ *INT*) and the percentage change in the currency value (e_f) according to the IFE relations:

a) Δ INF = i_h - i_f b) $e_f = \frac{1+i_h}{1+i_f} - 1$

The use of the IFE theory helped the author assess the impact of the interest rate on the exchange rate. Each point in the graphics has the percentage change in the inflation rate differential between the home country and the foreign country, and the percentage change of the exchange rate as coordinates. In theory, IFE states that if the interest rate differential is *y%* then the percentage change of the exchange rate should be *y%* as well. The line which unites all these points is known as *the IFE line* and it reflects the exchange rate adjustment to compensate for the inflation rate differential. Thus, outcome may be compared according to *the IFE line*:

- All the points which are situated on the IFE line show that the investors get the same yield, no matter if they invest in the home country, or abroad;
- The points which are above the IFE line confirm the relation (I_h - I_f **)** > e_f whose interpretation is the fact *the investment yield in the home country is higher than the one abroad*;
- The points which are below the IFE line confirm the relation **(** I_h - I_f **)** < e_f whose interpretation is that *the investment yield in the home country is lower than the one abroad*;
- If the point significantly deviates from the IFE line, then the percentage change of the currency value was not influenced by the inflation rate differential as the IFE theory suggests.

We applied the regression model for the IFE theory as we did for the PPP theory. Within the analysis the dependent variable is the exchange rate (e_f), and the independent variable if the interest rate ($i_h - i_f$ or Δ INT). According to the data, the econometric unifactorial model is: $y_i = f(x_i) + u_i$, where:

- y_i represents the real values of the dependent variable;
- x_i is the real values of the independent variable;
- u_i is the residual value, and it represents the influences of the other factors of y_i variable which are not specified in the model and are considered to be random, having insignificant influences on y_i variable.

The data analysis from tables 22 and 23, lead to the following specifications: y_i represents the exchange rate, which is considered the dependent variable; x_i is the interest rate differential, which is the independent variable, i.e. the influential factor on the exchange rate considered in the hypothesis.

The econometric model also presupposes to choose a mathematical function $(f(x))$ which will connect the two variables. The process that is most often used in the case of a unifactorial model is the graphic representation of the two rows of values with the *correlogram*. Therefore, if we have n pairs of observations (y_i, x_i), $i = 1, 2, ..., n$, on Y and X, then the simple linear regression model may be written as: $y_i = \alpha + \beta x_i + e_i$, where:

- α is the interceptor (the place on the regression line where it intersects OY). According to the direction and the inclination of the line α may be positive or negative.
- β is the regression coefficient (the quantity by which y is modified when x is modified by one unit).

2.2.3. Outcome

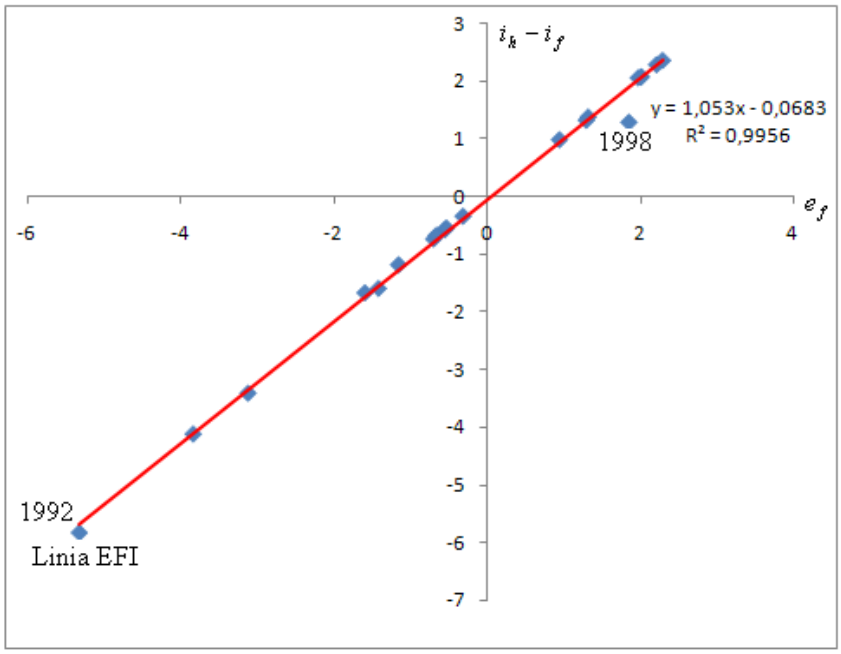

Figure 7. USA – Germany (IFE)

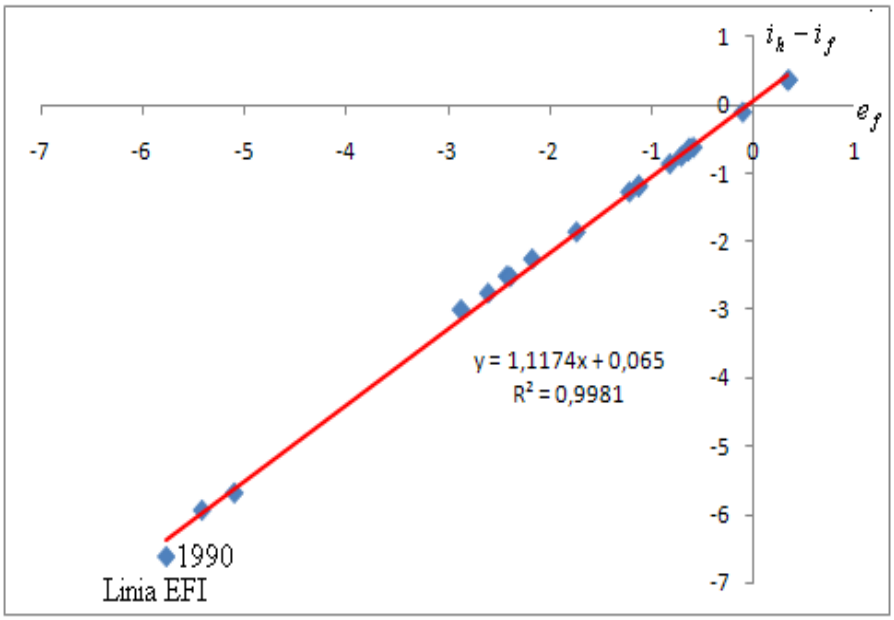

Figure 8. USA – UK (IFE)

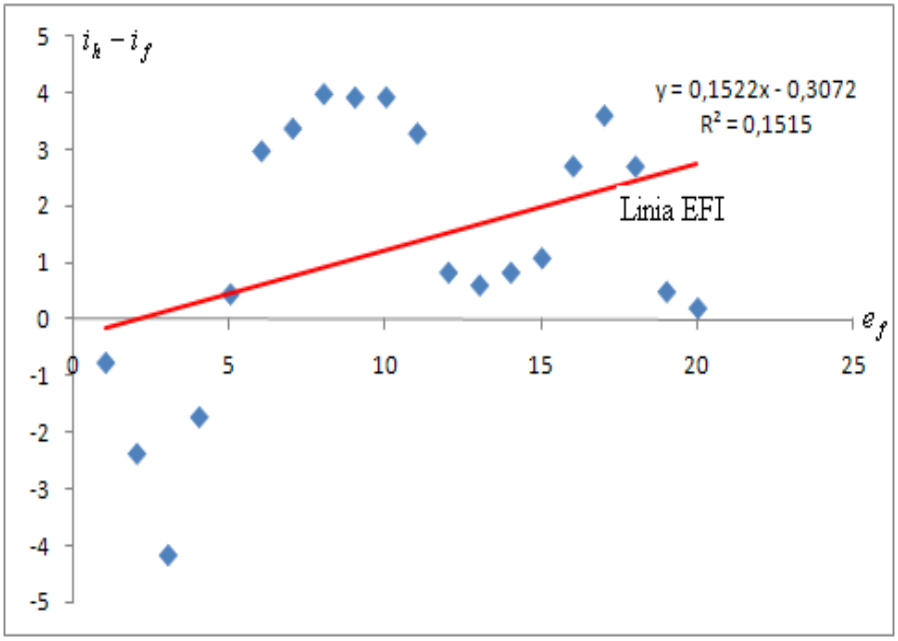

Figure 9. USA – Switzerland (IFE)

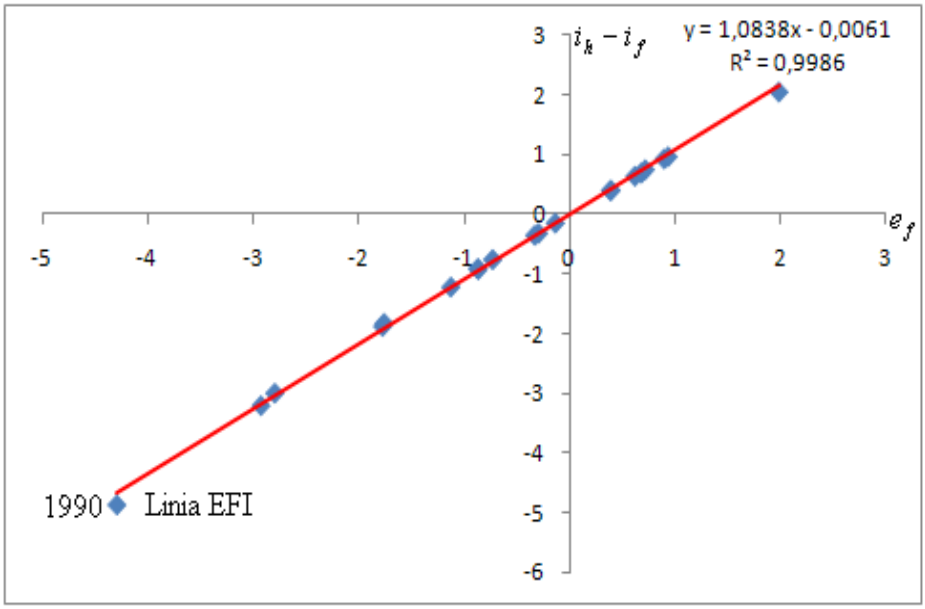

Figure 10. USA – Canada (IFE)

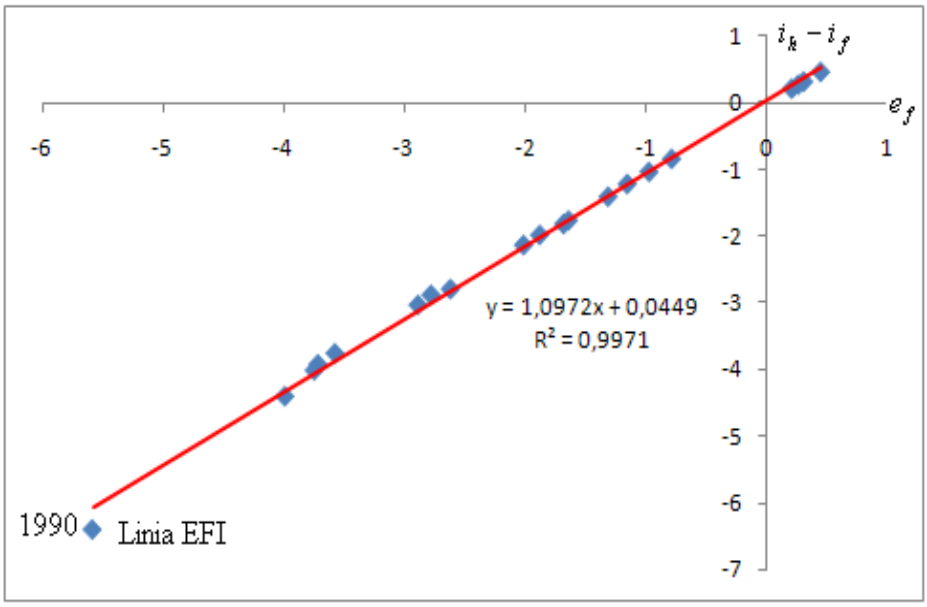

Figure 11. USA – Australia (IFE)

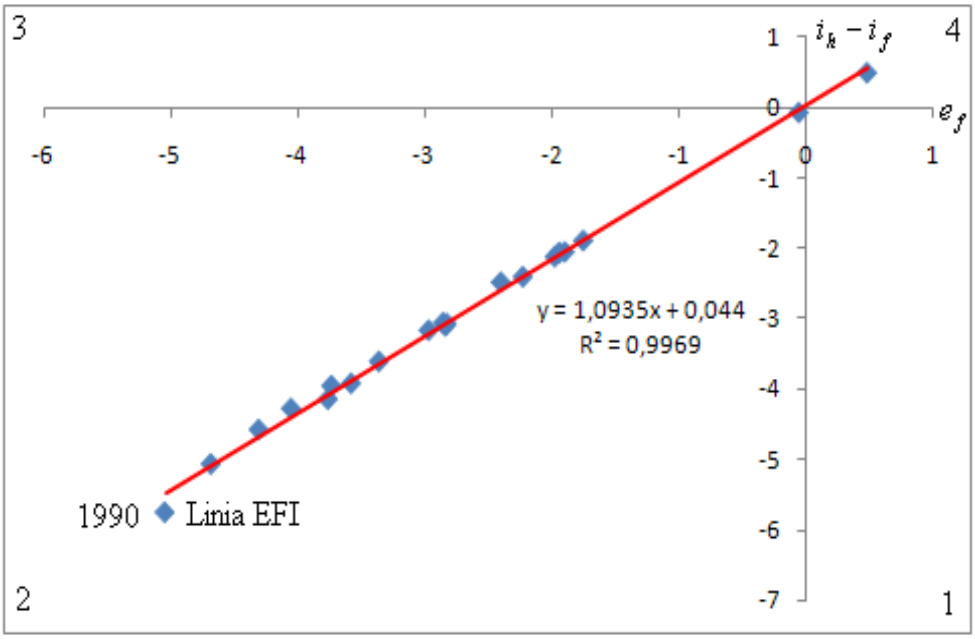

Figure 12. USA – New Zeeland (IFE)

The correlograms that were made for the analysed pair countries provide the first interpretation for the distribution of the points in a system of axes with OX and OY as coordinates. As in the case of the PPP theory, the visual analysis of how the cloud of points was formed gives us important data on the connection between the two variables, the exchange rate and interest rate differential. In order to synthesise how the changes of Y (the exchange rate) are associated with the changes of X (the interest rate differential), we have used "the method of the smallest squares".

This method tries to find the most suitable line for the analysed data. When the data is represented as points on the graphic and is grouped along the line drawn in the middle, then the distance between the points and the line vary according to the chosen line. The average of the square distances is considered as being a means of perfect fitting to the line. The best line is the one whose square deviation is the minimum. It is desired that the line pass the average (x, y) from the matrix. This is called *the regression line*. Thus, according to the IFE theory, if the points are close to the line, or on the line (for the graphics representing USA – Germany, USA – UK, USA – Canada, USA – Australia and USA – New Zeeland) then the interest rate differential for the analysed period was really influential on the exchange rate. The regression slope for USA – Germany (*y = 1,053x - 0,0683*), USA – UK (*y = 1,1174x + 0,065*), USA – Canada (*y = 1,0838x - 0,0061*), USA – Australia (*y = 1,0972x + 0,0449*), USA – New Zeeland (*y = 1,0935x + 0,044*), points out the following: if the value of β is positive, then the dependence between the two variables is in direct proportion; thus, an increase with a unit in the interest rate differential has determined the appreciation of the foreign currency.

In the case of the IFE theory, the degree of association between the two variables – the exchange rate and the interest rate differential – is given by *the correlation coefficient* (R^2). This coefficient varies between –1 and +1. Thus, the closer the coefficient gets to +1, the stronger the dependence between the two variables. But, when the index tends to –1 the coefficient shows the reverse. However, when it is equal to 0, there is no correlation.

The correlation coefficient (R^2) for the pairs USA – Germany, USA – UK, USA – Canada, USA – Australia and USA – New Zeeland is 0,9956, 0,9981, 0,9986, 0,9971, and 0,9969. The values obtained for these correlation coefficients are very close to +1, which demonstrates the influence of the interest rate differential on the exchange rate.

Among the correlograms for the six pairs there is a distinct one (i.e. USA – Switzerland), whose determination coefficient (R^2) is 0,1515. This value is considered as being too low (it tends towards 0), which indicates the lack of any correlation between the exchange rate and the interest rate differential for the analysed period.

Therefore, all correlograms, except the one for USA – Switzerland, support the IFE theory. They show that short term investment yield abroad is equal to the domestic one. In conclusion, the outcome regarding the interest rate differential is roughly compensated by the exchange rate modification. That is to say that the exchange rate was influenced by the interest rate differential during the analysed period.

3. Conclusions

The foreign exchange market influences many fields of our lives. The impact it has exceeds the sphere of imports and exports and influences the inflation and interest rates, thus having an indirect effect upon our lives. Therefore inflation and interest rates influence the exchange rate, which makes it essential for us to learn how to interpret the information provided by the financial media in order to invest wisely.

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***http://www.imf.org/external/pubs/ft/weo/2010/02/weodata/index.aspx

The Institutional Progress and Strategic Reforms in Albania, Require Active Role of Government Policies

Alba Robert Dumi[1] Terida Mehilli[2]

Abstract: Business takes place worldwide, in a huge diversity of societies and between widely varying organizations. Actually, the business environment has become more complex, with expanding and deepening ties between societies and between the many organizations within those societies. The aim of this article is to present an overview of the international environment, highlighting the differing levels, from local and national, to regional and international. The discussion focuses on the main identifying features of the business organization, including ownership and decision-making structures, as they adapt in differing geographical contexts. It is emphasized that the multinational enterprise (MNE), central to international business activities, covers a variety of organizations, large and small and the growing interactions between organizations, governmental and societal players are resulting in a broader view of the business organization in society. This argument looks at varying perspectives, often argued to be the defining characteristic of our times. The Government of Albania has adopted a comprehensive policy reform program to strengthen Albania's weak institutional and governance capacity. The overall objective of the proposed Public Administration Reform Project is to provide required resources for technical assistance, training, goods and incremental operating costs that are needed to implement the Government's Institutional and Public Administration Reform.

Keywords: International environment; Roles of governments; European Community; Albanian situation, Public administration

JEL Classification: H190; H 490

1. Introduction

Albania is open to foreign investment and increasing FDI is a top priority for the Albanian Government. Albania has put in place a liberal foreign investment regime, including a 10 percent flat corporate and income tax and has taken measures to improve the business climate by streamlining business procedures

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through e-government reforms. These improvements along with NATO membership and progress toward EU integration have contributed to the increase in invests interest during the last couple of years. Promising sectors for foreign investors and include: energy (including alternative energies), mining, transportation, telecommunications, and tourism.

The strategic country's geographic position places it at the crossroads of Western and Eastern Europe makes it a stable U.S. ally, a member of NATO, the WTO and a probable candidate status in the European Union. Although FDI has increased during the last couple of years, it still remains among the lowest in the region with a significant part of it coming from privatizations. Despite progress in reforms the major factors hindering FDI seem to remain the same: widespread corruption, weak law enforcement, in sufficiently defined property rights, lack of developed infrastructure, a sluggish government bureaucracy and frequent changes in the legal framework.[1] Foreign companies continue to face significant challenges in entering the market, particularly in areas that touch on property rights. Despite advancements government bureaucracy and inefficiency greatly hampers the ability to hold successful, open and transparent government tenders. They are under-equipped to handle essential tasks. These are primarily to manage transition, provide the regulatory/administrative framework for the market, establish relations with the international community and negotiate and manage aid flows. But these tasks must be carried out while re-establishing order and maintaining social safety nets, under conditions of budget stringency.

The Importance of this Study and the Hypothesis

This study empirically examines the impact of debt management policies on borrowing costs incurred by state governments when issuing debt in the municipal bond market. Based on positive political theory and the benefit principle of taxation, it is proposed that states that adhere to best practice debt management policies transmit signals to the credit ratings, investment community and taxpayers that the government should meet its obligations in a timely manner, resulting in lower debt costs[2]. As a result (USA political debt and reforming policies) of a multi-block multivariate regression model the implication of adhering to debt policies aimed at promoting transparency results in a borrowing cost savings in terms of true interest cost (TIC). However a comprehensive debt policy is not a significant indicator of borrowing costs. These results suggest a product of a pull-push process between the economic forces of the bond market on one hand and

[1] An Overview of Public Administration in Albania pg 6 year 2008. Economical analyze, an analyze by Albanian report, USAID data (Internet link) 2010, Albanian Progress Report 2009, pp. 12, 14, 28.
[2]Albanian Macroeconomic incomes 2006, pp. 10, 12, 24, 46; Albanian publisher by Albania international bank 2010, report Albania Government journal, pp. 14, 27, 39, year 2009.

politics on the other, pulling the administrative function toward efficiency in the former and democratic values of responsiveness and transparency in the latter.

There are four specific hypotheses in this paper research. During the concepts and data we are trying to explain the important role progress reforms in Albanian areas, that can`t do the progress without governance role.

(1) The comprehension of the importance for innovations and developing the entrepreneurship in Albania

(2) Identify and analyze for **multi-block multivariate regression model and the implication** factors.

(3) Resolve the problems of Albania's economic designing, developing the governance capacity.[1]

(4) Albanian **government services and tax-payers opportunity** that leads to a more democratic society.

There are Four Hypotheses in this Paper Research

We are trying to do an exhibition for Albanian situation under hypothesis views.

The problem lies in policies that respond to the bond market but virtually exclude any other community interest in policy making. It is recommended that openness in government and allowing taxpayers to understand government services are essential goals in ensuring responsible citizen oversight and providing taxpayers the opportunity to be less likely to propose restrictive initiatives or force dramatic political or management changes through the electoral process or bond referenda.

1.1. Albanian Local Government Programs and Projects

Refers to European Community, the difference of single states policy applied to grow the own international trade, are small. What is the real situation in states not members of European Community, like Albania, according to international business environment?

The external environment includes an array of dimensions, including economic, political, legal and technological factors. The article analyses their impacts on societies and the environment, and considers the roles of governments and firms in the wider stakeholder context.[2]

[1] European Commission – retrieved on 27, June 2007.
[2] U.S. Department of State, Center for Administrative Innovation, U.S. Embassies. GovLeaders.org, author Cynthia McCauley, methodology, p. 128, year 2009.

Naturally, at the end of this article we will have a complete vision of Albanian situation. We are going to illustrate the nature of globalization, highlighting trends in globalized production and market, by contrasting the key features of foreign direct investment (FDI), foreign indirect investment and other modes of international operations. The whole Society and Albanian Local Government Support Program (CSLGP**)** aims to increase the level of informed and organized civic activism at the local and national levels, along with more participatory, decentralized, accountable governance that leads to a more democratic society. The project will reach this objective through three programmatic components: (1) local government and civil society collaboration, (2) fostering civic participation, advocacy and activism, and (3) facilitating decentralization and local fiscal autonomy. Project aims to support Albania rapprochement through developing new business partnerships and regional professional networks; engaging civil society in alliance-building to further contribute to Albania normalization; and supporting government and non-government efforts toward rapprochement with research.

1.2. Rule of Law Albanian Development Program core programmatic objectives include: (1) increasing the judiciary's knowledge of the European Court of Human Rights (ECHR); (2) enhancing the institutional capacity of the Independent Bar Association; (3) improving the quality of legal education; and (4) fostering an effective environment for human rights protection. [1]

Administrative changes in Albanian public policies as an obstacle to the operating foreign investments, comparison of EU like these factors:

- A dynamic local government leadership;
- A coherent strategy acted upon with determination;
- A healthy climate of cooperation with business;
- Improving the quality of legal rules;
- Local government's investment initiatives to jumpstart the stagnant economy;
- Creative use of EU funds to implement local policy;
- Efficient municipal administration;
- Coherent links among urban planning, infrastructure and economic development.

[1] Analytical Report accompanying the Communication from the European Parliament and the Council, Brussels, 09 November 2010.

The Access to Information for Albanian Community Involvement program focuses on: (1) Training of public officials, local government representatives and civic groups on freedom of information, (2) media outreach to inform and update the public and the government on freedom-of-information, (3) production of a freedom-of-information (FOI) website; (4) Improving mechanisms for proactive publication of government-held information; and (5) free legal counseling to citizens and community organizations on FOI.

2. Objectives

2.1. These results suggest a product of a pull-push process between the economic forces of the bond market on one hand and politics on the other, pulling the administrative function toward efficiency in the former and democratic values of responsiveness and transparency in the latter.

The problem lies in policies that respond to the bond market but virtually exclude any other community interest in policy making. It is recommended that openness in government and allowing taxpayers to understand government services are essential goals in ensuring responsible citizen oversight and providing taxpayers the opportunity to be less likely to propose restrictive initiatives or force dramatic political or management changes through the electoral process or bond referenda.[1]

The external environment includes an array of dimensions, including economic, political, legal and technological factors. The article analyses their impacts on societies and the environment, and considers the roles of governments and firms in the wider stakeholder context.

The principal arguments treated. Through its programs in the areas of anti-corruption, local governance, rule of law, alternative media, and parliamentary assistance, USAID is working with civil society and reformers within the Government of Albania to help create opportunities that helps Albania to advance the country's democratic reform both at the local and national levels. Based on an "active citizen"[2] approach to democratic development, USAID is broadening efforts to foster greater citizen participation at the grassroots level and strengthening advocacy NGOs by providing core funding, advocacy grants and tailored technical assistance.

[1] Bundo Sherif ,risku dhe primi botimi 2001. Ciceri Beshir Finance university text, year 2003. Ray Blunt , American society INCOMS. July 2006 column for GovLeaders.org,
U.S. Department of State, Center for Administrative Innovation, year 2007, pg 7, 21 ,45.
U.S. Department of State, Center for Administrative Innovation, year 2004, pg 2

2.2. Analyses Selected Indicators for Responsiveness of Public Administration

The business environment may be visualized in terms of layers, beginning with the immediate internal environment within the organization, and moving outwards to the external environment surrounding the business and influencing its organization and operations. While only a few decades ago these external aspects were seen as centering on the home country of the business, the environmental horizon of business has now widened to take in a host of international forces, which interact with national and local factors.

Tensions exist between an organization and the external forces that impact on it, from local through to international, and these tensions are reflected in its internal environment.

For this, when we think of international business, we tend to think of large multinationals, but most of the world's businesses are very much smaller, and, increasingly, these smaller firms are becoming international in their outlook. Nowadays, thanks to advances in communication technology and transport, it is easier for companies to expand a variety of business activities across national borders. A large American corporation such as IBM may seem to have very little in common with a family-run firm in Tirana that selling its products or purchasing raw materials abroad, and go on to producing its products abroad. Even if their answers on how to achieve a smooth-running and efficient organization and how to satisfy the needs of customers may be different, both companies in their own way will affronting universal issues.

Like we know in the past the most important factors which influenced the firms were cultural and social, legal and technological factors. Now the factors which compose the economic policy and influenced international environment are not so unpredictable. The problem is that are complicated for the different decision making stakeholders at a time of a stagnant economy.

3. Methodology

The research methodology used to complete this article is that to compare the latest international economic policies to respond to different features present or not in them. To pursue this purpose we will use as a reliable research sources such as the European community, the Ministry of Economy of Albania, etc. Albanian companies act in an environment that is more or less favorable to them. The environment is significantly limited by the institutional framework that the rules of the game and is controlled by public administration and is responsive to the needs of foreign companies.

Regional cooperation is a principle of the highest importance for the political stability, the security and economic development of the WBs countries: Albania, Bosnia and Herzegovina, Croatia, the Former Yugoslav Republic of Macedonia, and Serbia Montenegro and Kosovo. Many of the challenges facing the WBs countries are not only common to them but also have a cross-border dimension, which involves their regional programs and projects..

In the empirical part of the paper, we analyze selected indicators for responsiveness of the public administration in selected Albanian programs, compared European Union (EU).

Table 1. Table shows the indicators of the public and political process in Albania

Strengths	*Weaknesses*
• Commitment of Government of Albania-GOA and political consensus in country on the EI process of Albania; • Central state coordination bodies (Cabinet of Ministers-COM, Ministry of European Integration-MOEI, EI Units in Line Ministries, Inter-Ministerial Working Group on the Implementation of the SAA, The European Integration Committee in the Assembly); • Instruments that align national priorities and policies with EU policies are established and functional: Strategy for Development and Integration (NSDI), Integrated Planning System (IPS), National Plan for the Implementation of the SAA (NPISAA); • The Albania efforts to EU are supported by IPA program.	• There is no a full political stability in the country; • Insufficient administrative capacity to cope with demanding EI processes; • The current mechanisms do not provide any clear guidance and involvement of some independent institutions, due to the separation of power doctrine; • There is no clear and effective communication mechanism between independent institutions and line ministries, also between central and local government; • Lack of involvement of EI parliamentary committee (infrequent meetings, no regular review of SAA-related topics etc.); • Weak coordination of EU assistance with other donors assistance and State budget; • Low capacities on absorbing EU financial assistance.

3.1 The Real Situation of Financial Sector in Albania

The financial sector in Albania has in general been spared from the global financial turmoil, primarily due to the low amount of loans in relation to total deposits. Also the lack of a housing/construction bubble has minimized pressure on the banks. However, a significant reduction in bank deposits took place in the fall of September 2008 as individuals withdraw their money due to fear from losing their savings. Since October 2008 deposits dropped by about 15% and during 2009 they were below their top level. After summer 2009 there has been a stable increase in bank deposits and by the end of 2009 they reached their pre-crisis level. Lower deposits created some liquidity issues but banks were well equipped to face the situation. Banks have increased their equity capital to better face the situation and also BOA has an active monitoring program to ensure enough liquidity in the banking sector. The financial sector is totally dominated by commercial banks funded with private capital. Currently, 16 banks are operating in the country – two domestically owned banks and 14 foreign or joint ventures.[1]

Referring to the above mentioned financial crisis which influenced companies stocks, we can say that, on Albanian SME`s have little or no influence. This, not only for the mentioned reasons above, but because only 3% of the Albanian companies are with private capital trading in stock exchange, the rest are joint stock companies with public capital.

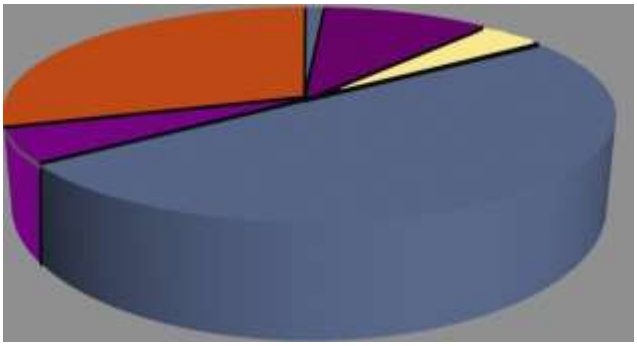
3.2 Foreign Direct Investment Statistics[2]

The FDI has increased although it still remains among the lowest in the region. The cumulative FDI is also the lowest in the region. The Bank of Albania reported the following figures for foreign direct investment in Albania. Regardless of numerous contracts, only a few projects materialized in 2009.

Table 2. FDIS in Albania

Years	**2004**	**2005**	**2006**	**2007**	**2008**	**2009***	**2010**
FDI in million Euro	279	212	259	481	653	580	588

[1] Winter 2003-2004 issue of Albanian economical report, pp. 147-123-158. 9. USAID report 2007, 2009, 2010,
**BA estimate for the first three quarters of 2009, 2010,* Albanian Finance MF incomes 2009, p. 10.
[2] Albanian publisher, Albania international bank 2010, report.



*Source: Bank of Albania *BA estimate for the first three quarters of 2009, 2010*

The direct investiments in Albania in 2009-2010

FDI during the first nine months of 2009, 2010 is estimated to have reached 580 or 588 million euro despite optimistic GOA projections for 2009 fueled mainly by strong investor interest witnessed during 2007-2008. A large part of FDI is due to privatizations. The Albanian government collected 103 million Euro from the privatization of 76 percent of the shares of the distribution arm of Albanian Power[1] Corporation; 48 million Euro from the privatization of 12.6 percent of AMC state controlled shares; 5 million euro from the privatization of 40% of GOA controlled shares of the United Bank Albania. INSIG (insurance company) privatization failed during the negotiation process with the winner and it might take place during 2011.

3.3. Public Debt and Albanian Situation

Analyzing the relationship between economic shocks and public debt that is having lately the European Community (we refer in particular to the crisis of the GDP of the two member states like Greece and Italy) budgeting decisions in the context of local economic shocks reveal the local fiscal policy priorities.

The analysis of Albanian incomes, finds that current expenditure paths are more influential when making cuts than when expanding budgets.

Public Strategies employees strive to support and improve the communities in which they live and work. The government support programs that help those in

[1] Albania Economy statistic facts, year 2009 data, 2010 data.

need who strive to provide for their families; and provide the youth of the community with the tools necessary to become leaders.[1]

Also focus on two primary areas to ensure the company provides meaningful contributions to the community. Our corporate contributions of time and money go to promoting philanthropy and to youth leadership development through initiatives that produce measurable outcomes and sustainable results in these two areas.

Government regulations applied to counties, like Albania once classified as not in attainment of ambient air quality standards affect local tax bases.

Local communities are also seen to employ some short-term use of reserve funds when facing negative expenditure pressures, but these funds are not used to completely prevent expenditure cuts. Furthermore, communities do not use debt as a mitigating response to external tax base pressures, but instead alter expenditure patterns.

4. Conclusions and Recommendation

Administrative changes in Albanian public policies as an obstacle to the operating foreign investments, comparison of EU are progressed in Albania like as:

- Developing;
- International investments founds;
- Entrepreneurship ambition;
- Marshalling resources to exploit business opportunity;
- State regulatory statistical and tax reporting.

Local communities are also seen to employ some short-term use of reserve funds when facing negative expenditure pressures, but these funds are not used to completely prevent expenditure cuts. Furthermore, communities do not use debt as a mitigating response to external tax base pressures, but instead alter expenditure patterns. Using the EU measurements and assessment of different areas of the business, namely the production of goods and services, can take place smoothly in Albania. PSI worked closely with high-level public officials and community leaders and provided critical guidance and strategic planning.

On an ongoing basis, PSI continues to adapt to: the changing needs of the communities we serve, legislative and administrative directives, research findings and promising practices from the field. These efforts include:

[1] Albanian Local Government Support Program (CSLGP), year 2006.
Albanian Government finance results 2009, Vol. 12 pp. 21, 25, 29.

- Providing customized training and learning opportunities for partners;
- Managing the daily activities of project staff;
- Monitoring large-scale project implementation benchmarks;
- Monitoring the new opportunities of developing and LC of new business;
- Manage the human resources, youth and women.

Additionally, PSI conducts field research that may lead to adjustments to the program in order to meet greater project goals. This has resulted in a high level of trust with state officials and more effective service delivery because program adjustments are made in a timely manner.

Results and Profits from this Research

Administrative changes in Albanian public policies as an obstacle to the operating foreign investments, comparison of EU. This includes partnerships with community-based organizations, public and private colleges, universities, public school teachers, public health departments. Additionally, more number of community leaders have been trained to deliver educational workshops; PSI has developed a robust workshop leader database, which permits remote access to (and entry of) service delivery information. This will be an important point of administrative changes in Albanian public policies as an obstacle to the operating foreign investments, comparison of EU.

Entrepreneurship ambition has worked to support changes in Albanian law that would offer anti-discrimination protections in keeping with international standards. The another point of administrative changes in Albanian public policies as an obstacle to the operating foreign investments, comparison of EU is: (1) International investments contributed to the improvement of Albania's financial regulatory environment which has strengthened public confidence in the banking system and has provided a more secure, efficient and transparent financial system to meet the credit, savings and insurance needs of businesses and individuals.

As a result, there had been a steady increase in bank deposits and a rapid flow of commercial credit to the private sector in recent years before the global financial crisis occurred. (2) PSI worked with the research team to conduct site selection and provide consultation on outcome measures, implementation findings and sustainability strategies. The project was the first of its kind, focused on low-income married parents, and looked at a comprehensive preventive approach to strengthening families. (3) PSI worked directly with the participating research sites to assist in program design, service delivery and project management, in addition to providing consultation to the research team. PSI conducted site visits and telephone

consultations, and developed materials to support the sites in a variety of operational areas. PSI provided guidance and technical assistance to multiple sites regarding:

The Government of Albania has adopted a comprehensive policy reform program to strengthen Albania's weak institutional and governance capacity. This policy reform program is being supported by a Structural Adjustment Credit, which was approved by the Bank in June of 1999. The overall objective of the proposed Public Administration Reform Project is to provide required resources for technical assistance, training, goods and incremental operating costs that are needed to implement the Government's Institutional and Public Administration Reform agenda effectively in Albania.

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The Complete Solution of the Core-Periphery Model for two Regions Using Successive Approximations

Catalin Angelo Ioan[1], Gina Ioan[2]

Abstract: In this paper it is give the complete solution, using the Newton's method of approximation, for the well known Krugman's Core-Periphery model for two regions. After the process of reduction of the system of conditions, using appropriate substitutions, it is obtained one equation which is the key of the problem's solving. After the presentation of the iterative formula which gives the solution, the principal indicators (regional incomes, the prices indexes of manufactured goods and the real wage of workers) are calculated.

Keywords Core-Periphery; region; wage

JEL Classification: R12

1. Introduction

The Core-Periphery Model developed by Krugman in a series of papers starting in 1991 has whip up the scientific world for the fact that they are non-analytical solvable.
In this paper, we shall give a complete solution, using the reduction of the system of conditions to one non-linear equation, which can be solved by successive approximations.

After this, we can give the principal behavior of the quantities of the model.

Let therefore ([3]) two regions with two types of production: agriculture and manufacture.

We shall suppose that the utility function is of Cobb-Douglas type, that is:

(1) $U= C_M^{\mu} C_A^{1-\mu}$

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where C_A and C_M are the consumptions of the agricultural goods and of manufactures aggregate respectively and $\mu \in (0,1)$ represents the share of expenditure which is received by the manufacturers.

The behavior of μ is essential in the convergence of both regions.

Supposing that, after a scaling, that the total labor is unitary, let denote with L_1 and L_2 the worker supply in the corresponding regions. Supposing that the peasants (which produce the agricultural goods) are fixed in each region, we have that:

(2) $L_1+L_2=\mu$

In what follows, we shall made some assumptions: first, we suppose that the wage rate of peasants is numeraire, second – the transportation costs of agricultural goods are null, third – we assume that for each unit of manufactured goods shipped from one region to another only a fraction $\tau<1$ arrives. Let note $T=\frac{1}{\tau}>1$.

We shall define $\lambda=\frac{L_1}{\mu} \in (0,1)$ - the share of manufacturing labor force in region 1 and, of course, $1-\lambda=\frac{L_2}{\mu}$ is the share of manufacturing labor force in region 2.

Let now the w_1 the wage rate of workers in region 1 and also w_2 the wage rate of workers in region 2.

Let denote with Y_1 and Y_2 the regional incomes, G_1, G_2 – the true prices indexes of manufactured goods for people who live in region 1, respectively in region 2, ω_1, ω_2 – the real wage of workers living in region 1, respectively 2.

Finally we note with $\sigma>1$ - the elasticity of demand.

The equations of short-run equilibrium are ([3]):

(3) $Y_1=\mu\lambda w_1+\frac{1-\mu}{2}$

(4) $Y_2=\mu(1-\lambda)w_2+\frac{1-\mu}{2}$

(5) $G_1^{1-\sigma}=\lambda w_1^{1-\sigma}+(1-\lambda)(w_2T)^{1-\sigma}$

(6) $G_2^{1-\sigma}=\lambda(w_1T)^{1-\sigma}+(1-\lambda)w_2^{1-\sigma}$

(7) $w_1^{\sigma}=Y_1G_1^{\sigma-1}+Y_2G_2^{\sigma-1}T^{1-\sigma}$

(8) $w_2^{\sigma}=Y_1G_1^{\sigma-1}T^{1-\sigma}+Y_2G_2^{\sigma-1}$

(9) $\omega_1=w_1G_1^{-\mu}$

(10) $\omega_2=w_2G_2^{-\mu}$

2. The Complete Solution

Substituting (5) and (6) in (7) and (8) we obtain:

(11) $w_1^{\sigma}[\lambda^2w_1^{2-2\sigma}T^{1-\sigma}+\lambda(1-\lambda)w_1^{1-\sigma}w_2^{1-\sigma}+\lambda(1-\lambda)\ w_1^{1-\sigma}w_2^{1-\sigma}T^{2-2\sigma}+(1-\lambda)^2w_2^{2-2\sigma}T^{1-\sigma}]=$
$\lambda Y_1T^{1-\sigma}w_1^{1-\sigma}+(1-\lambda)Y_1w_2^{1-\sigma}+\lambda Y_2w_1^{1-\sigma}T^{1-\sigma}+(1-\lambda)Y_2T^{2-2\sigma}w_2^{1-\sigma}$

(12) $w_2^{\sigma}[\lambda^2w_1^{2-2\sigma}T^{1-\sigma}+\lambda(1-\lambda)w_1^{1-\sigma}w_2^{1-\sigma}+\lambda(1-\lambda)w_1^{1-\sigma}w_2^{1-\sigma}T^{2-2\sigma}+(1-\lambda)^2w_2^{2-2\sigma}T^{1-\sigma}]=$
$\lambda Y_1w_1^{1-\sigma}T^{2-2\sigma}+(1-\lambda)Y_1w_2^{1-\sigma}T^{1-\sigma}+\lambda Y_2w_1^{1-\sigma}+(1-\lambda)Y_2T^{1-\sigma}w_2^{1-\sigma}$.

Replacing (3), (4) in (11), (12) we have (after simplifications):

(13) $\lambda^2w_1^{2-\sigma}T^{1-\sigma}(1-\mu)+\lambda(1-\lambda)w_1w_2^{1-\sigma}[1+T^{2-2\sigma}-\mu]-2\lambda\frac{1-\mu}{2}w_1^{1-\sigma}T^{1-\sigma}+$
$(1-\lambda)^2w_1^{\sigma}w_2^{2-2\sigma}T^{1-\sigma}-(1-\lambda)\frac{1-\mu}{2}w_2^{1-\sigma}[1+T^{2-2\sigma}]-\mu\lambda(1-\lambda)w_1^{1-\sigma}w_2T^{1-\sigma}-\mu(1-\lambda)^2w_2^{2-\sigma}T^{2-2\sigma}=0$

(14) $-\mu\lambda^2w_1^{2-\sigma}T^{2-2\sigma}-\mu\lambda(1-\lambda)w_1w_2^{1-\sigma}T^{1-\sigma}-\lambda\frac{1-\mu}{2}w_1^{1-\sigma}[1+T^{2-2\sigma}]+$
$+(1-\lambda)^2w_2^{2-\sigma}T^{1-\sigma}[1-\mu]+\lambda(1-\lambda)w_1^{1-\sigma}w_2[1+T^{2-2\sigma}-\mu]+\lambda^2w_1^{2-2\sigma}w_2^{\sigma}T^{1-\sigma}-$
$-2(1-\lambda)\frac{1-\mu}{2}w_2^{1-\sigma}T^{1-\sigma}=0.$

Let note now: $X=\frac{w_1}{w_2}$. After a dividing with $w_2^{2-\sigma}$ in (13), (14) we have:

(15) $\lambda^2(1-\mu)T^{1-\sigma}X^{2-\sigma}+\lambda(1-\lambda)(1+T^{2-2\sigma}-\mu)X+(1-\lambda)^2X^{\sigma}T^{1-\sigma}-\mu\lambda(1-\lambda)X^{1-\sigma}T^{1-\sigma}-\mu(1-\lambda)^2T^{2-2\sigma}-\frac{1-\mu}{2}\frac{1}{w_2}[2\lambda T^{1-\sigma}X^{1-\sigma}+(1-\lambda)(1+T^{2-2\sigma})]=0$

(16) $-\mu\lambda^2T^{2-2\sigma}X^{2-\sigma}-\mu\lambda(1-\lambda)T^{1-\sigma}X+(1-\lambda)^2(1-\mu)T^{1-\sigma}+\lambda(1-\lambda)(1-\mu+T^{2-2\sigma})X^{1-\sigma}+\lambda^2T^{1-\sigma}X^{2-2\sigma}-\frac{1-\mu}{2}\frac{1}{w_2}[\lambda(1+T^{2-2\sigma})X^{1-\sigma}+2(1-\lambda)T^{1-\sigma}]=0$

After the reduction of w_2 between (15) and (16) we find that:

(17) $T^{1-\sigma}[(\mu+1)T^{2-2\sigma}+(1-\mu)][\lambda^3X^{3-2\sigma}-(1-\lambda)^3]-X\lambda(1-\lambda)T^{1-\sigma}[(\mu+3)T^{2-2\sigma}+(3-\mu)][\lambda X^{1-2\sigma}-(1-\lambda)]+$
$X^{1-\sigma}\lambda(1-\lambda)[(\mu+1)T^{4-4\sigma}+4T^{2-2\sigma}+(1-\mu)][\lambda X-(1-\lambda)]-2X^{\sigma}T^{2-2\sigma}[\lambda^3X^{3-4\sigma}-(1-\lambda)^3]=0$

With the substitutions: $T^{1-\sigma}=t\in(0,1)$ and $\alpha=\frac{1-\lambda}{\lambda}>0$, after dividing with λ^3, we find from (17) that:

(18) $t[(\mu+1)t^2+(1-\mu)][X^{3-2\sigma}-\alpha^3]-X\alpha t[(\mu+3)t^2+(3-\mu)][X^{1-2\sigma}-\alpha]+X^{1-\sigma}\alpha[(\mu+1)t^4+4t^2+(1-\mu)][X-\alpha]-2X^{\sigma}t^2[X^{3-4\sigma}-\alpha^3]=0$

After successive grouping we obtain:

(19) $[X^{1-\sigma}+\alpha t][tX^{1-\sigma}+\alpha]\{[(\mu+1)t^2+(1-\mu)](X-\alpha)-2t(X^{1-\sigma}-\alpha X^{\sigma})\}=0$

Because $X^{1-\sigma}+\alpha t>0$ and $tX^{1-\sigma}+\alpha>0$ we have that (19) becomes:

(20) $[(\mu+1)t^2+(1-\mu)](X-\alpha)-2t(X^{1-\sigma}-\alpha X^{\sigma})=0$

Let note now:

(21) $\gamma=\frac{(\mu+1)t^2+1-\mu}{4t}$;

$\theta=\alpha^{2\sigma}=\left(\frac{1-\lambda}{\lambda}\right)^{2\sigma}$;

$\varepsilon=2\gamma\alpha^{\sigma}=\frac{(\mu+1)t^2+1-\mu}{2t}\left(\frac{1-\lambda}{\lambda}\right)^{\sigma}$

$W=\frac{X}{\alpha}=\frac{\lambda}{1-\lambda}X$

We can write (20) like:

(22) $\theta W^{2\sigma-1}+\varepsilon W^{\sigma}-\varepsilon W^{\sigma-1}-1=0$

We shall call the equation (22) the characteristic equation of the system (3)-(8).

Let now the function: $f:(0,\infty)\to\mathbf{R}$, $f(W)=\theta W^{2\sigma-1}+\varepsilon W^{\sigma}-\varepsilon W^{\sigma-1}-1$

We have: $\lim_{W\to 0} f(W)=-1$, $f(1)=\theta-1$.

But:

(23) $f'(W)=W^{\sigma-2}[\theta(2\sigma-1)W^{\sigma}+\varepsilon\sigma W-\varepsilon(\sigma-1)]$

(24) $f''(W)=(\sigma-1)W^{\sigma-3}[2\theta(2\sigma-1)W^{\sigma}+\varepsilon\sigma W-\varepsilon(\sigma-2)]$

Let $g:(0,\infty)\to\mathbf{R}$, $g(W)=\theta(2\sigma-1)W^{\sigma}+\varepsilon\sigma W-\varepsilon(\sigma-1)$

Because $g'(W)=\theta\sigma(2\sigma-1)W^{\sigma-1}+\varepsilon\sigma>0$ we have that g has at most one real root.

Because $\lim_{W\to 0} g(W) = -\varepsilon(\sigma-1)<0$ and $g(1)=\theta(2\sigma-1)+\varepsilon\sigma-\varepsilon(\sigma-1)=\theta(2\sigma-1)+\varepsilon>0$ follows $\nu_1\in(0,1)$ is the real root of g therefore also of f'. We have now: $\lim_{W\to 0} f'(W) <0$ therefore f'(W)<0 for $W\in(0,\nu_1)$ and f'(W)>0 for $W\in(\nu_1,\infty)$.

Let now $h:(0,\infty)\to\mathbf{R}$, $h(W)= 2\theta(2\sigma-1)W^{\sigma}+\varepsilon\sigma W-\varepsilon(\sigma-2)$. We have $h'(W)=2\theta\sigma(2\sigma-1)W^{\sigma-1}+\varepsilon\sigma>0$ therefore h has at most one real root. We have also: $\lim_{W\to 0} h(W) = -\varepsilon(\sigma-2)$ and $h(1)=2\theta(2\sigma-1)+\varepsilon\sigma-\varepsilon(\sigma-2)=2\theta(2\sigma-1)+2\varepsilon>0$.

If $\sigma<2$ then: $\lim_{W\to 0} h(W) >0$ therefore h has not real roots. In this case: f''(W)>0.

If $\sigma>2$ then $\lim_{W\to 0} h(W) <0$ and h(1)>0 implies that $\nu_2\in(0,1)$ is the root of h therefore of f'' also. But $\lim_{W\to 0} h(W) <0$ equivalent with $\lim_{W\to 0} f''(W) <0$ lead us to the conclusion that: f''(W)<0 for $W\in(0,\nu_2)$ and f''(W)>0 for $W\in(\nu_2,\infty)$. In this case, for the two real roots ν_1 and ν_2, we have from the upper relations:

(25) $\theta(2\sigma-1)\nu_1^{\sigma}+\varepsilon\sigma\nu_1-\varepsilon(\sigma-1)=0$

(26) $2\theta(2\sigma-1)\nu_2^{\sigma}+\varepsilon\sigma\nu_2-\varepsilon(\sigma-2)=0$

We have: $g(\nu_2)=\theta(2\sigma-1)\nu_2^{\sigma}+\varepsilon\sigma\nu_2-\varepsilon(\sigma-1)=-\frac{1}{2}\varepsilon\sigma\nu_2+\frac{1}{2}\varepsilon(\sigma-2)+\varepsilon\sigma\nu_2-\varepsilon(\sigma-1)=\frac{1}{2}\varepsilon\sigma\nu_2-\frac{1}{2}\varepsilon\sigma=\frac{1}{2}\varepsilon\sigma(\nu_2-1)<0$ therefore: $\nu_2<\nu_1$. The root of $f(W)=\theta W^{2\sigma-1}+\varepsilon W^{\sigma}-\varepsilon W^{\sigma-1}-1$ will be greater than ν_1 where the function is strictly increasing and convex. The same thing is obviously in the case $\sigma\leq 2$.

For the determination now of the real root $\overline{W}$ of f, we shall apply the Newton method of approximation for functions of one variable. Because the starting point x_0 for a function $f:[a,b]\to\mathbf{R}$, who maintains the monotony and the concavity ([2]) is those for which $f(x_0)f''(x_0)>0$ and at us f''(W)>0 for any $W>\nu_1$ we must choose x_0 such that $f(x_0)>0$.

From (21) we have that $\theta=\left(\frac{1-\lambda}{\lambda}\right)^{2\sigma}$ therefore $\theta>1$ if $\lambda\in\left(0,\frac{1}{2}\right)$, $\theta=1$ if $\lambda=\frac{1}{2}$ and $\theta<1$ if $\lambda\in\left(\frac{1}{2},1\right)$. Because f(1)=θ-1, in the case $\lambda\in\left(0,\frac{1}{2}\right)$ we shall choose $x_0=1$ and $\overline{W}<1$. In the case $\lambda=\frac{1}{2}$, from (22) we obtain easy that $\overline{W}=1$. In the case $\lambda\in\left(\frac{1}{2},1\right)$

therefore $\theta<1$ we shall choose x_0 sufficiently large (greater than 1) in order to have convergence of the algorithm and $\overline{W}>1$.

Lemma 1

Let the equation $aW^{2\sigma-1}+bW^{\sigma}-bW^{\sigma-1}-c=0$ where $a,b>0$, $\sigma>1$. In this case, the positive root $\overline{W}$ satisfy: $\overline{W} \le \left(\frac{c+\frac{b}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}}{a} \right)^{\frac{1}{2\sigma-1}}$.

Proof

We have $aW^{2\sigma-1}=-bW^{\sigma}+bW^{\sigma-1}+c$

Let the function $f(W)=-bW^{\sigma}+bW^{\sigma-1}+c$.

We have: $f'(W)=-b\sigma W^{\sigma-1}+b(\sigma-1)W^{\sigma-2}=bW^{\sigma-2}[(\sigma-1)-\sigma W]$ therefore $W=\frac{\sigma-1}{\sigma}$.

Because $\lim_{W\to 0} f'(W)>0$ we obtain that f increases for $W<\frac{\sigma-1}{\sigma}$ and decreases for $W>\frac{\sigma-1}{\sigma}$. The function f has a maximum point in $\frac{\sigma-1}{\sigma}$ therefore:

$$aW^{2\sigma-1} \le f\left(\frac{\sigma-1}{\sigma}\right)=b\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}\left(1-\frac{\sigma-1}{\sigma}\right)+c=c+\frac{b}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}.$$

We finally have:

$$\overline{W} \le \left(\frac{c+\frac{b}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}}{a} \right)^{\frac{1}{2\sigma-1}}$$

Lemma 2

Let the equation $\theta W^{2\sigma-1}+\varepsilon W^{\sigma}-\varepsilon W^{\sigma-1}-1=0$ where $\theta,\varepsilon>0$, $\sigma>1$. In this case, the positive root $\overline{W}$ satisfies:

$$\left(\theta+\frac{\varepsilon}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}\right)^{-\frac{1}{2\sigma-1}}\le\overline{W}\le\left(\frac{1+\frac{\varepsilon}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}}{\theta}\right)^{\frac{1}{2\sigma-1}}$$

Proof

From the lemma 1, for a=θ, b=ε, c=1 we have: $\overline{W}\le\left(\frac{1+\frac{\varepsilon}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}}{\theta}\right)^{\frac{1}{2\sigma-1}}$.

Replacing in the equation $\theta W^{2\sigma-1}+\varepsilon W^{\sigma}-\varepsilon W^{\sigma-1}-1=0$ $W=\frac{1}{Y}$ we shall obtain: $Y^{2\sigma-1}+\varepsilon Y^{\sigma}-\varepsilon Y^{\sigma-1}-\theta=0$. From lemma 1, with a=1, b=ε, c=θ we shall obtain: $\frac{1}{\overline{W}}\le\left(\theta+\frac{\varepsilon}{\sigma}\left(\frac{\sigma-1}{\sigma}\right)^{\sigma-1}\right)^{\frac{1}{2\sigma-1}}$.

In our case, $\theta=\alpha^{2\sigma}$, $\varepsilon=2\gamma\alpha^{\sigma}$ and $\gamma=\frac{(\mu+1)t^2+1-\mu}{4t}=\frac{(\mu+1)\tau^{2\sigma-2}+1-\mu}{4\tau^{\sigma-1}}$ implies:

$$\alpha^{-\frac{2\sigma}{2\sigma-1}}\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{-\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{-\frac{1}{2\sigma-1}}\le\overline{W}\le\alpha^{-\frac{2\sigma}{2\sigma-1}}$$
$$\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{\frac{1}{2\sigma-1}}$$

With the upper relations, we have that for $\alpha=\frac{1-\lambda}{\lambda}$:

$\lambda\in\left(0,\frac{1}{2}\right)$ implies that:

$$\alpha^{-\frac{2\sigma}{2\sigma-1}}\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{-\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{-\frac{1}{2\sigma-1}}\le\overline{W}\le\min(\alpha^{-\frac{2\sigma}{2\sigma-1}}$$

$$\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{\frac{1}{2\sigma-1}},1)$$

$\lambda\in\left(\frac{1}{2},1\right)$ implies :

$$\max(\alpha^{-\frac{2\sigma}{2\sigma-1}}\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{-\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{-\frac{1}{2\sigma-1}},1)\le\overline{W}\le\alpha^{-\frac{2\sigma}{2\sigma-1}}$$

$$\left(1+\frac{((\mu+1)\tau^{2\sigma-2}+1-\mu)\alpha^{\sigma}}{2\sigma}\left(\frac{\sigma-1}{\sigma\tau}\right)^{\sigma-1}\right)^{\frac{1}{2\sigma-1}}$$

From $\lambda=\frac{1}{2}$ follows: $\overline{W}=1$.

We have now, from the Newton's method:

(27) $x_{n+1}=x_n-\frac{f(x_n)}{f'(x_n)}=\frac{2\theta(\sigma-1)x_n^{2\sigma-1}+\varepsilon(\sigma-1)x_n^{\sigma}-\varepsilon(\sigma-2)x_n^{\sigma-1}+1}{\theta(2\sigma-1)x_n^{2\sigma-2}+\varepsilon\sigma x_n^{\sigma-1}-\varepsilon(\sigma-1)x_n^{\sigma-2}}$, $n\ge0$

where: $\theta=\left(\frac{1-\lambda}{\lambda}\right)^{2\sigma}$ and $\varepsilon=\frac{(\mu+1)t^2+1-\mu}{2t}\left(\frac{1-\lambda}{\lambda}\right)^{\sigma}$, $t=T^{1-\sigma}=\tau^{\sigma-1}$.

The range $(x_n)_{n\ge0}$ will converges at $\overline{W}$ – the real root of the equation (22).

Using the following formula ([5]):

(28) $\lambda w_1+(1-\lambda)w_2=1$

we finally find that:

(29) $X=\frac{1-\lambda}{\lambda}\overline{W}$

(30) $w_2=\frac{1}{\lambda X+(1-\lambda)}=\frac{1}{(1-\lambda)(\overline{W}+1)}$

(31) $w_1=w_2X=\frac{\overline{W}}{\lambda(\overline{W}+1)}$

(32) $Y_1=\mu\lambda w_1+\frac{1-\mu}{2}=\frac{(1+\mu)\overline{W}+1-\mu}{2(\overline{W}+1)}=\frac{1}{2}+\frac{\mu}{2}\frac{\overline{W}-1}{\overline{W}+1}$

(33) $Y_2=\mu(1-\lambda)w_2+\frac{1-\mu}{2}=\frac{(1-\mu)\overline{W}+1+\mu}{2(\overline{W}+1)}=\frac{1}{2}-\frac{\mu}{2}\frac{\overline{W}-1}{\overline{W}+1}$

(34) $G_1=\frac{\left(\lambda^{\sigma}\overline{W}^{1-\sigma}+(1-\lambda)^{\sigma}\tau^{\sigma-1}\right)^{\frac{1}{1-\sigma}}}{\overline{W}+1}$

(35) $G_2=\frac{\left(\lambda^{\sigma}\tau^{\sigma-1}\overline{W}^{1-\sigma}+(1-\lambda)^{\sigma}\right)^{\frac{1}{1-\sigma}}}{\overline{W}+1}$

(36) $\omega_1=w_1G_1^{-\mu}=\frac{\overline{W}\left(\lambda^{\sigma}\overline{W}^{1-\sigma}+(1-\lambda)^{\sigma}\tau^{\sigma-1}\right)^{-\frac{\mu}{1-\sigma}}}{\lambda\left(\overline{W}+1\right)^{-\mu+1}}$

(37) $\omega_2=w_2G_2^{-\mu}=\frac{\left(\lambda^{\sigma}\tau^{\sigma-1}\overline{W}^{1-\sigma}+(1-\lambda)^{\sigma}\right)^{-\frac{\mu}{1-\sigma}}}{(1-\lambda)\left(\overline{W}+1\right)^{-\mu+1}}$

(38) $\frac{\omega_1}{\omega_2}=\frac{1-\lambda}{\lambda}\tau^{-\mu}\overline{W}\left(1+\frac{(1-\lambda)^{\sigma}(\tau^{2\sigma-2}-1)}{\lambda^{\sigma}\tau^{\sigma-1}\overline{W}^{1-\sigma}+(1-\lambda)^{\sigma}}\right)^{-\frac{\mu}{1-\sigma}}=$

$\alpha\tau^{-\mu}\overline{W}\left(1+\frac{\tau^{2\sigma-2}-1}{\alpha^{-\sigma}\tau^{\sigma-1}\overline{W}^{1-\sigma}+1}\right)^{-\frac{\mu}{1-\sigma}}$

One particular case arises for $\lambda=\frac{1}{2}$ from where $\alpha=1$ therefore $\overline{W}=1$. We have now:

(39) $w_2=1$

(40) $w_1=1$

(41) $Y_1=\frac{1}{2}$

(42) $Y_2=\frac{1}{2}$

(43) $G_1=\left(\frac{1+\tau^{\sigma-1}}{2}\right)^{\frac{1}{1-\sigma}}$

(44) $G_2=\left(\frac{1+\tau^{\sigma-1}}{2}\right)^{\frac{1}{1-\sigma}}$

(45) $\omega_1=w_1G_1^{-\mu}=\left(\frac{1+\tau^{\sigma-1}}{2}\right)^{-\frac{\mu}{1-\sigma}}$

(46) $\omega_2=w_2G_2^{-\mu}=\left(\frac{1+\tau^{\sigma-1}}{2}\right)^{-\frac{\mu}{1-\sigma}}$

(47) $\frac{\omega_1}{\omega_2}=1.$

3. Conclusions

With the method presented in the previous section, we have determined all the cases for $\mu\in[1/10,9/10]$ with step=1/10, $\sigma\in\{2,3,4,5\}$ and $\tau\in[10/100,99/100]$ with step=1/100.

We can easily see that, related to the variation of λ:

- $\frac{\omega_1}{\omega_2}$ is an increasing function if:

μ	σ	τ	μ	σ	τ	μ	σ	τ
0.1	**2**	**[0.55,1)**	**0.4**	**2**	**[0.1,1)**	**0.7**	**2**	**[0.1,1)**
0.1	**3**	**[0.78,1)**	**0.4**	**3**	**[0.33,1)**	**0.7**	**3**	**[0.1,1)**
0.1	**4**	**[0.86,1)**	**0.4**	**4**	**[0.51,1)**	**0.7**	**4**	**[0.19,1)**
0.1	**5**	**[0.9,1)**	**0.4**	**5**	**[0.62,1)**	**0.7**	**5**	**[0.33,1)**
0.2	**2**	**[0.29,1)**	**0.5**	**2**	**[0.1,1)**	**0.8**	**2**	**[0.1,1)**
0.2	**3**	**[0.6,1)**	**0.5**	**3**	**[0.22,1)**	**0.8**	**3**	**[0.1,1)**
0.2	**4**	**[0.73,1)**	**0.5**	**4**	**[0.41,1)**	**0.8**	**4**	**[0.1,1)**
0.2	**5**	**[0.8,1)**	**0.5**	**5**	**[0.53,1)**	**0.8**	**5**	**[0.1,1)**
0.3	**2**	**[0.14,1)**	**0.6**	**2**	**[0,1,1)**	**0.9**	**2**	**[0.1,1)**
0.3	**3**	**[0.46,1)**	**0.6**	**3**	**[0.12,1)**	**0.9**	**3**	**[0.1,1)**
0.3	**4**	**[0.62,1)**	**0.6**	**4**	**[0.31,1)**	**0.9**	**4**	**[0.1,1)**
0.3	**5**	**[0.71,1)**	**0.6**	**5**	**[0.44,1)**	**0.9**	**5**	**[0.1,1)**

Analyzing these, we can easily see that for a large share of expenditure which is received by the manufacturers - μ, the ratio of the real wages of workers living in the corresponding regions increases in reference with the share of manufacturing

labor force in the first region, even if it is a good or poor distribution of manufactured goods or a smaller elasticity of demand.

If μ has a little value, that is the character of consumption in the first region is preponderant agricultural, a bigger elasticity of demand and a good policy of transportation will contribute to an increasing of the ratio of the real wages.

If we compute the total variation of the function we can remark that it essential depends from μ, that is how much the manufacturing industry has a dominant role in the region, an increase of the manufacturing labor force in the first region will contribute to a bigger increasing of $\frac{\omega_1}{\omega_2}$.

- $\frac{\omega_1}{\omega_2}$ is a decreasing function if:

μ	σ	τ
0.1	**2**	**(0,0.53]**
0.1	**3**	**(0,0.77]**
0.1	**4**	**(0,0.85]**
0.1	**5**	**(0,0.89]**
0.2	**2**	**(0,0.2]**
0.2	**3**	**(0,0.56]**
0.2	**4**	**(0,0.7]**
0.2	**5**	**(0,0.77]**
0.3	**3**	**(0,0.27]**
0.3	**4**	**(0,0.49]**
0.3	**5**	**(0,0.62]**
0.4	**4**	**(0,0.14]**
0.4	**5**	**(0,0.22]**

For a region preponderant agricultural related to the consumption and a poor distribution of goods or in the case of a big elasticity of demand, the ratio always will decrease.

Again, the total variation of the function shows us that a little decreasing of $\frac{\omega_1}{\omega_2}$ it is possible only if we have a good distribution of goods to the other region.

- $\frac{\omega_1}{\omega_2}$ has an alternate character (first increases, after decreases and finally increase) if:

μ	σ	τ	μ	σ	τ
0.1	**2**	**[0.54,0.54]**	**0.4**	**4**	**[0.15,0.5]**
0.2	**2**	**[0.21,0.28]**	**0.4**	**5**	**[0.23,0.61]**
0.2	**3**	**[0.57,0.59]**	**0.5**	**3**	**[0.1,0.21]**
0.2	**4**	**[0.71,0.72]**	**0.5**	**4**	**[0.1,0.4]**
0.2	**5**	**[0.78,0.79]**	**0.5**	**5**	**[0.1,0.52]**
0.3	**2**	**[0.1,0.13]**	**0.6**	**3**	**[0.1,0.11]**
0.3	**3**	**[0.28,0.45]**	**0.6**	**4**	**[0.1,0.3]**
0.3	**4**	**[0.5,0.61]**	**0.6**	**5**	**[0.1,0.43]**
0.3	**5**	**[0.63,0.7]**	**0.7**	**4**	**[0.1,0.18]**
0.4	**3**	**[0.1,0.32]**	**0.7**	**5**	**[0.1,0.32]**

If the variation is pendulous we can see that the total variation is not so big. It has large values for big values of σ that is for an important elasticity of demand.

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Interregional Competition as Innovated World Order: Is It Enhancing Exchanges or Destabilising the World?

Pierre M. Chabal [1]

Abstract: The paper deals with the idea of the world continuous transformation to the present regionalism. This is why the analysis is focused on the regional emergence as a multi-faceted concept. Another objective of the paper is the delimitation between the global political terms and the regional policy sectors. The first conclusion of the paper is that the regions do not fight each other with military weapons, but with economic, monetary and trading instruments used within an encompassing institutional and legal framework. This transposition may also apply to political and cultural issues. Economists use competition from an ideal-typical angle and, again, a belief in the market forces, the hidden hand, and the ensuing equilibrium between offer and demand. However, in political science, settlement or equilibrium does not really apply. For a political scientist, competition refers to power games that cannot result in lasting, uncontested domination *by one* but consist in shifting dynamisms of power/domination *among all.*

Keywords: regionalism; sector-to-sector confrontation; culturalism; 'proliferation' of regions.

JEL Classification: R11; O18; P25

From 1989 to 1996, the world was transformed from one where nations, nationalisms and international world wars had dominated international relations for a century to a situation of coexistence among world regions, of regionalisms and of interregional relations. This transformation from nations to regions took place after a particularly tensed period of cold war, from 1947 to 1991, defined by its meta-regional scale and bilateral nature, when tensions were paroxysmal.

In relation to the Pacific region, the pace of change since the late 1980s has been even more rapid. As early as 1989 and 1990, during the collapse of communism in Europe and the withering of the competition between the USA and the USSR, Pacific nations took early steps to move past the cold war by founding cooperative dynamics such as the Asia-Pacific Economic Cooperation or APEC and other regions soon followed suit.[2]

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[2] The first APEC meeting was held in Canberra in 1989, the second in Seoul in 1990. APEC is an initiative largely associated with Australia and Japan as original 'launchers'.

Does such regionalisation suggest that coexistence among world regions is to be peaceful? By contrast with the cold war, which was defined by the confrontation in total or - already - global terms of one *Weltanschauung* setting forth against another, the answer is affirmative.[1] However, in terms of regional drives and inter-regional affirmations, reality is more complex and, above all, plural.

In the Eurasian and Pacific regions since the 1990s, no less than four major dynamics have become structuring realities. In chronological order of affirmation, these consist of a *co-operation* process within APEC beginning in 1989, a '*unioning*' process within the European Union or EU from 1992, a *co-operation* process within the Shanghai dynamic from 1996, when the Shanghai Group is created, and an *association process* within the 'ASEAN + 3' in 1997, as well as through the project of an East Asian Community.[2]

This proliferation of inter-State groupings, one step ahead of the proliferation of States after the decolonisation processes and the demise of the Soviet Union (Boniface 2000), has set the stage for an inter-regional competition. This competition is less likely to be peaceful than fiercely competitive.[3] The nature of this competition remains unclear, whether commercial and financial or informational and communicational, but it will probably be intense, with a hegemonic, Mahanian view on the part of at least some Region-States.[4]

[1] *Weltanschauung*: this philosophical term, of German origin, means a representation of the world. It refers here to the individual/liberal view or the collective/communist view, epitomised by the rigidity of the cold war divide.

[2] 'ASEAN + 3' is a forum aiming to coordinate cooperation between the Association of Southeast Asian Nations or ASEAN and three East Asian countries: China, Japan, and South Korea. The first leaders' meeting was held in 1997, the group's impact was strengthened by the Asian financial crisis of 1997-1998 and the grouping was institutionalised by 1999. Recently, the suggestion is that the significance of the grouping is being eclipsed by the East Asia Summit, but that is not clear given the comparatively new existence of an 'East Asian' dynamic since 2005. The creation of 'ASEAN +' is a reaction to APEC, ASEM and Shanghai, a reactive trait also suggested for NAFTA in 1993 seeing light almost concomitantly (1993/94) with the EMU in Europe (1992/93), etc. In 2010, 'ASEAN + 3' became 'ASEAN + 6', with Australia, New Zealand and India.

[3] The suggestion that regions become competitive refers to reality: for example the 2007-2008 *international* crisis is creating competing *regional* solutions, different in the West and in Asia - Orwell's *1984* opening chapter depicts world regions - Oceania, Eurasia, Oceania - in a state of perpetual, 'total' war.

[4] Alfred Mahan, as conceptualiser of maritime power, provided a historical analysis of naval strategy and a vision that the mastery of naval power is directly related to the control of the world dynamics. In *The Influence of Sea Power upon History 1660-1783*, published in 1890, he suggests that maritime space is not the complement of terrestrial space but the very medium of the projection of power and that the USA ought to turn the shores of other countries into the borders of the USA, patrolling and 'occupying' seas and oceans. This has influenced USA naval strategy until today: the positioning the USA fleets permanently in various locations of the world: the 6th Fleet in the East Mediterranean; the 7th Fleet in the Northwest Pacific.

This paper analyses three instances of interregional competition, in Asia-Pacific, in Asia and in Eurasia, with as its main objective to understand the gradually emerging nature of this tension. It is set within the realist school of international relations analysis albeit its main aim is less to further theoretical developments than to discuss how such a hypothesis of an enhanced world-tension is becoming a determinant of post-cold war international relations. It suggests that alternative groupings are being sought in order to react to the formation of APEC, such as the Asia-Europe Meeting or ASEM in 1996, formed at the same time as the Shanghai dynamic of 1996 and of the 'ASEAN + 3' in 1997.[1] These 'coincidences' suggest that the emergence of inter-regional cooperative organisations must be analysed strategically, not just descriptively. Regional emergences must be viewed as expanded into a multi-faceted concept (Part I) and a concept to be used for applied analysis (Part II).

1. Regional Emergence as a Multi-Faceted Concept

The end of the cold war, from Detente in the 1970s to the collapse of the near totality of Eurasian communist regimes in the late 1980s and early 1990s, marked an easing of tensions, the opening-up of borders and the dismantling of repressive and authoritarian communist regimes.[2] Today, free from the bi-polar worldview and competition between the USA and the USSR during the cold war, regions are free to act on their own. Regions and States today seem free to organise and construct themselves, or to confront each other, without the biased terms of the dominantly ideological situations of the cold war. This is in fact but a partial representation of regional dynamics: militarily confrontation may have receded, but ideology and cultural contestation and confrontation still linger on.

1.1. The Obsoleteness of Militarism: Absent from most Regionalisms

The most striking difference between the cold war from 1947 to 1989 and the post cold war from 1991 onwards is the demise of military tension as a paramount form of international affirmation.[3] This demise logically follows that of the USSR and of

[1] See supra note 2 page 108

[2] The 'end' of the cold war does not convey a single, commonly agreeable meaning. Rather it points to a shift of dynamics from a 'global bilateralism' to a 'multifaceted, multisectoral pluricentrism'. This is the period following the 1972 inter-German *rapprochement*, which marks, for the first time since the beginning of the cold war, an 'easing-out' of East-West tensions, soon to be followed by the Helsinki process resulting in the 1975 Conference for Security and Cooperation in Europe, later (1995) to become the OSCE.

[3] Not forgetting the military intervention in the post cold war, notably in Kuwait in 1991 and Iraq in 2003, but it is during the cold war that military confrontation was part and parcel of the international game, first in Korea, then in Vietnam, etc. Today, it still occurs but marginally.

the Warsaw Pact (Chabal 2004 b). In the post cold war, no military organisation has been created anew, at least not of an officially military nature. For instance, NATO remains intact but was substantially changed through the 1999 renewed Treaty, evolving from a strictly military *command* to a forum used also for discussing security *doctrine*; and the Shanghai Cooperation Organisation or SCO created in 2001, clearly a security organisation, is not advocating a military nature.[1]

Militarism is, on the face of it, absent from most regional constructions and when it is present, as was just recalled, it is in some organisations that are *not* part of a regional construction, such as NATO and transatlantic security. Glancing through the history of Community Europe, of ASEAN, of West-Africanism, of Latin-Americanism, one cannot see that regional projects revolve around militarism.[2] Two dynamics stand out here for comparison: Europeanism and Atlanticism.

First, European affairs have experienced military attempts but these have tended to fail. In 1953-1954, the project of a European Defence Community or EDC passed all stages of preparation and adoption but faltered in the French parliament in 1954, despite the fact that France was at the origin of the project in 1953. This was most probably due to the fact that, after the Second World War, Europeans were not yet ready to trust each other militarily. These newly-innovated partners had been still at war less than ten years earlier. From the 1950s to the 1980s, Europeans benefitted indirectly from the West European Union or WEU, a European alternative of sorts to the Atlantic NATO. However, the WEU was never able to pick up momentum among Europeans, despite the efforts of its Secretary General A. Cahen, in the 1980s, even though the Community had reached a critical mass of ten Member-States with the admission of Greece in 1981. Since 1992, Maastricht Europe has incorporated the WEU ambition into the European Treaty and even conceived rapid military deployment capabilities, but has been hitherto unable to use these capabilities outside the umbrella of NATO (Chabal 2004 c).[3]

European militarism is incompatible with Atlanticism. Europe is not prepared to leave the NATO and its USA-dominated protection.[4] In other words, European

[1] Even if its member-States regularly conduct joint military exercises and if many Western analysts sometimes wonder about its nature, the Shanghai Cooperation Organisation is not a military organisation.

[2] The sending of ECOWAS troops to the Ivory Coast in 2002 and 2003 is an interesting case that would need to be explored but lies outside the scope of this article. To take it up briefly, this occurrence is exceptional and has remained exceptional, not leading to a 'militarisation' of ECOWAS.

[3] As the European Community was 'relaunched' or 'deepened' by the provisions of the Maastricht Treaty, signed in December 1991, ratified in 1992 and entered into force on January 1st, 1993, which considerably contributed to the integrative nature of the European construction (common policies, majority decision-making for more numerous sectors, etc.).

[4] The likeliness of such a 'distanciation' has been further reduced by France's recent (April 2009) falling in line back into the NATO integrated command.

militarism is a failure of a logical kind. The European construction is a model-building initiative, an institutional initiative taken in the 1950s for geopolitical reasons. It is an elaborate form of influence-seeking, not a direct domination-seeking or hard-power seeking dynamic or 'face one' of power.[1] The conception within the European Union of the drive towards world power consists of a trading capacity. The aim is to be the first trading bloc in the world, equipped with an institutional capacity to influence the ways in which other regions are equipping themselves with institutions.

Second, Atlantic affairs have experienced great success. NATO, launched in 1949 as a reaction to the Soviet threat after 1945 and consolidated as a counter-force to the Warsaw Pact created in 1955, enabled western European members, in line otherwise for the domino effect, to prepare from the 1950s onwards to strike back if need be. And it empowered North American members, in search for a justification to remain projected on the European theatre after the Second World War, to do just that. Through NATO, both the USA and Canada have been able to remain involved in Europe through times of peace after WW II. NATO never demonstrated regional ambitions, nor has it been capable of being more than an integrated or strategic command among allies. The difference between allies and neighbours comes to mind: allies can combine across great geographical spaces; while neighbours unite across common borders. Allies made sense in the cold war dynamics; neighbours make sense in the post cold war era. The Atlantic is not a region; it is a geopolitical space, the history of which is one of strategic confrontations and tensions that travelled from both sides of the ocean.[2]

In the post cold war, and especially since 1999 and the new prolonged Treaty, NATO has essentially served two purposes. First, it replaced the UN for interventions in Bosnia in 1995 and Kosovo in 1999. It did so in 1995 to prevent a front of instability from building up at its gates, but not in compliance with the original Treaty's article 5. Then in 1999, it did so again to prevent such a possibility but this time in compliance with article 5 of the renewed Treaty. Next, NATO has been reconsidered from being a strictly military organisation to also being a peace-keeping organisation offering a number of educational and humanitarian programmes.[3] NATO's success, as a military organisation, makes it the longest-lasting, oldest-dating multilateral alliance in contemporary history.

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[1] On the various 'faces' of power (Steven Lukes 1974), see section II, paragraph 1 of this article.

[2] For instance H. Coutau-Bégarie, Géostratégie du Pacifique, 2001, La Puissance maritime, 1998, La Lutte pour l'empire de la mer, 1999, Traité de stratégie, 2003. The United Kingdom allegedly maintained until 1943 maintained secret plans to invade the USA.

[3] The author was NATO research fellow on East Asia in 1994-1996 with a Final Report on *The Emergence of a Collective Security Framework in Northeast Asia* (http,//www.nato.int/acad/fellow/94-96/f94-96.htm) and associated research fellow on the East Mediterranean in 1998-2000 (http,//www.nato.int/acad/fellow/98-00/deraulin.pdf).

To sum up on European and Atlantic aspects of militarism, it seems that Europe is not military and that Atlanticism is not regional. To be sure, the military dimension is all the more absent in groupings that are regional and all the more present in groupings that are not regional. Regionalism has more to do with 'integrative cooperation' of neighbours while militarism has more to do with alliances.[1]

1.2. The Sectoral Emphasising: Towards a Sector-to-Sector Confrontation

This receding of militarism as a main form of direct tension and competition or confrontation leaves other forms of tension and confrontation open and active. These other and novel forms are becoming prominent and conveyors of renewed balances of power through the sectoralisation of regions' *modus operandi*. Sectoralism as strategy and sectoralism as confrontation, two trends of such a sectoralisation, need here to be explored.

First, taking sectoralism into strategic consideration, regions tend to organise themselves according to policy sectors rather than in 'global political terms'. That is to say, the post cold war is characterised not only by a shift from a global scale to a regional one but also by a shift from a global management of intergovernmental affairs to a sectoral one. To be sure, the UN is yielding more and more intervention tasks to sectoral branches through such bodies as the World Trade Organisation, the International Monetary Fund, the World Bank, the International Labour Office … and intervenes less and less directly. Even military peacekeeping operations are often devolved to NATO, at least in Western Eurasia and in Africa. This new balance in UN world governance of States is offering more and more leeway to Region-States as to the governance of emerging regional *nexi* of power through integrative neighbourhoods.

The difference between 'global political terms' and 'regional policy sectors' ought to be specified. First, a global regional construction refers to the fact that regions, in a rather Orwellian manner, would construct in order to pursue a classic or zerosumish power game at the risk of clashing with other regions.[2] Regionalism here equates with nationalism, regionalism as the clausewitzian 'continuation' of nationalism by other means.[3] The trend here is to ingrate in order to 'vitalise' in a simplistic Ratzelian perspective.[4] Second, a sectoralised regional construction

[1] The concept of 'integrative cooperation' comes from the author's NATO fellowship Report (1996) - see preceeding note.
[2] As was recalled above note 3 page 108, in his novel *1984*, George Orwell depicts the world as made up of three regions - Oceania, Eurasia, Eastasia - forever engaged in a perpetual war against each other.
[3] Clausewitz, Carl von, *On* War, abridged version, Oxford World's Classics, Oxford University Press, 2007
[4] See F. Ratsel, *Politische Geographie*, 1897 and the concept of 'Lebensraum' or 'vital-space'.

refers to the fact that regions build themselves according to a similar division of policy work. This similarising makes possible an exchange of cooperation between regions, at one remote from a bloc-construction of an often antagonistic nature. It follows that confrontation can and does exist, only shifting from a holistic scale to a sector-by-sector competition. Thus, Europe, APEC, ASEAN and MERCOSUR organise themselves as regions on a regional but not on a sub-regional basis and mainly on a sectoral and sub-sectoral programme basis. Geography is but a justification, not a foundation. Instead, the founding principle is neighbourhood as a framework for sectoral programmes. Neighbours unite their forces in a political attempt to manage for the future while focusing on their common or 'communal' present.[1]

Second, sectoralism as confrontation points towards a sector-to-sector dynamic of competition akin to a head-to-head dynamic of tensions. This political, community-type management of the future can be a peace-longing way to tackle inter-regional competition but this might be an *a*realist view. Inter-regional competition is always present. Neighbours unite in order to dominate other regions, if possible gradually, sector by sector. Four random illustrations are suggested below to demonstrate this intense and only seemingly subdued form of confrontation.

- Trade is a major sector of tension, wholly conducive to intense soft power games, even if it can be differentiated into various trade commodities. International competition is now a macroeconomic one with figures of GDP, of market shares and of growth rates replacing those of the arms race and nuclear arsenals of the cold war. To be or not to be member of the WTO became for China in the late 1990s a major strategic question. The Sino-European textile war in the early 2000s remains a case in point of international tensions of a new kind.[2]

- Transportation, the logistical capacity to ship goods and merchandises, is a classic, collateral aspect of economic trading competition. Global in nature, this competition tends to open or expose global public actors, such as States, to global private actors, such as shipping companies. The new regions are less material and territorial than service-linked and communicational but they still remain fiercely competitive.[3] The two aspects come together in the issue of security of maritime routes or shipping lanes for which wars may break out again, which also is triggered by neo-piracy, a concern for both States and transporters.

[1] For instance, one of the founding principles of the Shanghai Cooperation Organisation is that of 'good neighbourhood', an open concept able to mean anything from peace to integration.

[2] China's economic success after its opening-up from 1978 onwards, its high growth rates throughout the 80s and the 90s, its role in the 1997/1998 Asian economic crisis lead to its entry into the WTO in 2001.

[3] Transport issues are complex. It is necessary for a region to experience a certain internal capacity before it can compete in world logistical terms. See (Chabal 2004 a)

- Education is an interesting forum for soft-power games. During the cold war, students travelled to their corresponding political worlds. Those from communist countries studied in Moscow, East Germany or Beijing while those from non-communist States studied in the USA, England or Australia. In the post cold war, the European strategic Bologna process consisting of 'aligning' countries on a model that is not only common in formal traits -the 'LMD' or '3-5-8'- but prone to a Paretian circulation of elites,[1] education thus becomes a sector of dedicated attempts at model-seeking and model-imposition (Chabal 2006 a).

- Institutions in general and institutional-model imposition in particular are contemporary forums of inter-regional strategic confrontation. If not head-to-head in a coming to war sort of way, they are already a major forum of aggressive positioning. The European experience of formalising cooperation agreements competes with American and Asian ways of dominating. The Europe-linked proliferation of interregional dialogues, processes or summits, such as the Asia-Europe Meeting or ASEM, or European Union-Latin America summits, is a case in point. The new form of competition is how to devise the most efficient, peaceful-looking institutions in order to export them to other regions. It is possible to transpose substantially, not just lexically, the concepts of military acts of tension to the sectors that make up international exchanges of an economic, logistical, educational or institutional nature.

In other words, regions do not fight each other with military weapons but with economic, monetary and trading instruments used within an encompassing institutional and legal framework. This transposition may also apply to political and cultural issues.

1.3. Much Ado about Culturalism: Values, Identities, Projects

Beyond military and economic aspects of mounting regionalisms as continuations of nationalisms, cultural aspects must be questioned. The reason for this questioning is simple. Political leaders call more and more upon identities and values to justify and legitimise their regional efforts. From the Southeast Asian identity that can say 'No!' and the European identity that can say 'Yes!', to the Latin American one that can say 'Not in my backyard!' and the West African one that questions European neo-influences, all regions are relevant to illustrate a concern for identity as a legitimising dynamic.

A difference exists between two kinds of regional *rapport* to identity and values. Either the regional process begins with institution-building then works on its

[1] The Italian sociologist Vilfredo Pareto has demonstrated that one form of social unequality is that a comparatively small number of influential people, or elites, tend to occupy key top positions in a 'rotating' manner by 'circulating' from one to the other. See (Pareto, 1935)

identity as is evidenced by the European example; or the regional process begins with values and thus with identity then works on institutions as seems clear in the Asian dynamic. A further advantage for Asia is that counter-identities - neither European; nor Western - come in handier to rally round neighbours as partners. The values debate between cultures is not mostly about values; one must indeed decipher reality and point out to the proper dimension, rather than to the over-obvious one. The discourse about values, prominent as it is, comes analytically second only to the dynamic of legitimising political efforts to unite regions. The values debate is about legitimacy. Legitimacy is about acceptance, acceptance of leadership in the Weberian approach, thus acceptance of regional leadership.[1] Legitimising is thus about making political values acceptable. The legitimacy of a region as a subsuming of national references has first and foremost to do with the subjectivity of the people living in that region. Therefore, legitimacy is the heart of regionalism. Without legitimacy and capacity to mobilise, there can be no region. Legitimacy is the substance of region-building because it is the very substance of politics and regions are in essence political constructions. This conceptual approach can be illustrated in the case of Europe, of Asia, and of the Asia-Pacific.

Europe since the end of the Second World War has been building itself with peace as a legitimating leitmotiv. This is perhaps why Europe, as a political construction, is floundering or evolving with ups and downs according to the progress and recess of identity-building. The original trauma was so intense, from the thirty-year war in the seventeenth century to the devastation of the two world-wars in the twentieth century, that the aspiration for peace engulfed Europeans in a desperate attempt to stop drowning in mutually-assured conventional destruction. As a result, except for the recent single currency, peace-ensuring or supra-sovereign institutions were built without much efficacy as to identity-building. Hence, the present debate of legitimacy *versus* bureaucracy of Europe or the democratic gap unfolding in today's Europe, a debate which even divides both political parties in their midst and candidates to the European Parliament.

Asia is building itself with values as a legitimating leitmotiv. Here the Asian values debate has preceded institutional construction of institutions but construction seems to be lagging behind.[2] 'ASEAN +' exists mainly through ASEM; APEC is not regional; the Shanghai Cooperation Organisation contradicts the East Asia Community. Asians are coming to terms with their cultural differences. Community-building is presented as cultural community-building rather than as politically integrative community-building (Chabal 2006 b). Integrative dynamics

[1] Max Weber's analysis of leadership as authority - traditional, legal-rational, charismatic - dissects the nature of the consent of the governed to vest power into the governing and then to accept their governance.

[2] See (Kim Jung-Ho, *The 'Asian Values' debate and new East-Asian democratic values*, in Chabal 2010 a. pages 96-115)

through a cultural medium is indeed a dynamic distinct from Europe -most indicative in Asian music, entertainment and movies-[1] versus the European gray little men in Brussels - as EU Commission officials are sometimes mockingly referred to. Asian values for the future or commonality, not isolation, juxtapose against European values reacting to the past - peace, not war. In other words, Asia is inventing a way to react to any risk of isolation and the European construction has made war in Europe near impossible.

Asia-Pacific is building itself with free trade as a legitimating leitmotiv and is therefore in a different *rapport* to identity when compared to Europe and Asia. The Asia-Pacific emphasis is on pragmatism and opportunism rather than on the construction of a region in the European sense. Opportunism - as economic pragmatism and political reactivity - is evidenced in the chronology. The 1989 Canberra and the 1990 Seoul summits were the launching steps of APEC, immediately around the fall of the Berlin wall in October 1989 and the Malta summit of December 1989 between R. Reagan and M. Gorbatchev, sometime before the demise of the USSR in December 1991.[2] Pragmatism, as suggested by the capacity to invent a new geo-economic core based upon the ocean as the element of commonality, the capacity to regionalise as a cooperation and to suggest as early as the 1994 APEC Bogor Summit to create a Free Trade Area among APEC participants by 2020, while a FTA is usually a post-community and pre-single market step.

To sum up, while APEC is essentially a business entity, Asia is an entity of culture and Europe an entity of appeased politics. Europe's post WW II essence is that of a peace that works. Yet, despite differences underlined between the three elements - peace in Europe, values in Asia, free trade in Asia-Pacific -, the comparison holds. The invention of a regional culture is part and parcel of the regionalism at play and it is a culture that makes sense in the particular region under consideration. Furthermore, a culture makes an explicit reference to the contrary forces to be fought off. Some examples of such counter-forces include war and destruction in Europe, colonialism and submission in Asia, continental division and neo-colonialism in Asia-Pacific.

The concept of regional construction yields that of regional competition or that, more precisely, of a displacement of the factors of competition from hard-core militarist factors to organisational and cultural ones. Regions, once self-identified intra-regionally (Part I), that is to say once they have built their centripet institutional existence and elaborated on their values, usually engage inter-

[1] For instance, a recent phenomenon of a 'Korean wave' or *Hallyu*, consisting of Korean artistic products becoming so popular in the whole of Asia as to create a wave of 'Korean-ness', now links with an added commercial value for Korean trade and an added diplomatic clout for Korea.

[2] The promptness of the Baltic States to declare independence from the USRR even before that date: 11th March 1990 for Lithuania, 20th and 21st August for Estonia and Latvia.

regionally into reciprocal groupings and, as a consequence, into centrifugal rivalry (Part II). That is to say they seek to enlarge their perspectives and partnerships with other regions but realise that they are also becoming competitors of these other regions. This process begins with the main continuation of a colonialist type of imposition, thus by a tendency to yield to a universalist zero-sum game.

2. Using Regional Emergences for Applied Analysis

Moving to concrete analyses, regions have truly become international actors such as any other international actor.[1] The emphasis here will be put on facts and events, yet at the same time placed on facts and events approached within existing frameworks. Schools of international relations apply to regional studies.[2] For the critical school, regions are transnational commercial hegemons in the making, embodying one form of the international division of labour and of the division of means of international production. For the liberal school, regions are construing an international system, a system able to operate on a meta-national level and a system acting on an infra-global level but not producing world integration. For the realist school, regions are intergovernmental competitors and, within this school, this article examines three aspects of the competition among actors talking hard to each other, in fierce diplomatic intergovernmental negotiation, around a self-sustaining institutional race and, potentially, a coming to war.

2.1. The Hardened Political Discourses on the Universality of Values

One way in which regions are evolving is that their construction processes dwell upon militant identities and, therefore, on centrifugal values radiating from a core to a periphery. Among the numerous ways in which values can be addressed, one consists of addressing them as a hegemonic dynamic, through the notion of universalism. As suggested above, what is at stake here is a universalist culture or a culture of universalism akin to a cultural ideology. The notion of universal values proposed notably by politicians promoting regional integration implies the subsuming of existing, more national and local values, under the integrating authority of these regional values.

[1] S. Santander (2007) analyses the EU as a coherent actor of interregional relations but also as a model-exporter seeking to influence other regions by negotiating their institutional alignment.

[2] See, among many, (Beits, 1979, p. 253; Cox, 1983, pp. 162-175; Gilson, September 2005, pp. 307-326; Gilson, 2002, p. 66; Hänggi, *Regionalism through interrégionalisme*, in Liu & Régnier (ed.), 2003, p. 257; Hänggi, May 2000, p. 14; Hettne September 9-11, 2004, p. 26; Hettne & Söderbaum, 1999, pp. 6-21; Hettne, 2003, 272 p.; Mattli, 1999, 207 p.; Milliken, 1999, pp. 225-254; Ripsman, 2005, pp. 669-693; Rüland, 2002; Rüland, 5-6 July 2002; Reiterer, Summer 2002, pp. 133-152; Slocum, and Van Langenhove, 2004, pp. 227 – 252)

To be sure, one step ahead of identity-building and of intra-regional culture construction, lies the natural, human tendency to seek hegemony, a natural tendency from the realist perspective. In other words, influence or power only truly makes sense if it is absolute (Haushofer 1941). This search or hegemonic drive takes on nowadays a universalist form as a culture of universal values. These universal values serve as a basis for the question of which world order, whether democratic, liberal or enlightened, should take over which other world order, whether economic, State-driven or conservative, now that the East - the irreplaceable other bloc during the cold war- has withered. Regions outnumber the two or three camps of the cold war -the West, the East and the Non-Aligned States-[1] and they appear to be imposing, centrifugally, their values onto other regions.

Indeed, it is interesting how some almost unnoticed drift has occurred from values in general such as peace, identity, and free trade, as perfectly acceptable, national or regional and legitimate justifications for the existence of the self, to universal values in particular, such as multilateral views as to what would be universal values, national or regional, and goals. That is *de facto* a universalisation of just such values and goals. In other words, values are no longer mere identity bases, they are also militant ingredients for a competition against other values in other regions. Universalisation implies an active, potentially expansionist dynamic of imposition of values and goals onto others, even over the resistance of others. What is at work is a classic power-imposition exercise, clearly a cultural expansion, not a territorial expansion, such as that of which political science, through Dahl in the 1960s to Lukes in the 1970s and 1980s have explored facets, aspects or faces (Lukes 1974, 2005). Such cultural or territorially symbolic imposition operates in three phases.

First, a one-dimensional view of applied inter-regional power suggests that one region imposes its views and values, among other elements, *against or over the resistance of others*. This is *par excellence* the cold-war bloc-to-bloc situation, if one accepts that the West or the USA won the cold war in 1991 - which is debatable as it can be argued that the demise of the USSR was more of an implosion than a defeat. More generally, when a region, the North - the European Union or North America - behaves as if one part of the world not only knew better but also had to be followed, imitated, respected and feared, such behaviour is one-dimensional imposition.[2] Examples here include the European Union seeking to impose its commercial views over the differing interests of an astounded group of African-Caribbean-Pacific countries, such as was the case during the 1994 renegotiation of the ACP or Lomé agreements according to terms favourable to the

[1] The non-aligned movement in the 1950s had already added a third 'party' to the dichotomy between the USA-driven West and the USSR-driven East.

[2] Charismatic power or charismatic legitimacy draws upon the unconditional adherence of 'followers' to the leader's preferences.

Europeans; or a member of the North-American Free Trade Agreement seeking to impose its views over the emerging power of MERCOSUR Member-States after 1993, when it seems that the over-early realisation of a free-trade bloc with the USA, Canada and Mexico jeopardised to some extent the Mexican economy, not yet ready to take in the full blow of customs-less competition with the two northern partners.

Second, a two-dimensional view of applied inter-regional power takes on the form of a seemingly negotiated situation by *negotiating for one region's interest in the name of protecting other regions*. This is the situation where a region, still seeking to dominate, acts less directly or unequally but engages the other region in a levelling-off relation, possibly dwelling on the wish to symbolically compensate for past violent imbalances. The Europe-Asia dialogue or ASEM process relating since 1996 to the enlarging West Europe and Southeast Asia illustrates this rather well even if the concept of protection applies imperfectly here as neither Europe nor Southeast Asia seeks to actually protect or seek protection by the partner region but rather both seek together to be stronger in the new global game. Still, they protect each other's regional roles and identities by giving it a renewed creative visibility. ASEM was actually, fifteen years ago, the very first institutional inter-regional dialogue to have seen light in the world.

Third, a three-dimensional view of applied inter-regional power consists of a region striving to *convince other regions or countries that its values are beneficial for those regions* or countries. In the contemporary, global post-cold-war world, this is really an attempt at model-imposition, in particular through an exportation of an institutional mode of region-building.[1] This situation is that of the replacement of overt *imposition* dynamics by covert *imitation* incentives. Convincing other regions that it is easier for them to interact, exchange, trade and exist provided that they accept, adapt, adopt and open up to the inspiring region's ways of doing things, making decisions, relaying the regional level onto their constituent national identities is, to be sure, a very powerful but softer way to gain influence over others.

Is there really a difference in nature between today's universalism and yesterday's colonialism[2] or is it rather a difference of degree? The mechanism of the realist, mutually assured imposition drive has not changed. Its degree or form has been adapted to a novel dynamic, which no longer brings in contact countries as sovereign States, but creates interactions among multilateral regions. This new game, so long as States remain the sovereign actors of international relations and

[1] Seminars are regularly organised for that purpose. See *Is There a European Model of Governance ? A Comparative Perspective*, IPSA Conference, March 18-20, 2010, Jean Monnet Building, European Commission.

[2] And before-yesterday's imperialism in the Antiquity ?

are not replaced by Region-States, is subtler, fostering intra-sovereign *regions* competing among themselves through *States*-related decisions.

2.2. The Conflicting Regional Launches: from Regions to 'Proliferation' of Regions

Another way in which regions are evolving is that their global dynamics consist of their emergence and/or acceleration almost everywhere in the world *at the same time*. This suggests a process which is more likely to lead to a race for resources, whether political, symbolic or influential resources, than to the gradual harmonisation of their international presences.

The analysis will concentrate on the Asia and Asia-Pacific regions, although by definition, the multiplication of regional dynamics as a global phenomenon applies world-wide.[1] In broad terms, the world has gone from roughly five regional dynamics, before the 1990s, to more than twenty, beginning in the 1990s. Such a proliferation of regions applies naturally to Asia and the Asia-Pacific, as a truly world-wide phenomenon. This region is, additionally, characterised in the 1990s not just by such a proliferation but also by a very *early* start in the process of regionalisation.

In Asia-Pacific, as *early* as 1989, such proliferation began with the creation of APEC (Canberra Summit 1989, Seoul Summit 1990) even before the official end of the cold war in December 1991.[2] This early 'initiative', a neutral term, or this 'offensive', a realist expression, is clearly an attempt to fill in the vacuum of bipolarity by uniting the Pacific as a geopolitical space hitherto considered less vital than others, and to equip the USA with a Pacific community complementing the Atlantic one. The multilateral dimension of APEC must be underlined. The bilateral treaties between the USA and Japan in 1953 and that between the USA and Korea in 1954 were of a different nature. Regionalisation and multilateralisation, occur as two sides of the one coin.

[1] This paper focuses on the Asia-Pacific. However the analysis claims to be valid for other regions as well. MERCOSUR and Maastricht in 1991 triggered NAFTA in 1993; the EU of 1992 triggered West Africa to add in 1994 a West African Economic and Monetary Union or WAEMU to the Economic Community of West African States or ECOWAS of 1975; and the end of the cold war and of apartheid triggered southern Africa in 1992 to include South Africa into the Southern Africa Development Community or SADC, while South Asia similarly activated the South Asian Association for Regional Cooperation or SAARC also in 1992. Projects such as the Common Market of the Black Sea in the early- and mid-1990s or of Councils such as the Gulf Cooperation Council, though created in 1981, also echo this point.

[2] December 1991 is the demise of the USSR. The collapse of the Berlin Wall is October 1989, the Malta Summit is December 1989 and the departure of the Baltic Republics from the USSR anticipated by more than a year on this rupture, at least for Lithuania, see supra note 2 page 116.

Still *early*, the American part of the Asia-Pacific space launched successively a South-American initiative, MERCOSUR in 1991, and a North-American one, NAFTA in 1993, clearly as a counter-offensive to Maastricht - initiatives seen as offensives are a postulate of the present paper. The cold war had prevented for forty years the post World War II regions from truly deciding for themselves of their own course of action because there were by necessity aligned on one superpower.[1] The European Community was encouraged to unite by the USA, through the Organisation for Cooperation and Development in Europe created in 1948. The Marshall Plan is originally offered by the USA also to Eastern Europe and the USSR. Its refusal in 1947 by the USSR for herself and for Eastern Europe can be taken as one possible definition of the beginning of the cold war. Logically in the post cold war, regions catch up very rapidly as they are freed or detached from an alignment on one great power and can choose their own way. Regionalisation is thus a form of des-alignment.

Between 1995 and 1996, the Asian part of the Asia-Pacific triggered three major initiatives *concomitantly* with other European dynamics. First, Southeast Asia launched anew as ASEAN enlarged from six to ten members in just four years, between 1995 and 1999, beginning with Vietnam.[2] This is thus an 'ASEAN-II', soon to innovate yet more with 'Asean+3' in 1997 (today '+6' - since 2010) and with the ASEAN Regional Forum or ARF in 1994, whose potential as a political initiative was captured after 2001by the world emphasis on the fight against terrorism. This potential will probably, however, pick up momentum again with a link to an East Asian Community: at the same time as ASEAN is enlarging in Southeast Asia, the three Northeast countries - China, Korea, Japan - join in the dynamic through a kind of association via the notion of the whole of East Asia or East Asia Community, whose first Summit was held in December 2005.

Second, China and Russia engaged Central Asia into the Shanghai dynamic in 1996. Again an offensive, consisting of engaging the newly independent Central Asian republics and not letting them ascribe to a western influence, whether the USA or the European Union. Uzbekistan was an interesting case: the country engaged the West in the early 1990s, then it engaged the region after 2005 and the post-Andijan sanctions imposed by the West to the region - in protest against a violent police repression of popular uprisings - and since 2001 Uzbekistan has played a greater role through joining the Shanghai Cooperation Organisation. This early offensive in 1996, as soon as the Tajik civil war from 1992 to 1996 is over, and even with Uzbekistan, is noteworthy for two reasons. It associates both China

[1] This ought to fine-tuned for China, aligned on the USSR from 1949 till 1956 and then engaging the United States into a *rapprochement* which bears fruit in the early 1970s. see note 1 page 118.

[2] Yet still a communist regime, whereas in 1967 the ASEAN was basically 'the Asia that can say No!' to communism. The ASEAN admits Vietnam in 1995, Laos and Myanmar in 1997 and Cambodia in 1999.

and Russia for the first time after the early days of communist honeymoon from 1949 to 1956; it rallies Central Asia to Russia *indirectly* via China, the real main initiator, thus giving China a prominent role.

Third, a reactive offensive launched the Southeast Asia-Europe meeting or ASEM in 1996. Politically, ASEM achieved several goals. It enabled ASEAN to affirm itself and not be isolated by the Shanghai process through a *tour de genie*: it engaged Asia as 'ASEAN+3'; it enabled the European Union to substantiate a foreign policy dimension now that the Maastricht Treaty encompassed a novel Common Foreign and Security Policy or CFSP-*PESC* exists (Chabal 2004 c). And it not only enabled China not to feel alienated by the Europeans but it enhanced China into a crossroad role: symbolically and cartographically, ASEM associates Southeast Eurasia and Western Eurasia, thereby 'containing' or 'trapping' the Shanghai Asia.[1]

In other words, no less than six major sub-regional initiatives or offensives were taken in just six years. Additionally, the picture was made complete by the pan-Asian dynamics of 'ASEAN+' vs. Shanghai, and the pan-East Asia one of an East Asia Summit as from 2005.

Is this a series of coincidences? On the contrary, this is a vivid sign of an intensive inter-regional competition for geopolitical power and inter-regional political leadership. One need only underline two points in order to further highlight this. First, one country only, China, is a member of all Asian dynamics: APEC, ASEAN+, SCO and ASEM. Second, the one country - the USA - which is a member of APEC and of NAFTA but neither of ASEAN+, nor of ASEM, nor of SCO, is a competitor for China in global terms.[2] The global USA-China tension, resembling as early as the beginning of the 1990s as a head-to-head confrontation potentially coming to war, is thus a dimension made evidently clear also through the inter-regional analysis.[3]

2.3. The New 'Head-to-Head' Hypothesis of the New Cold War

Yet another way in which regions are evolving is that the result of the previous two characteristics - a hardened discourse; a proliferation of regions - is a situation of competition. Competition has been historically resolved, ever since Thucydides and the Peloponnese wars, through the wining-over by one party at the zerosumish expense of the other party. Signs abound of the harshness of the competition. These

[1] Or the 'innovated Asia'. Note also that Central Asia equips herself with a number of Centralasian structures. See (Chabal, 2007, published in 2011)

[2] Interestingly enough, the USA has applied for the status of observer to the SCO but was turned down.

[3] The end of the cold war suggested that the USA-USSR tension of the then recent past was to be replaced (immediately?) by a (as fierce?) USA-China tension.

include the European Union/China commercial tension over textile and the Russian/European Union tension over gas-deliveries *at the time* when Ukraine and Belarus are talked of, among others, for another possible enlargement of the European Union.

To pick up from the suggestion made *supra* according to which a renewed bipolar tension of an inter-regional nature is in the making, bipolarity must be defined anew. If a novel form of 'cold tension' has been rampant since the end of the cold war in 1991, it is a new cold war of a specific nature. It is interregional in essence and it confronts two super-regionalisers. That is, not just two powers - China and the USA - but two interdependent multilateral activists, each seeking - rather than to divide and rule - to associate and rule and to begin to integrate.[1] Regionalisers operate essentially by placing themselves at a crossroad, and then by comforting the open regionalisation or regionalisation*s* with the intention of adding up spheres of co-prosperity.

Today's multi-regionalist contenders, China and the USA, have placed themselves each at the crossroad of at least three regionalisms. China did so in order to *respond to needs*, and the USA in order to *project power by offering security*. Let us examine the two in turn.

First, China, as recalled *supra*, is the only member of the three integrative co-operations in the wider Asia - Euro-Pacific-Asianism- which includes ASEAN +, SCO and APEC. In each case, the motivation is to respond to a need or to be needed and thus legitimised as a multi-polar actor. First, ASEAN after the inception of its 1995+ enlargements needed China, hence the ASEAN+3 - Korea and Japan are also useful, albeit less indispensable - to attract Europe into ASEM. ASEM only makes sense through ASEAN+3, not just ASEAN. Second, the SCO or Shanghai dynamic corresponds to a need, in the post-Soviet dynamic, to regulate Russian-Central Asian new relations; and there exists also a need for China of a go-west energy policy. Third, APEC as a Pacific-rim comprehensive ambition needed the whole of the East Asian part of that rim, not just China but also Hong Kong and Taiwan. China can coexist with Taiwan, in a multilateral cooperation - APE*C* - not an inter-State organisation.

Second, the USA, as is well known, conducts a long-dating Mahanian foreign policy consisting of a projection of power.[2] This projection of power is less subtle than that of China and geopolitically different. It seeks to secure continents and oceans, such as the Atlantic, the Americas, and the Pacific. In each case, the

[1] As each one was leading an entrenched camp, 'vertically' as it were. To 'associate' by agreement, as in the NAFTA Agreement, or to 'integrate' by sheer impact of quantitative advantages as in the SCO Organisation, these are two different forms of regionalisation by design.

[2] One of the postulates of Alfred Mahan's geopolitical thought is that maritime space was to be, for USA foreign and military policy, a space of natural power projection, as if the borders of the USA were to be the shores of other nations. See above note 4 page 108.

dynamic calls for a surge of premiership. First, Atlanticism and NATO are a *more sectoral* (military, not holistic) and *reduced* form (West Europe, then Europe, not Eurasia) *of turning* the USA projection of 1917 and 1941 into a permanent securitisation of the non-communist Eurasia.[1] Second, NAFTA commercialisation of North America, in response to the MERCOSUR-based marketisation of South America, echoes the post-colonial, fundamental securitisation and awareness. 'America for Americans' meant then (in 1823) not for Europeans and it means, today, not for other instigators. Third, Pacific co-operationism is a reactive, prompt, less direct securitisation of a space that complements the Atlantic, placing the USA at the geopolitical centre of the control of two Oceans. [2] The Mahanian view beholds, indicative of the fact that the borders of the USA are becoming the shores of other nations.

Beyond the seemingly dominant issue of regional open institution-building, more multilateral for China than for the USA and more clearly vertical for the USA than for China, lies the coming to confrontation between the two regionalist contenders. Such confrontation is not between Huntingtonian blocs of civilisation clashing one against the other (Huntington 1993). A clash means open aggression, but deterrence has made such major clashes obsolete for sixty years. Sino-USA tension is building up but that tension will not be released in a major war.

The question remains about the nature of such tension. It is a different nature from past situations when superpowers confronted each other with power tactics of the same nature, such as the USA and the USSR, in a mirror-like contrast - collectivism Vs individualism. Today, the nature of inter*regional* tension is more subtly different in at least two ways.

First, there exists a difference in the earnestness of regional multilateralism. Both China and the USA are involved in multilateralism but China is more involved than the USA. Originally, USA unilateralism and Chinese centrality compared rather well. Since the late 1990s, however, in particular since China's restraint during the 1997-1998 economic crisis, China has adapted to a world becoming really multiregional and also des-aligned due to Indian and Pakistani nuclear tests of 1998 and to North Korean and Iranian nuclear programmes. In 1997, the role of Asia and of China in Asia changed. Not only was China, as the growth leader, not affected as such by the crisis, probably due to the limited internationalisation of her public sector, but China's macroeconomic attitude was above all one of regional solidarity: if China had accompanied the loss of value in the Thai, Korean, Indonesian and Japanese currencies with a devaluation of the Chinese Yuan, the then residual comparative exporting advantage of those four countries would have

[1] This is exactly the scenario followed by the USA in Saudi Arabia from 1990/1991 onwards, after the intervention concerning Kuwait.

[2] As mentioned above, APEC is a Japanese and Australian initiative of the late 1980s. See note 2 page 107.

been jeopardised. The only asset left to those four countries for a short while - the chance to bring in currency from exports - would have been lost and their situation made all the harsher. China did not choose this unilateral attitude, which would have corresponded, though, to her long hesitation to devaluate the Yuan in order to boost her exports even further.

China's acceptance of ASEAN's need, of Russia's stabilisation and even of the APEC game is a case in point for China but also for Central Asia, East Asia and Russia.

The multilateralism on the part of some is confronted by a lesser multilateral drive on the part of others. The USA still dominates in NAFTA and in NATO and intends, as a main self-drive, to keep on dominating. The difficulty here is notional as well as diplomatic. A region is an entity that makes geopolitical sense and entails obligations despite its pluri-national dimension. Today's confrontation is thus more subtle than before in history, such as with imperialism, colonialism or cold-war attitudes. This added complexity can be further illustrated concretely, after the earnestness of regional attitudes, by the concreteness of such attitudes.

Second, there remains, to be sure, a difference in the concreteness of realisations. Again, both China and the USA have to deliver the convincing goods of their regional involvement, but China does so more concretely than the USA. Logically so. Multilateralism is more conducive to convincing through concrete, economic realisations; unilateralism is conducive to imposing through fashionable ideas, ideals and judgmental abstractions, of which Huntington's clashes are one (Huntington 1993). Here, China's Asianness - trade as a main medium of interaction - is an asset; but USA Westernness - procedures and formal agreements as a main medium of exchange - is a source of possible rigidity. Naturally, in both cases of multilateralism and unilateralism, confrontation occurs and needs weapons. But in one case, that weapon is multilateral growth; in the other case, that weapon is a judgmental positioning *vis-à-vis* a good or an evil.[1]

In sum, initiatives as offensives, competition as containment, and inter-regionalisms seen as modern nationalisms, the conclusion logically points to a far less peaceful post cold war world than envisaged at the turn of the 1980s and 1990s.

[1] 'Good' as a universal 'value'; 'evil' as a particular 'axis' (the 'axis of evil' coined by George W. Bush in 2001).

3. Conclusion: from Helsinki to Kabul

This analysis of the competition between three contemporary regionalisms, in Eurasia, Asia and the Asia-Pacific, had as its main objective to probe into the nature of this competition. In essence, this competition has become diversified in sectors, intensified in determination and clarified in terms of its main actors. Within regionalisations, a new category of actors emerged which this paper suggests to refer to as superregionalisers. These new actors question the chance for an appeasement of post cold war international politics and suggest instead a radicalisation of such politics.

The context of international relations is fast changing and the Helsinkian view, prevalent in the Conference for Security and Cooperation in Europe in the 1970s, of a possible reconciliation between East and West is being superseded. As one of many examples of this rapid change, the recent deepening of the Afghan stake - which is of course the democratisation of the regime but largely, too, the western influence in the region under a NATO/UN umbrella - will not reconcile influences in the region and may become a source of confrontation between the two superregionalisers highlighted in this paper - China and the USA,[1] in particular after the withdrawing from Afghanistan of western troops, likely to be followed by a Chinese move-in under SCO umbrella.

This paper has concentrated on competition as a specific form, in the post cold war, of internationalisation and of freedom. First, international tends to mean, in the post cold war, regional: the only really international or global phenomenon marking the past twenty years is enhanced or accelerated regionalisation; regionalisation*s* tend to become regional*ism*s of a mutually-assured containing nature. Second, free tends to mean, in the post cold war, less codification and more aggressive, confrontational competition. This is paradoxical in a sense: there has been an upsurge in codification, certainly in international trade, the WTO having more power than the GATT, and also in the mention of an appeal to international law. In another sense, however, aggressiveness has taken on, in a context where the codifying borders of the cold war blocs have disappeared, many more and new forms, as there is a freedom to confront, a freedom to aggress, a freedom to contest, a freedom to say 'No!' in a largely borderless world. Freedom today is, as a medium of an *essentially* competitive nature,[2] including the freedom to dominate over others in many new and numerous ways, from trade to information, from the military to the scientific, from cooperation to terrorism.

Finally, the concept of competition as used by a political scientist such as the author of this article is different from the approach of other scholars. Lawyers use

[1] 'Confrontation' or, in a vocabulary more appropriate to the post cold war, 'confrontational competition.'

[2] A nature the essence of which is competition, see Steven Lukes, *op. cit.*

competition from a belief in positive, textual and procedural, regulations for the settlement of disputes.[1] Economists use competition from an ideal-typical angle and, again, a belief in the market forces, the hidden hand, and the ensuing equilibrium between offer and demand. However, in political science, settlement or equilibrium does not really apply: for a political scientist, competition refers to power games that cannot result in lasting, uncontested domination *by one* but consist in shifting dynamisms of power/domination *among all.*

The hand may well be hidden but above all else it is hiding ideologies. Fairness is that of winners or conquerors or dominators imposing their fairness, whether through imperialism, colonialism or neo-colonialism. Clearly, the post-cold-war has not been peaceful. Afghanistan will long remain both the disputed link in the energy-transportation routes from the Caspian Sea to the Sea of Oman and the testing ground for competition influence between a USA-NATO and a China-SCO, no longer inter-State but inter-Region competition on a massive and potentially war-mongering scale. Such a confrontation will probably not be of a direct military nature, to echo one of the early sections of this paper. It will however occur at least around tensions for accessing oil and gas resources. For the time being, as to the USA and China, only the latter is in a real regional dynamic, with the Shanghai Cooperation Organisation. The USA is still mainly in a State-to-State confrontation dynamic. NATO is a not a regional organisation, the Shanghai Cooperation Organisation is.

Used Acronyms

APEC	Asia-Pacific Economic Cooperation
ARF	ASEAN Regional Forum
ASEAN	Association of Southeast Asian Nations
ASEAN + 3	ASEAN Plus Three (China, South Korea, Japan)
ASEAN + 6	ASEAN Plus Six (China, South Korea, Japan, Australia, India, New Zealand)
ASEM	Asia-Europe Meeting
CFSP	Common Foreign and Security Policy (PESC)
EAC	East Asian Community
EAS	East Asian Summit
ECOWAS	Economic Community of West African States
EDC	European Defence Community
EMU	Economic and Monetary Union
ESDP	European Security and Defence Policy (PESD)
EU	European Union

[1] Indeed, can competition law lead to fair trade or does it not all ascribe to a more complex dynamic ?

GATT	General Agreement on Tariffs and Trade
GDP	Gross Domestic Product
ILO	International Labour Office
IMF	International Monetary Fund
LA	Latin America
LMD	'Licence' (BA), Mastère, Doctorat
MERCOSUR	Mercado Commùn del Sur, Common Market of the South
NAFTA	North American Free Trade Agreement
NATO	North Atlantic Treaty Organisation
SCO	Shanghai Cooperation Organisation
UK	United Kingdom
USA	United States of America
USSR	Union of Soviet Socialist Republics
WAEMU	West African Economic and Monetary Union
WB	World Bank
WEU	West European Union
WTO	World Trade Organisation

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Strategic Importance of Credit Risk Management to Shareholders' Wealth-Sustenance in Nigerian Banks: An Empirical Analysis

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Abstract: This study highlighted the roles and strategic importance of credit risk management in the banking industry vis-à-vis sustenance of shareholders' wealth. The authors examined whether a reduction in the non-performing credits in banks' loan portfolio will reveal a possible correlation between effective credit risk management administration and shareholder's wealth. In testing this, secondary data were sourced from the randomly selected five banks financials (between the period of 2006 to 2010) with the use of relevant ratios. Two hypotheses were tested using multiple regression and correlation method. The result of hypothesis one showed that the calculated r – statistics (r =.429, $p<0.05$) was greater than the tabulated r – statistics (r =.381) showing that the test was significant at 0.05 alpha level. The result of hypothesis two also showed that the calculated r-statistics (r=.403, $p<0.05$) was greater than tabulated r-statistics (r=.381) at 0.05 level of significance which implied that, there was a significant relationship between credit risk management and shareholders' wealth. Based on these results, the authors recommended that, the banking sector should strive to employ objective standards of professionalism, experience and high integrity in placement of managers who are responsible for managing the credit portfolios; for this will largely influence the quality of risk assets management and debt recovery which will in-turn engender confidence in the banking industry and ensure the sustenance of shareholders' wealth and investment.

Keywords: Non-performing credit; Credit risk management; Shareholders' wealth; Risk asset management and Debt recovery

JEL Classification: G11; G21; G32

1. Introduction

The banking system occupies a unique position in the Nigerian financial system. Historically, First Bank of Nigeria Plc; commercial bank, was the first financial institution to start operation in Nigeria, as far back as 1892. Also in terms of assets and liabilities, commercial banking industry is more predominant than any other

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financial institutions in Nigeria (Nwankwo, 1992). Essentially, banks originally emerged as deposit takers and later metamorphosized into intermediates of funds and thereby started assuming credit risks. Credit became "the business of banking, and the primary basis on which a bank's quality and performance are judged" (Mueller,1976). Empirical studies of banking crises all over the world have shown that poor assets quality (predominantly loan) has been the most frequent factor for the bank failures. Stuart (2005) emphasized that the spate of non-performing loans, is as high as 35%. Risk is a condition in which there exists a quantifiable dispersion in the possible outcomes from any activity (CIMA Official Terminology 2005). It can also be defined as uncertain future events which could influence the achievements of the organization's strategic, operational and financial objectives. (CIMA Official Terminology, 2005). Credit risk Management refers to the process by which all loans, advances, credit facilities or accommodation granted by a bank to a customer are administered to ensure that the facilities run satisfactorily according to the terms governing them and are ultimately repaid on due date. However, risk is defined as the possibility of suffering some harm or loss which means there is the probability of a catastrophe or loss occurring whenever the future is uncertain. When a bank grants credit facility for a project, risk is involved because the future repayment is uncertain.

Modern risk management is the management procedure devised to eliminate or minimize the adverse effects of possible financial loss by identifying all the potential sources of loss; measuring the financial consequences of a loss occurring; and using controls to minimize actual losses or their financial consequences (Irukwu, 1998). According to Irukwu (1998), the most important topic in the business world today is the management and control of risk. Every day we learn about big, small and medium-sized companies that have collapsed or gone into liquidation because their management ignored the risks to which the organisation was exposed due to the absence of an efficient risk management system. A typical example in the international business community was the failure of the old British Merchant Bank; Barings Bank Plc in 1995 which was wrecked by the reckless trading activity of one of its relatively junior staff, Nick Leeson. An efficient financial risk management system could have detected the activities of that young man before the harm was done. In the past six years in Nigeria, more than 30 banks and 50 finance houses have gone into liquidation ruining the lives of several Nigerian depositors in the process. Umoh (1994) traced the rising non-performing loan ratio in banks books to poor loan processing, undue interference in the loan granting process, inadequate or absence of loan collaterals among other things, which are all linked with poor and ineffective credit administration. As noted by Miskovu (2009) there has been a number of fingers pointing at the failure of risk management, banks need to manage the credit risk inherited in the entire portfolio as well as the risk in individual credits. The effective management of credit risk is a

critical component of a comprehensive approach to risk management and essential to the long-term success of any banking organization.

A major function of commercial banks is to deal in the credit market; they perform this function by mobilizing funds from surplus economic units and channeling the same to deficit units for productive activities. This implies that, commercial banks grant loans to customers with the public's funds. These funds, made available to the customers by banks are liabilities in form of deposits. Most banks' deposits constitute assets withdraw-able on demand. The inability of banks to honour customers request, on the one hand could generate instability within the financial system which could retard economic performance (Aja-Nwachukwu, 1993). The advent of the financial services modernization act of 1999 was embraced with a lot of excitement by all in the banking sector. The present possibility for banks to diversify into a broader range of products and services makes life really cool for banking entrepreneurs and managers. But this diversification advantage is a one in a life time opportunity that should be consumed with some caution and prudence as this involves a great deal of risk. The very nature of banking business is so sensitive because about 85% of their liability is deposits from depositors (Saunders and Cornett, 2005). Banks use these deposits to generate credit for their borrowers, which is in a fact a revenue generating avenue for most banks. The credit creation process exposes the banks to high default risk which might lead to financial distress, including bankruptcy. All the same, beside other service, banks must create credit for their clients to make some money, grow and survive stiff competition at the market place. This study is primary concerned with measuring the extent to which banks can manage their credit risks, through appropriate management policies and strategies in order to protect the investments and wealth of their shareholders.

2. Relevant Literatures

In a frictionless economy, risk management is a pointless activity; shareholders can adjust the risk profile of their portfolios by diversifying or shifting their assets. Similarly, unhealthy companies that suffer unwelcome financial shocks can always approach the capital market for funding. However, Rene (2000) argues that, the world is much more complex than friction free theoretical models because, an adverse shock to a company’s cash flow typically creates indirect cases. These cases might stem from the threat of costly bankruptcy and financial digress arising from the difficulties of raising funds to finance corporate strategies or the consequences of these shocks to the business owners- especially the shareholders. Risk management- particularly through the use of derivative strategies can help managers lessen their threats and thereby boost and sustain the value of the company. Lawrence (2000S) opined that credit risk management is as old as

banking itself and that today's need for risk management is very similar to the need for customer profitability analysis some 20 years ago. Risk equally means a deviation from the expected and the "possible variation in outcomes" that is; risk is a vital and challenging ingredient of daily lives which makes it a conscious affirmation in the hearts of risk managers that, change is continuous and inevitable and how we respond determines our economic and emotional survival and prosperity in the future.

Naomi (2011) defines credit risk as the potential variation in the net income from non- payment or delayed payment of credit facility granted to customers. The Global Risk Management Group in its report in 1999 defines credit risk as the potential that bank borrower will fail to meet obligation in accordance with agreed terms. It added that, the effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long term success of any banking organization. Lending involves the creation and management of risk assets and it is an important task of bank management. Nwankwo (1992) noted that, in liquidity and portfolio management, effective management of the lending portfolio requires an articulated lending or credit policy. Similarly, it can be said that a credit policy provides a framework for the entire credit management process. Therefore, written credit policies, guidelines and regulations are the ingredients of sound credit management. These will set objective standards and parameters to guide bank officers who grant loans and manage the loan portfolio. Similarly, the guidelines will provide the Board of Directors, regulators, internal and external auditors with a basis for evaluating a bank's credit management performance. Loans most times are the largest and most obvious source of credit portfolio of any bank. Thus, managing the credit risk is significantly important to ensure strategic operational and financial objectives of the bank. Shareholders understand value. They entrust their capital to their Board of Directors because they seek a higher return than they could achieve from a risk free investment apart from government securities. This implies that, they expect boards and management to demonstrate entrepreneurship and dynamism that in taking risks. They will always expect that, the risks will be considered and well managed and that the risk profile of the organization will be understood.

Rene (2000) argues that the only reason a bank ought to manage its risk is that by doing so it makes its owners, the shareholders, better off. She argues that, a well designed credit risk management policy achieves this. She added that in particular, risk management increases the wealth of diversified shareholders. Shareholder value is nothing but the total benefit to shareholders from investing in a company. This includes dividends and perhaps more importantly, capital appreciation of the shareholders investment. Shareholders exercise the ultimate control over their company, they are also the residual claimant to its assets, which means their claims come last after all other shareholders have been paid off, not only do they bare their

risk in respect of their capital, they through their control of the management ultimately drive all strategic decisions.

3. Portfolio Theory and Traditional Method to Credit Risk Management

Portfolio Theory

Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many banks are now using earnings at risk (EAR) and value at risk (VAR) models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most banks, the practical of MPT to credit risk has lagged (William, 2007). Banks recognize how credit concentrations can adversely impact financial performance. As a result, a number of sophisticated institutions are actively pursuing quantitative approaches to credit risk measurement, while data problems remain an obstacle. This industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving customer relationships. The combination of these two developments has precipitated vastly accelerated progress in managing credit risk in a portfolio context over the past several years. However, the portfolio approach involves the following;

a) **Asset-by-asset Approach:** Traditionally, banks have taken an asset-by-asset approach to credit risk management. While each bank's method varies, in general, this approach involves periodically evaluating the credit quality of loans and other credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of the asst-by-asset approach is a sound loan review and internal credit risk rating system. A loan review and credit risk rating system enable management to identify changes in individual credits, or portfolio trends in a timely manner. Based on the outcomes and results of this investigation, loan identification, loan review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner.

b) **Portfolio Approach:** While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, banks increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model. Banks increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. One weakness with the asset-by-asset approach is that it has difficulty in

identifying and measuring. concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to a borrower, or to a group of correlated borrowers. Table 1 below summarises the strategies viable for reducing and coping with portfolio credit risk;

Table 1.

Technique	Advantages	Disadvantages	Implication
Geographic Diversification	External shocks (climate, natural disasters, etc.) are not likely to affect the entire portfolio if there is spatial diversification.	If the country is small or the Institution is capital constrained, it may not be able to apply this principle. It will become vulnerable to covariate risk, which is high in agriculture	
Loan Size Limits (Rationing)	Prevents the institution from being vulnerable to nonperformance on a few large loans.	Can be carried to the extreme where loan size does not fit the business needs of the client and results in suboptimal use and lower positive impact by clients. Clients could be dissatisfied.	Protects asset quality in the short run but prevents clients retention problems in the long run. Inimical to relationship banking.
Over collateralization	Assures the institution that enough liquidation value will exist for foreclosed assets.	Excludes poor, low-income clients who are the vast majority of the market.	Not a Recommended technique if goal is to better serve the low- and moderate income clients.
Credit Insurance	Bank makes clients purchase credit insurance. In event of default, bank collects from insurer.	Databases and credit bureaus may not exist to permit insurer to engage in this line of business in cost-effective manner.	
Portfolio Securitization	Lender bundles and sells loans to a third party. Transfers default risk and improves liquidity so that it can continue to lend. Allows lender to develop expertise in analyzing creditworthiness in one sector or niche.	Requires well documented loans and long time series of performance data to permit ratings and reliable construction of financial projections.	Requires a well developed secondary market, standardized underwriting practices, and existence of rating companies.

Source: Inter-American Development Bank,(2007): Strategies for Reducing and Coping with Portfolio Credit Risk

4. Traditional Approach

It is hard to differentiate between the traditional approach and the new approaches since many of the ideas of traditional models are used in the new models. However, the traditional approach comprises of four classes of models namely;

a) Expert Systems: in the expert system, the credit decision is left in the hands of the branch lending officer. His expertise, judgment, and weighting of certain factors are the most important determinants in the decision to grant loans. the loan officer can examine as many points as possible but must include the five "Cs" these are; character, credibility, capital, collateral and cycle (economic conditions). In addition to the 5 Cs, an expert may also take into consideration the interest rate.

b) Artificial Neural Networks: due to the time consuming nature and error- prone nature of the computerized expertise system, many systems use induction to infer the human expert's decision process. The artificial neural networks have been proposed as solutions to the problems of the expert system. This system simulates the human learning process. It learns the nature of the relationship between inputs and outputs by repeatedly sampling input/output information.

c) Internal Rating at Banks: over the years, banks have subdivided the pass/performing rating category, for example, at each time, there is always a probability that some pass or performing loans will go into default, and that reserves should be held against such loans.

d) Credit Scoring Systems: a credit score is a number that is based on a statistical analysis of a borrower's credit report, and is used to represent the creditworthiness of that person. A credit score is primarily based on credit report information. Lenders, such as banks use credit scores to evaluate the potential risk posed by giving loans to consumers and to mitigate losses due to bad debt. Using credit scores, financial institutions determine who are the most qualified for a loan, at what rate of interest, and to what credit limits (Wikipedia, 2008).

Banks Credit Risk Management in Relationship to Shareholders' Wealth

Risk asset management constitutes a critical function of the bank and a loss attributable to default in loan repayment and similar non- performance of credit facilities is the most worrisome, especially when interest rates are floating. The prudential guideline of (1990) clearly brought out the need for effective risk management and energized banks to be more conscious of the risk structure in their loan portfolio, the event also created the need to be more rigorous in evaluating applications for loans and advances. Esalomi (1998) added that, in assessing a bank's performance, risks should not be ignored; he stated that, when assessing a bank's performance, income statements do not always tell the whole story, for example, new risk loans do not affect a bank's performance but may affect the banks future performance. Lending decision operates for the future which no one can predict with certainty, the future is imaginable but not certain, hence the element of risk in every decision. According to Dandy (1995) there is no other area of banks operations that could make it suffer sizeable, unanticipated losses as quickly as it can than lending exposure. Though it is possible that commercial banks can incur sizeable losses in its investment

portfolio, but these losses are to some extent predictable and controllable by management of bank, unlike loan defaults which are less predictable and much more difficult to control, and improper assessment of risks associated with loan and advances results in the incident of non- performing credit. However, banks credit portfolio will contain *'Loans and Advances'.* The loans could be term loans, commercial papers or acceptances, etc. The bank also gives guarantee and indemnity. The banks current risk exposure on each of the items in its credit portfolio is classified as performing and non performing depending on the following:

a). The facilities are performing when both principal and interest are up to date in accordance with the agreed terms.

b.) A credit facility is demanded as non- performing when any of the following conditions exist;

- Interest or principal is due and unpaid for 90 days or more.
- Interest payment equal to 90 days. Interest or more have been capitalized, rescheduled or rolled over to a new loan.

Methodology

Methodology is a vital process of carrying out empirical study. It forms the background in which the procedures employed in carrying out a research are based. It follows a step after one another of which data gathered for a research is being analyzed. The study population covers enterprises listed on the Nigerian Stock Exchange. Since they are the leading companies of the country, they are able to represent the overall perspective of managing formats and styles especially in business organizations, which have to adjust constantly to keep pace with the changing circumstances. Moreover, the listed enterprises have been transformed into public limited companies with shareholders from many fields. The data used for this study were derived from the Financial Statements of the five selected banks for the period of 2006 and 2010. The five banks were selected using the stratified random technique to choose among the Nigerian 24 banks. The banks and nature of data collated from their financials are represented in table 2 below:

Table 2

Bank	Year	ROCE	DPS	EPS	Non – Performing Loan(N000,000)	Performing Loan (N000,000)	Provision For Bad Loans (N000,000)
FIRST BANK	2006	0.25	130	235	6713	1727	15095
	2007	0.41	150	434	4900	2178	14664
	2008	0.28	155	399	17945	21787	26442
	2009	0.27	160	335	12620	774327	22384
	2010	0.25	130	235	727290	217819	24456

UBA BANK	2006	0.24	65	109	7978	15095	10464
	2007	0.3	120	144	1303	14664	32072
	2008	0.44	159	250	5987	16199	10196
	2009	0.11	10	34	4942	58798	26418
	2010	0.05	20	14	13480	429288	25428
UNION BANK	2006	0.15	0.08	27.00	354290	97200	35095
	2007	0.19	0.05	25.00	391778	97691	19664
	2008	0.31	0.06	40.00	223845	96361	18199
	2009	0.42	0.08	40.00	325851	26442	58798
	2010	0.29	0.07	25.00	322075	22384	12928
GTB BANK	2006	0.12	0.04	12.00	3038795	104648	14648
	2007	0.20	0.06	25.00	1862707	320727	32072
	2008	0.30	0.09	30.00	2844328	101966	15196
	2009	0.37	0.12	40.00	1788756	445496	21258
	2010	0.36	0.12	0.00	501028	419658	21421
INTERCONTIN-ENTAL BANK	2006	0.11	0.06	31.00	12872	264183	25012
	2007	0.09	0.06	40.00	16589	439681	19763
	2008	0.09	0.08	45.00	15030	264183	18199
	2009	0.12	0.08	57.00	12381	254284	38798
	2010	0.11	0.07	82.00	1010	320832	22918

Source: Companies Annual Reports and NSE Fact Book (2006 – 2010): Industrial Performance of Selected Banks

Regression and Correlation analysis were used as tools of analyses to determine the relationship between financial risk management styles and firm performance measures. Bivarite correlation procedures' using the Statistical Package for Social Sciences (SPSS) was employed in computing the Pearson's coefficients. The correlation coefficient denotes the strength of the relationship on a scale, ranging from -1 to + 1. A positive value close to +1 indicates a strong positive relationship, vice versa. The correlation coefficient was tested at the 0.05 level of significance.

Hypotheses

This study tested these two hypotheses;

Hypothesis 1: (Ho); There is no significant relationship between credit risk management and share holders wealth (dividend per share)

Hypothesis 2: (Ho); There will be no significant relationship between firm credit risk management and profitability (earnings per share)

Model Specification

Regression models were developed to test these formulated hypotheses. Firstly to examine the relationship between credit risk management and shareholders wealth (dividend per share) of selected banks in Nigeria between 2006 – 2010. Hence we have:

DPS – f(ROCE, PFL, EPS)

DPS = b_0 + b_1ROCE b_2PFL + b_3EPS + U_i **Where:**

DPS = Dividend per share (proxy for wealth shareholder); **ROCE** = Return on capital employed

PFL = Performing Loan; **EPS** = earnings per share and **U_i**= Stochastic Error Term

Secondly, for hypothesis 2 which is to measure the significant relationship between credit risk management and profitability (earnings per share); Hence, the model was formulated thus:

EPS= f(ROCE, PFL,) Hence we have;

EPS = b_0 + b_1ROCE + b_2PFL+ U_i **Where**

EPS= Earnings per share; **ROCE** = Return on capital employed

PFL = Performing Loan; and **U_i**= Stochastic Error Term

RESULTS

Table 3. Regression Analysis showing the relationship between credit risk management and shareholders wealth

Model	Co-efficient	Std. error	T	Sig.t
Constant	-11.368	14.035	-.810	.427
Return on Capital Employed	29.261	50.408	.580	.568
Earnings per share	.460	.044	10.469	.000
Performing Loan	0.000006643	.000	-.247	.808

Dependent variable: Dividend per share

DPS = -11.368+ 29.261ROCE + .460EPS +0.000006643PFL + U_i

Std error = (14.035) (50.408) (.044) (.000)

T = (-.810) (.580) (10.469) (-.247)

Sig. t= (-.810) (.568) (.000) (.808)

R = .933, R^2 = .871, R = .853, f=47.272, DW =1 .062

Table 4: Regression Analysis Showing the Relationship between Credit Risk Management and Profitability

Model	Co-efficient	Std. error	T	Sig.t
Constant	-3.409	68.094	-.050	.961
Return on Capital Employed	475.646	222.567	2.137	.044
Performing loan	0.000004186	.000	.032	.975

Dependent variable: Earning per share

EPS = -3.409+ 475.646ROCE +.000004186PFL + U_i

Std error = (68.094) (222.567) (.000)

T = (-0.50) (2.137) (.032)

Sig. t= (.961) (.044) (.975)

R = ..427, R^2 = .182, R = .108, f=2.448, DW = .272

5. Discusion of Findings

Table 3 above presents the relationship between credit risk management and shareholders wealth. The result shows that the calculated r – statistics (r =.933, p<0.05) is greater than the tabulated r – statistics (r =.381) at 0.05 level of significance. It showed that there is significant relationship between credit risk management and shareholders' wealth hence, the null hypothesis (H_0) is rejected and the alternate hypothesis (H_1) accepted. 'T' – statistic was used to test the effect of each of the parameters of credit risk management on shareholders' wealth. The result revealed that the effect of each parameter on shareholders' wealth is not statistically significant at 0.05 alpha level except EPS. i.e. return on capital employed (t = .568, p>0.05), performing loan (t=-.000, p>0.05 and earnings per share (t=-.808, p>0.05). However, the coefficients were of positive values which implied that, increase in each of the parameters will lead to corresponding increase in shareholders' wealth. The coefficient of determination (r^2) was .871 which implied that, 87% of the variation in shareholders' wealth is caused by variations in the explanatory variables (return-on-capital employed, performing loan and earnings per share). The Durbin-Watson statistics was 1.062 which shows that autocorrelation exist in the regression model. The overall regression model was statistically significant in terms of its goodness of fit (f=47.272, p>0.05)

In order to determine quantitatively and more precisely the relationship between credit risk management and profitability, the second hypothesis was tested (see

table 4). Earnings per share was used as proxy for profitability. The result showed that calculated r-statistics (r=.427, p<0.05) was greater than tabulated r-statistics (r=.381) at 0.05 level of significance. Therefore, the null hypothesis (H_0) was rejected to accept the alternate hypothesis (H_1). This implied that there is significant relationship between credit risk management and profitability. However, the coefficient of determination (r^2) was .182 which indicated that 18% of the variation in earnings per share (proxy for profitability) is explained by variations in indices of credit risk management. The remaining 82% unexplained variation in credit risk management is largely due to variation in other variables outside the regression model which are otherwise included in the Stochastic Error Term. The effect of return-on-capital employed (t = .044, p>0.05) and performing loan (t=-.975, p>0.05) on earnings per share was not statistically significant in each case at 0.05 level, but showed a positive relationship between the dependent and independent variables. The Durbin – Watson statistics was .272 which means that autocorrelation exists in the regression model. The regression model was not statistically significant in terms of its overall goodness of fit (f=2.448, p>0.05).

6. Conclusion

A common attitude among Nigerians is to regard bank loan as a share of the National Cake. This situation is not helped by some bank officials who act fraudulently and the reluctance of the bank in prosecuting them as a result of the fear of negative publicity on the image of the bank. The culture of honoring repayment obligation to banks has not been fully embraced as frequent diversion of loan to other uses has become the norm. The declaration of huge profits by banks in the face of the economic recession and banking distress has also given an impression of exploitation by banks of their customers. Available statistics have shown that banks' profitability is affected by the high incidence of bad and doubtful debts, as revealed by the upward trends in the provisions in their annual report. Bank lending constitutes the core of banking and is responsible for a sizeable proportion of bank revenue. This study has shown that there is a significant relationship between bank performance (in terms of profitability) and credit risk management (in terms of loan performance). Better credit risk management results in better bank performance. Thus, it is of crucial importance that banks practice prudent credit risk management and safeguarding the assets of the banks and protect the investors' interests. Apart from the tested hypotheses, the study equally found out that banks with good or sound credit risk management policies have lower loan default ratios (bad loans) and higher interest income (profitability). Similarly, the study revealed that banks with higher profit potentials can better absorb credit losses whenever they crop up and therefore record better performances.

Thus, it is of crucial importance that banks practice prudent credit risk management to safeguard the assets of the banks and protect the investors' interests. In the course of this study, it was equally discovered that, bad and doubtful debts are on the increase and that recoveries were insignificant. In some cases, bad debts were obvious from the defective appraisal procedure and excessive reliance on collateral. In others, it seems unavoidable due to poorly focused credit policies and regulatory procedures. It was however obvious that all banks have had a share in the scourge of bad debts, which figured prominently in the current compulsory recapitalization and Government taking over some of these banks as a result of over-burdened debts and huge non-performing loans in the industry.

7. Recomendations

Based on the findings from this empirical investigation, the following recommendations are made for improving risk analysis and management that will sustain shareholders' wealth. That:

- for any bank to survive and continue on a path of profitability, a clearly formulated policy is required. Therefore, credit policies that will ensure operational consistency, adherence to uniformity and sound practices should be henceforth adopted by the banks.

- training of credit officers should be given high priority. Credit officers should be exposed to both internal, external and in-plant courses and thorough grooming in banking operations to aid effective performance of their sensitive jobs.

- banks should strive to employ objective standards of professionalism, experience and high integrity in placement of managers who are responsible for managing the credit portfolio. This will largely influence the quality of risk assets management and engender confidence in the banking industry.

- visitation and follow-up on loans are indispensable issues in guiding against bad debts. This should be entrenched into the credit administration and control procedure to confirm utilization of funds, managerial ability of customers and the safety of assets financed by the bank. Follow-up could confirm the deviation from agreed conditions of the loan and this can always be quickly checked before the loan goes bad.

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APPENDICES

Regression

Coefficients [a]

Model	Unstandardized Coefficients		t	Sig.	95% Confidence Interval for B		Correlations			Co linearity Statistics	
	B	Std. Error			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	-11.368	14.035	-.810	.427	-40.555	17.820					
VAR00003	29.261	50.408	.580	.568	-75.570	134.091	.445	.126	.045	.766	1.305
VAR00005	.460	.044	10.469	.000	.369	.551	.932	.916	.821	.818	1.223
VAR00007	-6.643E-6	.000	-.247	.808	.000	.000	-.135	-.054	-.019	.925	1.081

a. Dependent Variable VAR00004:

Collinearity Diagnostics

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	VAR00003	VAR00005	VAR00007
1	1	2.994	1.000	.01	.01	.03	.03
	2	.629	2.181	.00	.01	.27	.43
	3	.304	3.139	.07	.12	.64	.28
	4	.073	6.420	.92	.86	.05	.26

a. Dependent Variable: VAR00004

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	-6.32	200.27	44.00	60.819	25
Residual	-50.272	56.441	.000	23.404	25
Std. Predicted Value	-.827	2.569	.000	1.000	25
Std. Residual	-2.009	2.256	.000	.935	25

a. Dependent Variable: VAR00004

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	88774.708	3	29591.569	47.272	.000[a]
	Residual	13145.822	21	625.992		
	Total	101920.530	24			

a. Predictors: (Constant), VAR00007, VAR00005, VAR00003

b. Dependent Variable: VAR00004

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.933[a]	.871	.853	25.020	.871	47.272	3	21	.000	1.062

a. Predictors: (Constant), VAR00007, VAR00005, VAR00003

b. Dependent Variable: VAR00004

Regression

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.427[a]	.182	.108	121.396	.182	2.448	2	22	.110	.272

a. Predictors: (Constant), VAR00007, VAR00003

b. Dependent Variable: VAR00005

ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	72165.976	2	36082.988	2.448	.110[a]
	Residual	324211.464	22	14736.885		
	Total	396377.440	24			

a. Predictors: (Constant), VAR00007, VAR00003

b. Dependent Variable: VAR00005

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	-3.409	68.094		-.050	.961	-144.627	137.809					
	VAR00003	475.646	222.567	.428	2.137	.044	14.070	937.222	.427	.415	.412	.925	1.081
	VAR00007	4.186E-6	.000	.006	.032	.975	.000	.000	-.111	.007	.006	.925	1.081

a. Dependent Variable: VAR00005

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions		
				(Constant)	VAR00003	VAR00007
1	1	2.448	1.000	.02	.02	.05
	2	.476	2.268	.01	.11	.66
	3	.076	5.678	.97	.87	.29

a. Dependent Variable: VAR00005

Residuals Statistics[a]

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	22.17	205.94	108.32	54.835	25
Residual	-169.580	269.137	.000	116.227	25
Std. Predicted Value	-1.571	1.780	.000	1.000	25
Std. Residual	-1.397	2.217	.000	.957	25

a. Dependent Variable: VAR00005

Mathematical and Quantative Methods

Aggregate Import Demand and Expenditure Components in Nigeria

Philip Chimobi Omoke[1]

Abstract: This study uses disaggregated expenditure components of total national income to determine the behaviour of imports demand in Nigeria using annual time series data and by applying the Johansen-Juselius multivariate cointegration technique tests to find out if the relevant economic variables are cointegrated in the long run. Variables used in the study are volume of imports of goods and services, consumption expenditure, expenditure on investment goods, relative prices and a dummy variable for trade liberalisation policy in Nigeria. The empirical evidence suggests that cointegrating relationship exists among the variables. The error correction estimate reveals that almost all the coefficients of the variables tested came out with a statistically positive signs. Consumption expenditure, export and investment coefficient relates positively with import implying that increase in expenditure on these leads to a significant increase in import. Generally, the result showed that import demand function and expenditure component in Nigeria has a statistically significant relationship.

Keywords: Aggregate import demand; Expenditure components; Nigeria; Cointegration; Error Correction

JEL Classification: C22; F10; F41

1. Introduction

There have been various attempts to examine the linkage between imports and the macro components of aggregate expenditure, namely consumption, public spending, investment and exports (Giovannetti, 1989; Abbott and Seddighi, 1996; Alias and Cheong, 2000; Narayan and Narayan, 2005 and Frimpong and Oteng-Abayie, 2006). In addition to some policy concerns, previous research is also built upon an important econometric drawback of traditional modelling approach. In this regard, the standard import demand model relates the import demand to relative prices and an activity variable namely gross domestic product in most of the cases, and assumes that import content of each macro component of aggregate

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expenditure is the same (see Boylan et al. 1980; Goldstein and Khan, 1985; Asseery and Peel 1991; Arize and Ndubizu, 1992; Bahmani-Oskooee, 1998). It follows that if the different macro components of aggregate expenditure have different import content, then the use of a single demand variable in the aggregate import demand function will lead to aggregation bias (Giovannetti, 1989 and Abbott and Seddighi, 1996). In order to avoid from this problem, the import demand function is estimated as a function of relative prices and disaggregated expenditure components.

In Nigeria, Olayide (1968), Ajayi (1975), Ozo-Eson (1984) and Egwaikhide, (1999) had estimated Nigeria's import demand function. All the above studies employed the traditional approach which uses only domestic income and the relative prices and are therefore conducted in the aggregated level. No attempts, to the best of our knowledge , have been made to use the disaggregated import demand model to estimate the import demand function for Nigeria. Following recent studies by Tang (2003), Ho (2004), Narayan and Narayan, (2005), and Frimpong and Oteng- Abayie, (2006). We use the disaggregated components of domestic income (i.e. final demand expenditure components) together with the standard relative price variable to specify the aggregate import demand model for Nigeria.

The rest of the paper is organized as follows. Section 2 presents recent literature review of the aggregate import demand studies that used the disaggregation approach. Section 3 describes the econometric methodology used and presents the specification of the aggregate import demand model. Section 4 discusses the result while Section 5 concludes the paper.

2. Recent Empirical Import Demand Literature

There is plethora of empirical studies that have examined the causal factors of aggregate import demand models. From the empirical literature we surveyed, no study was found that specifically estimates the determinants of disaggregate import demand in Nigeria. It is therefore only logical for us to survey the literature that is directly relevant to the theme chosen for this study. At this point, we focus on reviewing only those studies that have used the disaggregate approach.

Abbott and Seddighi (1996) used the cointegration approach of Johansen and Juselius (1990) and the error correction models of Engel and Granger (1987) to estimate an import demand model for the UK. From their results consumption expenditure had the largest impact on import demand (1.3) followed by investment expenditure (0.3) and export expenditure (0.1). The relative price

variable (the ratio of import price to domestic price) had a coefficient of 20.1.

Mohammed and Tang (2000) also used the Johansen and Juselius (1990) cointegration technique and estimated the determinants of aggregate import demand for Malaysia, over the period 1970- 1998. The results indicated that while all expenditure components had an inelastic effect on import demand in the long run, investment expenditure had the highest correlation (0.78) with imports followed by final consumption expenditure (0.72). Expenditure on exports was found to have the smallest correlation with imports (0.385). They also found a negative (-0.69) and inelastic relationship between relative prices and import demand. All results were found to be statistically significant at the 1 per cent level.

Mohammad *et al*. (2001) examine the long-run relationship between imports and expenditure components of five ASEAN countries (Malaysia, Indonesia, the Philippines, Singapore and Thailand) through Johansen multivariate cointegration analysis (Johansen 1988; Johansen *et al.* 1991). Annual data for the period 1968-1998 are used for the countries (except Singapore, with a shorter period 1974-1998). The disaggregate model, in which the final demand expenditure is split up into three major components, is used. The results reveal that import demand is cointegrated with its determinants for all five countries.

Min *et al.* (2002) estimated South Korea's import demand using the Johansen and Juselius (1990) approach over the 1963-1998 period. They found evidence of long run elastic (1.04) impact of final consumption expenditure on import demand and inelastic (0.49) impact of export expenditure on import demand. Both results were statistically significant at the 1 per cent level.

However on the impact of investment expenditure, while they found it to be negatively related with import demand, it was statistically insignificant. On the impact of prices, they found relative prices negatively impacting import demand at the 1 per cent level of significance.

Tang (2003) estimated China's import demand using the bounds testing approach to cointegration. In the long run, he found expenditure on exports having the biggest correlation with imports (0.51), followed by investment expenditure (0.40) and final consumption expenditure (0.17). The relative price variable appeared with a coefficient of 20.6, implying that an increase in relative prices induces a 0.6 per cent fall in the demand for imports.

Ho (2004) has also estimated the import demand function of Macao by testing two popular models: (i) aggregate and (ii) disaggregate import demand model with the components of aggregate expenditure using quarterly data over the 1970 to 1986 period. Using JJ-Maximum likelihood cointegration and error correction technique, Ho (2004) found significant partial elasticities of import demand with respect to investment (0.1396), exports (1.4810) and relative prices (-0.3041) with their expected signs implied by the economic theory in the disaggregated model.

Narayan and Narayan (2005) recently applied the bounds testing approach to cointegration to estimate the long-run disaggregated import demand model for Fiji using relative prices, total consumption, investment expenditure, and export expenditure variables over the period 1970 to 2000. Their results indicated a long run cointegration relationship among the variables when import demand is the dependent variable; and import demand to be inelastic and statistically significant at the 1 per cent level with respect to all the explanatory variables in both the long-run and the short-run. The results revealed long run elasticities of 0.69 for both export expenditure and total consumption expenditure respectively, followed by relative prices (0.38) and investment expenditure (0.17).

Fosu and Joseph (2006) studied the behaviour of Ghana's imports during the period 1970-2002 is studied using disaggregated expenditure components of total national income. We use the newly developed bounds testing approach to cointegration and estimated an error correction model to separate the short- and long-run elements of the import demand relationship. The study shows inelastic import demand for all the expenditure components and relative price. In the long-run, investment and exports are the major determinant of movements in imports in Ghana. In the short run household and government consumption expenditures is the major determinant of import demand. Import demand is not very sensitive to price changes

Guncavdi and Ulengin (2008) examined the role of macroeconomic components of aggregate expenditure in determining import demand in Turkey. Along with the empirical assessment, the paper also suggests a theoretical model of import demand, which is built upon a utility maximization of a country subject to budget constraints. The empirical model derived as a dynamic form of linear expenditure system was estimated with quarterly data from the Turkish economy for the period of 1987-2006. The results show that consumption and expenditure are two important demand components in determining imports in the long run whereas only the growth rates of consumption and investment are dominant factors in the short run. Public expenditure appeared to have no significant impact on import demand in Turkey

3. Methodology

3.1 Model Specification

To carry out this research effectively, there is need to represent the study in a functional form which is thus specified:

$$M = f (C, I, X, Rp \text{ and } D) \quad (1)$$

Represented in log-linear econometric form:

$$InM_t = \alpha_0 + \beta_1 InC_t + \beta_2 InI_t + \beta_3 InX_t + \beta_4 Rp_t + \alpha_1 D_t + \varepsilon_t \quad (2)$$

Where

M = Import of goods and services

C_t = Final Consumption expenditure

I_t = Expenditure on Investment goods

X_t = Expenditure on total export of goods and services

Rp_t = Relative Prices (Import Price Index/domestic Price Index)

D_t = Dummy variable for trade liberalization Policy

α_0 is the constant term, 't' is the time trend, and 'ε' is the random error term.

In represents natural logarithm

3.2 Data Description and Source

The sample period runs from 1970 to 2005, to allow for a wide range of stability test. The data source is from the IFS CD ROM 2007. The data used in this work include Measure of the volume of Import of goods and services (M_t); the final consumption expenditure (C_t) which is the sum of household and government final expenditure; Expenditure on Investment goods (I_t), proxied by Gross capital formation; Expenditure on total export of goods and services (X_t); Relative Prices (Rp_t), which is a proxy for Import price Index (proxied by USA export Price Index) as a Percentage of Domestic Price Index; and Dummy variable (D_t) represented by Zero (0) for the period before trade liberalization (1970 – 1985) and One (1) for the period after trade liberalization (1986 to date).

3.3 Estimation Techniques

The technique used in this study is the cointegration and error-correction modeling technique. To estimate the cointegration and error-correction, three steps are required: these are testing for order of integration, the cointegration test and the error correction estimation.

3.3.1 Unit Root Test

The unit root test involves testing the order of integration of the individual series under consideration. Several procedures has been developed for the test of order of integration including the choice for this study: Augmented Dickey-Fuller (ADF) test due to Dickey and Fuller (1979, 1981), and the Phillip-Perron (PP) due to Phillips (1987) and Phillips and Perron (1988). Augmented Dickey-Fuller test

relies on rejecting a null hypothesis of unit root (the series are non-stationary) in favor of the alternative hypotheses of stationarity. The tests are conducted with and without a deterministic trend (t) for each of the series. The general form of ADF test is estimated by the following regression

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{i=1}^{n} \alpha \Delta y_i + e_t \quad (3)$$

$$\Delta y_t = \alpha_0 + \alpha_1 y_{t-1} + \sum_{n=1}^{n} \alpha_1 \Delta y_i + \delta_t + e_t \quad (4)$$

Where:

Y is a time series, t is a linear time trend, Δ is the first difference operator, α_0 is a constant, n is the optimum number of lags in the dependent variable and e is the random error term the difference between equation (1) and (2) is that the first equation includes just drift. However, the second equation includes both drift and linear time trend pp.

$$\Delta y_t = \alpha_0 + \alpha y_{t-1} + e_t \quad (5)$$

3.3.2. Cointegration Test

This is the testing of the presence or otherwise of cointegration between the series of the same order of integration through forming a cointegration equation. The basic idea behind cointegration is that if, in the long-run, two or more series move closely together, even though the series themselves are trended, the difference between them is constant. It is possible to regard these series as defining a long-run equilibrium relationship, as the difference between them is stationary (Hall and Henry, 1989). A lack of cointegration suggests that such variables have no long-run relationship: in principal they can wander arbitrarily far away from each other (Dickey et. al., 1991). We employ the maximum-likelihood test procedure established by Johansen and Juselius (1990) and Johansen (1991). Specifically, if Y_t is a vector of n stochastic variables, then there exists a p-lag vector auto regression with Gaussian errors. Johansen's methodology takes its starting point in the vector auto regression (VAR) of order P given by

$$y_t = \mu + \Delta_1 y_{t-1} + - - - + \Delta p \ \ y_{t-p} + \varepsilon_t \quad (6)$$

Where

Y_t is an nx1 vector of variables that are integrated of order commonly denoted (1) and ε_t is an nx1 vector of innovations.

This VAR can be rewritten as

$$\Delta y_t = \mu + \eta_{yt-1} + \sum_{i-1}^{p-1} \tau_i \Delta y_{t-1} + \varepsilon_t \tag{7}$$

Where

$$\prod = \sum_{i-1}^{p} A_{i-1} \quad \text{and} \quad \tau_i = -\sum_{j=i+1}^{p} Aj$$

To determine the number of co-integration vectors, Johansen (1988, 1989) and Johansen and Juselius (1990) suggested two statistic test, the first one is the trace test (λ trace). It tests the null hypothesis that the number of distinct cointegrating vector is less than or equal to q against a general unrestricted alternatives q = r. the test is calculated as follows:

$$\lambda \text{ trace } (r) = -T \sum_{i=r+1} \text{In} \left(1 - \hat{\lambda}_t\right) \tag{8}$$

Where

T is the number of usable observations, and the $\lambda_{1,s}$ are the estimated eigenvalue from the matrix.

The Second statistical test is the maximum eigenvalue test (λ max) that is calculated according to the following formula

$$\lambda \max (r, r + 1) = -T \text{ In } (1 - \lambda r + 1) \tag{9}$$

The test concerns a test of the null hypothesis that there is r of co-integrating vectors against the alternative that r + 1 co-integrating vector.

3.3.3 Error Correction Model

This is only carried out when cointegration is proven to exist; it requires the construction of error correction mechanism to model dynamic relationship. The purpose of the error correction model is to indicate the speed of adjustment from the short-run equilibrium to the long-run equilibrium state. The greater the co-efficient of the parameter, the higher the speed of adjustment of the model from the short-run to the long-run. We represent equation (2) with an error correction form that allows for inclusion of long-run information thus, the error correction model (ECM) can be formulated as follows:

$$\Delta InM_t = \alpha_0 + \sum_{t=1}^{n} \beta_{1t} \Delta InC_{t-1} + \sum_{i-1}^{n-1} \beta_{2t} \Delta InI_{t-1} + \sum_{i-1}^{n-1} \beta_{3t} \Delta InX_{t-1} + \sum_{i-1}^{n-1} \beta_{4t} \Delta InRp_{t-1} + \sum_{i-1}^{n-1} \alpha_{1t} \Delta D_{t-1} + \lambda Ec_{t-1} + \varepsilon_t \quad (10)$$

Where

Δ is the first difference operator

λ is the error correction coefficient and the remaining variables are as defined above.

4. Empirical Result

4.1 Stationarity Test

The Augmented Dickey Fuller (ADF) and Phillips – Perron (PP) tests were applied to find the existence of unit root in each of the time series. The results of both the ADF and PP tests are reported in Table 1 and 2.

Table 1. Unit Root test for Stationarity at Levels

Variables	ADF (Intercept)	ADF (Intercept and Trend)	PP (Intercept)	PP (Intercept and Trend)
LM	-0.138 (-3.632)*	-1.470 (-4.243)*	-0.220 (-3.632)*	-1.700 (-4.243)*
LCE	0.245 (-3.639)*	-2.038 (-4.252)*	0.481 (-3.646)*	-1.667 (-4.243)*
LI	-0.322 (-3.639)*	-1.987 (-4.252)*	-0.255 (-3.632)*	-1.673 (-4.243)*
LX	-0.232 (-3.632)*	-2.099 (-4.243)*	-0.143 (-3.632)*	-2.037 (-4.243)*
LRp	0.170 (-3.639)*	-2.688 (-4.252)*	0.874 (-3.646)*	-2.063 (-4.243)*
D	-1.092 (-3.632)*	-1.859 (-4.243)*	-1.092 (-3.632)*	-1.921 (-4.243)*

Note: Significance at 1% level. Figures within parenthesis indicate critical values.

Mackinnon (1991) critical value for rejection of hypothesis of unit root applied.

Source: Author's Estimation using Eviews 6.0.

The result in table 1 reveals that all the variables (except LINV which was stationary at ADF and PP Intercept & Trend) were not stationary in levels. This can be seen by comparing the observed values (in absolute terms) of both the ADF and PP test statistics with the critical values (also in absolute terms) of the test statistics at the 1%, 5% and 10% level of significance. Result from table 1 provides some evidence of non stationarity. Therefore, the null hypothesis is accepted for LGDP and LEX (but rejected for LINV in Intercept & Trend) and it is

sufficient to conclude that there is a presence of unit root in the variables at levels, following from the above result, all the variables were differenced once and both the ADF and PP test were conducted on them, the result as shown in table 2

Table 2. Unit Root test for Stationarity at First Difference

Variables	ADF (Intercept)	ADF (Intercept and Trend)	PP (Intercept)	PP (Intercept and Trend)
LM	-4.531(-3.639)*	-4.458(-4.252)*	-4.531(-3.639)*	-4.458(-4.252)*
LCE	-3.950(-3.639)*	-3.952(-3.548)**	-4.000(-3.639)*	-3.914(-3.548)**
LI	-3.766(-3.639)*	-3.704(-3.548)**	-3.787(-3.639)*	-3.726(-3.548)**
LX	-7.232(-3.639)*	-7.144(-4.252)*	-7.232(-3.639)*	-7.144(-4.252)*
LRp	-2.709(-2.614)***	-2.824(-4.252)*	-2.570(-3.639)*	-2.720(-4.252)*
D	-5.830(-3.639)*	-5.749(-4.252)*	-5.831(-3.639)*	-5.749(-4.252)*

Note:*,** and *** denotes significance at 1%, 5% and 10% levels, respectively. Figures within parenthesis indicate critical values.

Mackinnon (1991) critical value for rejection of hypothesis of unit root applied.

Source: Author's Estimation using Eviews 6.0.

The table reveals that all the variables were stationary at first difference, on the basis of this, the null hypothesis of non-stationarity is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one, i.e. 1(1).

4.2. Cointegration Test

The result of the cointegration condition (that is the existence of a long term linear relation) is presented in Table 3.1 and 3.2 below using methodology proposed by Johansen (1990):

Table 3.1. Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.665388	123.9087	95.75366	0.0002
At most 1 *	0.627052	86.68604	69.81889	0.0013
At most 2 *	0.481103	53.15132	47.85613	0.0147
At most 3 *	0.437030	30.84562	29.79707	0.0377
At most 4	0.274156	11.31162	15.49471	0.1930
At most 5	0.012199	0.417333	3.841466	0.5183

Trace test indicates 4 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 3.2. Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.665388	37.22268	40.07757	0.1013
At most 1	0.627052	33.53472	33.87687	0.0549
At most 2	0.481103	22.30570	27.58434	0.2051
At most 3	0.437030	19.53400	21.13162	0.0824
At most 4	0.274156	10.89429	14.26460	0.1596
At most 5	0.012199	0.417333	3.841466	0.5183

Max-eigenvalue test indicates no cointegration at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Table 3.1 rejected null hypothesis that there were no cointegrating vectors among the system. The result of the trace statistic test in table 3.1 indicates the existence of 4 cointegrating equations. Having ascertained that the variables are non-stationary at their levels but stationary at first difference and that these are evidence of cointegrating vector, the stage is set to formulate the error-correcting model, the reason for this is to recover the long-run information lost by differencing the variables.

4.3. Error correction Result and Analysis

Dependent Variable: DLM(-1)

	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.188653	0.038760	-4.867235	0.0003
DLM(-2)	-0.895588	0.149008	-6.010338	0.0000
DLM(-3)	-0.413401	0.144777	-2.855427	0.0135
DLCE(-1)	0.310305	0.163145	1.902017	0.0796
DLCE(-2)	0.379738	0.148630	2.554926	0.0240
DLCE(-3)	0.094489	0.149735	0.631041	0.5390
DLI(-1)	0.712721	0.112951	6.310024	0.0000
DLI(-2)	0.539503	0.129752	4.157963	0.0011
DLI(-3)	0.352429	0.156794	2.247724	0.0426
DLX(-1)	0.180884	0.058938	3.069084	0.0090
DLX(-2)	0.207019	0.068782	3.009776	0.0100
DLX(-3)	0.184408	0.052572	3.507711	0.0039
DLRP(-1)	0.020998	0.232225	0.090420	0.9293
DLRP(-2)	-0.431134	0.295117	-1.460893	0.1678
DLRP(-3)	0.015332	0.202227	0.075813	0.9407
DD01(-1)	0.474258	0.113323	4.185010	0.0011
DD01(-2)	0.504098	0.126708	3.978435	0.0016
DD01(-3)	0.286475	0.156899	1.825860	0.0909
ECM(-1)	-0.843324	0.132042	-6.386781	0.0000

R-squared	0.972785	Mean dependent var	0.252383
Adjusted R-squared	0.935103	S.D. dependent var	0.329282
S.E. of regression	0.083884	Akaike info criterion	-1.832046
Sum squared resid	0.091475	Schwarz criterion	-0.961765
Log likelihood	48.31274	Hannan-Quinn criter.	-1.543573
F-statistic	25.81555	Durbin-Watson stat	1.241360
Prob(F-statistic)	0.000000		

As indicated in the result above, the error correction term appears with a statistically significant coefficient with the appropriate negative sign as is required for dynamic stability. This follows well with the validity of an equilibrium relationship among the variables in the cointegrating equation. This term provides clear evidence of the significant relationship of Import demand and expenditure components in Nigeria. The estimated coefficient indicates that about 84 percent of

the errors in the short run are corrected in the long run. The error correction estimate shown in the table above reveals that almost all the coefficients of the variables tested above came out with a statistically positive signs. Consumption expenditure, export and investment coefficient relates positively with import implying that increase in expenditure on these leads to a significant increase in import. Except the coefficient of the second lag of relative price, the first and the third lag coefficient still indicated positive prices leading to the finding that the higher the relative price compared to the price of import, the higher the volume of both ceteris paribus. The dummy variable used to represent before and after trade liberalization in Nigeria came out statistically significant, which explains the fact that periods of liberalization have effect on import.

A further look at Table 4.3 indicates that the error correction model has a high coefficient of determination, this can been seen from R-squared of 97 percent and the adjusted R-squared of 93 percent. The R-squared measured the fitness of the regression result and show the percentage of variation in the dependent variable that was accounted by the variation in the explanatory variables. The Durbin-Watson statistic which measures autocorrelation shows that the error correction model is free from the problem of serial correlation due to its value (1.24). As a result of this, the estimated error correction model can be relied upon to make inference on the use of disaggregated expenditure components of total national income to determine the behaviour of imports demand in Nigeria

Generally, the result showed that import demand function and expenditure component in Nigeria has a statistically significant relationship.

5. Conclusions

The purpose of this study is to analyze Aggregate Import Demand and Expenditure component in Nigeria using Cointegration and Error Correction test. Estimating the import demand function, expenditure components like consumption expenditure, expenditure on investment, expenditure on the export of goods and services, relative price (proxied by ratio of import and domestic price index) and a dummy variables which represented before SAP as zero (0) and after SAP as 1(1). The series test was carried out using Augmented and Dickey-Fuller (ADF) and Phillip-Perron (PP) test to investigate the presence or otherwise of unit root in the variables used in the study. Stationarity of the variables was achieved at first difference which indicates the fact that the variables were integrated of other 1 (1). Johansen and Juselius cointegration test was carried out to find out the presence or otherwise of cointegration. It was observed the four (4) cointegrating vectors were found in trace statistics, leading to the conclusion that a long-term relationship exists among the variables so tested. To correct the long term effect of the cointegration, Error Correction Model (ECM) was included in estimating the equation. The coefficient

of the error correction came out with a negative and statistical significant value as is required for dynamic stability. This was agreed to follows well with the validity of an equilibrium relationship among the variables in the cointegrating equation. Also the term provided clear evidence of the significant relationship of Import demand and expenditure components in Nigeria. The estimated coefficient indicated that about 84 percent of the errors in the short run were corrected in the long run. It was also observed from the estimated result that the different expenditure components used in the study were statistical significant. This leads to the conclusion that there exist an empirical of expenditure relationship between aggregate import demand and expenditure components in Nigeria

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An Analysis of the Substitution Effect and of Revenue Effect in the Case of the Consumer's Theory Provided with a CES Utility Function

Catalin Angelo Ioan[1], Gina Ioan[2]

Abstract In the consumer's theory, a crucial problem is to determine the substitution effect and the revenue effect in the case of one good price's modifing. There exists two theories due to John Richard Hicks and Eugen Slutsky which allocates differents shares of the total change of the consumption to these effects. The paper makes an analysis between the two effects, considering the general case of a CES utility function and introduces three indicators which will characterize these shares.

Keywords: CES; substitution; revenue; utility

JEL Classification: D11

1. Introduction

In the consumer's theory, a crucial problem is to determine the substitution effect and the revenue effect in the case of one good price's modifing.

The theory due to John Richard Hicks consider after a modifing of a price, first a new allocation of goods preserving the utility, but modifing the revenue and after taking into account that the revenue is the initial one the changing in allocation due to a different utility.

The theory of Eugen Slutsky consider a combined displacement of the relative consuming obtained a share of the substitution effect or of revenue effect depending only from the parameters of the utility.

The problem is to determine these shares for both methods and to inquire which effect is uppermost.

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2. The Analysis

Let two goods A and B with the initial prices p_A and p_B and an utility function of a CES type $U=T\left(\alpha X^{-\lambda}+\beta Y^{-\lambda}\right)^{-\frac{1}{\lambda}}$, $\alpha,\beta>0$, $\lambda>0$, where X and Y are the consumed quantities in order to obtain an utility U. Let also, at a given time, V – the consumer's revenue.

In order to have the maximum utility for the revenue V it is known that we must have:

$$\begin{cases} \dfrac{U_{mA}}{U_{mB}}=\dfrac{p_A}{p_B} \\ V=p_AX+p_BY \end{cases}$$

where $U_{mA}=\alpha TX^{-\lambda-1}\left(\alpha X^{-\lambda}+\beta Y^{-\lambda}\right)^{-\frac{1}{\lambda}-1}$ and $U_{mB}=\beta TY^{-\lambda-1}\left(\alpha X^{-\lambda}+\beta Y^{-\lambda}\right)^{-\frac{1}{\lambda}-1}$ are the marginal utilities corresponding to the two goods A and B respectively.

We have now:

$$\begin{cases} \dfrac{\alpha X^{-\lambda-1}}{\beta Y^{-\lambda-1}}=\dfrac{p_A}{p_B} \\ V=p_AX+p_BY \end{cases}$$

Let note, in what follows:

$$\varphi=\frac{\alpha}{\beta},\ r_1=\frac{p_A}{p_B}$$

and: $S=r_1^{\frac{\lambda}{\lambda+1}}+\varphi^{-\frac{1}{\lambda+1}}$.

We have therefore:

$$Y=\left(\frac{\alpha p_B}{\beta p_A}\right)^{-\frac{1}{\lambda+1}}X=\varphi^{-\frac{1}{\lambda+1}}r_1^{\frac{1}{\lambda+1}}X$$

$$V=\left(p_A+p_B\varphi^{-\frac{1}{\lambda+1}}r_1^{\frac{1}{\lambda+1}}\right)X=\left(r_1+\varphi^{-\frac{1}{\lambda+1}}r_1^{\frac{1}{\lambda+1}}\right)p_BX$$

We obtain now:

$$X_1=\frac{r_1^{\frac{\lambda}{\lambda+1}}V}{Sp_A},\ Y_1=\frac{\varphi^{-\frac{1}{\lambda+1}}V}{Sp_B}$$

and the corresponding utility is: $U_1=\frac{TV\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}S^{-\frac{\lambda+1}{\lambda}}}{p_B}$.

Let suppose now that it is a change in the price of one of the goods, let say B, from p_B to p'_B, but the revenue V remains constant. Let note now: $r_2=\frac{p'_B}{p_B}$ and, of course: $\frac{p_A}{p'_B}=\frac{r_1}{r_2}$.

Let note, also: $R=r_1^{\frac{\lambda}{\lambda+1}}r_2^{-\frac{\lambda}{\lambda+1}}+\varphi^{-\frac{1}{\lambda+1}}$, $Q=\frac{R}{S}$.

We have, from the upper relations:

$$R\text{-}S=r_1^{\frac{\lambda}{\lambda+1}}r_2^{-\frac{\lambda}{\lambda+1}}\left(1-r_2^{\frac{\lambda}{\lambda+1}}\right)$$

$$\varphi^{-\frac{1}{\lambda+1}}=\frac{R-r_2^{-\frac{\lambda}{\lambda+1}}S}{1-r_2^{-\frac{\lambda}{\lambda+1}}}$$

Now:

$$X_3=\frac{r_1^{\frac{\lambda}{\lambda+1}}r_2^{-\frac{\lambda}{\lambda+1}}V}{Rp_A},\ Y_3=\frac{\varphi^{-\frac{1}{\lambda+1}}V}{Rr_2p_B}$$

and the corresponding utility: $U_3=\frac{TV\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}}{r_2p_B}R^{-\frac{\lambda+1}{\lambda}}$.

We shall apply now the Hicks method for our analysis.

At the modify of the price of B, for the same utility:

$U_1=\frac{TV\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}S^{-\frac{\lambda+1}{\lambda}}}{p_B}$ we shall have: $U_1=\frac{TV'\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}}{r_2p_B}R^{-\frac{\lambda+1}{\lambda}}$

therefore:

$$\frac{TV\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}S^{-\frac{\lambda+1}{\lambda}}}{p_B}=\frac{TV'\beta^{-\frac{1}{\lambda}}\varphi^{-\frac{1}{\lambda}}}{r_2p_B}R^{-\frac{\lambda+1}{\lambda}}$$

implies that:

$$V'=\frac{Vr_2S^{-\frac{\lambda+1}{\lambda}}}{R^{-\frac{\lambda+1}{\lambda}}}$$

With the new revenue, we obtain:

$$X_{2H}=\frac{r_1^{\frac{\lambda}{\lambda+1}}r_2^{\frac{1}{\lambda+1}}S^{-\frac{\lambda+1}{\lambda}}V}{R^{-\frac{1}{\lambda}}p_A}$$

$$Y_{2H}=\frac{\varphi^{-\frac{1}{\lambda+1}}S^{-\frac{\lambda+1}{\lambda}}V}{R^{-\frac{1}{\lambda}}p_B}.$$

The substitution effect (which preserves the utility) gives us a difference:

$$\Delta_{1H}X=X_{2H}-X_1=\frac{r_2^{\frac{1}{\lambda+1}}-Q^{-\frac{1}{\lambda}}}{Q^{-\frac{1}{\lambda}}Sp_A}r_1^{\frac{\lambda}{\lambda+1}}V$$

$$\Delta_{1H}Y=Y_{2H}-Y_1=\frac{1-Q^{-\frac{1}{\lambda}}}{Q^{-\frac{1}{\lambda}}Sp_B}\varphi^{-\frac{1}{\lambda+1}}V$$

The difference caused by the revenue V instead V' is therefore:

$$\Delta_{2H}X=X_3-X_{2H}=\frac{1-r_2Q^{\frac{\lambda+1}{\lambda}}}{Rp_A}r_1^{\frac{\lambda}{\lambda+1}}r_2^{-\frac{\lambda}{\lambda+1}}V$$

$$\Delta_{2H}Y=Y_3-Y_{2H}=\frac{1-Q^{\frac{\lambda+1}{\lambda}}r_2}{Rr_2p_B}\varphi^{-\frac{1}{\lambda+1}}V$$

named the revenue effect.

We shall apply now the Slutsky method for our analysis.

At the modify of the price of B, the revenue for the same optimal combination of goods is:

$$V' = p_A X_1 + p'_B Y_1 = p_A \frac{r_1^{\frac{\lambda}{\lambda+1}} V}{S p_A} + p'_B \frac{\varphi^{-\frac{1}{\lambda+1}} V}{S p_B} = \frac{S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1)}{S} V .$$

therefore:

$$X_{2S} = \frac{r_1^{\frac{\lambda}{\lambda+1}} r_2^{-\frac{\lambda}{\lambda+1}} V'}{R p_A} = \frac{r_1^{\frac{\lambda}{\lambda+1}} r_2^{-\frac{\lambda}{\lambda+1}} \left(S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1) \right) V}{RS p_A}$$

$$Y_{2S} = \frac{\varphi^{-\frac{1}{\lambda+1}} V'}{R p'_B} = \frac{\varphi^{-\frac{1}{\lambda+1}} \left(S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1) \right) V}{RS r_2 p_B} .$$

and the corresponding utility:

$$U_2 = T\left(\alpha X_{2S}^{-\lambda} + \beta Y_{2S}^{-\lambda}\right)^{-\frac{1}{\lambda}} = \frac{TV\beta^{-\frac{1}{\lambda}} \varphi^{-\frac{1}{\lambda}} \left(S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1) \right) R^{-\frac{\lambda+1}{\lambda}} r_1}{S r_2 p_A}$$

The substitution effect after Slusky (which not preserves the utility) gives us a difference:

$$\Delta_{1S} X = X_{2S} - X_1 = \frac{r_2^{-\frac{\lambda}{\lambda+1}} \left(S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1) \right) - R}{RS p_A} r_1^{\frac{\lambda}{\lambda+1}} V$$

$$\Delta_{1S} Y = Y_{2S} - Y_1 = \frac{S + \varphi^{-\frac{1}{\lambda+1}}(r_2 - 1) - R r_2}{RS r_2 p_B} \varphi^{-\frac{1}{\lambda+1}} V$$

and the revenue effect (after Slutsky):

$$\Delta_{2S} X = X_3 - X_{2S} = \frac{-\varphi^{-\frac{1}{\lambda+1}}(r_2 - 1)}{RS p_A} r_1^{\frac{\lambda}{\lambda+1}} r_2^{-\frac{\lambda}{\lambda+1}} V$$

$$\Delta_{2S}Y=Y_3-Y_{2S}=\frac{-\varphi^{-\frac{1}{\lambda+1}}(r_2-1)}{RSr_2p_B}\varphi^{-\frac{1}{\lambda+1}}V$$

We shall define, in what follows, the ratio:

$\alpha_Y=\frac{Y_2-Y_1}{Y_3-Y_1}$ - the share from the total consumption change for Y due to the substitution effect;

$\beta_Y=\frac{Y_3-Y_2}{Y_3-Y_1}$ - the share from the total consumption change for Y due to the revenue effect;

$r_Y=\frac{\beta_Y}{\alpha_Y}=\frac{Y_3-Y_2}{Y_2-Y_1}$ - the ratio between the revenue effect and the substitution effect.

We have obviously: $\alpha_Y+\beta_Y=1$ and $r_Y=\frac{1}{\alpha_Y}-1=\frac{1}{\frac{1}{\beta_Y}-1}$.

In the case of Hicks, we have:

- $\alpha_{YH}=\frac{\Delta_{1H}Y}{\Delta_{1H}Y+\Delta_{2H}Y}=\frac{\left(Q^{\frac{1}{\lambda}}-1\right)Qr_2}{1-Qr_2}$

- $\beta_{YH}=\frac{\Delta_{2H}Y}{\Delta_{1H}Y+\Delta_{2H}Y}=\frac{1-Q^{\frac{\lambda+1}{\lambda}}r_2}{1-Qr_2}$

- $r_{YH}=\frac{\beta_{YH}}{\alpha_{YH}}=\frac{1-Q^{\frac{\lambda+1}{\lambda}}r_2}{\left(Q^{\frac{1}{\lambda}}-1\right)Qr_2}$

In the case of Slutsky, we have:

- $\alpha_{YS}=\dfrac{\Delta_{1S}Y}{\Delta_{1S}Y+\Delta_{2S}Y}=1+\dfrac{\left(Q-r_2^{-\frac{\lambda}{\lambda+1}}\right)(r_2-1)}{(1-Qr_2)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)}$

- $\beta_{YS}=\dfrac{\Delta_{2S}Y}{\Delta_{1S}Y+\Delta_{2S}Y}=\dfrac{-\left(Q-r_2^{-\frac{\lambda}{\lambda+1}}\right)(r_2-1)}{(1-Qr_2)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)}$

- $r_{YS}=\dfrac{\beta_{YS}}{\alpha_{YS}}$

Because $Q=\dfrac{R}{S}=\dfrac{r_1^{\frac{\lambda}{\lambda+1}}r_2^{-\frac{\lambda}{\lambda+1}}+\varphi^{-\frac{1}{\lambda+1}}}{r_1^{\frac{\lambda}{\lambda+1}}+\varphi^{-\frac{1}{\lambda+1}}}$ we have: $1-r_2Q=\dfrac{\left(1-r_2^{\frac{1}{\lambda+1}}\right)r_1^{\frac{\lambda}{\lambda+1}}+(1-r_2)\varphi^{-\frac{1}{\lambda+1}}}{r_1^{\frac{\lambda}{\lambda+1}}+\varphi^{-\frac{1}{\lambda+1}}}$

therefore: if $r_2<1$ then $1-r_2Q>0$ and if $r_2>1$ then $1-r_2Q<0$.

Let analyse now the inequality: $\alpha_{YH}>\alpha_{YS}$. We have:

$$\frac{\left(Q^{\frac{1}{\lambda}}-1\right)Qr_2}{1-Qr_2}>1+\frac{\left(Q-r_2^{-\frac{\lambda}{\lambda+1}}\right)(r_2-1)}{(1-Qr_2)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)}$$ therefore:

$$\frac{\left(Q^{\frac{1}{\lambda}}Qr_2-1\right)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)-\left(Q-r_2^{-\frac{\lambda}{\lambda+1}}\right)(r_2-1)}{(1-Qr_2)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)}>0$$

Because $(1-r_2Q)\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)<0$ we must have:

$$Q^{\frac{\lambda+1}{\lambda}}\left(r_2-r_2^{\frac{1}{\lambda+1}}\right)-Q(r_2-1)+r_2^{\frac{1}{\lambda+1}}-1<0\,.$$

Let now the function: $g(Q)= Q^{\frac{\lambda+1}{\lambda}}\left(r_2 - r_2^{\frac{1}{\lambda+1}} \right) - Q(r_2 -1) + r_2^{\frac{1}{\lambda+1}} -1$

We have: $g'(Q) = \frac{\lambda+1}{\lambda} Q^{\frac{1}{\lambda}}\left(r_2 - r_2^{\frac{1}{\lambda+1}} \right) - (r_2 -1) = 0 \Rightarrow$

$$Q_{root} = \left(\frac{\lambda}{\lambda+1} \right)^{\lambda} r_2^{-\frac{\lambda}{\lambda+1}} \left(\frac{r_2 -1}{r_2^{\frac{\lambda}{\lambda+1}} -1} \right)^{\lambda} >0.$$

and, with the notation: $u= \frac{r_2^{\frac{\lambda}{\lambda+1}} -1}{r_2 -1} \in (0,1)$, we have: $g(Q_{root})=$

$$\frac{(r_2 -1)}{r_2^{\frac{\lambda}{\lambda+1}} u^{\lambda}} \left((1-u)u^{\lambda} - \frac{\lambda^{\lambda}}{(\lambda+1)^{\lambda+1}} \right).$$

Lemma 1 $(1-u)u^{\lambda} < \frac{\lambda^{\lambda}}{(\lambda+1)^{\lambda+1}} \quad \forall u \in (0,1) \ \forall \lambda > 0$

Proof Let note $h:(0,1)\rightarrow \mathbf{R}$, $h(u)=(1-u)u^{\lambda}$. Because $h'(u) = u^{\lambda-1}\left(\lambda - (\lambda+1)u\right)=0$ has the root: $u_0= \frac{\lambda}{\lambda+1}$ we obtain that: h has a maximum value in u_0, therefore $(1-u)u^{\lambda} < \frac{\lambda^{\lambda}}{(\lambda+1)^{\lambda+1}}$. **Q.E.D.**

From the upper relation, we obtain now that: $g(Q_{root})>0$ for $r_2<1$ and $g(Q_{root})<0$ for $r_2>1$.

Lemma 2 $(x-1)\left(\frac{\lambda+1}{\lambda} \frac{x - x^{\frac{1}{\lambda+1}}}{x-1} -1 \right) >0 \ \forall x>0 \ \forall \lambda>0$

Proof Let note $h:\mathbf{R}-\{1\}\rightarrow \mathbf{R}$, $h(x)= \frac{\lambda+1}{\lambda} \frac{x - x^{\frac{1}{\lambda+1}}}{x-1} -1$. We have

$$h'(x) = \frac{\lambda x^{\frac{1}{\lambda+1}} + x^{-\frac{\lambda}{\lambda+1}} - \lambda -1}{\lambda(x-1)^2}$$

But $k(x)=\lambda x^{\frac{1}{\lambda+1}}+x^{-\frac{\lambda}{\lambda+1}}-\lambda-1$, $k'(x)=\frac{\lambda}{\lambda+1}x^{-\frac{2\lambda+1}{\lambda+1}}(x-1)$ and $k(1)=0$, implies that: $k(x)>0\ \forall x>0$ therefore: $h'(x)>0\ \forall x>0$. The function h being increasing and $h(0)=-1$, $\lim_{x\to 1}h(x)=0$, $\lim_{x\to\infty}h(x)=\frac{1}{\lambda}$ we have that for $0<x<1$: $h(x)<0$ and for $x>1$: $h(x)>0$. Multiplied h with (x-1) we shall obtain the conclusion of the lemma. **Q.E.D.**

We have now $g'(1)=\frac{\lambda+1}{\lambda}\left(r_2-r_2^{\frac{1}{\lambda+1}}\right)-(r_2-1)=(r_2-1)\left(\frac{\lambda+1}{\lambda}\frac{r_2-r_2^{\frac{1}{\lambda+1}}}{r_2-1}-1\right)$. From the lemma, we have therefore: $g'(1)>0$. Because $g'(0)=1-r_2$, $\lim_{Q\to\infty}g'(Q)=\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)\infty$ we have that:

- if $r_2<1$: $Q_{root}>1$
- if $r_2>1$: $Q_{root}<1$

On the other hand, we have that: $g(0)=r_2^{\frac{1}{\lambda+1}}-1$, $g(1)=0$, $\lim_{Q\to\infty}g(Q)=\left(1-r_2^{-\frac{\lambda}{\lambda+1}}\right)\infty$.

We obtain then:

- if $r_2<1$: g is an increasing function on $(0,Q_{root})$ and decreasing on (Q_{root},∞) and also has one single root, except 1, in $(Q_{root},\infty)\subset(1,\infty)$.
- if $r_2>1$: g is a decreasing function on $(0,Q_{root})$ and is increasing on (Q_{root},∞) and also has one single root, except 1, in $(0,Q_{root})\subset(0,1)$

Let note $\overline{Q}$ - the single root of g. The upper specified values of g concludes that:

- if $r_2<1$: $g<0$ for $Q\in(0,1)\cup(\overline{Q},\infty)$ and $g>0$ for $Q\in(1,\overline{Q})$.
- if $r_2>1$: $g>0$ for $Q\in(0,\overline{Q})\cup(1,\infty)$ and $g<0$ for $Q\in(\overline{Q},1)$.

In terms of our indicators, we have that $\alpha_{YH}>\alpha_{YS}$ if $r_2<1$ and $Q\in(0,1)\cup(\overline{Q},\infty)$ or $r_2>1$ and $Q\in(\overline{Q},1)$ where $\overline{Q}$ is the root of the equation:

$$Q^{\frac{\lambda+1}{\lambda}}\left(r_2-r_2^{\frac{1}{\lambda+1}}\right)-Q(r_2-1)+r_2^{\frac{1}{\lambda+1}}-1=0$$

Also, $\alpha_{YH}<\alpha_{YS}$ if $r_2<1$ and $Q\in(1,\overline{Q})$ or $r_2>1$ and $Q\in(0,\overline{Q})\cup(1,\infty)$.

For the determination now of the real root $\overline{Q}$ of g, we shall apply the Newton method of approximation for functions of one variable. Because the starting point Q_0 for a function g:[a,b]→**R**, who maintains the monotony and the concavity is those for which $g(Q_0)g''(Q_0)>0$ and at us, if $r_2<1$: $g''<0$, $r_2>1$: $g''>0$, we must choose Q_0, in the case $r_2<1$ such that $g(Q_0)<0$ and in the case $r_2>1$ such that $g(Q_0)>0$.

On the other hand, if $r_2<1$, we have: $\overline{Q}>1$ and we shall choose the starting point Q_0 sufficiently large and if $r_2>1$, we have: $\overline{Q}<1$ and we shall choose the starting point Q_0 sufficiently small.

We have now, from the Newton's method:

$$(48)\ Q_{n+1}=Q_n-\frac{g(Q_n)}{g'(Q_n)}=\frac{Q_n^{\frac{\lambda+1}{\lambda}}\left(r_2-r_2^{\frac{1}{\lambda+1}}\right)+\lambda\left(1-r_2^{\frac{1}{\lambda+1}}\right)}{(\lambda+1)Q_n^{\frac{1}{\lambda}}\left(r_2-r_2^{\frac{1}{\lambda+1}}\right)-\lambda(r_2-1)},\ n\geq 0.$$

In the figure 1, we have on the horizontal axis the values of r_2 and on vertical axis the value of $\overline{Q}$ for which $\lambda=2$:

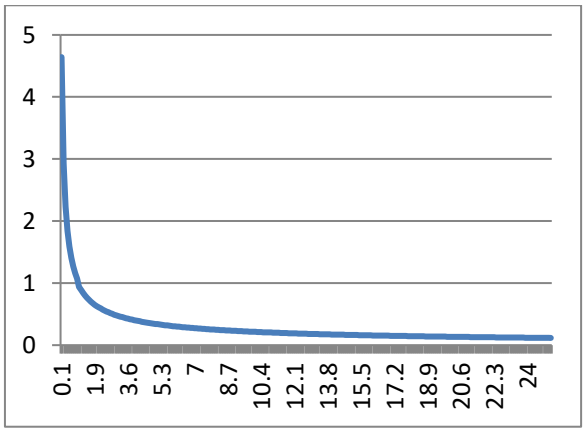

Figure 1. The chart of the roots $\overline{Q}$ for the case $\lambda=2$ in the case of a CES-function

If $\lambda \to 0$ we know that the CES-function becomes Cobb-Douglas.

In the figure 2, we have on the horizontal axis the values of r_2 and on vertical axis the value of $\overline{Q}$ for which $\lambda = \frac{1}{2}$:

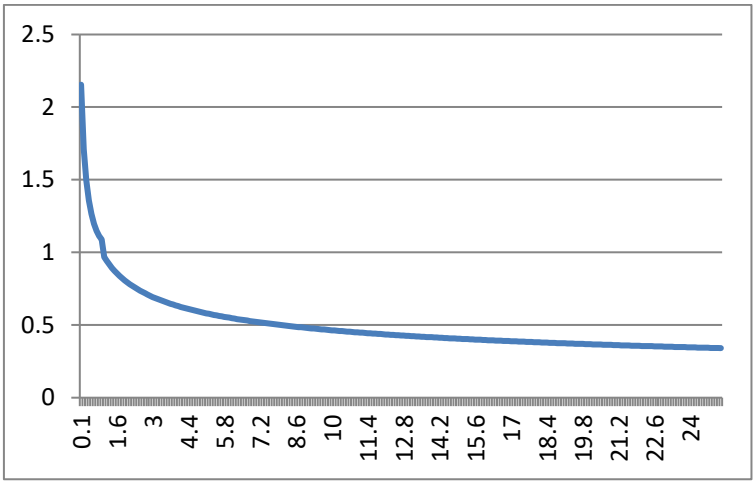

Figure 2. The chart of the roots $\overline{Q}$ for the case $\lambda = \frac{1}{2}$ in the case of a CES-function

If $\lambda \to 0$ we know that the CES-function becomes Cobb-Douglas.

3. Conclusion

Considering the single real root $\overline{Q}$ of the equation: $Q^{\frac{\lambda+1}{\lambda}}\left(r_2 - r_2^{\frac{1}{\lambda+1}}\right) - Q(r_2 - 1) + r_2^{\frac{1}{\lambda+1}} - 1 = 0$ we have that: $\alpha_{YH} > \alpha_{YS}$ if $r_2 < 1$ and $Q \in (0,1) \cup (\overline{Q}, \infty)$ or $r_2 > 1$ and $Q \in (\overline{Q}, 1)$ that is the share from the total consumption change for Y due to the substitution effect is smaller in the case of Slutsky than in the hicksian case. Also, $\beta_{YH} < \beta_{YS}$ that is the share from the total consumption change for Y due to the revenue effect is higher in the case of Slutsky than in the hicksian case.

If $r_2 < 1$ and $Q \in (1, \overline{Q})$ or $r_2 > 1$ and $Q \in (0, \overline{Q}) \cup (1, \infty)$ we have that $\alpha_{YH} < \alpha_{YS}$ that is the share from the total consumption change for Y due to the substitution effect is higher in the case of Slutsky than in the hicksian case and, of course $\beta_{YH} > \beta_{YS}$ that

is the share from the total consumption change for Y due to the revenue effect is smaller in the case of Slutsky than in the hicksian case.

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Tourism and Sustainable Development

Tourist Industry Recovers from World Economic Crisis

Anca Gabriela Turtureanu[1], Cornelia Elena Tureac[2], Bogdan Constantin Andronic[3]

Abstract: Tourism has become an important economic engine on the global point of view , but is extremely localized. Due to geographical distribution and nature of labor intensive activities in tourism offers a wide range of employment opportunities for poor and vulnerable groups in developing countries, especially but not exclusively, in rural and remote areas. Tourism has suffered a lot during the global economic crisis, there was a decline of 4% of international tourist arrivals in 2009, and revenues from international tourism fell by 6% by 2009. To a new report "Euro barometer" survey on the attitudes of Europeans towards tourism emphasized that the tourism industry has passed the economic crisis confirmed by the indicators. Motivations of travel for 2011 have been to traditional tourist destinations (58%), while 28% wanted to discover new destinations.

Keywords: tourism; debt crisis; economic uncertainty; growth; tourism market

JEL Classification: P48; L83; N5

1 Introduction

One of the main socio-economic phenomena of our century is the rapid development and remarkable continuity of domestic and international tourism, both at Earth and at regional level. Tourism, as an economic and social phenomenon, has known an spectacular boom in the second half of the twentieth century.

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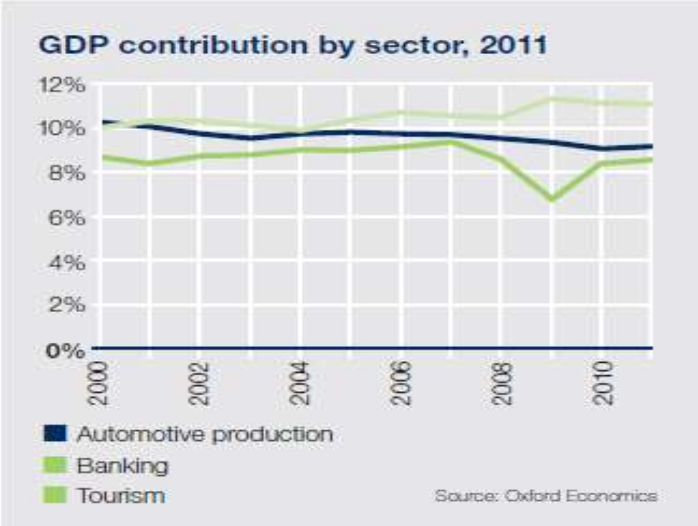
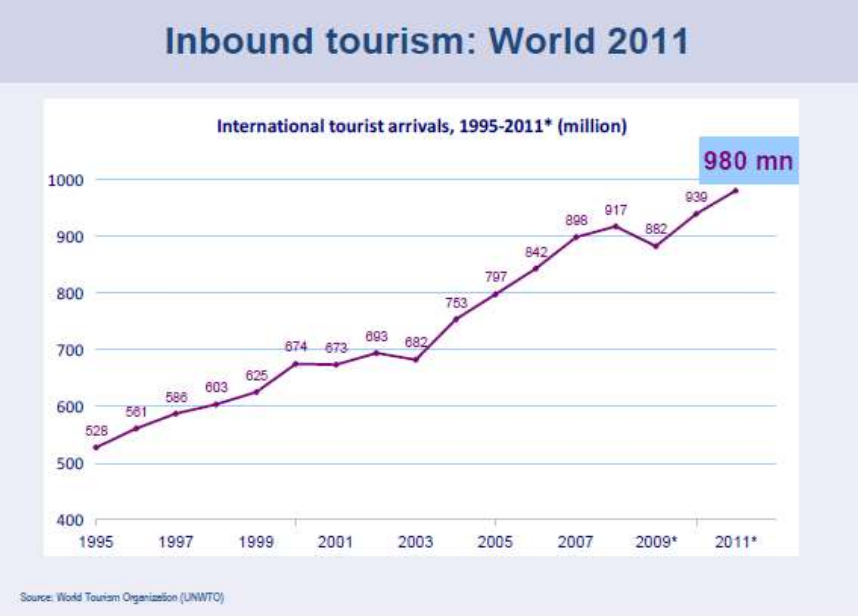
Tourism has a significant impact on economies, societies and cultures of countries. Action to occur on many levels, from boosting economic growth to improve the social fabric of the upper turning natural and material resources to improve living conditions. Obviously, tourism contribution to economic and social progress, the intensity of its action differs significantly from country to country depending on its level of development and the policy pursued towards him.

2 Tourism Development During Global Economic Crisis

Tourist industry in recent decades has proven that it can be an important element in the economic growth. The increasing number of tourists, tourism business growth, but also that this area is still a major employer in the labor market encourages positive evolution of the global Travel & Tourism sector. The contribution of tourism industry in global GDP is impressive 9% with only slightly smaller than the banking sector representing 11%, but higher than the automotive industry is 8.8%.

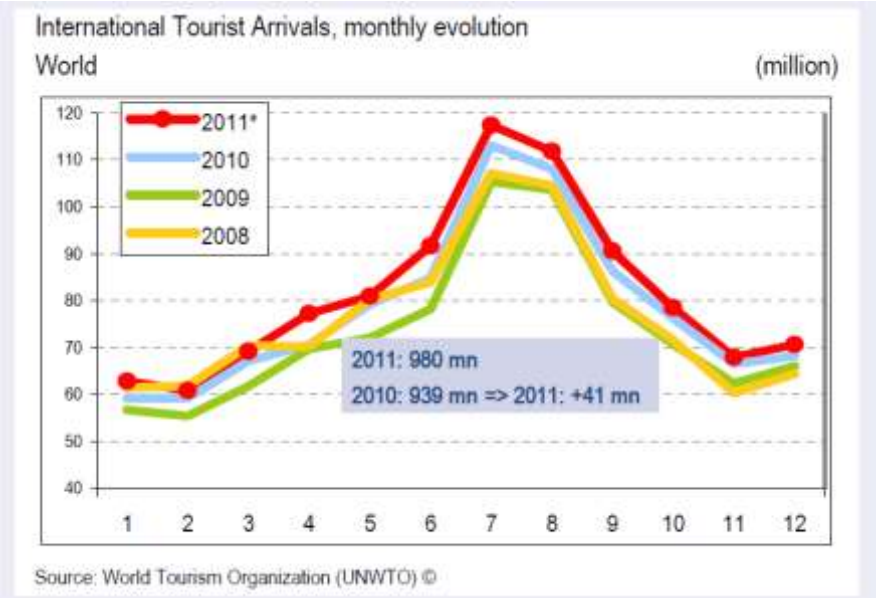


According to a new report UNWTO "2011 International Tourism Results and Prospects for 2012" during the 2011 tourist arrivals grew by about 4% to a total of 980 million. According to the report in 2012 will continue to grow, at a slower rate probably very close to one billion tourists. The increase in 2011 was 4.4% (980 million in 2011, compared with 939 million in 2010).



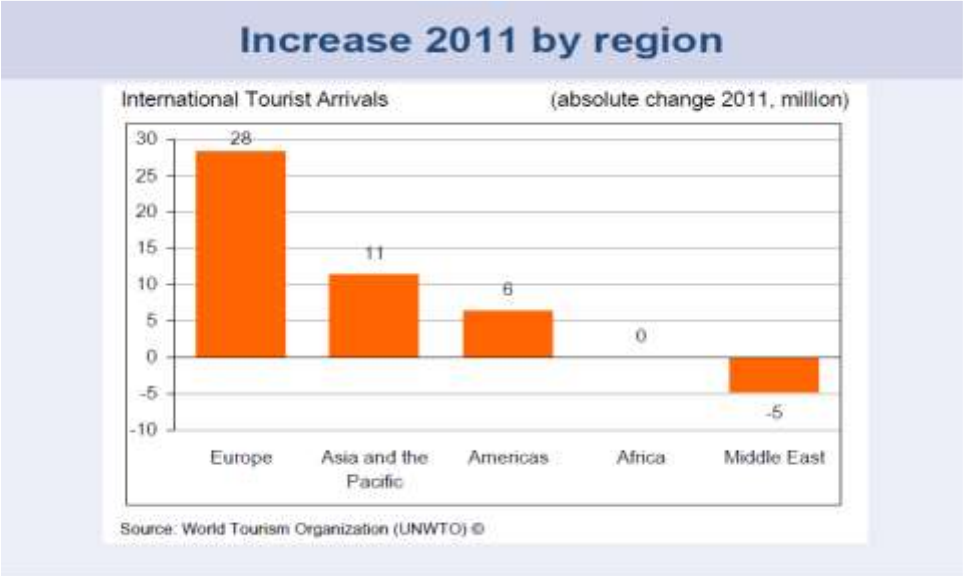
This figure is in itself very good, but considering the global context becomes even more valuable. 2011 was characterized by an impasse in the global economy that seems to recover in a series of events leading to political instability in countries in the Middle East and North Africa, and natural disasters, such as significant enough earthquake in Japan

WTTC said in late 2011 as The debt crisis Euro-zone Continues unabated. With little political will, reforms implementation that would significantly have result in a permanent solution to the crisis, there is a risk on policy-makers that could be overtaken by Financial Markets. At the same time, the risk of recession in the USA has increased. The weak labor market to weigh on household spending continues, while financial stress has taken its toll on business confidence.

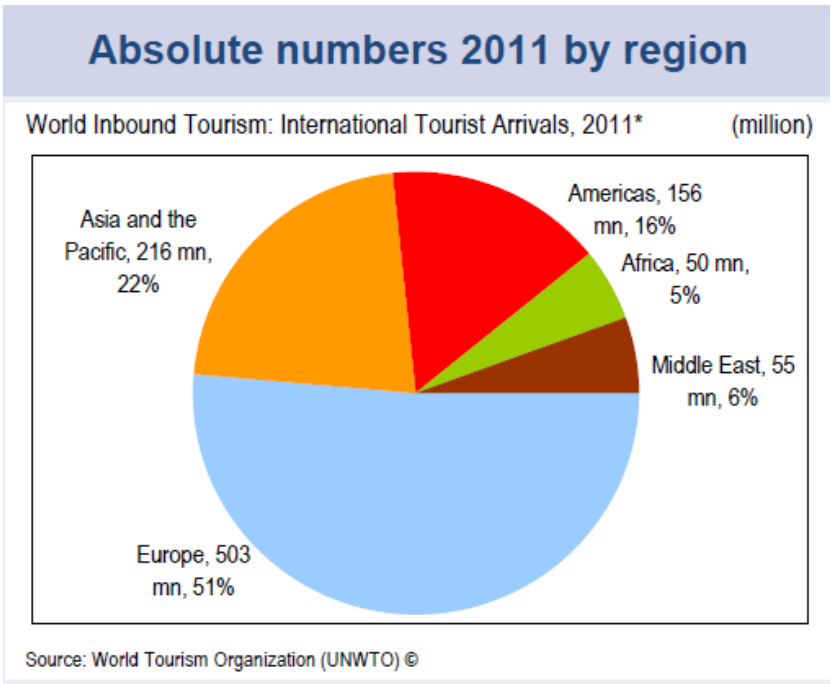


Speaking of arrivals growth in Europe is 6%, but the best results were registered in South Africa with 10%. Another interesting fact is that, contrary to what happened in previous years, growth was higher in economically advanced countries (5% in total) and in emerging markets (+3.8%) probably because of problems arising in Middle East and North Africa, which have slowed tourist arrivals and favored Europe.

In Europe, tourist arrivals reached 503 million in 2011, despite economic uncertainty, ie 28 million of the 41 million international tourist arrivals recorded worldwide. In Eastern Europe, Central and part of the Mediterranean was an increase of 8%, while arrivals in the Mediterranean are due to change orientation flow of tourists visiting the Middle East and North Africa for the European Mediterranean area, have been also notice the growth in this area and in Germany, Scandinavia and the Russian Federation.



In Asia and the Pacific was the result of 6% of arrivals, an increase of 11 million compared to 2010 amounting to a total of 216 million international tourists, while North Asia and Oceania or experienced more modest increases (4% and 3% respectively), partly due to considerable decrease of tourist flows from Japan.



UNWTO estimated growth will continue, albeit modest, in the course of 2012. This growth is expected to be between 3% and 4%, with about 1 billion international tourists. Increases are expected in Asia, Pacific and Africa (with values from 4% to 6%), followed by America and Europe (from 2% to 4%). Also, it is expected that in 2012 Middle East to begin to recover some losses in 2011 (probably from 0% to +5%).

International tourism: projection full year 2012

	2011	Projection 2012
World	+4.4%	+3% to +4%
Europe	+6.0%	+2% to +4%
Asia and the Pacific	+5.6%	+4% to +6%
Americas	+4.2%	+2% to +4%
Africa	+0.0%	+4% to +6%
Middle East	-8.0%	+0% to +5%

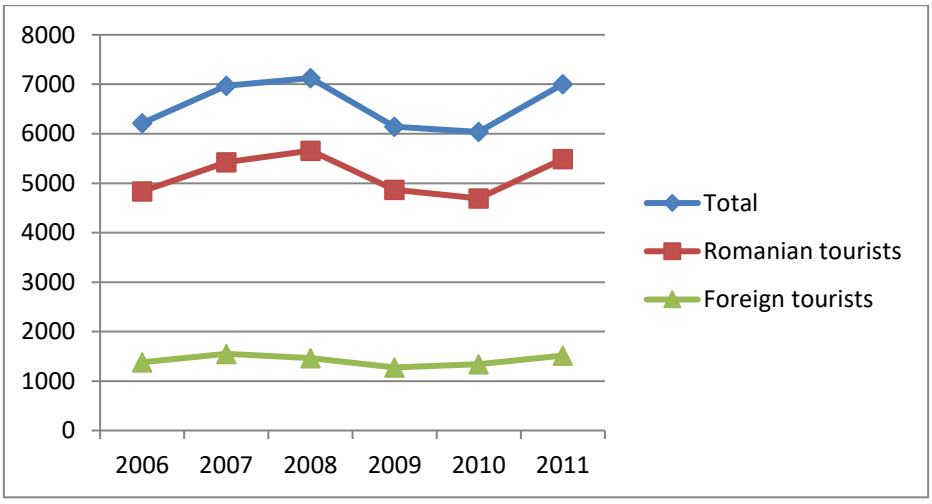
Source: World Tourism Organization (UNWTO)

3 The Development Of Tourist Arrivals In Romania

According to data compiled annually by the National Institute of Statistics of Romania's tourist industry evolved during 2006 - 2011 as follows:

- Arrivals in tourist reception in Romania on 2007 totaled 6971,9 up by 12.2% than in 2006. Arrivals in tourist reception on 2009 totaled 6141,1 down by 13.8% from the previous year.

	Arrivals In Romania					
	2006 - thousand tourists -	2007 - thousand tourists -	2008 - thousand tourists -	2009 - thousand tourists -	2010 - thousand tourists -	2011 - thousand tourists -
Total	6216,1	6971,9	7125,3	6141,1	6036,2	7002,4
Romanian tourists	4836,2	5421,0	5659,4	4865,5	4693,1	5487,6
Foreign tourists	1379,9	1550,9	1465,9	1275,6	1343,1	1514,8



- Arrivals in tourist reception in 2011 totaled 7002,4 up 16.0% that in 2010, but still has not exceeded the 2008 level.
- Romanian tourist arrivals in tourist reception with functions of accommodation were in 2011 78.4% of the total arrivals, while foreign tourists accounted for 21.6% of the total arrivals, weights close to those of the year 2010.
- Arrivals in hotels had in 2011 accounted for 76.7% of total arrivals in tourist reception with functions of accommodation. Compared to 2010, arrivals in hotels on 2011, grow by 16.8%.

As in volume, about 20% of tourists spend their holidays abroad, while 80% choose Romania. According to study IRES on "Holiday 2011, behaviors and habits", over 70% of respondents spent most holidays in the last 10 years in Romania. 15% of them say the most they have spent abroad, and 12% in both places.

The study "Holidays 2011 - behaviors and habits' shows that, after several years of financial crisis, Romanians reduce their aspirations in regard to their holidays: they would prefer to go abroad rather than in Romania, subtract the number who go on holiday plane, decreases interest destinations in Western European countries, but increases to or Bulgarian seaside.

Tourism market is extremely fragmented, is still dominated by few large players, who own about 30% of the market and mainly active in the tourism business. In March 2011, the top 10 travel agencies changed (for figures from 2010) such as: (according to Mediafax), the top 10 out Kartago, J'InfoTours and Parallel 45, whose business has declined considerably.

4 Conclusions

In 2011, world tourism has emerged fully from the crisis, say experts unanimously. Trend of increasing profits and the number of tourists will continue over the next few years, and this year could be even set a new record for number of trips, reports World Travel Monitor Forum.As shown in the statistics world tourism industry activity increases in importance. The main index, tourist arrivals, is increasing, and sales in 2011 of 4.4% is significant.

According to the WTO officials, tourism is very important in emerging economies, tourism affects the entire economy by reducing debt, trade deficit and creating jobs.Besides the critical economic dimension, tourism is very important socially and culturally, favoring communication between different cultures, it can have an influence on mentality and geopolitical developments worldwide.About tourism in Romania it registered a significant growth last year, but not yet reached the 2008 level, we can say that has the following trends:

- As a domestic destinations, is on an upward trend for Delta and spa destinations and maintenance. Spa tourism has attracted substantial investments in recent years (investment funds, European sources - the central and local authorities, direct sources of contractors) and will continue to receive funding and Sulina benefit from a pilot project to develop sustainable tourism.
- Top domestic destinations continue to be the Romanian coast. However, to counterbalance, in the summer stands the increasing preference for

package tourists in spas (diets containing maintenance treatment) in preference to a package on the beach, less attractive as services. Perhaps competition neighboring coastal destinations and spa & wellness segment competition will determine the hoteliers on the coast opposite to be more innovative in the packages that thei offer.

- Top foreign destinations remained the: Turkey, Greece, Bulgaria for the summer (as NATA) and Bulgaria and Austria for the winter. Dubai's having a promising increase.
- It outlines more than a tourism trend for families with children especially in coastal areas, this segment is apparently less affected by crisis.
- Business tourism has apparently returned, but budgets have shrunk, and companies put pressure on prices. And here begins to take the online site's more that thowse in offline.
- As a share of the total market, independent sources confirm that business tourism has the majority (about 60% of the market).
- Direct bookings and online bookings bites an increasingli piece of the market.

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Demographic Component-Support of Regional Economic Development. Case Study: Tecuci Plain

Iulian Adrian Şorcaru[1]

Abstract: Regional economic development is strongly conditioned by the demographic component, the analysis of demographic trends and demographic projections serving to substantiate proper development plans and strategies. This study aims to determine the demographic trend of human settlements in the Tecuci Plain, a space that can get the future status of micro-region, to identify the favorability and/or restriction factors, to draw up useful demographic projections for policy makers at local and regional level.

Keywords: demographic trend; demographic projections; regional development

Jel Classification: J1, J11

1 Introduction

Demographic changes we are witnessing in recent decades are a growing concern in the entire world. In Romania, the "demographic winter" installed after 1990 and the accentuation of regional disparities, require a closer analysis of demographic component in certain “micro-regions”, which may redraw the administrative-territorial map of Romania, whose future development can generate increased decentralization policies and implementation of more focused development strategies. In this context we consider that the area of Western and North-Western County of Galati-Tecuci Plain-, requires a careful analysis of demographic component, trying to establish the demographic evolution of this territory between the end of the nineteenth century and the last census, and to identify patterns of demographic evolution of human settlements that distinguish the region.

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2 The Territorial Administrative Frame and Demographic Evolution

Tecuci Plain has an area of about 905 km^2, approximately 90.5% being administered by Galati County (49 villages administered by 20 communes) and only 9.5% by Vaslui County (3 villages administered by 2 communes). Thus, the region currently includes a number of 52 villages grouped in 22 communes and one town municipality: Tecuci.

Statistical and demographic information used for Tecuci Plain (statistical papers, population censuses) reflect a growing population of the region between the late nineteenth century and 2002 - the year that marks the last census organized in Romania. Basically in this period of over a century the population in Tecuci Plain tripled its number, from about 48 197 inhabitants in 1893(Ciuntu, Th., 1897, p.2) to 151976 inhabitants in 2002. (Figure 1)

However, calculating the average annual increase and growth rates of the population of the region shows that there were, according to recognized demographic vitality of Moldova, different intensities of population growth, demographic behaviour being influenced by a number of historical and economic factors that marked the entire Romanian space.

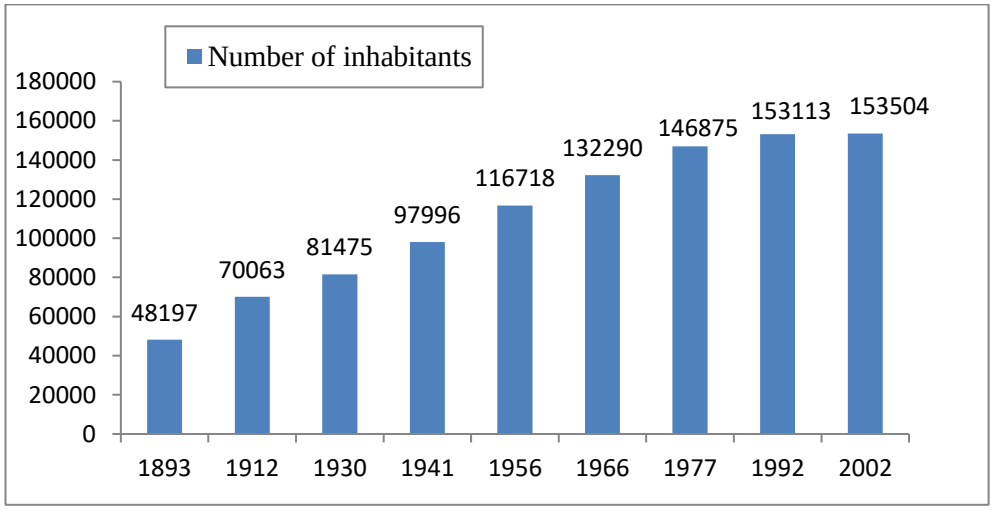

Figure 1 Demographic Trend in Tecuci Plain (source: calculated data after censuses of Romania)

Thus, during the *period 1893-1912*, Tecuci Plain records the highest population growth due to a high birth rate and lack of major political events with negative consequences for the region's population. In this period the average annual increase and growth rate of the population are 1151 inhabitants and 45.3%.

Table 1 The Evolution of the Average Annual Increase and Growth Rate of the Population in Tecuci Plain (source: calculated data)

Period	Average Annual Increase (number of inhabitants)	Growth Rate (%)
1893-1912 (19 years)	1151	45,3
1912-1930 (18 years)	634	16,2
1930-1941 (11 years)	1501	20,2
1941-1956 (15 years)	1248	19,1
1956-1966 (10 years)	1557	13,3
1966-1977 (11 years)	1325	11
1977-1992 (15 years)	416	4,2
1992-2002 (10 years)	39	0,2

Between 1912-1930, we are witnessing a drop in the two indicators analyzed, the population growth rate being only 16.2%. This decrease is mainly due to poor socio-economic status of most inhabitants of the region which gradually worsens during World War I, being reinforced by the economic crisis whose signs are beginning to be felt throughout the country since 1928.

The period 1930-1941 is characterized by an 20.2% increase and an average annual increase of 1501 inhabitants, values that were almost identical in the postwar period (1941-1956) when population increased by about 19.1 %.

The first signs of demographic rebound start with the *period 1956-1966* when the population growth rate decreased to 13.3% as a result of continuing decline in the birth rate and rural-urban migration growth. Is the period that marks the construction of one of the most important industrial projects from the communist period-*Steel Plant* from Galati City- partially opened in 1968 which generates an increase of about 57.3% of the city population during 1966 – 1977 (Oancea, 1973, p.62)

After 1977, population decline continued, Tecuci Plain recording insignificant increases ranging from 4.2% in the period 1977-1992 and only 0.2% between 1992-2002. The fall of the communist political regime and the establishment of the current political system had a major demographic impact on the region studied. The repeal of the communist pronatalist policies, considered forced ones, and especially the lack of strong and coherent policies to stimulate the birth rate in the 90´s, generated a continuous decrease of the demographic vitality, affecting also Tecuci Plain.

In conclusion, although the numerical evolution of the population in Tecuci Plain had an upward trend, it was not atypical, changes recorded at the national level at the end of the twentieth century and early this century leading to a major change in demographic behaviour even in regions with recognized demographic "traditionalism", with negative effects on medium and long term also on our region.

3 Demographic Trends Of The Human Settlements In Tecuci Plain

The analysis of demographic trends in each human settlement in the same period has enabled me to identify three types of major evolution (Figures 2 and 3):

a. upward, 48 settlements (90.5%), among which we mention: Tecuci, Malu Alb, Drăganeşti, Munteni, Matca, Ghidigeni, Cosmeşti, s.a.;

b. stagnant, one settlement (1.8%): Satu Nou;

*c. downward***,** 4 settlements (7,7%): Cârlomăneşti, Gara Ghidigeni, Torceşti, Mălureni.

If we analyze the evolution of population size and fluctuations occurred in each village within the region we can draw the following major conclusions:

- from a total of 40 villages in 1893, prevailed low ones - 13 villages, about 32.5% (Drăgăneşti, Podoleni, Cosmeşti, Băltăreţi, etc.) - and medium ones- 14, about 35% (Negrileşti, Cârlomăneşti, Furcenii Noi, Tălpigi, etc.), while the very large ones were represented by only 3 villages, 7,5% (Corod, Cudalbi, Lieşti), large ones by 4 settlements, 10% (Munteni, Buceşti, Matca, Tudor Vladimirescu) and very small settlements by 6 villages, 15% (Slobozia Blăneasa, Satu Nou, Hanu Conachi, Slobozia Corni, Poşta, Condrea);

- in 2002 the situation is diametrically opposite, large and very large villages are represented by 10 settlements, about 19.2% (Drăgăneşti, Malu Alb, Ghidigeni, ş.a.), and 11 settlements, about 21,1% (Lieşti, Matca, Iveşti, Buceşti, ş.a.). The biggest share is still held by the medium villages (20 villages, about 38.4%), while the number of small and very small villages has significantly diminished (6 small villages, about 11.5% and 5 very small villages, some 9.6%).

- the analysis and classification of each human settlement in population size classes, also reflects three major evolutions: *upward* recorded by 35 villages (67.3%), the largest variation recorded by Hanu Conachi; *stagnant*, recorded by 16 villages (30.7%) and *downward*, recorded by a single village, Mălureni (1.9%).

- the single urban settlement within the region,Tecuci City, recorded an upward evolution, evolving from a very small town in the late nineteenth century to a small one by the last census;

- the demographic hierarchy placed, at the end of the nineteenth century, on the first place Cudalbi village with 3970 inhabitants in 1893 and on the last place Posta village with 93 inhabitants; at the 2002 census first place is occupied by Matca with 11797 inhabitants and the last one by Gara Ghidigeni with only 20 inhabitants.

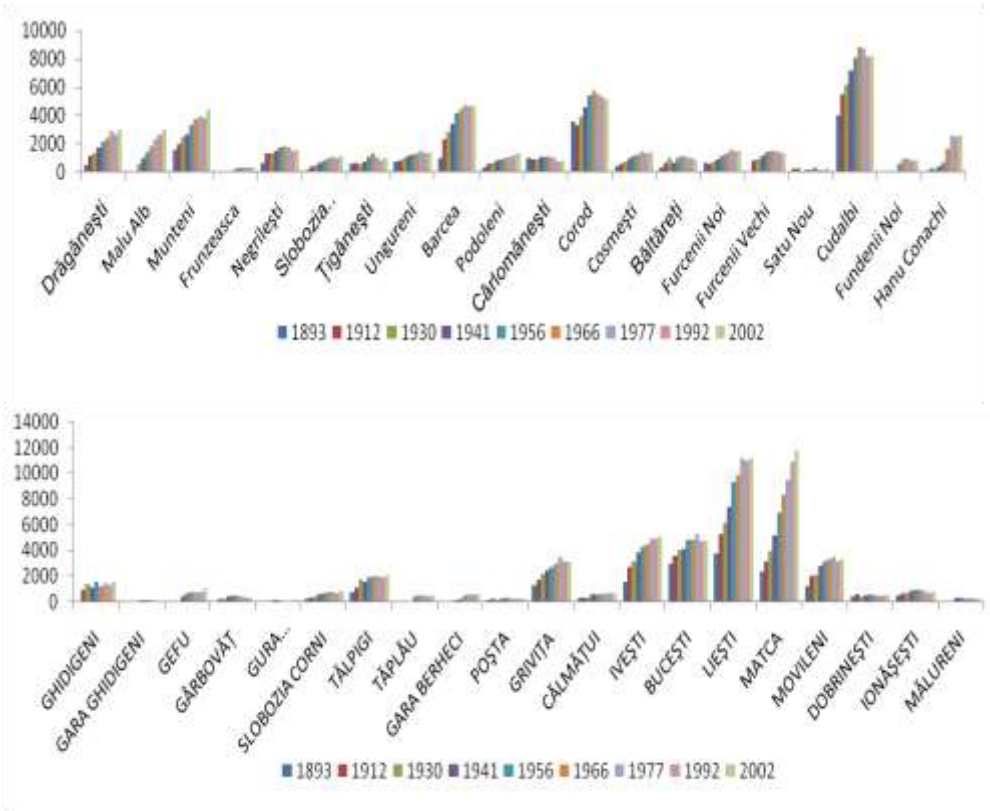

Figure 2 Demographic Trend of Rural Settlements in Tecuci Plain (Source: Censuses in Romania)

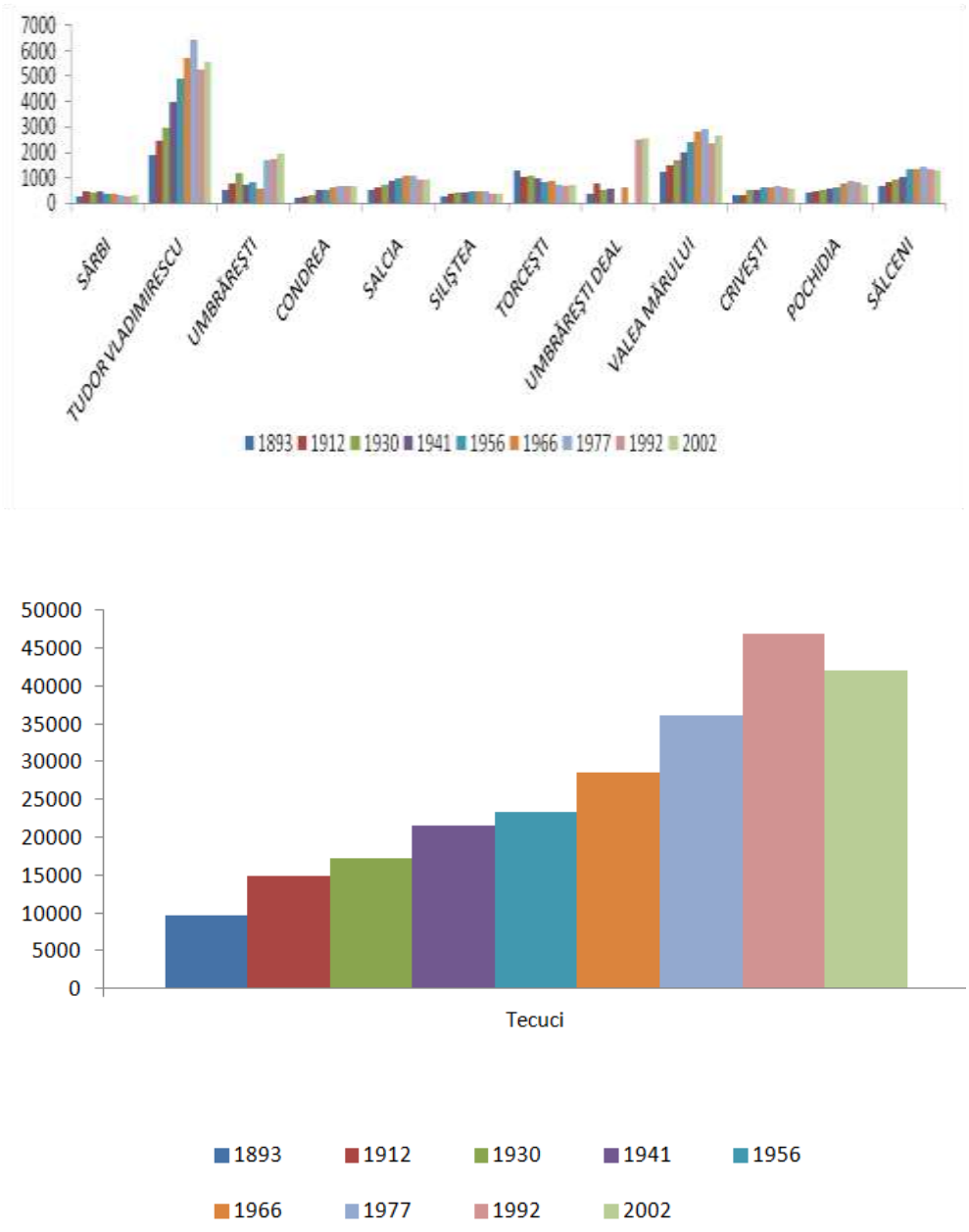

Figure 3 Demographic Trend of Tecuci City (source: Censuses in Romania)

Table 2. Population Growth Rate of Human Settlements in Tecuci Plain during the period 1992-2002 (source: calculated data)

Nr.crt.	Human Settlement	Population Growth Rate (%)
1	Barcea	0.1
2	Băltăreţi	-5.68
3	Buceşti	-0.46
4	Cârlomăneşti	13.8
5	Călmăţui	0.31
6	Condrea	0.3
7	Corod	-2.64
8	Cosmeşti	3.51
9	Criveşti	-9.5
10	Cudalbi	0.3
11	Dobrineşti	1.39
12	Drăgăneşti	9.94
13	Frunzeasca	8.94
14	Fundenii noi	-2
15	Furcenii noi	4.98
16	Furcenii vechi	-6.38
17	Gara berheci	3.22
18	Gara ghidigeni	-58.3
19	Gârbovăţ	14.33
20	Gefu	30.2
21	Ghidigeni	18.06
22	Griviţa	1.39
23	Gura gârbovăţului	245
24	Hanu Conachi	4.87
25	Ionăşeşti	3.32
26	Iveşti	2.22
27	Lieşti	1.35
28	Malu Alb	11.46
29	Matca	8.42
30	Mălureni	-2.29
31	Movileni	6.64

32	Munteni	15.9
33	Negrileşti	5.68
34	Pochidia	9.93
35	Podoleni	14.61
36	Poşta	3
37	Salcia	0.43
38	Sârbi	10.48
39	Satu nou	36.3
40	Sălceni	-4.49
41	Siliştea	1.42
42	Slobozia Blăneasa	18.62
43	Slobozia Corni	19.05
44	Tălpigi	10.9
45	Tăplău	13.5
46	Tecuci	-10.1
47	Torceşti	11.04
48	Tudor Vladimirescu	6.18
49	Ţigăneşti	12.77
50	Umbrăreşti	12.94
51	Umbrăreşti Deal	0.87
52	Ungureni	3.11
53	Valea Mărului	13.9

4 Conclusions

Although the processes of aging and pauperization of the population are becoming more deeper at national level, being reinforced by the current economic crisis, demographic forecasts on the upward evolution of the region are optimistic considering the lately evolution, during 1992-2002, and the values of the population growth rate. Thus, the growth rate ranges between -58.3% (Gara Ghidigeni) and +245% (Gura Gârbovăţului). Most settlements recorded a growth rate between 0 and 15% (36 localities, about 67.9%) out of a total of 43 cities that have experienced growth trends, while 10 cities (18, 8%) showed a downward trend. (Table 2)

In the end, we must admit that we are looking forward to the results of the census organized in 2011 which can confirm our calculations, being also an important check point for future projections.

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*** General Population and Housing Census of March 18, 2002, DJS, Galati.

Considerations Regarding the Environmental Responsibility and Taxation

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Abstract: The public policy tool of taxation may generate discouraging effects upon the economic agents – consumers or producers – but also could be used as incentives. High environmental taxation could generate crowding effect in terms of responsibility. Sometimes a very sophisticated system of environmental taxation is the basis for a highly regulated business environment and conformity but with a lack of real responsible citizenship. We are trying to see if the impact of taxation upon responsibility is real and can affect the motivation for environmental responsible citizenship. The main findings are related to the impact of regulating power of environmental taxes. Also there is evident the interest of entrepreneurs in environmentally responsible behavior and the less information about the benefits of responsible citizenship.

Keywords: environmental responsibility, taxation, responsible citizenship

JEL Classification: H23; M14; Q56

1. Introduction

It is recognized the deterrent effect of taxes on consumption and production. Tax systems worldwide base its environmental protection component on Pigou. Pigouvian principle "polluter pays" can have adverse effects on the individual level of responsibility. Basically you can create a dependence of paying for destroying the environment. The environmental damage became a normal consumption for which a certain environmental tax is paid. More over a social inequity is created by such an approach - the rich will "allow" themselves to create more environmental damage for the simple reason they can pay more (Bazina & Balleta & Touahrib, 2004, p. 3). According to a survey conducted among the SMEs in the South-East region of Romania, the main motivation for the entrepreneurs to develop activities related with environmental protection is given by the strict law limitations

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(especially fiscal regulation) and conformity actions. By far the second main incentive for a responsible citizenship in the reducing of certain cost resulted from protecting the environment. Another aspect that encourages the businessmen to be kind with the environment is the fact that a responsible attitude builds a good market image (the less importance of market image for such enterprises is given by the nature of a SME). The voluntary measures and activities are less important and placed last. This fact confirms the Friedman statement that a business sole role is to bring value and benefits only for the capital owners and excludes the other stakeholders (Friedman, 1970, p. 2).

This does not necessary means that the individual is irresponsible. The analysis of Jonas (1984) insists on the importance of intergenerational responsibility with regards to nature. As a matter of fact sustainable development at large may be considered an intergenerational optimum. Sustainable development being the human way to act for bringing the happiness of present generation without affect the future generation opportunity to seek happiness. The individual thus imposes limits upon him and thereby adopts the responsible citizenship. Taking this responsibility into account would then imply clearly distinguishing it from forms of behavior pertaining to taxation. It is hence important to distinguish the effect of taxation from that of individual responsibility over the quality of the environment. To be more precise, we suppose that taxation produces a crowding-out effect over responsibility. We could say the individual has a limited responsibility in the taxation boundaries. Several conclusions could then be drawn. Firstly, an increase in taxation could lead to environmental degradation. This indeed is not the aim of such taxation. Next, when the decision maker takes this form of behavior into account, it would help obtain a better environmental quality only in a situation where the effects of individual responsibility are not taken into account.

2. Different Approaches

We have two major limitations. One is the fact that the individual attitude (regarding the environment and the intergenerational solidarity) is mostly irresponsible and the second is the fact that taxation brigs altogether a crowding-out effect (Bazina & Balleta & Touahrib, 2004, p. 4). These limitations came together with the system of motivations and incentives, many of them that may have a fiscal dimension as well. Lynes and Andrachuk (2008) structured the main motivations as financial benefits, competitive advantage, image enhancement, stakeholder pressures and desire to avoid or delay specific regulatory actions. Although the set is considered as a general pattern for every enterprise there are different ways to assess these motivations. For example the financial motivations are achievable in short and medium term according to Kiernan (2001) or Hart (1995) through eco-efficiencies. According to the results of our investigation the

SMEs we questioned are more interested in fiscal incentives and punitive measures than in reaching efficiency through responsible actions. Moreover they don't have a strict system for calculating the eco-efficiency or environmental performance of their activity limiting the responsibility approach to reduced operation cost as a result of green actions integrated in their productive processes. The environmental or the eco-efficiency is not the attribute of SMEs, so no assessment in this direction is understandable. To gain credibility in measuring the environmental performance is necessary to assess a number of economic and environmental information and transform it in eco-efficiency indicators. Integrating the economic performance indicators with the environmental performance ones provides a complex image upon the enterprise activity as a whole and permits the environmental issues to be integrated in the decision system.

Somehow opposite to Bazina et. al. (2004), Bithas (2006) consider the environmental taxation a useful tool and that its absence deprives all other members – nonpolluting members – of society of environmental welfare. Moreover not paying the environmental fiscal punitive rates is consider being thievery and consists itself a motivation to damage the environment. No application of "polluter's pay" principle leaves the decision maker without any instrument for promoting the intergenerational optimality regarding the environment. More of it if no taxes the initial inequalities in using/damaging the environmental goods grows. So if Bazina approach leaves the environmental policy in a liberal way at the hands of voluntary responsible citizenship the other important approach of environmental issue is the internalization of externalities. The internalization is a response to stakeholder pressures (Henriques, 2010, p. 34), or by specific taxation. No matter which approach is considered remains the fact that optimum protection is reached when voluntary responsible citizenship or environmental fiscal policy provides zero environmental degradation. Following the law of thermodynamics (Georgescu-Roegen, 1971, p. 87), zero damage corresponds to zero level socioeconomic activities, so is an illusion.

There is another way of thinking as follows: "Laws can also force the polluter to take notice of these external costs be prescribing limits to what can be disgorged or emitted, but economists tend to be ideologically opposed to the use of law for this purpose, preferring the market to perform this function" (Beder, 1996, p. 5) and elsewhere "benefits from using well designed pricing mechanisms can be obtained with a sensible, well designed regulatory standard" (Schelling, 1983, p. 121). The approach also has its flaws because different regulatory systems are designed in specific market conditions and using different standards of "how much is ok to damage" that differs in conditions of time and space.

Bithas (2006) doesn't exclude the individual responsibility but see its limitations and affirm the necessity of complete it with a rigorous taxation system to take the initiative where the rational environmental behavior ends.

3. Assessing the Romanian SMEs perception of taxation

Based on two questions from our study on Romanian SMEs we assessed the entrepreneurs' perception on environmental responsibility and the perceived influences of taxation on it.

The questionnaire from where we extracted the responses was build aiming to evaluate both the present situation in the field of social and environmental responsibility among the SMEs and also to identify the specificity of SME sector in Romania for environmental responsibility activities and actions taken. We had some models and we have adapted our investigation to serve the study purpose.

There were 67 respondents, all small and medium entrepreneurs in the South East region of Romania. We selected the statistic population mainly based on the size of the business without any limitation industry. The questionnaire responses were given via electronic mail and in some cases was necessary an interview with the entrepreneur to explain the purpose of the action and the significance of some of the questions.

The first question was focused on how the enterprise involves itself in environmental responsible actions. The purpose of this question was to evaluate the knowledge in the field of environmental responsibility.

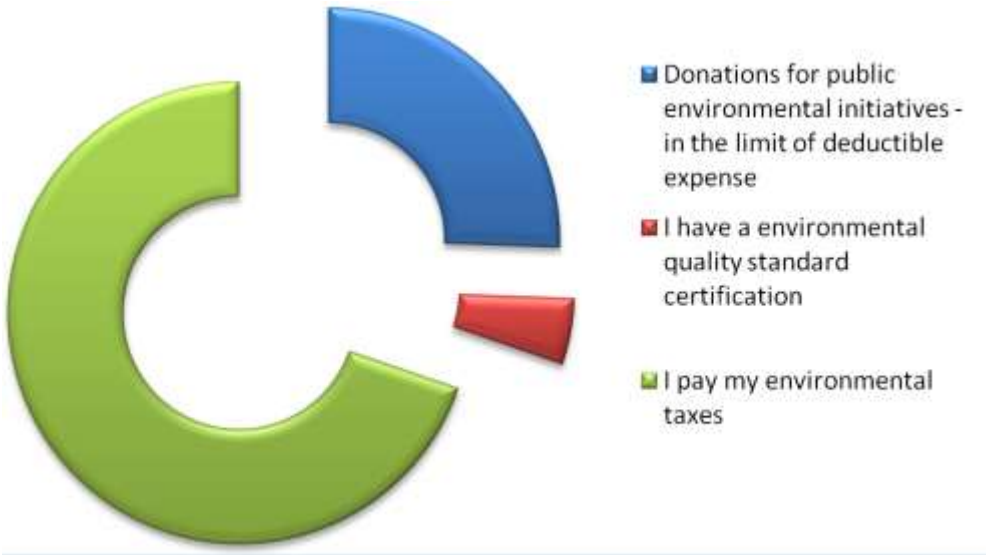

Figure 1 Answers for question 1: "Among the following actions, the most important are…"

Source: own assessments (2011)

The last response option was a trick one but most of the respondents chose it. This fact confirms the little knowledge of small and medium entrepreneurs in the field of social and environmental responsibility. Some of them do contribute to the budgets of some local initiatives but mostly promoted by the public authorities. Only 5% of the respondents have an environmental quality certification.

The second question was about what motivates the entrepreneur to involve his business in a form of environmental responsibility action. There were given three optional standard responses and a forth blank free to be filled with other response than the three above. The blank option was filled by few respondents mainly explaining and detailing the above choices.

Figure 2 Answers for question 2: "I consider the main motivation for any environmental responsibility action…"

Source: own assessments (2011)

The responses for the second question we analysed confirm again the importance of the fiscal aspect in the way of manifest the business environmental responsibility. Some of the respondents do manage the relation with their stakeholders and have a good image about their direct interests in enterprise activity. They also connect the stakeholders' satisfaction with the firm market image. The fewest responded that they "just care about the environment". The respondents were free to have multiple choices but for this assessment we registered only the first choice considering it was the strongest feeling at the moment of the response. We gave the possibility to have multiple choices trying to avoid "politically correct" answers.

4. Conclusion

The general conclusion after assessing the results of the study is that the environmental fiscal burden has an impact on the environmental responsible behavior in the both ways – motivating action and diminishing the damage. Moreover in the case of the SMEs tend to have the only role in the involvement in environmental initiatives. The dimension of the respondent enterprises could have an impact on the results in the respect of the little financing possibilities for bigger initiatives or even own ones. Because of it the SMEs are satisfied to contribute to public initiatives but still strictly related to the fiscally deductible limit.

Our future purpose is to assess the possibility of establishing an econometric model describing the fiscal forces implication upon the environmental responsible behavior and also the characteristics of SMEs ecological footprint based on the data collected.

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