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Applying the Viable System Model to an Organization with CSR Goals: The Case of a Charity Organization

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Abstract

Designing and adapting organizations to secure viability and increase performance is a challenge. Research models often fail to integrate corporate social responsibility (CSR) aspects in the concept development and its implementation. Therefore, the aim of this study is to propose a holistic approach how organizations can be designed, changed and managed considering its implications to service management under a CSR approach. Hereby the Viable System Model was applied. Its structure can be applied to any kind of structured organization and for its management with goals to be achieved in modern society; however focus of the research is the cluster of charity organizations. Goal of the developed model is to be able to react to all potential organizational environments by taking decisions correctly and in the right moment based on the needed information reducing service lead times and manpower allocation as well as increasing the service level. To ensure this, service management tasks were assigned and standardized communication channels were defined. In conclusion this proposed approach empowers organizations to have internal mechanisms to secure viability by pursuing the goal of a high performance CSR approach.

Keywords: Cybernetics, Viable System Model, Service management, Organizational Model, Corporate Social Responsibility, Charity Organization

1. Introduction

Developing organizations capable to deal with the present and future competitiveness needs is a challenge (Schuh & Stich, 2013, p. 2). In addition the complexity of relationships and processes is growing (Placzek, 2007, p. 2). As a result many companies lose competitiveness due to a slow adaptation to their environment. Moreover across all sectors, organizations are in an environment with increasing competitive pressure (Schuh et al., 2011, p. 843). The main factors that favor this situation are the increasing globalization and the resulting competition situation that causes an intense reduction of product life cycles as well as a growing individualization of the final products according to specific customer criteria (Abele & Reinhart, 2011, p. 1). This evolution is combined with the demands of customers who want to be served with shorter delivery

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times (Tu & Dean, 2011, p.1). Therefore the capability to deal with changing customer requirements, demand volatility and new product launches is acquiring more and more importance for winning competitive advantage (Capgemini, 2010, p. 5). Service industries play an increasingly important role in our overall economy (Kellogg & Nie, 1995, p. 323). In this context there is a need for service management research in order to give methodological answers to the growing service sector (Roth & Menor, 2003, p. 145). However an integrative high performance CSR approach in non-profit organizations is uncovered in practice (Forbes, 2011) and is key for securing viability. To make it possible, information flows, as interconnection element in organizations, are a key element. Information is needed for policy definition, decision-making, planning, control, coordination, etc. Problems with information flows lead to negativ impact in any organization.

Corporate Social Responsibility is a concept that has attracted worldwide attention and has acquired a new resonance in the global economy. The increasing interest in CSR in recent years is due to globalization and international trade influencing business complexity and creating new demands for greater transparency and corporate citizenship (Suárez Serrano, 2016, p. 4). The CSR concept has been developed over the years by expanding its scope of research compared to historical information, and has been a subject of continuous public debate. Currently, CSR has become an area of scientific research carried out not only by psychologists, philosophers, sociologists and economists, but also by business administration specialists. Most of the research works related to the concept provide an analysis of the idea from various points of view (Elijido-Ten at. al., 2010, p. 1037).

Researchers often fail to integrate Corporate Social Responsibility (CSR) aspects in the organisational concept development and its implementation. Many approaches have been studied in order to solve the problem of organizational alignment with the environment in service companies. However most of them have failed due to several reasons, such as lack of information, coordination or control that leads to take strategic decisions neither at an optimal point in time nor in an optimal way. Therefore the main research objective is to make companies more flexible, so that the company can face any kind of environment because its internal structure and communication enables a fast decision-making to align the company with market conditions. The paper will be based on the Viable System Model (VSM). By applying the Viable System Model, the organization is transformed into an autonomous system capable of adapting to constant environment changes (Beer, 1959, p. 17).

As a sub-type of a service organization we can find the set of non-for-profit organizations, and within those, the charities, defined by five characteristics: formal organisations, private understood as separated from government, not designed for distributing profit, self-governing and voluntary (Nasir et al, 2012, p. 19). Knowing that this type of organization doesn´t include making money as a primary goal, performance monitoring and efficiency are essential to improve its impact on social and economic development of society (Nasir et al, 2012, p. 19-20). In this regard a new concept is needed in practice and therefore this research pursues to fulfill the goal for coordinating the non-profit characterictic with the efficiency needed also for this type of organization to secure its viability and increase its impact.

The research work will help to develop a model supporting the following main hypotheses:

Thanks to a new conceptual model for service management taking into account the added value to the end-customer the viability of an organization can be assured.

The Viable System Model provides the necessary structure to determine the interrelationships between areas and parameters that allow them to make continuous improvement possible.

The CSR goals help a charity organization to increase its value-added and also to improve its image. Both are key for securing viability of the organization.

In the faculty of economics of the Rey Juan Carlos University in collaboration with the research area of productive systems of the department of Construction and Fabrication Engineering at the National Distance Education University (UNED) an approach has been developed to solve the problem of service organization with the help of the Viable System Model. The aim of the research is to propose a self-regulating approach how to design service organizations such as charities fulfilling the goals of Corporate Social Responsibility (CSR) including the economic responsibility by maximizing the efficiency of any service organization.

2. Methodological approach and literature review

In this project the objective is the development of an organizational and service management model based on the CSR concept using the Viable System Model (VSM). The methodology used to reach this goal was the following:

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Definition of methodological approach.

Literature review for:

The Viable System Model

Service management tasks

CSR concept

Charity Organization

Conceptual model development:

Development of a target system for an organization and for a service system

Service management tasks according to planning horizon levels

Definition of recursion levels within a service organization

Service management tasks and their classification to the VSM systems

Identification of the needed information flows between organization and service recursion levels and within the service management level

Applying the model for charity organizations

After having described the methodology, the VSM as a reference model is compared with other approaches. As described in the literature the VSM is an unmatched conceptual and methodological tool for the modeling and design of organizations and its areas with the goal of being viable (Schwaninger et al., 2008, p. 16). Due to this fact and its alignment with the aim of the research the Viable System Model is applied. Applying the VSM means to implement the organizational structure of any viable or autonomous system in a service organization.

To validate the research methodology, research and practical applications were searched. Many authors have used the VSM as basis to describe and develop models how to deal with complex social and industrial challenges. Some of the topics worked are:

Herold (1991) developed a concept for the organization of a company based on the VSM. In this approach, the general structure of the company is analyzed first by means of a questionnaire (Herold C., 1991, pp. 74-76).

Erbsen (2012) created a concept for optimizing patient care in disease-oriented centers in university hospitals (Erbsen, 2012).

Groten (2017) studied how to design integrated distribution networks based on the Viable System Model and compared it versus classical distribution planning concepts by means of simulation (Groten, 2017).

Gallego et al. (2018) designed a concept for designing manufacturing organizations following lean management principles (Gallego et al., 2018) and for coordinating production and maintenance management in manufacturing companies (Gallego & García, 2018).

3. Basics of the Viable System Model, service management, CSR principles and of charities

The Viable System Model (VSM)

The Viable System Model (VSM) is a cybernetic management model developed by Stafford Beer (Espejo & Harnden, 1989, p. 57). Beer deduced the VSM from the central nervous system of the human being and from the science of cybernetics with the goal to deal with complex systems (Schuh et al., 2011, p. 434). As a consequence the minimum requirements that a system must meet to ensure its viability are derived when analyzing the central nervous system (Beer, 1972, p.198).

The VSM is built on three main principles: viability, recursivity and autonomy. Viability is a property of every system that is able to react to internal and external perturbations in order to maintain separate existence (Schuh et al., 2011, p. 434). The principle of recursion states that every system has the same structure regardless of which recursion level it is (Malik 2006, p. 275). The principle of relative autonomy describes the degree of freedom in the behavior of a recursion level. In this context, autonomy means that a system can act independently as long as it is coordinated with the rules of its management

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system (Gomez, 1978, p. 148). The cybernetic model of every viable system consist always in a structure with five necessary and sufficient subsystems that are in relation in any organism or organization that is able to conserve its identity with independency of its environment (Espejo & Harnden, 1989, pp. 21-22).

Systems 1, 2 and 3 regulate internal stability and try to optimize performance within a given structure and criteria (Beer, 1972, p. 230). System 3 is the coordination center of all internal areas of the company condering the goals for the whole company since systems 1 and 2 can only compare deviations locally (Malik, 2006, pp. 131-132).

System 4 is the strategic system that makes strategic analysis of the external environment and the internal capacity to deal with it and, based on it, takes the necessary strategic decisions (Brecher et al., 2011, p. 435). System 5 represents the normative level that makes the balance between current operations (System 3) against future´s needs (System 4). When there is no balance, System 5 plays the role of judge (Espejo & Harnden, 1989, p. 293). It defines the rules that determine how the global system behaves. It is continuously designing the future of the system through the elaboration and choice of behavioral alternatives. Here the company policy is created, through a close interaction between the management systems, 3, 4 and 5 (Malik, 2006, p. 91). System 5 is the top management and it determines policies and establishes the goals to take decisions (Beer, 1972, p. 253).

Organizational functions and service management tasks

Organizational functions as described from Porter can be divided into primary and support functions, which are activities that described the value chain of an organizarion that are related to its competitive strength. Primary activities are directly concerned with the creation or delivery of a product or service. They can be grouped into five main areas: inbound logistics, operations, outbound logistics, marketing and sales, and service. Primary activities are linked to support activities which help to improve their effectiveness or efficiency. There are four main support activities: procurement, technology development (including R&D), human resource management, and infrastructure (IT systems for planning, finance, quality, information management etc.) (Porter, 1985).

Services can be defined as the ability and willingness of the provider in the form of a performance promise. However, this promise can only be realized by the demand of a customer. This also underlines the nature of services, since the sale of the service happens after the actual creation of the need for the service. A process-oriented perspective defines services as the combination of the provider's performance potential and the external factor introduced by the customer. The external factor can be the customer himself, people, objects or information provided by the customer as well as a combination of these. The realization of the service, which is in the foreground of the process orientation, includes the simultaneous activities of the supplier-side provision and customer-side use (Schuh et al., 2016, p. 6). In an organization the level of service-orientation varies acording to a transformation line. As it can be seen in the Figure 1 the transformation line reflects the service scope of a company. The degree of service orientation, the contribution of services to revenue and profits as well as customer loyalty increase with the course of the transformation line (Schuh et al., 2016, p. 44).
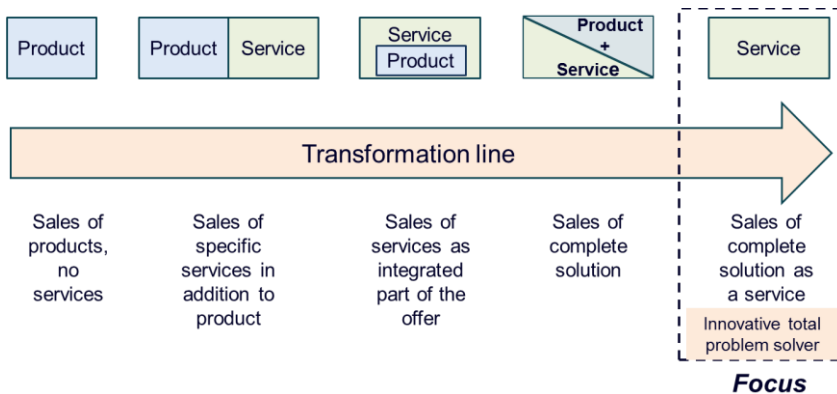
Figure 1: Service orientation and the transformation line (own elaboration based on Hildenbrand (2006) & Schuh et al., 2016, p. 12)

The strategic perspective of service management pursues the goal of differentiate the services of the organization to build customer loyalty and as a consequence generate more profits (Schuh et al., 2016, p. 12). A basic structure for business

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models including services consists of the service offer and market addressing model, the service creation model and the revenue model (Schuh et al., 2016, p. 69). The processes of a service organization include the active and supporting value creation activities in the form of business processes and support processes as well as the necessary management processes. The coordination of these different process levels creates an important prerequisite for entrepreneurial success (Rüegg-Stürm, 2003). Moreover, the processes have a time characteristic depending on their horizon of influence. The tasks are assigned according to their temporal relevance at different planning levels. According to the St. Gallen management model, management levels are divided into normative, strategic and operational planning levels (Bleicher, 2004, p. 80). In the past, the main focus was on operational and tactical problems, however to successfully manage logistics in the future, an active strategic planning level is also required (Schuh & Stich, 2013, p. 1).
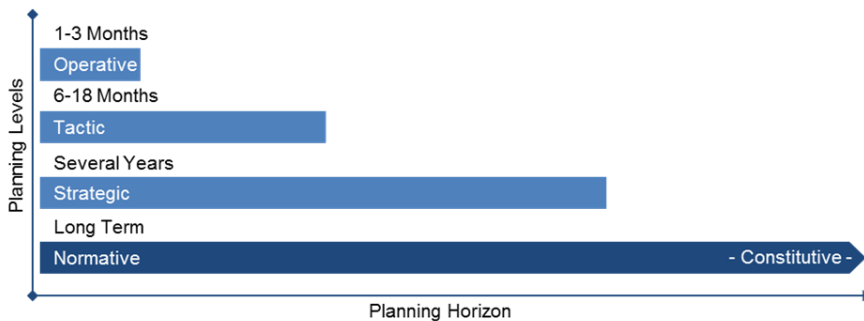
Figure 2: Planning levels and horizons in supply chain management (Bleicher, 2004, p.80).

Corporate Social Responsibility (CSR) concept

CSR term is defined as "a concept whereby companies integrate social and environmental concerns in their business operations and in their interaction with their stakeholders on a voluntary basis" by the EU commission (EU Comission, 2011). Moreover it can be defined as, "the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life" (Heemskerk et. al., 2002).

Since 1958 the number of articles on CSR has remained stable over the decades, with an increase since the 1990s, due to efforts to resolve the debate both in practice and in academic research with respect to the relationship of corporate financial performance of the CSR, that is, whether the corporations benefited economically or not with participation in social activities (Jaramillo, 2007, p. 91). In addition, the evolution of CSR research has been classified into three types of studies: before the introduction of CSR, of the results after its introduction and of the CSR related processes such us decision-making, interpretation of groups of interests, etc. (Jaramillo, 2007, pp. 87-100).

Meanwhile, the evolution of CSR in other institutional contexts, especially in some emerging economies, is much less understood and deserves academic attention. For example, developments in an emerging economy may follow a path similar to that of the developed economies or differ significantly due to their institutional contexts. With an increasingly interconnected global economy, as well as with the globalization of social practices, CSR visions in different institutional contexts can converge or settle into different equilibria (Martínez, 2014, p. 17).

The dilemma is posed in the role of multinational companies, which increasingly deal with the problems of CSR simultaneously in multiple and diverse institutional environments. This suggests that, at a certain moment, a company may be exposed to multiple institutional logics associated with corporate social practices. A specific challenge faced by multinationals is the way in which they meet the expectations of their various stakeholders across national borders (Herrera et. al., 2013, pp. 55-56).

The utility of following the concept of CSR, not only by companies but also by the state, is the improvement in competitiveness that has been presented in numerous studies. In this sense, the main studies of international competitiveness show the important role of the CSR in the construction of the competitive advantage of the company in the region and the country. On the other hand, the need to increase the clarity of commercial activity, eliminate corruption and unethical behavior in business and the use of good practices has also been observed (Salamanca & Gutiérrez, 2018, p. 1539). The CSR concept and its application present the following facts:

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Quantitative benefits: 67% of customers say they are more likely to buy products and services from a company if they know it supports good causes, up 11% from previous year (Forbes, 2011)

Qualitative benefit: CSR as new element of leadership is making a profound difference in business performance.

The question still remained, however, of reconciling the firm's economic orientation with its social orientation. A step in this direction was taken when a comprehensive definition of CSR was set forth. In this view, a four-part conceptualization of CSR included the idea that the corporation has not only economic and legal obligations, but ethical and discretionary (philanthropic) responsibilities as well (Carroll, 1979). The point here was that CSR, to be accepted as business person, it should be framed in such a way that the entire range of usiness responsibilities are embraced. It is suggested here that four kinds of social responsibilities constitute total CSR: economic, legal, ethical, and philanthropic. Furthermore, these four categories are shown in Figure 3. To be sure, all of these kinds of responsibilities have always existed to some extent, but it has only been in recent years that ethical and philanthropic functions have taken a significant place. Each of these four categories deserves closer consideration (Carroll, 1991, p. 42).
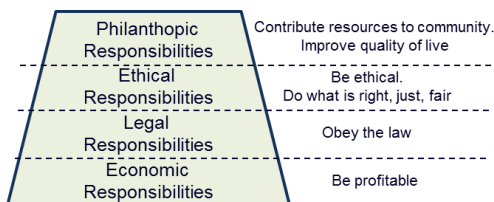
Figure 3: Categories of responsibilities of the CSR concept (Carroll, 1991, p. 42)

To conclude, to implement a CSR strategy in a company's culture and to make people understand the benefits of truly strategic CSR initiatives, senior managers are required to clearly and consistently express their commitment to the strategic initiatives that the organization chooses adopt (Hoque et al., 2014, p. 33). According to Carroll (1991) "Social responsibility can only become reality if more managers become moral instead of amoral or immoral" (Carroll, 1991, p. 42).

Non-for-profit and charity organizations

When referring to non-for-profit organizations (NFP), everything is covered and can refer to a non-profit organization (NPO) or a charity. Non-profit organizations can do virtually anything except operate for a profit motive. Non-profit organizations range from high profile groups, such as political parties, to small groups of a few people linked by a common interest or cause. They can include commercial groups, professional groups, social clubs and sports organizations (Neely, 2003, p. 3).

The National Council of Non-profit Organizations considers itself an authority in the US, in which, 46 of the 52 states have a centralized NFP partnership that provides accreditation and values best practices. In this regard, the National Council of Non-Profit Organizations affirms that the success of the NFP and also of the NPOs are the best practices of responsibility, transparency, prudent fiduciary supervision, legal, ethical and responsible fundraising (NCN, 2016).

Therefore, the success of the NFP means obtaining financing and then delivering the product / service, while only the latter will necessarily be measured in a company, since it would generate the benefit. In other words, an NFP would not be considered successful if it obtained financing but did not deliver the desired service, but a company would be considered successful if it generated income.

The United States of America concentrates one of the highest rates of charity per capita, both in the financial area, as in the personal time. "In 2015, Americans donated $ 373 billion in private charity. In addition, on an annual basis, 64.5 million adults in the US UU They offered a combined amount of 7.9 billion hours of service "(Lupton & Miller, 2016, p. 98). The charity is a type of institution or business that falls within the category of non-profit organization or NPO. This type of organization is often called a foundation or charity. It can be based on educational, religious activities or even activities of public interest. The law and regulation of the charity depend on the country or region where it has been established and operated. A charity is something that is given to an organization or an individual to help or benefit them (Gautier & Pache 2015, p. 346).

Some charities operate as private organizations and others are public. Private foundations obtain their funds through a family, corporation, individual or any financial source. They mainly use their donation funds to grant grants to people who need it or to organizations involved in charitable activities (Fomrbun & Shanley, 1990, p. 250).

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On the other hand, public organizations obtain their grants from the state or central government, as well as from private individuals and organizations. Public organizations help in many activities. For example, public organizations in the US UU they are the American Cancer Society, the World Wide Fund for Nature and many other services. They usually seek contributions from the government. They can be hospitals, churches, institutes for medical research, etc. In our country, the panorama is similar (Fomrbun & Shanley, 1990, p. 250).

In the literature four main motivational categories are described by which companies join charitable projects or donate: maximization of strategic gains, altruistic motivation, political motivation and motivation of administrative utility. In fact, most of the combinations of these four motivations summarize the motives of the companies that carry out philanthropic actions (Campbell & Slack, 2007, pp. 333-334).

Non-profit or charitable organizations, whose primary activities have traditionally been based on the achievement of a social mission, are increasingly adopting practices that are often associated with business (Tuckman & Chang, 2006, p. 630). Since at least the 1980s, charities have generated a substantial part of their income from sales of goods and services, especially in the arts, education and health sectors (Child, 2010, p. 149). And they have experienced a growing shift towards hiring professional managers and adopting formal practices such as strategic planning, independent financial auditing and quantitative evaluation and performance measurement (Bromley & Meyer, 2014, p. 945).

4. Conceptual model development

Development of a target system for an organization and for a service system

The final goal of each organization is to be efficient to maximaze its key parameters. Every service organization is oriented to the management approach based on added value. The increase in the company value will be achieved mainly by increasing the performance of the company (Alexandre et al., 2004, pp. 126-127). The key indicator includes, therefore, the factors of turnover, capital employed and costs (Alexandre et al., 2004, pp. 126-127), which are decisive for the success of the company. These factors are included in the Return-on-Capital-Employed (ROCE) indicator. ROCE is a common feature in business practice and describes the return on a company's capital (see formula below) (Isermann, 2008, pp. 876-877):

$$ROCE = EBIT / (Capital\text{-}Employed) = (Volume\ of\ business\text{-}Costs) / (Capital\ employed)$$
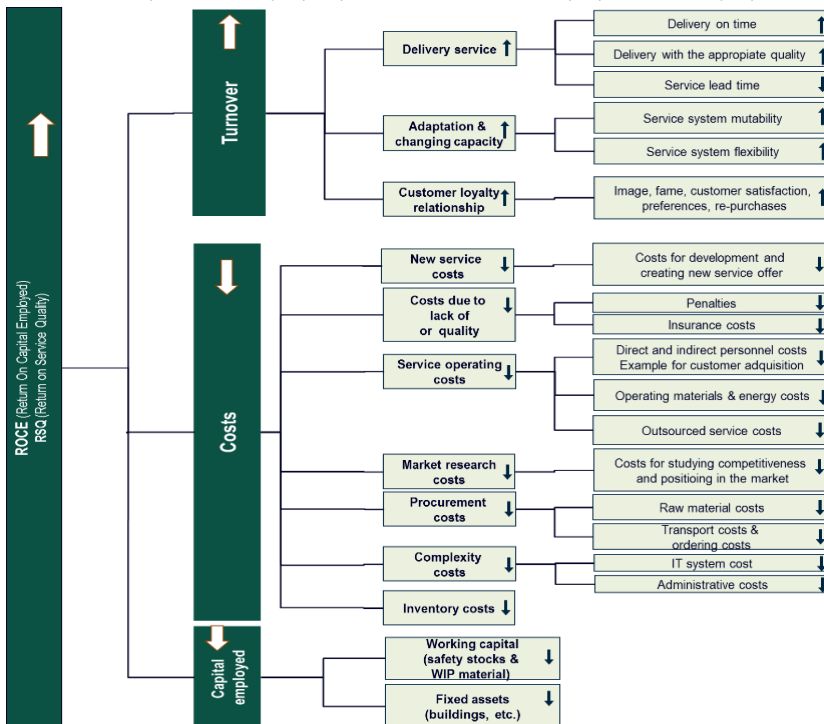
Figure 4: Target system for an organization and for a service system (own elaboration based on Gallego (2018))

On the other hand a non-profit and charity organization is also oriented on added value to be as efficient as possible trying to execute its final goal of providing a service to the community. Moreover, it has to take into account the level of fullfilment of the needs of society and the level of efficiency in doing so.

Service management tasks according to planning horizon levels

As explained before, planning tasks can be classified into strategic, tactical and operational planning depending on the respective planning horizon. Therefore this classification was performed for the conceptual model based on the literature and derived for a production management model (Gallego & García, 2018):

Strategic management & planning tasks

- Principles, guidelines, culture (1.1)
- Definition of service offer (1.2)
- Organizational structure (1.3)
- Creation of investment program (1.4)
- Service strategy planning & master data (1.5)
- Continuous observation & evaluation of service environment: market & customer analysis (1.6)
- Target system (1.7)
- Service system design & location distribution for specific customer segments & sales channels (1.8)
- Service master program: sales planning, requirements and resources planning (1.9)
- "Make-or-buy" decision-making (1.10)
- Maintaining and creating core partnerships (1.11)

Tactical management & planning tasks

- Creation and configuration of existing and new service processes: core ressources, activities and cooperations (2.1)
- Service requirements planning:
  o Determination of service requirements (2.2)
  o Procurement program (2.3)
  o Service procedure scheduling (2.4)
  o Calculation of capacity needs (2.5)
  o Comparison & adjustment of capacities (2.6)
- Supplier selection (2.7)
- IT systems selection (2.8)
- Technology planning for service processes (2.9)
- Continuous observation & evaluation of internal performance (2.10)
- Offer and order processing (2.11)
- Know-how management for services (2.12)

Operative management & planning tasks

- Planning & control of own services:
  o Calculation of services volume (3.1)
  o Detail scheduling (3.2)
  o Detail planning of resources (3.3)
  o Sequencing of service activities (3.4)
  o Availability check (3.5)
  o Release of service activities (3.6)
- Planning & control in external companies:
  o Order calculation (3.7)
  o Offers collection and evaluation (3.8)
  o Contracting of suppliers (3.9)
  o Release of supplier orders (3.10)
- Orders coordination (3.11)
- Measure and calculation of KPIs (3.12)

Figure 5: Service management tasks associated planning horizons (own elaboration based on Gallego (2018))

Definition of recursion levels within a service organization

A company is assumed as a viable system that is the first level of recursion in which the five systems necessary to ensure viability are found. Therefore, in the course of this research work can be differentiated four levels of recursion:

The highest level, the service organization (n-1)

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The service recursion level (n). In the same recursion level it can be found finance, human resources, IT, research and development, etc.

The recursion level of the service unit, for example service units for disasters or for family issues (n + 1)

The recursion level of specific services such as treatment of divorce within a family, conflictive children, etc. (n + 2)

The systems 1 of the recursion level n + 2 are no longer viable systems in contrast to the higher recursion levels, because they do not contain a structure since they are the elements of the service execution. Within this first level of recursion of the service organization, the different functions of a company can be found, such as service management, commercial, finance, research and development, information systems, etc. In this research project, service tasks will be analyzed in detail, recursion level n, but also taking into account the function of system 2 at the company level, n-1, whose function is to coordinate the different functional areas of a company.

System 5 of the service organzation (n-1) defines its legal framework, politics, corporate policy and constitution, ethos and underlying values as well as its leadership philosophy. All of this information is transferred to all functional departments inside the organization including the service management system. Using these common normative values the company receives information from the environment that can be: market standards, legal regulations, new technologies, needs of society or information about competition. Based on these inputs the organization defines its strategy in system 4 of the organization level in continuous communication with system 3 to check if the strategy can be implemented and the internal consequences of its implementation on the stability of the company. System 2 at organization level plays the role of coordinator between the functional areas of the organization trying to solve conflicts between them. Moreover the systems 1 at organization level are all functional areas of every company such as service management.

At the recursion level of service management (n) it is assumed that the different service units will be the respective systems 1 which also contains a viable system in each of these units. The VSM of the service management system within a company is described by the tasks performed by its five necessary systems:

System 5 establishes the service objectives and communicates them to the other management systems, systems 3 and 4. Goal of system 5 is to secure the existence and to increase profits of the organization.

System 4 observes and collects essential information from the external environment of the service management system. Its goals area to increase customer loyalty, to position it in the market by creating USP characteristics of the organization to differentiate it from other players by means of a continuous review process of the environment.

System 3 is responsible for maintaining the internal stability of the model by optimizing the use of internal resources using the information received from system 4 about the clients as well as the information of the different divisions of system 1 obtained through system 2. It would be related to functions such us management of performance, time, ressources, etc. Moreover system 3* allows a quick response to possible emergencies in the service units by acting before information flows through system 2. It is capable to perform actions in real time if something happens outside of normal limits such as making changes in service activities to avoid non-meeting customer expectations.

System 2 is represented by the functions of coordination between the different service units in daily activities. This system receives all the information of the different service units and acts as a filter so that only the necessary information reaches the system 3. The difference between both is in the time horizons of action. While system 2 performs functions in daily activities, the tactical system optimizes the performance of the internal system over a longer time horizon. System 2 represents the information function that defines the level of interconnection between systems 1 and the level of hierarchical control of system 3.

System 1: each service unit within the service management system is an operational unit that includes the management of the unit and the division that performs the operational activities. An example could be a disasters service unit that contains different activities for inundations, earthquakes, etc. to be performed. Each system 1, service unit, is in charge of giving priorities in case of multiple disasters.

Environment: represents all the external factors that influence the service management system of an organization. The environment is represented by the demands of customers, new service technologies, market standards, delivery times, service products, strategies and performance of competitors for example to help in making decisions about future an development of USP (Unique Selling Proposition) of the organization, etc.

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The diagram shows the environment of the entire service management system as well as of service unit:
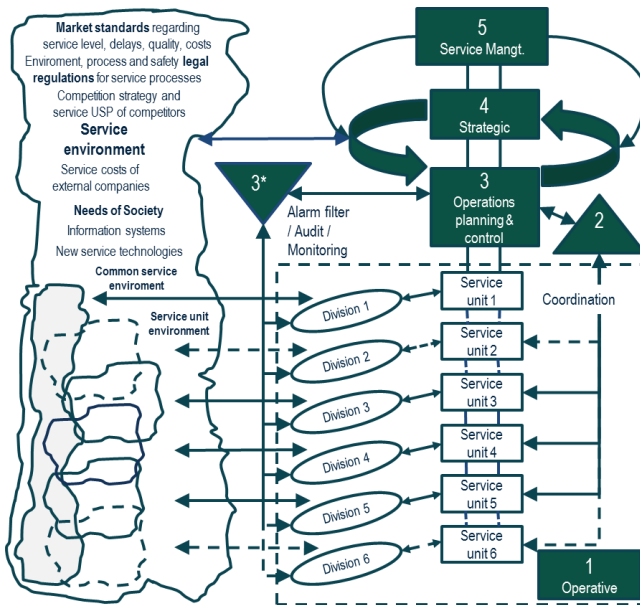
Figure 6: Analogy with the VSM: Service management recursion level (own elaboration)

Service management tasks and their classification to the VSM systems

Service management tasks were assigned to the VSM systems at recursion levels n and n + 1. As an example in Figure 7 are shown the service management tasks and its classification. In the same way it was done for all other tasks:

Strategic planning tasks	Service Mngt. recursion level			Service unit recursion level		
	S 5	S 4	S 3	S 5	S 4	S 3
Principles, guidelines, culture (1.1)	X			X		
Definition of service offer (1.2)	X					
Organizational structure (1.3)		X				
Creation of investment programm (1.4)		X				
Service strategy planning & master data (1.5)		X				
Continuous observation & evaluation of service environment: market & customer analysis (1.6)		X				
Target system (quality, cost, time) (1.7)		X				
Service system design & location distribution for specific customer segments & sales channels (1.8)		X			X	
Service master program: sales planning, requirements and resources planning (1.9)		X	X		X	X
"Make-or-buy" decision-making (1.10)		X				
Maintaining and creating core partnerships (1.11)		X	X		X	X

Figure 7: Strategic service management tasks and its classification to VSM systems (own elaboration)

Identification of the needed information flows between organization and service recursion levels and within the service management level

Current technical literature agrees that the connection interfaces between recursion levels is extremely important (Ríos, 2012, p. 59). Goal is to determine basic links that can be transferred to any VSM in any company. The intensity of this connection between the levels varies according to the company (Ríos, 2012, p. 59). An exchange of information within the company and between levels of recursion is necessary to control the corporate environment, which generally has more information than can be processed in the company (Herold, 1991, p. 287). Between the recursion levels it can be found the following communication flows:

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Between the organization environment and system 4 of the service management recursion level

Between systems 5 of the organization and service management

Between systems 4 of the organization and service management

Between systems 3 of the organization and service management

Between systems 2 of the organization and service management

Between the operating units, systems 1, of the organization and service management

Between the alarm / monitoring filter (System 3*) of the company's recursion level and system 4 of service management

Between the two normative systems of the organization and service management there is a flow of information that defines the degree of freedom of decision making in which the service mangenement recursion level can act. Specifically, it means that the decisions taken by the management of the company are communicated to the management of service management defining its guidelines for autonomous decision making within the respective areas. These guidelines can be financial, on personnel, on affectation to other areas, etc. In the same way, the objective levels such as service level, quality of service, costs and adaptation capacity are influenced by decisions from the management, defining the priorities and the limits for the coordination among service units. An example could be: the organization in its strategic plan establishes the target number of services performed for the following years as well as the required flexibility in percentage as well as the decrease in target costs. Of course these decisions would influence the decision-making framework for the service management system that should adapt their methods and tools to be able to optimize costs, times and quality based on the given flexibility.

As explained during the research work basic communication flows were defined. In total a number of 79 information connections were defined for the service management recursion level specifying if the communication goes from company´s recursion level to the service management recursion level or between systems in the service management recursion level. An extract is shown in Figure 8:

No.	Information in the service management recursion level	From…to…
1	Information about quality problems in the service units	From System 1 to 2/3
…	…	…
28	Number of services performed	From System 1 to 4/5
29	Number of services that have met the required deadlines and quality	From System 1 to 4/5
30	Average service lead time	From System 1 to 4/5
31	Number of customers acquiring services for the first, second, etc. time → customer loyalty	From System 1 to 4/5
32	Number of services with claims	From System 1 to 4/5
33	Total number of changes made to initial resources planning	From System 1 to 4/5
…	…	…
79	Information about the economic environment of service management	From environment to 4/5

Figure 8: Example of information flows in the conceptual model of a service organization (own elaboration)

Applying the model for charity organizations

A feeback loop has been developed to explain the two main problems identified for charities. It was analyzed the causalities from the introduction of the CSR concept until its impact the financial resources and the performance of the charity. Due to the concept, nowadays, the ethical responsibility and normative compliance with the law are usually fulfilled by charities.

On the other hand, the philanthropic and the economic responsabilities are not often completely fulfilled. For a charity to meet its philanthropic responsibility, it should considered the real demands or needs of the society in order to respond appropriately by allocating ressources based on those needs. Moreover the economic responsibility, be profitable from donations or volunteers, is not maximize because if a charity doesn´t provide the solutions for the society needs, then donations and volunteers can be reduced as a result. As a consequence, the available ressources for developing, performing and control the services will decrease. In addition, there is a potential to improve the performance of the available ressources of a charity organization in order to maximize its impact on society and environment applying the Viable System Model. By doing so, the feedback loop is closed and the research study tries to improve point 3 and 6 by enabling an alignment with the environment, society needs and by improving the internal efficiency.

Figure 9: CSR Causal feedback loop for a charity organization (own elaboration)

From the research it is pursued to fill in the GAP for these two areas:

First, to align the environment and society needs with the goals and utilization of resources of a charity organization.

Second, to provide a structure and a communication framework to increase the efficiency of internal processes.

As a consequence in Figure 10 it can be seen a proposal of a charity applying the VSM:
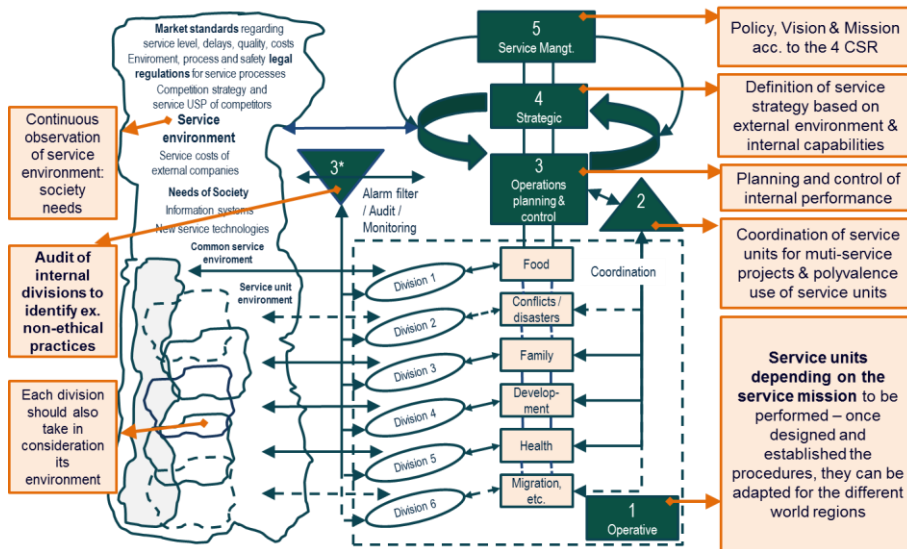
Figure 10: Charity organization applying the Viable System Model (own elaboration)

Figure 10 shows the description of six examples of service units that can exist in a service management model of a charity organization, their relation with the environment and the internal mechanisms with the related communication flows and auditing systems to deal with it taking into consideration the four responsibilities defined in the normative level, system 5, of the model.

5. Conclusions

The research work helped to develop a model supporting the following main hypotheses:

Thanks to a new conceptual model for organizational and service management taking into account the added value to the end-customer the viability of an organization can be assured.

The Viable System Model provides the necessary structure to optimize an organization in a recursive way to ensure the viability of the company in the long term.

The Corporate Social Responsibility mission and goals provide a compromise with and for the community that makes possible to every organization to go beyond its economic activity by improving the external environment impacted or not by its activity. By doing so a company is able to increase its relevance, image and perception on end-customers, current and potential stakeholders. As a consequence it creates a positive feedback loop on sales, donations and society, environment and economy.

In the case study for a charity it was proved how the developed model improves the adaptability to society needs and also the internal performance to maximize the output from the resources available.

Next step of the research will be to simulate company and service performance using the conceptual model developed and to compare it with current available structures how to deal with changing environment. Final goal is to transfer this research method to real service organizations applying it in particular areas or to design organizations and service models based on it, in particular to non-profit organizations such us charity organizations.

In conclusion this proposed approach can increase the efficiency of service organizations such us charity organizations. Also it shows how a VSM approach can be used as a methodology to be successful in any kind of environment together with the CSR goal. By using it a company can adapt itself to all future potential environment scenarios by changing its strategy and internal set-up.

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How Principles of Business Ethics Relates to Corporate Governance and Directors?

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Abstract

How can we define business ethics? Which principles are inherent in it? Business ethics propose several principles to be considered by companies, commercial entities, as well as other entities such as NGO's, cooperatives, public organizations etc. First, this study will clarify the meaning and scope of business ethics and the principles included, such as integrity, fairness, trust, openness, truthfulness etc. Secondly, I will try to examine different facets of business ethics. I will approach this concept especially from a legal perspective and try to determine which aspects of this concept have been integrated into law. Business ethics has reflections especially in business law and corporate governance and is being "legalized" by the corporate codes of conduct. This study aims to clarify that business ethics are mentioned explicitly in Turkish law, in the Code of Corporate Governance concerning public companies and discuss legal impact of this regulation. As a result of this quotation in the Turkish Legislation, there could be revealed several questions. One of the questions is whether ethical standards might be a source of liability of the board and directors. In my presentation I would like to examine to what extent ethical standards interrelates with corporate governance codes and the liability of directors. Business ethics can be described as a source concept and a set of principles, that gives rise to fields such as "corporate governance", "corporate responsibility", "liability of directors" and "human rights in business" concerning especially working conditions of the employees. Business ethics has an intersection with all the mentioned fields. In the second part of this study, I will try to clarify the connection of business ethics with corporate governance principles in business and then conclude how business ethics has been adopted into legal system and how it shapes and affect business practices especially in Turkish law.

Keywords: Business ethics, fairness, integrity, corporate governance, principles in business, ethical principles for companies, liability of directors.

Introduction

How can we Describe Business Ethics, Which Principles are Inherent to it?

Although is not easy to give a common uniform description of business ethics it can be described as "*ethically right way to run business*" and similarly as "*to apply ethical principles and values to business practices*". Business ethics emphasizes moral values and stand on principles such as fairness or equality, trust, honesty, integrity, openness and truthfulness[1]. Trust requiring by nature two parties, is considered to be a both moral and legal concept. It can be described as legal concept especially in the context law of confidentiality for example. However honesty is considered to be a purely moral value. The remuneration of directors is given as an example that should comply with fairness and honesty[2]. Integrity can be described as committing to accept and follow moral values of a company. For example whistle blowing in a company,

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[1] **Rosamund Thomas**, Business Ethics, Chapter 2, in Corporate Social Responsibility: The Corporate Governance of the 21st Century, 2011, p.35-36-37.; **Julia Casson**, A Review of the Ethical Aspects of Corporate Governance Regulation and Guidance in the EU, London, 2013, p.8.

[2] **Rosamund,** p.36-37.

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that an employee communicates its concerns about unlawful or unethical acts or transactions within the company serves to integrity[1].

Business ethics covers a wide range area and is related to all kind of business relationships of the company. Business ethics is not related only to customers, but all the stakeholders which comprise suppliers, creditors, employees, competitors, the society, the environment, the state and as insider interests, the shareholders.

How Business Ethics Relates To Law?

Some authors mention that BE begin where law ends. Is this true? How business ethics relates to law? What is the interrelation of these two domains? What is the role of business ethics in shaping law[2]? There are mainly two different opinions and approaches concerning this question. **The 1st approach** followers explain that business ethics includes the law but extends beyond it[3]. These authors mention that there is an intersection area between business and law. According to this approach, "*the law is essentially an institutionalization or codification of ethics into specific regulations and proscriptions[4].*" With this respect, some authors also mention that law is an instrument for translating morality into guidelines and practices[5].

The 2nd approach followers considers business ethics as a grey area and mention that business ethics begin where law ends[6], meaning that business ethics is primarily concerned with issues that are not covered by the law. They believe that business ethics is concerned with an area that is not covered by the law and that does not cover a common area with law. The followers of this approach don't consider principles or rules as part of business ethics which have been translated into law. They consider as typical ethical dilemmas mostly issues such as, high pressure sales techniques, whistle blowing, advertising to children, employee privacy, gift giving, which are not regulated in the law[7].

It can be concluded that, in recent years, there is more tendency to integrate ethical principles into legislative systems at national level or in the international guidelines. Depending on the legal system and legal culture of each state, ethical principles for business, might be integrated into the legal system and adopted either as soft law or hard law with a mandatory effect.

The Concept and Principles of Corporate Governance

On the other side, the aim of corporate governance is to maximize shareholders holdings and establish an efficient management and control mechanism for the company, for the best interest of stakeholders. The ultimate purpose is to assure business efficiency and assure an equal use of resources[8].

Corporate governance provides various legal mechanisms such as separation of management and board of directors. This allows two-tier board system rather than a unitary board. The requirement of independent board members and committees are other legal tools of corporate governance.

This system is based on the separation of powers and aim to assure a management system which will make self-control as well, in addition to other control mechanisms such as the internal control or auditing. Corporate governance includes rules and legal tools which will ensure that the company is well directed and controlled[9]. The center of the attention is mostly the board of directors and the management.

Corporate governance is based on several basic principles which can be categorized under four main pillars. Although these pillars might vary upon national legislative system of each country, can be categorized **"accountability"**,

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[1] **Rosamund,** p.38.

[2] **Andrew Crane/Dirk Matten**, Questioning the Domain of the Business Ethics Curriculum, Journal of Business Ethics, p.357-369; p.357

[3] (Trevino/Nelson fikri, **Crane/Matten**, p.358 aynen); This approach seems to be adopted in the G20/OECD Principles of Corporate Governance, 2015, p.47. There is mentioned that "*an overall framework for ethical conduct goes beyond compliance with the law, which should always be a fundamental requirement.*"

[4] **Andrew Crane/Dirk Matten**, Business Ethics, fourth edition, Glasgow 2010, p.5-6.

[5] **T.L. Beauchamp, / N.E. Bowie**, 2004, Ethical Theory and Business., 7th edition, 2004, p.4; **Crane/Matten**, p.359 para. 2.

[6] **Crane/Matten**, p.359 para. 2.

[7] **Crane/Matten**, p.359 para.3.

[8] **Casson**, p.20; **Ann K.Buchholtz/Jill A. Brown/ Kareem M. Shabana**, Corporate Governance And Corporate Social Responsibility, Chapter 14, in The Oxford Handbook of Corporate Social Responsibility, p.327.

[9] **Casson**, p.6.

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"transparency", "fairness", and **"Independence".** Corporate governance ensures the application of best practices and legal mechanisms under the umbrella of these main principles.

Accountability ensures that management is accountable to the board, and that the board is accountable to shareholders and the company.

Equal treatment or fairness, indicates that all shareholders, including minorities should be treated equitably. Thus, this principle protects shareholders' rights and addresses to board of directors. Principle of equal treatment or fairness is closely related to concepts such as good faith, diligence, integrity and trust which are standards to define liability of directors as well. Especially board members carry out their duties in a way that reflects values such as integrity, fairness and honesty[1].

Transparency and disclosure ensure timely, accurate disclosure on all business-related matters including the financial situation, performance, ownership and corporate governance.

Independence indicates that independent directors and advisers, free from the influence of any group within the company or outer company, should be assigned.

In this respect, corporate governance follows some of the ethical standards such as integrity, transparency, independence, accountability in the dealings with stakeholders. Some of the corporate governance principles are closely related and overlap with principles of business ethics.

How Business Ethics relates to Principles of Corporate Governance?

Most of the Codification Concerning Corporate Governance is of Soft-law Nature

There are several codifications concerning corporate governance in the EU member states, which have basis on ethical principles as well, such as insider trading[2] or regulations against bribery. A part of the ethical issues concerning business and companies, such as bribery, corruption, money-laundering, fiscal policy, are all related to public economic interests[3]. These issues concern public interests such as the society and the state, which make part of external stakeholders. Concerning the application of ethical values in business practices, there should be made a distinction between internal and external stakeholders. Unethical issues against insider interests, such as employees, shareholders, are not always codified as part of the mandatory legal system.

Disclosure and transparency, one of the four main pillars of corporate governance, by setting up mostly preventive rules, support criminal law regulations as well. In the EU Corporate Governance Plan, transparency and disclosure of financial or non-financial data is mentioned as a way to respond the need to prevent both unethical and criminal issues such as fraud, bribery, money-laundering, corruption and similar unlawful acts[4]. The before mentioned unethical issues are mostly part of criminal law regulations, since they are unlawful acts against the state.

EU regulations and the national legislations of the EU member states are mostly principle-based. These rules are relevant to certain basic issues such as board structure, shareholders' right, audit and disclosure of financial data. Most governance measures are principle-based soft law, and allow discretion in their application to member states, which may in turn ensure that provisions **are not mandatory** for companies[5].

Direct link or reference to Business Ethics in the Codes of Corporate Governance?

There have been carried researches concerning the question to what extend ethical values are adopted into the codes of corporate governance. Depending on national legislative systems, business ethics might have an impact on corporate governance and the implementation of business ethics could help good governance. Although corporate governance in the continental corporate European law is mostly principle-based, does not usually include nor address ethical principles to be

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[1] **Casson**, p.8.

[2] This act can be described as to share confidential data with third persons which allow them to make a profit by selling or buying company shares.

[3] **Casson**, p.28.

[4] EU Corporate Governance Plan, "Action Plan: European company law and corporate governance - a modern legal framework for more engaged shareholders and sustainable companies", 12.12.2012, p.5.

[5] **Casson**, p.13.

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applied to business. In the EU there is primary focus on processes and procedures for improving governance, rather than on ethical standards for governance[1].

The Corporate Governance Action Plan, published in 2012, did not mention any ethical values or principles. This regulation displays a set of rules and principles in order to enhance transparency and shareholders' rights mostly[2].

As a result of researches conducted in the EU and the UK by an institute of business ethics, has been revealed that there is no explicit reference to ethical principles in the codes concerning corporate governance, both at the EU level and within member states, except Belgium and the UK[3].

We can conclude that although some of the four pillars of corporate governance find its routs somehow partially in business ethical principles, in most of the EU states' legislations, there have not been established any direct link between business ethics principles and corporate governance principles.

On the contrary, G20/OECD Principles of Corporate Governance (OECD Principles 2015)[4] concerning responsibilities of the board make a reference to ethical standards stating that "*the board should apply high ethical standards and it should take into account the interests of shareholders fairly.*"

In a similar manner in Turkish law, the Code of Corporate Governance (the TCCG) concerning public companies, which ground on OECD principles, make reference and displays explicitly business ethics under the paragraph number 3.5 of the third pillar concerning stakeholders[5].

Turkish Code of Corporate Governance and Principles of Business Ethics

In Turkish corporate law, the Turkish Code of Corporate Governance (the TCCG) in public companies[6] displays four main pillars. First pillar pertain to "**shareholders**", second pillar is related to "**disclosure and transparency**", third pillar pertain to "**stakeholders**", and fourth pillar concerns "**board of directors**". This codification has mostly a soft-law nature, although it displays mandatory rules concerning mostly board of directors, transparency and the general assembly.

The third pillar involve **stakeholders**, which include all the persons or group of interests related to company such as workers, creditors, customers, suppliers, syndicates, NGOs, other than shareholders. Third pillar aims that the company carry out its business in a way to protect and balance the interests of all the parties and groups related to the company.

At the paragraph number 3.5 of the third pillar, business ethics is codified explicitly under the title of "*Ethical Rules and Social Responsibility*". According to **first paragraph** number 3.5.1, "*companies carry out their activities within the scope of ethical rules which are announced to the public via company's website*".

The second paragraph number 3.5.2, pertains essentially to social responsibility. However it refers again to "ethical rules" as well as at the first paragraph. The second paragraph mentions that "*a company is sensible to its social responsibilities and follows the legal regulations concerning the environment, consumers, public health and ethical rules*"[7]. This paragraph draw the framework of the social responsibility for public companies and displays different areas to be protected under the concept of social responsibility, which can be defined as a new type of responsibility for companies. Thus in the second paragraph ethical rules are mentioned in a way that they constitute one of the sub-fields and make part of corporate social responsibility[8].

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[1] **Casson**, p.8, 13, 18.

[2] See EU Corporate Governance Plan; **Casson**, p.16.

[3] **Casson**, p.4.

[4] G20/ OECD Principles of Corporate Governance, 2015 version, p.46

(https://www.oecd-library.org/governance/g20-oecd-principles-of-corporate-governance-2015_9789264236882-en.).

[5] See below under "Turkish Code of Corporate Governance and Principles of Business Ethics".

[6] Code concerning Corporate Governance dated 3.01.2014, with number II-17.1 (The TCCG).

[7] At the following part of the second paragraph is mentioned that "A company support and respects human rights recognized internationally and combat all kind of fraud including corruption and bribery".

[8] However is mentioned that in reverse to business ethics, corporate social responsibility focuses more on the social, environmental and sustainability issues than on morality. See **Rosamund,** p.36.

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Another reference to ethical rules is made again at the paragraph 3.1.4 of the same 3rd pillar. According to paragraph number 3.1.4 of the 3rd pillar companies establish necessary mechanisms for stakeholders to allow them communicate to the committees their concerns about unlawful and unethical transactions of the company.

Another last quotation is regarding independent directors. In the paragraph number 4.3.6 of the 4th pillar, is mentioned explicitly that independent directors, have to possess strong ethical standards. However this quotation is not under the form of a duty of the directors, rather it is formulated as a qualification that director have to possess.

In contrary to most of EU states, in Turkish corporate law, ethical principles are codified explicitly with regard to public companies activities and independent directors. Consequently this would reveal certain questions concerning legal impact of such an explicit codification.

First question would be regarding the extent and the content of ethical principles displayed in the TCCG. What are the content and the boundaries of the ethical rules and how can we specify them? Which are the ethical principles according to paragraph 3.5 of the third pillar? Concerning this first question can be said that ethical principles are not listed nor specified in the TCCG. However, ethical standards are treated on a larger scale in the G20/OECD Principles of Corporate Governance which constitutes the basis of the TCCG[1]. The standards suggested in the G20/OECD Principles could be referred as a guideline to clarify the ethical rules under the TCCG. Companies have a discretionary power on defining their ethical rules and are suggested to adopt their own ethical codes[2].

Secondly, we could ask whether this paragraph is mandatory and whether ethical principles could have any impact concerning liability of directors. Ethical principles might have role especially in the discretionary decisions of the board of directors. The board is expected to follow ethical principles while taking decisions. Board decisions have consequences for all internal and external stakeholders[3]. Consequently there could be legal question whether ethical principles might constitute a source of liability of directors in public companies.

With regard to this second question article 5 of the TCCG which regulate and demonstrate mandatory principles, can be helpful. Among the mandatory rules the biggest part belongs to fourth pillar concerning board of directors. On the contrary third pillar concerning ethical rules is not among the mandatory principles. In this respect according to paragraph number 3.5.1 of TCCG, companies are not obliged but encouraged to prepare their own ethical rules and announce them on their website. But a public company is not obliged to adopt ethical rules and if the company does not adopt such ethical rules, has to explain in the company's annual report the reasons of the abstinence. According to article 8 of the TCCG, public companies have to announce whether principles of corporate governance in the TCCG are applied or not, if not companies have to give an explanation with a justification in their annual report.

But in case a public company adopt ethical rules, there follows the question whether this kind of self-made principles or rules have binding effects on the stakeholders and whether board members can be held liable. This question is very much controversial within the context of corporate social responsibility[4].

Another point is that, whether the company adopts its own ethical rules or not, taking in consideration the explicit indication of ethical standards in the TCCG, concerning the qualities of the independent directors, it can be raised the question if solely unethical decisions or transactions of the company can be a source of liability for independent directors of public companies. In this respect, it should be point out that, although in the TCCG ethical rules are explicitly mentioned, it is still not regulated within the context of the liability of the board of directors or independent directors.

Whereas in the OECD Principles 2015, "*to apply high ethical standards*", is explicitly displayed as a duty of the board and in a way that board members might be held liable on the ground that they are not respecting ethical standards[5]. Under this

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[1] See G20/ OECD Principles of Corporate Governance, 2015 version, p.47, 50.

[2] In the OECD Principles 2015, is sugested that a company might also voluntarily commit to comply with the OECD Guidelines for Multinational Enterprises. See p.47.

[3] **Casson**, p.6.

[4] For these discussions see **Anna Beckers**, Enforcing Corporate Social Responsibility Codes:On Global Self-Regulation and National Private Law, 2015; **Liesbeth F.H. Enneking**, Foreign Direct Liability and Beyond, 2012; **Tineke Lambooy**, Legal Aspects of Corporate Social Responsibility, 2014, Utrecht Journal of International and European Law 1.

[5] See G20/ OECD Principles of Corporate Governance, 2015, p.46.

approach of the OECD Principles, "to apply ethical standards", addresses to directors as part of their responsibility [1]. At the international level it is mentioned similarly that, the morality of the board and the directors should underlie ethical standards [2].

Conclusion

To conclude about how business ethics connects to corporate governance, we can summarize concerning Turkish law that; although ethical rules are explicitly mentioned and codified in the Turkish Code of Corporate Governance concerning public companies, since the so-called regulation is of soft-law nature, has no binding effects for companies, and would not constitute a source of liability of the board and the directors.

However companies might choose to adopt their own ethical codes and constitute their ethical rules. The standards suggested in the G20/OECD Principles could serve as a reference and a guideline to specify the ethical rules under the TCCG. The TCCG has its basis on an older version of OECD Principles which have been renewed and adopted to the recent need in business. Consequently the most recent G20/OECD Principles on Corporate Governance can be taken as reference to develop the TCCG.

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Pecking Order and Trade – off Capital Structure Theories in the European Countries Supported by European Stability Mechanism

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Abstract

The financial assistance provided by European Stability Mechanism during the recent European crisis was accompanied with severe austerity measures and strict reforms that changed significantly the economic environment in the countries that accepted it. The present study examines whether these changes affected the capital structure of the European firms in these countries. Using accounting data for firms in Cyprus, Greece, Ireland and Portugal, the researchers created a balanced panel database and applied the Shyam-Sunders and Myers (1999) methodology to investigate whether pecking order or trade-off hypotheses can better explain the financing decision of the firms in these countries during the period before and after the outset of the ESM financial assistance. The results indicate that the firms' capital structure decisions are explained by both theories in Greece, Cyprus and Portugal before the beginning of the EMS program, while only by trade-off in Ireland. On the other hand, after the beginning of the ESM program the firms' capital structures are better explained by trade-off hypothesis in Greece and Cyprus, while nothing changed in cases of Ireland and Portugal. The fact that Greek and Cypriot tax rates increased the most among the four examined countries may explain at least partially the above differentiations. So, the economic environment is a primary factor that affects the explanatory power of each capital structure theory. Moreover, a change in economic environment may lead to a change in the dominant capital structure theory.

Keywords: Capital Structure, Trade-Off, Pecking Order, Cyprus, Greece, Ireland, Portugal, European Stability Mechanism

1. Introduction

The ways that a firm chooses to finance its investments and the way that this selection influences the firm's value is the subject of a capital structure theory. Alternatively, a capital structure theory defines the ways that the mix of different capital sources affects the value of a firm as well as provides the reasons why these impacts exist (Grinblatt and Titman, 2002). Capital structure theories have been continuously in the center of interest for corporate finance theoretical scientists and practitioners since the introduction of Modigliani and Miller theorems in 1958 and 1963. These theorems set the basis for the development of various capital structure theories, such as Trade – Off theory, Pecking Order theory, Asymmetry Information theory, Signaling theory and Market Timing theory (Bradley et al, 1984).

The present study investigates the two basic competing capital structure theories that are Trade – Off and Pecking Order theories. The first one supports that firms determine an optimal capital structure that try to achieve. This optimal capital

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structure is the one that minimizes the weighted average cost of capital of the firm and maximizes its value (Smart et al, 2004). On the other hand, the second theory supports that no optimal capital structure exists, but the firms are financed taking into account the level of each capital source's cost preferring cheaper to more expensive sources (Grinblatt and Titman, 2002).

There are numerous surveys that investigate which of these two capital structure theories are present in economies all over the world. However, their results are contradictory. In this study, this contradiction is taken into consideration based on the fact that there are researchers claiming that both theories can partially explain the firms' capital structure changes and that the two theories are not mutually exclusive (Chatzinas & Papadopoulos, 2018; Serrasqueiro & Caetano, 2015; Rahman and Arifuzzaman, 2014; Sogorb-Mira & Lopez-Gracia, 2003; Zhang & Kanazaki, 2007). Moreover, there are researchers who found that the managers' decisions on the firms' capital structure depend on the economic conditions of each country (Chatzinas & Papadopoulos, 2018; Banerjee, 2017). Based on this last proposition, the originality of the present study comes from the fact that it aims at investigating the explanatory power of trade – off and pecking order theories in countries with significantly changing economic conditions. These countries are Greece, Ireland, Portugal and Cyprus, which are the European countries that were fully supported by the European Stability Mechanism (ESM) during the recent European crisis. Spain was also supported by the ESM but only partially and this is the reason why it is excluded. Specifically, the present study used accounting data for 135 non financial and non utilities firms that are based in Cyprus, Greece, Ireland, and Portugal during a period that begins in 2006 and ends in 2016. Using the Shyam-Sunders and Myers (1999) methodology, the results indicated that the economic environment is a primary factor that affect the explanatory power of each capital structure theory as wells as that a change in economic environment may lead to a change in the dominant capital structure theory only under specific conditions.

Finally, the remainder of the present study is organized as follows: Section 2 displays comprehensively and concisely the basic points of trade – off and pecking order capital structure theories as well as the results of previous researches worldwide and the impact of crises in their predictions. Section 3 describes the economic environment of the four examined countries during the investigated period and previous researches' findings on the firms' capital structure of each country. Section 4 presents the scope, the research questions and hypotheses, the sample, the Shyam-Sunders and Myers (1999) methodology and the results of the present study followed by the necessary discussion. Finally, section 5 summarizes the basic conclusions of the total research and ideas for future researches are proposed.

2. Literature Review

Trade – off theory supports that there is an optimal capital structure that minimizes the firm's weighted average cost of capital and maximizes its value (Smart et al, 2004). This optimal capital structure is the targeted one by each manager and results from the fact that an increase in debt creates both advantages and disadvantages (Attiyet, 2012). The advantages of debt include the tax benefits of the interests paid (Modigliani & Miller, 1963) and the decreases of the costs of managers-shareholders agency conflicts (Jensen & Meckling, 1976). Specifically, the more the debt, the more the interests and the less the taxes paid by the firm. In the same way, the more the debt, the less the firm's profit which leads to lower managers' compensation moderating the conflicts between the shareholders and the managers. However, personal taxes (Miller, 1977) and non-debt tax shields such as amortizations (DeAngelo & Masulis, 1980) may distort the level of these advantages. On the other hand, the disadvantages of debt include the increase of financial distress risk (Modigliani & Miller, 1963) and the increase of the cost of debtors-shareholders conflicts (Jensen & Meckling, 1976). Specifically, the more the debt, the more the interests are leading to a situation of a possible financial distress. Moreover, the more the debt, the more part of the profit that claim the debtors is at the expense of the shareholders intensifying the costs of debtors-shareholders conflicts. Consequently, the managers have to find the optimal capital structure which is determined by the level of debt that the marginal cost of debt is equal to its marginal benefit (Cortez & Suzanto, 2012). Alternatively, the optimal capital structure is defined by the level of debt that the disadvantages of debt are counterbalanced by its advantages (Jahanzeb et al, 2014).

Pecking order theory suggests that the firms do not have an optimal capital structure, but the mix of funds is determined by the preferences of the managers, which are determined by the cost of each capital source. Specifically, the first reference to this theory was made by Donaldson in 1961 who claimed that "managers prefer funding investment, first, with retained earnings, second, after the supply of retained earnings has been exhausted, with debt and finally, when it is imprudent for the firm to borrow additional amounts, by issuing outside equity" (Grinblatt & Titman, 2002). The pecking order hypothesis was introduced by Myers (1984). Myers (1984) based on asymmetric information problems claimed that the firms prefer internal funds to external ones, while they prefer issuance of debt to issuance of stocks if the use of external funds is necessary. The reasons why they prefer internal to external funds is located on the fact that external funds usually require

high flotation cost and disclosure of additional financial information about the perspectives of the firm, which the managers do not want to make public (Niu, 2008). On the other hand, the preference of debt to equity issuance may be found on the fact that the equity issuance provides management rights to the new shareholders. This provision restricts the willingness of the existing shareholders to finance investments using equity issuance since they wish to retain the control of the firm (Niu, 2008). Moreover, this hierarchy is also explained in terms of risk (Myers & Majiluf, 1984). The firms prefer safer sources to riskier sources resulting in preferring internal funds to external and debt to equity.

Many researchers have investigated the behavior of firms' capital structure aiming at detecting whether pecking order or trade – off hypothesis can better explain this behavior, but their results are contradictory. Using various methods, some of them conclude that pecking order hypothesis is dominant (Macas Nunes & Serrasqueiro, 2017; Trinh et al, 2017; Pacheco, 2016; Balios et al, 2016; Atiyet, 2012; Sheikh et al, 2012; Vijayakumar, 2011), while others support the superiority of trade – off theory over pecking order hypothesis (Sardo & Serrasqueiro, 2017; Rossi et al, 2015; Wang, 2013). Below, some of these surveys are presented, while a much more detailed presentation may be seen in Martinez et al (2018). Trinh et al (2017) conducted a survey for Vietnamese small and medium firms for the period 2003-2009 and found that pecking order have greater explanatory power than trade – off. Atiyet (2012) using a sample of 88 French companies supported that fund deficit is the major factor that drives the behavior of their capital structures for the period 1999-2005. This result favored pecking order. Sheikh et al (2012) examined whether pecking order hypothesis influenced the Pakistani firms' capital structure for the period 2001-2008 and claimed that pecking order in its weak form exists. Vijayakumar (2011) using a sample of 26 firms of Indian automobile sector investigated the adjustability of the two theories and concluded that pecking order paradigm overbears the trade – off hypothesis during the period 1996-2009. On the other hand, the research of Rossi et al (2015) resulted that trade – off theory is much more appropriate than pecking order hypothesis in explaining the managers' decisions on capital structure using a sample of 82 Italian firms in the Agro-food industry for a period beginning in 2007 and ending in 2011, while Wang's (2013) survey leads to the same conclusion using data for UK non-financial firms for a period from 2006 to 2011.

Moreover, there are surveys that favor both theories (Chatzinas & Papadopoulos, 2018; Banga & Gupta, 2017; Mc Namara et al, 2017; Pacheco & Tavares, 2017; Serrasqueiro & Caetano, 2015; Zhang & Kanazaki, 2007; Sogorb-Mira & Lopez-Gracia, 2003) or none of them (Ohman & Yazdanfar, 2017; Dasilas & Papasyriopoulos, 2015; Wellalage & Locke, 2015; Rahman and Arifuzzaman, 2014). Chatzinas and Papadopoulos (2018) used data for 142 non-financial listed in Athens Stock Exchange firms and conclude that both theories can explain the capital structure's behavior depending on the general economic conditions. Banga and Gupta (2017) examined the capital structure of small and medium sized firms in India for a period from 2007 to 2012. Their findings support that the two theories are complementary, since they can explain different aspects of capital structure's behavior. Mc Namara et al. (2017) drew the same conclusion using data for European small and medium sized enterprises for a period from 2005 to 2011. In the same context, Zhang and Kanazaki (2007) using a sample of 1,325 non-financial Japanese firms for a period 2002 to 2006 concluded that both pecking order and trade – off theories can explain at least partially the movements of firms' capital structure. Sogorb-Mira and Lopez-Gracia (2003) examined 6,482 small and medium sized Spanish companies during 1994-1998. Their results suggest that both theories play significant role at the determination of the capital structure even if trade – off seems to exhibit greater explanatory power. On the other hand, Ohman and Yazdanfar (2017) using a sample of 15,897 Swedish small and medium sized firms between 2009 and 2012, Wellalage and Locke (2015) using data from 120 non-listed firms for a period 1998-2008, and Rahman and Arifuzzaman (2014) examining 60 and 51 firms of United Kingdom for periods 1992-2012 and 1995-2012 respectively claimed that there was not adequate evidence that allow the one or both theories to be favored.

During times of crisis, the risk and the uncertainty of economic environment sharply rise resulting in a decrease in the supply of capital loans, because of the reluctance of the economic units with surpluses to provide funds to the economic units with deficits. Consequently, the interest rates follow the path of risk and are formed in significantly higher levels (Demirguc-Kunt et al., 2015). Another reason for these changes may be located on the increased adverse selection costs that raise the required returns and lower the market values making the access to the equity markets prohibitive for the firms (Doukas, 2011). Finally, this reluctance is intensified because of the negative perspectives that are created under these risky conditions resulting even in zero supply of funds for some firms (Campello et al, 2010).

All these new conditions influence various variables of the firms as well as their capital structure (Balios et al, 2016; Proenca et al, 2014; Truong & Nguyen, 2016). According to trade – off theory, the worsening of the economic environment increases the bankruptcy costs making the firms forming a lower level of debt in their optimal capital structure (Bradley et al., 1984; Howe & Jain, 2010). However, this prediction applies most in cases of financial crises. In cases of a debt crisis, the restriction in the supply of funds is accompanied by high fiscal deficits and / or high public debt ratios, forcing the government

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to take various measures such as a rise of tax rates. This increase is expected to raise the tax benefits leading firms to increase the debt level in their optimal capital structure. As a result, the final effect on firms' capital structure of such an economic environment depends on whether the tax effect or the bankruptcy costs effect is greater (Chatzinas & Papadopoulos, 2018). On the other hand, according to pecking order theory, the decrease of the available cash flows that come from internal sources because of the reduction of sales and profits makes the firms seek increased external funds that lead to an increase of debt in their capital structure (Cetorelli & Goldberg, 2011; Hassan & Samour, 2015). This disagreement in the predictions of the two theories in times of crisis is not empirically resolved. Some research attempts concluded that firms' leverage increased during the financial crisis of 2008 (Demirguc-Kunt et al., 2015; Sumedrea, 2015; Ivashina and Scharfstein, 2010; Zeitun et al, 2017), other surveys support that the debt level reduced during the same period (Fosberg, 2012; Iqbal & Kume, 2015; Harisson and Widjaja, 2014; Proenca et al, 2016; Harisson & Widjaja, 2014), while there are some researchers that claimed that no significant changes in capital structures were provoked by the crisis (Mouton & Smith, 2016).

2. Presentation of Countries: Environment and Firms' Capital Structure

As mentioned above, the present study examined the capital structure of the European countries that were fully supported by the European Stability Mechanism (ESM) during the recent European crisis. These countries were Greece, Ireland, Portugal and Cyprus. In the present section some economic data for the economic environment of each country are presented as well as some surveys on the firms' capital structure. Specifically, Table I and Diagram 1 present the growth of real Gross Domestic Product (Diagram 1.a), the profit tax (Diagram 1.b) and the total tax rate (Diagram 1.c) as percent of commercial profits and the annualized lending rate to firms for loans with maturity over 1 year (Diagram 1.d) for each country during the period 2006-2016.

Cyprus is an economy that is based on the touristic, shipping and financial sectors. It entered the European Union in 2004 and the European Monetary Union in 2008. The global financial crisis of 2008 barely affected the Cypriot economy. However, it was major affected by the acute economic crisis in Greece, which led the Cypriot banking system to particularly high losses, its fiscal deficit at 6.3% of GDP in 2011 and the debt at 76% of GDP. Cyprus sought financial assistance from the member states of European Union and entered the European Stability Mechanism in 2013 undertaking a series of measures that restored its economy and its banking system. The level of the financial assistance package was equal to 10 billion. The austerity measures and the reforms that have been implemented led Cyprus to overcome all negative perspectives of the economic downturn in a short period of time and exited the financial assistance program in 2016. The first signs of the recovery of the Cypriot economy were visible from 2015 and continued in the coming years, with a growth rate close to 4% in 2017. The projections for 2018 are even more optimistic (Ioannou & Charalambous, 2017). According to Table I, the Cypriot GDP annual growth (%) declined sharply from 4.5% in 2006 to -5.9% in 2013, while the profit tax rose from 7.8% to 9.2% correspondingly, the total tax rate from 20.6% to 21.9% and the interest rate declined from 6.3% to 6.2%. On the other side, the Cypriot GDP annual growth (%) raised sharply from -5.9% in 2013 to 3.4% in 2016, the profit tax continued to rise to 9.2%, the total tax rate from to 24.2%, while the interest rate declined from 6.2% to 4.2% correspondingly. The accumulated changes of profit tax, total tax rate and lending interest rates are equal to 17.95%, 6.31% and -2.68% correspondingly for 2007-2013, 4.35%, 10.50% and -31.28% for 2013-2016, and 23.08%, 17.48% and -33.12% for the total examined period. Finally, as refers to the capital structure theories' ability to explain the firms' decision on financing, the lack of relevant studies is impressive. However, the majority of the studies that the researcher managed to find agree with the dominant position of the pecking order hypothesis (Mokhova & Zinecker, 2013; Machielsen, 2012).

TABLE I. GDP annual growth, profit tax, total tax rate and annualized lending interest rate in Cyprus, Greece, Ireland and Portugal for the period 2006-2016

Diagram 1: Gross Domestic Product annual growth, profit tax, total tax rate and annualized lending interest rate in Cyprus, Greece, Ireland and Portugal for the period 2006-2016

Greece was the major problem of European Monetary Union in facing the global financial crisis of 2008, since its macroeconomic environment converted a financial crisis to a severe debt crisis. Greece agreed with the terms of three Memoranda of Understanding and received a financial support of about 302 billion undertaking the responsibility to implement severe austerity measures and strict reforms of public sector. The first memorandum was signed in 2010 when the Greece's fiscal deficit of 2009 rose from 3.7% to 15.1% with a debt ratio of 126.8%. The implementation of the austerity measures in combination with the negative perspectives of Greek real economy led the country to the sharpest recession resulting in a loss of 25% of its Gross Domestic Product (Nelson et al, 2017). Greece has managed to exit the European Stability Mechanism programs in conditions of strict surveillance in 2018. According to Table I, the Greek GDP annual

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growth (%) declined sharply from 5.7% in 2006 to -5.5% in 2010, while the profit tax decreased from 16.9% to 14.1% correspondingly, the total tax rate from 49.5% to 46.7% and the interest rate from 5.4% to 4.2%. On the other side, the Greek GDP annual growth (%) raised from -5.5% in 2010 to -0.2% in 2016, the profit tax increased to 22.4%, the total tax rate from 46,7% to 50.7%, while the interest rate remained almost stable at about 5% levels. The accumulated changes of profit tax, total tax rate and lending interest rates are equal to -16.57%, -5.66% and -23.06% correspondingly for 2006-2010, 58.87%, 8.57% and 3.84% for 2010-2016, and 32.54%, 2.42% and -20.11% for the total examined period. Finally, the Greek firms' capital structure behavior is investigated by many researchers, the majority of whom agree that the pecking order hypothesis can better explain the financing decisions of firms' managers (Balios et al, 2016; Dasilas & Papasyriopoulos, 2015; Noulas & Genimakis, 2011; Daskalakis & Psillaki, 2008, 2009; Eriotis et al., 2007; Agiormigiannakis et al., 2004; Daskalakis et al., 2003). However, some other scholars conclude that the Greek firms define a long-term optimal capital structure, a conclusion that is in accordance to trade - off theory or that none of the two examined theories can explain adequately their capital structure behavior (Vasiliou et al., 2006; Vasilioy & Daskalakis, 2005; Chatzinas & Papadopoulos, 2018).

Ireland was an economic miracle for European Union. From 1998 to 2007, the Irish debt ratio decreased from 54% to 25% following a strictly controlled fiscal policy with high growth rates. When Lehman Brothers collapsed in September 2008, the crash spread all over the world and the Irish banks were found uncovered to the new risky conditions. The Irish government then took over all the obligations of the bankrupt Irish banks. As a result, bank balances were transferred to the public budget and Ireland's deficit from almost zero in 2007 reached 25% in 2010, and debt from 25% rose to 96.2% in 2010. So, Ireland was the second member state of European Union to seek financial assistance from European Union and entered into a Memorandum. As Greece did before, Ireland signed in November 2010 a Memorandum of Understanding accompanied by € 85 billion in funding, which is an amount equal to 58% of its GDP. Finally, Ireland was also the first country to exit the Memorandum by the end of 2013. The actions of the Memorandum consisted of austerity measures, reforms and banking restructuring (Whelan, 2013). According to Table I, the Irish GDP annual growth declined from 5.5% in 2006 to 1.8% in 2010 with its lowest value equal to -4.6% in 2009, while the profit tax reduced from 11.9% to 11.8% correspondingly, the total tax rate remain almost stable at 25.4% .and the interest rate from 4.7% to 3.1%. On the other side, the Irish GDP annual growth (%) raised sharply from 1.8% in 2013 to 5.1% in 2016, the profit tax rose to 12.4%, the total tax rate to 26.0%, while the interest rate declined from 3.1% to 3.0% correspondingly. The accumulated changes of profit tax, total tax rate and lending interest rates are equal to -0.84%, 5.08% and 4.20% correspondingly for 2006-2010, 0%, 2.36% and 2.36% for 2010-2016, and -34.12%, -0.98% and -34.76% for the total examined period. Finally, as refers to the capital structure theories' ability to explain the firms' decision on financing, the relevant studies do not agree whether the pecking order hypothesis of the trade-off holds the dominant explanatory power (Mac an Bhaird & Lucey, 2010; Bancel & Mittoo, 2004).

Finally, Portugal's economy followed a parallel course with that of the Greek economy between 2000 and 2008, with its GDP rising steadily until the time of the economic crisis in Europe. From 2008 to 2011, Portuguese Gross Domestic Product was significantly reduced as the economy of the country faced many pathogens such low exports, structural problems, extrovert economy and low industry. Its debt ratio climbed from 50.4% in 1995 at 120% in 2012, one year after its government requested financial assistance by the European Stability Mechanism. Portugal agreed with the terms of a Memorandum of Understanding and received a financial support of about 26 billion undertaking the responsibility to implement the austerity measures and reforms of public sector. The memorandum was signed in 2011 when the Portugal's fiscal deficit of 2010 rose at 10.0%. Portugal exited the European Stability Mechanism program in conditions of surveillance in 2014 (Portugal, 2015). According to Table I, the Portuguese GDP annual growth declined from 1.6% in 2006 to -1.8% in 2011, while the profit tax decreased from 15.3% to 15.2% correspondingly, the total tax rate from 43.8% to 42.6% and the interest rate from 4.7% to 4.1%. On the other side, the Portuguese GDP annual growth raised from -1.8% in 2010 to 1.6% in 2016, the profit tax decreased to 12.5%, the total tax rate from to 39.8%, while the interest rate to 2.9%. The accumulated changes of profit tax, total tax rate and lending interest rates are equal to -0.65%, -2.74% and -13.22% correspondingly for 2006-2011, -17.76%, -6.57% and -28.50% for 2011-2016, and -18.30%, -9.13% and -37.95% for the total examined period. Finally, the Portuguese firms' capital structure behavior is investigated by many researchers, the majority of who agree that the pecking order hypothesis can better explain the financing decisions of firms' managers (Macas Nunes & Serrasqueiro, 2017; Pacheco, 2016). However, some other scholars conclude that the Portuguese firms choose their financial mix in accordance to trade - off theory (Sardo & Serrasqueiro, 2017) or that both theories can explain adequately their capital structure behavior (Pacheco and Tavares, 2017; Serrasqueiro and Caetano, 2015).

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3. Empirical Investigation

3.1 Scope, Research Questions and Research Hypotheses

The present study aims at examining whether the economic conditions formed by the financial assistance provided by the European Stability Mechanism influence the behavior of the firms' capital structure. Alternatively, the researchers investigate which of the two basic capital structure theories, which are trade – off and pecking order, can better explain the managers' decisions on the capital sources the firms use before and after the change of economic conditions that a package of financial assistance from European Stability Mechanism to a member-state of the European Monetary Union may cause. In this context, the research questions formed are:

1. Can the pecking order theory explain the behavior of the capital structure of the firm in countries assisted by the European Stability Mechanism?

2. Can the trade – off theory explain the behavior of the capital structure of the firm in countries assisted by the European Stability Mechanism?

3. Is there a change in the explanatory power of a capital structure theory provoked by the change in the economic conditions that a package of financial assistance from European Stability Mechanism may cause?

4. What may be the reasons for a possible shift from the one capital structure theory towards the other?

The trigger for the present study was given by Chatzinas and Papadopoulos (2018) who provided evidence that in case of Greek firms the two capital structure theories are complementary even if they found that trade – off theory was dominant after the financial assistance received from the European Stability Mechanism (2010-2014) and the pecking order hypothesis was slightly dominant in the period before (2008-2010). They attributed this shift to the fact that "when economic conditions change, firms adjust their capital structures according to the *Trade-off* theory, whereas when the economic conditions remain stable, firms behave according to both theories". Based on these conclusions, we formed the following three research hypotheses:

H1: Both pecking order and trade – off theories can only partially explain firms' capital structure behavior.

H2: The pecking order hypothesis can explain a more significant part of firms' capital structure behavior in "normal" economic conditions.

H3: The trade – off theory can explain a more significant part of firms' capital structure behavior in "special" economic conditions.

The above research hypotheses aim at accepting or rejecting the already drawn implications by Chatzinas & Papadopoulos (2018). The present study aims at confirming the implication that the reinforcement of the power of trade – off theory may be attributed to the fact that the tax deductibility effect is larger than the bankruptcy costs effect. As mentioned above, the trade – off theory supports that because of the increased bankruptcy costs that incur during crises, the firms should lower their debt levels to meet their optimal capital structure (Bradley et al., 1984). However, in case of European crisis, the four financially assisted countries took strict austerity measures including in some cases increases of corporate tax rates. According to the same theory, the increased levels of corporate tax rates should increase the advantage of interests' tax deductibility leading firms to increase their debt levels to meet their optimal capital structure. So, if tax deductibility effect is greater than cost bankruptcy effect, the total effect to debt ratio of the firms is positive according to both trade – off theory and the pecking order theory. It is reminded that pecking order effect on debt ratio in times of crisis is based on the fact that the decreased levels of internal cash flows because of the reduced profits push firms to external funds. So, the fourth and fifth hypotheses are formed in the following way:

H4: The financial assistance received by European Stability Mechanism significantly affects the capital structure theory that the firms follow in financing decisions.

H5: In the context of trade – off theory, if the tax deductibility effect is higher (lower) than the bankruptcy costs effect, the firms are expected to increase (decrease) their debt ratio to meet their optimal capital structure in times of crisis.

3.3 Data and Methodology

The present studies focuses on the listed firms of the countries that received financial assistance by the European Stability Mechanism. These countries were Cyprus in 2013, Greece in 2010, Ireland in 2010 and Portugal in 2011. Spain also

received a financial assistance but it was only partial and for this reason it is excluded. The accounting data of these firms were drawn by the Bloomberg database for a period beginning in 2003 to 2016. The initial number of the listed Cypriot, Greek, Irish and Portuguese firms was 595, but the firms with missing values during the total period were excluded resulting in a final number of 135 firm. Out of these firms, 13 (9.63%) are Cypriot, 70 (51.85%) are Greek, 25 (18.52%) Irish and 27 (20.00%) were Portuguese. Finally, the data were winsorized at a 5% level.

The methodology applied is the one that Shyam-Sunders and Myers (1999) proposed. According to it, two regressions are estimated for each hypothesis. Equation (1) represents the regression for trade – off theory.

$$\Delta D_{it} = a_1 + b_{TA} (D_i^* - D_{it-1}) + u_{it} \qquad (1)$$

Where D_{it} is the long-term debt ratio as a percentage of net total assets for firm i in period t, D_i^* is the optimal capital structure of firm i, a_1 is the constant coefficient of regression and b_{TA} is the trade – off coefficient, which has to be positive in order for adjustments to the optimal capital structure to be denoted, but smaller than 1 because of the existence of the transaction costs (Shyam-Sunders & Myers, 1999). As refers to the optimal capital structure, Shyam-Sunders and Myers (1999) supported that a three – year moving average is an effective proxy. This proxy is used in the present study, too. It worth mentioning the fact that net total assets are defined as the sum of net fixed assets and net working capital or as the residual of the subtraction of the short-term liabilities from the total assets.

Equation (2) shows the respective regression for pecking order hypothesis.

$$\Delta D_{it} = a_2 + b_{PO} Def_{it} + u_{it} \qquad (2)$$

Where D_{it} as above, a_2 is the constant coefficient of regression, and b_{PO} is the pecking order coefficient which has to be equal to one for the pecking order to exist (Shyam - Sunder & Myers, 1999). In cases of positive but smaller than one pecking order coefficient, a weak form of pecking – order hypothesis may be concluded (Atiyet, 2012; Sheikh et al, 2012). Finally, Def_{it} is the financial deficit for firm i in period t and is computed by the equation (3):

$$Def_{it} = (Div_{it} + X_{it} + \Delta W_{it} + R_{it} – C_{it})/ \text{Net Total Assets}_{it} \qquad (3)$$

Where Div_{it}, X_{it}, ΔW_{it}, R_{it}, and C_{it} are the dividend payments, the capital expenditures, the net change in net working capital, the current portion of long-term debt at start of period, and the operating cash flows after interests and taxes for firm i in period t respectively.

The above methodology is completed with two diagnostic tests. For first one, variations of the models of equations (1) and (2) are estimated. These variations are estimated by scaling the long-term debt and the deficit with sales, by using fixed effects model and by using random effects model. If the regression coefficients of the variations are virtually identical to the ones of the initial equations, then the estimators of the equations (1) and (2) are considered to be robust. For the second one, the anticipated deficits are used instead of the current deficits computed by equation (3) in order to be confirmed that the good fit of equation (2) results from the planned financing and not from short-term adjustments. Two proxies are used for the anticipated deficits. The first one is the deficit of the previous year ($Def_{i,t-1}$). The second one is computed with equation (3) using the operating cash flows after interests and taxes and the net changes in the net working capital of the previous years. If the regression coefficients of the anticipated deficits satisfy the conditions of a positive but smaller than one value, then the good fit of pecking order model is not based on short-term adjustments (Shyam - Sunder & Myers, 1999).

The above regressions and their diagnostic tests are executed separately for each of the four examined countries for two periods. The first period corresponds to the period beginning in 2006 and ending in the year that each government signed its Memorandum of Understanding and the second period begins in the year after the government signed the Memorandum of Understanding and ends in 2016. It is reminded that Cyprus, Greece, Ireland and Portugal signed their memoranda in 2013, 2010, 2010 and 2011 respectively. As a result, different periods are formed for each country.

3.4 Results of Statistical Analysis

3.4.1 Cyprus

Cypriot Government signed the Memorandum of Understanding with European Stability Mechanism in 2013. So, the first period lasts from 2006 to 2013, while the second from 2014 till 2016. Table II shows the estimation of equations (1) and (2) for firms of Cypriot economy during these two periods.

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During the first period (2006-2013), pecking order hypothesis seems to explain greater percent of the volatility of the financial leverage in comparison to trade-off theory. Specifically, the trade-off theory presents a statistically significant coefficient equal to 0.568 ($p<0.01$) and a non significant constant coefficient ($p>0.10$). As refers to pecking order, its coefficient is equal to 0.911 and statistically significant ($p<0.01$), while the constant coefficient may be assumed to be zero ($p>0.10$). The explanatory power of pecking order, as it may be measured by the coefficient of determination, is equal to 31.7% which is higher than the 17.4 which is the level of the explanatory power of trade-off theory. However, when the two equations are simultaneously estimated the coefficient of determination is almost equal to the sum of the two models, which leads to the conclusion that both regressions are statistically significant and both theories are present during this first period. On the other hand, during second period (2014-2016), the explanatory power of trade – off rises sharply at 48.2%, while the one of pecking order falls heavily at just 3.7%. The constant coefficients of the two models remain statistically not significant ($p>0.10$), the coefficient of trade-off remains statistically significant ($p<0.10$) equal to 0.998, while the one of pecking order is equal to 0.167 and not statistically significant ($p>0.10$). The addition of the two regressions in one confirms the dominance of the trade-off theory over the pecking order hypothesis.

TABLE II. Estimation of the Models of Pecking Order and Trade-Off Theories for Cypriot firms

Table III presents the results of the first diagnostic test for Cypriot firms. Equations (1) and (2) were estimated scaling the variables with sales, using fixed effects and using random effects. These results do not appear significantly different in signs, in magnitude and in statistical significance from the ones displayed in Table II. So, according to the first diagnostic test, the results from it, and the conclusions may be drawn by it, are robust.

TABLE III. First Diagnostic Test based Variations of Dependent Variable for Cypriot firms

Table IV displays the results of the second diagnostic test. Using the two proxies of anticipated deficits, the results of Table IV are in agreement with the results of Table II, since the coefficients of the two theories during the two periods are similar in terms of signs, magnitude and statistical significance which leads to the conclusion that the pecking order equation and the trade – off equations for the Cypriot firms are able to capture and express the planned financial needs of the firms.

TABLE IV. Second Diagnostic Test based on Anticipated Deficit for Cypriot firms

3.4.2 Greece

Table V presents the estimation for the equations of Trade – Off and Pecking Order Theories, while Table VI and Table VII display the results of the first and the second diagnostic tests respectively. It worth mentioning that the first period for Greece begins in 2006 and ends in 2010 resulting in a six-year second period, which lasts from 2011 to 2016, since Greece's Memorandum of Understanding was signed in 2006.

TABLE V. Estimation of the Models of Pecking Order and Trade-Off Theories for Greek firms

According to Table V, the trade – off regression is able to explain 20.4% of debt's variance during the first period, while pecking order regression 21.3% of it. The constant coefficients of both regressions are equal to 0.021 and -0.069 respectively and not statistically significant ($p>0.10$), while the coefficients of the independent variable are equal to 0.759 and 0.810 and statistically significant ($p<0.01$). The estimation of a common model can explain 40.0% of the total variance, which indicates that both the regressions, and therefore both theories, have a significant contribution. On the other side, during the second the proportion of the debt's variance explained by the two regressions amounts to 25.0% and 0.4% for trade – off and pecking order respectively. Furthermore, the constant coefficients are again not statistically significant ($p>0.10$) while the coefficient of trade – off model is again statistically significant ($p<0.01$) and equal to 0.935. However, the coefficient of pecking order is equal to 0.810, but not statistically significant ($p>0.10$). As a result, pecking order theory has zero explanatory power.

According to Table VI, the estimations of the variations of equation (1) and (2) using sales as scale variable and applying fixed and random effects are virtually identical in terms of magnitude, sign and statistical significance. As a result, the first diagnostic test supports that the estimations of Table V for Greece are robust.

TABLE VI. First Diagnostic Test based Variations of Dependent Variable for Greek firms

Finally, according to Table VII, the pecking order coefficients and the trade-off coefficients remain positive and most of them statistically significant, while the constant coefficients are still not statistically significant indicating that the results of

Table V express the planned financing and not short-term adjustments. These results strengthen the robustness of the estimated regression (1) and (2).

TABLE VII. Second Diagnostic Test based on Anticipated Deficit for Greek firms

3.4.3 Ireland

Irish Government signed the Memorandum of Understanding with European Stability Mechanism in 2010. So, the first period lasts from 2006 to 2010, while the second from 2011 till 2016. Table VIII shows the estimation of equations (1) and (2) for firms of Irish economy during these two periods.

TABLE VIII. Estimation of the Models of Pecking Order and Trade-Off Theories for Irish firms

During the first period (2006-2010), trade-off hypothesis seems to explain greater percent of the volatility of the financial leverage in comparison to pecking order theory. Specifically, the trade-off theory presents a statistically significant coefficient equal to 0.768 ($p < 0.01$) and a non significant constant coefficient ($p > 0.10$). As refers to pecking order, its coefficient is equal to 0.460 and statistically significant ($p < 0.05$), while the constant coefficient may be assumed to be zero ($p > 0.10$). The explanatory power of pecking order, as it may be measured by the coefficient of determination, is equal to 4.1% which is lower than the 21.8 which is the level of the explanatory power of trade-off theory. On the other hand, during second period (2011-2016), the explanatory power of trade – off remains almost at the same level of 27.0%, while the one of pecking order slightly rises at just 6.7%. The constant coefficients of the two models remain statistically not significant ($p > 0.10$), the coefficient of trade-off and pecking order remain statistically significant ($p < 0.10$) equal to 0.857 and 0.497 respectively. The above results indicate the dominance of the trade-off theory over the pecking order hypothesis during both periods in the Irish economy.

Table IX presents the results of the first diagnostic test for Irish firms. Equations (1) and (2) were estimated scaling the variables with sales, using fixed effects and using random effects. These results do not appear significantly different in signs, in magnitude and in statistical significance from the ones displayed in Table VIII. So, according to the first diagnostic test, the results from it, and the conclusions may be drawn by it, are robust.

TABLE IX. First Diagnostic Test based Variations of Dependent Variable for Irish firms

Table X displays the results of the second diagnostic test. Using the two proxies of anticipated deficits, the results of Table X are in agreement with the results of Table VIII, since the coefficients of the two theories during the two periods are similar in terms of signs, magnitude and statistical significance which leads to the conclusion that the pecking order equation and the trade – off equations for the Irish firms are able to capture and express the planned financial needs of the firms.

TABLE X. Second Diagnostic Test based on Anticipated Deficit for Irish firms

3.4.4 Portugal

Table XI presents the estimation for the equations of Trade – Off and Pecking Order Theories, while Table XII and Table XIII display the results of the first and the second diagnostic tests respectively. It worth mentioning that the first period for Portugal begins in 2006 and ends in 2011 resulting in a five-year second period, which lasts from 2012 to 2016, since Portugal's Memorandum of Understanding was signed in 2006.

TABLE XI. Estimation of the Models of Pecking Order and Trade-Off Theories for Portuguese firms

According to Table XI, the trade – off regression is able to explain 29.8% of debt's variance during the first period, while pecking order regression 12.2% of it. The constant coefficients of both regressions are equal to 0.033 and 0.009 respectively and not statistically significant ($p > 0.10$), while the coefficients of the independent variable are equal to 0.865 and 0.690 and statistically significant ($p < 0.01$). The estimation of a common model can explain 40.4% of the total variance, which indicates that both the regressions, and therefore both theories, have a significant contribution. On the other hand, during the second the proportion of the debt's variance explained by the two regressions amounts to 18.3% and 7.8% for trade – off and pecking order respectively. Furthermore, the constant coefficients are again not statistically significant ($p > 0.10$) while the coefficients of trade-off and pecking order independent variables are again statistically significant ($p < 0.01$) and equal to 0.664 and 0.943 respectively. As a result, both theories are present during both periods.

According to Table XII, the estimations of the variations of equation (1) and (2) using sales as escalation variable and applying fixed and random effects are virtually identical in terms of magnitude, sign and statistical significance. As a result, the first diagnostic test supports that the estimations of Table XI for Portugal are robust.

TABLE XII. First Diagnostic Test based Variations of Dependent Variable for Portuguese firms

Finally, according to Table XIII, the pecking order coefficients and the trade-off coefficients remain positive and most of them statistically significant, while the constant coefficients are still not statistically significant indicating that the results of Table XI express the planned financing and not short-term adjustments. These results strengthen the robustness of the estimated regression (1) and (2).

TABLE XIII. Second Diagnostic Test based on Anticipated Deficit for Portuguese firms

3.5 Discussion of Results

In Cyprus, given the robustness of the equations that confirmed by the two diagnostic tests, both trade-off and pecking order hypotheses contribute to the interpretation of the behavior of the capital structure of the Cypriot firms during the first period (2006-2013), but the pecking order hypothesis in its weak form (b_{PO}=0.911 < 1) is the dominant one (R^2_{PO}=0.317>0.174= R^2_{TO}). On the other hand, the pecking order's explanatory power is eliminated during the second period and trade-off prevails (R^2_{PO}=0.037>0.482= R^2_{TO}). Previous studies supported that the pecking order hypothesis hold a dominant position in explaining the Cypriot firms' managers' decisions about the capital structure (Mokhova & Zinecker, 2013; Machielsen, 2012). The present results are in partial agreement with them, since the presence of pecking order is intense during the first period. So, it may be concluded that during 'normal' economic conditions Cypriot managers act in accordance to pecking order hypothesis However, during the second period, where the economic conditions became extreme, the trade-off outbalances the pecking order. This observation is not in opposition to previous results because none of them examined the capital structure of Cypriot firms during crisis times. So, these extreme economic conditions led the Cypriot firms to redirect their capital structure choices in accordance to trade-off.

Greece is the first country that entered a European Stability Mechanism financial assistance program and the statistical results indicated a similar behavior of the Greek firms' capital structure to the Cypriot firms' one. Specifically, pecking order hypothesis in its weak form (b_{PO}=0.810 < 1) is slightly better than trade-off theory in explaining the Greek firms' capital structure during the first period (R^2_{PO}=0.213>0.204= R^2_{TO}). On the other hand, during the second period the explanatory power of pecking order hypothesis was eliminated and the one of trade-off increased rapidly (R^2_{PO}=0.004<0.250= R^2_{TO}). The majority of previous studies agree with the superiority of pecking order hypothesis for the Greek firms during 'normal' economic conditions (Daskalakis & Psillaki, 2008, 2009; Eriotis et al., 2007; Agiormigiannakis et al., 2004; Daskalakis et al., 2003), but even in times of crisis there are researchers that conclude that the superiority of pecking order hypothesis holds (Balios et al, 2016; Dasilas & Papasyriopoulos, 2015; Noulas & Genimakis, 2011). However, preceding studies indicated that there are evidence that support the trade-off hypothesis both in 'normal' economic conditions (Vasiliou et al., 2006) and in times of crisis (Chatzinas & Papadopoulos, 2018). The present study deduces that none of the two examined theories can adequately interpret the capital structure' movements of the Greek firms during 'normal' economic conditions (Chatzinas & Papadopoulos, 2018; Vasilioy & Daskalakis, 2005), but the trade-off theory outbalances pecking order during crisis times (Chatzinas & Papadopoulos, 2018).

In Ireland, only trade-off hypothesis appears to contribute to the interpretation of the behavior of the capital structure of the Irish firms during both the first (2006-2010) and the second period (2011-2016), since the explanatory power of the pecking order hypothesis in its weak form is significantly lower than the one of trade-off theory (R^2_{PO}=0.041<0.218= R^2_{TO} for the first period; R^2_{PO}=0.067<0.270= R^2_{TO} for the second period;). Previous studies do not agree whether the pecking order hypothesis of the trade-off holds the dominant explanatory power (Mac an Bhaird & Lucey, 2010; Bancel & Mittoo, 2004). In contrast, the present study claims that the dominant theory in financing decisions of Irish firms is trade-off regardless the prevailing economic conditions.

Finally, in Portugal pecking order hypothesis in its weak form (b_{PO}=0.957 < 1) is worse than trade-off theory in explaining the Portuguese firms' capital structure during the first period (R^2_{PO}=0.122<0.298= R^2_{TO}). On the other hand, during the second period this situation is not overturned (R^2_{PO}=0.078<0.183= R^2_{TO}). However, during both periods the coefficients of the respective models are statistical significant and positive, which may lead to the conclusion that both theories are present in the Portuguese firms' decision about their capital structure. This is not an unexpected conclusion, since there are previous studies that supported this behavior (Pacheco and Tavares, 2017; Serrasqueiro and Caetano, 2015). Furthermore, there

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are many preceding studies both in favor of pecking order (Macas Nunes & Serrasqueiro, 2017; Pacheco, 2016) and in favor of trade-off (Sardo & Serrasqueiro, 2017).

Table XIV below summarizes the above conclusions for each country:

TABLE XIV. Summary of the Results of Statistical Analysis

According to Table XIV, the Greek and Cypriot firms changed the way they decided their capital structure after the Memorandum of Understanding, while nothing changed in Ireland and in Portugal. In particular, Greek and Cypriot firms' capital structure was shifted from pecking order hypothesis to trade-off theory. Moreover, in Cyprus, Greece and Portugal, both theories are applied during 'normal' economic conditions, as they can be expressed by the first period. The above results lead to a partial acceptance of the research hypotheses 1, 2 and 3. Specifically, research hypothesis 1 is accepted for Cyprus, Greece and Portugal, while research hypotheses 2 and 3 are accepted for Cyprus and Greece.

The reasons for the above differentiations may be found in tax and interest environment of the four countries. It is reminded that taxes express the tax deductibility and interest rates express the financial distress costs supported by trade-off hypothesis. During the whole examined period, profit tax raised by 23.08% in Cyprus and 32.54% in Greece and the total tax rate by 17.48% and 8.57% respectively. The same time the changes in Ireland and Portugal was equal to 4.20% and -18.3% for the profit tax and to 2.36% and -9.13% for the total tax rate respectively. Moreover, the interests for loans to firms with maturity over one year reduced by 33.12% in Cyprus, 20.11% in Greece, 34.76% in Ireland and by 37.95% in Portugal. So, Cyprus and Greece, which are the two countries with the highest increases in tax rates simultaneously with a medium deterioration of interest rates of debt, are the countries that a shift from pecking order to trade-off hypothesis was observed. On the other hand, Portuguese and Irish tax environment slightly changed, while the interest rates reduced rapidly. These observations support that in Greece and Cyprus the advantages of tax deductibility significantly increase, while the disadvantages of the financial distress costs slightly or moderately reduce, but in Portugal and Ireland the advantages of tax deductibility do not significantly change, while the disadvantages of the financial distress significantly reduce. The above developments provide the reasons why there is an increase of the explanatory power of the trade-off theory in Greece and Cyprus and not in Ireland and Portugal, while they partially confirm the research hypotheses 4 and 5.

4. Conclusions

Modigliani and Miller (1958; 1963) theorem set the basis for the development of two competing capital structure theories, the pecking order and the trade-off. Among corporate finance theoretical scientists and practitioners, there is a continuous controversy over which of these two theories can better explain the changes of capital structures of the firms. Many researchers provided evidence in favor of the pecking order theory (Macas Nunes & Serrasqueiro, 2017; Trinh et al, 2017; Pacheco, 2016; Balios et al, 2016; Atiyet, 2012; Sheikh et al, 2012; Vijayakumar, 2011), as well as in favor of the trade-off theory (Sardo & Serrasqueiro, 2017; Rossi et al, 2015; Wang, 2013). However, during the last year there is an increasing trend in the studies that support that neither of them can alone explain fully the capital structure decisions but both of them can partially explain them (Chatzinas & Papadopoulos, 2018; Banga & Gupta, 2017; Mc Namara et al, 2017; Pacheco & Tavares, 2017; Serrasqueiro & Caetano, 2015; Zhang & Kanazaki, 2007; Sogorb-Mira & Lopez-Gracia, 2003). The present study belongs to this last one group of studies.

Specifically, the present study examined the behavior of capital structure in countries that have taken financial assistance from the European Stability Mechanism during the periods before and after the signing of the respective Memorandum of Understanding. These countries are Cyprus, Greece, Ireland and Portugal. Before the crisis, the Cypriot, Greek and Portuguese firms follow both pecking order and trade-off paradigms, while the Irish firms only the trade-off. After the crisis, the dominant capital structure theory is trade-off in Cyprus and Greece, while nothing changes for the Irish and the Portuguese firms. As a result, evidence is provided in favor of the aspect that the two theories are complementary and not mutually exclusive. However, the present study's originality is found on the fact that it investigated the explanatory power of trade – off and pecking order theories in countries with significantly changing economic conditions and tried to connect the observed differences with these changing economic conditions. As a result, the countries in which a shift to the trade – off theory was observed were Greece and Cyprus, whose tax environments were the ones that worsened the most among the four examined countries. So, the present study claims that a severe deterioration of the tax environment for the firms leads them to adjust their capital structures according to trade – off. This means that changing tax environment leads the firms to determine a new level of their optimal capital structure. Reaching this level, they can return to the principles of pecking order hypothesis.

The researchers of the present study are aware of the risk of their last proposition, which is that the changing economic environment causes changes in the firms' optimal capital structures that, after they are reached, are financed following the pecking order paradigm. This is the reason why, in our opinion, future researchers should focus on the behavior of the firms' capital structure after the normalization of the economic conditions. A return of the firms in the previous situation could confirm this proposition. After all, the recent European crisis is an excellent opportunity for its examination.

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Tables

TABLE I. GDP annual growth, profit tax, total tax rate and annualized lending interest rate in Cyprus, Greece, Ireland and Portugal for the period 2006-2016

		2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
GDP annual growth (%)	Cyprus	4.5	4.8	3.9	-1.8	1.3	0.3	-3.1	-5.9	-1.4	2.0	3.4
	Greece	5.7	3.3	-0.3	-4.3	-5.5	-9.1	-7.3	-3.2	0.7	-0.3	-0.2
	Ireland	5.5	5.2	-3.9	-4.6	1.8	3.0	0.0	1.6	8.3	25.6	5.1
	Portugal	1.6	2.5	0.2	-3.0	1.9	-1.8	-4.0	-1.1	0.9	1.8	1.6
Profit tax (% of commercial profits)	Cyprus	NA	NA	7.8	7.8	9.4	9.2	9.1	9.2	9.5	9.3	9.6
	Greece	16.9	16.4	14.1	14.1	14.1	13.5	11.2	11.2	19.0	19.7	22.4
	Ireland	11.9	11.9	12.0	12.1	11.8	12.0	12.0	12.2	12.4	12.4	12.4
	Portugal	15.3	14.9	14.4	14.4	15.1	15.2	14.5	15.0	15.0	13.5	12.5
Total tax rate (% of commercial profits)	Cyprus	NA	NA	20.6	20.6	21.7	21.6	21.6	21.9	22.5	24.0	24.2
	Greece	49.5	48.9	46.7	46.7	46.7	45.9	44.1	44.0	50.7	49.6	50.7
	Ireland	25.4	25.4	25.5	25.6	25.4	25.5	25.6	25.9	26.0	26.0	26.0
	Portugal	43.8	42.9	42.5	42.3	42.6	42.6	41.9	42.2	42.3	40.9	39.8
Annualized lending rate to firms for loans with maturity over 1 year	Cyprus	NA	NA	6.3	6.0	5.8	6.3	6.5	6.2	5.8	4.9	4.2
	Greece	5.4	6.3	6.5	4.7	4.2	5.0	5.1	4.9	4.9	4.5	4.3
	Ireland	4.7	5.8	6.2	3.7	3.1	3.6	3.1	2.9	3.0	3.0	3.0
	Portugal	4.7	5.6	6.0	3.9	3.1	4.1	4.3	3.9	3.8	3.4	2.9

Source: Databases of World Bank and European Central Bank

Note: NA = Not Available

TABLE II. Estimation of the Models of Pecking Order and Trade-Off Theories for Cypriot firms

	Period	
	2006-2013	2014-2016
Dependent Variable	Long-Term Debt to Net Total Assets	
	(ΔD_{it})	
Trade – Off Regression		
Constant	0.173	-0.066
p –value	0.182	0.179
Target Adjustment coef (b_{ta})	0.568	0.998
p –value	0.000	0.000
R^2	0.174	0.482
Pecking Order Regression		
Constant	0.130	0.021

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p –value	0.260	0.759
Pecking Order coef. (b_{po})	0.911	0.167
p –value	0.000	0.238
R^2	0.317	0.037
Both Regresions		
Constant	0.164	-0.066
p –value	0.105	0.222
Pecking Order coef. (b_{po})	0.941	-0.001
p –value	0.000	0.995
Target Adjustment coef (b_{ta})	0.573	0.999
p –value	0.000	0.000
R^2	0.503	0.482

TABLE III. First Diagnostic Test based Variations of Dependent Variable for Cypriot firms						
Period	2006-2013	2014-2016	2006-2013	2014-2016	2006-2013	2014-2016
Dependent Variable	Long-Term Net Debt to Sales		Long-Term Net Debt to Net Total Assets		Long-Term Net Debt to Net Total Assets	
	(ΔND_{it})		(ΔND_{it})		(ΔND_{it})	
Method	No effects		Random Effects		Fixed Effects	
Trade – Off Regression						
Constant	-0.004	-0.034	0.025	-0.066	0.175	-0.081
p -value	0.847	0.260	0.614	0.586	0.182	0.080
Target Adjustment coef (b_{ta})	0.044	0.330	0.099	0.996	0.611	1.250
p -value	0.751	0.022	0.449	0.000	0.000	0.000
R^2	0.001	0.140	0.009	0.512	0.317	0.732
Pecking Order Regression						
Constant	-0.029	0.008	0.088	0.021	0.129	0.034
p -value	0.128	0.769	0.428	0.848	0.271	0.692
Pecking Order coef. (b_{po})	0.158	0.166	1.134	0.170	1.023	0.245
p -value	0.000	0.108	0.000	0.222	0.000	0.272
R^2	0.141	0.014	0.414	0.040	0.430	0.174
Both Regresions						
Constant	-0.031	-0.010	0.164	-0.066	0.167	-0.114
p -value	0.109	0.713	0.112	0.194	0.087	0.037
Pecking Order coef. (b_{po})	0.171	0.174	0.941	-0.001	1.067	-0.165
p -value	0.000	0.005	0.000	0.995	0.000	0.235
Target Adjustment coef (b_{ta})	0.081	0.394	0.573	0.999	0.638	1.349
p -value	0.528	0.111	0.000	0.000	0.000	0.000
R^2	0.153	0.231	0.503	0.482	0.633	0.750

TABLE IV. Second Diagnostic Test based on Anticipated Deficit for Cypriot firms

Period	2006-2013				2014-2016			
Dependent Variable	Long-Term Debt to Net Total Assets				Long-Term Debt to Net Total Assets			
	(ΔD_{it})				(ΔD_{it})			
Trade – Off Regression								
Constant	0.172	0.162	0.151	0.163	0.012	0.009	-0.041	-0.059
p-value	0.186	0.106	0.178	0.109	0.775	0.851	0.404	0.258
Target Adjustment coef (b_{ta})	0.602	0.676	0.628	0.577	0.861	0.870	1.123	1.239
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coef. on $E(Def_1)$[a]	0.066	1.168			0.455	0.437		
p-value	0.654	0.000			0.000	0.002		
Coef. on Def_{it} - $E(Def_1)$[a]		0.969				-0.019		
p-value		0.000				0.830		
Coef. on $E(Def_2)$[b]			0.523	0.935			0.180	0.111
p-value			0.000	0.000			0.083	0.348
Coef. on Def_{it} - $E(Def_2)$[b]				0.900				0.180
p-value				0.000				0.083
R^2	0.176	0.518	0.391	0.503	0.682	0.682	0.525	0.542
Pecking Order Regression								
Constant	0.159	0.146	0.098	0.137	0.082	0.100	-0.019	0.005
p-value	0.249	0.203	0.441	0.238	0.158	0.103	0.790	0.943
Coef. on $E(Def_1)$[a]	0.207	0.733			0.580	0.686		
p-value	0.089	0.000			0.000	0.000		
Coef. on Def_{it} - $E(Def_1)$[a]		0.898				0.120		
p-value		0.000				0.317		
Coef. on $E(Def_2)$[b]			0.428	0.926			-0.066	0.084
p-value			0.000	0.000			0.620	0.615
Coef. on Def_{it} - $E(Def_2)$[b]				1.012				0.226
p-value				0.000				0.145
R^2	0.028	0.335	0.161	0.320	0.338	0.357	0.007	0.064

[a] $E(Def_1)$ is the anticipated Financial Deficit expressed by the Financial Deficit of the previous year $[E(Def_1) = Def_{it-1}]$
[b] $E(Def_2)$ is the anticipated Financial Deficit expressed by the deficit with lagged values of funds from operations and the changes in the net working capital

TABLE V. Estimation of the Models of Pecking Order and Trade-Off Theories for Greek firms

	Period	
	2006-2010	2011-2016
Dependent Variable	Long-Term Debt to Net Total Assets	

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	(ΔD_{it})	
Trade – Off Regression		
Constant	0.021	-0.009
p –value	0.862	0.935
Target Adjustment coef (b_{ta})	0.759	0.828
p –value	0.000	0.000
R^2	0.204	0.250
Pecking Order Regression		
Constant	-0.069	-0.069
p –value	0.555	0.686
Pecking Order coef. (b_{po})	0.810	0.810
p –value	0.000	0.192
R^2	0.213	0.004
Both Regresions		
Constant	-0.046	0.000
p –value	0.654	0.999
Pecking Order coef. (b_{po})	0.778	0.104
p –value	0.000	0.215
Target Adjustment coef (b_{ta})	0.726	0.826
p –value	0.000	0.000
R^2	0.400	0.253

TABLE VI. First Diagnostic Test based Variations of Dependent Variable for Greek firms

Period	2006-2010	2011-2016	2006-2010	2011-2016	2006-2010	2011-2016
Dependent Variable	Long-Term Net Debt to Sales		Long-Term Net Debt to Net Total Assets		Long-Term Net Debt to Net Total Assets	
	(ΔND_{it})		(ΔND_{it})		(ΔND_{it})	
Method	No effects		Random Effects		Fixed Effects	
Trade – Off Regression						
Constant	0.028	0.002	-0.020	-0.009	0.022	-0.011
p -value	0.007	0.892	0.905	0.939	0.861	0.924
Target Adjustment coef (b_{ta})	0.187	0.186	0.668	0.828	0.820	0.861
p -value	0.008	0.012	0.000	0.000	0.000	0.000
R^2	0.020	0.115	0.164	0.250	0.292	0.323

Pecking Order Regression

Constant	0.004	0.032	-0.069	0.052	-0.088	0.051
p -value	0.675	0.555	0.555	0.686	0.467	0.708
Pecking Order coef. (b_{po})	0.258	0.529	0.810	0.126	1.028	0.122
p -value	0.000	0.110	0.000	0.192	0.000	0.300
R^2	0.148	0.009	0.213	0.004	0.336	0.064
Both Regresions						
Constant	0.009	0.032	-0.046	0.000	-0.063	-0.003
p -value	0.360	0.000	0.655	0.999	0.535	0.981
Pecking Order coef. (b_{po})	0.262	0.524	0.778	0.104	0.991	0.098
p -value	0.000	0.000	0.000	0.215	0.000	0.328
Target Adjustment coef (b_{ta})	0.210	0.103	0.726	0.826	0.784	0.860
p -value	0.001	0.073	0.000	0.000	0.000	0.000
R^2	0.173	0.152	0.400	0.253	0.541	0.325

TABLE VII. Second Diagnostic Test based on Anticipated Deficit for Greek firms

Period	2006-2010				2011-2016			
Dependent Variable	Long-Term Debt to Net Total Assets (ΔD_{it})				Long-Term Debt to Net Total Assets (ΔD_{it})			
Trade – Off Regression								
Constant	0.021	-0.046	0.001	0.046	0.019	0.027	-0.024	-0.012
p -value	0.859	0.655	0.992	0.654	0.865	0.803	0.829	0.915
Target Adjustment coef (b_{ta})	0.704	0.670	0.819	0.755	0.826	0.824	0.806	0.798
p -value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coef. on $E(Def_1)$[a]	0.144	0.630			0.293	0.397		
p -value	0.088	0.000			0.001	0.001		
Coef. on Def_{it} - $E(Def_1)$[a]		0.779				0.104		
p -value		0.000				0.211		
Coef. on $E(Def_2)$[b]			0.464	0.869			-0.194	0.057
p -value			0.000	0.000			0.006	0.557
Coef. on Def_{it} - $E(Def_2)$[b]				0.680				-0.194
p -value				0.000				0.006
R^2	0.211	0.407	0.293	0.412	0.270	0.273	0.264	0.271
Pecking Order Regression								
Constant	0.012	-0.058	-0.018	0.070	0.069	0.080	-0.017	0.032
p -value	0.923	0.606	0.887	0.552	0.584	0.529	0.890	0.796
Coef. on $E(Def_1)$[a]	0.387	0.425			0.302	0.428		
p -value	0.000	0.000			0.003	0.002		
Coef. on Def_{it} - $E(Def_1)$[a]		0.807				0.126		
p -value		0.000				0.189		
Coef. on $E(Def_2)$[b]			0.371	0.842			-0.285	0.106
p -value			0.000	0.000			0.000	0.339

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Coef. on Def_{it} - $E(Def_2)$[b]				0.776			0.225
p -value				0.000			0.022
R^2	0.058	0.269	0.058	0.214	0.022	0.026	0.030	0.042

[a] $E(Def_1)$ is the anticipated Financial Deficit expressed by the Financial Deficit of the previous year [$E(Def_1) = Def_{it-1}$]

[b] $E(Def_2)$ is the anticipated Financial Deficit expressed by the deficit with lagged values of funds from operations and the changes in the net working capital

TABLE VIII. Estimation of the Models of Pecking Order and Trade-Off Theories for Irish firms

	Period	
	2006-2010	2011-2016
Dependent Variable	Long-Term Debt to Net Total Assets (ΔD_{it})	
Trade – Off Regression		
Constant	-0.286	0.026
p –value	0.236	0.916
Target Adjustment coef (b_{ta})	0.768	0.857
p –value	0.000	0.000
R^2	0.218	0.270
Pecking Order Regression		
Constant	-0.307	-0.003
p –value	0.251	0.992
Pecking Order coef. (b_{po})	0.460	0.497
p –value	0.024	0.001
R^2	0.041	0.067
Both Regresions		
Constant	-0.332	-0.001
p –value	0.161	0.996
Pecking Order coef. (b_{po})	0.454	0.372
p –value	0.012	0.006
Target Adjustment coef (b_{ta})	0.766	0.815
p –value	0.000	0.000
R^2	0.258	0.306

TABLE IX. First Diagnostic Test based Variations of Dependent Variable for Irish firms

Period	2006-2010	2011-2016	2006-2010	2011-2016	2006-2010	2011-2016
Dependent Variable	Long-Term Net Debt to Sales (ΔND_{it})		Long-Term Net Debt to Net Total Assets (ΔND_{it})		Long-Term Net Debt to Net Total Assets (ΔND_{it})	
Method	No effects		Random Effects		Fixed Effects	
Trade – Off Regression						
Constant	0.002	0.018	-0.286	0.026	-0.289	0.026
p -value	0.915	0.356	0.343	0.916	0.243	0.922
Target Adjustment coef (b_{ta})	0.031	0.562	0.766	0.857	0.881	0.863
p -value	0.007	0.000	0.000	0.000	0.000	0.000
R^2	0.211	0.333	0.216	0.270	0.364	0.318

Pecking Order Regression

Constant	-0.013	-0.025	-0.307	-0.003	-0.304	-0.009
p-value	0.438	0.164	0.341	0.992	0.290	0.976
Pecking Order coef. (b_{po})	0.157	0.337	0.452	0.497	0.430	0.581
p-value	0.002	0.000	0.026	0.001	0.072	0.003
R^2	0.080	0.298	0.040	0.067	0.149	0.128

Both Regresions

Constant	-0.012	-0.019	-0.332	-0.001	-0.326	-0.002
p-value	0.486	0.242	0.161	0.996	0.185	0.995
Pecking Order coef. (b_{po})	0.198	0.323	0.454	0.372	0.366	0.377
p-value	0.001	0.000	0.012	0.006	0.073	0.028
Target Adjustment coef (b_{ta})	0.171	0.516	0.766	0.815	0.868	0.808
p-value	0.159	0.000	0.000	0.000	0.000	0.000
R^2	0.284	0.407	0.258	0.306	0.386	0.346

TABLE X. Second Diagnostic Test based on Anticipated Deficit for Irish firms

Period	2006-2010				2011-2016			
Dependent Variable	Long-Term Debt to Net Total Assets (ΔD_{it})				Long-Term Debt to Net Total Assets (ΔD_{it})			
Trade – Off Regression								
Constant	-0.299	-0.337	-0.273	-0.288	0.039	0.011	0.065	0.074
p-value	0.217	0.157	0.231	0.210	0.874	0.963	0.782	0.754
Target Adjustment coef (b_{ta})	0.796	0.779	0.791	0.788	0.909	0.864	0.864	0.873
p-value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coef. on $E(Def_1)$[a]	0.130	0.505			0.246	0.580		
p-value	0.467	0.032			0.090	0.002		
Coef. on $Def_{it} - E(Def_1)$[a]		0.444				0.358		
p-value		0.016				0.008		
Coef. on $E(Def_2)$[b]			0.437	0.524			0.471	0.437
p-value			0.000	0.003			0.000	0.001
Coef. on $Def_{it} - E(Def_2)$[b]				0.134				0.471
p-value				0.515				0.000
R^2	0.221	0.258	0.304	0.306	0.284	0.318	0.363	0.364
Pecking Order Regression								
Constant	-0.244	-0.288	-0.249	-0.269	0.033	0.006	0.072	0.049
p-value	0.369	0.282	0.343	0.308	0.911	0.984	0.795	0.862
Coef. on $E(Def_1)$[a]	0.164	0.263			-0.038	0.445		
p-value	0.097	0.009			0.815	0.043		
Coef. on $Def_{it} - E(Def_1)$[a]		0.497				0.498		
p-value		0.016				0.001		
Coef. on $E(Def_2)$[b]			0.403	0.521			0.460	0.548
p-value			0.002	0.011			0.000	0.001
Coef. on $Def_{it} - E(Def_2)$[b]				0.182				0.196
p-value				0.440				0.348
R^2	0.026	0.052	0.073	0.077	0.000	0.067	0.089	0.094

[a] $E(Def_1)$ is the anticipated Financial Deficit expressed by the Financial Deficit of the previous year [$E(Def_1)$ = Def_{it-1}]

[b] $E(Def_2)$ is the anticipated Financial Deficit expressed by the deficit with lagged values of funds from operations and the changes in the net working capital

TABLE XI. Estimation of the Models of Pecking Order and Trade-Off Theories for Portuguese firms

	Period	
	2006-2011	2012-2016
Dependent Variable	Long-Term Debt to Net Total Assets	
	(ΔD_{it})	
Trade – Off Regression		
Constant	0.033	-0.053
p –value	0.825	0.733
Target Adjustment coef (b_{ta})	0.865	0.664
p –value	0.000	0.000
R^2	0.298	0.183
Pecking Order Regression		
Constant	0.009	0.009
p –value	0.957	0.943
Pecking Order coef. (b_{po})	0.690	0.690
p –value	0.000	0.001
R^2	0.122	0.078
Both Regresions		
Constant	-0.015	-0.017
p –value	0.914	0.914
Pecking Order coef. (b_{po})	0.646	0.312
p –value	0.000	0.042
Target Adjustment coef (b_{ta})	0.843	0.588
p –value	0.000	0.000
R^2	0.404	0.209

TABLE XII. First Diagnostic Test based Variations of Dependent Variable for Portuguese firms

Period	2006-2011	2012-2016	2006-2011	2012-2016	2006-2011	2012-2016
Dependent Variable	Long-Term Net Debt to Sales (ΔND_{it})		Long-Term Net Debt to Net Total Assets (ΔND_{it})		Long-Term Net Debt to Net Total Assets (ΔND_{it})	
Method	No effects		Random Effects		Fixed Effects	
Trade – Off Regression						
Constant	0.014	0.027	0.034	-0.053	0.032	-0.049
p –value	0.473	0.249	0.885	0.738	0.840	0.768
Target Adjustment coef (b_{ta})	0.253	0.743	0.876	0.664	0.893	0.771
p –value	0.014	0.000	0.000	0.000	0.000	0.000
R^2	0.237	0.200	0.306	0.183	0.360	0.287
Pecking Order Regression						
Constant	-0.028	0.045	0.009	-0.012	0.003	0.008
p –value	0.061	0.026	0.957	0.942	0.986	0.965
Pecking Order coef. (b_{po})	0.567	0.545	0.690	0.514	0.769	0.673
p –value	0.000	0.000	0.000	0.001	0.000	0.001
R^2	0.466	0.411	0.122	0.078	0.186	0.156
Both Regresions						
Constant	-0.027	0.044	-0.014	-0.016	-0.020	-0.005
p –value	0.062	0.027	0.929	0.935	0.891	0.974

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Pecking Order coef. (b_{po})	0.560	0.469	0.641	0.321	0.705	0.372		
p–value	0.000	0.000	0.000	0.038	0.000	0.063		
Target Adjustment coef (b_{ta})	0.206	0.331	0.850	0.583	0.864	0.682		
p–value	0.006	0.007	0.000	0.000	0.000	0.000		
R^2	0.490	0.443	0.408	0.211	0.467	0.312		

TABLE XIII. Second Diagnostic Test based on Anticipated Deficit for Portuguese firms

Period	2006-2011				2012-2016			
Dependent Variable	Long-Term Debt to Net Total Assets				Long-Term Debt to Net Total Assets			
	(ΔD_{it})				(ΔD_{it})			
Trade – Off Regression								
Constant	0.034	-0.014	0.026	-0.008	-0.006	0.016	-0.041	-0.016
p–value	0.819	0.920	0.849	0.953	0.969	0.910	0.794	0.916
Target Adjustment coef (b_{ta})	0.852	0.812	0.939	0.905	0.797	0.738	0.693	0.590
p–value	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Coef. on $E(Def_1)$[a]	-0.066	0.511			0.595	0.774		
p–value	0.611	0.002			0.000	0.000		
Coef. on Def_{it} - $E(Def_1)$[a]		0.670				0.211		
p–value		0.000				0.145		
Coef. on $E(Def_2)$[b]			0.543	0.892			0.103	0.314
p–value			0.000	0.000			0.336	0.049
Coef. on Def_{it} - $E(Def_2)$[b]				0.482				0.103
p–value				0.000				0.336
R^2	0.299	0.411	0.407	0.460	0.299	0.310	0.189	0.209
Pecking Order Regression								
Constant	0.064	0.010	0.059	0.016	-0.052	0.006	-0.078	-0.020
p–value	0.716	0.951	0.731	0.924	0.752	0.972	0.642	0.900
Coef. on $E(Def_1)$[a]	-0.296	0.356			0.378	0.827		
p–value	0.046	0.059			0.009	0.000		
Coef. on Def_{it} - $E(Def_1)$[a]		0.743				0.484		
p–value		0.000				0.002		
Coef. on $E(Def_2)$[b]			0.408	0.842			-0.031	0.422
p–value			0.001	0.000			0.782	0.011
Coef. on Def_{it} - $E(Def_2)$[b]				0.591				0.605
p–value				0.000				0.000
R^2	0.025	0.164	0.063	0.143	0.050	0.120	0.001	0.096

[a] $E(Def_1)$ is the anticipated Financial Deficit expressed by the Financial Deficit of the previous year [$E(Def_1) = Def_{it-1}$]

[b] $E(Def_2)$ is the anticipated Financial Deficit expressed by the deficit with lagged values of funds from operations and the changes in the net working capital

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TABLE XIV. Summary of the Results of Statistical Analysis

	Before Crisis: First period		During Crisis: Second Period	
	Trade-Off	Pecking Order	Trade-Off	Pecking Order
Cyprus	Yes	Yes	Yes	No
Greece	Yes	Yes	Yes	No
Ireland	Yes	No	Yes	No
Portugal	Yes	Yes	Yes	Yes

Figures
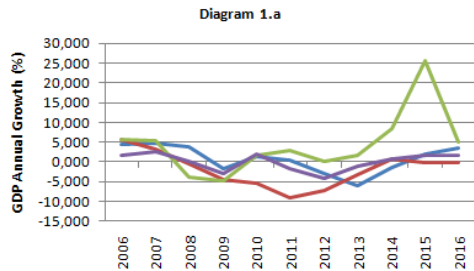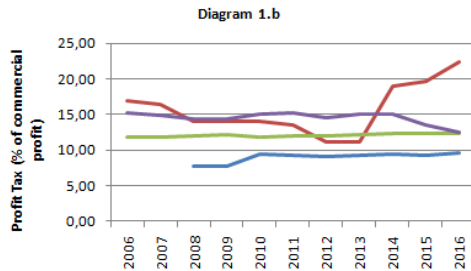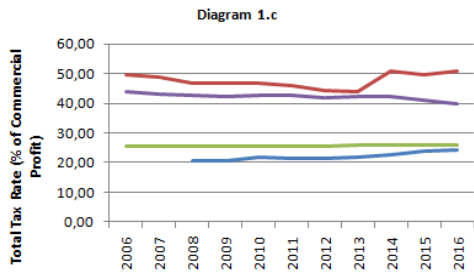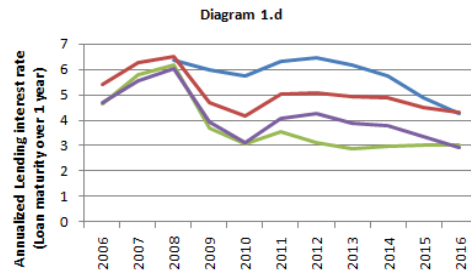
Diagram 2: Gross Domestic Product annual growth, profit tax, total tax rate and annualized lending interest rate in Cyprus, Greece, Ireland and Portugal for the period 2006-2016

(Review Article)

Georgia in the World Merchandise Trade: Main Trends and Problems of Development

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Abstract

Foreign trade is the main factor in the country's integration into the world economic system. It promotes the socio-economic development of states, especially developing countries. After the restoration of state independence, Georgia actively cooperates with different countries within the framework of bilateral and multilateral agreements. Its foreign trade activity is based on a high level of openness of the economy and liberal policy, features of the market economy and new vectors of development. Georgia has been a member of the World Trade Organization since 2000 and has one of the most liberal and competitive trade regimes across the world. Georgia's foreign trade turnover has a cyclical growth pattern with a combination of periods of its fall. Over the entire post-Soviet period, the country has a negative trade balance and a high dependence on imports. Export characterizes a high degree of concentration of geographical structure and low level of diversification. The article analyzes the current state of Georgia's foreign trade, shows the main indicators of the country's foreign trade for the period of 1994-2014, and examines the main trends in its development and the importance of export diversification to improve the efficiency of foreign trade.

Keywords: foreign trade, merchandise, export, import, Georgia

1. Introduction

After the collapse of the Soviet Union, Georgia moved to a new stage in its historical development, characterized by a high degree of freedom and a liberal economic policy. In 2018, according to the Index of Economic Freedom, Georgia ranks 16th among 180 countries and is part of a group of mostly free states. Liberal foreign trade policy is one of the major principles of the economic policy of Georgia. The Government of Georgia has implemented reforms in the tariff policy. As a result, nowadays Georgia has one of the most liberal foreign trade policies in the world, which implies the assistance of foreign trade regimes and customs procedures, low import tariffs and minimal non-tariff regulations (MESD).

Foreign trade is the main factor in the country's integration into the world economic system. Export contributes to the increase in foreign exchange earnings and stimulates the social and economic development of the state. As G. Haberler (1970) noted, "International trade has made a tremendous contribution to the development of the less developed countries in the nineteenth and twentieth centuries, and can be expected to make an equally big contribution in the future if it is allowed to proceed freely ". In this regard, the main purpose of this work is to analyze the trends in the development of Georgia's foreign trade, determine its place in the world trade of goods and the opportunities for its further development based on of export diversification .

Literature rieview

The internationalization of production has been greatly accelerated and the international division of labor has deepened under the influence of globalization and scientific and technological progress (Korganashvili L. 2017, 2016). As a result of this international trade flows have increased. The need to include countries in international trade is explained by different

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theories. The role of foreign trade in the pursuit of wealth of the nation is highly evaluated by the mercantilists (Magnusson 1994). The starting international trading axioms inherent in classical theories (Smith 1986 [1776], David Ricardo 1951), which, despite a number of assumptions, explain the benefits of trade. Fundamentals of the reasons that determine the direction and structure of international trade flows, as well as the possible advantages in the international exchange, are laid by E. Heckscher and B. Ohlin (Heckscher 1919, 2007, Ohlin 1933). According to their theory, a country will export goods that use its abundant factors intensively, and import goods that use its scarce factors intensively. In the two-factor case, it states: A capital-abundant country will export the capital-intensive good, while the labor-abundant country will export the labor-intensive good. Heckscher-Ohlin theory refined P. Samuelson (HOS-Heckscher-Ohlin-Samuelson Theory) (Suranovic 2010) and W. Stolper (Stolper-Samuelson Theorem) (Stolper&Samuelson 1941).

The standard model of international trade unites the various theories, developing the fundamental position of the classical theories. It is based on the concepts of the limit values and the general equilibrium of the economic system. It provides mathematical and graphical interpretation of international commodity exchange, and shows the real impact of international trade on the economies of individual countries (Edgeworth 1925, Marshall 1979, Haberler 1936), etc.

The alternative theory of international trade is critical to achieve reinterpreted predecessors and offered original interpretation of the participation of national economies in the international exchange of goods. Among these theories following should be noted: The trade theory based on economies of scale (Krugman 1981, Krugman&Obstfeld 1992, Lancaster 1980 et al.), The theory of technological gap (Posner 1986), The theory of a product life cycle (Vernon 1970), The theory of international competition (Porter 1986) and others. Since the second half of the XX century, dynamic comparative advantages became relevant. This question was studied by Krugman (1987), Grossman and Helpman (1989), Redding (1997) and others.

Although there are many theories of international trade, none of them can fully explain the nature of international trade. And there is ample empirical evidence that recognize the validity of the theory of comparative advantage (Bernhofen&Brown 2005, Schott 2004, Uchida & Cook 2004, Krugman&Obstfeld 2003). Moreover particularly noteworthy is the fact that most of the principles of the World Trade Organization (WTO) is based on the theory of comparative advantage (Root 2001). Currently, comparative advantages are used to assess the country's competitiveness in international trade (Korganashvili L. 2017, 2016,). .

Research methodology

The theoretical and methodological basis of the work constitutes the fundamental tenets of the theory of international trade. Well-known scientific methods were used for the study: statistical, comparative, deduction and induction, analysis and synthesis, and etc. Informational and empirical basis of the study is constituted by statistical, informational and analytical data of various international and national organizations, research papers, online resources, and etc.

The effectiveness of foreign trade is calculated as the ratio of exports to imports. If this ratio - efficiency coefficient is greater than 1, then the trade can be considered effective. On the other hand, the import dependence of the trading partners is calculated as the ratio of imports to exports. The country will be considered dependent on the other, if the ratio coefficient of import dependence is less than 1.

Comparative advantages of Georgia on certain goods are valued by index Balassa (Balassa 1965), which is calculated according to the formula

$$RCA_{ij} = (X_{ij} : X_{it}) / (X_{wj} : X_{wt})$$

where RCA_{ij} is Revealed Comparative Advantage Index, X_{ij} and X_{it} are the values of country i's exports of product j and world exports of product j and where X_{it} and X_{wt} refer to the country's total exports and world total exports. A value of less than unity implies that the country has a revealed comparative disadvantage in the product. Similarly, if the index exceeds unity, the country is said to have a revealed comparative advantage in the product.

Main trends in the development of Georgia's foreign trade

After the collapse of the Soviet Union, Georgia actively cooperates with different countries within the framework of bilateral and multilateral agreements. In 2017, the geography of its trade covered 140 countries. According to preliminary data, in 2017, the foreign trade turnover of goods amounted to $10707.4 million, including exports – $2728.0 million, imports – $7979.4 million (75%). Compared with 2016, foreign trade turnover increased by 13.8%, exports by 29.1% and imports by 9.4% (Geostat).

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Foreign trade of Georgia is developing in the conditions of globalization. Its main development trends are followings:

The cyclical nature of the development of foreign trade turnover: a combination of growth with periods of its fall. For example, the growth cycles cover 1994-1997, 2000-2009 and so on (table 1, Growth rate to previous year, %).

Permanent negative trade balance and high dependence on imports. In 2017, the deficit was $5254.7 million – 49.0% of all of trade turnover (Geostat). Compared to 2016, it increased by $73.2 million (1.4%). This is the highest volume of trade deficit, but its highest share in foreign trade turnover was in 1998 – 64.7%. The peak of the share of imports to turnover was observed in 1998 (82.4%), to GDP in 2017 – 52.6% (Table 1).

Low share of exports both in foreign trade turnover and in GDP. In the foreign trade turnover of Georgia, exports with the highest share were present in 1994 – 36.1%, and in relation to GDP in 2017 – 18.0%.

In 2017, the share of foreign trade turnover reached 70.6%, and in 1994 it was 16.7% (Table 1).

Change in the share of groups of countries. In 1995, the CIS accounted for 62.5% of Georgian exports and 40.1% of imports, in 2005 these figures were 47.0% and 40.0% respectively, and in 2017 – 43.3% and 29.6%. The share of the European Union has also changed. If in 2005 the EU countries accounted for 25.0% of exports and 29.7% of imports, in 2017 these figures were 23.7% and 27.5%. On June 27, 2014, the European Union and Georgia signed the Association Agreement, which includes the Deep and Comprehensive Free Trade Area (AA / DCFTA), which provides preferential trade relations. Despite this, the CIS countries occupy an important place in the foreign trade of Georgia (Korganashvili, 2016)..

High degree of concentration of the geographic structure of Georgia's foreign trade: in 2017, 3 main trade partners accounted for 34.7% of turnover, for 5-48.2% and for 10-66.7%. As for exports, these figures were 30.0%, 44.5% and 67.4% respectively, and for imports – 36.2%, 44.5% and 66.5% (Geostat).In 2016, the market concentration index (HH-Herfindahl-Hirschman index) was 0.06, and in 2012 it was 0.04 (WITS, 2016).

Low level of diversification of exports and imports: 10 commodity items account for 63,3 % of country's exports and 64.7% of imports (Geostat). In 2017, the first place in the commodity structure of Georgia's exports is occupied by copper ore and concentrates – 15.4%, the second place is ferroalloy – 11.3%, followed by motor cars – 8.6% (in 2013 their share was 24.2%. Georgia is not a producer of cars, therefore, a high share of this commodity position in the country's exports testifies to a significant volume of re-export operations), wine from fresh grapes – 6.3%, medicaments put up in measured doses – 5.2%, etc. In the commodity structure of imports in the first place are petroleum and petroleum oils - 8.7% of the total import of the country. The following positions are occupied: motor cars – 5.9%, petroleum gases and other gaseous products – 4.4%, medicaments put up in measured doses – 4.3%, copper ores and concentrates – 4.2% and etc. In 2016, the index of Export Market Penetration for export was 2.41, in 2015 - 2.57 (WITS, 2012-2016).

A decline in the share of high-tech exports in manufacturing exports: in 2002, high-technology exports (% of manufactured exports) accounted for 41.1% of manufacturing exports, but in 2016 it declined to 3.9%. 38.35% of Georgia's exports and 53.54% of imports are consumer goods, 23.95% and 14.71% are intermediate goods, 32.97% and 9.62% are raw materials, 3.67 and 21.72% are capital goods. A small share of capital goods causes a low level of technological development (WB).

Increasing the level of liberalization of foreign trade policy. Georgia has been a member of the World Trade Organization (WTO) since 2000 and the Liberal foreign trade policy is one of the major principles. The Government of Georgia has implemented reforms in the tariff policy. As a result, nowadays Georgia has one of the most liberal foreign trade policies in the world, which implies the assistance of foreign trade regimes and customs procedures, low import tariffs and minimal non-tariff regulations (MESD). In 2015, compared to 2002, its average tariffs for the countries with the most favored nation (MFN) for all goods decreased from 9.65% to

0.87%, including agricultural products from 12.53% to 7.1% and non-agricultural from 9.44% to 0.46%. In 2015, the average of preferential tariffs were 0.72%, 5.88% and 0.38%, respectively (Table 2).

Table 1. The main indicators of Georgia's foreign trade in merchandise, 1994-2017

Years	million current US$	Share in Turnover, %	Growth rate to previous year, %	Share in GDP, %

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	Export	Import	Turnover	balance	Export	Import	balance	Export	Import	Turnover	balance	Export	Import	Turnover
1994	151,2	268,0	419,8	-116,8	36.1	63.9	27.9	-	-	-	-	6.0	10.7	16.7
1995	151,2	391,6	542,8	-240,4	27.8	72.2	44.3	100.0	146.1	129.3	205.8	5.6	14.5	20.1
1996	198,8	686,7	885,5	-487,9	22.5	77.5	55.1	131.5	175.4	163.2	203.0	6.4	22.2	28.6
1997	239,8	943,5	1183,3	-703,7	20.3	79.7	59.5	120.6	137.4	133.6	144.2	6.8	26.9	33.7
1998	189,0	883,2	1071,2	-694,2	17.6	82.4	64.8	78.8	93.6	90.5	98.6	5.2	24.5	29.7
1999	240,7	622,6	863,3	-381,9	27.9	72.1	44.2	127.4	70.5	80.5	55.0	8.6	22.2	30.8
2000	324,0	709,0	1033,0	-385,1	31.4	68.6	37.3	134.6	113.9	119.6	100.8	10.6	23.2	33.8
2001	317,6	753,3	1070,9	-435,7	29.7	70.3	40.7	96.2	107.6	104,0	113.1	9.9	23.4	33.3
2002	347,8	731,4	1079,2	-383,6	32.2	67.8	35.5	109.5	97.3	100.8	88.0	10.2	21.5	31.8
2003	465,3	1141,1	1606,4	-675,8	29.0	71.0	42.1	133.8	156.0	148.9	176.1	11.7	28.6	40.2
2004	646,9	1847,9	2494,8	-1201,0	25.9	74.1	48.1	139.0	161.9	155.3	177.7	12.6	36.1	48.7
2005	866,7	2490,9	3357,6	-1624,2	25.8	74.2	48.4	134.0	134.8	134.6	135.2	13.5	38.9	52.4
2006	993,1	3681,2	4674,3	-2688,1	21.2	78.8	57.5	114.6	147.8	139.2	165.5	12.8	47.4	60.2
2007	1240,2	5216,7	6456,9	-3976,5	19.2	80.8	61.6	124.9	141.7	138.1	147.9	12.2	51.3	63.5
2008	1497,7	6058,1	7555,8	-4560,4	19.8	80.2	60.4	121.8	116.1	117.0	114.7	11.7	47.3	59.0
2009	1133,6	4500,2	5633,8	−3366,6	20.1	79.9	59.8	75.7	74.3	74.6	73.8	10.5	41.8	52.3
2010	1677,5	5257,1	6934,6	−3579,6	24.2	75.8	51.6	148.0	116.8	123.1	106.3	8.1	25.3	33.4

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201 1	218 6,7	703 8,4	9225 ,1	−485 1,7	23. 7	76.3	52.6	130 .4	133 .9	133. 0	135. 5	9.0	28. 9	37.9
201 2	237 6,2	803 6,9	1041 3,1	−566 0,7	23. 3	76.7	54.4	108 .7	114 .2	112. 9	116. 7	9.1	30. 7	39.8
201 3	290 9,5	801 1,6	1092 1,1	−510 2,1	26. 6	73.4	46.7	122 .4	99. 7	104. 9	90.1	10.8	29. 9	40.7
201 4	286 0,7	859 3,3	1145 4,0	−573 2,6	25. 0	75.0	50.0	98. 3	107 .3	104. 9	112. 4	10.0	29. 5	39.3
201 5	220 4.7	730 0.3	9505 .0	- 5095. 6	23. 2	76.8	53.6	77. 1	85. 0	83.0	88.9	15.8	52. 2	68.0
201 6	211 3.1	729 4.6	9407 .7	- 5181. 5	22. 5	77.5	55.1	95. 8	99. 9	99.0	101. 7	14.7	50. 7	65.4
201 7*	272 8.0	798 2.7	1071 0.6	- 5254. 7	25. 5	74.5	49.1	129 .0	109 .4	113. 8	101. 4	18.0	52. 6	70.6

Source: The table is compiled and calculated according to the annual "Statistical Yearbook of Georgia" and "External Trade of Georgia", 1995-2017.

Table 2. Average tariffs for the import of products in Georgia

Product group	Tariff type	2002	2006	2010	2015
All products	Average of MFN tariffs	9.65%	8.68%	0.68%	0.87%
	Average of preferential tariffs	9.65%	8.16%	0.65%	0.72%
Agricultural	Average of MFN tariffs	12.53%	12.65%	9.16%	7.1%
	Average of preferential tariffs		12.05%	8.7%	5.88%
Non-agricultural	Average of MFN tariffs	9.44%	8.42%	0.07%	0.46%
	Average of preferential tariffs		7.91%	0.06%	0.38%
Source: ITC, Market Access Map. http://www.macmap.org/CountryAnalysis/AverageTariffResult.aspx?country=SCC268|Georgia&bysection=0					

The low level of Georgia's export diversification is one of the most acute problems of the country's economy, as it indicates the low efficiency of its foreign trade. Diversification of exports is directly related to the diversification of the national economy. Therefore, first of all, its progressive diversification is necessary: the main emphasis should be made on the development of industries with a high share of added value. At the same time, one should not limit oneself to exporting material and technical goods, special attention should be paid to trade in services and technologies. Diversification in this direction is of great importance for the Georgian economy, since the share of services in GDP in the country is about 2/3 (Korganashvili, 2017, 2014).

For the development of trade in technology requires a knowledge economy, the importance of which has increased greatly. This is due to the effect of the following trends: technological globalization and increasing role of human capital; the growth of innovation as an organized activity; the emergence of the "New Economy" on the basis of the revolution in information and communication technologies; development of innovative infrastructure and innovation management system at the national and international levels; mass and accessibility of higher education; the complication of the system "science-technology-production-consumption", etc. (Korganashvili L. 2015, 2014).

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Georgia's integration into world trade in merchandise

Georgia is a small country and its role in world trade is insignificant. In 2016, the share of Georgia's exports and imports in world exports and imports of goods amounted to 0.01 and 0.04% .In terms of their volume, the country took 128th and 106th places (WTO). In 2017, five of the main trading partners were Turkey ($1,589,377.7 th. – 14.8%), Russia ($118,367.7 million – 11.1%), China ($939,518.6 th. – 8.8%), Azerbaijan ($881,904.2 th. – 8.2%) and Ukraine ($566,601.4 th. – 5.3%). Russia ($394,712.4 th. – 14.5%), Azerbaijan ($ 272172.5 th. – 10.0%), Turkey ($211.67 million – 7.9%), Armenia were the main export trading partners (7.7%) and China ($207218.0 th. – 7.6%), on imports – Turkey ($1372802.7 th. – 17.2%), Russia ($394788970.2 th. – 9.9%), China ($732,292.9 th. – 9.2%), Azerbaijan ($609721.8 thousand – 7.6%) and Ukraine ($ 445147.0 thousand – 5.6%) (Geostat).

The degree of integration of a country into world trade can be estimated by the Enabling Trade Index (ETI). It assesses the extent to which economies have in place institutions, policies, infrastructures and services, facilitating the free flow of goods over borders and to their destination. ETI is calculated using four sub-indexes: Sub-index A – market access; Sub-index B – border administration; Sub-index C – infrastructure; Sub-index D – operating environment. Sub-index A measures the extent and complexity of a country's tariff regime as well as tariffs. There are two pillars in this sub-index. Sub-index B measures border administration of a single pillar, which assesses the efficiency and transparency of the border administration. More specifically, it captures efficiency, transparency and costs associated with importing and exporting goods. Sub-index C assesses the availability and quality of transport infrastructure of the country, associated services, and communication infrastructure, necessary to facilitate the movement of goods within the country and across the border. Sub-index D consists of a single pillar, which has a significant impact on the quality of its products, imports, and trade and transport merchandise to do business. According to the Enabling Trade Index in 2016, Georgia ranks 41st among 136 countries, and in 2014 it was on the 46th place among 134 countries. Under sub-index A Georgia is on the 15th place, sub-index B – 39th, sub-index C – 73rd and sub-index D – 33rd (Table 3).

Table 3. Enabling Trade Index, 2016

	Rank	Score
Enabling Trade Index	41	4.8
Subindex A: Market access	15	5.2
Pillar 1: Domestic market access	9	5.9
Pillar 2: Foreign market access	33	4.6
Subindex B: Border administration	39	5.3
Pillar 3: Efficiency and transparency of border Administration	39	5.3
Subindex C: Infrastructure	73	3.8
Pillar 4: Availability and quality of transport Infrastructure	76	3.3
Pillar 5: Availability and quality of transport services	98	3.6
Pillar 6: Availability and use of ICTs	65	4.6
Subindex D: Operating environment	33	4.8
Pillar 7: Operating environment	33	4.8
Weforum. The Global Enabling Trade Report. 2016, pp.136-137 http://www3.weforum.org/docs/WEF_GETR_2016_report.pdf		

The most problematic factors for importing are: high cost or delays caused by international transportation, tariffs and non-tariff barriers, high cost or delays caused by domestic transportation, burdensome import procedures, inappropriate telecommunications infrastructure, domestic technical requirements and standards, corruption at the border. In turn the most problematic factors for exporting are: identifying potential markets and buyers, inappropriate production technology and skills, technical requirements and standards abroad, access to trade finance, difficulties in meeting quality/quantity requirements of buyers, access to imported inputs at competitive prices, burdensome procedures at foreign borders, high cost or delays caused by international transportation, rules of origin requirements abroad, corruption at foreign borders, high cost or delays caused by domestic transportation and tariff barriers abroad (Weforum, 136). For the further development of Georgia's foreign trade and its full-fledged integration into world trade in goods, first of all these problems should be resolved.

Table 4 shows the estimates of efficiency of foreign trade of Georgia and its import dependence on top trade partners in 2017. The effectiveness of foreign trade is the ratio of exports to imports and import dependence on trading partners shows

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the ratio of imports to exports. As seen in Table 4, from 10 major trading partners of Georgia only trade with Bulgaria can be considered effective. Georgia has a strong import dependence on Germany, Turkey and China.

Table 4. Efficiency of Georgia's foreign trade and its dependence from imports of top trading partners, 2017

Countries	Exports, thsd. US Dollars	Imports, thsd. US Dollars	Export/Import*	Import/Export*
Total	2727971.5	7979435.0	0,34	2,92
Of which:				
Turkey	216567.1	1372802.7	0,16	6,34
Russia	394712.4	788970.2	0,50	2.00
China	207218.0	732292.9	0,28	3,53
Azerbaijan	272172.5	609721.8	0,4	2,24
Ukraine	124449.8	445147.0	0,45	3,58
Armenia	208701.5	281137.6	0,74	1,35
Germany	45361.6	433330.0	0,10	9,55
United States	121794.2	267746.1	0,45	2,20
Bulgaria	178827.4	155551.2	1,15	0,87
Italy	69278.0	217299.6	0,32	3,14
Other countries	888888.9	2675435.9	0,33	3,01

* Calculated by the author. Source: http://geostat.ge/cms/site_images/_files/english/bop/FTrade__2017_ENG-with%20cover.docx.pdf

Despite the negative trends in the development of Georgia's exports, the country has the potential to increase it. As shown in Table 5, Georgia has revealed comparative advantages for such products as Minerals, Food Products, Vegetable, Metals, Transportation and Chemicals.

Table 5. Revealed comparative advantages of exported goods of Georgia

Products	Georgia $X_{ij} : X_{it}$	World $X_{wj} : X_{wt}$	RCA_{ij}
Animal	2.15	2.20	0.98
Vegetable	9.20	3.44	2.67
Food Products	17.52	3.40	5.15
Minerals	9.36	1.52	6.16
Fuels	2.70	11.01	0.25
Chemicals	10.17	9.14	1.11
Plastic or Rubber	1.24	4.34	0.29
Hides and Skins	0.26	0.73	0.36
Wood	0.95	2.47	0.38
Textiles and Clothing	3.18	4.50	0.71
Footwear	0.15	0.92	0.16
Stone and Glass	2.20	4.94	0.45
Metals	16.85	6.91	2.44
Mach and Elec	2.50	25.11	0.10
Transportation	20.56	10.13	2.03
Miscellaneous	1.02	9.25	0.11

Calculated by the author. Source: WITS http://wits.worldbank.org/CountryProfile/en/GEO, http://wits.worldbank.org/CountryProfile/en/Country/WLD/Year/2014/TradeFlow/Export/Partner/all/Product/90-99_Miscellan

Conclusions

The processes of liberalization of the economy in Georgia significantly change the nature of foreign trade relations. The country is gradually improving the terms of trade, but there are serious problems in this area. Among them, one should note the strong dependence on imports, the irrational commodity structure, the decrease in the share of capital goods, the high level of concentration, the low level of diversification, the underdeveloped infrastructure, etc. In this regard, Georgia should optimize the structure of the economy, find resources to stimulate exports and implement policies substitution of imports, increase of innovative potential, etc. Addressing the trade deficit and increasing exports should become one of the main tasks of Georgia's economic development. The country needs a development strategy that will reduce the impact of negative external factors and increase the level of independent development.

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Process of Formation of the Legal Environment for Marketing in Georgia

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Abstract

The article emphasizes significance of the laws within the legal framework for performing marketing activities, timely solution of the problems and protection of the consumers' interests. The author describes the process of development of the legal framework for business in Georgia and pays particular attention to the activities performed after signing and effectiveness of the Association Agreement with the European Union. With respect of protection of the consumers' rights, the article provides analysis of Georgian laws: Code of Food Safety and Free Circulation, Code of Food/Animal Fodder Safety, Veterinary and Plants Protection, Georgian Law on Advertising, Technical Regulation on Additional Requirements to Labeling of Food Products, Technical Regulations on Providing Information on the Products to the Consumers. In the author's opinion, significant weakness of the legislation affecting marketing is the fact that Georgian Law on Protection of Consumers' Rights suspended in 2012 has not been enacted yet while the draft law is ready and published. On the basis of analysis of legal framework the author concludes that the consumers' rights, in general, are protected in the country by the effective legislation but the main thing is not only existence of the laws but rather their enforcement. For this purpose, states the article, Georgian government has adopted the resolution (2015) Food/Animal Fodder Safety State Control Rule, according to which the relevant state structures control the respective businesses and protect the consumers' rights in this way. The process of improvement of the legal basis affecting marketing in Georgia is still in progress.

Keywords: marketing, consumers' rights, legal framework, law, marketing environment

Introduction

Generally, individuals engaged in business are well aware in necessity of taking into consideration the consumer interests but due to various causes, sometimes, they fail to do so. This is a great mistake and in many cases results in collapse of the business. Sometimes the business neglects the long-term interests as well. In addition, sometimes the competitors apply the improper competition practices. To prevent such situations, initially the individual countries and further their various associations placed business and marketing into the legal framework. By this, on one hand, they have protected the consumers and entire society from undesired impact of business and marketing and on the other – protected the companies from one another. At the same time, people engaged in business realized that viewing their business from the consumers' perspective (Charles D. Schewe, Alexander Watson Hiam,2003,p.23) would express the substance of marketing best of all and provided the shortest way to ensuring effectiveness. Thus the process of formation of the marketing legal environment for in the developed countries commenced.

Working based on the legal acts within the marketing legal system would allow people engaged in business to have clear conscience for their actions. Laws regulating business and marketing and other normative acts help the marketing professionals to conduct their activities in the right way and provide fair and timely solutions to the existing problems. Legislation regulating business and marketing is stricter in some countries (Kotler, Ph., Keller, K.,2015, p.107) while some

apply relatively mild. European Union applies general laws that are mandatory for all member states. They should be taken into consideration by the other countries as well that strive to become the member states and Georgia is among them.

After decomposition of the Soviet Union and gaining independence development of the legislation regulating business and marketing have commenced in Georgia. As early as in 90s there were developed and adopted such significant laws in marketing context as Law of Georgia on Protection of Consumers Rights (1996) and Law of Georgia on Advertising (1998). Before adoption of these laws business activities and marketing environment was regulated by various legislative acts, in particular, by the resolutions of the Cabinet of Ministers of the Republic of Georgia and decrees issued by the head of the state. Lawmaking activities became especially extensive after signing of the Association Agreement with the European Union and its entry into effect. Currently, the amendments are made to the laws regulating the marketing environment, in accordance with the requirements of Association Agreement. At the same time, the new laws are developed and thus, gradually, the legal system regulating business and marketing improves and this is of great significance not only for Georgian population but for those as well, who arrive to Georgia for travel or other purposes. Though, much is to be done in this sphere. Georgian Law on Protection of the Consumers Rights has not been enacted yet. It was declared invalid in 2012. While certain work was performed in the country in this area and the draft Law on Protection of Consumers Rights was published (Draft Law of Georgia on Protection of Consumers Rights, 2013), the process is not completed. In our opinion, this can be regarded as significant weakness of Georgian legislation regulating business and marketing. Naturally, it is not easy to adopt European standards in the sphere of consumers rights protection but even European Union have not easily dealt with this problem. Relevant European structures have spent almost half a century (45 years) to adopt general law on food (Todua L., 2013, p.1). In our opinion, Georgia will be able to develop the legal framework regulating business and marketing within the period set in accordance with Association Agreement. Results of lawmaking activities performed in the country allow us to say this.

Among the laws directly applicable to marketing activities, those, protecting the consumers and ensuring supply of safe food to them are of primary significance. We regard that of no less significance are the technical regulations that regulate the food labeling process and supply information to the consumers. Within this approach, we regard that the substantial laws and legislative acts are the following laws and technical regulations:

Law of Georgia – Code of Food Safety and Free Circulation;

Law of Georgia – Code of Food / Fodder Safety, Veterinary and Plants Protection;

Technical Regulation on Additional Requirements to Food Labeling;

Technical Regulation on Proving Information on the Food to Consumers.

In our opinion, this group includes also Georgian Law on Advertising that plays significant role in providing information to the public correctly.

This article provides analysis of the listed laws and other normative acts in the context of protection of the consumers' rights.

Research Methodology

Theoretical basis of this article was provided by the works directly dealing or related to marketing legal framework in Georgia. Among them we would like to emphasize the following:

Todua L., 2013, Food Regulations in the European Union.Key Food Law;Todua L., 2013, Food Regulations in the European Union.Food Hygiene;Todua L., 2014, Food Regulations in the European Union. Food labeling; Todua L., 2014, Food Regulations in the European Union.Food Additives; Mghebrishvili B.,2005, Business Macro Enviroment in Georgia; Mghebrishvili, B., Urotadze, E., 2016, Characteristics of Food Products Labeling in Georgia; Todua, N., Mghebrishvili, B., Urotadze, E., 2016, The main aspects of formation of legal environment of the Georgian food market; Todua, N., 2017, Influense of Food Labeling Awereness on healthy behavior of Georgian Consumers; Todua, N., 2017, The Impact of Globalization the Attitude of Georgian Consumers to Healthy Nutrition; Todua, N., Mghebrishvili, B., 2018, Legal Fundamentals of Food Safety Provisions in Georgia.

In the process of studying of legal environment of the marketing we relied on both, general and specific research methods. Among general methods we applied the dialectic method, analysis and synthesis. According to the dialectic method the legal framework of business and marketing was analyzed in dynamics. I.e. attention was focused on the sequence of

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development of the laws and normative acts and process of making amendments to them. Analysis of each law was performed article by article, in the context of the consumers' interests. Conclusions, on the basis of analysis results were made by the method of synthesis. Among the specific methods and techniques of research we have used such statistical methods as grouping and comparison. Using the methods of grouping and comparison we identified and analyzed the laws and technical regulations applicable to the marketing activities. Final conclusion was formulated based on judgment and the process of understanding of consistency of the situation evaluation.

Results of the research

The first law adopted in Georgia to regulate marketing activities was the Law of Georgia on Protection of Consumers Rights. This law specified the consumers' rights to the quality of goods, services, works, to information, compensation of damages caused by the improper products, protection of their rights at court, membership of the consumers' associations and societies (Law of Georgia on Protection of Consumers Rights,1996, Article 2). Thus, this law has established the legal, economic and social basis for protection of the consumers' rights in the territory of Georgia. Consumers' rights were provided for in details in the relevant articles of the said law. Law on Protection of the Consumers Rights was changed many times before is invalidation (2012).

New Draft Law on Protection of Consumers Rights was developed by the incentive of EU Integration Committee of the Parliament of Georgia. Goal of development was approach of Georgian legislation to EU legislation in the sphere of protection of the consumers' rights. New draft law differs to some extent from the previous law. New Chapter III – Ombudsman of the Consumers was included. No such chapter was provided in the previous law. The chapter specifies the rights of the consumer (Draft Law of Georgia on Protection of Consumers Rights 2013, Article 15, legal basis of the ombudsman's activities (ibid., Article 16), rules of his/her appointment [ibid., Article 18], rules of establishment of the ombudsman's office and its functioning (ibid., Article 20) and other issues. In Georgian society opinions about the said draft law are different. Georgian Business Association regards that "the Draft Law on Protection of the Consumers' Rights would cause damages to both, consumers and businesses" (15). It would cause significant problems, especially to small and medium businesses and significantly complicate operation of large ones" (15).One of the representatives of this Association, "the draft law makes burden of business heavier and causes additional expenses" (16) and these expenses "will be distributed between the businesses and consumers in case of adoption of the law" (16). In our opinion, though introduction of the ombudsman's institute will need additional expenses, the consumers' opportunity to protect their interests would improve and this is significant. The fact that the different views about certain articles of draft laws were not agreed upon and it has not enacted yet, as mentioned above, is a significant weakness of Georgian legislation regulating business and marketing. Due to failure to enact the draft law dissatisfied and deceived consumers have restricted capability to protect their interests. And this is unacceptable, regarding Association Agreement between EU and Georgia. The document states that "The Parties shall cooperate in order to ensure a high level of consumer protection and to achieve compatibility between their systems of consumer protection" (Association Agreement, 2014, Article 345). How can be achieved high level of consumers protection in Georgia, if the Law on Protection of Consumers' Rights was not enacted up to present?! Though in Georgia many laws and legislative acts were developed in the sphere of protection of the consumers' rights and taking their interests into consideration, in accordance with the Association Agreement, they cannot substitute the opportunities that the consumers can get for protection of their rights by entry of the Law on Consumers Rights into force.

Georgian Law on Advertising has to play certain role in protection of the consumers' rights. The law adopted in 90s of the past century was significantly changed by the laws adopted from time to time, new articles were added and many articles were removed from it. Some provisions of Georgian Law on Advertising directly protect the consumers' interests, their health and welfare, their safety. In this respect, the mentioned law states that "the advertising shall not provoke the public to violence, aggression and chaos, it shall not stimulate dangerous actions that can harm human health or safety (Georgian Law on Advertising, 1998, Article 4, Section 11). Georgian Law on advertising provides for protection of the consumers interests in advertising of any type of goods. The law contains separate provisions for advertising of some goods of specific nature, such as: alcohol beverages (ibid. Article 8), tobacco products (ibid. Article 8^2), pharmaceutical products (ibid. Article 9), artificial food for infants (ibid. Article 9^2), weapons (ibid. Article 10). Relevant sections of the mentioned articles detail the ways of prevention of undesirable influence of advertising and protection of their interests.

The issues of protection of human interests are generally provided in the Law of Georgia – Code of Product Safety and Free Circulation. The document emphasizes that its goal is to ensure "a) Protection of human life, health, property and environment; b) placing at market the safe products..." (Law of Georgia – Code of Product Safety and Free Circulation, 2012, Article 1). Hence, the Code allows sale at market of only those products that are safe. "The products that do not contain any risk or contain minimal risk regarded as acceptable with respect of human health and safety in case of their

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use according to their intended purpose, reasonably and with due regard of shelf life" can be regarded as such products (ibid., Article 4, Section 2). For the purpose of protection of the consumers rights the Code provides for responsibility of the manufacturers and distributors for placing of the flawed products at market. The Code focuses also in the issue of providing information to the consumers. The document states that "the manufacturer/distributor shall provide to the consumers necessary, true and complete information" (ibid., Article 12, Section 1). Naturally, this would allow the consumers making correct choice in the process of product procurement.

Code of Products Safety and Free Circulation, in general context, is focused on the issue of products labeling that is detailed in the technical regulation developed for this purpose.

Law of Georgia – Code of Product Safety and Free Circulation is subject to permanent refining, to duly regard economic and political changes in the country. Six amendments were made only in 2018. These amendments dealt with labor safety norms, operation of the authority supervising construction activities, the rules of imposing fines for non-compliance with the construction norms in the zone of special construction regime (Georgian Law on Amendments to the Process of Product Safety and Free Circulation, Article 1). It is also significant that by enactment of this law several laws were invalidated (Law of Georgia on Standardization", Law of Georgia on Technical Danger Control etc.) and this evidences readiness of the country's legislative authority to permanently refine the existing laws and other normative acts (Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code, 2012, Article 104).

Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code plays special role in protection of the consumers' interests. This law is the successor of several laws. Among the laws invalidated by its enactment we should primarily mention Georgian Law of 27 December 2005 on Food Safety and Quality and Law of Georgia of 14 June 1995 on Veterinary (Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code, 2012, Article 76]. Since 2012, many changes were made to the mentioned law. This, primarily, was caused by necessity of regarding the requirements of European Commission. Most changes were made to the given law upon signature and effectiveness of the Association Agreement between EU and Georgia. Though, this process continued further. From the initial version of the law some articles (e.g. articles 14, 15, 16, 28, 29 etc.) and even entire chapters were removed. Many articles entered into force since 2018 and some shall enter into force in 2020. These deal with the business operator's obligations in the sphere of veterinary (ibid., Article 18[1], Section 1, Subsection "e") and situation control in this respect by the National Food Agency (ibid., Article 22, Section "b", Subsection "c"), in addition, the rules of sanctioning of the violators for non-compliance with the requirements (ibid., Article 66, Section 5). Naturally, care about the animals' welfare indirectly serves to improvement of the human welfare.

Law of Georgia – Code of Food/Fodder Safety, Veterinary and Plants Protection is significant not only for local consumers but also for the people visiting Georgia temporarily, to perform their job duties, to travel or for other purposes. This law provides them the opportunity of consuming locally produced safe food. This would positively impact the country's image. But currently, the basket of goods of both, population of Georgia and tourists is not favorable for the country. In it no more than 20 percent is manufactured in Georgia and the remained 80 per cent is imported (Papava V., 2008). In such situation, scopes of application of the Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code are limited. It is necessary to increase the quantity of products manufactured domestically at market and this is impossible without development of agriculture and domestic production.

Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code states its purpose from the outset. The Code states that its "purpose is protection of human life and health, consumers' interests, animal health and welfare, plant health..." (Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code, 2012, Article 1, Section 1). To achieve this goal t is necessary to create effective state control system (ibid., Article 1, Section 1).

Though Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code is entirely devoted to protection of consumers' interests and each of its provisions serves to the consumers' protection, the principle of protection of the consumers' interests is provided in it as separate article (ibid., Article 10[1]). This article emphasizes the issue of providing information to the consumers. In particular, it states that "the consumer shall be provided with the necessary true complete information about the food products/animal feed, animals, plants, animal and vegetable products, veterinary preparations, pesticides that would allow making correct choice (ibid., Article 10[1] Section 1). The same Section emphasizes that "... the consumer shall be protected from the attempts of deception and misleading" (ibid., Article 10[2] Section 2). To prevent this, according to the Code, "it is prohibited to label, advertise or present (including pre-packaging, packaging, placement) of the food products/animal feed is such a manner that can mislead the consumer ..." (ibid., Article 10[1] Section 3) and impel him/her to make incorrect choice.

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Chapter three of the said law provide detailed requirements to be taken into consideration in determination of the food safety (ibid., Article 11,Section 4). The law provides in the separate articles the requirements to animal feed safety (ibid., Article 12), veterinary requirements (ibid., Article 12[1]) and requirements to the plants protection (ibid., Article 13).

Though Law of Georgia –Food Products/Animal Feed Safety, Veterinary and Plants Protection Code, in general context, emphasizes the issues of traceability (ibid., Article 17) and labeling (ibid., Article 18). These issues are stated in details in the technical regulations approved by the government of Georgia.

Technical Regulation on Additional Requirements to Food Labeling was developed and approved in accordance with Food Safety and Free Circulation Code. Its approval invalidated the Order of the Minister of Agriculture of Georgia of 11 December 2009 on Approval of the Additional Requirements to Food Labeling. The Technical Regulation is the successor of the mentioned order and mostly relies on it. It states that "…the regulation is intended for protection of the consumers' economic interests" (Technical Regulation on Additional Requirements to Food Labeling, 2013, Article 1). The requirements stated in the relevant articles of the Technical Regulation to: food labeling (ibid., Article 3), information provided on the label (ibid., Article 4), specifying nutritional value (ibid., Article 6) help the consumers to make correct choice and protect his/her economic and not only economic interests. Placing of the requirements to food labeling into the legal framework allows the consumer to legally protect his/her interests in case of their violation.

Technical Regulation on Providing Information on Food to the Consumer can play significant role in improvement of the consumers' awareness in food products and protection of their interests. Technical Regulation was approved by the Resolution #301 of 2016 of the government of Georgia though it entered into force only in 2018. Technical Regulation was prepared and approved in accordance with the Code of Food Safety and Free Circulation. According to the technical regulation the information shall be provided to the consumers so that they could protect their interests. Consumers should know what kind of products they buy, what is their composition, properties, shelf life, safety term and risks associated with its consumption (Technical Regulation on Providing Product Information to the Consumers, 2016, Article 4) etc. Such information would allow the consumers making conscious choice. Though, conscious choice does not always mean that it is a correct one that can be made only in case of availability of fair information. With respect of providing fair information, the mentioned technical regulation requires that the "information about food shall not be misleading" (ibid., Article 6, Section 2). I shall be "…accurate, clear and easily understandable for the consumer". In addition, the information shall not contain any hint on healing of any disease or medicinal qualities of the food products, with the exclusion of the information about natural mineral waters and food products for special purposes (ibid., Article 6, Section 3).

Regulation on Additional Requirements to Food Labeling explains also the obligations and responsibilities of business operator with respect of information (Technical Regulation on Additional Requirements to Food Labeling, 2013, Article 7). It provides the list of data that shall be included into the information about food (ibid., Article 8), rules of information availability and placement (ibid., Article 11) etc. It could be said that the technical regulations on Additional Requirements to Food Labeling and on Providing Food Information to the Consumers supplement and strengthen one another. If their requirements are complied with, the business will be able to achieve satisfaction of the consumers and the satisfied consumers, whether nationals or people from the other countries visiting Georgia for various purposes, by purchasing the products, will contribute to effective business thus and making the country's economy healthier.

Conclusion

After decomposition of the Soviet Union, when Georgia has gained independence, to create legal framework for business and marketing environment, significant works were performed. In 90s the government commenced work in this area and this work is still in progress. This process became especially extensive after signature and effectiveness of the Association Agreement between EU and Georgia. In the European Union many legal acts regulate the marketing environment and, naturally, the respective normative acts were not developed and amended instantly, the work continues up to present. Naturally, one article cannot discuss all laws and legal acts applicable to marketing legal environment. This article is focused on the main laws and normative acts that directly impact the consumers' interests, ensure manufacturing and sale of the products corresponding to their requirements, as well as the consumers' informing about these products.

Study of the process of formation of the marketing legal environment showed that the laws and other normative acts adopted in Georgia in this sphere gradually improve and allow better consideration of the consumers interests. In addition, putting of the marketing legal environment into order would contribute to protection of the interests of both, local population and those who visit Georgia to work, view the country and for the other purposes. This is significant to create positive image of

Georgia at international level and this, in turn, would contribute to increase of the tourists' flows and further development of the country's economy.

Irrespective of work performed in Georgia for improvement of the legal environment of marketing, in our opinion there is much to be done, it is necessary to enact the law on protection of the consumers' rights that would facilitate protection of their rights by the consumers. It is necessary also that more attention should be paid to control of compliance with the adopted laws and other legal acts. All, the businessmen and consumers should understand that by complying with the laws and other normative acts intended for regulation of the marketing legal environment they would contribute to formation of Georgia as a rule-of-law state and improvement of its prestige at national and international levels.

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Impact of Private Equity in Colombian Companies: A Case Study

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Abstract

A private equity fund is an investment vehicle managed by a professional team, whose main objective is to provide a medium or long-term return to its investors through capital investments in companies that are not listed on the stock exchange. In Colombia the first professional managers of private equity funds arrived in 2005, Since that date, several companies have been formed dedicated to this, such as Valorar Futuro, an investment fund which bought Aderezos and Higietex. The aim of this research was to determine the impact of the leverage of a private capital fund on the economic growth of a company. Financial balances of the companies Aderezos and Higietex were obtained from 2013 to 2017 and analyzed. Finally, it was found that the private capital fund allowed growth in the companies Aderezos and Higietex.

Keywords*: venture, finance, private capital, investments, business

Introduction

Private Equity (PE) is a business model in which investors are associated with professional managers for the injection of private capital into companies, through the purchase of shares with the ultimate goal of obtaining a return about its investment through various disinvestment mechanisms (Chapple, Clarkson, & King, 2010; Meuleman, Wright, Manigart, & Lockett, 2009).

Some of the elements that make Private Equity (PE) a differentiated business model are (Ulloa, 2006) its structure of participation and roles, the average term of return on investment, and the mechanisms used to achieve the objective of your business model

Like all other for-profit businesses, the PE seeks to increase the value of the investment made. The way in which the PE works to achieve this objective is to invest in companies that are not usually listed on the stock exchange and some of which can not access bank financing or the capital market (Demaria & Tarradellas Espuny, 2016).

The structure of Private Equity is based on an asset management model, however, it is commonly accepted that one of the most distinctive features is its period of return on investment (3-10 years) (ASCRI, 2018) which is much higher than the fast money culture of Wall Street.

In the strict sense, the business of private capital was born with the first merchant companies destined to the exploration and exploitation of the American continent in the years before the 1900s, during this time the term Venture was coined which was a contraction of adventurer (adventurer) term with which they commonly referred to the people involved in these activities (Cendrowski, Petro, Martin, & Wadeck, 2012). The first great moment of the PE in the twentieth century occurs in the United States with the famous purchase of Carnegie Steel by JP Morgan in 1901 (Talmor & Vasvari, 2011). However, the business of PE as the industry we know today, was born in the eighties with the appearance of the so-called bootstrap acquisitions that later came to be known as Leveraged Buyouts in which essentially a buyer acquires its target financing through debt, a large part of the resources needed in the transaction (Hungarian Private Equity and Venture Capital Association, 2018). One of the main exponents and main precursor of this type of business is Henry Kravis, founding partner of the renowned private equity firm KKR, responsible for famous transactions such as the purchase of RJR Nabisco, producer of, among other products, Oreo cookies ("Henry R. Kravis," 2017).

In order to better understand the PE business model, it is important to know how the typical participants of a PE business and their relationships work:

Limited Partners: the typical investors of the Private Equity business are individuals or companies with the capacity to commit a significant level of capital and willing to have periods of return between 7 and 10 years. (Braun & Schmidt, 2014). Within these investors, it is possible to find pension funds, universities, private companies, government agencies and Family Offices such as Rockefeller, Rothschild etc.

General Partners: they are companies or people with extensive experience in the investment sector (Prowse, 1998), with administrative knowledge and valuable relationships that offer a competitive advantage to the investor when seeking to access the investment strategies pursued by the fund. In the Colombian case, under their regulation scheme, they can be professional managers, private companies, stockbrokers and investment banks. (Ministerio de hacienda y crédito público, 2015).

Administrators*:* the figure of administrator depends to a great extent on the jurisdiction where the business is being carried out, usually in the international market it is usually the same companies of the professional managers or Private Equity Firms that administer the funds through of legal figures as segregated accounts (Kaplan & Stro, 2009). In Colombia, there is a figure or fiduciary role that is reserved exclusively for a certain group of entities that are: fiduciaries, stockbrokers and Investment Management Companies (SAI) (Superintendencia financiera de Colombia, 2001).

The operation of the business model of a private equity firm can be divided into four stages [16], [17]:

- Fundraising: as its name says the Fundraising consists of the acquisition of investment capital for the private equity fund, generally during this stage, a professional manager establishes an investment strategy and carries out a marketing process known as roadshow to attract potential investors or limited partners and thus get the resources that are needed to execute the strategy (Andbanck, 2014).

- Investment: Consists in the constitution and formalization of all contracts associated with this business model, including the creation of the private equity fund in the management company, the remuneration and compensation structure of the manager, and the investment mandate and clawbacks, once the previous step is completed, the professional manager initiates the execution of the investment strategy (Liu & Yang, 2015).

- Administration: during this process the manager determines the specific investment opportunities that are in line with the fund's strategy and determines the allocation of capital to each of these opportunities, once this is done, the professional manager must exercise an active management of these investments seeking to meet the objectives agreed with their investors that at the end of the day is summarized in the increase in value of the capital received (EVCA, 2007). At this point it is worth mentioning that in addition to capital, private equity firms are also characterized by the proximity they seek to develop with the companies or businesses in which they invest, with the purpose of contributing their knowledge in good corporate governance practices, strategy and management, corporate finance, human resources management, etc.

- Disinvestment (Exit): in this period the manager makes the sale of the assets or businesses in which it was initially invested in order to materialize the value generated through the administration process, for this purpose the manager has several tools that are: OPI (Initial Public Offer), sale to another Private Equity and sale to a strategic buyer M & A (Mergers and Acquisitions) (Johan & Zhang, 2016).

- Like all financial businesses, PE firms face different risks that they must seek to mitigate or reduce. Among these we can typically find the following (Diller & Jäckel, 2015):

- Liquidity risk: Given that investments under a PE business model are in assets that are not generally listed on the stock exchange, this makes it more difficult to execute an early exit from the investment, which is configured as a liquidity risk.

- Concentration risk: This consists of the existence of a large concentration of capital in a single investment strategy, a situation that arises from the need to have management capacity in the same investment (company). That is to say, "there are many eggs in the same basket".

- Risk of adverse selection: This is that, having a limited number of investment options, there is a greater likelihood that the decision and its performance are sub-optimal.

In Colombia, the first professional managers of private equity funds to arrive were LAEFM Colombia (LAEFM Colombia, 2018) and SEAF Colombia (SEAF Colombia, 2014), in the year 2005. After this arrival, the first regulations for the development and regulation of the industry were made. The first regulatory framework of the industry was made under resolution 470, where pension funds were granted permission to invest in these private equity funds.

Taking the study carried out by the firm Ernst & Young and ColCapital, we can find that since its inception, the private equity fund industry has shown a constant increase (ColCapital & EY, 2017).

A couple of cases of Colombian companies in which investments were presented by private equity funds are:

Tribeca purchased stakes in Emi and Onda de Mar through its Private Equity Fund FCP Tribeca Fund I, managed by the fiduciary Fiducor (Tribeca, 2018).

SEAF and SEAF Colombia they bought participations in Mimo's and Kokoriko through the participation of Grupo Conboca through their private equity fund MAS COLOMBIA-LATAM

In the year 2012, the firm Valorar Futuro bought the company Higitex Ltda., and in 2013 bought Ascender S.A.

The aim of this study was to
determine the impact of the leverage of a private capital fund on the economic growth of a company, where the companies Ascender S.A and Higietex Ltda in Colombia will be taken as a case study

Methods

The financial statements of Ascender SA and Higitex Ltda, from 2013 to 2017, were taken from the Colombian Superintendence of Companies. Once obtained, a database was assembled and the main accounts were selected in order to calculate the financial indicators.

The selected accounts were: operating income (OI), gross profit (GP), operating profit (OP), net profit (NP), EBIT, invested capital (IC), and equity (E).

Variations in operating income, gross profit, operating profit and profit and loss over the years were determined (1). And the financial indicators such as gross margin (2), operating margin (3), ROE (4) and ROIC (5) were calculated

$$VTY(\%) = \left(\frac{Current\ year}{Last\ year} - 1\right) * 100 \qquad (1)$$

$$GM(\%) = \frac{gross\ profit}{operating\ income} * 100 \qquad (2)$$

$$OM(\%) = \frac{EBIT}{operating\ income} * 100 \qquad (3)$$

$$ROE(\%) = \frac{net\ profit}{equity} * 100 \qquad (4)$$

$$ROIC(\%) = \frac{EBIT}{invested\ capital} * 100 \qquad (5)$$

Where VTY is the variation of the indicator through the years; GM is the gross margin; OM is the operating margin; ROE is the return on equity, and ROIC is the return on invested capital.

results and discussion

Salsas Aderezos is an Antioquia food company that is part of the Ascender S.A. business group. He has also had a wide selection in the country with presence in more than 5 main cities. The company was founded in 1994 and in 2013; the purchase process was started by the private equity fund Valorar Futuro. On the other hand, Higietex is a company dedicated to the production and marketing of cotton products for personal care and health. It has been in existence for forty years and is one of the most recognized brands in this sector in Colombia. Currently exports to South and Central America. This company was purchased by the private equity fund Valorar Futuro in the year 2011

After receiving the support of the Valorar Futuro capital fund in the financial balances of the company Aderezos (table 1), a continuous growth in its income can be evidenced. Between 2013 and 2014, revenues grew approximately 7.1%, while for the 2014-2015 period, revenues grew by approximately 11.5% and finally for the 2015-2017 period, they rebounded with 31%. This is also reflected in the increase in its cost of sales, with an average growth of approximately 23% as of 2014, which supports its continuous increase in sales.

Table 1. Financial statements of the company Aderezos for the years 2013 to 2017.

	2013	2014	2015	2016	2017
OI	$5,467	$5,854	$6,525	$85,665	$11,279
GP	$2,713	$2,870	$3,256	$3,914	$5,325
OP	$1,073	$866	$1,031	$1,467	$2,354
NP	$536	$160	$300	$807	$1,317
EBIT	$1,073	$866	$1,031	$1,467	$2,354
IC	$1,477	$1,325	$1,172	$1,747	$2,152
E	$1,451	$1,093	$813	$1,346	$1,938

The values are given in dollars

Respecting to the gross margin, the company shows a constant behavior between 2013 and 2015 with an average of 48% (Table 2). The company presents a constant behavior between the years of 2013 to 2015 in its operating margin, with an average behavior of 18%, and an increase between 2016 and 2017 of almost 4 percentage points, showing a significant increase in sales and even above their costs and expenses. The company presents a significant increase in its ROE for the period between 2015 and 2016, as it goes from average levels of 30% to average levels of 64%. Finally, between 2016 and 2017, the ROIC presented an approximate variation of 25%, which indicates an increase in the profitability of the funds invested in the assets, whether they are of patrimonial origin or long-term loans.

Table 2. Financial indicators of the Company Aderezos for the years 2013 to 2017.

	2013	2014	2015	2016	2017
GM	49.6%	49.0%	49.9%	45.8%	47.2%
OM	19.6%	14.8%	15.8%	17.2%	20.9%
ROE	36.9%	14.6%	36.9%	59.9%	67.9%
ROIC	72.7%	65.4%	87.9%	84.0%	109.4%

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The purchase of the company Aderezos by the private equity fund Valorar Futuro allowed a change in the management of the company (ceasing to be a family business), allowing improvements in its processes, which can be seen in the increases of its indicators.

Between 2016 and 2017, the company showed significant growth in its income levels and indicators such as the operating margin and the ROE. Additionally, it underwent changes in its brand image, seeking to respond to new marketing strategies proposed by the professionals of the private equity fund.

It can be said then, that the greatest impact of this purchase is the change in its management and as a result the increase in its revenues, the product portfolio and the arrival in new markets.

On the other hand, the Higietex Company, after receiving the income from the Valorar Futuro fund, showed a continuous growth in income, between 2013 and 2014, revenues grew approximately 1.8%, while among the year 2014 to 2015 they grew approximately 13.9% and finally between the years 2015 to 2017, they grew on average 28.4% (Table 3).

Table 3. Financial statements of the company Higietex for the years 2013 to 2017.

	2013	2014	2015	2016	2017
OI	$4,142	$4,216	$4,802	$5,585	$6,261
GP	$1,430	$1,596	$1,947	$2,148	$2,297
OP	$78	$241	$528	$696	$789
NP	$-201	$-12	$284	$387	$425
EBIT	$78	$241	$528	$696	$789
IC	$1,176	$118	$1,198	$1,239	$1,525
E	$855	$82	$536	$372	$249

In terms of gross margin, the Higietex Company showed a constant average behavior of 37.6%, with a slight growth in 2015 of 3 percentage points. Likewise, it presented an average increase of 12% in its operating margin as of 2015, showing an improvement in its operational and administrative expenses.

Higietex showed a significant increase in its ROE as of 2015, since this goes from negative levels to positive and maximum levels of 44.6%. As of 2014, the ROIC showed a significant increase, going from levels lower than 10% to levels higher than 20%, reaching its peak in 2016 at 56.2%, which shows an improvement in the profitability of the funds invested in the assets, either of their patrimonial origin or of long-term loans (Table 4).

Table 4. Financial indicators of the Company Higietex for the years 2013 to 2017.

	2013	2014	2015	2016	2017
GM	34.5%	37.9%	40.6%	38.5%	36.7%
OM	1.9%	5.7%	11.0%	12.5%	12.6%
ROE	-62.8%	-3.5%	42.9%	44.6%	33.3%
ROIC	6.7%	20.5%	44.1%	56.2%	51.7%

For both Aderezos and Higietex, after receiving the capital injection by Valorar Futuro, there may be evidence of a growth in its operating revenues, which is evidenced by an increase in selling costs at the company Aderezos. However, in Higietex a decrease in its sales costs can be evidenced, which could have occurred when performing an efficiency in obtaining raw material and direct labor, also, a reduction in operating income between 2016 and 2017 can also be seen, which could be presented by an increase in its operating expenses.

In terms of total assets both companies showed growth year after year, for the company Aderezos an average growth of 21.5% was obtained, while for Higietex a constant growth of 16.8% was obtained, which could conclude that in some the injection of capital allowed the acquisition of assets that leveraged the growth of the company. As for liabilities, both companies showed a decrease starting in 2016.

Conclusions

The private capital funds allow the growth of small businesses or family businesses; this was reflected in the case study of the company Aderezos, where its indicators saw an increase, due to several factors influenced by Valorar Futuro, such as improvements in the brand, consulting in business management, product diversification, among others. The in-depth study should be followed with other cases that allow evaluating the influence of these private funds on small companies in Colombia and making a comparison with other countries.

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Information of the Financial Statements Disclosures - Case of Albania

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Abstract

Since 2008 in Albania, financial reporting is carried out based on international standards and national accounting standards, which are in compliance with International financial reporting standards. In our paper, we want to focus on the "Financial Statements Disclosures" as one of the components of the full package of financial statements. Often there is an erroneous view or attitude that compiles disclosures is something simple and easy. But even for their preparation, the accounting principles and rules should be strictly followed. Through the literature review we will highlight the role and importance of preparing of the financial statements disclosures on financial reporting, the care that should be shown in their preparation and the importance they have for users of financial statements. This also for the fact that, as simple as it may seem in its preparation, this statement has a high level of significance, and may even serve as an "indicator" for detecting fraud, assisting decision-making processes, and so on. The objectives of our paper will be realized through comparative, descriptive and statistical analyzes, using primary and secondary data. Primary data will be provided by the questionnaire addressed to target groups: accountants-because they prepare disclosures; auditors and tax inspectors - because they are the users of financial statements disclosures as they use these notes to understand the truth and credibility but also to discover frauds and mistakes. Secondary data will be gained from the literature review and the national accounting standards study of our country. The primary data analysis will serve first to understand the level of preparation of the financial statements disclosures and then to understand the role and importance of their information in the preparation of the full set of financial statements, with the purpose of giving the true and fair view of the activity of the entity, thus contributing to the increase of transparency. Secondary data analysis will serve to understand better the theoretical framework for the disclosures and the information that they carry. In the end, we will provide necessary recommendations regarding the disclosures and information they need to carry to ensure a higher quality of financial reporting.

Keywords: financial reporting, disclosures, accounting, users of accounting information.

Introduction

In recent years, the nature of financial reporting (FR) is evolved to meet the changing needs of its users. Business and capital markets have become more challenging, more complex, where risk and uncertainty are growing. Because of this, financial reporting has changed to respond to these challenges. The tendency for use of fair value more and more in preparing FS seems to be correct because fair value expresses better the reality of transactions carried out in a business. But on the other hand, the use of fair value model involves more complex measurements and widespread use of judgment

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by increasing subjectivity rather than objectivity. The economic, technological, etc. changes currently occurring globally reflect a fundamental trend towards the increasing need to provide qualitative and reliable accounting information that is important to the users.

In Albania, financial reporting is carried out based on international standards and national accounting standards, which are in compliance with IFRS. In our paper we will focus on a particular aspect of financial reporting, in financial disclosures. We will stop at the statement of "Financial Disclosures" as one of the components of the full package of Financial Statements. This is because of the fact that in our country there is often a wrong opinion or attitude according to which the compilation of financial disclosures is something simple and easy. But in fact, for the preparation of financial disclosures should be strictly followed the accounting principles and rules in order to provide users with the opportunity to better understand the risks and benefits that accompany the financial situation and the performance of the reporting entity.

Financial statements disclosure requirements and disclosure practices have also responded to these economic changes as well as to the multiple transactions performed by the entities, shifting from providing simple explanations for the financial statements to the more detailed disclosures. These disclosures include information about the assumptions used by the entity's management, about the accounting models used, the alternative measurement methods used and about the uncertainty of the estimates for the items of the statement of financial position. In a way, it can be said that disclosure has become a balancing point, aiming to ensure that information is reliable and useful for decision-making.

All of these trends in financial reporting present challenges not only to financial reporting preparers, which need to prepare and support these new changes. But they also they present challenges for investors and other users of FS information, in efforts to understand the importance of information provided in the financial statements during their decision making process. They also present challenges for auditors to formulate judgments on the proper information that should be disclosed in the notes and to determine the calculation of the materiality to be applied during the audit process of the financial statements. Moreover, auditors should consider the overall presentation of the financial statements including relevant notes if they represent transactions and events in a manner that achieves the fair presentation of the entity's activities.

More recently, the role of auditors with regard to disclosures that an entity has to present in its Financial Statements (FS) has been considerably in the spotlight. Especially after recent financial crisis events and concerns about auditor's efforts regarding to information that should be required to be disclosed in the notes. Some recent reports have suggested that auditors should use greater professional judgment and skepticism during the FS audit and specifically in the statement of disclosures. Whereas, during a study conducted by the CFA Institute in 2012[1], it was found that investors believe the financial crisis of 2008 and the five years of economic insecurity have clearly revealed the inadequacy of disclosures, particularly those provided by financial institutions. According to this study, it results that during the financial crisis of 2008, there is enough evidence of insufficient disclosure in providing transparency to investors regarding exposures, risks, uncertainties, etc.

Based on what said above, we intended to carry out this study, where the main purpose is to put in evidence the role of the information contained in the statements of disclosers in the full package of accounting standards and the care to be shown in their preparation. And for our country, based on the analysis of primary data, we will clarify the level of preparation of the disclosures in the financial statements, the role and importance of their information in the preparation of the financial statements, with the purpose of giving true and fair view of the activity of the entity, thus affecting the increase of transparency.

Literature Review

According to the requirements of the Financial Reporting Framework, it is stated that an entity should prepare the financial statements in such a way that they provide useful information to the internal user and especially to their external users. To be reliable, the FS information should be relevant and present faithfully the activity the entity performs. Accounting scandals and frauds are perennial, they have occurred in all periods, in all places, and many corporations are affected. Unfortunately, there are some legal and regulatory space in accounting and auditing standards that permit discretion and thus motivate accounting professionals to use manipulation practices.

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[1] https://www.cfainstitute.org/-/media/documents/article/position-paper/financial-reporting-disclosures-investor-perspectives-on-transparency-trust-volume.ashx

Principle-based accounting standards carry the use of a high level of judgment by the FS'prepares so that making evident the risk of manipulating information that is prepared on their basis. Also in Albania, Ujkani M, Myftaraj E (2018) in their study have identified that the complete set of National Accounting Standards (NAS) has spaces that leave room for interpretation and motivate professionals to use "creative accounting " in preparing financial statements by violating thus presenting the true and fair view of the entities activities, of its financial position and performance.

Bhasin (2016) in his study notes that Financial Reporting (FR) contains "asymmetric" information available to both stakeholders, both internal and external, as this because has two positions during the preparation of financial statements that depend on their preparers. The first approach considers (FR) and their preparation in order to "accountability" to their owners and for other stakeholders within the entity. Others consider FR as a "communication" of FS information to the shareholders and all other users who have an interest in an entity to make "useful" economic decisions.

In a perfect world, of course, all stakeholders, board members and executives would have full confidence in the "FS" of the economic units and could make "right and smart" decisions to invest or to buy a company, promoting the efficient distribution of capital. Sherman and Young (2016) in their study of FR shortcomings have argued that: "Unfortunately, this does not happen in the real world for some reason where among them we first distinguish, the FS of the entity *necessarily depends on the estimates and the way of judging of their preparers*, which can be extensively out of the "proper context" even when done in good faith. Also managers and executives routinely encounter powerful incentives to deliberately "inject" the FS error.

In the study conducted (Lu and Abeysekera 2014, Maroun 2017) it has been noted that the inclusion of financial information, and especially of non-financial ones, in the financial statements of the entities contributes greatly to the transparency of information and is therefore a important issue in economies worldwide. The provision of non-financial information is a strategic action that substantially improves the communication of entity with stakeholders (Fonseca 2010, Miska et al., 2013). A study carried on by Ernst and Young (2017) has highlighted the key importance of this information to users and has evidenced that 68% of investors have accepted that they use such disclosures in their investment decisions.

The increase of the volume of information provided by companies, including this in the FS, has happened mainly due to the work done in this area by the Global Reporting Initiative (GRI) (Moneva et al 2006, Brown et al 2009, KPMG 2011) whose guidelines are still more authoritative in the international arena. In Europe, various recent initiatives have strongly encouraged the introduction of non-financial information. Thus, EU Directive 2014/95 / EU (EU 2014) 2 and its adaptation to the specific characteristics of each Member State suggests that Public Interest Entities in Europe should publish a "Non-Financial Statement" addressing environment and social issues, respect for human rights, fight against corruption and bribery.

Currently, initiatives have been taken to create a comprehensive framework to improve the financial statements disclosures (FSD). The framework of FSD aims to help entities to communicate more effectively with investors, eliminate excessive information, and move away from their formal compilation. According to a CFA Institute's 2012 survey, a majority of respondents (80%) said they did not believe that the volume of Disclosures is a disturbing area for investors. The message was clear from the respondents: *Investors are not seeking a reduction in the volume of disclosure information, they are the main customers of the financial statements and reforms in the FS Disclosure should aim at providing investors with useful information to guide their investment decisions.* But the results of the study received from the financial statements preparers, the entities that provide consulting services in the field of accounting, academics and others, have commented that FS Disclosure have become voluminous and "heavy" for users to read. They believe their volume is excessive and can "darken" key messages and cause that investors may emerge from the most important pieces of information "in the midst of all the clutter" included in the financial statements. They therefore argue that reducing the volume of FS Disclosure would make them more effective.

These initiatives, as noted above, came as investors believed that the financial crisis of 2008 and the recent corporate scandals have clearly shown the lack of transparency in financial reporting information (such as Lehman Brothers, MF Global and Bear Stearns etc.). This evidences the need for improvements in the quality and effectiveness of financial reporting information which aim increasing of transparency.

Various studies and these discussions presented in this paper have led to the review of the FS Disclosure, which is viewed in the July 2012 initiative where the accounting standards setters have issue for discussion two documents that required

public comment on the development of a framework for disclosure. [1] These were discussed for the purpose of changing the way in which the disclosure requirements are set by the accounting standards setters and how these requirements can be applied by the entities in their financial statements. Initially, the focus of standard setters was on the writing of principle based standards which aimed at reducing the volume of FS Disclosure, while leaving the volume of this information in the management to decide what to give in the FS Disclosure.

But the growing demand for information from financial reporting, especially from third parties, investors, creditors (outside the entities) has brought to the revision and preparation of a FS Disclosure Framework. Lastly, during the last months of 2018, [2] there are efforts and initiatives on identifying disclosure objectives and related disclosure requirements for defined rate regulation. In the continuation of efforts to look for ways to increase communication in financial reporting, the IASB has made a better communication on Financial Reporting with its central topic of its agenda from 2017 to 2021, including a Disclosure Initiative which has as purpose to give the ideas how the disclosures in the financial statements can be improved.

Even in the Conceptual Framework Revised, published by the IASB in March 2018, pay a particular importance to the presentation of information in the FS and to the provision of disclosures. Information on the financial situation and performance of the entity is communicated through the presentation and provision of FS Disclosures. The IASB states that the effective communication of information in financial statements makes that information more relevant and contributes to a faithful representation of an entity's financial situation and its performance.

In the IFAC publication "Global Accountancy Profession's Call to Action for the G20 Countries" (IFAC 2018) is highlighted among some of the recommendations given by the G20 meeting in Argentina, the recommendation for enhancing transparency, "Robust transparency in the public and private sectors is key to earning the public's trust and confidence, fighting corruption and promoting good governance." To enhance transparency in the private sector, among other things, plays a role the strengthens of the FS disclosures and admission and implementation of integrated reporting

So actually it is not any more into question the provision of FS disclosure. In the focus is the level and amount of FS disclosure as well as the foundation of a general framework for their preparation.

We will briefly put in evidence the Albanian legal framework regarding the FS disclosure specified in two periods of time: before the preparation of the complete set of NAS, so before 2008; and after the preparation of the complete set of NAS. Accounting organization before 2008 was made based on law no. 7661 dated 19.01.1993 "On Accounting", where Article 48-52 foresees that an integral part of the annual accounts [3] would be "Annual Accounts Annex". These articles clearly specify the types of information that should contain the annex in relation to the preparation of annual accounts such as information in relation to:

The principles, rules and methods applied for the preparation of annual accounts;
Analytical information on the various balance sheet items and the profit and loss account
Completion of annual accounts with other necessary data etc.

Also in this law was defined the purpose of the annex content, which should be guided by the principle of the materiality of its information to the users of the company's annual accounts

Also, the full set of NAS initially created based on law no. 9 April 22, 2004, "On Accounting and Financial Statements", provides in the General Framework for the Preparation of FS that they should give a true and fair view of the financial position, financial performance and cash flow of the reporting entity, and only if (a) they are accurate and complete in reflecting the content of economic events; (b) their preparation is based on reasoned and substantiated assessments (where assessments are necessary); (c) the disclosure to the financial statements have been prepared in sufficient detail

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[1] The Financial Accounting Standards Board's invitation to comment on its discussion paper, *Disclosure Framework*
  A discussion paper, *Towards a Disclosure Framework for the Notes*, by the European Financial Reporting Advisory Group, French Autorité des Normes Comptables, and U.K. Financial Reporting Council

[2] https://www.ifrs.org/news-and-events/calendar/2018/november/international-accounting-standards-board/ https://www.ifrs.org/-/media/feature/meetings/2018/november/iasb/ap09e-rra.pdf ; https://www.ifrs.org/-/media/feature/meetings/2018/november/iasb/ap09d-rra.pdf

[3] The term annual account is the definition of the law currently abrogated "On Accounting" and currently it does not exist but is equivalent to the full set of Financial Statements

to give a general picture of the financial position, financial performance and cash flow of a reporting entity, in such a way that the competent reader can draw reasonable conclusions.

In this way, this law clearly establishes the role of FS disclosure for the presentation of the financial situation and performance of the entity. This objective has not changed even after the improvement of the complete set of NAS in Albania (paragraph 6 SKK 1). Each national accounting standard prepared by the National Accounting Council has at its end a complete section on the disclosure where are presented clearly the kinds of information that should contain the respective statements. The changes that had the full set of standards in 2014 with the entry into force in 2015, was also reflected in this section, where disclosure requirements were added compared to the former NAS set, but of course in our country is the legal space that the preparation of this information is "a subjectivism" of the PF preparers.

Even the new Law 25/2018 "On Accounting and Financial Statements" clearly stipulates that in the package of the FS is included the statement of the disclosure (article 13). The new in this law states in its Article 16, which sets out the basic rules of the way of preparation and presentation of FS Disclosure as well as the information that should be given to them both for individual and consolidated FS. Furthermore it is stipulated that these disclosure should also provide information about the employees, wages of the executive and supervisory board, the fees of the auditors, and so on. The law also defines for the public interest entities even the need to provide other information such as: activity performance report (article 17); the non-financial report (Article 18), the internal management report (Article 19), and the reporting of payments made to state institutions (Article 21).

From the literature review, accounting standards and past and current laws of our country, it is noted that provision of the information on the FS disclosure serves as a switching bridge from the quantitative data to the qualitative data of the information reflected in the complete set of FS As a consequence, a great deal of dilemma will be how much should be this information which should contain the explanation of the elements of the complete set of FS with the purpose of giving the activity of the entity in order to increase the transparency (see figure 1).

Figure No 1- The relationship between the components of the financial statements and the information they contain
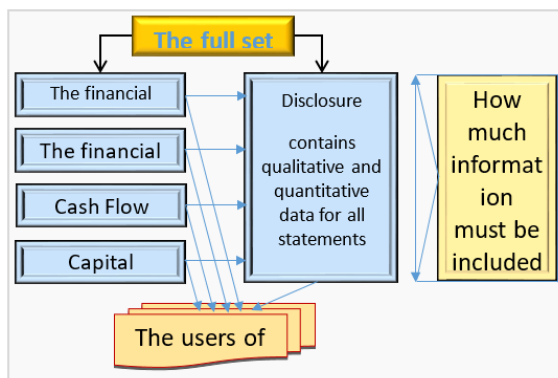
Source: Authors, based on literature review

In conclusion, it can be said that what is unquestioned is the importance, care and role that have the provision of FS disclosure for the activity exercised by an entity, thus leading not only to fair and effective decision-making but also to enhancing transparency as well as in the usefulness of information for users.

Methodology

In order to achieve the objective of our work, the description analyze and the chi square statistical model were used. A questionnaire has been prepared, whose data serves as the primary data where the target group served, the accountants - because they are compilers and writers of FS disclosures; auditors and tax inspectors-because they are users of "FS disclosures" and helped from these disclosures for the detection of frauds and mistakes. The primary data analysis to be provided below will serve first, to understand the level of preparation of the FS Disclosures and then to understand the role and importance of their information in preparing the financial statements for the purpose giving a true and fair view of the

activity of the entities, thus increasing the transparency. Based on the reviewed literature but also in the objective of our work we raise some research questions such:

- How much is the Level of FS disclosures?
- Are the "FS disclosures" affected by the financial statements preparers?
-Do the disclosures help in identifying the discovery of errors, misinterpretations or fraud?
-According to the perception of the target group are seen FS disclosure as important and why?

The questionnaire was structured in three sections where the first section served to collect information about the general characteristics of the target group such as gender, occupation, current job position, years of exercise of the accounting profession, the size of the entities for which professionals have prepared, audited or controlled financial statements, etc. The second section refers to the FS disclosure and the third section served to obtain information on their relevance. The questionnaire was distributed to 160 professionals designated as a target group and data was collected by 101 professional.
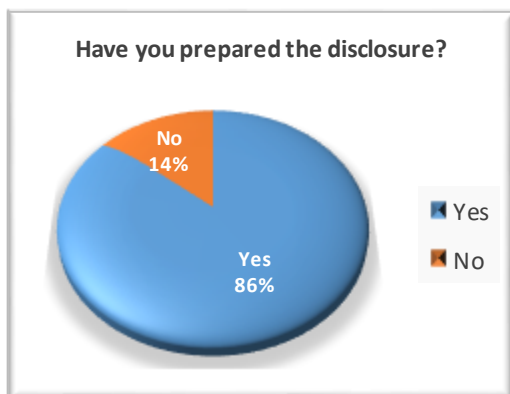
Data Analysis

Initially, the data analysis will begin with a brief description of the characteristics of the target group which consists of private accountants with 52.48%, certified accountants with 33.66% and auditors with 13.86%. Respondents have working experience from 1 year to 32 years of work, as well as a geographical distribution in different districts of Albania such as Berat, Fier, Lushnje, Durres, Vlore, Shkoder, Tirana, Elbasan. At the same time, the size of the entities based on the law on SMEs for which respondents have offered FS preparation, audit or control services pertain to small and medium-sized enterprises and large enterprises. (See Annex I-General Characteristics).

From the data, it is concluded that around 84.15% of the respondents have used the complete set of NAS (ie 15 standards and one standard for NGOs). This implies that the preparation of disclosure not only cannot be avoided, but should also include a considerable "volume", referring to accounting standards.

So to answer our question on the level of the FS disclosure, it was originally thought to be obtain the answer whether the professionals have prepared the respective statement or not. If the answer was yes, depending on the size of the entity, it was asked to know how much the volume of this information was and then to evidence the type of information given. The data analysis showed that 86.14% of respondents have prepared the FS disclosure, while others have either not prepared or did not audited this FS.

Professionals that responded that have not prepare FS belong to the category of auditors who normally have in the focus the auditing services rather than the preparation of the FS. According to the descriptive analysis it is noted that the minimum of drafted pages for all entities there are zero pages prepared for the disclosure and the maximum levels of the disclosure pages are 80 pages only for the big entities (see Charts 1 and 2). This indicates that the professionals or prepare or do not prepare this statement in accordance with the principles set out in the complete set of NAS.

Chart no1 " Have you prepared the disclosure" Chart no2"How much is the volume of diclosure information

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How much is the volume of disclosure information? (Number of pages)

	micro	small	medium	big
Minimum	1.00	1.00	2.00	3.00
Maximum	10.00	20.00	55.00	80.00
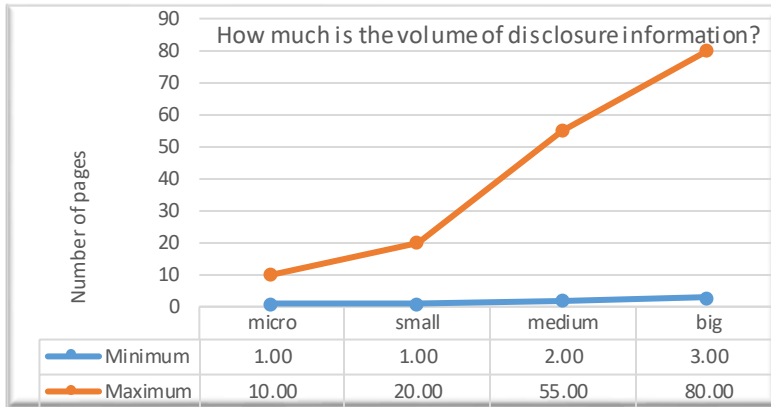
Source: Authors from data analysis

Meanwhile, regarding the type of information presented in these disclosure for those who have prepared FS disclosure, it is evidenced that the information was simply the evidence of the used NAS, of accounting policies and valuation methods and only three main indicators of the "inventories", "property, plant and equipment" and information on the calculation of the profit tax realized during the accounting period. (See Chart No. 3 as follows);

Chart no.3 "Type of the information of disclosures"

Type of the Information of disclosures (Values)
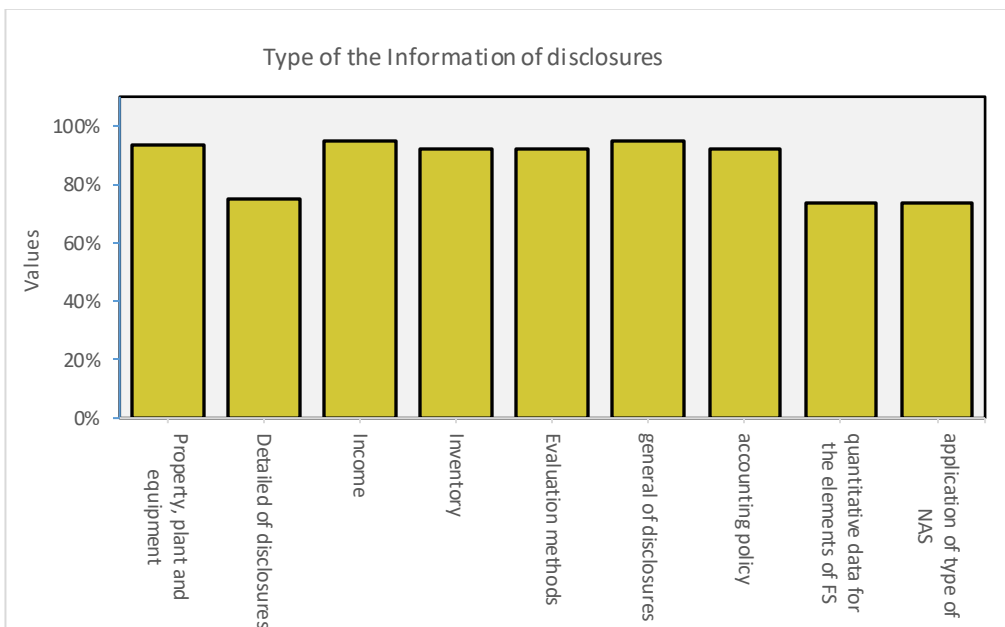
Source: Authors from data analysis

Research question -Are the "FS disclosures" influenced from the financial statements preparer, we have analyzed using the chi square test of independence test. Through this test, we will evaluate whether the variables are independent. The results showed that the preparation of the FS disclosures depended (not independent) on its author (p) = 0.001, p <0.05 (see table no. 1 Annex II); this was expected result, as long as the FS preparer is responsible for the preparation of the FS disclosures. By pointing out the role of the FS disclosures information and the responsibility for their preparation depends on the accounting professional we tried to test the fact that this information would help them in the next periods to prepare

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the FP where the results of the chi square test showed that it had an impact because p = 0.001 less than 0.05 (see Table 2

To answer the research question – Do the FS disclosures help in identifying mistakes, misinterpretations, or fraud; we again used the chi-square test. The results of this test showed that FS disclosures have / not have effect; namely the effect of FS disclosures in detecting the errors that could contain the financial statements had an impact because p = 0.003 (i.e. less than 0.05); while the FS disclosures had no impact on the misinterpretation since p resulted in a value of 0.15 (i.e. greater than 0.05 and the influence of FS disclosures in detecting fraud that may contain the financial statements was dependent on p = 0.008 less than 0.05 (see tables No. 3,4,5, Annex II)

And the last research question was related to evidence of significance that has FS disclosures. From the analysis of the answers it turns out that the majority of respondents think that FS disclosures are very important to give a true and fair view (98%), and they are also important to identify the NAS application (83.2%) and 79.2% think that they are important also to detect possible anomalies and errors. While a small percentage of respondents, about 39.6% of them think that they have an impact on the detection of fraud. And their impact on decision-making processes is perceived as important since 63.4% of them are positively expressed (see Chart no 4).

Chart no.4 "The importance of disclosures"
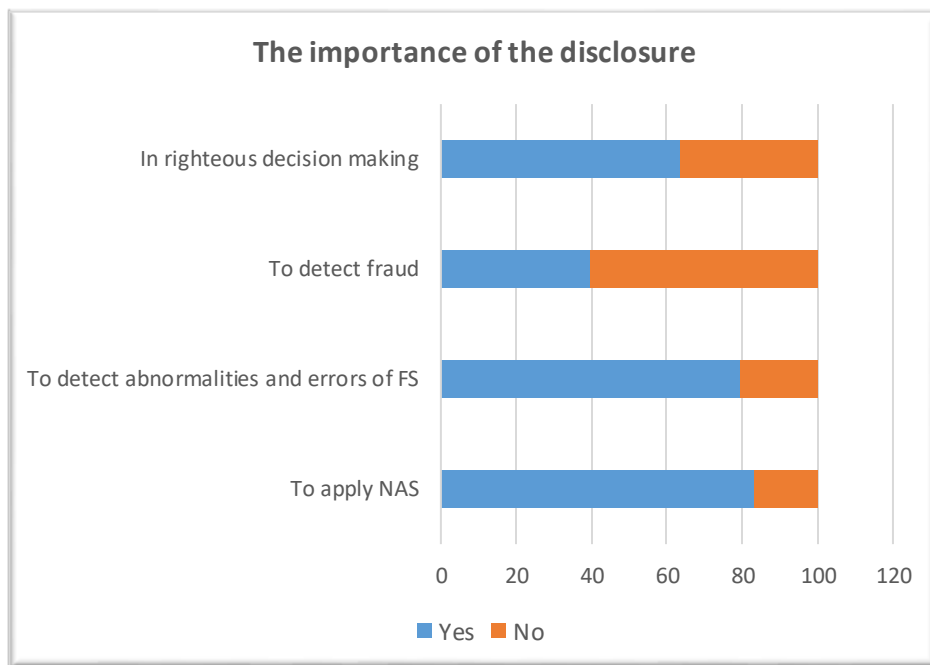
Source: Authors from data analysis

At the end of the data analysis, we conclude that the FS disclosures are prepared by most of the financial statements preparers, which apply the entire set of financial statements according to NAS. But the information provided in this statement is "vaguely" as it cannot be considered normal a volume of explanatory notes of a minimum 0 up to 1 page when the entity's size grows from micro to large entities. While the data analysis found that these FS disclosures had an impact not only in the preparation of the financial statements in the coming periods, but also in the discovery of errors and misinterpretations contained the financial statements and did not affect the frauds that of the information provided in the FS. So knowing that the preparation of the disclosures depended on the preparation we can say with full conviction that a great deal of care should be given to its preparation, as this statement resulted to be of great importance in relation to the implementation of the NAS, to detect errors, fraud and especially in the decision-making process, which evidences the importance of this statement in the importance of presenting a true and fair view of an entity.

Conclusions and Recommendations

At the end of this paper we can say that FS Disclosures has a very important role in financial reporting. They are a key to earning the public's trust and confidence, fighting corruption and encouraging good governance. Actually more and more attention is paid to the financial statements disclosure. Currently, international work is being done to prepare a general framework for FS Disclosures, to provide the fundamental principles for their preparation. Even G20 and IFAC have given more importance to the transparency of information on FS for fighting corruption and making better decisions.
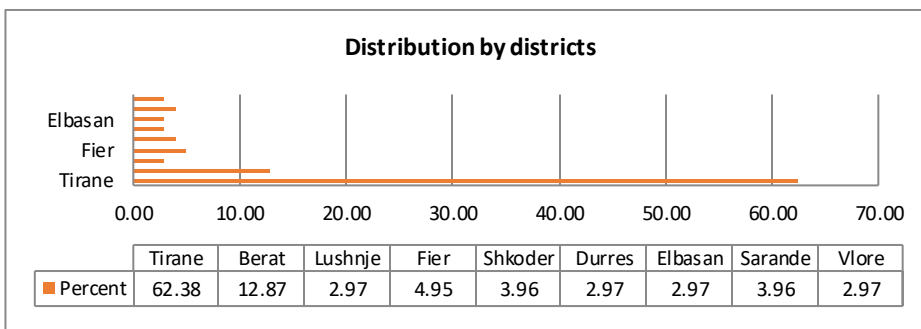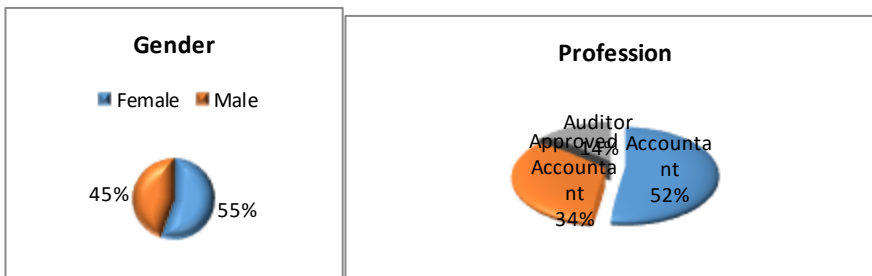
In Albania, there is a legal framework for FS Disclosure preparation. The main part of the FS prepares is to prepare the Disclosures but their volume and the importance in their preparation according to the law. The role of FS Disclosures is very important in finding abnormalities, frauds, but also in the decision-making process. And so we recommend that all actors cooperate with each other for the preparation of this statement with the aim not only of increasing transparency, but above all for the correct application of the general framework for the preparation of the financial statements.

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ANEX I-General characteristics

	Tirane	Berat	Lushnje	Fier	Shkoder	Durres	Elbasan	Sarande	Vlore
■ Percent	62.38	12.87	2.97	4.95	3.96	2.97	2.97	3.96	2.97

Anex II-Data analyses

Table no 1 "Is the prepration of FS Disclosure affected by the accountant professional"

		$Profesioni
Shsh	Chi-square	38.109
	df	3
	Sig.	.001*,b

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Table no 2   Chi-Square Tests—" The use of previouse FS disclosure on the FS preparatio "
Crosstabulation

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	23.544a	1	.000		
Continuity Correctionb	21.178	1	.000		
Likelihood Ratio	27.143	1	.000		
Fisher's Exact Test				.001	.000
Linear-by-Linear Association	23.311	1	.000		
N of Valid Cases	101				

Table no 3   Chi-Square Tests- found of mistakes * II2c Crosstabulation

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	9.923a	1	.002		
Continuity Correctionb	8.138	1	.004		
Likelihood Ratio	10.413	1	.001		
Fisher's Exact Test				.003	.002
Linear-by-Linear Association	9.712	1	.002		
N of Valid Cases	47				

Table no 4   Chi-Square Tests- misinterpretation * II2c Crosstabulation

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	6.520a	1	.011		
Continuity Correctionb	5.036	1	.025		
Likelihood Ratio	6.552	1	.010		
Fisher's Exact Test				.015	.012
Linear-by-Linear Association	6.381	1	.012		
N of Valid Cases	47				

Table no 5   Chi-Square Tests- fraud * II2c Crosstabulation

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	8.246a	1	.004		
Continuity Correctionb	5.710	1	.017		
Likelihood Ratio	9.955	1	.002		
Fisher's Exact Test				.008	.008
Linear-by-Linear Association	8.070	1	.004		
N of Valid Cases	47				

The Role of Competitive Cities as a Response to Regional Challenges in Latin America

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Abstract

In the article, a phenomenon of urbanization of Latin America was analysed in terms of its impact on the level of competitiveness of the cities. A role that cities play in Latin America's economy was emphasized. The author has examined a number of reliable reports on competitiveness of the cities and on this basis formulated its assessment of the level of competitiveness on a global basis, including identifying strengths and weaknesses of the cities, key areas for strong economic development and proposes recommendations. Based on the analysis of available data and source reports, the main trends in urbanization have been identified that may affect the dynamics of the Latin American city's competitiveness.

Keywords: competitiveness, urbanization, economic development, Latin America

JEL Codes: O54, R11, R58

Introduction

Latin America is the most urbanized developing region in the world. Since 1950, Latin America urbanized at an exceptional rate, raising its urban population as per cent of total from 50 per cent to 82 per cent now. This figure is expected to grow to 86 per cent by 2050. Brazil and the southern cone may reach that level by 2020. In 2015, as much as 13% of world's urban population lived in Latin America. São Paulo, Mexico City, Lima or Bogota are examples of the largest cities in the world, with an ever increasing number of inhabitants. Over the past two decades, the region's urban population and economic growth has been increasingly taking place also in intermediate-sized cities, which are expanding exponentially.

The growing level of urbanization transfers into greater competitiveness opportunities, but also creates new difficulties. To sustain their growth, the region's cities need to address challenges not only to their economic performance but also to the quality of life of their citizens, sustainable resource use, and the strength of their finances and governance. In the article, a phenomenon of urbanization of Latin America will be analysed in terms of its impact on the level of competitiveness of the cities. A role that cities play in Latin America's economy will be emphasized. The special focus will be put on the Emerging and Sustainable Cities Program (ESC), non-reimbursable technical assistance program providing direct support to national and subnational governments in the development and execution of city Action Plans, enhanced by the Inter-American Development Bank (IDB). Some guidance on the future development of cities will be revealed.

The terms "competitive cities" and "city competitiveness" have become commonly used by researchers, journalists, political leaders, economic development practitioners, and others. The definitions vary, but some common issues can be found. According to McKinsey Global Institute [MGI, 2013] city competitiveness can be defined as the set of factors – policies, institutions, strategies and processes – that determines the level of sustainable productivity of a city, where sustainability encompasses economic, environmental and social issues. For the purposes of this article "a competitive city" is understood as one that successfully facilitates its business and industries to create jobs, raise productivity, and increase the incomes of citizens over time. Competitiveness can be achieved by investing in institutions and infrastructure, training citizens and promoting innovation, with adequate financing and private sector support. Worldwide, improving the competitiveness of

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cities is a pathway to eliminating extreme poverty and to promoting shared prosperity. Competitive cities are hubs for growth and innovation. Thus, competitive cities are drivers of economic development [World Bank, 2006, OECD, 2006, 2014].

Literature review

In reviewing literature published by the World Economic Forum, OECD, McKinsey Global Institute, Brookings, the World Bank, and other, several patterns can be noted. Most literature considers four major categories of policy levers as being integral to city competitiveness [Brookings Institution Metropolitan Policy Program 2007, 2011, 2012, 2013; Centre for Cities 2013, 2014a, 2014b, 2015; Cities Alliance 2006; McKinsey Global Institute 2012, 2013; OECD 2006, 2013, 2014; WEF 2014; World Bank 2006]:

- Institutions and regulations – the importance of a taxation and regulatory system, a transparent and efficient public administration, and the use of special measures to address environmental degradation, social cohesion, and traffic management.

- Infrastructure and land – at lower income levels, institutions, regulations, and basic infrastructure tend to be crucial drivers of competitiveness, while at higher income levels, human capital, advanced infrastructure, and innovation systems become crucial for sustained economic growth and job creation;

- Enterprise support and finance – regular dialogue with businesses, means to attract investors, public-private partnerships, training and mentorship networks for small and medium enterprises (SMEs), and seed capital.

- Skills and innovation – strong educational institutions, the alignment of training/educational curricula with the needs of local business and industry, and arts and culture to attract international talents and investment.

However, it seems to be difficult to achieve consensus on how to compose, use and evaluate those policies and investments, how to balance scarce resources, how to regulate the processes for making decisions, the choice of partners/main actors, the techniques/policies for implementation etc. Some reports (OECD, World Bank, Cities Alliance, Brookings) tend to emphasize a collaborative approach between various actors in a city and with government. Other reports (WEF, McKinsey Global Institute) stress the need for city leaders to envision and push a development agenda from the front. In some approaches [OECD, Cities Alliance, World Bank] economic development as a long-term strategic effort, requiring reliable financing, timelines for implementation, ownership of the process from stakeholders, and a collaborative approach is underlined.

In 2015 the World Bank published a study encompassing 750 cities around the world investigated in the period 2005-2012 [Kilroy, Mukim, Negri, 2015]. The authors analyse the conditions necessary for making a city competitive. The conclusion arrives that there is no single recipe for becoming a competitive city, but still some common patterns can be identified and some suggestions can be formulated. According to the World Bank [2006, 2015], McKinsey Global Institute [2012, 2013], OECD [2014], competitive cities require:

- economic development set as a priority by city governments;

- successful cooperation of public and private entities willing to resolve city's problems;

- successful cooperation with cities or tiers of government to resolve problems exceeding the possibilities of solving a single city.

In each case, the focus on economic structure, policy levers and growth coalitions is crucial [Dijkstra, Poelman 2014; Kilroy, Mukim, Negri, 2015].

Sustained long-term economic success in most case-study cities has been observed: the growth of existing firms, the attraction of outside investors, and the creation of new businesses. Successful cities do not just rely on attracting outside investment to spur economic growth. They balance business recruitment with assisting the growth of existing firms – which typically account for the largest share of new jobs in most economies – as well as with helping the formation of new businesses. Competitive cities focused these policy levers on economywide interventions as well as on specific industrial sectors.

Cities at all levels of income and with different industrial structures and political regimes have found ways to increase jobs, raise incomes, and strengthen productivity, thus benefiting their citizens. Their path depends on their starting point, size, endowments, economic vocation, economic structure, and administrative remit. Cities can improve their performance by

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using a custom process for designing and implementing a strategy and by using tools that are already available. These tools include strategic analysis of the local economy and external market trends and opportunities, public-private dialogue, and techniques for harnessing the political economy during implementation. The competitive cities among 750 examined by World Bank explicitly or implicitly used some of these tools to make informed decisions according to their specific needs [Kilroy, Mukim, Negri 2015]. It can also be argued that advances in globalisation, information and technology revolution, and farreaching structural change is altering the terms of competition between cities [Krugman 1996; Jensen-Butler 1997; Begg 1999; World bank, 2006; Storper, 2013; Roberts, Blankespoor, Deuskar, Stewart, 2017].

2. Latin America's urbanization trends

Latin America is most urbanized developing region, with over 80 percent of its population living in cities[1], which is far ahead from the world's average of 66%. Urbanization in most countries of the region began to increase in the second half of the 20th century. Urbanization in Latin America began earlier than in other regions and managed to develop at a considerable faster rate. Since 1950 Latin America experienced 93% growth of urbanization rate which did not happen in any other region on this scale. The countries whose urbanization levels have grown most are Colombia and Brazil, with an average annual growth of nearly 1.3% between 1950 and 2015.

The ongoing shift from country to town has contributed much to Latin America's growth, primarily due to economies of scale raising the productivity of expanding cities and reducing the cost of delivering their basic services. As several reports indicate, cities are crucial to Latin America's overall economy. About 260 million people live in the region's 198 large cities – defined as having populations of 200,000 or more. Large cities together generate more than 60 percent of region's GDP (which is more than 1.5 times the contribution expected from large cities in Western Europe). The 10 largest Latin American cities alone contribute to half of that output. Such a concentration of urban economic activity in the largest cities makes Latin America comparable to the United States and Western Europe in this respect but not to many other emerging regions.[2]

Fig. 1. Share of urban population by regions, as % of total population (1950, 2015, and 2050)
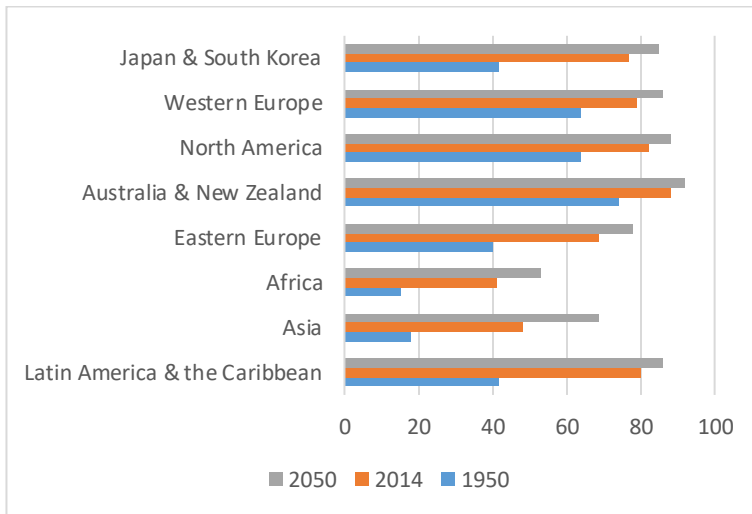
Source: Based on the data of BBVA Research [2017].

The Latin American cities are steadily expanding. This trend creates complexity of problems with urban planning, sustainable development and effective city management. Inequality, violence and organised crime are the main problems in urban areas [Glaeser, Joshi-Ghani, 2014; Ferreyra, Roberts, 2018]. Insecurity is the prime concern for most people in Latin America, ahead of jobs. The poor are the first to suffer from the widespread violence, and their improvised homes are the most exposed to extreme weather events and natural disasters. Latin American cities are the most unequal and often

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[1] In comparison, the EU is 74% urbanized, while China and the whole East Asia and Pacific 50% [BBVA Research, 2017].

[2] China's top ten cities, for instance, contribute around 20 percent of the nation's GDP [WEF, 2014].

most dangerous places in the world, with social divisions generating strong geographical segregation between its residential districts and favelas hardwired into the urban mozaique [Parangua 2012].

Fig. 2. Share of urban population in big cities (as % of total urban population, 2015)
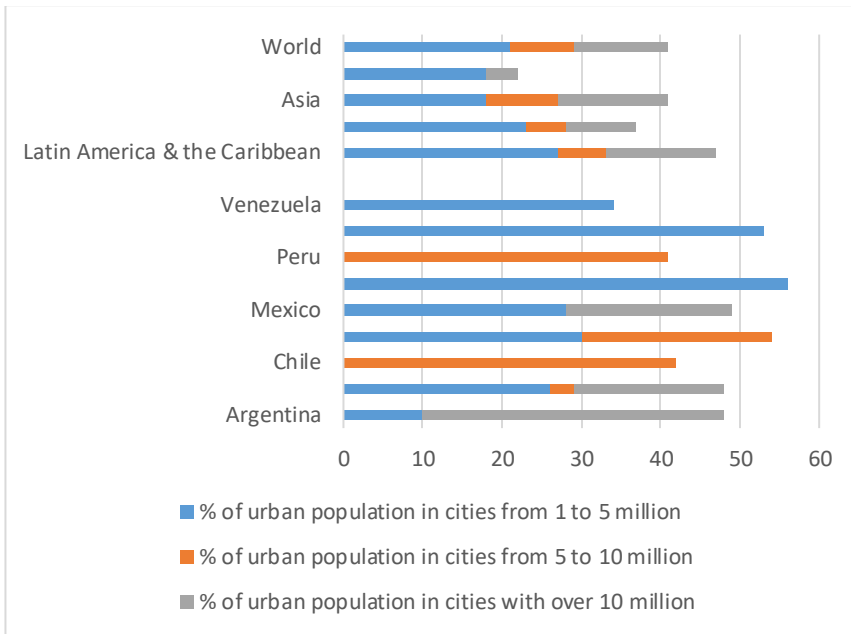
Source: Based on the data of BBVA Research [2017].

Fig. 2. Number of big cities in Latin America (2014)[1]
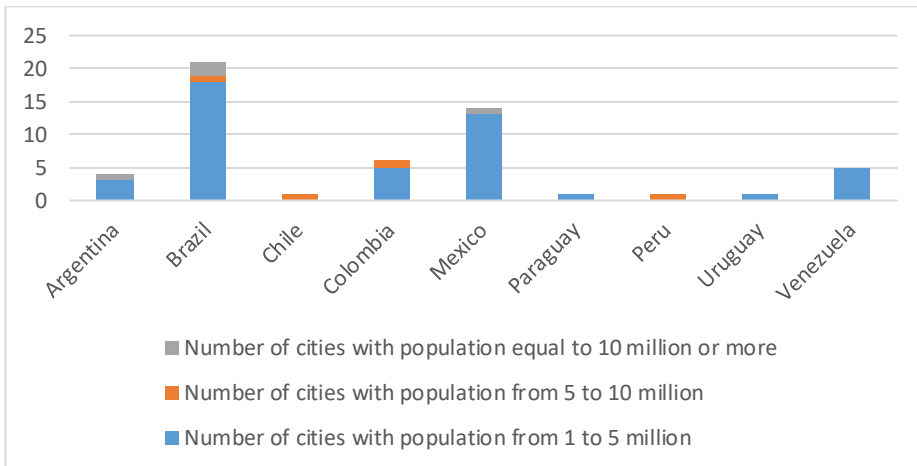
Source: Based on the data of BBVA Research [2017].

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[1] The number of cities with population of at least 1 million is equal to 105 in China, 58 in India, 13 in the Russian Federation, 11 in Indonesia, 8 in Turkey, 6 in South Africa and 1 in Poland.

Despite efforts in the past 20 years to redistribute resources and evident success of social programmes, 122 million city residents in Latin America still live in poverty, mostly in shanty towns and contributing to informal economy [Gocłowska-Bolek, 2015]. Improving such dwellings and their surroundings has contributed to their stability, all the more necessary given the housing shortage. But the challenge is not to move the slum population to the outskirts of cities, because it would take them away from their work and modern amenities, but try to include them effectively into the city fiber [BBVA Research, 2017].

3. The key role of cities in Latin America

According to McKinsey Global Institute estimation, Latin America's 198 large cities are expected to generate 65 percent of the region's growth over the next 15 years [Kilroy, Mukim, Negri, 2015], which is equivalent to about 6 percent of expected global GDP growth, as well as more than 1.5 times the contribution expected from Western Europe's large cities and similar to the level anticipated from India's.

Latin America's top ten cities are considered most critical for the economy due to its size and contribution to countries' GDP [Gollin, Jedwab, Vollrath, 2016; Kilroy, Mukim, Negri, 2015]. However, in many of them the rate of economic growth has declined since the era of rapid urbanization. Since 1970., growth rates in Brazil's São Paulo and Rio de Janeiro have dropped from above the national average to below it. Mexico City's metropolitan region, for instance, has posted a slower pace of growth than the average of Mexico's 45 middleweight cities. Other leading cities in the region have also recently grown more slowly than the "middleweight" cities, which we define as those with populations of 200,000 to 10 million.

Tab.1. Latin America's biggest cities (2015).

Rank	City	Country	Population	City's GDP per capita
1.	Mexico City	Mexico	22,976,700	16,239
2.	Sao Paulo	Brazil	20,847,500	25,651
3.	Buenos Aires	Argentina	15,481,800	35,906
4.	Rio de Janeiro	Brazil	12,460,200	23,176
5.	Lima	Peru	10,674,116	15,531
6.	Bogota	Colombia	9,135,800	21,497
7.	Santiago	Chile	7,164,400	28,929
8.	Belo Horizonte	Brazil	5,595,800	20,134
9.	Guadalajara	Mexico	4,687,700	14,206
10.	Caracas	Venezuela	3,260,200	15,891

Source: World Atlas [2017].

Many of the region's top ten have started to run up against capacity constraints as urban management struggles to keep pace with the demands of expanding metropolitan regions that have swallowed up smaller towns that neighbor them but are outside their jurisdiction. Planning and policy have often been uncoordinated and funding hasn't been sufficient to meet growing needs. Many cities have outgrown the capacity of their infrastructure, the design of their transportation systems, and their ability to deliver adequate public services, making it difficult to get things done efficiently and effectively.

As a result, cities are not generating enough high-productivity jobs to employ an expanding labor force and have thus raised informal economic activity to damagingly high levels. Unless the very largest cities significantly increase their productivity and the number of jobs they generate in the formal economy, as well as boost the efficiency of their operations and management, MGI expects their growth rates to remain below the average for the region's large cities [Kilroy, Mukim, Negri, 2015]. That could drag down Latin America's overall rate of growth.

4. Latin American cities in global rankings of competitiveness

There are several global rankings that compare cities in the world, taking into account different categories, one of which is competitiveness, and the methodology constantly raises some discussions. Most often, the largest cities in the world are compared, among them also Latin American cities find their place, although not in the leading positions.

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In the A.T. Kearney Global Cities Report [2018], the most competitive cities are: New York, London, Paris, Tokyo and Hong Kong. The authors of the report tend to consider 27 aspects grouped into five major areas: business, human capital, information exchange, cultural experience and political participation.

The study, published annually for a decade, collects information from 135 cities to assess their competitiveness, influence and potential. In Latin America, the research included the study of the following cities: Belo Horizonte, Bogota, Buenos Aires, Caracas, Guadalajara, Lima, Mexico City, Monterrey, Porto Alegre, Puebla, Recife, Rio de Janeiro, Salvador, Santiago, São Paulo [A.T. Kearney Global Cities Report, 2018].

Tab. 2. Latin America most competitive cities (2017)

Rank	City	Country	Position in the global ranking
1.	Buenos Aires	Argentina	25
2.	São Paulo	Brazil	31
3.	Mexico City	Mexico	38
4.	Bogota	Colombia	55
5.	Rio de Janeiro	Brazil	56

Source: A.T. Kearney Global City Report [2018].

In other key study, conducted by the Economic Intelligence Unit of the British weekly "The Economist" and commissioned by the multinational bank Citigroup, Buenos Aires again is outstanding as the most competitive city in Latin America in terms of its capacity to attract investments, businesses, talented professionals and even tourists. The study considered 120 large cities around the world and Buenos Aires ranked 60th in the general ranking, right in the middle of the list. Although the score was far from the most competitive cities in the world, still it was at the top of the region, with better grades than São Paulo, Santiago de Chile, Mexico City, Rio de Janeiro, Panama, Lima, Bogota, Monterrey, Medellín, Guadalajara and Porto Alegre, which were the other Latin American cities studied. There were eight categories that were examined in each city for the study: economic power, physical capital, financial maturity, institutional effectiveness, social profile and culture, human capital, environment and natural hazards and global appeal.

The interesting thing in the case of Buenos Aires is that the best grades were obtained in the non-strictly economic categories. The Argentine capital's strongest areas are: global attractiveness (position 27th of the ranking), human capital (the 43rd) and social and cultural profile (the 57th) [Citibank/The Economist, 2018]. Today, Buenos Aires has a plan in place to build a *ciudad moderna* (modern city). This plan addresses top-of-mind concerns like economic growth, government transparency, quality of life, mobility and the environment. In fact, a 2014 survey by the Inter-American Development Bank shows that residents of Buenos Aires rate safety, inequality, transportation, transparency and health as their top concerns.

The general context, which is also followed by the example of Buenos Aires, shows Latin America lagging behind the regions that concentrate economic power and development. Thus, the cities of the United States and Europe (with New York and London ranked the highest) appear at the top of the ranking, despite the growing concern about their large national fiscal deficits, slow growth and aging population and infrastructure. Many Asian cities, such as Singapore and Tokyo, also appear with dominant positions, reflecting the economic growth of an entire continent.

In the *Hot Spots 2025: Benchmarking the future competitiveness of cities* [The Economist/Citigroup, 2018], another report prepared annually by Citigroup and The Economist, there are several Latin American cities listed, with São Paulo ranked the highest (36th) among the world's most competitive cities today which are likely to retain their advantage until 2025.

In Latin America, major Brazilian cities – São Paulo (36th), Rio de Janeiro (76th) and Porto Alegre (97th) – are expected to improve their competitiveness significantly by 2025. All three cities are among the top 15 risers in the overall index rankings. São Paulo (36th), the Index's most improved, is also the most competitive city among the BRICS countries, while there is no Chinese city among the top 25 most improved cities. This may reflect the progress that Chinese cities have already made on the one hand and the fact that many cities in Brazil still have a bit of catching up to do before they can match the competitiveness of their Chinese rivals, on the other [The Economist/Citigroup, 2018].

5. Intermediate-sized competitive cities in Latin America

Over the past two decades, the region's urban population and economic growth has been increasingly taking place also in, which are expanding exponentially. In 2015, as much as 13% of world's urban population lived in Latin America. The

growing level of urbanization transfers into greater competitiveness opportunities, but also create new challenges. There are some Latin American cities listed below, recognized worldwide as competitive, growing and prosperous. To sustain their growth, the cities need to address challenges not only of their economic performance but also of the quality of life of their citizens, sustainable resource use, the strength of their finances and governance, as well as to overcome natural, security and economic threats due to its entrepreneurial culture, work ethics, and business and political leadership. Strong economic capabilities have been built over decades through effective cooperation between public and private institutions and the results are encouraging, however much remains to be done in the field [UN, 2012; WEF, 2014; Kilroy, Mukim, Negri, 2015].

Among the cities that best develop their potential using their advantages in relation to their rivals, and which can serve as an example of the best-used assets, the following should be mentioned: Bucaramanga (Colombia), Medellin (Colombia), Guadalajara (Mexico), Monterrey (Mexico), Curitiba (Brazil), Santiago (Chile) or Buenos Aires (Argentina).

Main trends in competitiveness of Latin American cities

After a sharp growth, urbanization in Latin America exhibits signs of moderation. Over the next decades it will expand below the world average. Urbanization is positively correlated with income per capita, as well as with capital, labor and productivity (TFP) measures. However, in spite of displaying high urbanization rates, Latin American countries show relatively low levels of income, capital, labor and productivity [Storper, 2013; Roberts, Blankespoor, Deuskar, Stewart, 2017].

In spite of the positive trends observed on its development and growth [OECD, 2014; Center for Cities 2014b, 2015], urbanization continues to be concentrated in a very limited number of cities. Only Mexico and Brazil have more than a dozen cities with over a million inhabitants, while countries such as Uruguay and Paraguay don't have more than two cities with a population of more than one million residents. There is a certain relationship between urbanization and per capita income, along with the indicators of capital, employment and productivity. In spite of the high rates of urbanization, the countries of Latin America have relatively low levels of income, capital, employment and productivity. For that reason, the predictions of a much smaller expansion than was seen in recent decades, represent a challenge to growth in the region [Kilroy, Mukim, Negri, 2015]. The quality of the infrastructure is not at a high level in the countries of the region, with Chile, Mexico and Uruguay being the least affected in this aspect [OECD, 2014; Center for Cities, 2015].

Productivity rises inasmuch as urbanization grows. According to MGI Reports (2013) the countries with a higher degree of urbanization, such as Chile and Argentina (where it comes close to 90%) productivity is much higher than in nations in the developmental phase, such as Paraguay, where it barely reaches 60%. Still, productivity of Latin American cities lags that of Western European or North American ones. Closing this gap provides Latin America with the opportunity to raise living standards and join the ranks of the world's richest countries [Ferreyra, Roberts, 2018].

Given the prominence of cities in Latin America's economy, fulfilling their economic potential is a key to sustaining growth in the region as a whole, according to new research by the McKinsey Global Institute [MGI, 2013]. Yet Latin America has already won a large share of the easy gains from expanding urban populations. Many of the largest cities are grappling with traffic gridlock, housing shortages, and pollution. To sustain growth, these cities must address challenges not only to their economic performance but also to their citizens' quality of life, to environmental sustainability, and to the strength of their finances and governance [Maloney, Valencia Caicedo, 2017; Roberts, Blankespoor, Deuskar, Stewart, 2017].

The relative youth of Latin America's population makes transforming the region's urban economies even more urgent. In marked contrast to Japan and Western Europe – as well as to some developing regions, including China and Eastern Europe – Latin America's working-age population is projected to expand steadily until it peaks, in the 2040s, at around 470 million potential workers. That will be 30 percent more than the region had in 2007 and a net increase of 85 million, equivalent to three-quarters of today's labor force in the United States or Western Europe [Kilroy, Mukim, Negri, 2015].

This expansion offers Latin America a significant demographic dividend if its economies can grow sufficiently to generate enough high-productivity jobs for a large, young workforce—much of it in urban settings. Employed productively in a dynamic, job-creating economy, young workers could create the wealth on which future investment and sustained growth depend. But a failure to create attractive opportunities in the formal sector would mean that informal or even illegal activity might become more likely for young people seeking to provide for themselves and their families.

By the second half of this century, Latin America's demographic profile will look more like Europe's, with the proportion of the population that's economically active not only shrinking but also having to provide for the growing proportion of older people. Unless Latin America's policy makers, businesses, and civil societies take steps to reform and develop their cities

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and create more productive jobs in the formal economy, the region runs the risk of growing old before it grows rich [Arsht 2014; Kilroy, Mukim, Negri 2015].

There are several programs providing assistance to the cities authorities introduced. One of the most important is the Emerging and Sustainable Cities Program (ESC) – the IDB's non-reimbursable technical assistance program providing direct support to national and subnational governments in the development and execution of city Action Plans. The ESC employs a multidisciplinary approach to identify, organize and prioritize urban interventions to tackle the main roadblocks that prevent the sustainable growth of emerging cities in Latin America and the Caribbean. This transversal approach is based on three pillars: 1. environmental and climate change sustainability, 2. urban sustainability, and 3. fiscal sustainability and governance [www2].

Stage one of the ESC begins by executing a rapid diagnostic tool to identify the sustainability challenges of a city. Afterwards, topics (i.e. water, air quality, transparency, etc.) are prioritized through the use multiple filters – environmental, economic, public opinion and sector specialist expertise – to identify issues that pose the greatest challenges in a city's pathway towards sustainability. Finally, an Action Plan is formulated, containing prioritized interventions and a set of strategies for their execution across the short-, medium- and long-term [www2].

In stage two, the execution phase begins with the preparation of pre-investment studies for prioritized interventions and the implementation of a citizen monitoring system. There are already some results of the program announced (1. Master Plan: Public Space of the Historic Center of Cumaná – Venezuela, 2. Recuperación Integral del Centro Histórico de Santa Ana – El Salvador; 3. Managing Systems of Secondary Cities; 3. Quetzaltenango: Diagnosis of Competitiveness and Economic Development), another are ongoing [www3].

Conclusions

Latin America, as the global leader in urbanization, deserves special attention in how to capture the economic and social potential of the growth of cities to turn this phenomenon into competitiveness. Creative innovative policies that foster equitable economic growth, sound urban governance, long-term housing and public space management, efficient urban services are needed.

As several studies already referred to indicate, improving the competitiveness of cities is an important factor to eradicate poverty and increase shared prosperity. Latin America's political and business leaders must act decisively on two fronts to improve the performance of the region's cities and turn its demographic profile to advantage: reforming and upgrading the largest cities, on the one hand, and helping a broader group of high-performing middleweight ones to emerge, on the other. While national policies – including regulation – significantly influence how cities are run, local policy choices are also very important to their economic performance. To underpin a stable environment conducive to strong economic development, city policy makers should consider prioritizing following issues [Storper 2013; Kilroy, Mukim, Negri, 2015; www4]:

Economic performance (transparent land ownership and zoning regulation; reliable urban infrastructure, intercity transportation networks);

Social conditions (public safety; accessible housing; efficient public transportation; high-quality education; public–private partnerships to improve access to public services);

Sustainable resource use (improve energy productivity; building regulations; green standards for urban demand; improve urban distribution; make waste management profitable);

Sound urban governance (long-term planning and coordination; sustainable, responsible fiscal management).

In the same time, urbanization in Latin America is to expand less than the world's average in the future, which represents a big challenge in terms of growth in the future. Urbanization levels vary significantly within each country in the region. Several studies indicate that countries with higher urbanization levels exhibit greater levels of capital and better infrastructure. Urbanization is positively correlated with income per capita, as well as with capital, labor and productivity (TFP) measures. Anyhow, in spite of displaying high urbanization rates, all Latin America countries underperform, especially in the category of human capital levels. Productivity is larger in more urban countries, but comparatively small in Latin America [BBVA Research, 2017; www4].

Reassessing the role of cities in overall development of Latin America, these trends have to be recognised and addressed to properly. Prospects of slighter expansion of urbanization ahead represent a challenge in terms of growth for the region

and requires more effective approach to governance, management, and cooperation issues to assure higher competitiveness of the cities [BBVA Research 2017; WEF 2014].

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Bitcoin and Blockchain: A Threat or Opportunity for the Financial System

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Abstract

As world economy evolved over years, barter which is a primitive transaction system left its place to money system. Commodity and bimetallic systems of money resolved the problems, especially the requirement of double coincidence of wants and eased the trade within parties. Chronologically, paper system of money followed the commodity system and implemented via two methods. In the first method, convertible paper money is converted into gold and silver by the authority that issued paper money. In the second method that is still valid today, fiat money is accepted by parties because of its being a legal tender. Money supply definitions keep changing as new liquid assets emerge day by day. Especially after the post global financial crisis, central banks have a more critical function for the world economies. Keeping all these developments aside, surrounded by fintech trends, financial system has confronted with a new instrument bitcoin that is first introduced in 2009. Though there are still too many consideration about this new financial instrument, number of bitcoins has growing since 2009 and has reached almost 17 million as of September 2018. Some economists consider bitcoin and other cryptocurrencies as a threat especially for central banks' emission power. In this study we try to shed light to bitcoin, other cryptocurrencies and blockchain technology with regard to their evolvement and whether they pose a threat or provide an opportunity to the financial system.

Keywords: Bitcoin, cryptocurrency, blockchain, central banks, regulation, financial system

1. Introduction

Money is an asset that is generally accepted as payment, for goods and services or repayment of debt (Cecchetti and Schoenholtz, 2011). Though definition of money supply keeps changing, as new liquid assets emerge day by day, money preserves its place at the core of the payment system. In the evolution of the payment system, commodity moneys takes the first place. Commodity moneys are things with intrinsic value. From ancient times until several hundred years ago, they functioned as medium of exchange. Second period has launched with paper currency that is also convertible into coins and precious metals. Over years, it evolved into today's fiat money. Decreed by government as a legal tender, fiat money lost its feature of convertibility into precious metals. To overcome problems special to money, such as the risk of theft and transferring fees of huge amounts, a new step was taken towards modern banking instruments like checks, electronic payment and, e-money. First form of e-money was the debit card. A more advanced e-money is the stored-value card. A more sophisticated version is called a smart card. Another form of e-money is referred to as e-cash that is used in internet transactions. Though all these progress bring the idea of a cashless society, it seems the world is far from this alternative, at least for the near future. But another question arises as what will be the money of future? (Mishkin, 2016).

Following global financial turmoil of 2008, central banks of especially emerged economies have taken a leading role in terms of finding a panacea to the sub-prime mortgage backed problems. They have pursued several unconventional monetary policies such as quantitative easing, forward guidance, and negative interest rates in a rush to ease the unfavourable developments in global economic conjuncture. Under the scope of these effects, central banks of emerged economies have injected abundant liquidity to the financial markets in order to stimulate their economies (Atici, 2017). As a result of the monetary easing policies, balance sheet of the FED (Federal Reserve System) reached to $4.4 trillion as of

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the end of 2016 from the $1 trillion in 2007. For the same period, balance sheet of ECB (European Central Bank) increased to $3.5 trillion from $2.1 trillion and balance sheet of BOJ (Bank of Japan) reached to $4.1 trillion from $1 trillion. When People's Bank of China included to the picture, whose balance sheet increased to $5 trillion from $2.2 trillion, total balance sheet figure of the four biggest central banks rocketed from $5 trillion in 2007 to $17.3 trillion as of the end of 2016 which represents a dramatic increase of 246% (Yardeni, 2017). Besides their other functions, central banks have come to the fore with their authority on money or money supply.

Several years after its creation as a new type of e-money, Bitcoin has boosted questions that if it can take the place of money in future. To answer this question a good starting point is to ask whether Bitcoin can fit the three classical functions of money, namely the medium of exchange, unit of account and store of value. Further questions will follow like, what are the other cryptocurrencies? What is the function of blockchain? We should also ask if bitcoin would turn to be a threat against the authority or emission power of central banks or an opportunity for the financial system. This study tries to shed light to these questions by analyzing the evolvement of bitcoin, other cryptocurrencies, and blockchain and whether these instruments pose a threat or provide an opportunity to the financial system. Section 2 presents the historical background. Section 3 discusses Bitcoin, Blockchain and monetary system. Section 4 concludes the paper.

2. Historical Background

Bitcoin is a private and decentralized digital currency. It has first developed by a person or a group operating under the name Satoshi Nakamoto in 2008 and has become operational by the early 2009 (Nakamoto, 2008). Unlike traditional fiat currencies, Bitcoin is not backed by a government decree. There is no authority that is in charge of its supply. It is not indexed to any other currency but its value with respect to other currencies is determined by supply and demand. Since it is a digital currency, it can be broken into very small numerical values. Bitcoin is a network that consists of computers covering the entire system. As a section of data in a massive database, it is just like a computer file that is assigned to a certain owner's digital address. It operates using peer-to-peer networking that eliminates the intermediary so that the exchange can be realized directly between parties. Users have digital wallets so they can trade between each other. The owner of a bitcoin can swap its ownership by sending bitcoin to a different personal wallet so by this way possession of a bitcoin can change. System employs cryptography to maintain the anonymity of its users to secure the transactions and to control the creation of additional units of currency, namely the "cryptocurrency" (ElBahrawy et al. 2017). At the core of the bitcoin system there is block chain. Block chain records every transaction that have ever taken place in bitcoin. So we can call it as a public ledger that details the history of every bitcoin. Block chain is sustained by participating computers which verify transactions in chunks called "blocks" and relay them across the network (Paglierv, 2014). Validation process relies on data being encrypted using algorithmic hashing. Encrypted value is a series of numbers and letters that does not share similarity with the original data, and is called a hash. Cryptocurrency mining involves working with this hash. Proof-of-work is the system that Bitcoin's blockchain network uses to create and hash blocks together. When the computer in a network must use proof-of-work for mining, it needs to solve a complicated mathematical problem. If a computer which is also named as node successfully solves the problem, it must then be verified by the other nodes in the network. If it does, the transaction is verified and completed, and the miner whose node solved it, is rewarded with Bitcoins.

There are hundreds of cryptocurrencies with market values and the common feature of these different cryptocurrency systems is the blockchain. Although all cryptocurrencies share an underlying blockchain technology and reward mechanism, they stand on isolated transaction networks. The majority of cryptocurrencies are almost the clones of bitcoin and referred to as 'altcoins'. On the other side, there are a number of cryptocurrencies that share common features of bitcoin but also have innovative features that provide substantial differences (Hileman & Rauchs, 2017).

Though year 2008 has taken as the milestone of Bitcoin, we can trace the roots of it in the Austrian theory of the business cycle. Ludwig von Mises revealed the hints to the problem of business cycles in his monument, Theory of Money and Credit (1933). He developed the cycle theory in 1920s and published his book Monetary Theory and the Trade Cycle (1933) and Prices and Production (1931) by the contribution of Friedrich von Hayek. This theory has become known as the "Austrian" theory of the business cycle.

According to the "Austrian" theory, without an expansion in bank credit, supply and demand tend to reach an equilibrium in a free price system. However, when government leads to a credit expansion through central bank, this increases the cash reserves of commercial banks which in turn increases bank credit supply and an increased supply of money or inflation. Another effect of an expansion in bank credit is the excessively funnelled new funds to real sector which leads to decreased interest rates that are artificially positioned below the level of free market rates. When interest rates fall artificially, investors prefer to invest more in capital goods since the previously unprofitable projects seem profitable by the lowered interest

rates. The credit flow boosts economic activities on one side but gives way to increasing costs of factors of production, on the other. If investments made do not match with consumer preferences than the gap between these two leads to a slow down and even a depression. The result reveals the fact that inadequate savings are not enough to buy the excessively produced capital goods. So firms re-adapt their production to match consumer's intertemporal preferences (Rothbard, 2009).

Friedrich Hayek, in "Denationalisation of Money" (1974) refers to the abolition of central banks. He figures that abolition of the government monopoly of the issuing money covers also the disappearance of central banks. He suggests private banks can issue non-interest bearing certificates or notes, with a district registered names. By this way, currencies that can provide a stable purchasing power would eliminate other less stable currencies from the market. These ideas describe a private currency created by private enterprises to end the monopoly power of central banks in the issuance of money (ECB, 2012).

We can trace roots of Bitcoin in the ideas of tech enthusiasts, as well. Chaum (1998), introduced a new kind of cryptography which enables an automated payment system that third parties could not see details on the payment made by the individual. Dwork and Naor (1992), suggested a moderately hard technique that would be computed by a user to gain access to a resource by preventing unnecessary use of that resource. British cryptographer Back (2002) proposed a function similar to the one submitted by Dwork and Naor (1992). He used the iteration, hashcash. Hashcash was proposed as a mechanism to suppress systematic abuse of internet resources such as email, and anonymous remailers. Dai (1998), in his paper, proposed an alternative money creation subprotocol, in which, account keepers decide and agree on the amount of b-money to be created each period, with the cost of creating that money determined by an auction. In a most recent paper, Szabo (1998) developed a proposal similar to b-money which is named bit gold and suggested those bits could be created online with minimal dependence on third parties, and securely stored and transferred.

Some of the today's economists have basically two criticism concerning Bitcoin. First one is that, Bitcoin does not have any intrinsic value like gold and silver; it is just a bit stored in a computer. Another concern is, it becomes accepted not because of a government decree but because it has its roots in a commodity expressing a certain purchasing power (ECB, 2012). But besides these basic concerns there are some other concerns such as the regulatory environment which is an indispensable part of financial transactions, volatility of bitcoin's value, limitation of its supply, a possible bubble in its value and also environmental issues with regard to its mining.

3. Bitcoin, Blockchain and Monetary System

Milton Friedman, founder of monetarism, argued that central bank should increase the money supply by a constant percentage every year. Through the k-percent money supply rule, Friedman proposed to set the money supply growth at a rate equal to the growth of real gross domestic product each year. Almost twenty years ago, Friedman predicted and drew attention to the rise of cryptocurrencies, as well. He noted web as a major source for the emergence of a reliable electronic currency that can enable an anonymous online transaction between parties which can turn to be one of the major forces that will reduce the role of governments (www.ntu.org). While some views have suggested a connection between bitcoin's growth rate and the monetary growth rate adopted by Milton Friedman, the bitcoin protocol appears to give almost no attention to any optimal rate of monetary growth. The number of Bitcoins produced has reached 17 million as of November 2018 (news.bitcoin.com). According to the rule of the system, the number of bitcoins generated per block is set to decrease by 50 percent for every 210,000 blocks. As six blocks are found on average within an hour, this means almost every four years there will be halving to keep the inflation under control. By this declining growth rate, the final number of Bitcoins will be fixed at 21 million units by the year 2140. Though Bitcoin is intended to simulate the rarity of gold, whether the supply will be truly fixed has become a matter of disagreement (Yermack, 2013).

There are also concerns about the price of Bitcoin due to the high swings and volatility of it. As presented in Figure 1, high volatility is experienced in the price of Bitcoin especially in the last quarter of 2017 and first quarter of 2018. On the supply side, Bitcoin is overwhelmingly controlled by adopters and miners. On the demand side, scarcity have an important influence on the prices. Nonetheless, demand and supply determine the price. Other factors that lead to high volatility can be stated as investor (renowned investor) preferences, regulatory issues, speculation and manipulation.

Figure 1: Bitcoin Price
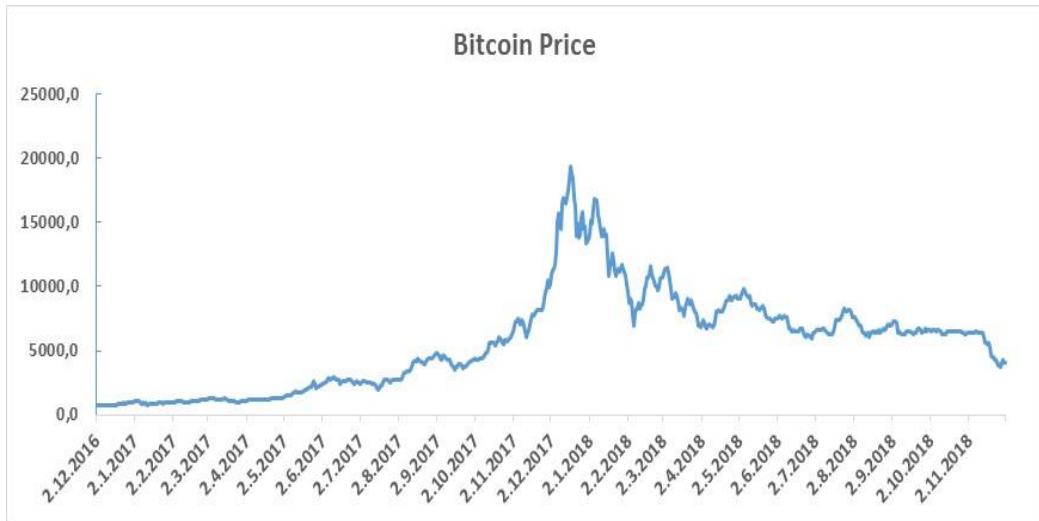
Source: data.bitcoinity.org

Another drawback of Bitcoin is whether it comprise a bubble or not. According to Roubini and Byrne (2018) "coin mania" consists a risk of a bubble. They compare Bitcoin with the railway stocks in the 1840s at the dawn of the industrial revolution. They argue that as the bubble burst in railway stocks, a similar case can be expected for bitcoin and other cryptocurrencies, as well. For a recent example it would be enough to recall dot-com bubble of NASDAQ in year 2000. Similarities among these cases can be a signal of a possible burst in Bitcoin.

Despite the concerns mentioned above, if we turn back to the question of whether Bitcoin satisfies the three functions of money, it can be stated that Bitcoin satisfies being a medium of exchange. Transaction fees which are lower than the traditional payment vehicles and anonymous characteristic that is necessary for the parties that need privacy, makes it attractive for conducting transactions. However, volatility of Bitcoin makes it unfavourable in terms of unit of account and store of value functions. Since it is volatile, no one quotes its price in terms of Bitcoin. The volatility in its value makes Bitcoin unsuccessful as a store of value, as well. (Mishkin, 2016).

Transparency is the most important feature in the financial system. Stiglitz (www.independent.co.uk) highlights this fact and criticizes Bitcoin with regard to the anonymity in its nature. Governments concern about the uses of Bitcoin as it is also a convenient tool to conduct illegal operations such as drug trade, tax evasion, ransomware and money laundering. Several monetary authorities around the world warn the users of cryptocurrencies that regulations are around the corner in parallel to the increasing risks of it.

Thefts of Bitcoin and other cryptocurrencies are another issue of critism towards the electronic currencies. In February 2014, Mt. Gox which is one of the largest Bitcoin exchanges experienced a theft that is almost 500 million USD. This theft led to the bankruptcy of Mt. Gox. Market cap of top ten cryptocurrencies is presented in Figure 2. Price increases in cryptocurrencies may turn them to potential targets of cyber criminals. Almost 1.1 billion USD worth of cryptocurrency was stolen in the first half of 2018 (Carbon Black, 2018). Unlike banks, cryptocurrencies are not typically protected or insured by a third party so this reveals the importance of security and necessity of a regulatory mechanism.

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Figure 2: Market Cap (Billion USD) as of 02.12.2018

Source: coinmarketcap.com

Another dimension of cryptocurrency issue is the absence of a lender of last resort that will manage the economy. Modern central banks of today have more or less the same dominant function in economies, in terms of maintaining stable prices, supporting employment, ensuring the safety and soundness of banking and financial system, stabilizing the financial system during crisis and monitoring the payment system. During the Global financial crisis, the U.S. Federal Reserve has managed to stabilize the financial system by using all its monetary tools. In order to perform their duties, central banks can pursue an expansionary or contractionary monetary policy. They can implement open market operations for contracting or expanding the monetary base. They can change interest rates in order to control inflation. Their actions affect both actors of real economy and households. Advocates of the Austrian School of Economics support the implementation of peer-to-peer networking that eliminates central banks and their complex schemes to democratize the financial system. Even so, cryptocurrencies are far from satisfying immediate liquidity demand when necessary or stabilizing the economy in downswings. Furthermore, thousands of individual cryptocurrencies can not provide the required connection and communication with the fiscal side by their current form (Fatas and Mauro, 2018).

Despite all its drawbacks, cryptocurrencies promise efficient and low cost transactions with their underlying technologies. In order to take advantage of this asset, some central banks have started to consider whether they can issue digital currency of their own. Bank for International Settlements define this potential digital currency as Central Bank Digital Currency (CBDC) as a digital form of central bank money that is different from balances in traditional reserve or settlement balances held by commercial banks at central bank. By introducing CBDC, central banks could satisfy policy goals with respect to financial inclusion, consumer protection, privacy and fraud prevention. However, introducing CBDC could result in a wider presence of central banks in the financial system which could cause greater political interference, as well. CBDC could affect the overall value of money issuing function as it reduces the high fixed infrastructure costs and operational costs such as printing, storage, transportation and settlement. If it could manage to be an attractive asset it could also serve as a substitute for other non-deposit financial assets. If it would highly accepted by the users, the increase in its circulation might contract the overall seigniorage. A significant reduction in seigniorage could lead to financial loses in the absence of alternative sources of income and moreover could risk monetary policy and financial stability goals through negative or low capital (BIS, 2018).

While the excitement about Bitcoin seemed to be settled, blockchain technology is attracting growing interest. It makes it hard to cheat the transactions, saves cost, speeds clearing and settlements, reduces operational risks and keeps transaction details confidential other than supervisors. Moreover, it improves the bargaining power of buyers and sellers due to the absence of third parties. All these improvements undermine the intermediary function of traditional financial institutions but provides opportunities for central banks. Blockchain-based transactions denominated even in domestic currency might provide swiftness to the operations of central banks by the time saved from complex clearing operations.

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So all clearing mechanism could shift to new decentralized networks (Niepelt, 2016). This technology may require redefining of the procedures of financial system and roles of its actors over again.

4. Conclusion

Although Bitcoin and other cryptocurrencies are created as a reaction to central banks and to their complex schemes to democratize the financial system, they seem to be accepted by a limited audience for several reasons. Nevertheless, cryptocurrencies inspire the actors of the financial system and fintech companies with their underlying technologies to develop productive facilities.

Cryptocurrencies have many inadequacies in their current forms in terms of legal infrastructure, insurance, transparency, sustainability and regulation but they also have some other features such as fast transaction, low transaction fees and anonymity which attract considerable attention. Some countries strictly ban virtual currencies while some others try to find ways to control it. Considering the potential of it, some central banks seem to work on digital currencies in order to issue their own digital currency in the near future. By this way they can satisfy policy goals with respect to financial inclusion, consumer protection, privacy and fraud prevention. However, on the other side this may lead to a wider presence of central banks in the financial system. Moreover, digital currencies may also affect the seigniorage shares of central banks and result in financial loses in the absence of alternative sources of income.

Above all, blockchain technology promises cost and time saving transactions. If central banks could interiorise this technology, current procedures of the financial system and roles of its actors may change, as well. Bitcoin, alt coins and their underlying technologies provide a crucial opportunity to the financial system to transform into an advanced level.

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Comparative Review of Socio Economic Levels in Balkan Countries

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Abstract

The paper analyses the state of Balkan Countries' socio economic levels and their structures based on development indicators. The main objective of the research is to identify the main differences between the Balkan countries' and relate them to the differences existing in the overall. The socio-economic performance of Balkan Countries have been discussed elaborately making a comparison between them. The general aim of research is to determine whether differences in socio-economic levels in Balkan countries between 2000 and 2017. This region is a developing countries' geography . Also a comprehensive research encompassing of Balkan Countries is still lacking. It is important to determine the socio-economic status of this region in which political developments and changes have been bring out in the recent decades.The research included in current study is based on secondary data analysis. Indıcators from economy, population, health, environment gender, tourism, etc. were determined in the base of social and economic status. Research data were obtained from DataBank of World Bank. As a result of this research, although they are in same region and have similar conditions, main differences on socio-economic situations were found. Reducing socioeconomic inequalities depends upon speeding up structural reforms in Balkan Countries. The results obtained from this research can be used as a source for planning the structural reforms (if needed). [1]

Keywords: Balkan Countries, Socio-Economic Levels, Comparison.

1. Introduction

While there is a huge literature studies the effect of socio economic levels on development among worldwide countries, there are less comparative studies related to Balkan countries. Furthermore, while much interest to Europe, there is a knowledge gap in literature among Balkan's region. Addressing this gap, this research may undertake the differences among Balkan countries in some development indicators.

The Balkan Peninsula has a multicultural geography where different races live and various languages are spoken. In fact, these differences create a diversity as an abundance and cultural richness. "The Balkan region constitutes today an inseparable part of the under formation 'new' European space" (Demetropoulou, 2002:87).

Throughout the last decade, although many studies emerged about the impact of the socio-economic levels in European countries, Balkan region's researches are limited. This region is a developing countries' geography . The Balkan Peninsula has changing and transforming structure in politics, economics and social. Due to this structure; differences between Balkan

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[1] This study was presented in ICSS XVI 2018 16th International Conference on Social Sciences Paris, 23-24 November 2018 and published in the abstract book in
https://euser.org/icss16en/16th_ICSS_2018_Abstract_Book_ISBN_9788890970023.pdf?v=5.

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Countries are raised. It is important to determine the socio-economic status of this region in which political developments and changes have been bring out in the recent decades. The paper analyses the state of Balkan Countries' basic socio economic levels based on development indicators. The main objective of the research is to identify the differences between the Balkan countries'. In this study, comparison between Balkan countries tried to be done according to some of their basic socio-economic indicators, because a comprehensive research encompassing of Balkan Countries is still lacking.

An analysis of different development levels eradication requires examining the differences in socio-economic levels among countries. The research seeks to contribute to find out the status of Balkan Countries by undertaking a systematic assessment of the development levels, looking at the levels of socio-economic indicators. By focusing on development levels, this research also contributes towards filling this gap.

1.1. Why Focus on Socio-Economic Differences?

By including the differences and inequalities on Balkan country indicators, the research covered by attention to many important dimensions to justify the use "socio-economic" in the title. In addition, the focus of the research is the development level comparision of social and economic level among Balkan countries. Development remains one of the most important global targets facing humanity. Extending "development in all its forms everywhere" while at socioeconomic levels is a long-standing goal, rearticulated as the first United Nations Sustainable Development Goal. As differs from the other researches, The study focused on both economic and social indicators of development on Balkan countries as development has both social and economic dimensions.

2. RESEARCH METHOD

The research is focused to determine differences in socio-economic status in Balkan countries between 2000 and 2017. The research included in current study is based on secondary data analysis. Indicators from economy, population, education, health, environment etc. were determined in the base of social and economic status.

2.1 Methodology

In this study, the subject examined by using "Exploratory Research" method has been discussed with all aspects. This study is a compilation of information related to the subject and scanning of statistical data. Research data were obtained from DataBank of World Bank and The World Development Indicators(WDI). The World Development Indicators is the World Bank's premier compilation of cross-country comparable data on development.

The research includes a current study based on secondary data analysis. Secondary data is data that was originally obtained for another purpose of the research that is currently use it, and they are to be found already organised in a certain form. Secondary data can be either internal or external (Tapescu, 2015:379). There are various steps when using secondary data for research: firstly, the need of data must be identified; secondly, data sources must be searched; thirdly, data must be collected; fourthly, the need of additional data must be identified (Ctoiu et al., 2009).

The paper based on external secondary data obtained from DataBank of World Bank and The World Development Indicators(WDI). Data Bank is the statistical office of the World Bank, whose mission is to provide of high quality statistics on World and to provide statistics at worldwide level that will enable comparisons between countries and regions. Data Bank is an analysis and visualisation tool that contains collections of time series data on a variety of topics. World Development Indicators (WDI) is the primary World Bank collection of development indicators, compiled from officially recognized international sources. It presents the most current and accurate global development data available, and includes national, regional and global estimates.

2.2. Limitation

This study is further limited by Balkan Countries and datas about soscio-economic conditions.The study paper examines Balkan countries for 2000-2017 time period using a comparable data set. The socio-economic performance of Balkan Countries have been discussed elaborately making a comparison between them.

2.3. Theoretical Framework

In recent years, studies on the development performance difference between countries and regions have attracted great interest for the researchers. There are three main approaches to the analysis of the performance of countries in the literature (Deliktaş and Balcılar, 2005: 8). The first and most common is the approach to income level or GDP growth. This indicator is the representative variable of living standard in the country. The second approach is the Measurement of the inequality

in the global distribution of income. The third approach is to assess efficiency performances and multi-factor productivity measures. These approaches are mostly used in economic comparison of countries. In addition, studies which include comparisons between countries in terms of social aspects are also carried out from researchers.Some of them is shown in Table 1.

Table 1: Cross-Country Comparison Researches In Literature

Author/s	Year	Countries	Data Set Period
Färe and others	1994	OECD countries	1979-1988
Vehid	2000	15 EU Countries and Turkey	1998
Güran ve Cingi	2002	55 Countries	1995
Mackenbach and others	2003	Finland, Sweden, Norway, Denmark, England and Italy	1981–1985, 1991–1995
Deliktaş and others	2005	15 EU Countries and Turkey	1980-2002
Kök and Deliktaş	2004	25 developing country and 22 OECD country	1991-2002
Pires and Garcia	2004	75 countries	1950-2000
Deliktaş and Balcılar	2005	25 Transition Economies	1991-2000
Güran and Tosun	2005	OECD countries	1951-2003
Kunst and others	2005	10 European Countries	1980-1990
Gwatkin and others	2007	56 Developing Countries	1992-2003
Bambra and Eikoma	2008	23 European Countries	2002-2004
Karabulut and others,	2008	EU Countries and Turkey	2001-2005
Demiray Erol E.	2013	EU Countries and Turkey	2009-2011
Daştan and Çalmaşur	2014	EU Countries and Candidates of EU	1995-2012
Tunç, Ertuna	2015	Balkan Countries and Turkey	1980-2013
Asadullah and Savoia	2018	89 Developing Economies	1990-2013

3. General Overview of Balkan Countries

This section of the research provides an overview on the Balkan Countries. The word "Balkan" is Turkish and means "forest and mountainous area". The peninsula is dominated by mountain type of landform. The name "Balkans" which was established with the plural suffix of the Turkish, has been used with the meaning of family, height, nation, community(Özey, 2016: 3).The mountains, which divide Bulgaria from the middle in the east-west line, and located to the north of the peninsula, are also called the Balkans. The name of the Balkan mountains was given to the peninsula in time (Todorova, 2003: 116) The term Balkan peninsula was first used by German geographer Johann August Zeune in 1808. The term was widely used in 1893 after the criticism of the geographer Theobald Fischer.

The name Balkan refers to the mountainous structure and geographical location of the region, but over time it began to use to define new states. In the first quarter of the 19th century and the first quarter of the 20th century, while the political and ethnic divergence of the region was mentioned, it was named as the "Balkanization". (Arısoy, 2013: 83)

Balkan Peninsula is bordered in the north by Hungary, in the northwest by Italy, in the northeast by Moldova and Ukraine, and in the south by Greece and Turkey or Mediterranean. The Balkans are also bordered by the the Black Sea in the east, Adriatic Sea in the west, and the Ionian Sea in the southwest.

Source: Encyclopædia Britannica, https://www.britannica.com/place/Balkans/images-videos/An-introduction-to-the-Balkan-Peninsula/18983/media/50325/62181, Retrieved date: 05.11.2018.

The Balkans are characterized as Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Greece, Kosovo, Macedonia, Montenegro, Romania, Serbia, and Slovenia—with all or part of each of these countries located in the peninsula. A small portion of Turkey are also located within Balkan Peninsula.

In this section, brief information about general situation of the Balkan countries such as the borders, economic structures and sources are given.

*Slovenia, Croatia, Bosnia Herzegovina, Macedonia, Serbia and Montenegro became independent as a result of the dissolution of Yugoslavia. Slovenia is bordered in the east by İtaly, by Austria in the north, by Hungary in the northeastern, by Croatia in the southeast. It has an agriculture-based economy. The main agricultural products are grains, potatoes and various fruits. Significant sources of income include forestry, livestock and winter sports tourism. There are various mineral resources, especially coal and mercury. In the field of industry, metallurgy and weaving have an important place(Yiğit, 2015).

*Croatia is located to the northwest of the Balkan Peninsula. Slovenia draws its borders in the northwest, Hungary in the north, Bosnia and Herzegovina in the south, the Adriatic sea in the west and Serbia in the northeast. The economy of the country is based on agriculture and animal husbandry until the Second World War. The post-war industry develops rapidly and oil operated. Coal and bauxite sources are available. The major sources of income are ship transport and tourism(Yiğit, 2015).

*Bosnia Herzegovina borders by Serbia and Montenegro in the east and southeast, and by Croatia in the north and west. The economy is based on agriculture. Mainly agricultural products cereals and potatoes, vegetables, sugar beet, flax and tobacco are grown. Forestry and sheep breeding has an important place in the economy. In Bosnia fruit growing, and in Herzegovina viniculture developed. Coal, iron, copper, manganese, lead, mercury and silver are mining in Bosnia and Herzegovina. Lumber, iron and steel, tobacco, leather and sugar are important in industrial products(Yiğit, 2015).

*Serbia borders by Romania in the northeast, by Bulgaria in the east, by Macedonia in the south, by Montenegro in the southwest, by Bosnia and Herzegovina in the west, by Croatia in the northwest and by Hungary in the north. Serbia has an agriculture-based economy. In Serbia, approximately 22% of the people are engaged in agriculture. Major agricultural and livestock products; barley, wheat, corn, oats, potatoes, rye, tobacco, sunflower, sugar beet, hemp fiber, prune, meat and

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wool. Serbia has various mineral resources. Major industrial areas are steel, forestry products, cement and textiles. Tourism has an important place in the national economy. Road and rail transport is well developed(Yiğit, 2015).

*Montenegro borders by Bosnia and Herzegovina and Croatia in the west, by Albania in the southeast, by Kosovo in the northeast and by Serbia in the north. Montenegro's natural resources; bauxite, coal mines and hydroelectric energy. Cereals, oilseeds and legumes are grown in agriculture. There are also vineyards and orchards(Sarısaçlı, 2011).

* Kosovo borders by Montenegro in the west, by Serbia in the north and east, by Macedonia in the southeast and by Albania in the southwest. The main source of income is agriculture and animal husbandry. Cereals, tobacco, sugar beets, hemp and various vegetables are grown, viticulture and fruit growing are done. Sheep breeding and forest products management are other economic resources. Kosovo has the largest lignite basin known as reserve in Europa. Zinc has lead deposits such as lead, copper, silver, gold and chrome. The industry has not developed.

*Macedonia borders by Serbia and Kosovo in the north, by Albania in the west, by Greece in the south and by Bulgaria in the east. The main source of income is agriculture. Grain, tobacco, fruit, grapes are grown. Iron, lead, zinc, manganese are underground sources. The industry has not developed(Yiğit, 2015).

*Albania borders by Montenegro to the north, by Kosovo to the northeast, by Macedonia to the east, by Greece to the south and by Adriatic and Ionian to the west. Albania is rich in natural sources and underground assets, also rich in chrome, nickel, copper, bauxite, phosphorus, and a small amount of underground sources including oil and coal. Economy based on agriculture(Taşçıoğlu, 2011).

*Greece borders by Turkey in the east, by Bulgaria in the north, Macedonia and Albania in the northwest draws. In addition, 400 island is connected to Greece in the Aegean Sea. Greece is one of the largest lignite producers. Also produces bauxite, marble, iron ore and bentonite. Lead, magnesite and salt are other important mineral sources. Coal, gold, silver and zinc mines are operated. Greece has a small but extremely open economy. The economy is predominantly based on the private sector. Industrial construction is limited. Agriculture, forestry and fishing are among the income recourses(Özey, 2016).

*Bulgaria borders by Serbia and Macedonia in the west, by the Black Sea in the east, by Romania in the north, by Greece in the southeast, by Turkey in the south. The Bulgarian economy is an economy that operates according to free market conditions.("Bulgaristan Genel Ekonomik Durumu", 2017) In Bulgaria crops such as wheat, corn, rapeseed and sunflower are grown and sugar beet and alfalfa cultivation is made. Bauxite, copper, lead, coal, oil and natural gas sources are available. In industrial products; electricity, gas, water; food, beverages, tobacco; machinery and equipment, base metals, chemical products, coke, refined oil, nuclear fuel are available.

*Romania borders by Moldova in the east, by Ukraine in the north, by Hungary in the northwest, by Serbia in the southwest and by Bulgaria in the south. The agricultural sector is developing slowly but, Romania has rich agricultural lands and can grow a wide range of agricultural products; grain, beetroot, sunflower seeds, vegetables and fruits. Natural sources of oil, natural gas, coal, minerals, timber are available. In industrial products; coal, petroleum, gas, chemicals and metals, machinery production, shipbuilding industry, land and rail transport equipment, communication equipment, tractors and construction equipment, electric power generation, electrical energy production, medical and scientific instruments, durable consumer goods, textiles and the food industry has evolved.("Romanya Ülke Raporu")

*Turkey borders by Bulgaria in the northwest, by Greece in the west, by Georgia in the northeast, by Armenia, Iran and Azerbaijan (Nakhichevan) in the east, by Iraq and Syria in the southeast. The majority of Turkey's territory is in Anatolia. A small part is located in the Balkans. Turkey has natural resources and qualified workforce. Moreover, due to its geopolitical location, it is considered as an important center which can be invested by connecting Europe and Asia continents. The economy is based on agriculture, the service sector and to a lesser extent, industry. Underground sources are iron, chromium, copper, boron, bauxite, sulfur, manganese, mercury, lignite and petroleum.

Table 2: General Information About Balkan Countries

Countries	EU Status*	Currency Unit**	Income Group**	Surface area (sq. km) (thousands)**
Greece	01.01.1981 entry	Euro	High income	132
Slovenia	01.05.2004 entry	Euro	High income	20,3

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Romania	01.01.2007 entry	New Romanian Leu	Upper middle income	238,4
Bulgaria	01.01.2007 entry	Bulgarian Lev/Euro	Upper middle income	111
Croatia	01.07.2013 entry	Croatian Kuna/Euro	High income	56,6
Turkey	Candidate	Turkish Lira	Upper middle income	785,4
Albania	Candidate	Albanian Lek	Upper middle income	28,8
Macedonia, FYR	Candidate	Macedonian Denar	Upper middle income	25,7
Serbia	Candidate	New Serbian Dinar	Upper middle income	88,4
Montenegro	Candidate	Euro	Upper middle income	13,8
Bosnia and Herzegovina	Potential candidate	Bosnia Herzegovina Convertible Mark	Upper middle income	51,2
Kosovo	Potential candidate	Euro	Lower middle income	10,9

Source* https://europa.eu/european-union/about-eu/countries_en#tab-0-1, Retrieved data 10.09.2018

Source **http://databank.worldbank.org, Retrieved data 17.09.2018

4. FINDINGS

Having presented the dats of socio economic levels, this section provides status on development of Balkan countries. This section introduces the descriptive development indicators. It also offers cross-national development statistics, comparing countries at different socio-economic levels. This section provides an descriptive data on the Balkan Countries, while also briefly describing their economy, population, health, environment, gender, etc. in the base of social and economic status, not before highlighting the main aspects and particularities.

4.1. Are differences in development levels among Balkan countries narrowing?

The information used for the purpose of this research consists of series for 2000-2017 period, regarding descriptive socio economic indicators. The collected data topics are such as economy, population, health, environment, gender, etc in the base of social and economic status.. In addition to indicators on basic socio-economic level, Data were identified on such as GDP, Inflation, Income level, HDI, Life Expactancy, Gender Equality, Internet users, Carbon dioxide emission, Fertility rate etc. in Balkan countries. After collecting the data, a comparison was drawn between the Balkan countries'.

Tablo 3: Population Status

Countries	2000		2017	
	Population, total (millions)	Population growth (annual %)	Population, total (millions)	Population growth (annual %)
Turkey	63,24	1,5	80,75	1,5
Greece	10,81	0,4	10,76	-0,1
Bulgaria	8,17	-0,5	7,08	-0,7

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Albania	3,09	-0,6	2,87	-0,1
Bosnia and Herzegovina	3,77	0,2	3,51	-0,3
Kosovo	1,7	-3,6	1,83	0,8
Macedonia	2,03	0,5	2,08	0,1
Serbia	7,52	-0,3	7,02	-0,5
Croatia	4,43	-2,9	4,13	-1,2
Slovenia	1,99	0,3	2,07	0,1
Romania	22,44	-0,1	19,59	-0,6
Montenegro	0,6	0	0,62	0

Source: http://databank.worldbank.org/data/source/world-development-indicators, Retrieved data 10.09.2018

Critical factors - such as population size and growth rates have a direct impact on development, particularly human resource development. Population is one of the fundamental building blocks of sustainable development and population growth must be balanced with available resources if development strategies are to become reality. Table 3 shows that Turkey has the biggest population among Balkan countries. However, that should not be forgotten that there is only included in Turkey's Thrace region of the Balkans. Thrace's population is 1,9 billion(TUIK, 2018). There are differences about population size and growth in Balkans. The country with the lowest population is Montenegro. Controlled population is preferred but also the negative growth in the Bulgaria, Albania, Bosnia- Herzegovina, Serbia, Croatia and Romania population points to the existence of a problem.

Table 4: GDP and GDP growth

| Countries | 2000 | | 2017 | |
	GDP (current US$) (billions)	GDP growth (annual %)	GDP (current US$) (billions)	GDP growth (annual %)
Turkey	272,98	6,6	851,1	7,4
Greece	130,13	3,9	200,29	1,4
Bulgaria	13,15	4,9	56,83	3,6
Albania	3,63	6,7	13,04	3,8
Bosnia and Herzegovina	5,50	5,5	18,17	3
Kosovo	1,85	27	7,13	4,5
Macedonia	3,77	4,5	11,34	0
Serbia	6,54	7,8	41,43	1,9
Croatia	21,77	3,8	54,85	2,8
Slovenia	20,34	4,2	48,77	5
Romania	37,44	2,4	211,8	6,9
Montenegro	0,98	3,1	4,77	4,3

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Source:https://data.worldbank.org/indicator/NY.GDP.MKTP.CD?locations=BG-GR-MK-TR-RS-ME-RO-XK-BA-HR-AL-SI, Retrieved data 10.09.2018

GDP which is an indicator of production capacity, is an important economic data for countries. GDP is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. According the production levels, countries differ from GDP and also GDP growth ratios. Table 4 shows that Turkey has the largest GDP but again should not be forgotten that there is only Thrace region of Turkey in the Balkans.

Table 5: International Tourism Data

Countries	2000		2016	
	International tourism, receipts (current US$) (000)	International tourism, receipts (% of total exports)	International tourism, receipts (current US$) (000)	International tourism, receipts (% of total exports)
Turkey	7,636	15,2	18,743	14,2
Greece	9,219	31,5	14,725	30,1
Bulgaria	1,074	19,5	3,653	12,2
Albania	389	71,8	1,693	52,9
Bosnia and Herzegovina	233	15,6	723	12,8
Macedonia	38	7,7	280	5,3
Serbia	77	9,7	1,150	7,6
Croatia	2,758	37,7	9,633	38,8
Slovenia	961	9,5	2,427	7,6
Romania	359	3,3	1,730	2,8
Montenegro	379	41	933	55

Source: https://data.worldbank.org/indicator/ST.INT.TVLR.CD?end=2016&locations=BG-GR-MK-TR-RS-ME-RO-XK-BA-HR-AL-SI&start=2000&view=chart Retrieved date 22.11.2018

Tourism is an important contributor to the economy such as income and receipts levels for development, as it is the lead export sector(ILO and UNWTO,2009). Table 5 shows that tourism receipts has great impact on the Balkan country's income and export levels. Albania, Croatia and Greece contribution rates to export are higher than other countries.

Table 6: Inflation

Countries	2000	2010	2017
	Inflation, GDP deflator (annual %)	Inflation, GDP deflator (annual %)	Inflation, GDP deflator (annual %)
Turkey	49,3	7	10,8
Greece	1,6	0,7	0,7
Bulgaria	7,3	1,1	1,2

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Albania	4	4,5	1,4
Bosnia and Herzegovina	28,8	1,4	2,3
Kosovo	11,4	4,7	-0,3
Macedonia	13,8	2	3,5
Serbia	78,6	5,9	2,8
Croatia	4,4	0,8	1,2
Slovenia	5,4	-1	2
Romania	43,1	3,5	5,3
Montenegro	20,2	1,6	2,7

Source: https://data.worldbank.org/indicator/NY.GDP.DEFL.KD.ZG?locations=BG-GR-MK-TR-RS-ME-RO-XK-BA-HR-AL-SI, Retrieved data 17.08.2018

Inflation is a situation continuous and noticeable increase in the general level of prices. Price stability in conjunction with economic growth are the main goals of the economic policy. It is generally accepted that price stability is necessary for economic and social development. Tablo 6 shows that Turkey and Romania couldn't controll the general level of price increases. The other countries have tolerable inflation rates.

Table 7: HDI Scores and HDI Indicators

Countries	Human Development Index (HDI)	HDI rank	Life expectancy at birth (years)	Gross national income (GNI) per Capita 2011 PPP $	Mean years of schooling (years)
Slovenia	0.896	25	81.1	30,594	12.2
Greece	0.870	31	81.4	24,648	10.8
Crotia	0.831	46	77.8	22,162	11.3
Montenegro	0.814	50	77.3	16,779	11.3
Bulgaria	0.813	51	74.9	18,740	11.8
Romania	0.811	52	75.6	22,646	11.0
Turkey	0.791	64	76	24,804	8.0
Serbia	0.787	67	75.3	13,019	11.1
Albania	0.785	68	78.5	11,886	10.0
Bosnia and Herzegovina	0.768	77	77.1	11,716	9.7
Macedonia, FYR*	0.757	80	75.9	12.505	9.6
Kosovo*	0.739	*	71.3	10,066	10.7
High Human Development Group	**0.757**		**76.0**	**14,999**	**8.2**

WORLD	0.728		72.2	15,295	8.4

Source: http://hdr.undp.org/en/composite/HDI   Date: Retrieved data 22.09.2018

Human Development Index is considered as an important indicator of the socio-economic performance of the countries. Results for HDI are given in Table 7. in each country for which data are available. According to the Human Development Index (2017), Balkan countries ranked between 25th in Slovenia and 80th in Macedonia. HDI index differs between 0,757 and 0,896. Slovenia has the higher HDI score. However, when the economic, health and education indicators are compared, there are various differences among countries.

Table 8: Gender, Communication, Environmental Sustainability, Fertility Rates

Countries	Gender	Internet users,	Carbon dioxide	Fertility rate,
Turkey	0.922	58.3	4.5	2,1
Greece	0.964	69.1	6.2	1,3
Bulgaria	0.990	59,8	5.9	1,5
Albania	0.970	66.4	2.0	1,7
Bosnia and Herzegovina	0.924	54.7	6.2	1,4
Kosovo	0.927	63.9	2.8	2,1
Macedonia	0.946	72.2	3.6	1,5
Serbia	0.976	67.1	5.3	1,5
Croatia	0.991	72,7	4.0	1,4
Slovenia	1.003	75.5	6.2	1,6
Romania	0.985	59.5	3.5	1,6
Montenegro	0.956	69.9	3.6	1,7
WORLD	0.940		4.9	2.1

Source: https://data.worldbank.org/topic/gender?locations=BG-GR-MK-TR-RS-ME-RO-XK-BA-HR-AL-SI, Retrieved data 22.09.2018

Gender and Development issues in the developing world and in emerging economies of Europe become more important(Momsen, 2009). Gender equiaty and gender problems come across in certain aspects of policy-making, which are important both from the gender perspective and development perspective as Gender equity is essential in addressing major sustainable development challenges (Gender, 2009: 12). Balkan countries have differences about Gender equity, internet use and carbondioxide emissions. Fertility rates are similar in mant countries except Turkey and Kosovo.

5. Results and Discussion

This research examined the socio economic levels of Balkan Countries and explained this through reference of development levels data. Therefore, the research tested for Balkan countries comparing differences in development levels in the period 2000-2017. The results underscore the differences of socioeconomic levels in Balkan countries. The Balkan peninsula is a developing countries' geography As a result of the research, although they are in same region and have similar conditions, main differences on socio-economic situations were found. In addition to differences on basic socio-economic level, differences were identified on such as GDP, Inflation, Income level, HDI, Life Expactancy, Gender Equality, Internet users, Carbon dioxide emission, Fertility rate etc. in Balkan countries.

The main finding from the research is that socioeconomic inequalities in development indicators showed a difference in Balkan countries. This finding points to the evidence that socioeconomic inequalities are persistent in Balkans. The

differences was observed cross-national comparisons for the 2000s and 2017s both. Development level is an important factor in this region. Balkan countries have similar conditions but different development levels. Single-country studies have shown that socio-economic levels are different from each other in Balkan countries. Differences in the national socio-economic levels may reduce the ability of countries to consider economic growth policies in Balkan region and to create development. Reducing socioeconomic differences and inequalities depends upon speeding up structural reforms in Balkan Countries.

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Development of a Reciprocal Health Care Model for Determination of Safety Level in the Nursing Homes in Estonia

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Abstract

The aim of the current paper was to assess the care workers' psychosocial and physical health; patient's safety and examine the variations of care workers' working conditions in the national nursing homes. The NOSACQ-50 questionnaire was used as a research method. The majority of the care workers in nursing homes complain about physical pain, especially low back pain, and work-related stress. The study results show, that several specific features, such as management safety priority, commitment and ability, are found to influence the six dimensions of safety climate. Based on these results, the importance of good communication practices, management commitment and effective safety training to ensure a strong safety climate and safe behaviour among health care workers is highlighted. Mutual support from the employers to the care workers is needed to create safety as an organizational value. Thus, an effective assessment tool for the evaluation of safety level in nursing homes could be proposed based on the results of this study. The current paper presents a Reciprocal Health Care Model for determination the levers of safety improvement in nursing homes. The model refers to the importance of management safety priority and abilities as well as peer safety communication and trust in the safety ability.

Keywords: health care, safety climate, psychosocial health, physical health, workplace safety

1. Introduction

Theoretical Basis

The health care sector hires a large number of employees with high health risks. Healthcare workers are also at risk of suffering many different types of harm on the job. Even the fatal accidents of employees are possible, but the number of nonfatal occupational injuries, illness and absences are more common, particularly in the nursing homes of ageing people (Tullar *et al.,* 2010). Most of the health care risk managers look forward to the opportunities ahead and are dedicated to managing their organization's risk and enhance patient's safety. Additionally, workers' occupational health and safety (OH&S), which has impact on patient's safety, need to be emphasized. Previous research has also demonstrated that the level of workers' physical and mental health can influence patient's well-being (Flin, 2007). The healthcare systems across the globe continue to experience persistent and unsettled changes, reforms and improvements. The opportunities for healthcare specialists, particularly nurses, to provide effective and visionary leadership to address the challenges and consequences of the system reform have never been greater (Duncan *et al.,* 2014). Economic controls that cause demands for the new models of care in hospitals in order to reduce costs (Aiken & Patrician, 2017) are significant in many countries and contribute to a climate of increased management (Duncan *et al.*, 2014). Persistent concerns about nurses and leaders shortages (Titzer *et al.,* 2014) along with complaints of overloaded and dissatisfied nursing workforces point to the importance of healthy and productive work environments in sustaining the health and well-being of nurses (McHugh *et al.,* 2011). Effective leadership practices to address these tasks should be informed by the current observed conclusions of the

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extraordinary effects of nursing management styles on nurse outcomes. Safety management challenges within the different organisations were studied with a special focus on the safety culture, safety knowledge, interrelationships between safety management systems and organizational factors (Järvis, 2013).

It is common understanding, that health care workers in the nursing homes face a wide range of OH&S hazards causing infectious diseases, musculoskeletal disorders, chemical-induced disorders and stress-related illnesses (Andre *et al.,* 2016). Many of them experience fatigue, because of the long shifts and heavy physical work, mental stress, lack of balance between work and family and physical pain – factors that may pose a serious problem, not only for workers' well-being, but can also decrease their ability to provide good quality of patient's care (Yassi & Hancock, 2005, Sundin *et al.,* 2011; Sepp *et al.,* 2015; Andre *et al.,* 2016). Previous research has illustrated, that the work of nurses and care workers in the Estonian hospitals and nursing homes is physically and mentally stressful (Sepp *et al.* 2015). It is clear that supportive environment in the organisation is essential in order to maintain employees' health and motivation, learning and innovation (Kivimäki *et al.,* 2010). Yassi and Hancock (2005) describe a number of studies showing that interventions designed to reduce health care workers' injuries and illness also have positive effects on patient's safety. Katz-Navon with colleagues (2005) state that health care sector has several unique characteristics comparing with other sectors. First, the working environment in health care sector is complex in terms of job and task characteristics and involving high risks. Second, working environment affects not only workers' safety and well-being, but also patient's safety, what is the highest priority in health care sector. In addition, workers' safety behaviour is generally controlled not only by the health care organization, but also by the health care professionals' (nurses, supervisors and physicians) authorities.

Knowing the safety climate ingredients in the organization, there is a possibility to improve the safety system and safety level (Manoukian, 2017), particularly in nursing homes. The research literature discusses several approaches to developing a positive safety culture and climate as well as possibilities to enhance it (Järvis, 2013). At the same time, relatively little is known how healthcare organizations influence and deal with the formation of safety climate with respect to workers' psychosocial and physical health as well as patient's safety. Despite multiple attempts to explain safety climate through competing models, there is limited empirical research to substantiate which dimensions of the safety climate and organisational safety practices have the most demonstrative impact on safety performance within the nursing homes.

In the light of the above arguments the aim of the present study was to assess the influence of different dimensions of safety climate on workers' psychosocial and physical health, patient's safety and examine variations among national nursing homes. In addition, the article intends to propose and to discuss a model for a positive safety climate and empirically to test this.

2. Materials and methods

The current study investigates the safety climate's level in different nursing homes in Estonia. The Nordic Safety Climate Questionnaire (NOSACQ-50) (Kines *et al.*, 2011) was used for measuring safety climate. A simple random sample was selected from care workers employed at the 19 nursing homes in all four parts of Estonia. Four of the selected nursing home refused to participate in the study and thus, 15 nursing homes were included in the sample. The sample involves nursing homes, rehabilitation and follow-up health care organisations, and workers, who are providing home health care services.

The data were collected during the period of September–December 2016. The questionnaire was sent to 371 care workers and, 233 of them (representing 62.8 % response rate) fulfilled the questionnaire and participated in the study. The highest response rate was in the East (36.9%) and North (31.3%) parts of Estonia. The majority of the nursing homes involved in the study, were financed by the public health care system (46.7%). Table 1 contains additional background information of the participants in the study.

According to NOSACQ-50 questionnaire, the dimensions (Dim) of safety climate are described as follows:

Dim1 - "Management safety priority and ability" (The organizational priorities are largely communicated through the managers. Manager's behaviour would be a main source of the information. If the managers are perceived to be committed to safety and to prioritize safety in relation to other goals, safe behaviour would be expected to be rewarded, and thereby reinforced);

Dim2 – "Management safety empowerment" (One-way for managers to convey trust is empowering the employees. Empowerment is a delegation of power, and as such it demonstrates that trust workers' ability and judgement, and that managers value workers' contributions);

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Dim3 – "Management safety justice" (Employee safety responsibility and safety behaviour would be positively influenced by management procedural and interactional safety justice, i.e. just treatment and procedures when handling accidents and near-accidents.);

Dim4 – "Workers' safety commitment" (Safety motivation is strongly determined by the leadership and safety standards of the leader, but also by the standards and group cohesion. Group standards and cohesion are also determined by safety behaviour).

Dim5 – "Workers' safety priority and risk non-acceptance" (Safety priority and safety commitment should be assessed regarding separately to management procedures and practice);

Dim6 – "Peer safety communication, learning, and trust in safety ability" (Communication and social interaction are necessary means for the creation of social constructs such as organizational climate. Reason (1997) pointed out a learning culture and a reporting culture as two of the constituting sub-climates. Hofmann & Stetzer (1998) suggested that management encouraging open communication on safety sends a strong signal on how safety is valued.).

Dim7 – "Workers' trust in the efficacy of safety systems" (The safety climate questionnaire that should assess perceptions of the efficacy of safety systems, but that this should be assessed together with other aspects of safety climate, suggested above) (Kines *et al.*, 2011).

Table 1 General Information

Characteristics of the sample (*n*=233)	Category	n	%
Gender (*n*=233)	Female	225	97
	Male	6	3
	Non-specified	2	1
Age (*n*=233)	Group1(≥65)	27	12
	Group2 (55-64)	77	33
	Group3 (45-54)	72	31
	Group4 (35-44)	33	14
	Group5 (25-34)	18	8
	Group6 (≤24)	6	3
Language	Estonian	183	79
	Russian	50	21
Demographic/background	North part[1]	73	31.3
	West part[2]	52	22.3
	South part[3]	22	9.4
	East part[4]	86	36.9
Occupation	Group A-Care workers	215	92.3
	Group B-Administrative staff	17	7.3
	Non-specified	1	0.4

Nursing homes [1]in North with codes F,J,G,H,M; [2]in West with codes B,O,E; [3]in South with codes A,K,N; [4]in East C,D,I,L

The NOSACQ-50 questionnaire was used in the Estonian and Russian languages in order to explore the care workers' shared perceptions and opinions toward safety-related procedures and practices in the nursing homes.

The tool contains positively and negatively formulated 50 items using a four-point Likert scale: strongly disagree-1, disagree-2, agree-3, strongly agree-4. The mean score was calculated for each dimension, respondent and for the groups. A mean score over 2.5 was considered as a positive result, as this is the mathematical mean value of the highest and lowest score. In addition, respondents were asked to provide data about experienced occupational accidents and diagnosed occupational diseases as well as to report possible health complaints (for example, pain in neck, back, arms and knees). Respondents' opinion and perception towards patient's safety was assessed using a Likert five-point scale.

Additionally, the Nordic musculoskeletal questionnaire (Kuorinka *et al.,* 1987) was used for assessment the musculoskeletal complaints (pain in the muscles) of workers.

The analyses have been prepared using SPSS Statistics 22.0. The following statistical methods were used: correlation, *MANOVA* and Factor Analysis Principal Component method (Field, 2013).

3. Descriptive analysis

The occupational accidents and diseases rates among respondents were low (occupational accidents 5.6%, occupational diseases 4.3%); however, 76.4% of the respondents reported that their job is stressful and 82.8% of them reported that they have experienced physical pain in different body locations. In order to investigate health care workers' physical health, the average muscular pain locations according to the workers' age were examined (Table 2). The most frequently reported health problem (low back pain), was reported by 48.9% of the respondents.

Table 2 Pain complaints

Age	n	Neck pain (%)	Upper back pain (%)	Low back pain (%)	Arms' pain (%)	Knee pain (%)
≥65	27	18.5	33.3	22.2	29.6	22.2
55-64	77	35.1	22.1	48.1	37.7	40.3
45-54	72	38.9	26.4	56.9	31.9	22.2
35-44	33	45.5	30.3	48.5	15.2	15.2
25-34	18	27.8	11.1	55.6	16.7	27.8
≤24	6	16.7	16.7	66.7	16.7	50.0
Total	233	34.8	24.9	48.9	29.6	28.3

According to NOSACQ-50 questionnaire, the general results reflected positive outcome on different dimensions (Dim) of safety climate.

Dim1. Management's safety priority and ability

Dim2. Management's safety empowerment

Dim3. Management's safety justice

Dim4. Workers' safety commitment

Dim5. Workers' safety priority and risk non-acceptance

Dim6. Co-workers' safety communication, learning, and trust ability

Dim7. Workers' trust in the efficacy of safety systems.

The total scores according to NOSACQ-50 were the following (scale 1-4): Dim1–3.39, Dim2–3.49, Dim3–3.52, Dim4–3.57, Dim5–2.89, Dim6–3.52 and Dim7–3.61.

The comparison of the results of patients who felt pain according to the locations (Table 3) of the nursing home, it is possible to conclude that the results do not vary significantly. However, a slight tendency can be observed that the institutions in north part of the country have lower scores in Dim1, Dim2, Dim4, Dim5 and Dim6; thereby the Dim3 - "Management safety justice" had the highest score in the Estonian north part's nursing homes. Institutions in the east part of the country show the high scores in Dim2, Dim4, Dim5 and Dim7. In the west part of the country, the highest scores were followed in the dimensions 1, 2 and 6. The differences between the regions are too small to draw substantive conclusions based on the regional results. It is seen from the results, that Dim5 - "Workers' safety priority and risk non-acceptance" have the lowest score and Dim7 - "Workers' trust in the efficacy of safety systems" gained the highest score in all the regions. This result might be influenced by the way of thinking from the Soviet times, when the superiors, insured the security of the subordinates in full.

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Table 3 Regional results of dimensions

PART	n	Dim1	Dim2	Dim3	Dim4	Dim5	Dim6	Dim7
North part	73	3.3	3.42	3.54	3.45	2.79	3.45	3.61
West part	52	3.45	3.52	3.51	3.62	2.87	3.61	3.53
South part	22	3.32	3.49	3.52	3.63	2.88	3.55	3.45
East part	86	3.43	3.52	3.49	3.63	2.98	3.52	3.69
Total	233	3.39	3.49	3.52	3.57	2.89	3.52	3.61

3.1 - The relationships between the safety climate dimensions, stress and patient safety

In order to explore psychosocial health in detail, we examined statistically correlations between stress and occupational diseases and accidents, muscular pain and patient's safety in the unit as well as in the organization in general. The opinion of the leadership and the care workers might be different about the safety level and the use of safety improvement possibilities; therefore, the leadership and the care workers were investigated separately.

Initial data was divided into 2 samples, based on the position of worker (care workers (n=215), group A; and administrative staff (n=17), group B). Correlations between dimensions and selected variables were calculated within the groups. The results indicate (Table 4) that the care workers (group A) who give a higher score to Dim3 - "Management safety justice" feel that patient's safety in their unit is higher.

The only significant correlation (p<0.05) for group A is defined between the parameters "Management safety justice" and "Patients' safety in their unit". Positive moderate correlations for the group B are detected between workplace stress and management safety priority and ability, empowerment and justice. Additionally, we can say that rating of patient's safety correlate with "Management safety empowerment". Study results also reveal that those administrative workers (group B) who find their work not very stressful, give higher scores to Dim1 - "Management safety priority and ability", Dim2 - "Management safety empowerment" and Dim3 - "Management safety justice". At the same time, workers who perceive the patient safety in high level in both – in their unit and within the organization, give higher scores to Dim2- "Management safety empowerment".

Table 4 Safety climate dimensions and correlation with perceived stress and patient safety

		Stressful job	Patient safety in the unit	Patient safety in the organization
Group A (*n*=215) Sig. (2-taled)	Dim3 Management safety justice	0.005	0.138* 0.048	0.104 0.151
Group B (*n*=17) Sig. (2-taled)	Dim1 Management safety priority and ability	0.566* 0.022	0.465 0.060	0.465 0.060
Sig. (2-taled)	Dim2 Management safety empowerment	0.570* 0.021	0.568* 0.017	0.568* 0.017
Sig. (2-taled)	Dim3 Management safety justice	0.570* 0.021	0.333 0.191	0.333 0.191

*Correlation is significant at p<0.05

There is a positive correlation at significance level 0.05 between the variables "stressful job" and "patient's safety" in the organization for the group A (r=0.163). However, this correlation (0.163) is very weak, so we cannot conclude that workers, who feel that their work is not stressful, give higher scores to patient's safety in the organization.

Table 5 describes the assessment for patient safety according to the different nursing homes in different Estonian regions. The average score (1-5 scale) for patients' safety in the unit is 3.69 and in the organization 3.66. So, there is no particular difference between the nursing homes in different regions of the country.

Table 5 Assessment of perceived patient safety

| Part	Patient's safety in the unit	Patient's safety in the organisation
North	3.53	3.52

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West	3.69	3.68
South	3.86	3.58
East	3.79	3.78
Total	3.69	3.66

3.2 - Development of a Reciprocal Health Care Model for improvement of safety climate in nursing homes

Based on the previous research in the nursing safety area (theoretical part of the current paper), the current research results and the correlations between the safety climate's different dimensions, a Reciprocal Health Care Model for Safety Climate (RHCMsc) has been developed. The model integrates the main reciprocal components affecting safety climate that enhance workers' safety commitment and also contribute to good patient's safety. Figure 1 demonstrates the relationship between workers' safety, workers' commitment and patients' safety.

The model proposed takes into account the dynamic interrelationships between different dimensions of safety climate, safety management systems (SMSs), safety behaviour and motivational strategies for safety knowledge exchange and learning within the organisation.

Figure 1. Reciprocal Health Care Model for safety climate (RHCMsc)
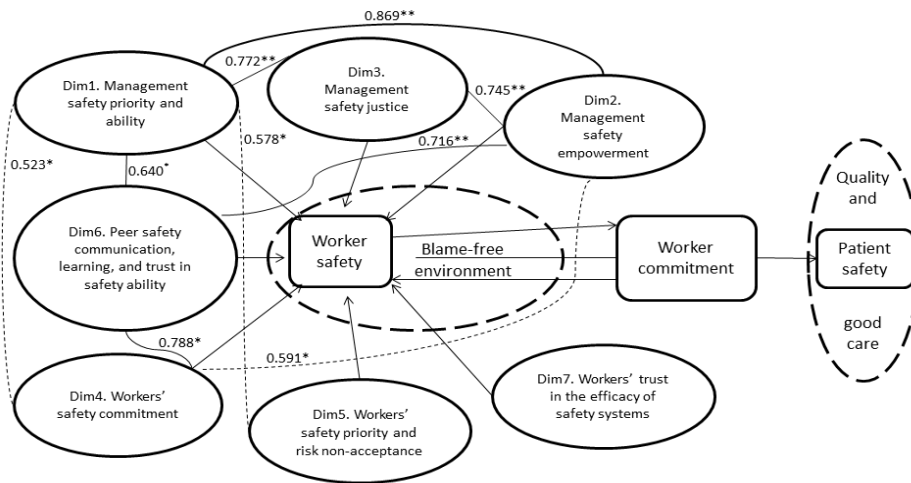
[**]Correlation is significant at $p < 0.01$
[*]Correlation is significant at $p < 0.05$

The author suggests that healthcare organizations should pay more attention to how create blame-free environment in the nursing in order to develop a positive safety climate and to change employees' safety behaviour.

Figure 1 demonstrates, that the main factors to create the blame-free environment in the nursing home and the positive safety climate, are "management safety priority and ability" and "management safety empowerment". Those factors ensure "workers' safety commitment" and improve "peer safety communication, learning, and trust in safety ability". The correlations between the different ingredients (dimensions) in the safety climate model are high. Exceptional is the Dim7 that do not suit to the model ("workers' trust in the efficacy of safety systems). If we "invest" into management's and care workers' safety knowledge, where the priority is good safety culture, the effective patient's care is guaranteed.

The further development of the model is needed in order to test the usability of it and to validate it. The author emphasizes that the vital part of the implementation of the proposed model is the proactive integration of safety management systems into organizational structure and processes as well as employers' commitment, employees' involvement in health and safety activities as well as their commitment to safety.

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4. Discussion and Conclusions

In the light of the above arguments, the present nationwide study was the first step in the assessment of safety climate and relevant factors in Estonian nursing homes. The results of the study indicate that the care workers' job is psychologically and physically stressful. Earlier, Sepp *et al.* (2015) demonstrated similar results in the Estonian nursing homes. Our results showed that low back pain is reported as the main physical problem. From the other researchers, the musculoskeletal disorders of health care workers have been attributed in the large part to the patient's transfer and lifting activities (Hignett, 2003).

The results show that the care workers evaluate their safety climate higher than the patient's safety. The care worker is a key person in the nursing home and their safety behaviour depends on their perceptions and believes towards safety as well as shared values and norms within the organization. The results indicate that when the management is committed to safety and demonstrates that safety is a value and priority for the organisation, then workers' involvement in health and safety activities, safety decision-making process and good safety practice are increased. This result is supported by Kines *et al.* (2011) who concluded that if managers are perceived to be committed to safety and to prioritize safety in relation to other goals, safe behaviour would be rewarded, and thereby reinforced. This commitment can be reflected by the training programs, management involvement in the safety committees, consideration of safety in job design etc.

The results of the present study also demonstrate that the management plays the main role in order to improve safety climate in nursing homes. These results are in a line with Griffin and Hu (2013) who have found the certain leadership aspects that influence on safety behaviour, and Flin (2007) who has also revealed that one of the essential factors to the construct of safety climate in healthcare is the senior managers and supervisors' commitment to safety.

The results of the current study show that the number of reported occupational accidents and diseases in Estonian nursing homes is low. It can be explained by the underreporting in general (due to the various political and legislative shortages in Estonia) and by the fact that risk is perceived as a normal part of care workers' job and as the people tend not to report about minor accidents and near-misses. It is supported by our study results - low score of Dim5 (questions concerned attitudes to risk taking, considering minor accidents as a part of daily routine, accepting dangerous behaviour as long as no accidents occur, braking safety rules while on time pressure). Results by Eklöf *et al.* (2014) indicate the similar: if the management do not accept to consider the risks as a part of health care workers' job, then it does not support the improvement of workplace health and safety. Alameddine *et al.* (2015) found that the main barrier for improving safety and a high-quality care is a lack of mutual trust between employers and employees, which may cause hiding of errors and near-misses. West with the colleagues (2006) demonstrated that 'high-performance human resource managements systems, which include several essential aspects - workers employment security, investments in workers training, workers participation in decision making processes as well as relevant and adequate feedback to workers - facilitates better to their health, commitment and well-being'.

As the final result of the study in progress, the researchers developed a Reciprocal Health Care Model for safety climate which refers to the importance of management's safety priority and abilities as well as peer safety communication and trust in the safety ability. This is in a line with other researchers' results: e.g. Firth-Cozens (2002) states that effective leadership and line managers' commitment play a critical role in the maintaining of a good safety culture, commitment of workers (Laschinger *et al.* 2000), trust (Prause *et al.* 2013; Stulova *et al.,* 2017) and effective safety communication (Nadzam, 2009). Additionally, workers' professionalism, cooperation and support are essential for good safety in workplace and those factors promote workers' health, motivation, learning and innovation (Kivimäki *et al.*, 2010).

Employers must pay close attention to risk analysis and risk assessment that affects both employees and nursing home clients (patients). Risk management and prevention are a proactive component of safety management.

Sources of funding

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Financing of Small and Medium-Sized Enterprises: A Supply-Side Approach Based on the Lending Decisions of Commercial Banks

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Abstract

The objective of this paper is to determine the primary issue causing commercial banks to lend to SMEs. Indeed, this paper focuses on the supply side approach to bridge the research gap in understanding the financing lacuna, which has often been overlooked due to the tendency to analyse financing gap from the demand side only. The paper discusses the nature of the decision-making process from interviews with bank loan officers utilising verbal protocol analysis to give insights into the decision making of bank loan officers in the processing of bank funding proposals. To achieve the objective of the study, we used a qualitative research approach characterised by the collection of information through semi-structured interviews with loan officers responsible for small and medium-sized enterprises of four (4) commercial banks in Cameroon. The information resulting from the transcription of interviews was analysed using content analysis. The result derived from the analysis revealed that confidence is the paramount issue urging commercial banks to grant loans to SMEs. Indeed, from existing embedded relationship overtime, commercial banks obtain valuable information about the behaviours of SMEs. Based on this information a certain degree of confidence and trust emerges causing banks to supply loans to SMEs. From the aforementioned analysis, we formulate: "**The theory of confidence lending decisions of commercial banks**."

Keywords: bank loans, commercial banks, confidence, lending decision, SMEs

1 - Introduction

Small and medium scale enterprises (SMEs) are universally acknowledged as effective instruments for employment generation and economic growth [3]. In Africa, where the private sector is not well developed, SMEs could play a critical role in stimulating development and alleviating poverty [17]. However, SMEs have very limited access to deposit and credit facilities provided by formal financial institutions [59, 28]. The vast majority of firms around the world fall into the category of micro, small- or medium-sized enterprises [8]. While SMEs thus constitute an important component of the private sector in the developing world, they report significantly higher obstacles to their operation and growth than large enterprises [30]. Among these obstacles, the lack of access to appropriate financial services, especially lending services, looms large [45]. The bank survey showed that the top reasons for turning down financial requests were the firms' poor credit history, insufficient collateral, and insufficient sales, income or cash flow, unstable business type, and poor business plan [56].

The role of commercial bank credit is very important in the development of entrepreneurship and Small and Medium Scale Enterprises [43]. Basically, loans from commercial banks are the most significant source of debt for SMEs throughout the world [35]. For instance, [36] showed that commercial banks' credit to SMEs have significant effect on economic growth by positively affecting gross domestic product. This also implies that SMEs financing is a great catalyst and a driving force for economic growth. According to [10], small businesses   using bank services to support their exports have a higher probability of being better placed in both the intensive and the extensive margin.

Financing has always been a perennial problem among SMEs. Many studies have been done to analyse the problems of SME financing. The most common approach is to analyse SME financing problems from the demand-side [33, 39, 49]. Small and medium size enterprises lie on the demand side while commercial banks lie on the supply side. This paper attempts to fill the research gap on SME financing by discussing the supply-side focusing on the practices of the supplier of credit, the environment that influences the supply of funds to SMEs. A key issue of interest in the recent literature on financial intermediation has been the role of relationship lending. Specifically, the result of some empirical findings revealed that the ability of SMEs to access bank loans depends on cordial relationship with suppliers [41]. Relationship lending is particularly common in the case of small business lending because small businesses typically rely on bank loans for a substantial part of their financing needs but tend to be informationally opaque [52]. Banks may acquire private information over the course of a relationship and use this information to refine the contract terms offered to the borrower [13]. The results of recent empirical findings proved that relationship with banks is the bed rock of the lending decisions of Commercial banks [22, 46, 47, 11]. [54, 55] called attention to distinction between impersonal lending and relationship lending. According to these authors, the former identifies situations in which banks rely on the borrowers' balance sheets in order to assess creditworthiness. The latter applies when banks engage in acquiring additional information by interacting with their customers. Much emphasis is placed upon the benefits to both parties of a 'good' relationship between banks and their small business customer [19]. For example, [48] find that building close inter-firm and bank/firm relationships enables SMEs to get preferential access to credit over their competitors and employ more debt, especially short term debt, in their capital structure. According to [66] firms are able to gain better access to bank financing at a more competitive price when their transactions with financiers are embedded in social relationships.

Information asymmetry is sought for many decades to be the main hindrance for SMEs to access bank loans [14]. According to financial intermediation literature, banks produce private information about borrower quality [25, 26, 57, 20]. Additionally, the literature contends that being in a relationship, banks source valuable information from SMEs [54, 55]. For instance, [65] suggest that loan officers play a critical role in relationship lending by producing soft information about SMEs. In the same vein, [13] advocate that banks accumulate increasing amounts of this private information over the duration of the bank-borrower relationship and use this information to refine their loan contract terms. However, the literature did not mention the nature and type of information banks source from the relationship with SMEs. Indeed, relationship alone might not be exclusively the main issue urging banks to service loans to SMEs. Apparently, the literature seems to ignore an important aspect that might nurse from a relationship between banks and SMEs, which might produce an incentive for banks to lend to SMEs. According to [53], it is important to assess the credit management practices of banks. This study attempts to bridge the gap in the literature by highlighting the type of information banks source from SMEs being in a relationship susceptible to influence their lending decisions.

2 - Literature review

The financing of small and medium enterprises (SMEs) has been a topic of great interest among both policy-makers and researchers because of the growing importance of SMEs in the economic development around the world [1]. It is revealed that access to finance by SMEs is still a major challenge impeding the realisation of the full potential of SMEs as engines of poverty alleviation, employment creation and economic growth at large [44]. SMEs' reliance on bank finance to maintain financial and operational sustainability is also globally accepted [22]. Bank lending is the most common source of external finance for many SMEs and entrepreneurs, which are often heavily reliant on traditional debt to fulfil their start-up, cash flow and investment needs. According to [7] firms with bank financing grow faster than similar firms without bank financing . While it is commonly used by small businesses, however, traditional bank finance poses challenges to SMEs, in particular to newer, innovative and fast growing companies, with a higher risk-return profile. It implies that a negative trend in the provision with bank credit may thus adversely affect growth and employment [60].

2.1 - Overview of commercial banks

Lending is one of the central activities of banks [53] from which commercial banks earn their profit [6]. Commercial bank lending is an important source of finance to many businesses especially the SMEs, which are more reliant on traditional

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debt to fulfil their business financial needs .However, lending to SMEs by commercial banks poses the most serious credit risks. Credit risk constitutes the likelihood that the SME would default on interest and/or principal payment [50]. Credit risk is a major concern to all financial institutions that are involved in lending to SMEs because the risk of default by SME clients can jeopardize the performance and survival of the lending institution. According to [6], bad loans seriously affect the performance of bank.

Commercial banks play a significant role in economic resource allocation of many countries around the globe. They channel funds from depositors to investors as well as generating the necessary income to cover their operational costs. Commercial banks' lending significantly plays crucial roles in catalysing industrialization in the economy, by facilitating the mobilisation and transfer of funds for economic production. Therefore, well-functioning commercial banks spur technological innovations by identifying and funding entrepreneurs, thus creating chances of successfully implementing innovative products and production process. One of the objectives of commercial bank lending is to improve private sector business activity, to enhance their contribution to economic growth. However, commercial banks have basic lending principles that act as a check on their lending activities [31].

In most of the developing economies, commercial banks are often unable or reluctant to grant loans to small and medium enterprises. Instead, they prefer lending to well establish businesses that have well maintained financial statements and credit histories. According to [2], formal financing to SMEs is mostly obstructed by the collateral requirement in conventional banking. According to these authors, this can be attributed to the SMEs size and age, lack of business strategy, collateral, financial information, bank requirements as well as the owners or manager's educational background and business experience. SMEs also suffer financing shortage due to information asymmetry, and their inaccessibility to debt finance forces them to use informal financing or internal capital, which may be insufficient for expansion. Bank credit is one of the major ways of addressing the challenge of inadequate funding that exists in the SME sector; however, SMEs have limited access to bank credit. Credit rationing depends on firm and entrepreneur characteristics, relationship characteristics and loan characteristics and supply conditions [42]. However, the conditions of accessing credits and their prices exert a decisive influence on the profitability and business opportunities of SMEs [64].

From the traditional view, that asymmetric or incomplete information restricts access to external funds [14]. Broadly, it is has been reported that access to credits by SMEs is hindered by the characteristics of the firm, owner/manager features, banking conditions and country-specific features [38]. In the literature a wide range of factors is sought to influence the accessibility of bank loans by SMEs. Empirically, access to finance is sought to be influenced by information asymmetry [54], banking consolidation [28], economic and financial crises [24, 51], ownership structure of business [18, 69], bank internal policy such as the demand for collateral and high interest rate charged [38, 29], liquidity ratio of banks and credit risk [40], characteristics of both the firm [1], reputation of the firm [7], functional distance between bank headquarters and branches [63], quality of financial statement [21, 5], social networks and embedded relationship between a firm and its bank [34, 32, 58, 4, 41, 15, 46], economic performance or profitability of firms [37, 62], savings habits of individuals [42], Access to information [67], age, gender, educational and experience of the entrepreneurs [30], bankruptcy codes [61, 68], banking system [12], economics conditions [64], and financial and legal system [23]. Indeed, the results of previous empirical findings showed that a multitude of factors explain the possibility of SMEs accessing bank loans. None of these studies highlighted the specific features of commercial banks influencing their decisions to grant loans to SMEs.

3-Research question

What determine(s) the decisions of commercial banks to grant loans to SMEs?

4-Methodology

We adopted a qualitative research methodology characterised by semi-structured interviews with loan officers of commercial banks in the city of Douala-Cameroon. The interviews were done at the convenience time of the loan officers prior to a rendez-vous. Indeed, we interviewed loan officers responsible for SMEs of four (4) commercial banks operating in the city of Douala. Averagely, each interview took 40 minutes. All the interviews were conducted within the premises of the bank and at the convenient time of the loan officer (during break or closing time). However, access to the banking institutions was constraints by a written application. Nonetheless, the respondents were asked question about issues characterising their decisions to grant loans to SMEs. The interviews were recorded using a mobile phone, transcript and analysed using content analysis.

5- Presentation of the interviews with bank officers

Participant 1 – BICEC

A - Characteristics of SME

A.1- Collateral

Collateral is not the major issue causing bank to grant loans to SMEs. Specifically, the bank finances profitable projects. Most often, the bank should be aware of the activity it is going to finance. Specifically, collateral comes as a last resort; that is, whenever borrowing conditions have been fulfilled. Indeed, collateral is being mentioned when all possible eventualities related to lending conditions have been considered. Actually, we think of the means to recover the loans; supposedly, the business experiences a downturn. Generally, the demand for collateral is intended to limit possibility of credit risk stemming from business failure.

A.2 - Accounting documents

Accounting documents make it possible to forecast the activity, and to have an idea on the potential of SMEs to reimburse loans. However, 9 out of 10 financial documents prepared by SMEs are tricked. Somewhat, SMEs have three distinct financial documents with specific objectives. For example, there might be respective balance sheets for the company, the tax authority, and the bank. However, we do not limit our analyses exclusively on financial documents, but we go further to apprehend the reality on the field. The essence is to reconcile figures and the reality of the enterprise. Sometimes, on the paper everything is painted white, but does not reflect the observations on the field. As a result, accounting documents do not guarantee the accessibility to bank loans.

A.3 - Sector of activity, age, size and location of SMEs

We do not have any preference on a particular sector. We are interested in the reliability of the sector and current economic trends worldwide. Likewise, there are sectors that we cannot take the risk to service loans, because it is affected by severe economic downturn. Besides, the activity should be profitable enough to attract financing. We always have an ear open to the world to obtain recent business tendency in order to be aware of fertile sector to invest. The location of SMEs is not important. Meanwhile, wherever the location of any SME, we go to the site in order to perceive the reality at the spot. Therefore, location is not a significant issue concerning the lending decision of the bank. Similarly, the age and size of the enterprise do not matter as well. Basically, it is the activity that is essential.

A.4- Network and relationship

The relationship between bank and SMEs gets established and strengthened in the long-term. However, relationship might induce a certain degree of confidence caused by the behaviour of the client. Explicitly, in any relationship, the bank sources valuable information about the borrower's behaviour (character) susceptible to induce trust and confidence between both parties. For instance, confidence may occur when the borrower has initially honoured debt obligations within the deadline. In addition, a customer who has been loyal and honest with the bank for many years may access credit even without any collateral. Meanwhile, there are people who demand for loan immediately they have opened accounts; whereas, the bank has not appreciated their behaviours. Yet, the bank does not trust them, and may not take the risk to grant credit.

B - Profile of the entrepreneur

The profile of the manager provides valuable information to the bank. For example, is the borrower married? If yes, which marital regime? Explicitly, the level of education, experience, skills, expertise and competence of the managers are important indicators to be considered in lending decisions of the bank. Indeed, the level of education and competence in the field are valuable information not to be neglected. On the other hand, if the owners are not competent, we may be interested in the quality of the management team surrounding them. As regards to age, supposed the owner is old, we are interested in the implication of a family member in the management so as to assure progressively the succession of the enterprises.

Generally, SMEs lack managerial skills and proper training. In most cases, there is lack of distinction between the property of the owner and the assets of the firm. In fact, there is absolutely confusion between business properties and owner's assets. Additionally, a burgeoning of SMEs are family business entities, and most of the work is provided by inexperienced family members. At times, the borrowed funds may not be used for the required purpose. The funds may be allocated for other uses. Therefore, the technical knowledge and experience of the managers are of high significance. Imperatively, it is

important for the banker to know if the manager is competent enough to manage the activity of the business. Most often, entrepreneurs are not trained from the base. They might acquire entrepreneurial skills, but still lack managerial competence. Sometimes, they externalise their accounting services, but they themselves are unable to understand and interpret the content of accounting documents. Basically, the problem of SMEs is situated at the level of training. The owners of SMEs ought to be trained for them to acquire the necessary skills to manage their business.

Participant 2 – Société Générale de Banque au Cameroun (SGC)

A. Opinion about SMEs

It is a booming and rapidly expanding sector. It is the sector that occupies the lion's share of the economic fabric in Cameroon at the moment. For the case of SMEs, we observed a precarious organisation style to a semi-developed one. A sector that should be prioritised in terms of sustainable development and financial support schemes. Commercial banks, especially, SGC has resolutely turned towards the financial supports of SMEs in a regular basis. However, there exists a proliferation of SMEs with a very short life-span of maximum 5 years.

B. Characteristics of SMEs

B.1 - Collateral

In Cameroon, the legal collateral recovery procedure is cumbersome. Consequently, collateral comes as a last option in the lending decisions of the bank. Primarily, we should be assured that the activity is profitable enough to be confidence of recovering the loan. However, the demand for collateral is to safeguard against any risk of default related to the activity of the enterprise. Therefore, collateral makes it possible to recover at least the invested capital prior to any loss. Initially, the paramount preoccupation of the bank is to diagnose the profitability of the activity. Afterwards, we begin to think about possibility to recover the loan, supposed, the business infringes bankruptcy. Probably, an activity sought to be profitable today might encounter severe crises. From this perspective, collateral makes it possible to recover the loan of savers. Obviously, collateral is necessary to cover the bank from any risk allegedly occurred from the activity of the enterprise. Specifically, collateral is not a determining factor in the lending decisions of banks.

B.2 - Accounting documents

Most often, the bank develops a specific preference on SMEs practising book-keeping. Financial documents are supposed to reflect the reality concerning the image of the enterprise. Meanwhile, in many occasions figures are painted in white. Despite the figures communicated by the borrower to the bank, we check thoroughly whether they correspond with the reality of the firm. Therefore, it is important for SMEs to keep records of their activities, which could be of help in the demand for bank loans.

B.3 - Sector of activity, age and size of SMEs

Primarily, it is important to finance a project whose activity is profitable. Generally, the life span of most SMEs is at most 5 years. Therefore, we are interested in the quality of the activity undertaken by the business. As a result, we should know if the project is profitable before deciding to engage funds. As a result, borrowers should have a profitable activity whenever they aspire to seek for bank loans. Moreover, we have to be aware of the fundamental orchestrating the demand for loan. The bank is entitled to minimise the risk of any loan delinquency, because the money constitutes the savings of individuals. Furthermore, there is lack of preference on a particular sector of activity. Generally, we provide financing to an enterprise whose activity is sought to be booming; irrespective of the industry (sector) in which it belongs. However, there are sectors that the bank is prohibited to allocate funds; albeit, their immense profitable characteristics. For examples, banks might not sponsor terrorism or the fabrication of arms. Conclusively, size, age and business location are not decisive factors in lending decisions of the bank. Above all, it is the activity that we finance. However, we do not finance start-ups.

B.4 - Network and relationship

The bank provides financial supports to someone whose activity is known. Initially, there should have been an existence of a cordial relationship between the bank and the person seeking for finance. Besides, the person should be a customer of the bank. On the other hand, the bank must be familiar to the activity. In some situations, we refuse to grant loans to borrowers with consistent collateral of about 1 billion, simply because the bank is not acquainted to them. In fact, the pledging of collateral is necessary, but not sine qua non in the lending decisions of banks. The bank is supposed to know the person with whom it intends to deal with very well, and have a good mastery of the activity as well. Additionally, the way

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the borrower manages relationship with business partners is an important indicator to the banker. For instance, the bank might not take the risk to transact with individuals who do not settle their invoice regularly with suppliers, do not pay salaries to workers and lack courtesy business relationships with clients.

C – Profile of the entrepreneur

The technical knowledge of the person seeking for loans is appraised by the bank. Generally, granting loan to SMEs is an activity in which both parties mutually benefit. The person asking for credit is supposed to have a minimum level of competence in managing the business. Therefore, it is vital that the manager be armed with appropriate managerial skills and business knowledge. For, we do not get up one morning and start a business for which we do not have reliable skills or experience. Thus, we are interested in the background of the owners of SMEs. They should have the necessary background and experience to manage a business venture. Most often, when the owner is implicated in the activity of the business, it substantiates the impression that the bank has towards the enterprise.

In a nutshell, the profile of the entrepreneur is an indicator, but not a determining factor in the lending decisions of the bank. Sincerely, the profile of the owner is not an institutional benchmark to provide judgement on the credit worthiness of borrowers. Meanwhile, they provide complementary information likely to influence the lender's judgement concerning the creditworthiness of borrowers. Indeed, they are alerting factors relative to the lending decisions of the bank. However, if the owners lack experience, we are interested as well in the background of the management team. There is likelihood that the owner might not be competent, but is surrounded by a team of highly qualified persons. Furthermore, the age of the owner does not matter. Supposedly, the owner is old; we are interested in the implication of a family member in the management of the business, which marks a progressive succession of the firm prior to the death, inaptitude or retirement of the founder. The main issue here is to verify whether succession of the enterprise is prepared progressively. On the other hand, sex, age and religious belief of the owners are not important. However, such features may cause the bank to quest for further information about the borrower.

Participant 3 – Cameroon Bank of Small and Medium-sized enterprises (BC-PME)

A. Opinion about SMEs

It is a dense sector with high potential of development and growth, and susceptible to develop the economy of a country. Large companies are few; therefore, the economy of a country can be developed by the SMEs' sector. Meanwhile, it is a sector that enhances a sustainable development and promotes entrepreneurship. However, they are less structured in terms of organisation, which makes it difficult to either maintain proper accounting records or to distinguish the owners' wealth from the assets of the business. Most often, people get involved in entrepreneurship based on opportunity. Later on, it is from it that other skills are discovered and developed gradually.

B. Characteristics of SMEs

B.1 - Collateral

Generally, we avoid talking about collateral to borrowers. Many SMEs complain of collateral as the major obstacle to access bank loans, which is not true. Specifically, the reliability that the loan will be repaid is vital for the bank. Most often, it is the owners of SMEs, who deliberately propose to offer any collateral. Actually, we firmly belief collateral is not going to pay back loans. For example, a building pledged as collateral would not pay back the loan. Moreover, the court procedure to claim the collateral is not an easy task. It requires bottleneck and cumbersome court procedures; which might sometimes involve time and money costs. Imperatively, before granting loans, borrowers are constraints to satisfy pre-defined lending conditions. Later on, since there is no zero risk avoidance in business, the bank has to hedge against likelihood of loan delinquency by asking for collateral. Primarily, the project is supposed to be "bankable". Sometimes, we spare some borrowers from pledging collateral, whenever all the prerequisites related to lending conditions have been fulfilled.

B.2 -Accounting documents

Keeping good accounting records is important for both enterprise and bank. Financial documents are important for decision-making. These documents help to survey the financial health of the enterprises and the potential to pay back loans. Most often, SMEs dissimulate the figures on financial statements submitted to banks. Despite the fake figures, we still rely on them to compute financial ratios. The essence is to be able to establish the conformity of the figures in relation to what is being observed on the site. Thus, working in a context of information asymmetry is inherent in the duty of the bank.

B.3 - Sector of activity, size and age of SMEs

There are high-risk sectors for which the bank cannot take the risk to grant loans. Really, the bank seeks for sector with profitable activities in order to invest. Meanwhile, there are sectors for which the bank cannot supply funds such as weapons, drugs, etc. The size (in terms of turnover and number of employees) and age of SME express notoriety in business. Principally, age signals the famousness of the enterprise. However, they are minor indicators relative to the lending decisions of the bank.

B.4 -Network and relationship

Anglo-Saxons have an essential element that they call character. It is a non-quantifiable element, but is vital in any lending decisions of the bank. Sincerely, the bank might reject the application of borrowers simply because it lacks confidence in them. Indeed, many loans are refused to be granted, because of lack of trust and confidence towards the persons. In fact, confidence emerges from relationships with SMEs and is a paramount issue in the lending decisions of the bank. Most often, confidence gets strengthened with time from the little actions carried out by clients. Sometimes, desiring to quest for supplementary information about the behaviour of the borrower; we go further to seek information from the entourage of the borrower (clients, suppliers, workers, spouse, neighbours, etc.). Thus, it is important to critically assess the behaviour of the borrower even beyond business framework. Obviously, it is risky to grant loans to a borrower who is unable to meet financial obligations with suppliers, workers, and lacks cordial relationship with customers. For example, the groaning of suppliers and workers might testify that the borrower does not have pleasant relationship with business partners. Bank might not take the risk to grant loans to such an individual. Thus, the character of the borrower is an important issue, which is not supposed to be neglected in the lending decisions of the bank.

C –Profile of the entrepreneur

We are interested in the implication of the owner in the "life" of the business, technical knowledge and experience as well. Generally, a reliable business background enables the owner to be involved in the activity of the business; instead, to concede the management to a third party. If the owner is not competent, we are interested in the background of the management team surrounding the owner. Sincerely, the owners might not be competent, but they are surrounded by a team of highly skilful and competent individuals.

The age of the entrepreneur is important in two dimensions: firstly, the owners may lack experience when they are too young. Secondly, the owners may lack enough mobility when they are old. Concerning the age of owners, we recommend borrowers to establish a life insurance as a form of collateral for the bank. Indeed, majority of SMEs are sole ownership business entities, which mainly rely on a single individual. Consequently, the succession plan and delegation of power is important to avoid demise of activities owing to the inability or death of the owner. Therefore, it is significant to prepare a gradual succession plan of the enterprise.

Conclusively, structuring and organisation is a major obstacle to the activities of SMEs. There is lack of managerial capacity on the side of the managers; especially, the search for market opportunities and the negotiation of contracts with suppliers. As a result, SMEs should be accompanied regularly in various aspects related to business organisation and entrepreneurship. Additionally, the managerial capacity of SMEs is supposed to be strengthened.

Participant 4 – Afriland First Bank

A. Opinion about SMEs

The SME sector is an "engine" of economic growth and development. The economic tissue of Cameroon is dominated by 90% of SMEs. It is an important driver of wealth creation in a country. Importantly, a country which aspires to develop should concentrate resources in the SMEs' sector as well.

B - Characteristics of SMEs

B.1- Collateral

Most often, we do not emphasise on the provision of collateral, but in the credibility and the reliability of the project. Thus, we have to be sure that the project is qualified to be financed. Sometimes, people bring a guarantee of 700 million CFA for a loan of 2,000, 000 million CFA, but we refuse to grant it to them. The court procedure to claim collateral is cumbersome. Generally, when a borrower encounters difficulties to pay the loan, we get closer to him in order to renegotiate the terms of

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the contract; instead of, brandishing the collateral for auctioning. Most often, it is our pride and publicity that a firm succeed with our loan.

B.2 - Accounting document

In the case of SMEs, keeping regular accounts is sought to be impossible. As a result, it becomes difficult to appraise their real financial needs, and the calculations of financial ratios as indicators that inform the financial situation of the enterprise. However, such tasks are difficult to undertake, since the majority of SMEs do not practise standard accounting system. In addition, most SMEs do not practice standard accounting system resulting to the establishment of Financial, Statistical and Declarations documents. Indeed, less than 20 per cent of SMEs keep regularised standard financial documents.

B.3 -Sector of activity, size and age of SMEs

We have to make good investment decisions because they are sectors, which are already saturated. However, industrial location is not important. Specifically, we look at both the project and the economic environment as well. The age of SMEs expresses notoriety in the sector of activity. It is obvious that ageing SMEs might have been able to sustain their activities from inflicted tribulations, have acquired enough experiences in the sector, occupied market position and became famous. As a result, the bank may have a particular consideration on old SMEs than new or start-ups. On the other hand, the size of SMEs does not matter in making lending decisions.

B.4 -Network and relationship

Relationships with SMEs are a capital issue in the lending decisions of the bank. Undoubtedly, business relationship might cause the bank to finance an activity without demanding for any collateral. Basically, confidence and trust escalate with time prior to a solid social network with customers. Sincerely, confidence is the bedrock of most lending decisions of the bank. Primarily, we do not lend to individuals whom we lack confidence. Therefore, it is the foundation of any lending decisions.

C. Profile of the manager

In one way, decisions to supply funds to SMEs depend on the outcomes of the financial analyses, and the perception the banker has about the borrower. Indeed, to finance the bank looks at certain characteristics of the owner, or the management team. It implies that, the banker is supposed to have a suitable perception about the character of the borrowers before deciding to grant loans. Sometimes, the process related to credit analyses process might stop prematurely; if the bank gets a bad perception about the borrower. In addition, we focused on the level of experience and judicial record of the borrower. The educational level is less important; meanwhile, the experience of the founder is vital. The bank cannot give money to someone who does not have experience in the business. Thus, financing a business being managed by an inexperienced individual is a risk to the bank. Generally, managers are poorly trained, which is observed in the ways of compliling a file relative to the application of the loan. In most cases, the training of SMEs is a major problem to the evolution of business. For example, SMEs may avoid a downturn in business, but lack negotiating potentials with third parties. Particularly, lack of cash management capacity is a huge obstacle to the success of SMEs. In most cases, there exist a mixed-up of the owner's wealth and those of the enterprise. As a result, it becomes difficult to assess business assets separately from owner's wealth.

Fundamentally, gender preference in lending decisions is out-dated. Just like men, women are now getting more involved in entrepreneurship. There are many women in the loan portfolio of the bank. Similarly to men, they are very enthusiastic and dynamics in business as well. The religious belief and ethnicity of the borrower are not important. However, the age of the owner involves risk that is covered by insurance companies. Marital status is not important, however, we may question on the matrimonial regime of the borrower. Nonetheless, it is subjective, but not factual.

In conclusion, plentiful of SMEs suffer from an inappropriate organisational structure, incompetence and unfavourable business environment. Indeed, they suffer from an organisational deficit, with a single person doing all the jobs in the enterprise and may not want to relent some of his authority. They lack business visions and management capacity. SMEs suffer as well from unfavourable business climate that seriously hinders their development and growth. In fact, less than 15 per cent of SMEs have designed a proper business organisational structure. As a result, the problem of SMEs lies in the angle of technical skills and competence. The owners of SMEs ought to be trained for them to acquire the necessary skills to manage their business.

6-Analyses and discussion of interviews with bank officers

The outcome of the interviews with loan officers revealed that the challenges SMEs face to access bank loans is partially caused by both their organisational structures and the background of the entrepreneur. According to banks, most SMEs lack reliable organisational structure, appropriate managerial skills, and elementary business knowledge. In most cases, the wealth of the owners is managed simultaneously with those of the enterprise. Such a management style makes it very difficult to properly appraise owner's property from the wealth of the business.

From the above analysis, we observed that commercial banks take into consideration primarily the quality of the project. Contrary to opinions of most SMEs concerning collateral as a core issue to acquire bank loans, it results from interviews with bank officers that collateral is insignificant in the lending decisions of banks. Obviously, it is the activity that is being financed, but not the collateral. Thus, banks are interested in the capacity of the activity to generate substantial cash-flows such that firms honour their financial obligations. Therefore, banks are not interested either in the collateral to be pledged as security or the rate of interest accepted by the borrower. Sincerely, the project ought to be profitable enough in order to pull external funds. Most often, the court procedure to realise collateral necessitate a lot of time and cumbersome procedure. Sometimes, the loan application of some borrowers is rejected despite the availability of consistent collateral. Nonetheless, collateral might serves as a defence line to the banker. However, collateral is not preeminent in lending decisions of commercial banks. Fundamentally, the project is supposed to be profitable for it to attract financing.

Fundamentally, lending decision of commercial banks is based on confidence. Indeed, from the existence of a relationship, a certain degree of confidence emerges between banks and borrowers. Most often, embedded in social networks, confidence stems from the information the bank source relatively to the behaviour of a borrower. According to banks, it is the foundation of any lending decisions. It implies that, commercial banks grant loans to SMEs on the basis of confidence. Sincerely, banks insistently apprehend the character of borrowers thoroughly prior to any lending decision. For example, [48, 49] contend that for a small firm, social networks are of vital importance for broadening the availability of financial sources. However, the existence of a network and relationship is a result of a long-term dealing between banks and SMEs.

Accounting documents enable the determination of financial indicators, which are sine qua non to make lending decisions. However, submitting financial documents does not assure absolutely the accessibility of bank loans. Firstly, banks do not trust the financial documents communicated by SMEs. Secondly, SMEs lack appropriate skills to carry on standard accounting practices resulting to the establishment of Financial and Statistical Declaration documents. Additionally, banks stipulate that SMEs establish accounting documents according to pre-envisaged objectives. For example, the intention to lessen tax burden, might urge SMEs to manipulate figures on the financial documents. Additionally, they might adjust figures on accounting documents to capture the interest of banks. As a result, figures might be altered to dissimulate the poor financial health situation of the enterprise. Accordingly, banks acknowledge that many of the accounting documents submitted by SMEs are plagued with flawed figures. Notwithstanding, despite the unreliable nature of financial documents, banks always strive to compare the reality on the field with the figures on financial statements.

Furthermore, the profile of the entrepreneur is insignificant; however, it is a non-financial indicator that banks do not neglect in their lending decisions. Sometimes, banks are interested in both the age and experience of the entrepreneur. Apparently, a young entrepreneur may lack experience; meanwhile, an old one may lack enough mobility. On the other hand, banks are interested as well on the succession plan wherein the owner/manager is sought to be old. Accordingly, banks wish to know if the owners implicate members of the family in the management of the business; so as to assure a gradual succession of the enterprise. Moreover, the banks are interested in the experience of the entrepreneur. Supposedly, entrepreneur lacks experience, banks become interested in the experience and competence of the management team of the business. Most often, banks have high preference on SMEs whose owners have experience and implicate regularly in the management of the business; rather than, conceding it to a third party.

7. Conclusion

We observe from interviews with bank officers that commercial banks highly value the character of borrowers in their lending decisions. In the course of a relationship, banks readily obtain valuable information concerning the behaviour of borrowers. In fact, there is likelihood that relationship with customers nurtures a climate of trust and confidence that banks use as a tool in their lending decisions. Specifically, banks grant loans to SMEs based on the framework of confidence, which evolves from contact overtime between both parties. Sometimes, despite the existence of substantial collateral, it is only when banks have confidence in a borrower that they take the risk to supply funds. Thus, the information banks obtain from SMEs while in a relationship is related to the behaviours of borrowers. Consequently, the appraisal of the behaviours of borrowers

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induces a certain degree of confidence providing an incentive for commercial banks to lend to SMEs. Such a lending practice observed towards commercial banks result to the formulation of: **"The theory of confidence lending decisions of commercial banks".** This theory stipulates that the behaviour of SMEs overtime in a relationship with banks provide a certain degree of confidence and trust, which account for the decisions of banks to grant loans to SMEs. Indeed, being in a relationship, banks observe the behaviour of SMEs explaining their lending decisions. Therefore, the behaviour of SMEs towards commercial banks is sine qua non to apply and access bank loans. As a result, SMEs might find their demands for loans rejected despite the availability of reliable and consistent collateral; because, banks do not have confidence on them.

The most common findings in the extant literature are that large institutions have comparative advantages in transactions lending to more transparent SMEs based on hard information, while small institutions have comparative advantages in relationship lending to informationally opaque SMEs based on soft information. The relationship lending technology, in contrast, is based significantly on "soft" qualitative information gathered through contact over time with the SME and often with its owner and members of the local community. The soft information may include the character and reliability of the SME's owner based on direct contact over the time by the institution's loan officer, the payment and receipt history of the SME gathered from the past provision of loans, deposits, or other services to the SME by the institution; or the future prospects of the SME garnered from past communications with SME's suppliers, customers, or neighbouring businesses [16]. According to [29], trust has the potential to influence decisions and behaviour. Confidence might be expected to reduce agency costs, perceived credit risk and thus influence credit availability by reducing the request for personal collateral. Trustworthiness is associated with three attributes of SME owner managers' namely; ability, benevolence and integrity. This presumes that lending is premised on a lack of trustworthiness, which relies on an opportunistic assumption of human behaviour [9, 27]. For instance, [34] argue that a relationship based on trust is a better strategy to improve SMEs' access to finance than the establishment of longer or more concentrated relationships

8. Recommendations

Indeed, from the lenders point of view, the fact that entrepreneurs lack appropriate managerial skills and competence has been cited as one of the challenges constraining SMEs to access bank loans. As a result, proprietors of SMEs should participate in educational seminars, forums and workshops in order to acquire reliable managerial skills. Thus, training programmes and workshops would help to reinforce the managerial capacity of managers. Specifically, most entrepreneurs engage in entrepreneurship because of current opportunities. Meanwhile, they lack proper management skills and competence. However, banks prefer to lend to SMEs whose entrepreneurs are both competent and experienced. Besides, banks have a high preference on SMEs whose owners are implicated in the activity of the business. Therefore, it is important for entrepreneurs to acquire the necessary skills for them to implicate in the management of their businesses.

Owing to the fact that confidence is the bedrock of the lending decisions of commercial banks; SMEs should highly develop their social capital to establish and strengthen social network with banks. For instance, they should devise strategy to develop and consolidate relationships with banks. Indeed, the existence of solid relationship is essential for both banks and SMEs. In fact, SMEs are sought to be informationally opaque; therefore, from the relationship banks acquire information about their behaviours, which might be an incentive to grant loans. Thus, it is vital for SMEs to foster relationship with banks that is important to access bank debt.

In fact confidence is susceptible to be generated, whenever, SMEs open accounts with banks different from that of the owners. The fact that there is confusion between the accounts of the owners and that of the firm might shed doubts on the proper judgement that banks may have on the quality of the business. Thus, opening separate accounts discloses valuable information to banks about the quality of the business. As said before, confidence and trust get evolve over time when both parties deal together. As a result, it is important for SMEs to operate accounts different from those of the owners such that it consolidates the perception banks have on their activities.

SMEs dominate the economic fabric of Cameroon, which constitutes an enormous opportunity for the banking sector. Banks may benefit a lot when dealing with SMEs. There is likelihood that the volume of banking activities increases when dealing with SMEs. Large enterprises are few; therefore, banks should devise strategies in order to attract a pool of funds from SMEs. As a result, banks should assist SMEs in their daily operations by giving them advice on issues related to management. For examples, banks may organise workshops, training seminars, straighten business networks with SMEs, and organise educational forums on the elaboration of business plan and the practice of bookkeeping. On the other hand, banks may accompany start-ups in their vision for them to grow. Conclusively, further research works should assess quantitatively the empirical prediction of the aforementioned theory by using a wide range of commercial banks locally or internationally across the globe.

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The Effect of Economic Variables on Banking Credits: An Empirical Study of Algeriancommercial Banks (1997-2017)

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Abstract

The study aimed to test the effect of deposits, real interest rate, population and economic reforms on the Banking credit fromAlgeriancommercial banks represented by the size of credit facilities. The study used annual data for the period from 1997 to 2017. Where the Multi regression model was estimated using a method of Ordinary Least Squares OLS. Results of the analysis showed that there is a positive relationship with a statistically significant between the credit facilities and the deposits and the variable of economicreforms, while the real interest rate and population size have been linked by significant negative relationship.

Keywords: Credit, Credit Facilities, Deposits, Real Interest Rate, Population, EconomicReforms, Commercial Banks, OLS, Algeria.

Introduction

Funding is a key element in the composition of capital to developing countries in general, and the funding process depends primarily on the policies used to fill it and direct it to areas of economic development. The banks and financial institutions to blockessential and important in the funding process, as the banking sector a major role cannot be ignored in the process of economic development, as it is the most important portals that exercised by the State in which its economic policy, especially in light of economies that are based on bank financing, which is known leveraged economies such as Algeria.

The evolution of the banking sector, a key indicator of the vitality of the economic situation. Reflected the role of banks in the business sector clearly through their banking services are many and varied greatly help in promoting economic and financial operations and business. However, the real role of commercial banks, measured by the performance of its primary function of financial intermediation, accepting deposits and granting loans, which are determined in the context of the credit policy of the Bank.

And parallel with it was the duty of the Commercial Bank to maintain a balance between lending and borrowing to maintain continuous liquidity. This balance is difficult to provide, because of the risk of non-payment, which assumes control at each stage of the process of credit.

The fact that all countries place restrictions on the credit activity of commercial banks in order to limit the scope of freedom in the creation of credit, since a credit policy that is consistent with the objectives of economic policy may hinder the development policy, particularly through the inflationary pressures or deflationary, which may caused, which adversely affect those goals.

It is here shows the influence of monetary policy on credit policy. This effect is different to varying degrees, from one country to another and from time to time, in the ability of monetary authorities to control credit through the various tools included in the monetary policy (both quantitative and qualitative).

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Based on the importance given to the activity of the financial system and banking has emerged the need to identify the most important core activity of granting credit facilities, and the policy governing this activity and it can be summarized as the problem of the study the following question:

What is the impact of each of the volume of total deposits, the real interest rate, the population and reforms in the economic and monetary policy on bank Credit granted by the Algerian banks for the period (1997-2017).

A-Importance of the study:

Importance of the study lies in its treatment of a topic of great importance in the Algerian economy, through the important role that is characterized by the Algerian commercial banks to finance investments and accelerate growth. The significance of the study in the time period, characterized by the recourse of public authorities in Algeria in an effort to activate finance market in general, and market banks, especially, to the reform measures are important in the financial and banking sector, taking into account the profound changes taking place in the national economy and international alike. The main objective behind this is to develop the effectiveness of banks and their adaptation to the new economic reality. After the issuance of the Code of Money and the loan is known that phase shifts, at least from the regulatory and legislative, where he became the Bank of Algeria imposes stringent larger, either in the financing of public expenditure(financing the treasury deficit, public), or in the refinancing of commercial banks with liquidity, as well as in apply the rules of caution, and therefore emphasis in bankingsupervision, anxious to conduct credit controls reduce the impact of the volume of loans granted on the rates of inflation.

B- Objectives of the study:

The study aimed to:

1 - Track the evolution of the volume of credit facilities granted by commercial banks for the period (1997-2017).

2 - To analyze and measure the impact of economic variables represented in each of the total volume of deposits, the real interest rate on lending, the number of people, circumstances and economic reforms on bank credit provided by commercial banks represented by the size of the Algerian credit facilities.

3 - Access to a standard form for expressing the determinants of bank credit in the Algerian banks.

4-To shed light on some aspects of relevant research.

C- Hypotheses of the study:

To achieve the objectives of the study, make the theoretical concepts and studies relevant formulation of hypotheses of the study are as follows:

1. There is a positive impact for each of the total volume of deposits, the number of population and economic reforms pursued by Algeria in the banking sector, bank credit extended by commercial banks in Algeria.

2. No negative impact to the real interest rate on bank credit granted by commercial banks in Algeria.

For that, the study tested the effect of a range of economic variables reflect the determinants of bank credit to banks, where it should be noted that the study was limited to test the effect of four economic variables without addressing the determinants of particular characteristics of each Algerian banks separately, owing to the lack of data in this regard. To achieve this, it addressed in the first part of the study of the theoretical framework, while the remainder consists of the study of four parts, Part II contains a description of the data and methodology of the study, and the third part presents the results reached. The last part includes conclusion and some recommendations.

C-Theoretical framework and previous studies

1 - Definition of credit policy, and bank credit

Reflect the policy of credit (Credit Policy) of the bank for collection, but SOS, standards and conditions that are taken into account in the framework of credit policy the public to be determined by the central bank does not management credit portfolios in order to achieve economic growth target and to provide adequate returns to the banks the lowest cost and lowest risk possible (www.cbl.gov .ly). The bank credit (Banking credit) Fisher (Lloyld, 1986) that is synonymous with the word religion, religion's commitment to pay in the future, and credit is a claim to receive payments in the future. And considered (Vaish, 1979) in the definition referred to in (Abdullah, cruiser, 2006.167) that the purchasing power of non-

expendable income, but created by the banks of the income of the depositors is the exploiter and the applicant. Thus Valatman a loans and cash and non-monetary, which are awarded to individuals and legal entities of public and private for the provision of adequate safeguards and pledged to the borrower to pay that the funds and benefits, commissions and expenses due from it at once or in installments on due dates,

2 - an overview of the evolution of the Algerian banking system and the reforms

In an effort to activate finance market in general, the market, especially banks, public authorities have in Algeria to an important reform measures related to the economy in general and procedures related to financial and banking sector in particular, have over the development process in two stages Algeria witnessed a lot of attempts to reform: The first phase (from 1997 to 2007): This phase is characterized by moving from a planned to organize an economic organization of another economic subject to market forces, as defined by Algeria during this period a number of fundamental reforms and has resorted to international financial institutions in order to achieve economic stability. Standby credit agreements marked between 1989 and 1994 with the World Bank. (Bouzaydh, 2006)

Phase II: (after 2007), which saw the start of Algeria out of the security crisis that gripped the country during the nineties, and saw the continuation of reforms and complete the transition to a market economy. Algeria has seen the so-called Economic Recovery Programmed (2001-2004), which focuses on institutions and agricultural production activities and the other, also dedicated to promoting the public interest in the field of irrigation, transport and facilities, improving the standard of living, local development and human resource development. (Bouzaydh, 2006), in addition to the program of support for economic growth in 2005 marked the revitalization of intensive economic development was accompanied by the restoration of security.

The Algerian banking system saw many of the reforms represent the most important reform that is touching and a lot of his work and his way to adapt to new economic reforms, which is guaranteed by Law (No. 90-10) on the cash and loan, one of the basic legislative acts, which included all matters relating to cash and the loan whether it's legal form of banks, the activities of banks, banking supervision, and standards of management ... etc.

The law includes three levels of authority to regulate the job bank, the Monetary Council and the loan, which has the broadest powers to manage the affairs of the Central Bank and the issuance of banking systems related to, inter alia, the issuance of money and the terms and conditions of banks and financial institutions and private coverage and distribution of risk and the liquidity and solvency to the other. Bank of Algeria, select this law, the Directorate of the Central Bank, which consists of a governor and three deputies and the Central Bank has a number of powers including the issuance of securities and the conduct of monetary gold reserves and foreign currency and can use monetary policy tools such as restoring the discount, the compulsory reserve and money market ...etc(Bahloul, 1993) and the Banking Committee, to monitor the implementation of rules and regulations governing banks and financial institutions and to punish violations installed.

The impact of Money and Credit to the Algerian banking system appears in the status conditioning and public banks with this law, and to complete the conditions for the adoption of the Bank of Algeria, and between these conditions: a minimum of social capital that must be provided by banks. Emerged as a financial and banking institutions, including many new Khalifa Bank, Arab Bank, Rayyan Bank upgrade and Real Estate Fund and the establishment of the National Fund for the establishment of housing and mortgage finance company, etc. ...

Hand the credit after the issuance of the Code of Money and Credit knew the process of granting credit some shifts, at least from the regulatory and legislative, where he became the Bank of Algeria imposes stringent larger, either in the field of financing public expenditure (financing deficit Treasury public), or in the field of refinancing of commercial banks liquidity, as well as in the application of the rules of caution, and therefore emphasis in banking supervision, anxious to conduct credit controls reduce the impact of the volume of loans granted on the rates of inflation.

Economic factors affecting the bank credit provided by commercial banks:

The proportion of bank credit to GDP indicator of the evolution of the banking system (see the study Colombage, 2006) and study (Liang and Teng, 2006). Where the affected bank credit provided by commercial banks represented a net domestic credit (the sum of net credit to the public sector is not Financial and directed credit to the private sector, and other accounts (www.worldbank.org)) a number of economic factors, among them what the study tested the degree of impact as follows:

1. Total volume of deposits (Deposit): Index is one of the most important deposits of indicators that reflect the evolution of the banking system, this indicator also reflects the capacity and effectiveness of the banks to attract deposits. And expresses the ratio of total deposits to GDP on the degree of financial deepening ((Christopoulos and Tsionas, 2004, is also considered as an indicator of financial development (Liang and Teng, 2006). Is associated positively with the size of the credit. (Ameri, 2003)

2. The real interest rate on lending (Real Interest Rate): the real interest rate is the interest rate loan that is adjusted for inflation as measured by the GDP deflator ((www.worldbank.org. Where affected by Algerian banks in the process of granting credit through its cost tool the interest rate on lending, where used as a tool of commercial banks within the parameters of monetary policy to reduce or increase the size of the credit. and negatively associated with the size of credit. (Ameri, 2003)

3. Population (Popularion): The level of aggregate demand for domestic credit, and positively associated with credit. (Atoum, 2002)

Shown in Figure (1) represents the evolution of the volume of credit facilities and the volume of bank deposits, and figure (2) the development of the real interest rate on the ticks for the period ten years.
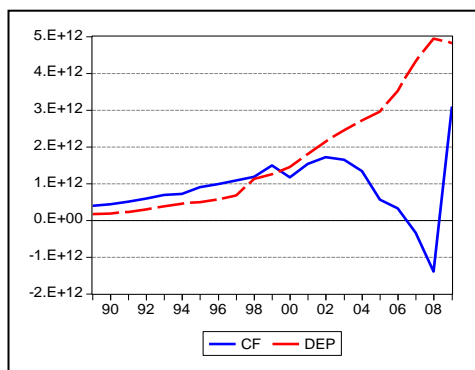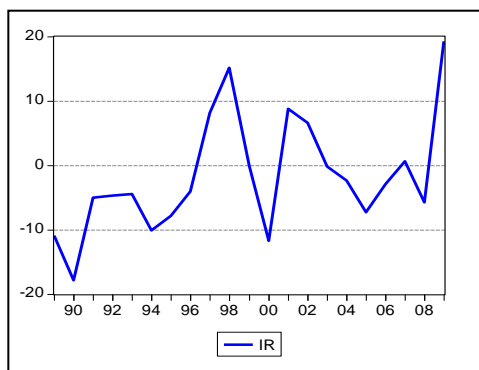
Appears from Figure (1) and Figure (2) that the volume of credit facilities to banks Algerian than the size of bank deposits during the same period where remarked this period, economic growth is weak as well as the deterioration of the situation of politics and security in Algeria, where the banks in that period were not the most appropriate solution to direct savings to it, and fit this type of credit facility with the fluctuation of interest rates both on deposits, or which loans and which has seen high levels during the nineties, so removed the Central Bank of the roof 20)%) of the rates of interest on loans for the year ((1994. as I knew years (1995) the largest interest rates on loans (18.41%), and the back of this surge in interest rates on the results of financial liberalization policies.

A year later (1996) interest rates began to decline, due economists, however, that high initial interest rate was exaggerated, so that the interest rates on loans year ((1994 reduced the demand for loans to the investment and stabilized during the last decade at levels 8)%) . And the result that real interest rates fluctuate characterized in most years registered negative rates. The first positive value was 8.14)%) in 1997)) and after the highest positive value of the interest rate was (% 15.10) Year 1998)), due mainly to the low rate of inflation (as measured by contraction in gross domestic product), which decreased from (29.8 %) and% (18.7%) years (1995) and (1996), respectively, to (% 5.7) years (1997), as well as important reforms in the context of the policy of financial liberalization brought about by structural adjustment program which has been applied from the beginning of the year (1994), until (1996). Back then real interest rates to fluctuate between negative values and positive values during the last ten years

While the volume of deposits went to the continuous rise in the period (2000 - 2009) to coincide with the continuous decline as well as to the size of credit facilities for the same period except in 2009, which saw a big increase. 2009.

2- Previous studies:

There were many studies on bank credit and factors specific to him, where (Chamie, 1989) he study the credit and productivity in Jordanian economy for the period (1968-1986) through the analysis of the impact of bank credit on the productivity of various economic sectors, as measured by the amount of influence on the added value achieved in each sector of the dinar spending in the form of credit. The study showed medium and low productivity marginal productivity of the dinar from bank credit at the level of the Jordanian economy as a whole.

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While the study found (McKinnon, 1973) and (Shaw, 1973) that the liberal policies in developing countries related to the banking sector that would mitigate the restrictions on the ceiling interest rate, and reserves the legal high, and bias of some credit programs, and others, stimulate growth economic by improving the quality and quantity of investment, while the imposition of quantitative restrictions on the banking regulations to restrict the amount of investment and productivity, and impede economic growth. Although the policies liberal contributed to raise interest rates to higher rates, the P that it would lead to stimulate private savings and promote financial intermediation and the optimal allocation of resources, thereby increasing the supply of credit to the private sector, which in turn leads to increased investment and higher growth rate.

The econometric studies like (Khatib and forearm, 1996) determined factors affecting the banking credit on the industry sector in the following equation:

CR = b0 + b1G + b2I + b3R + b4F + b5Dum ... (1)

Where:

CR: the volume of bank credit to industry.

G: rate of growth of gross domestic product.

I: investment.

F: the expected inflation rate.

Dum: dummy variable which takes into account the conditions of instability experienced by the Jordan, and had a negative impact on bank credit, and the method is used (OLS) to estimate both equations separately, and the results showed that the positive relationship between the growth rate of GDP and the total volume of investment on the one hand, and between the volume of credit provided to industry on the other hand, while the inverse relationship between bank credit and other variables.

D- Results

Preliminary tests of the study data:

Descriptive statistics and natural distribution test

Table (1) shows the descriptive statistics of the variables of the study model for the period 1997-2017. The descriptive results shown in the table indicate that the calculation of the volume of deposits and the volume of credit facilities was positive, as the volume of credit facilities was larger than the volume of deposits. While the highest percentage of credit facilities amounted to 99.35% of GDP, while the highest value of bank deposits accounted for 47.10% of GDP. The smallest deviation of the deposit size variable was recorded, followed by the real interest rate variable on lending, while the highest standard deviation of the credit facility variable was recorded. While there were no significant differences between the arithmetic mean and the highest value and lowest value for the population variable. While the standard deviation was somewhat higher (10.35%) than other study variables.

Table (1): Descriptive Statistics and Normal Distribution Test

Population size LOG(POP)	The real interest rate on lending Population size IR	Bank deposits DEP	Credit facilities CF	
21	21	21	21	Number of views
17.211	-0.0176	0.3648	0.4054	The arithmetic average
17.367	0.1924	0.4710	0.9935	Above
17.020	-0.1790	0.2179	-0.1221	The lowest
0.1035	0.0906	0.0835	0.2839	Standard Deviation
-0.2438	0.6668	-0.3188	0.1728	Sprain

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1.9877	3.0634	1.7499	2.8322	Flattening
1.1047	1.5600	1.7232	0.1292	Jarque-Bera
0.5755	0.4583	0.4224	0.9374	Probability

Source: Prepared by the researcher

As shown in Table 1, the variables of bank deposits and the number of population show a negative spike, which means distortion to the left, while the torsion coefficient of the credit facility variables and the real interest rate is positive. All the variables of the study model except for the real interest rate variable show less inflation than in the normal distribution (3), while the flattening coefficient exceeds the real interest rate variable (3) which means that it is a little flattened.

The results of the Jarque-Bera test indicate acceptance of the normal distribution hypothesis for all study variables at a significant level of 1%. Based on the natural distribution test results, the use of the lower-squares method was used to estimate the parameters of the study model.

Brayman and Cramer (2001) point out that the problem of multiple correlations between variables is shown if an independent variable correlation coefficient exceeds 80%, while Kennedy (1998) points to an 80-90% correlation between two or more independent variables that makes it Variable independent of dependent variable. Thus, the model of the study does not suffer from the problem of multicolinearity. Table (2) shows the correlation matrix between the study variables.

The above table shows that there is no problem of multiple correlations between independent study variables of more than 70%.

2 - Analysis of the results of the study:

$$\text{........(2)}$$

| + 58.93 | + 0.99 | - 0.49 | - 3.43 | + 0.14 |
| (13.694*) | (2.229)** |) -13.529)* | (2.731)** | (-3.401)* |

$R^2 = 0.96$ F statistic

Before analyzing the results of the regression model, it is necessary to ensure that there is no change in the data model during the study period, based on the stability test, In this area, the Cumulative Sum Test, whose results are shown in Figure 3, will be used. Where the residual curve is located between the standard deviation lines from the beginning of the period, which proves that the stability of the parameters of the model, and therefore will depend on the fragmented .

Equation (2) shows the estimation of the parameters of the study model. The value between the brackets represents the statistical value (t) and the degree of its significance. ** () (**) indicates a significance of 1% and 5%, respectively.

Before analyzing the results of the multiple regression model, reference should be made to the interpretation of the R² value and the value and value of the DW, F-Statistic. The first value refers to the explanatory power of the model. The independent variables explain 96.69% of the changes in the dependent variable, while the value of the Durbin-Watson (DW) test indicates that (1.5-2.5) (Eviews 4 Users Guide I). The value of the F statistic is 117.07 at a level of 1%, which is higher than the value of the table F. Therefore, the hypothesis that there is a statistically significant effect of the independent variables combined on the dependent variable is accepted.

The previous methodology in estimating the model of the study may suffer from two problems that may lead to misleading results. The first is that the random errors obtained from the previous regression model may be interrelated, which is known as the Autocorrelation Problem. The second is that the variation in random error may not be constant over time as assumed by the OLS method, which is known as the problem of Heteroske-dasticity Problem (Gujarati et al., 2003, 387).

Residuals were tested to determine the suitability of the OLS method to estimate the model. It will be tested whether random errors follow a normal distribution, not self-related, and whether their variation is constant over time.

Test the normal distribution of the model's Rondoms:

The normal distribution of the regression model is determined by the JarqueBera statistic shown in Fig. 4. It is shown that the slope of the regression model is naturally distributed and complies with the conditions of the application of the lower squares method.

Series: Residuals
Sample 1989 2009
Observations 21

Mean	-8.32E-15
Median	-0.003851
Maximum	0.092922
Minimum	-0.096194
Std. Dev.	0.051614
Skewness	0.168519
Kurtosis	2.270917
Jarque-Bera	0.564513
Probability	0.754080
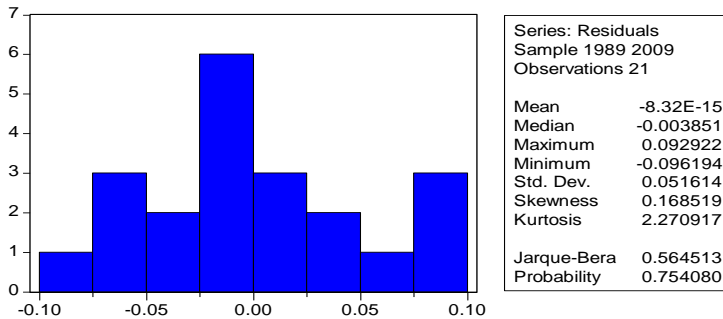
Figure (4): Test the normal distribution of the model

Test self-bonding of model:

The purpose of this test is to investigate the extent to which a random correlation between random errors will be achieved by applying the Ljung-Box test to random errors. This test comes to examine the null hypothesis that there is no self-association between random errors until the lag period. Table (3) shows the results of the Ljung-Box test represented in Q-Stat and Prob.

The table shows that the probability of the statistical test was always greater than 1%, indicating that there is no self-correlation between the regression model locks.

While the study also aimed (Abu Muammar, 2001) to determine the size of deposits and facilities in Palestinian banks for the period (1990-2000), as well as to identify the reasons for the weak role of banks in providing credit and contribute to the investment. The researcher in the study on a series of interviews with the directors of banks in addition to the presentation and analysis of statistics was in the proportion of facilities to deposits in commercial banks, investment banks and specialized banks for the period (1993-1999). The size of the facilities offered by banks, the Palestinian, Jordanian banks and banks operating in Palestine for the sectors of the economy as a whole by each bank, in addition to the distribution of credit facilities to the direct economic sectors for the period (1997-2017).

Descriptive findings of this study that the volume of credit facilities provided by the Jordanian banks operating in Palestine, higher than those offered by the Palestinian or Egyptian banks operating in Palestine. The study also showed that the political conditions affect the size of the facilities provided for the economic sectors, the inexperience of banks, there are no guarantees it for the granting of such facilities in addition to the weakness of the economic sector in general.

Like the study (Al-Khatib and forearm, 1996), the (Atoum, 2002) measured the role of credit granted by the Jordanian banking sector in economic growth during the period 2000-1985 AD. By estimating the model simultaneously consisting of equations first production function, while the second equation is a function of credit and to show that bank credit depends on the size of the population (POP) and the volume of total deposits with the banking system (TDEP) in addition to the interest rate (RI), and after assessing the form simultaneously using a two-stage least squares (2SLS). The results revealed for the function of credit and a positive relationship between bank credit and the size of the population (POP) at the level of the economy and the level of sectors except the construction sector's total deposits (Tdp) was associated positively with the size of credit facilities, but were not her teacher morale statistically not on the level of the economy not at the level of sectors, finally, the interest rate has been associated with the inverse relationship between bank credit and proved to her teacher on the moral level of the economy and the sectoral level.

The aim of the study (Ameri, 2003) in Yemen to measure the impact of bank credit granted by commercial banks on Yemen's economic growth, representing a rate of GDP at the level of the economy as a whole and at the level of economic sectors were made quarterly for the period 1990 to 2001, based on the Standard Model estimated features,

The error contrast homogeneity test:

In order to examine homogeneity or stability of homoskedasticity, the White Heteroskedasticity Test, shown in Appendix 2, will be applied. The results of the test showed the instability of the random error variation. Thus, the parameters of the model were implicitly recalculated with these The problem, according to E-views. (White Heteroskedasticity-Consistent Standard Errors & Covariance)

Therefore, given the compatibility of the conditions of the use of the method of ordinary squares with no problems in data and repair of what was found, the model expresses the relationship between the dependent variable and independent variables, where the fixed part of the equation and its value (+ 58.93) to the lowest credit facilities Provided by commercial banks in the absence of any impact representing 58.93% of the value of GDP.

There is a significant positive relationship between the size of the credit facilities and the total deposits and the variable economic terms, while the real interest rate and the size of the population were associated with a significant inverse relationship.

Thus, there is an effect on all the previous variables on bank credit provided by commercial banks, so that the positive effect of both the size of bank deposits and the economic theory and the study of (Al-Atoum, 2000) on the Jordan and the study of (Amiri, 2003) on Yemen. As well as the negative relationship of the rate of interest on lending with the economic theory and study (Atom, 2000) and (Ameri, 2003). The volume of deposits accounts for 99% of the changes in the volume of credit facilities. It is considered to be the most important variable affecting the bank credit provided by commercial banks in light of the results of the model analysis, which was consistent with the findings of the study (Amiri, 2003) on Yemen.

While the effect of the size of the population differed from what was expected by showing a negative relationship of statistical significance. In the opinion of the researcher, the population does not necessarily necessarily reflect the size of the credit facilities to the extent that it reflects the size of the bank deposits. Investment fund and investment support fund that require bank financing, the Algerian individual or public institutions tend to self-finance investment and population increase does not necessarily correspond to the increase in the volume of credit facilities granted to them. The increase in the population does not necessarily mean the increase in the number of bank customers with deposits and borrowings. Al-Amiri (2003) showed that the ratio of population size to the size of bank credit is positive but not statistically significant, and in line with the findings of the study that increasing population counts does not necessitate an increase in credit facilities.

As for the variable economic and monetary reforms during the period of study, it showed a positive positive effect through the positive relationship as 14% of the changes in credit facilities are explained by the reforms guaranteed in the Algerian economic.

II Conclusion

The study aimed to test the effect of deposits size, real interest rate, population, and economic terms on bank credit provided by commercial banks represented by the size of credit facilities granted by them. Using annual data for the period from 1997 to 2017. The study provided a standard analysis of the effect of each variable. The study found results related to descriptive analysis and outcomes associated with standard analysis. whereas:

1. The volume of credit facilities (bank credit) went through two stages, from 1997 to 2009, during which growth was characterized by positive growth rates and a period characterized by decline and negative growth during the period (2001-2008).

2 - The size of bank deposits characterized by continuous growth and growth at increasing rates during the study period (1997-2017).

3 - The fluctuation of real interest rates, before and after the economic reforms pursued by Algeria.

4. Bank credit provided by commercial banks is positively influenced by the size of deposits (Dep), economic reforms (Dum), and is negatively affected by the real interest rate on lending (IR) and population size (Pop).

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Therefore, the study presents some recommendations that can contribute to the role of the Algerian banking system in achieving the desired social and economic objective of economic growth.

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Appendix (1): Variables of the study model

Log(Pop)	Real Interest rate %	Deposits % of GDP	Domestic Credit Facilities % of GDP	Years Variables
17.19	8.14	23.91	38.59	1997
17.20	15.10	39.34	41.38	1998
17.22	-0.10	38.68	45.82	1999
17.23	-11.72	34.97	28.27	2000
17.25	8.73	42.01	36.22	2001
17.26	6.55	46.80	37.95	2002
17.28	-0.18	46.41	31.65	2003
17.29	-2.38	44.16	22.11	2004
17.31	-7.26	39.27	7.71	2005
17.32	-2.95	41.31	4.08	2006
17.34	0.62	45.92	-3.14	2007
17.35	-5.76	44.72	-12.21	2008
17.37	19.24	47.10	30.21	2009
17.02	-10.90	37.80	90.63	2010
17.05	-17.90	32.11	78.43	2011
17.07	-5.04	26.45	59.63	2012
17.09	-4.75	27.38	55.45	2013
17.12	-4.45	31.69	59.03	2014
17.14	-10.13	29.78	47.23	2015
17.16	-7.90	24.68	45.04	2016
17.17	-4.05	21.79	38.32	2017

Appendix (2)

Test the homogeneity of the error variation of the study model

)White Heteroskedasticity Test(

White Heteroskedasticity Test:				
F-statistic	4.099202	Probability		**0.034565**
Obs*R-squared	18.56177	Probability		**0.137330**
Test Equation:				
Dependent Variable: RESID^2				
Method: Least Squares				
Date: 07/02/11 Time: 00:12				
Sample: 1989 2009				
Included observations: 21				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	-91.68235	80.40597	-1.140243	0.2917
DEP	-3.004965	3.166120	-0.949100	0.3742
DEP^2	0.154129	0.159478	0.966455	0.3660
DEP*RIR	-1.038608	0.299883	-3.463383	0.0105

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DEP*(LOG(POP))	0.166588	0.186654	0.892497	0.4018
DEP*DUM	0.114591	0.049757	2.303001	0.0547
RIR	-3.700279	3.018110	-1.226025	0.2598
RIR^2	0.330076	0.115179	2.865754	0.0241
RIR*(LOG(POP))	0.240940	0.181185	1.329801	0.2253
RIR*DUM	-0.084230	0.032947	-2.556520	0.0377
LOG(POP)	10.73407	9.375271	1.144935	0.2899
(LOG(POP))^2	-0.314044	0.273275	-1.149189	0.2882
(LOG(POP))*DUM	0.018128	0.115967	0.156321	0.8802
DUM	-0.362184	1.994020	-0.181635	0.8610
R-squared	0.883894	Mean dependent var		0.002537
Adjusted R-squared	0.668268	S.D. dependent var		0.002931
S.E. of regression	0.001688	Akaike info criterion		-9.695760
Sum squared resid	1.99E-05	Schwarz criterion		-8.999412
Log likelihood	115.8055	F-statistic		4.099202
Durbin-Watson stat	3.086812	Prob(F-statistic)		0.034565

Lag=12

Lag	Q-Stat	Prob
1	2.2402	0.134
2	2.4327	0.296
3	4.9145	0.178
4	8.8105	0.066
5	10.216	0.069
6	10.535	0.104
7	11.351	0.124
8	12.048	0.149
9	13.049	0.160
10	14.992	0.132
11	16.242	0.132
12	19.685	0.073

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