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CUPRINS

MAKING LARG SUPPLY CHAIN MANAGEMENT SMART AND IDENTIFICATION OF ITS CONDITIONS WITH MANAGEMENT TOOLS OF SWOT, BI, AND RFID TECHNOLOGY

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Abstract

In the information age and complex competitive environment in the world of global competition, the senior managers of organizations and companies require timely and correct decisions in order to maintain the demand-oriented in order to maintain market demand-oriented and customer retention and retain customer. Thus, for any decision-making and planning in organizations and companies, we should identify the current situation through investigation of internal and external environmental factors known so that we predict future. The present study aimed to make LARG supply chain management smart and to identify its conditions with management tools of SWOT, BI and RFID technology. This study is applied and its method is descriptive-analytic. Results of studies show that the management of programs and organizational activities are not limited to within the organizations. Therefore, organizations and companies, including manufacturing, services companies, can provide managements goals of LARG supply chain in all manufacturing and service chains that has advantages of lean, agile, resilient, and green approaches to achieve success by identifying internal and external environmental factors using analyzing tool of SWOT along with business intelligence and radio Frequency Identification technology (RFID).

Keywords: supply chain management, LARG supply chain management, management tools of SWOT, business intelligence (BI), radio Frequency Identification technology (RFID)

Introduction

In today's highly competitive environment, the key to sustainable competitive advantage is activity within the supply chain and providing high quality services [4]. Globalization of business and information technology development have caused that supply-oriented market changes to demand-oriented market and organizations meet their customers' needs to survive in the competitive business. Accordingly, the base of supply chain management became important [27].To protect their competitive advantage against competitors, companies are continually meeting their customer needs. One of the key characteristics of competitive business in the world today is to pay attention to competitive issues of supply chain [19]. To identify opportunities and threats, environmental analysts investigate the effects of environmental variables on all sectors and bodies of organizations, including the inputs and outputs. In other words, through environmental analysis, opportunities and threats are identified and internal weaknesses and strengths of the organization are identified, goals are determined, and procedures and organizational policies are specified. Management tool assists management to adopt an integrated approach [1].Today, more organizations have realized that information is the lifeblood of e digital economy and the key to success in era of information is to make clear, better and faster decisions in the competitive field. Inappropriate business decisions, decisions based on incomplete information, can bring many losses [23].According to the Government Accounting Office (GAO) of America RFID is a technology that is used to identify, track and store the information electronically. In simple terms, this technology is a system that uses radio frequencies read by a receiver to transmit the identity of an object or person in the form of wireless [20].One of the most important

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decisions in the supply chain is the efficiency and effectiveness of this chain along with parameters and variables having uncertainty [5]. Initiatives to improve supply chain performance are trying to match supply to demand and thus reduce costs while improving customer satisfaction. This requires that the uncertainty in the supply chain is reduced to the maximum so that facilitates the more predictable demand above the chain [37].To predict and optimize the process of right selection in each supply chain activities, including selection of suppliers, the manufacturing sector (entry of raw goods, process manufacturing, assembly, etc.), managers of supply chain need to make proper decisions with minimal measurement error. To measure different conditions such as reliability and non-reliability, we can use SWOT analysis tool. The flow of information is provided by key components of supply chain.The presence of correct and information quickly accessible is one of the basic needs of the management, and all employees in the lower sectors. Therefore, by knowing the conditions and use of intelligence technology business that converts raw data into knowledge and auto detection of information and recording them, we can create synchronized management among employees in different sections of LARG supply chain. In addition, by doing this we can achieve its goals such as reducing costs (due to the correct information of the product, product design, product manufacturing process, transportation of goods, personnel, etc.), increased profitability (due to reduced costs, managing recycling products), the establishment of partnership relations (due to a full understanding of the situation by means of SWOT and business intelligence technology and RFID).

Importance of study

In recent years, with increasing levels of competition in the global market, numerous studies have been done on the use of information technology as a way to improve production processes in supply chain management [33]. Supply chain consists of two or more organizations that are legally separated and they are linked by materials, information, and financial flows. These organizations can be companies that produce parts, components and finished products, and even they include providers of logistic services for final customer. The aim of all those who work in the supply chain is increasing the competitiveness [15].Competitiveness, reduces costs, survive in market, customer retention, increased profitability, protect the environment, and keep pace with the increasing globalization of markets and customer expectations, have led to new approaches to supply chain management. LARG supply chain management is based on four approaches of lean, agile, resilient and green approaches that its management needs rapid and comprehensive information on the selection and decision-making to achieve the goals. By identifying optimal conditions and opportunities by means of SWOT and pervasive use of business intelligence technologies that are efficient converters of information into knowledge along with technology to detect radio frequencies that receive, record, maintain, and transmit information, the power of monitoring and controlling information-based activities supply chain will be possible.

Methodology

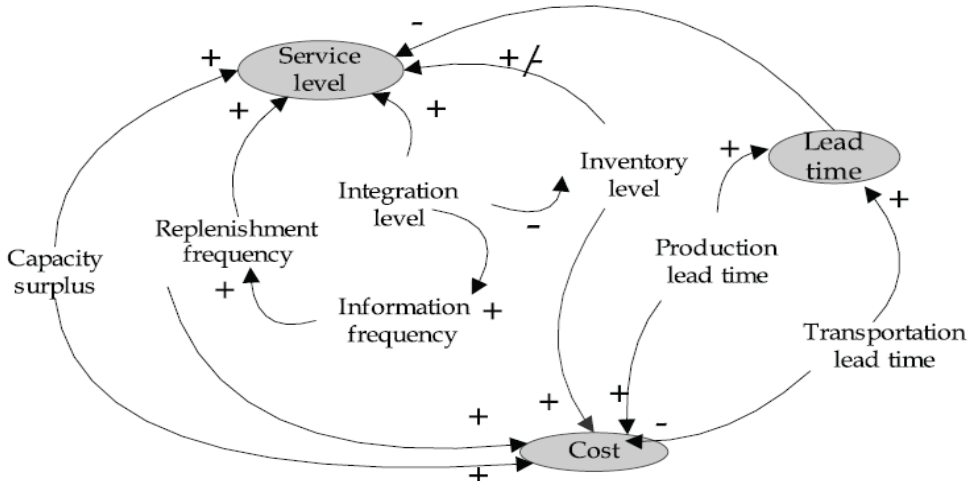
Research is divided into three categories based on goal, including basic research, applied research and developmental research [17]. The present study is descriptive and analytical in terms of nature and method. In descriptive and analytical studies, researcher not only states the problem but also he explains and describes the problem and its dimensions [9]. This study is applied in terms of type and goal that aims to achieve a logical framework to explain the LARG supply chain management by SWOT, BI, and RFID technology.

Theoretical review of literature

LARG supply chain management

Supply chain environment is more dynamic and unpredictable than in the past. Therefore, it must be reconfigured to respond the changes [38]. Supply chain management has become a tactical asset for the current state of global competition. Innovative strategies such as lean, agile, resilient and green emerged, as an emerged response, need for high levels of collaboration and great complexity. However, the consistency of strategic operations with supply chain partners has collaboration capacity [39].Using four approaches of LARG supply chain, lean approach in a supply chain by reducing the cost, agility approach to maximize profits by providing accurate customer requirements, resilient approach may not have the lowest cost but it has higher capacity to confront with uncertain business environment. In addition, environmental policies should also ensure that the system is stable. Exchanges between the lean, agile, resilient and green approaches are real management issues, and may help supply chain to become more effective and more sustainable [31].They include features, organizational systems, informational systems, human factors, performance measurement technologies[39]. In order to investigate the establishment of approaches in supply chain management, creation of relationship between the supply chain features (derived from the establishment approaches) was necessary by selecting key performance indicators. Figure 1 shows the cause and effect relationships between supply chain performance indicators and features.

Fig 1: Performance indicator supply chain attributes relationships.



(Source: [40])

Cause and effect figure was selected to show the dynamics of the supply chain. By using this figure, it will be possible to imagine the impact of supply chain features on indicators. The positive links mean that two nodes move in the same direction [40].

Lean Supply Chain Management

Lean manufacturing is a term introduced by John Krafcik, (responsible to develop Hyundai in America) and International Motor Vehicle Program (IMPV) researcher. This mode of manufacturing reduces the manpower in the factory, space needed for manufacturing, capital spent on equipment, engineering force and time needed for the creation of new products by half. In addition, in the lean manufacturing, needed stock out-cost reduces over than 50% and products are supplied with high variety [43]. This approach is based on reducing the cost and flexibility, focusing on process improvement by reducing or eliminating all the "waste" or non-value added of operations [42].

Agile Supply Chain Management

To survive in dynamic and changing markets, supply chain requires a tool that can overcome environmental challenges by its help. Such tool is agility [7]. Agility in the supply chain is defined as the ability of a supply chain to respond quickly to changes in the market and customer needs. Agile supply chain can be considered as structure aims to satisfy the needs of customers and employees in which each organization can develop its business strategies, processes, structure and informational systems [18].

Green Supply Chain Management

Green supply chain involves phases of the product life cycle from design to recycling. Adopting investment strategies in improving the environmental performance of the supply chain includes many advantages and benefits such as saving energy, reduced pollutants, faster delivery of goods and services, reduce latency, lower costs and increased quality. In addition, it will result in competitive advantage by creating added value for customers due to supply of green products [3].

Resilient Supply Chain Management

One way of dealing with changes in production and market conditions is the concept of supply chain and its increased flexibility to meet the different needs of customers [8]. Supply chain flexibility is the ability of different systems to meet various customer expectations in less time, cost, functional loss and organizational disorders [30].

SWOT Analyst management tool

1. SWOT is acronym of strengths, weaknesses, opportunities and threats [1]. Rules governing analytical matrix of this tool include:

Aggressive strategies: maximum strategies to use environmental opportunities using the strengths of the organization

2. Conservative strategies: strategies to take potential advantages lean environmental opportunities to compensate for weaknesses in organization

3. Competitive strategies: strategies to use organization's strengths to avoid exposure to threats

4. Defensive strategies: strategies to minimize losses caused by threats and weaknesses [2].

Business Intelligence

Large amounts of data exist in information systems of organizations. Part of the data is obtained by domestic transactions and part of them is obtained by external sources. However, even if they are collected and stored in systematic and structured models, they cannot be directly used for decision-making. These data should be extracted by appropriate tools and processed by analytical methods so that they can be converted to knowledge in order to use them management decision-making process. The most important benefit of using business intelligence systems is to enhance the effectiveness of the decision-making process [22].

Radio frequency identification technology

This technology has a wide and rapid growth in industry and services. RFID technology provides an innovative and automated system for intelligent management [16]. The system includes the following components:

1. Tag Transmitter
2. Data Reader and antennas
3. Software

In general, Radio frequency identification technology is wireless identification system that is able to exchange data between a tag connected to an object and data reader. Tag is device connected to the product that we want to detect or track it. Tag is a combination of chip and antenna. Chip has been embedded by antenna and sends the information necessary to identify the considered item for a reader. The reader converts the radio frequencies returned from the RFID tag to digital information. Then, it provides the possibility of sending data for computer to its processing [20].

Integration goals Lean, Agile, Green and Resilient approaches

The aim of integration of the four approaches in the form of LARG supply chain management is to find common grounds on five common visions of integration, including integration of customer, internal integration, provider of materials and services integration, technology integration and planning, and communication integration [21]. Big data, advanced analysis, and record patented in-memory database are the agenda of senior management because they are empowering keys in increasing the business decisions [29].The first step in a strategic planning process is to determine the missions and goals of the organization. Then, by using SWOT analysis as one of the tools to develop strategy, we can develop strategy that is appropriate to the environment. By using this analysis, first, we can begin to analyze the internal and external environments of organizations [1].Second, by understanding the environment and the supply chain in the manufacturing and service organizations, use of BI technology that includes a set of wide range of applications, such as Report Builder, an online analytical processing [6] and RFID technology that enables the system to record the data in tags and transmit them to a computer [20].we can make optimized decisions with the utmost reliability.

Review of literature

The word LARG was created by placing Latin first letters of four approaches of supply chain together. The idea of LARG supply chain management was shaped in the Mechanical Engineering & Industry Research Unit, Faculty of Science and Technology, Universidade Nova de Lisboa. Currently, this research unit is known as the main reference in this regard [28].The project proceeded until March 2013, and the majority of articles on LARG published in this period were published by this team. Industrially, this project was case studied in the Volkswagen factory in Autoeuropia that part of it has been implemented.over time, due to problems created in supply chain field for different companies, this idea was primarily focused by many researchers that this domain has been reached within the borders of Iran [44].

Examples of research on supply chain management approaches and their relationship with technologies are shown in Table 1.

Table 1: Review of literature

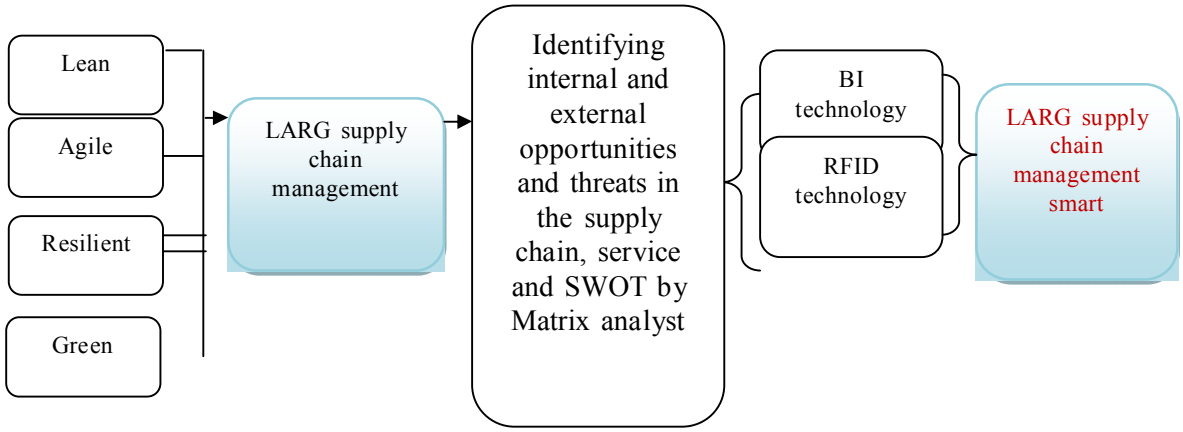
researchers	Title study	Main goal of study
Doroudchi and Nikmehr (2007)	Studying the importance of information technology in supply chain management	Investigation of the impacts of IT applications on supply chain management and providing factors affecting the adoption of information technology
How customers identify and understand the logistics service providers in terms of achieving the desired benefits in allocation of resources?	Investigation of the concepts and functions of PLs (third party logistics provider) in the supply chain	Hayat davoodi(2007)
Combined approach assessment of ANP and evaluation laboratory and decision test to evaluate comparisons of lean, agile and lean -agile supply chain strategies in Dizel Sang Company of Iran	Evaluation of comparison of lean, agile and lean -agile supply chain strategies	Gadiklaeeet al(2011)
Holding communication between RFID technology and information systems in decision-making in the supply chain	The use of RFID and informational systems in NAJA supply chain management	Rastegar and Baratimosleh(2014)
Simulation of the supply chain (for flexibility) in relation to the automobile supply chain in Portugal	Supply chain redesign for resilience using simulation	Carvalho et al (2012)
Providing a GIS-BIM model in determination of flow of materials, availability of resources, and "map" of visual supply chain	Integrating BIM and GIS to improve the visual monitoring of construction supply chain management	Irizarry et al (2013)

Providing an integrated evaluation model based on green and resilient approaches for evaluating automobile supply chain and using the Delphi method to get the weight of the supply chain approaches	Ecosilient Index to assess the greenness and resilience of the upstream automotive supply chain	Azevedo et al (2013)
evaluating the conditions and the link between lean management, supply chain management and sustainable development, according to two points	Lean Management, Supply Chain Management and Sustainability: A Literature Review	Martínez-Jurado and Moyano-Fuentes (2014)
Describing the development and evaluation of a resilient decision support tool that evaluates the effect of ES in supply chain management and bridging the gap in evaluation tool of portfolio in supply chain management	Building and evaluating ESET: A tool for assessing the support given by an enterprise system to supply chain management	K. Dharini Amitha Peiris at al (2015)
Tests stock out-cost management system of vendor by sharing stock out-cost sharing between suppliers and customers using EOQ model	Supply chain coordination in vendor-managed inventory systems with stockout-cost sharing under limited storage capacity	Jun-Yeon Lee et al (2016)

Results

The disadvantage of lack of proper management in the supply chain is bullwhip effect. It states that although customer's demand for certain products does not change so much, stock out-cost levels and backlog orders considerably fluctuate across the supply chain. Increase of these fluctuations is moving up the supply chain (the first supplier). One of the methods to confront with this effect is reducing the uncertainty, reduced variability, reduced delivery time and the harmonization of the use of information and communication technologies, process integration and advanced planning [24].Increasing reliability supply chain is possible by identifying domestic and foreigner conditions by SWOT analysis tool. Increased and extended service and selections with minimal error, using BI technology that is very efficient tool in the decision-making along are associated with the use of radio frequency identification technology to receive, record and maintain information, particularly in the production chain (operational section) to identify and record of input materials, semi-products, products, products in stock, delivered products, and recycled products. Conceptual model of study is shown in Figure 2.

Fig 2: Conceptual model of study



RFID technology has the ability to identify elements in a supply chain, as an important factor in applying management controls is desirable times and places. Providing annual reports, repairs and maintenance, avoiding from materials shortages and using security

policies are only part of the capabilities of this technology [13].Continuous awareness of place and the movement of goods, equipment and devices and also awareness of the working status of the system according to charts and reports that smart system of operations provides for managers based on systemic analyses, results of analysis on these data, databases, and data stores in supply chain using radio ID with these systems to update data in the database provide extra in chain information systems [26]. To make appropriate decisions with minimum error by chain managers throughout the chain, internal and external environment conditions must be determined. Supply chain management is the cornerstone of the success of Wal-Mart and is considered as the main competitive advantage in warehouse retail industry. Their distribution system is considered as the most efficient system.Their emphasis in supply chain management is sharing information with suppliers. The focus will be on newly approved strategy and construction of green logistic processes. The manager of company is committed to three ambitious goals in supply chain management, including supply of 100 percent by renewable energies, to create zero wastes and to sell products to conserve resources of Wal-Mart and environment [25].Wal-Mart chain management strategy that was recognized as the largest company in the world in 2013, based on revenue, by means of SWOT analysis is shown in Table 2.This chain store includes company of household products, food, and supermarket and hypermarket. Domain of activity of this company is retailing. Wal-Mart's business is conducted in five sections of stores, Supercenters, local markets, Sam clubs, and international stores [10].

Table 2: SWOT strategy in wal-mart store analysis

Respected and powerful brand, Reasonable pricing, Loyal Customers, Powerful Strategy, Extensive range Product,	strengths
So weakness in the coverage Extensive area of his range despite using technology, Health and safety risks of some goods, Less flexibility ina variety of products than its competitors	weaknesses
Focusing on specific markets such as China, Using of new locations, expand market	opportunities
Big competitors, intense price competition, The new regulations, tariffs taxes	threats

Organizations can use SWOT analysis tool as the core of the organization's strategic plan to find the path or direction of the market [10].

Conclusions and Recommendations

As mentioned, big data, advanced analyses, and recording in-memory database technology are the agenda of senior management because they are empowerment keys to enhance business decisions. Certainty and uncertainty conditions can be estimated by analyzing the current situation. Evaluation of current conditions, forecasting the future conditions and use of IT systems such as BI and RFID resolve the LARG supply chain problems and make it smart. It is recommended that researchers assess and evaluate LARG supply chain management in manufacturing and service sectors such as the automobile, tourism, etc in their field studies.

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THE INFLUENCE OF WAITING TIME SATISFACTION ON CUSTOMER LOYALTY TOWARDS MULTI-STAGE SERVICES: EVIDENCE FROM INDIA

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Abstract

Research shows waiting time in services is an important source of service evaluation by the customer. In fact, time is one component of the total 'cost' that the customer bears and cost is a core component of the perceived cost-benefit equation that the customer uses to evaluate her or his sustained patronage of a particular service. In most services, customers consider waiting as a waste of time. However, from the customer perspective, in the case of a full-service restaurant, waiting is expected and sometimes desirable also. Prior research, mainly in the west, suggests that when customers think that a wait for service is too long, they become less satisfied with overall service quality. Based on a research setting in a full-scale restaurant in India, this paper seeks answers to two research questions: First, what are the determinants of overall waiting-time satisfaction and second, what is the influence of waiting-time satisfaction on customer loyalty.

Key Words: Customer Loyalty, Waiting Time Satisfaction, Services Management

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Introduction

According to one estimate thirty seven billion hours were spent by Americans waiting to avail of services, during which time "they fret, fidget, and scowl." Such studies of customer frustration with waiting is well described in academic literature (Giebelhausen et al., 2011; Galdwell, 1993). Similar situations seem to prevail around the world. Another study suggests that the average person waits for twenty months in an eighty year lifetime (Wielenga, 1997; Lovelock and Wirtz, 2004). A little unfair perhaps, research also shows that customers usually think they waited longer than they actually did (Chernow, 1981).According to van Riel et al. (2012) measuring customer satisfaction in a retail environment without accounting for various waits provides incomplete results. In a study looking into the relationship between perceived wait duration (PWD) and customer satisfaction, 'having something to do' decreased perceived boredom resulting in a more positive wait experience (McGuire, 2010).

In another study on customer evaluations of service offshoring, Forman, Thelen and Shapiro (2015) found that customer loyalty towards domestic service providers will decrease if they are asked to wait longer and if overseas service providers provided better quality services much quicker. This is despite the fact that customers in general are opposed to offshoring of services (Forman et al., 2015). Buyer's cost for product or service acquisition includes several types of costs in addition to the monetary cost of acquisition. 'Time' is one such cost. Economic theory suggests that consumers will acquire or be prepared to acquire a service as long as the benefits exceed the costs of acquisition (Hoffman and Bateson 2006). However, service customers tend to view waiting as a waste of their time mainly because it is seen as an unwarranted 'cost'. With changing lifestyles, customers seem increasingly less tolerant of having to wait. (Katz et al.,1991).

When customers perceive the wait duration to be too long, it influences their evaluation of the overall service quality thus influencing their satisfaction with the service and further damaging their loyalty or re-patronage intent and their recommend intention (Taylor, 1994; Lee and Lambert, 2005; Davis and Vollmann, 1990; Davis, 1991; Dube et al., 1989).

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This research looks at customer waiting time in a full-service restaurant set-up. It is hypothesized that due to the nature of a full-service restaurant where waiting time delays (real or perceived) may bring about changes in the service delivery process, waiting-time may be a salient source of service evaluation by the customer. However, it is also important to note that the issue at hand is not waiting time but waiting time delays – either real or perceived. This research thus is an attempt to understand customer wait behavior and how it may influence customer loyalty.

Methodology

The objective of this study is two-fold. Initially, the determinants of overall waiting-time satisfaction are looked into and then the influence of waiting-time satisfaction on customer loyalty is investigated. The research setting for this study will be a popular south Indian full-service restaurant that has multiple branches all across India.

A full-service restaurant was chosen for this study because it creates different wait expectations than a fast-food restaurant. A full-service restaurant is a type of leisure service and the delivery of the service is paced so that customers have time to enjoy the service experience. As a result, customers are already prepared to expect that waits will occur over the course of service delivery (Hensley and Sulek 2007).

Conceptual Background

Waiting Time Satisfaction

An important characteristic of services is that they cannot be stored or inventoried. However, restaurants can create an inventory of food though even they are unable to store the entire restaurant service experience (Hoffman and Bateson 2006). This characteristic is called 'service perishability' and is a source of various challenges for service providers. Matching demand and supply at all times is a major challenge and delays in providing the services – especially when demand fluctuates – maybe seen as a source of dissatisfaction by consumers. According to Bielen and Demoulin (2007) the 'delay' or 'waiting time' can either be real or objective (Davis and Vollman, 1990; Katz et al.1991; Taylor, 1994) or could be perceived or estimated (Pruyn and Smidts, 1998). The cognitive aspect of the wait is the consumers' evaluation of the wait as being (or not being) acceptable, reasonable, tolerable (Durrande-Moreau, 1999). Another dimension to the wait is the affective aspect where the which captures emotional responses to waiting such as pleasure, happiness, frustration and so on (Taylor, 1994; Pruyn and Smidts, 1998).

According to Hensley and Sulek (2007) many services consist of multiple stages in which customers have to wait more than once during service delivery. Although the actual number of wait stages will vary with the service context, in the context of a full-service restaurant the multi-stage waits can be described as follows (1) Service-entry waits: Waiting time before getting seated; (2) In-service waits: Waiting for food to arrive; and (3) Service-exit waits: Waiting for the bill, payment and change.

Customer Loyalty

Dick and Basu (1994) define loyalty as "the strength of the relationship between an individual's relative attitude and repeat patronage." They add that customer loyalty leads to lower competitive pressure, a decrease in price sensitivity, and an increase in positive word of mouth by customers (Dick & Basu 1994).

A very effective way to measure customer loyalty is by creating composite measurements of loyalty by measuring loyalty in terms of customer attitudes and behavior. Loyalty measures can include customers' brand preferences, propensity of brand-switching, frequency of purchase, recency of purchase, recommend intention and total amount of purchase (Pritchard and Howard, 1997; Hunter, 1998). According to Pritchard and Howard

(1997), using such a composite measure customer loyalty increases the predictive power of the measure. Measures included in this study comprise overall satisfaction with the service, repurchase intention, recommend intention, and customer value.

Survey Instrument Development

The instrument will have three parts:

1 General Information about the customer;

2 Questions measuring customer perceptions of multi-stage wait time satisfaction;

3 Questions measuring the customer loyalty- satisfaction, brand preference, recommendation and re-patronage.

Sampling design and survey administration

110 respondents provided complete responses to the field-workers. The respondents were contacted at four locations of the restaurant in the Indian cities of Jammu (J&K state), Ambala (Haryana state), Chandigarh (Union Territory) and Saharanpur (Uttar Pradesh state). The mall intercept method was employed and a structured questionnaire was administered to the customers after they complete their visit of the restaurant. A team of trained MBA students from a leading deemed university campus program in Haryana administered the questionnaires.

Data Analysis

The data was analyzed using correlation analysis and multiple-regression analysis (enter method) for the best model-fit. The customer loyalty questions comprised the criterion variables (dependent variables) and the waiting time satisfaction questions comprised the predictor variables (independent variables).

Results

Table 1- Determinants of Waiting Time Satisfaction

Predictor variables (WT**)	β	t value
Constant	1.150	
WT5	.423	5.324*
WT4	.224	3.055*
WT1	.180	2.256*
WT2	.164	2.230*
F-value: 30.525	Df.:	4
Sig.: < . 0001	R square	.538
Adj. R square .520	Maximum VIF	1.687
Sample Size 110		
Criterion Variable: Customer Loyalty (Overall)		
* Denotes variables that had $p < 0.05$ for the t-test.		
** WT denotes Waiting Time		

As per Table 1, the following waiting time questions were significant predictors of customer loyalty (criterion variable): Waiting time to receive bill (Waiting Time 5), Waiting time for food to arrive (Waiting Time 4), Comfort in waiting area (Waiting Time 1) and Waiting time before Seating (Waiting Time 2). Overall satisfaction with waiting time (Waiting Time 6) and Seating Comfort (Waiting Time 3) were not significant predicators as per the model obtained. A maximum VIF value of 1.687 also shows that the model is free from the problem of multicollinearity and the F-value (from the ANOVA table) shows that the model is significant. The adjusted R-square value of 0.520 shows that the predictor variables (waiting time satisfaction) has accounted for 52 per cent of the variance in the criterion variable (customer loyalty). This value is very similar to the value obtained by Hensley and Sulek (2007) in their study assessing the influence of waiting time satisfaction with customer satisfaction in multi-stage services.

Table 2- Pearson Correlation Coefficients: Waiting Time with Customer Loyalty Determinants

WT- Waiting Time; CL- Customer Loyalty	WT1	WT2	WT3	WT4	WT5	WT6
CL1	.533(**)	.339(**)	.205(*)	.285(**)	.173	-.063
Sig.	.000	.000	.032	.003	.071	.516
CL2	.482(**)	.017	.348(**)	.223(*)	.574(**)	.367(**)
Sig.	.000	.860	.000	.019	.000	.000
CL3	.242(*)	.464(**)	.282(**)	.265(**)	.449(**)	.669(**)
Sig.	.011	.000	.003	.005	.000	.000
CL4	.194(*)	.244(*)	.096	.099	.341(**)	.400(**)
Sig.	.043	.010	.318	.302	.000	.000
CL5	.185	.142	.273(**)	.332(**)	.387(**)	.095
Sig.	.054	.139	.004	.000	.000	.326
CL6	.131	.235(*)	.026	.306(**)	.165	.245(**)
Sig.	.173	.014	.790	.001	.085	.010

** Correlation is significant at 0.01 level (2 tailed)

* Correlation is significant at 0.05 level (2 tailed)

As per Table 2, the customer loyalty sub-dimensions designated as CL1…CL6 are as follows: Overall satisfaction with restaurant (CL1), Patronage or repurchase intention (CL2 & CL5), Value dimension (CL3), Recommend Intention (CL4), and Brand Preference (CL6). A glance at the correlation analysis shows that all individual customer loyalty sub-dimensions show significant correlation with at least 4 out of the total 6 waiting time satisfaction sub-dimensions.

Discussions and Conclusion

Theoretically this study supports a multi-stage approach to study wait satisfaction and its influence on customer loyalty. The regression results show that waiting time satisfaction significantly affects customer loyalty. The correlation analysis also compliments the regression results. This proves that customer waits (amongst other variables) need to be taken seriously by service organizations if they wish to improve customer loyalty. While several researchers have written about the value of such an approach and have argued that customer satisfaction varies with the wait stage, few researchers in India, or even at a global level, have used a multistage approach to study wait satisfaction in actual retail settings (Hensley and Sulek 2007; Hwang and Lambert, 2005).

One very important component of this research was the 'recency effect'. In this study the respondents had finished their actual dining experience as they completed their surveys, their impressions of the service waits and service delivery were fresh in their minds. Thus, customers' opinions were not given in retrospect after a long duration numbering in days or weeks; it also must be appreciated that their opinions were based on the actual service received – rather than on hypothetical service scenarios.

The customers' waits at different stages need to be carefully analyzed and suitable service offerings have to be provided so that the wait not only becomes less troublesome to customers but becomes fun & enjoyable. Service firms can perhaps use waits as an opportunity to cross-sell. Waiting areas could have mini-cyber cafés, fish-tanks, vending machines, magazines, TVs etc. managers should try to assess the relative importance wait stages and other design variables before redesigning a service to raise customers' evaluations of service performance. Obviously, the variables which exert the greatest effect on customer

satisfaction should be considered first. Managers should avoid wasting money and other resources on redesigning service features that do not exert a significant effect on customer satisfaction (Hwang and Lambert, 2005; Hensley and Sulek 2007).

The service wait management will also have to include different strategies for different types of services. Investment in improving services might also be better spent on information and communication rather than solely on physical facilities. For instance in airports, it might be valuable for travelers to know how long they will have to wait before picking up their luggage by looking at information boards that indicate waiting time. Developing waiting time guarantees can also be considered as a means of informing customers of their expected waiting time. Such guarantees can increase customer satisfaction or decrease the likelihood of premature termination of waiting experiences by customers (Kumar et al., 1997; Bielen and Demoulin 2007).

Future Research

This research has also contributed to a negligible wait management literature in the context of Indian businesses and could well pave the road to understand how Indians relate to waits. In terms of future research the following research areas could be explored:

1.This study could also be meta-analyzed with other similar researches conducted globally in order to understand the cross-cultural dimension of service waits;

2.Waits could be researched in the context of other services such as healthcare, airports, banks etc. and a comparison could be drawn;

3.Wait management could also be discussed in the very important area of services failure/recovery;

4.Consumer characteristics that influence wait-satisfaction could also be discussed in order to profile & segment markets.

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MONETARY TRANSMISSION MECHANISM OF INTEREST RATES IN ROMANIA

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Abstract

Still haunted by global economic and financial crisis effects, financial instability represents an element with resonance at the macroeconomic level, including at the level of monetary policy pursuits. Risks, vulnerabilities and tensions concerning the monetary and financial stability can come not only from outside, but rather can come from the improper or poor functioning of the monetary mechanism of transmission. Thus, should be considered that a deficient transmission of the impulse of the monetary policy can generate significant tensions, vulnerabilities and even risks and ultimately, financial and monetary instability. In this context, the article♦ aims to examine whether and to what extent the evolution of interest rates from the period 2007-2014 can be considered a source of tensions for the financial and monetary stability by a week transmission between the central bank (National Bank of Romania) and monetary market. Thus, the article analyzes the evolution of interest rates of the Romania's money market in relation to the policy rate of the National Bank of Romania, but also in relation to macroeconomic fundamentals which interest rates is supposed to influence.

Keywords: financial instability, monetary transmission, Romania

JEL: E43, E58, E65

1. Introduction

Global financial and economic crisis, in addition to the devastating effects on the economies of the world, it has changed the perspective from which stability problems (or better financial instability problems) are viewed. It is speaking very much about financial instability, but a separate component of financial instability, or even a different aspect of instability, can be considered monetary instability (Milea, 2014), which can catalyze numerous risks, vulnerabilities and tensions existing on international monetary markets. The existence of these imbalances can occur independent or dependent of the functioning of monetary transmission mechanism, but as far as he himself has difficulty in managing arising problems, then it may be considered that he contributes to the amplification of monetary instability. Therefore, a look at the monetary transmission mechanism, the way it works and its speed of action, may be a useful approach in order to understand and manage the imbalances which generate instability. About risks and vulnerabilities there is a whole literature ready to decipher some of our misunderstandings, but very little, and only tangentially, there is mentioned the problem of tensions which generate instability.

Thus, the article tries to clarify the extent to which monetary transmission issues fall under the appearance and manifestation of tensions in the money market.

The definition of the concept of tension captures the state of tension, the stretching, the "struggle", the "nervousness", the inner strength that arises in a body or system due to external forces, the "potential difference", the pressure (generally treated in report of a value or limit considered "normal"), the "excitement", the "feverishness", the unit effort, the accumulation of energies or forces, which in a closed environment tend to escape. Therefore, the tension can

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be regarded as a characteristic or a feature of something and needs for an adequate description three elements: medium of manifestation, the factor or the phenomenon which is under tension and the force or the group of forces that determines a particular manifestation of the factor or the group of factors in that environment.

If we believe, generally speaking, that the macroeconomic system is a vivid logical system (Dinga, 2009), then the monetary and financial markets, which have a strong component of human behavior, they subscribe also to the characteristics of vivid logical systems. Therefore, if we believe that financial stability is the state of "health" of the system and of the financial and monetary markets and the financial instability describes the state of "disease" or the "severe illness", then the tensions which are manifesting on these markets can be viewed as a state of "pre-disease" or "feverishness" and it warns about the imminent "disease". In this context, the tension can be seen as a signal of the change of the normal physiological status of the financial and monetary system, being a relevant indicator of the imbalance or the "disease" that will come soon.

Also, it should be noted and distinguished the concept of tensions from the concept of risks, which involve the production, with a high probability, of a negative phenomenon, often irreversible. Or, tensions can be considered in many cases reversible, sometimes of the moment and not infrequently positive, describing the normal state or the "tone" of the monetary and financial market in the conditions of a low or moderate volatility. Also, tensions can be considered a latent state, often difficult to identify or an altered state of risks' manifestation, which under the influence of certain factors or forces, in certain specific environmental conditions, it can move to the state of threat or risk.

In this context, the article aims to analyze the evolution of interest rates on the money market from Romania in relation to monetary policy interest rate of the National Bank of Romania (NBR), but also in relation to macroeconomic fundamentals, in order to indicate whether there are adverse developments of interest rates and how they can be considered tensions capable of generating instability.

2. Description of the problem

Monetary policy aims at achieving the primary objective of price stability (implicitly through inflation targeting strategy) through three main instruments such as: monetary base (through open market operations), interest rates, and minimum reserves.

Thus, the problem of domestic absorption is managed by monetary policy also through the instrument of interest rates. Movements in interest rates causes an adjustment of the absorption, an increase in interest rates being associated in theory and in practice with the reduction of domestic absorption and with the counteract of the inflationary effects. Real interest rates are derived by adjusting nominal rates with inflation, being formed in the banking and financial markets, the central bank setting only the monetary policy interest rates, which direct the evolution of interest rates in the money market. The evolution of real interest rates modifies the price and the availability of bank loans, the household wealth and the exchange rate evolution, affecting equally the demand for public goods. Increasing interest rates in the money market with a rapid development and / or an important manner it can cause an adverse effect, through which the borrowers are no longer able to honor its obligations to the banks, especially in the conditions of an economy excessively indebted to the banking system.

A downward trend in interest rates contributes to the lowering of the foreign currency value compared to the domestic currency (i.e. an appreciation of the domestic currency and thus a decrease in the exchange rate), which may lead to the increase of imports and of lowering of domestic products prices abroad thus, ultimately, to the reduction of exports. However, over time, the aggregate domestic demand registers increases leading ultimately to the increase of production, of employment, of investments and also of the expenses and incomes. This can lead also to the

increase of wages and prices, if the monetary policy boosts this trajectory. It is possible that only interest rates and/or inflation to rise without being accompanied, at a certain time, by the increase in production and by the reduction of unemployment. Thus, the understanding of the functioning of monetary transmission mechanism is crucial in determining its actual influence on the economy. If the central bank maintains the monetary policy interest rates at a low level, or at least decreasing, this signal should be perpetuated in the interbank market and then in the banking system through a more affordable price offered by bank to customers, stimulating thus both investment and consumption. However, there is a danger that the central banks, which promotes constantly an extremely low interest rates or near zero or they are acting without sufficient credibility among the public, to be unable to achieve a satisfactory liquidity management. In this case, the central banks will send an inappropriate signal, both to the interbank market and also to the banking customers, through which companies and population will be encouraged to hold liquidity rather than to hold bank' receivables with low interest rates (the entrance into liquidity trap).

In fact, mismanagement can occur all the way of monetary transmission, either because the monetary policy interest rate is inconsistent with the macroeconomic framework, either because the interbank interest rates are unrelated to the monetary policy interest rates or either the loans and deposits interest rates are inconsistent with the interbank interest rates or even worse with the monetary policy interest rates, signaling a faulty transmission of monetary policy. Normally, interbank interest rates should report possible money market tensions and the central bank, through its monetary policy should focus on improving the transmission mechanism at this level. Any lack of correlation between these interest rates may be due to the natural factors, intrinsic, structural or cyclical factors or to the possible disruption of the monetary transmission mechanism, due to external factors, which can affect a segment of these interest rates or all the interest rates.

If loans granted by commercial banks are coming mainly from funds raised from the interbank market, then the problem of any possible lack of correlation between loans interest rates and interbank interest rates may indicate problems in the monetary transmission mechanism. If the funds are raised from other market than the monetary market, the lack of correlation between interest rates should not worry the managers of monetary policy, but if the majority of funding comes from the monetary market (as it is the case with almost all European Union countries, including Romania), any significant variation, or possibly even of an opposite sign, can signal problems more or less severe with the monetary transmission mechanism.

Thus, we can say that the extent to which monetary policy interest rate helps to ensure the monetary stability, by providing a satisfactory liquidity, but not excessive so as not to lead to a higher inflation, may be signaled by an effective monetary transmission mechanism.

Note however that the evolution of interest rates are not fully under the control of monetary authorities (implicit of monetary policy), although they made a great efforts in order to obtain a maximum control over the transmission mechanism of monetary policy so as to ensure ultimately the reduction of inflation, the increase of output and the decrease of unemployment. In this respect, there is a certain inconsistency regarding the measures of the monetary authorities in managing the effects of monetary policy impulses, which, in a certain limit can be understood and considered normal.

3. Methodology and data sources

Given previous research, the article aims at achieving a qualitative and quantitative analysis of the phenomenon of monetary transmission, in terms of how the interest rates on outstanding loans and on outstanding deposits (in RON) react to the evolution of monetary policy interest rates and also to the developments of ROBOR 12 months (both are being considered in the model as independent variables). The analysis is based on the NBR data for Romania for the period January 2007 - July 2014, including data from the NBR publications

(monthly bulletins, reports on financial stability, reports on inflation etc.). Processing was conducted using econometric models and ANOVA toolkit. The research methods consist in developing the correlation matrix between the analyzed variables and the formulation and testing of regression equations.

In order to exemplify the connection between the determined variable (interest rate on outstanding term deposits in RON, and respectively the interest rate on outstanding loans in RON) and the independent variables, we used the correlation matrix, shown in Table no.1.

Table no.1 The correlation matrix

	IROTD in RON (% y.p.)	*IROL, in RON (% y.p.)*	*IRNTD, in RON (% y.p.)*	*IRNL, in RON (% y.p.)*	*IROTD, in euro (% y.p.)*	*IROL, in euro (% y.p.)*	*IRNTD, in euro (% y.p.)*	*IRNL, in euro (% y.p.)*	*MPIR (% y.p.)*	*ROBOR 3M (% y.p.)*	*ROBOR 12M (% y.p.)*	*INFLR (%)*
IROTD in RON (% y.p.)	1											
IROL, in RON (% y.p.)	0.95976	1										
IRNTD, in RON (% y.p.)	0.98515	0.93409	1									
IRNL, in RON (% y.p.)	0.97506	0.95031	0.97974	1								
IROTD, in euro (% y.p.)	0.94697	0.85960	0.96519	0.93004	1							
IROL, in euro (% y.p.)	0.64686	0.69756	0.69226	0.63902	0.66519	1						
IRNTD, in euro (% y.p.)	0.90225	0.81620	0.94635	0.89427	0.98002	0.73715	1					
IRNL, in euro (% y.p.)	0.68587	0.70383	0.73467	0.67817	0.71941	0.97303	0.78837	1				
MPIR (% y.p.)	0.8988	0.89824	0.92612	0.89235	0.89215	0.86320	0.90713	0.87214	1			
ROBOR 3M (% y.p.)	0.89071	0.86802	0.94089	0.92335	0.89170	0.75868	0.91656	0.78787	0.92673	1		
ROBOR 12M (% y.p.)	0.89763	0.86826	0.94378	0.92013	0.89747	0.75090	0.92193	0.77972	0.92764	0.99615	1	
INFLR (%)	0.55408	0.57335	0.58213	0.51005	0.55682	0.60606	0.60386	0.59631	0.69239	0.61056	0.63343	1

Source: NBR dataset, ANOVA simulation

The notations used are: IROTD in RON (% y.p.) - Interest rate on outstanding term deposits, in RON (% y.p.); IROL, in RON (% y.p.) - Interest rate on outstanding loans, in RON (% y.p.); IRNTD, in RON (% y.p.) - Interest rate on new term deposits in RON (% y.p.); IRNL, in RON (% y.p.) - Interest rate on new loans, in RON (% y.p.); IROTD, in euro (% y.p.) - Interest rate on outstanding term deposits, in euro (% y.p.); IROL, in euro (% y.p.) - Interest rate on outstanding loans, in euro (% y.p.); IRNTD, in euro (% y.p.) - Interest rate on new term deposits in euro (% y.p.); IRNL, in euro (% y.p.) - Interest rate on new loans, in euro (% y.p.); MPIR (% y.p.) – Monetary policy interest rate (% y.p.); ROBOR 3M (% y.p.) – the ROBOR interst rate on 3 months; ROBOR 12M (% y.p.) - the ROBOR interst rate on 12 months; INFLR (%) – HICP inflation rate.

Analyzing the correlation matrix we see that: - all selected variables are positively correlated, with a relatively strong bond over (0.5); - according to the theory an important role it has the monetary policy rate; - the most significant rates from all the rates we have selected for use in regression equations; - the inflation rate is positively and significantly correlated with the monetary policy rate, but shows also strong correlations with other interest rates, it was subsequently used for the confirmation, in a regression equation, of the connection with developments in interest rates.

4. Results

Regarding the monetary transmission mechanism for the period October 1999 - January 2004, Tieman (2004) stated that "Interest rate pass-through from policy interest rates to market rates and inflation has been hypothesized to play a lesser role in Romania than in other Central European transition economies. This paper tests this hypothesis and concludes that it cannot be supported by the data. Hence pass-through in Romania is concluded to be in line with that in comparable economies in the region. Moreover, the interest rate pass-through has become more pronounced over time.". He also said that dividing the series into two smaller periods (October 1999 - June 2001 and June 2001 - January 2004), in the first period monetary policy rate does not significantly influence the market interest rates, but in the next period monetary policy interest rate significantly influences market interest rates, and the series are cointegrated.

Also, regarding on the monetary transmission mechanism in Romania, Antohi, Udrea and Braun (2003) concludes that the monetary transmission mechanism outlined by the central bank is the result of combined effects of general characteristics of the economy (openness and size) and of depth of structural and institutional reforms and the macroeconomic stabilization policies in the transition to a market economy. They noted that the NBR interest rates have a direct impact on the interest rates on term deposits, but have a weaker influence on interest rates on loans (which are influenced more by interest rates on deposits). Credit channel is undermined by the excess liquidity of the system, by the substitution of credit in local currency with the credit in foreign currency and by moral hazard. At the same time, the authors captured the fact that less relevant to the Romanian economy is the real interest rate channel, while the nominal interest rate channel has a strong influence over banking system and over macroeconomic behavior.

Harnessing the previous studies conducted in the field, the results presented in this article are based on the information from the Table. 1, thus considering that you can determine a transmitted influence from monetary policy and from interbank market in Romania on the interest rates on outstanding term deposits in RON, and respectively on outstanding loans in RON, for the period January 2007 to July 2014. According to the method of regression, I used the following regression equation, keeping the above notation:

$$IROTD = \beta_0 + \beta_1 MPIR + \beta_2 ROBOR12M \quad (1)$$

The simulation through the regression method for determining the above regression equation leaded to the results from Table no.2. The result indicates that the interest rates on outstanding term deposits in RON are determined in a high proportion of proposed independent variables, which gives relevance to the applied model. However, the result highlights the dependence of interest rates on outstanding term deposits in RON in the same direction with the monetary policy interest rates and 12 months ROBOR rates, which can be interpreted positively as consistent with economic theory, i.e. with the monetary policy rate movement it should change also the interbank rates and the interest rates on deposits belonging to the banking sector. The model is based on a dataset relatively high (more than 30 observations), for this reason the *t-statistic* must be greater than 2 (or less than -2) thus indicating a significant factor with a confidence of more than 95%. This seems confirmed by two independent variables chosen (MPIR and ROBOR 12M). The very low *P-value* for ROBOR 12 months means that the confidence degree is 99.98%.

Table no.2 Regression for the outstanding term deposit interest rates in RON

Regression Statistics	
Multiple R	0.9149232
R Square	0.8370845
Adjusted R Square	0.8333818
Standard Error	1.1241017
Observations	91

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	571.34796	285.67398	226.0786	2.12007E-35
Residual	88	111.197214	1.26360471		
Total	90	682.545174			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	-0.230138	0.5167067	-0.445394	0.6571288	-1.25698403	0.796707899
MPIR (% y.p.)	0.6650519	0.16163034	4.11464737	8.708E-05	0.343845522	0.986258179
ROBOR 12M (% y.p.)	0.3641102	0.09161714	3.97425856	0.0001443	0.182040386	0.546179993

Source: NBR dataset, ANOVA simulation

Referring to outstanding loans interest rates in RON, the following equation (Equation 2) can help us to understand the connection with monetary policy rate and ROBOR 12 M interbank rates.

$$IROL = \beta_0 + \beta_1 MPIR + \beta_2 ROBOR12M \quad (2)$$

The simulation through method of regression of the above determination equation leads to the results from Table no.3

Table no.3 Regression for outstanding loan interest rates in RON

Regression Statistics	
Multiple R	0.9031229
R Square	0.815631
Adjusted R Square	0.8114408
Standard Error	1.0997171
Observations	91

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	470.81505	235.40752	194.65178	4.90086E-33
Residual	88	106.42524	1.2093777		
Total	90	577.24029			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	5.8138294	0.505498	11.501191	3.181E-19	4.809258324	6.8184004
MPIR (% y.p.)	0.858484	0.1581242	5.4291767	4.952E-07	0.544245492	1.1727226
ROBOR 12M (% y.p.)	0.1835518	0.0896297	2.0478896	0.0435516	0.005431537	0.361672

Source: NBR dataset, ANOVA simulation

The result indicates that the interest rates on outstanding loans in RON are determined in a high proportion by the independent variables proposed, which gives relevance to the applied model. At the same time, the result highlights the dependence of interest rates on outstanding loans in RON in the same direction with the monetary policy interest rates and ROBOR rates at 12 months, which can be interpreted positively as consistent with economic theory. The model is based on a data set relatively high (more than 30 observations), the *t-statistic* for this reason must be greater than 2 (or less than -2), thus indicating a coefficient of significance with a confidence of more than 95%. This seems confirmed by the two independent variables chosen (MPIR and ROBOR 12M). The *P-value* at a very low level for ROBOR 12M means that the confidence is 95.64%.

With respect to economic fundamentals (in this case I was choosing the rate of inflation) reaction to the interest rates and especially to the policy rate, I built the following regression equation.

$$INFLR = \beta_0 + \beta_1 IROL_{ron} + \beta_2 IROL_{euro} + \beta_3 MPIR + \beta_4 ROBOR12M \quad (3)$$

The simulation through the regression method for the above equation of determination leads to the results from Table no.4

Table no. 4. Regression for inflation rate

Regression Statistics	
Multiple R	0.7015904
R Square	0.4922291
Adjusted R Square	0.4686119
Standard Error	1.6531642
Observations	91

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	227.839981	56.959995	20.841931	4.89102E-12
Residual	86	235.0338651	2.7329519		
Total	90	462.8738462			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*
Intercept	1.1376547	1.706993789	0.6664668	0.5068968	-2.2557366	4.531046
IROL. in RON (% y.p.)	-0.2418298	0.168688265	-1.4335897	0.1553152	-0.57717093	0.0935114
IROL. in euro (% y.p.)	-0.1022782	0.324292425	-0.3153889	0.7532304	-0.74695023	0.5423938
MPIR (% y.p.)	1.1479633	0.38832489	2.956193	0.0040191	0.37599902	1.9199277
ROBOR 12M (% y.p.)	-0.0094908	0.140968972	-0.0673254	0.9464789	-0.28972783	0.2707462

Source: NBR dataset, ANOVA simulation

The results indicate that the rate of inflation is determined by a ratio of 0.4922 (R Square) of the independent suggested variables, which give some relevance to the model. However, the result highlights the dependence of inflation in the same direction of monetary policy interest rates and in the opposite direction of interest rates on outstanding loans in RON and in euro and of ROBOR 12M. This can be interpreted in the sense of complying with the theory that inflation should rise when interest rates on banks and interbank fall. The model is based on a relatively large dataset (more than 30 observations), for this reason the *t-statistic* must be greater than 2 (or less than -2), indicating a significant coefficient with a confidence of more than 95 %. The value of *P-value* is very low for the monetary policy interest rate which means that the confidence is 99.59%. The interest rates on outstanding loans in RON seem to have a

significant degree of confidence (84.46%), but not the same can be said about ROBOR rates at 12 months and the interest rates on outstanding loans in euro.

In view of the above and confirming the views of other authors (Antohi, D., 2014), I conclude that the interest rate transmission mechanism operates in Romania, lately, an improvement maybe being due to the additional level of supervision in the banking system, to the adjustment of balance sheets of financial and banking institutions, to the considerable reduction of various costs of the banking system, to the better perception of risks in the banking system, but also of the risks of the economy and to the certain maturity of financial-banking market in Romania.

5. Conclusions

The issue of financial and monetary stability (or rather instability) continues to play an important role in the concerns of politicians, the media and experts, as demonstrated by the many papers, both theoretical and applied, that examine and propose solutions in order to improve financial stability. In this framework, along with the risks and vulnerabilities recognized in the literature, the tensions generating instability should be examined more carefully. If we consider the tensions are arising from within the banking system, then a look over the monetary transmission mechanism may signal possible shortcomings of its operation and may provide clues about the extent to which monetary transmission mechanism can generate instability.

In this context, based on a quantitative and qualitative analysis using correlation and regression methods, I tried understanding the monetary transmission mechanism in Romania. Correlations of the money market interest rates in Romania are extremely strong, making it difficult to choose the most significant interest rates, so that it can be used in viable regression equations. Research focused on the extent to which monetary policy interest rates and possibly interbank interest rates (in our case ROBOR 12M) can explain, in a significant manner, the operation of outstanding term deposits interest rates in RON and the outstanding loan interest rates in RON.

The results obtained are consistent with the results of other specialized studies on Romania, confirming a proper functioning of the monetary transmission mechanism, at least in the analyzed segments. The study also shows that the inflation rate responds in a significant manner to the signals of the monetary policy rate, which falls within the theoretical assumptions of the literature. Understanding these issues may allow greater controllability of unfavorable phenomena which manifest on money market, and on Romanian economy.

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JOB SEQUENCING METHODS AND TOTAL ELAPSED TIME MANAGEMENT IN BLOCK PRODUCTION INDUSTRY

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Abstract

The study applied job sequencing algorithm model for total elapsed time management in Osun State. The study examined the significant impact of job sequencing system on total elapse time management and the nexus between job sequencing and on-time delivery. A survey research was employed and data were collected through observation and investigation to pre-production, production and post -production activities of the selected block industry in Odo - Otin Local Government in Osun State. The results revealed that job sequencing model has significant impact on total elapse time management. Also, the finding revealed that saved time will reduce the cycle time, on -time delivery, customer due date of delivery and the total elapse time will be at optimal and this will enhance and boost the buffer stock for unexpected future demand. However, the cost implication of the saved time will enhance the profit of the`organisation. Organisations should endeavor to integrate the strategies of job sequencing model into their operations and build a team work toward cost minimization in all their activities.

Keywords: Job sequencing, Johnson rule Algorithm, Production Cost minimization and Total Elapsed time Management.

Introduction

Job sequencing which mean the selection of an order for a series of jobs to be done on a number of service facilities (machines) to reduce the production cost has created need of concern to management scientists. Job sequencing is conceptually perceived by management scientists as the process of production management which involves the assigning jobs to workstations and employees to jobs for specified time periods. Different scheduling methods result in diffent job sequences, leading to difference waiting time of individual jobs (Nong, Xueping, Tony & Xiaoyun, 2005). Due to the dynamic environment faced by business organisations as an open system, several jobs can be processed at one or more workstation(s). If job sequences or flow of operations are not carefully planned and managed, lapses, time waste, bottlenecks and several jobs may hanged and waiting lines may developed.

In addition, new jobs can enter the process at any time, as a result of the unavoidable dynamic environment. Such complexity puts pressure on both managers of small-scale businesses such as food vendors, welders among others and managers of large scale businesses such as automobile companies, cement factories, saw mills, block industries among others sought for maximum production at minimum cost within a reasonable and profitable time. In spite of the variability of job sequencing among factories, the importance of job sequencing on production cost of block industry cannot be over emphasized because of its necessity and unavoidability. In production, the purpose of job sequencing is to minimize the production time and costs, by telling a production facility when to make, with which staff, and on which equipment. Job sequence aims to maximize the efficiency and free flow of the production at a minimum costs and minimum time.

The sole aim of a production manager is the maximum production of quality goods at a minimum cost, which has made worthy of note that the impact of sequencing jobs during operations cannot be ignored. Development and increase in the market for blocks and the number of block industries in Odo Otin Local Government area of Osun State has grown rapidly since the establishment of State. As a result, the managements of most block industry in this area experience the under-use and over-use of resources such as man, machine, and tools like spade,

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shovel, and the wastage of materials such as sand, water, cement, boards, among others. This creates unnecessary expenses and increases in the cost of production and consequently, affects the profit margin as a result of the avoidable increase in the cost of production.

Furthermore, a lot of time which is supposed to be utilized for the production of bricks are used in searching for labour, waiting for the late delivery of materials, repair of machines, among others therefore causing waiting lines and bottlenecks which will increase cost and lead to low sales and loss of customers if bricks are not available when demanded. All these problems stagnate the growth of block industries and contribute to late delivery of the product, high cost, poor quality and inability to meet customers' requirement and there can be no minimization of cost if jobs are not properly sequenced, therefore, there is need to establish the link between effective job sequencing and total elapse time management.

Objective of the Study

The objectives are to:

- examine the significant impact of job sequencing system on total elapsed time management .
- explain the relationship between job sequencing and on-time delivery.

Literature Review

To improve the production facilities, a set of jobs are executed on the set of machines. For better performance there are large numbers of constraints. Process scheduling theory has been developed to meet all side constraints (Merten & Muller, 1972). Process Schedule is done in such a way that the resulting solution minimizes the given objective function. Many variants of the basic scheduling problem can be formulated by differentiating between machine environments, side constraints and objective functions.

What is sequencing?

Sequencing gives the idea of the order in which things happen or come in event. Suppose there are n jobs ($1,2,3.....n$) each of which has to be processed one at a time at m machine ($A,B,C...$). The arrangement of these flows is called job sequencing (Kalavathy, 2000). Sequencing can be defined as the selection of an order for a series of jobs to be done on a number of service facilities (machine). In sequencing, a systematic procedure is adopted in assigning priorities to waiting jobs thereby determining the sequence in which jobs will be processed.

Sequencing problem, thus arises when a few facilities (machines), each render a different kind of services (operations) are to be assigned a number of jobs in such a way that the order of performing operation by the machines on each job remains unaltered, as this order is predefined. For example, if a job requires an operation to be performed first on the machine a, then another operation on machine B, the order of performing operations should remain AB. The purpose of sequencing problems is to complete the job within the minimum possible time, keeping the minimum idle time of the machines (or services). Sequencing problem is by and large as allocation problem.

Principal assumptions of sequencing

While solving a sequencing problem, the following assumptions are made:

- One machine can process only one operation at a time.
- Each operation once started must be completed first.
- Preceding operation must be completed before the succeeding one can proceed.
- Processing time is known and fixed and the time taken in transfer of jobs between machines is neglected.
- Machines to be used are of different types.
- Jobs to be processed are known and ready for processing before the period under consideration begins.

Objectives of Job Sequencing

- **Minimizing work in Progress**: Optimal production management aims to minimize work in process. Work in process requires storage space, represents bound capital not available for investment and carries an inherent risk of earlier expiration of shelf life of the products. A queue leading to a production step shows that the step is well buffered for shortage in supplies from preceding steps, but may also indicate insufficient capacity to process the output from these preceding steps.
- **Maintaining minimum average flow time of production:** Task time is calculated on virtually every task in a business environment. It is used in manufacturing, however, most common in production lines that move a product along a line of stations that each performs a set of predefined tasks. The product moves along a line, so bottlenecks (stations that need more time than planned) are easily identified when the product does not move on in time. Correspondingly, stations that don't operate reliably (suffer frequent breakdown, etc.) are easily identified.
- **Maintaining minimize cost of production:** Cost reduction can result in significant product cost saving, manufacturing cost saving, and life cycle cost saving when companies interested in cutting cost implement
- **Maximizing utilization of production resources:** The available resources i.e machines, men, money and materials will be well utilized and arranged in optimal manner. Sequencing allows job flows in order of pre determined and achieved as speculated.
- **Targeted output achieved as specified:**, Supply chain management is involved, When your supplier supply materials needed per time and production is carried out within specification (scheduling) products supplied are more likely to meet customers expectation thereby allowing finished product, inventory without failing to meet their needs for volume and timeliness.

Classification of Job Sequencing Algorithms/ Models

Some of the algorithms /models for solving job sequencing problems are explained below;

TABU Search Algorithm

Eugeniusz and Czesl (2015) these authors explained TABU search algorithm for the job shop problem. It provided a new approximate algorithm that is based on the big valley phenomenon, and used some elements called path re linking technique as well as new theoretical properties of neighborhoods. The model provided a powerful tool to solve the job shop problem with the makespan criterion. It offered very good accuracy, in comparison to other best known approaches, obtainable in a short running time on a modern PC. The general idea of the algorithm could be applied to other scheduling problems, as an example, the flow shop and hybrid flow shop problem. (Rao, Raju, & Babu, 2013)

Fuzzy Topsis Method

Another scholars, Pragati and Manisha (2011) presented Fuzzy TOPSIS model in Job Sequencing Problems on machines of unequal efficiencies. Sequencing problems arise when there are more many jobs to done on series of machines with different time specification. In such problems, they determined an appropriate order or sequence for a series of jobs to be done on a different number of facilities. The processing time on theses machines for the jobs are assumed as imprecise processing time (Rao et al, 2013). Weights were given to each machine according to their efficiency. The gap distance will be defined and calculated, closeness coefficient of each job is ranked in order of their weight to minimize the overall total elapse time.

Payoff System / Model

Joss (2011) proposed a modification to the concept of the potential of Hart and Mas Colell to determine a payoff system for job scheduling problems. The basic understand of this model is the value attached to each job, the job should be assigned to production process or machines base on significant payoff of such job.

Johnson's Sequencing Rule

Punit and Rakesh (2012) In this study, they proposed an approach to find an optimal path from source to destination by taking advantage of job sequencing technique. They had used n jobs m machine sequencing technique and this was divided into n jobs 2 machine problems. Using Johnson's sequencing rule, they solved the problem and obtained the (n-1) sub sequences of the route. Using the proposed algorithm, they calculated the optimal sequence, which lead to the shortest path of the network. (Rao et al, 2013). This current study adopts the Johnson's rule algorithms to reveal the impact of job sequencing to production cost minimization.

Sequencing Model for N-Jobs through Two Machines (Johnson's rule algorithms)

This type of problem can be described as :

(i) Only two machines A and B, are involved :

(ii) Each job is processed in the order AB, and

(iii)Expected processing times $A_1, A_2, A_3 \ldots A_n, B_1, B_2, B_3 \ldots B_n$ are known as given below:

Job	1	2	3	…	n
A_i	A_1	A_2	A_3	...	A_n
B_i	B_1	B_2	B_3	…	B_n

Johnson's Rule

Since the procedure for solving such problems was developed by Johnson and Bellman (1953), this procedure as explained below is known as Johnson's Rule.

Step 1. Select the smallest processing time from $A_1, A_2, A_3 \ldots A_n$ and $B_1, B_2, B_3 \ldots B_n$. if there is a tie, select either of the smallest processing time.

Step 2. (i) If the smallest processing time is A_r, do the r^{th} job first and place it at the beginning of the sequence

(ii) If it is B_s, do the s^{th} job last of all and place it at the end of the sequence

(iii) If there is a tie for minimum $A_r = B_s$, process the r^{th} job first and the s^{th} job in the last

(iv) If there is a tie for the minimum among A_r's then do any one of them first.

(v) If there is a tie for minimum among B_S's then do any one of them in the last.

Step 3. Repeat step 1 and 2. Continue the process till all the jobs have been assigned a position known as 'optimal sequence'.

Sequencing of N- Jobs through three Machines

Johnson's method can be extended to the three machine case if any one of the following conditions is satisfied: Smallest time for a job on machine A is greater than or equal to the largest processing time on machine B or Smallest processing time for a job on machine c is greater than or equal to the largest processing time on machine B. For solving such problems, replace the equivalent problem involving n jobs and two machines. These two (fictitious) machines are donated as X and Y, and corresponding processsing time are defined by X_i and Y_i, where

$X_i = A_i + B_i$

$Y_i = B_i + C_i$

Sequencing of N-Jobs through M-Machines

In this type of problem, let expected processing times are represented by a Table of the type shown below:

Job	**Machine times for n-jobs and m-machines**				
	A_1	**A_2**	**A_3**	**…**	**A_m**
1	A_{11}	A_{12}	A_{13}	…	A_{1m}
2	A_{21}	A_{22}	A_{23}	…	A_{2m}
:	: :	: :	: :	: :	: :
N	A_{n1}	A_{n2}	A_{n3}	…	A_{nm}

Solution to this problem is possible only if any one of the following condition is satisfied. Smallest processing time on machine A_1 is greater than or equal maximum time on machines A_2, A_3…. A_m – 1or

Smallest processing time on machine A_m is greater than or equal to machine time on machine A_2, A_3, …, A_m -1.

Procedure for obtaining optimum sequence involved following steps:

Step 1: Check whether it satisfy the above mentioned condition.

Step 2: if condition is satisfied, proceed further. If not satisfied, method fails.

Step 3: convert the machine problem into an equivalent two machine problem says machine M and N, such that

$A_iM = A_i1 + A_i2 + ….. + A_im$ excluding the last machine time

$A_iN = A_i2 + A_i3 + ….. + A_im$ excluding the first machine time

Then determine the optimum sequence of m jobs through 2 machines by using the optimum sequence algorithm.

Elapsed Time Management

Elapsed time has to do with the time between starting the first job slated on the machine or a particular facility and the time of completing the last job on the machines. This includes the idle time that occurs on any of the machines during the process. The proper planning, scheduling and controlling of the time is referred to as total elapsed time management. Mathematically; Total Elapsed Time = $StJ_1\ M_A + tJ_1\ M_B + ……..\ J_1\ M_N$ for Job 1. Also, for Job2 $StJ_2M_A + tJ_2\ M_B + ……..\ J_2\ M_N$ and $J_3\ M_A + tJ_3\ M_B + ……..\ J_3\ M_N$ for Job 3 assumed to be the last job + Idle time on the machines if occurs.

Empirical Review

To improve the production facilities, a set of jobs are executed on the set of machines. For better performance there are large numbers of constraints and objectives must be achieved. Process scheduling is vital and authors have done series of study to meet all side constraints and for maximum gain to be achieved. Process Schedule is done in such a way that the resulting solution minimizes the given objective function.

Comparison of Well-Known Scheduling Methodologies

Tadsanee and Jirarat (2010), in their study Comparison of Well-known Scheduling Methodologies explains the well-known scheduling methodologies including first come first serve, shortest processing time, EDD, and least slack time. Since the scheduling may be done by using the rules of jobs and orders, two types of scheduling methodologies are created namely job-based rule and order-based rule. The methodologies then turn to be double. The eight methodologies are applied in a case study of an electronic manufacturing company in

Thailand. It is found that job-based rules always gives better results than order-based rules, and EDD and shortest processing time are the best methodologies.

Nong, Toni and Xiaoyun Xu (2005) The authors examined job scheduling methods for reducing waiting time variance represents their local level work and considers a single resource on a computer and network system. The paper supports an overall effort to achieve end-to-end Quality of Service (QoS) assurance for individual high priority jobs on an information infrastructure (such as the Internet). They worked on QoS models at the local, regional, and global levels. A local level QoS model aims to provide service stability and dependability on individual resources, leading to standard parts, which enable predictable performance. This simplifies QoS assurance at the regional and global levels. Performance results showed that Verified Spiral gives the best performance for the scheduling methods and problems tested in the study. Balanced Spiral produces comparable results, but at less computational cost.

During their investigation they discovered a consistent pattern in the plot of WTV over mean of all possible sequences for a set of jobs, which can be used to evaluate the sacrifice of mean waiting time while pursuing WTV minimization. This study considered only a single resource and jobs with only information of their processing times. This paper focuses on the VS and BS algorithms. Minimizing Waiting Time Variance (WTV) is a job scheduling problem where schedules on batch of *n* jobs, for servicing on a single resource, in such a way that the variance of their waiting times is minimized. Minimizing WTV is a well-known scheduling problem, important in providing Quality of Service (QoS) in many industries. Minimizing the variance of job waiting times on computer networks can lead to stable and predictable network performance

METHODOLOGY

Research Design

The survey research method was used in this study . Observation and investigation was made to production of blocks industry in Okuku, Odo – Otin, Local Government Osun state. This observation affords the research to collect data on steps, time and cost of production of the three types of blocks which are: 6 inches, 9 inches and special block without manipulating any of the variables involved in the study. The study covered all the production activities of the selected block industry in Okuku, Odo – Otin, Osun state.

Sample and Sampling Techniques

Sampling techniques relate to the procedure or method of choosing representatives of study population. Therefore, the researcher adopted simple techniques. Proportionate random sampling technique was used to select the block industry based on the activities and population of the workforce in the selected block industry in Osun state.

Instrumentation

The research instrument for this study adopted is "observation and investigation method" which made the respondents and the activities of the block industry to be well known to the researcher.

Section A – observation The first section focused on information on the number of workers, time used up on each process, the process of production and the number of machines in the firm.

Section B – investigation: the second section focused on information on the cost of production. Cost of a bag of cement, sand, water, labour, fuel and other miscellaneous expenses.

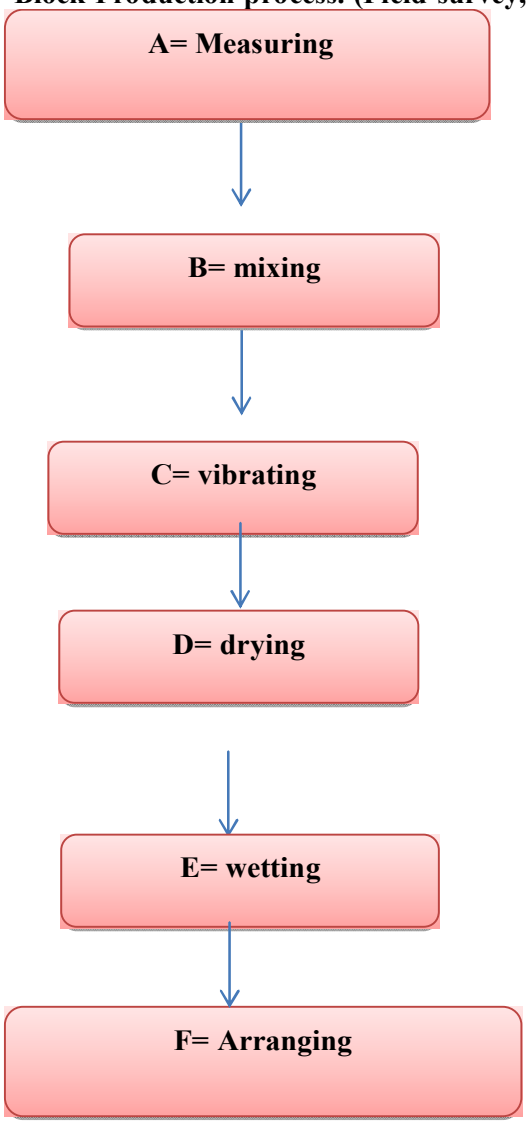
Administration of the Instrument

A close observation was made by the members of the research group. The research consulted with the manager of the selected block industry for support and assistance in the

observation and investigation on the subject matter. The managers assisted in justification of the observation made and in sustaining the interest and support by providing adequate information needed. All aspects of the investigation were explained to the respondents and the confidentiality of the information being supplied was guaranteed.

However, through the help of the manager, the researcher was able to ask questions with ease. It took the researcher three weeks to gather the information needed with average of 8 hours per day

Fig 1. Block Production process. (Field survey, 2015).



The block industry produces 6 inches blocks, 9 inches blocks and special blocks

Quantity produced per bag of cement

PRODUCT	QUANTITY PER BAG OF CEMENT
6 inches block	50
9 inches block	40
Special block	35

Source: Researcher's survey, (2015).

The estimated time used up by the firm per bag of cement on each type of block

Machine

Machine A represents measuring, Machine B represents mixing, Machine C represents vibrating, Machine D represents drying Machine, E represents wetting and Machine F represents arrangement.

MACHINES JOB	A	B	C	D	E	F	TOTAL TIME USED UP PER JOB
1	10	10	30	45	5	15	115
2	10	10	35	55	5	12	127
3	10	10	20	50	5	13	108
350							

Job

Job 1 represents 6 inches blocks, Job 2 represents 9 inches blocks and Job 3 represents Special Blocks.

Estimated time used up for Production

Total estimated time used up in the production of 6 inches block per bag of cement is 115 minutes.
Total estimated time used up in the production of 9 inches block per bag of cement is 127 minutes.
Total estimated time used up in the production of special blocks per bag of cement is 108 minutes.
Total estimated time used up in the three types of block per bag of cement each is 350 minutes.

Estimated Cost of Production

MATERIAL	**COST**
1 BAG OF CEMENT COST	₦1800
A LABOURER COST	₦200
SAND PER WHEEL BARROW COST	₦200
FUEL AND OTHER MISCELLANEOUS EXPENSES COST	₦300

Source: Researcher's survey, (2015).

Applying the processing of n-jobs through m-machines method

Cost of production for the three jobs with an estimated time of 350 minutes

3 Bags of cement = ₦5400

5 labourers = ₦3000

9 Wheel barrows of sand = ₦1800

Cost of fuel and other miscellaneous expenses = ₦900

Total cost for the three jobs for 350minutes = ₦11100

STEP 1: Comparism of time

First

Min MA ≥ Max MB√

Min MA ≥ Max MC×

Min MA ≥ Max MD×

Min MA ≥ Max ME√

Last

Min MF ≥ Max MB√

Min MF ≥ Max MC×

Min MF ≥ Max MD×

Min MF ≥ Max ME√

STEP 2: Compress

Mα –the last machine satisfied

Mβ –the first machine satisfied

JOB / MACHINE	1	2	3
M1	100	115	95
M2	105	117	98

STEP 3: Sequence

Job 3 has the least time of 95 minutes

3		

JOB / MACHINE	1	2
M1	100	115
M2	105	117

Job 1 has the least time of 100 minutes

J3	J1	J2

Therefore the job will be sequenced: JOB 3, JOB 1 and JOB 2

STEP 4:

MACHINE	A		B		C		D		E		F		IDLE TIME					
JOB	**S**	**F**	**S**	**F**	**S**	**F**	**S**	**F**	**S**	**F**	**S**	**F**	**A**	**B**	**C**	**D**	**E**	**F**
3	0	10	10	20	20	40	40	90	90	95	95	108	-	10	20	40	90	95
1	10	20	20	30	40	70	90	135	135	140	140	155	-	-	-	-	40	32
2	20	30	30	40	70	105	105	160	160	165	165	177	-	-	-	-	20	10

S represents start time and **F** represents finish time

Total elapsed time = 177minutes (optimal time used for the production)

Idle time for Machine A = 147minutes

Idle time for Machine B= 137minutes

Idle time for Machine C = 72minutes

Idle time for Machine D = 17minutes

Idle time for Machine E = 12minutes

Idle time for Machine F = 137minutes

Time used up by the block industry is 350minutes

Time used up if proper Job sequencing is applied is 177minutes

Time saved if proper Job sequencing is applied is 173 minutes

Conclusion and Recommendations

From the study conducted, it takes the block industry about 350minutes to produce fifty 6inches blocks, forty 9inches blocks and thirty-five special blocks with one bag of cement allocated to each type of block. It was realized that the application of proper job sequencing takes about 177minutes for the block industry to produce fifty 6inches blocks, forty 9inches blocks and thirty-five special blocks with a bag of cement allocated to each type of blocks

whereby machine A will be idle for about 147minutes, machine B will be idle for 137minutes, machine C will be idle for 72minutes, machine D will be idle for about 17minutes, machine E will be idle for about 12minutes and machine F will be idle for about 137minutes. Therefore about 173minutes is saved and can be utilized in making about forty-nine 6inches block, thirty-nine 9inches block and thirty-four special blocks extra.

Therefore, the selection of an order for a series of jobs to be done on a number of service facilities (machine) minimizes production time in block industry. Thus, has a positive impact on total elapse time minimization. The nexus between effective job sequencing and time minimization as revealed from the finding above shown that saving period of idle time and 173 minutes actual time saved will reduce the resources that ought to have been allocated to the period. Also, the time saved will reduce the cycle time or delivery time and customer due date of delivery will be met. From this finding, the total elapse time will be at optimal and this will enhance and boost the buffer stock for unexpected future demand. However, the cost implication of the saved time will enhance the profit of the`organisation. The finding supported the conclusion of Rao et al (2013) that sequencing job has the capacity to reduce and manage total elapsed time in production organisation. Organisations should endeavor to integrate the strategies of job sequencing model into their operations and build a team work toward cost minimization in all their activities.

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IMPACT ON LIBERALISATION NATURAL GAS PRICES IN THE EUROPEAN UNION

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Abstract:

This article is part two of a study on energy market liberalization in the European Union. In order to harmonize and liberalize the internal market in natural gas in the European Union, over 15 were adopted three legislative packages successive measures which address market access, transparency and regulation, consumer protection, supporting interconnection and adequate levels of supply. From a macroeconomic perspective empirical evidence suggests that the liberalization of the gas market will bring positive effects in terms of lower prices and better service for consumers. Given the evolution of liberalization, this paper will show that liberalization has not delivered the expected results. European gas market reform was followed by a double approach. First, in accordance with EU directives, Member States were required to take at least a minimum set of key measures for the liberalization of national markets. Secondly, the European Commission has promoted efforts to improve the interfaces between national markets by improving cross-border trading rules.

Keywords: *European Directive; internal energy market; price; vulnerable consumer.*

JEL Classification: L11, L12, L51

1. Introduction

The European Union is trying to build a single market, competitive in natural gas until recently was dominated by national players with monopoly power. The ultimate goal is to build medium- and long-term energy market in which consumers can choose, including across borders, and where prices will reach the same level.

2. European regulations on the liberalization of the European gas market

Liberalization of the electricity and gas markets, which are subject to EU energy policy was launched in the early 1990s, when the European Commission has developed a three-step plan. In the first phase they were adopted three Directives that ensure greater price transparency and facilitated the transit through distribution networks, and in the second and third phases was intended to progressively abolish monopoly over the production and distribution of gas (Berinde M., 2003).

The first gas directive, adopted in 1998, established the initial steps for changing industry structure by introducing network access, legal separation and regulating third-party access.

A second gas directive, adopted in June 2003 sought to accelerate liberalization for industrial consumers by 2004 and for all consumers to 2007. It introduced rules on unbundling transport supply.

Regulation 1775 of September 2005 has established detailed guidelines for third party access principles of capacity allocation mechanisms, congestion management procedures and transparency requirements. Lack of support from most European governments prior to 2000, served to slow liberalization.

However, the combination of long-term gas contracts indexed offering to supply a significant proportion of Europe and the lack progress in the liberalization of their gas markets had the consequence phenomenon called vertical foreclosure.

Conducting the survey in 2007 showed that the energy sector the second gas directive did not like the consequences achieve a competitive and transparent internal market, mainly

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for transport capacities and long-term legacy contracts. This gave rise to the third Directive in the gas sector and Regulation 715 adopted in July 2009 (repealing Directive second gas).

The two documents form a broader set of laws on the internal energy market. In February 2011, the European Council set the objective of completing the internal energy market by 2014 and the development of interconnections, to end the isolation of some Member States of European networks for natural gas by 2015 (Article 194 TFEU).

In October 2011 the European Union adopted Regulation (EU) no. 1227/2011 regarding the integrity and transparency of wholesale energy market which seeks to ensure fair trade practices are European energy markets. It gives ACER (Agency for the Cooperation of Energy Regulation) the power to collect, review and disseminate data related to wholesale energy markets, monitor markets and trade, to investigate cases of market abuse and coordinate with Member States applying appropriate sanctions. Responsibility for sanctions applicable to infringements lies with the Member States, however.

The legislative package for consumers are incorporated for "power to choose" allowing consumers to switch providers in a short time. Clearly, the decision to choose a different provider must be based on accurate information and - therefore - insert suppliers obligation to ensure that the information is kept in a transparent manner and as completely as possible. At the same time, providers must establish effective procedures to resolve any consumer complaints.

3. The impact of liberalization of gas market

Liberalization performance can be measured in several ways. The effect on prices is probably the most important indicator.

European single market objective is to have an average price lower natural gas in the European Union and a degree of convergence in prices through increased competition. In contrast to the price of fossil fuels, which are usually traded on global markets with relatively uniform prices, there is a wider range of prices within Member States of the European Union for natural gas. This is, to some extent, influenced by the price of primary fuels and more recently, the cost of carbon dioxide emission certificates.

International trade in natural gas is not practiced in an organized international markets, such as that of oil or coal. The absence of an international organization of manufacturers and exporters to ensure uniform regulation of the issue price, favored the proliferation of a wide variety of trading prices and therefore the formulas are set.

Consequently, we cannot talk about an international market and the international prices of gas, but on a few large markets which gradually to evolving geographic distribution of exploitable reserves and the degree of economic efficiency of the formulation of transport, they were "associated" providing a number of areas. Basically, we can say that while oil markets are globalized, the gas is continental.

In Europe, prevalent are long-term contracts, under which prices are not determined directly based on market conditions' equity (the marginal cost of production in the long term supply-demand ratio, balance of power between buyers and sellers) but indirectly, based on complex formulas that link the gas price with that of oil.

3.1. The impact of liberalization on prices for households

Progress in the functioning of the internal energy market should have a positive impact by ensuring that wholesale prices have converged across Europe. This has not happened in the case of retail prices, where network distribution systems, energy and climate policies uncoordinated national taxes, charges and network charges vary, leading to a fragmentation of the internal market.

A comparative presentation of average prices (in euro per kilowatt hour) of natural gas for the last three years is given in Table 1.

Table. 1: Gas prices for households in the European Union (€ per kWh)

	2012	2013	2014
EU 28	0,065	0,067	0,066
Belgium	0,066	0,066	0,058
Bulgaria	0,051	0,049	0,048
Czech Republic	0,064	0,055	0,057
Denmark	0,099	0,091	0,080
Germany	0,066	0,068	0,068
Estonia	0,052	0,049	0,046
Ireland	0,065	0,068	0,067
Greece	0,077	0,072	0,068
Spain	0,073	0,075	0,073
France	0,068	0,070	0,070
Croatia	0,047	0,046	0,047
Italy	0,083	0,080	0,077
Cyprus	-	-	-
Latvia	0,051	0,048	0,050
Lithuania	0,060	0,056	0,042
Luxembourg	0,062	0,053	0,050
Hungary	0,043	0,037	0,035
Malta	-	-	-
Netherlands	0,081	0,080	0,076
Austria	0,077	0,075	0,073
Poland	0,047	0,049	0,050
Portugal	0,084	0,093	0,098
Romania	0,029	0,031	0,031
Slovenia	0,067	0,067	0,068
Slovakia	0,050	0,051	0,050
Finland	-	-	-
Sweden	0,123	0,118	0,113
United Kingdom	0,053	0,060	0,063

Source: Eurostat, 2015

As can be seen in Table 1 the gas price for households has declined but not at the level expected. Lowest price found in Romania (EUR 0.031 / kWh), Hungary (EUR 0.035 / kWh) and Lithuania (EUR 0.042 / kWh). The highest prices are present in Portugal (EUR 0.098 / kWh) and Sweden (EUR 0.113 / kWh).

EU trends hide significant differences between Member States and between different economic sectors. This indicates weaknesses in the internal energy market, with large differences between Member States' policies regarding network costs and low taxes.

3.2. The impact of liberalization on prices for industrial consumers

Gas prices are of particular importance for international competitiveness, as they represent a significant proportion of total energy costs for industrial and service enterprises. Unlike the price of other fossil fuels, which are usually traded on global markets with relatively uniform prices, there is a wider range of prices within the EU member states for natural gas.

Energy prices in the EU depends on a number of conditions of supply and demand, geopolitical situation, import diversification, network costs, environmental costs, severe weather conditions or levels of excise and taxation. Gas prices or price schemes vary from one povider to another. These can result from negotiated contracts, especially for industrial users.

While in Europe the energy has never been cheap in recent years difference in terms of energy prices between the EU and its economic partners major increased further: on average,

industrial prices for natural gas are currently in the European Union three to four times higher than in the United States, India and Russia, exceeding by 12 % the price in China is comparable to those of Brazil and slightly lower than in Japan.

Increasing energy costs but independently, developments in national, regional or European sector-specific market structure, market strategy of a company etc. can all determine the success, or failure of the competitiveness of companies and the economy. Indispensable in certain sectors, energy (be it gas or electricity) can contribute directly to increasing or decreasing production costs, with direct implications for the competitiveness of businesses (Table no. 2).

Table. 2: Gas prices for industrial consumers in the European Union (€ per kWh)

	2012	2013	2014
EU 28	0,041	0,040	0,037
Belgium	0,040	0,032	0,029
Bulgaria	0,036	0,035	0,032
Czech Republic	0,034	0,032	0,030
Denmark	0,045	0,037	0,036
Germany	0,048	0,045	0,040
Estonia	0,038	0,035	0,036
Ireland	0,042	0,041	0,039
Greece	0,053	0,045	0,042
Spain	0,039	0,037	0,037
France	0,041	0,039	0,038
Croatia	0,046	0,042	0,039
Italy	0,042	0,038	0,035
Cyprus	-	-	-
Latvia	0,038	0,035	0,035
Lithuania	0,044	0,041	0,028
Luxembourg	0,051	0,043	0,040
Hungary	0,041	0,040	0,037
Malta	-	-	-
Netherlands	0,040	0,042	0,039
Austria	0,044	0,043	0,040
Poland	0,036	0,038	0,036
Portugal	0,042	0,043	0,042
Romania	0,028	0,030	0,030
Slovenia	0,049	0,043	0,037
Slovakia	0,037	0,037	0,035
Finland	0,049	0,047	0,045
Sweden	0,055	0,050	0,045
United Kingdom	0,035	0,037	0,036

Source: Eurostat, 2015

For industrial consumers Table. 2 prices are the lowest in Lithuania (EUR 0.028 / kWh) and Belgium (EUR 0.029 / kWh), followed by Romania and the Czech Republic (EUR 0.030 / kWh). The first are Finland and Sweden (EUR 0.045 / kWh).

As shown in the two tables reveals that, at the end of liberalization, gas prices are lower in Eastern Europe, and the highest prices remain in western and northern Europe.

In recent years, the annual consumption of natural gas decreased, then stabilized, on the one hand the economic crisis, which resulted in reduced industrial consumption, but also due to structural changes in the European economy (lower share of heavy industry), increase the share of renewable energies and improving energy efficiency.

So far, the EU has kept its global leadership in energy-intensive exports of goods. But it is possible that European industry should be required to make greater efforts to offset higher costs for energy by continuing improvement in efficiency, taking into account physical

limitations, given that competitors strive for greater efficiency and the European industry decides to invest abroad to be as close in expanding markets (COM 2014).

The worst affected were units and steel industries of metallurgy, machine building, chemical, glass and ceramics, in which spending on gas and electricity are an important in production costs. Returning Customer losses were difficulties in marketing products, reduced production capacities, were carried restructurings and layoffs, some units have ceased production activity. The current difficulties through which the industry is reflected in the continued decline in natural gas consumption.

3.3. The impact of liberalization on vulnerable consumers

Due to the economic crisis, especially the number of customers on low incomes rose sharply and vulnerability to high prices of natural gas went up. Because of specific problems faced by Member States of high unemployment and poor economic conditions in general, it is difficult to identify the most vulnerable beneficiaries and clients. In the Gas Directive the European Commission seeks to protect vulnerable consumers.

4. The impact of liberalization of gas market in Romania

In Romania liberalization has meant, in theory, competition between suppliers to provide consumers quality services at affordable prices, but economically justified. This can happen only when consumers are informed about alternatives, they are aware that they can change their supplier and know under what conditions. It is not enough only the existence of regulations on switching, consumers need information to allow a decision as to their advantage.

Law electricity and natural gas (Law 123/2012) mentioned in Articles 3 to 16, tied vulnerable consumers: "The end customer household customers belong to a category that, for reasons of age, health or low income are the risk of social exclusion and to prevent this risk, benefit from social protection measures, including financial ones. Social protection measures and eligibility criteria are established by these acts. "The scheme consists of state subsidies. Estimates on the number of vulnerable consumers on the Romanian market amounted to 1.15 million from 8.36 million domestic consumers of electricity and gas. Gas prices are to liberalize by 2021 for residential customers.

After two years of gradual liberalization and after full liberalization of non-household consumers as of January 2015, the representatives of ANRE (National Agency for Energy Regulation) estimates that 24% of the total consumption of households accounted for approx. half (representing approx. 20% of total households) is the consumption of households who could afford the real price of gas, a price by about 20% over today's final price including network charges and fees. The other half of domestic consumption (approx. 80% of households) would require a social aid scheme to support this growth. Over time there have been many ways to build such a scheme, to enable accelerated market liberalization.

Alternatives that the government has had over time for social support of households suggests that households were not the real reason for postponing liberalization.

If instead to subsidize consumption by low prices, it builds a social policy that the poorest are supported with income support and the prices get to the real market, there are several advantages. Consumers can decide which sources of energy (heating, electric heating, gas, wood stoves, etc.) that is most advantageous price / quality ratio. Higher price for natural gas will make consumers and dissipate less power. Today, support through low prices benefit not just those who are very poor that neither can connect to natural gas. With an income support, these households could connect to the gas network if they wish.

The major argument against liberalization is the affordability of price increases, especially given that low natural gas prices in recent years have made a significant number of households to disconnect from the heating and switch to natural gas heating own. However,

postponing liberalization will exacerbate the problem, because households off further if cheap gas remains a better alternative for consumers than a service heating still remained at a quality / price more disadvantageous delays sector reform district heating.

Currently, the average annual disconnection from heating systems is 4% and there is a tipping point at which district heating systems in the cities come to abolish. Due to disconnection of heat in recent years, a number of consumers even among the urban population, middle-income, substituting district heating with individual central gas will be strongly affected by the price increase without necessarily category so "vulnerable customers" as defined in the Directive and the Romanian legislation. A World Bank study estimated that for the increased price for gas at market level, compared to 2012, it would be appropriate to extend the number of beneficiaries of aid heating by 30-40% (PSIA 2013).

Liberalization for households should take account simultaneously purchasing power and consumption structure thereof, to build a scheme fairer than today and to benefit more poor consumers or "vulnerable" by rising prices. One can conceive a billing system to better distribute the expense over the year to avoid price shocks winter.

Eliminating social tariff should be conditional on other financial measures "to replace the facility provided by this tariff low-income customers.

A solution that would provide subsidies for about 60% of the population, according to estimates of the Ministry of Energy market in Romania, is the granting of the EU budget. Romania proposed the European Commission in 2014 adopted a European definition of the concept of vulnerability in the context of the European Energy Union formation. The proposal is likely to be accepted if it is still actively supported. Greece is among the countries that joined the Romanian approach. The proposal has the support of other countries, particularly new member states of the European Union. But even if the project will be accepted by most Member States, the legislative process will take years.

5. In conclusion

Completing the internal market of the European Union requires the removal of numerous obstacles and trade barriers, harmonization of policies and fiscal measures, pricing regarding rules and standards. The objective is to ensure a functioning market characterized by fair access to the market, a high level of consumer protection, interconnection and high levels of production capacity.

Liberalization of gas market in the European Union has brought positive effects in terms of lower prices and better services, but not at the expected level.

The benefits of liberalization of natural gas to final consumers were rather limited, given some great prices on the market.

Liberalization, like globalization, should be well understood so that you can adapt the interest of the state, region, company or individual. We start from the premise that this process has not been initiated and is not directed against consumers, but is designed for them to be the main beneficiaries of quality services at a fair market price, sustainable and more accessible.

Contrary to the expectation that the European Union by aligning gas prices in Europe, prices will not rise in Romania, as in other countries, energy prices are in a process of growth.

Law electricity and natural gas in Romania defines vulnerable consumer as end customer belonging to a category of household customers who, because of age, health, low income, are at risk of social exclusion and to prevent this risk, benefit social protection measures, including financial ones. In this context they need to identify and help vulnerable consumers directly, fairly and transparently. Other consumers who are "vulnerable" if you are concerned about the value of natural gas bill must, first of all, to consume more efficiently and eliminate waste through energy efficiency investments.

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EFFECT OF BRAND IMAGE CUSTOMER SATISFACTION IN TELECOM INDUSTRY IN SOUTH SULAWESI

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Abstract

The purpose this research goals, test and analyze the effect of brand image on customer satisfaction in the telecommunications industry in South Sulawesi This research is a quantitative research with survey method is explanatif (explanatory research) or research testing hypothesis.. Finally, this study empirically proved that the brand image direct and significant impact on customer satisfaction. However, the brand image is not significant and direct effect on customer loyalty. This shows the importance of brand image in enhancing customer satisfaction.

Keywords: image, satisfaction, customer, telephone

Introduction

The mobile phone industry has grown rapidly in Indonesia since 15 years ago, is evident from the number of cellular subscribers continues to increase from year to year. Indonesia is the fourth in Asia after South Korea, China and Japan. Currently in Indonesia operates 7 mobile operators with a GSM (Global System for Mobile) and others there are four operators of CDMA (Code Division Multiple Access). According to data from the Directorate General of Post and Telecommunication, in the period 2006-2010 the average growth per year of cellular users in Indonesia is 31.9% per year. Until the end of 2010 the number of mobile subscribers reached 211 million, of which GSM operators dominate 95% of the mobile market, the rest is the CDMA market 5%. While mobile payment schemes dominated by pre-paid (94%) and the remaining 6% of post-paid. Telkomsel as the market leader, subscribers has reached 94 million in 2010 with a market share of about 44.5%. The current range of mobile phones has penetrated to the remote area. Since 2008 Telkomsel as mobile operators have managed to reach 100% of all districts in Indonesia.

When compared with other countries 5 operator India, china 5 operator, Singapore 3 operator, Malaysia 2 operator. This study discusses the importance of brand image, customer value, excellent service, experience as consumer preferences in the use of mobile telecom products to improve customer satisfaction and loyalty. Gropper and Boliy (1999) explains that promote patient (customer) satisfaction as the ultimate goal for the success of the organization.

In an effort to retain customers, companies need to strive to create customer loyalty. However, companies need to realize that the loyal attitude alone is not sufficient to ensure the viability of the company, because the loyal attitude does not much affect sales and profit figures. The need for real action as proof that customers are truly loyal to the company, namely the customer retention (Buttle, 2004). Therefore, many companies have concluded to further adapt customer retention techniques in order to improve company performance (Hennig-Thurau and Klee, 1997). Customer loyalty, according to Andreassen and Lindestad (1998: 12) is reflective of psychological commitment to a particular brand. The purpose of repurchasing and the desire to maintain a positive interaction "word of mouth" which is one indication of customer loyalty. Customer loyalty associated with the services of a company. Customers will be loyal if they are satisfied and will continue to work closely on an ongoing basis. Meanwhile the company tends to make customers feel satisfied is an active strategy to maintain customer loyalty.

The company expected to be able to make the customers satisfied with the products produced and the level of service provided so as to make the customer feel satisfied and be loyal to assume that the products and services provided by the company in accordance with

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what they expect. Customer loyalty is very important for companies that want to maintain the viability of its business and its business success. According to Jennie Siat in Mouren Margaretha (2004: 297) states that customer loyalty is the ticket to success of all businesses. A satisfied customer will be able to re-purchase at a time that will come and inform others on what is perceived. Given that created loyalty to its customers, the company will acquire two benefits once, namely getting the profitability of the group sell their products and attract new customers because see the loyalty of existing customers, this means more and more companies make a profit for its survival.

Formulation of the problem Based on the background of the problems that have been described above, it can be formulated research problems in general and thorough as follows:

1. Does the brand image significantly influence customer satisfaction in the telecommunications industry in South Sulawesi?

A. Objective

1. To find out, test and analyze the effect of brand image on customer satisfaction in the telecommunications industry in South Sulawesi.

LITERATURE REVIEW

1. Marketing Services

Service marketing concepts used in this study as the basis of theoretical thinking to understand the concept and marketing strategy services, since the object of this study is that the insurance company service providers. In this section, before discussing the concept of marketing services, first put forward the concept of basic services. Services can be "deeds, processes and performances" (Zeithaml and Bitner, 2004: 3). Services may include ideas, ideas, processes and performance presented the service provided to customers whose production is intangible, simultaneously with the production of consumption, varied and not durable. Another view, the service is any action or activity that can be offered by one party to another that is essentially intangible their products. Thus, services marketing is marketing the idea, process and performance that can be offered by service providers to their customers. "The quality of services being marketed assured on the quality of the work" (Gronross, 2000; Lovelock, Zeithaml and Bitner in Astuti, 2001).

Brand Image (Brand Image) According to Kotler (2000), mentions that the brand image are a number of beliefs about the brand. Keller defines brand image as perceptions about a brand as reflected by the brand itself into memory when a consumer sees the brand. The conceptual model of the brand image according to Keller (1998) includes the attributes of the brand, the brand advantage and brand attitudes. Knowledge of a brand in the memory / memories essential for the making of a decision and have been well documented in the memory (Alba, Hutchinson and Lynch, 1991 in Keller, 1993: 2) so that the knowledge of the brand (brand knowledge) is very important in influencing what people think of someone about a brand. Brand image (brand image) is the image of a brand that is considered as a group of associations that connect consumers to the idea a brand name (Biel, 1992: 8).. In this study, dimension or indicator variable corporate brand image (brand image), proxied by the dimensions of corporate image presented by Keller (2003), which developed into five dimensions as follows: 1. Professionalism representing quality approach (quality) of the attributes, benefits and behavior. 2. Modern representing innovative approach of the attributes, benefits and behavior. 3. Serving all segments of society that represent the values and programs of concern for the environment and social responsibility. 4. Safe which is the approach of corporate credibility (Popular) 5. Concern for consumers that an approach of orientation to the customer (customer orientation). 6. Customer Value On the concept of customer value gives an overview of the customers of a company, through a consider what

they want, it will be a positive value and believe that they benefit from a product (Woodruff, 1997). William A. Band (1991) saw the need for cross-functional within a company, namely, marketing, operations and human resources as a prerequisite in managing customer value. From some of the research that has been done by several researchers obtained a definition of customer value. Customer value is the customer's overall assessment of the usefulness of a product that is based on the perception of what is acceptable and what is given (Zeithami, 1987). Perception buyers about the value that describes a comparison between the quality or benefit that they feel the product with the sacrifices they feel when paying the price of the product. Furthermore Garvin in 2001 Zhang explained that the six elements of customer value that appearance, idiosyncrasies, beliefs, suitability, durability, ease of Customer Value is the perceived quality of customers that are tailored to the relative prices of the products produced by a company (Slater and Narver, 1994, P.23). With the value of the customer or the customer, we mean emotional bond formed between customers and manufacturers as customers use a product or service important produced by the manufacturer and find these products provide an additional value (Butz and Goodstein, 1996).

6. Excellent Service

According to Barata (2004: 31) excellent service (service excellence) is composed of five basic elements, among others:

1. Ability(ATP)
2. Attitude
3. Attention
4. Action
5. Accountability

According to Gita Nelwan to create excellent service, must start with 1 vision, 1 Word, 1 Team. Only with a common vision can bring forth the same words that in turn will create a solid team. Every employee needs to have a common understanding that the paradigm of "Customer is King". The essence of the service is hospitality (hospitality).

7. Customer Experience (Customer Experience)

In detail Kartajaya Schmitt in 2006, said that the customer experience as a marketing approach can be seen from the following indicators:

1. The Five Senses (Sense)
2. The feeling (Feel)
3. How to Think (Think)
4. Habits (Act)
5. Linkage (Relate)

8. Customer Satisfaction

Oliver (1997) defines customer satisfaction as service after buying evaluation, where the perception of the performance of alternative products or services chosen meet or exceed expectations before purchase. If the perception of the performance can not meet the expectations, then there is dissatisfaction (Umar: 2003).

9. Customer Loyalty

In the decade of the 2000s, the orientation of world class companies experienced a shift from the conventional approach towards contemporary approaches (Bhote, 1996). This contemporary approach focused on customer loyalty. There is nothing wrong in the conventional approach, but what is done is not enough. In the language of mathematics, the

conventional approach "Necessary but not sufficient" To compete in the dating, for example, satisfied customers could switch suppliers if there are competitors that provide discounts or better service. According schanaars (1998), "there are four kinds of possible relationships between customer satisfaction and loyalty the failures, forced loyalty, defector and successes". Customer satisfaction should be accompanied by the customer loyalty. Customers are really loyal not only potentially become a word-of-mouth-advertisers, but most likely also loyal to the company's portfolio of products and services for many years.

Loyalty behavior actually began to emerge in the era of the 1970s, after a period in which most of the studies have shown that loyalty is a pattern of repeat purchase (Oliver, 1997). Loyalty is the most important factor in determining the success of a retail business and the sustainability of the store, and in the absence of loyalty in the retail business, the competitive advantages possessed such never existed and is not successful (Omar: 1999). Mowing and Minor (1998) define loyalty as a condition where the customer has a positive attitude toward a brand, committed to the brand, and intends to continue purchasing in the future. According Uncles and Laurent (1997): "Loyalty conceptualized as a behavioral measure (including exclusive purchase and repeat purchase probability) and an attitudinal measure (including brand preference, liking, commitment, and intention to buy)" According to Loudon and Bitta Delta (1993), "store loyalist Refers to the customer's inclined to patronize a given store during a specified period of time". Customers who are considered loyal to subscribe or re-purchase for a certain period. Loyal customers are very meaningful for enterprises because of the cost to acquire new customers is more expensive than maintaining existing customers (Peter and Olson, 2002) .There are several characteristics of a customer can be considered loyal according to Griffin (2002: 31) Among others:

• Customers who make purchases on a regular basis with a willingness to continue to use (regular Makes repeat purchases)

• Customers who purchase for other products in the same place or purchased outside the line of products and services (purchases across product and service lines), recommends it to others who ask for advice (recommend them to other customers, customers who refer to others (Refers companies)

• Saying or convey something positive about the company to others (positive behavioral intentions are reflected in the service provider's ability to have the customer);
• Customers that can not be influenced by a competitor or a resilience not to move to another product or showing immunity of appeal similar products from competitors (demonstrates immunity to the fullness of the competition)

Research Methods

Research Approach This research is a quantitative research with survey method is explanatif (explanatory research) or research hypothesis testing.

Discussion

This discussion focused on the decisions resulting from hypothesis testing, as an attempt to answer the formulation of the research problem. Results of analysis of hypothesis testing are described as follows: 1. Effect of Brand Image Customer Satisfaction To answer the problem formulation and the first hypothesis can be observed from the analysis path in Table 16. From Table shows that the brand image (X1) has a positive and significant impact on customer satisfaction services (Y1). Results of this study showed that a good brand image will make customers more satisfied. This finding agrees with the results of research Pribanus Wantara (2009), by lifting the title influence brand image, reputation and excellent service to the satisfaction and loyalty of students PTS in East Java that conclusion says that the brand image, reputation, excellent service will increase student satisfaction but only image brand and reputation have a significant influence on the loyalty of students, not including excellent service and also the satisfaction of the students will be able to increase the loyalty of the

students. Statistical results descriptive indicate that modern as an indicator of the dominant form variables brand image that is visible from the average value that is high compared with other indicators, it proves that the use of mobile cards is because it has a brand that is well-known and famous so always keep in mind, with his trademark so that consumers dianggapa be easy to use so modern compared to other cellular products.

The facts in the study showed a telecommunications users shows that customers go to counters that sell mobile cards majority of customers assume that the provider has a modern value that, the right choice to use products means ebih priority to fame brand telecommunications service provider rather than other factors , so that the modernization can provide a sense of prestige or pride for the customer and the provider's image looked relatively good, so in such a way the brand image becomes the main provider and the first to be considered for customers in responding to the need to use cellular products. This is consistent with those described in the grand theory that among aspects of the product that is intangible (intangible), the brand is the most important thing, Where the majority of the marketing strategy tends to highlight the brand (including all elements are added as a logotype or slogan) than the products that are being sold. Branded service providers need to be managed properly so that such can provide a positive brand image in the eyes of customers who can benefit provider companies, as explained that a strong brand and modern is a very valuable asset that will ultimately impact satisfaction for its customers.

It can be proved that the brand image has a positive and significant impact on customer satisfaction. Satisfaction is the result of the buyer's perception of the brand image it receives from the service provider / enterprise. The given image that is able to meet customer expectations, it will cause the customer to feel satisfied. So it can be said that when the brand image increases, then it can be used also as an indicator of increasing customer satisfaction. Parasuraman et al (1998), Sivadas (2000) and Selnes (1993) in his research also proves the existence of a positive and significant influence of brand image on customer satisfaction. Empirical evidence shows that that company / organization can compete and have a competitive advantage, the services offered by the company / organization must be truly qualified. The strategy needs to be done by a company / service providers to obtain a quality service is the development of innovation through research and development so that the services offered will always be up to date which is oriented to meet the needs and desires of customers as well as the accuracy of delivery to meet customer expectations.

Another opinion expressed by Graeff (1996) states that the rapid development of the market, will encourage consumers to be more expensive than its brand image to the characteristics of the products offered. These conditions indicate that the product is in the position of "mature" in the product life cycle. Murphy (1990) indicates three levels of product life cycle, including proprietary, competitive and stage image. Proprietary explains that the band was able to demonstrate the uniqueness of a product on the market. Competitive explains that the brand is able to describe a product has a competitive advantage that will drive the competitors to perform product development in order to survive in the market. While the stage to explain that the brand image of a product capable of being decisive in differentiating a product in the minds of consumers in their purchase decision than other products.

In building a good brand image there are several variables that are relevant to be studied further. Meenaghan and Shipley (1999) noted the importance of marketing communication in enhancing brand image. It is also stated by Graeff (1996), which have more specifically discussed the importance of the promotion in building a brand. Based on the above description and the results of the above studies, shows that there is a direct and positive influence brand image significantly to customer satisfaction.

Conclusion

The results of this study prove that empirically brand image direct and significant impact on customer satisfaction. However, the brand image is not significant and direct effect on customer

loyalty. This shows the importance of brand image in enhancing customer satisfaction. This is consistent with the hypothesis 1 and proved that the brand image and significant positive effect on customer satisfaction in the telecommunications industry in South Sulawesi.

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PERSPECTIVES ON ENERGY AND CLIMATE IN EUROPEAN UNION

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Abstract:

Climate policies are fundamental to the future of our planet, while a truly European energy policy is an important factor for competitiveness. The primary objective of 40% reduction of greenhouse gas emissions for 2030 greenhouse is the basis of the most efficient in terms of cost to an economy with low carbon dioxide emissions. Reduce by at least 27% renewable energy is an important objective to provide stability to investors, stimulate green jobs and support security of supply. The 2030 expressed the EU's willingness to promote progress towards a competitive low carbon dioxide, the investment stability and the security of energy supply, to ensure that energy remains affordable for households and businesses, sets a higher ambition as regards climate change.

Keywords: *climate change, energy, emissions, renewables, energy efficiency*

JEL Classification: Q21, Q47, Q48

1.General considerations

The measures on climate change and to reduce emissions of greenhouse gases is a priority for the EU countries that were committed to transforming Europe into an efficient economy in terms of energy with low emissions of carbon dioxide. The first package of EU climate and energy set three key objectives for 2020: a 20% reduction in emissions of greenhouse gases, increasing to 20% the share of energy from renewable sources and achieving improvements 20% energy efficiency.

The first package of EU climate change and energy was adopted in 2008 and set objectives for 2020, recording significant progress towards achieving these objectives. In the climate and energy policies for 2030, the EU approved an integrated framework that establishes a number of headline targets and policy measures for 2020-2030 and stimulating future international negotiations on climate change. It includes a number of targets and measures aimed at increasing competitiveness, safety and economic sustainability of the EU energetic system. It also aims to encourage the investment in green technologies, which would help create jobs and strengthen Europe's competitiveness. In particular, it proposes the following:

- a commitment to continue reducing emissions of greenhouse gases by setting a target of 40% reduction by 2030 compared to 1990 levels;
- a target for energy from renewable sources constitute at least 27% of energy consumption, with flexibility for Member States in establishing national targets;
- improved energy efficient reasons by bringing necessary amendments to the Energy Efficiency Directive;
- reform of the EU Emissions Trading Scheme allowances to include a reserve for market stability;
- indicatori key on energy prices, diversification of supply, interconnection between different Member States and technological developments, to measure progress towards an energy system more competitive, safer and more sustainable;
- a new governance framework for reporting by Member States, based on national plans coordinated and evaluated at EU level. (European Commission Communication on a framework for climate and energy policy in 2020-2030)

2.Regulations governing the EU climate and energy

The main international agreement in this area is the United Nations Framework Convention on Climate Change (UNFCCC). It was one of three conventions adopted at the Earth Summit in Rio in 1992. So far, it has been ratified by 195 countries. It started as a way for countries to work together to limit global warming and climate change and to cope with their effects.

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Council currently deals with two aspects to the UNFCCC:

• ratification of the Doha amendment to the Kyoto Protocol, which refers to commitments under the second period, between 2013 and 2020;

• Negotiations for a new global agreement on climate change that includes all countries of the UNFCCC, with the objective of achieving greater emissions reductions globally, which should enter into force in 2020.

In the mid 90s, UNFCCC signatories have realized that stronger measures were needed to reduce emissions. In 1997, they agreed on the Kyoto Protocol, which introduced legally binding targets for reducing emissions Legal for developed countries. The second commitment period under the Kyoto Protocol started on 1 January 2013 and will end in 2020. Take 38 developed countries, including the EU and its 28 Member States. The second period is marked by the change from Doha, under which participating countries have committed to reduce their emissions by at least 18% compared to 1990. The EU has pledged to cut emissions by 20% during this period compared to levels 1990. (www.consilium.europa.eu/ro/)

The main weakness of the Kyoto Protocol is that it requires only developed countries to take action. Also, since the United States did not sign the Kyoto Protocol, Canada withdrew before the end of the first commitment period, and Russia, Japan and New Zealand do not participate in the second commitment period, the protocol applies at present only about 14% of global emissions. However, more than 70 developed countries and developing undertook various non-binding commitments to reduce or limit their emissions of greenhouse gases. (Council of Europe, international agreements on climate policy)

EU's main objectives for the Paris Agreement:

• an ambitious, legally binding, applicable to all countries;

• the inclusion of clear targets, fair and ambitious for all countries;

• periodic review and strengthen the objective targets countries 'below 2 C';

• responsibility of all countries - to one another and to the public - for their targets.

The European Council adopted conclusions on the framework for 2030 in March 2014 and reviewed progress made at its meeting in June 2014. At its meeting in June, EU leaders also discussed the Commission's energy security strategy, which is closely linked to within 2030.

At a meeting of 23-24 October 2014, the European Council agreed on the framework of climate and energy for 2030 for the EU. The European Council also adopted conclusions and, in particular, has approved four important objectives:

• a binding target of reducing EU greenhouse gas emissions by at least 40% by 2030 compared to 1990;

• a target binding EU on energy consumption from renewable sources by at least 27% in 2030;

• an indicative EU target for energy efficiency improvements of at least 27% in 2030;

• support the completion of the internal energy market by meeting the current objective interconnection of electricity by 10%, urgently, no later than 2020, in particular for the Baltic States and the Iberian Peninsula, and aim to reach a goal 15% by 2030. (European Council, 23 to 24 October, 2014)

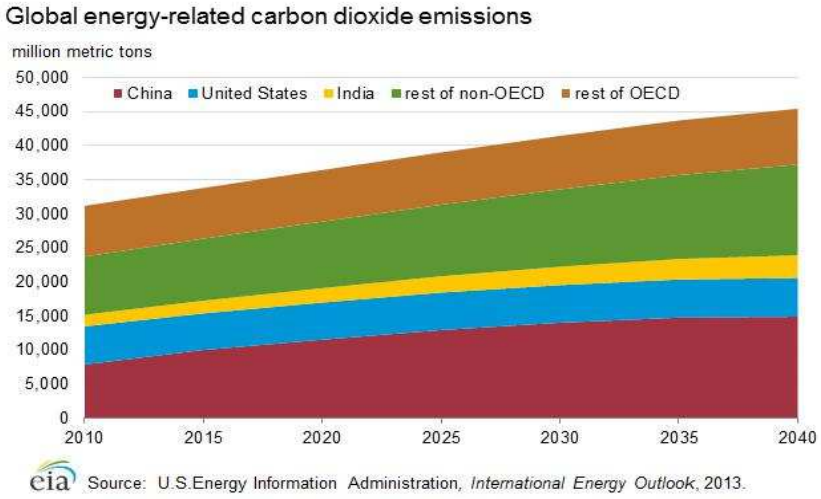
Regarding energy security, the European Council endorsed additional measures on reducing EU energy dependency and increase its security of supply of electricity and gas. Ministers discussed the proposal for a reserve for market stability in the EU ETS (Emissions Trading System) Environment Council meeting on 3 March 2014, within the framework of climate and energy policy for 2030. There was a broad consensus on the need to strengthen the ETS, the ministers welcomed the Commission proposal.

In the second half of 2014, at the meetings of the Working Group of the Council on environmental issues were identified and discussed a number of key issues relating to the proposal on market stability reserve. Environment ministers also held an exchange of views

on this proposal at an informal meeting of the Council on 16 July 2014 in Milan. (Environment Council on 3 March 2014).

The European Council meeting on 23-24 October 2014 reached agreement on the framework for climate and energy policy for 2030 and endorsed a binding target of reducing EU greenhouse gas emissions emissions. Regarding the EU ETS, the European Council stated that the main European instrument for achieving this objective on an ETS emissions will be reformed and working together with a means of stabilizing the market. (European Council, Consolidares ETS)

Table 1. Global emissions of carbon dioxide



3. Analysis of the climate and energy prospects. International Conference on Climate Change (COP21) in Paris (30 November-12 December 2015)

The 28 EU Member States are signatories to the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto Protocol, which legally obliges developed countries to reduce emissions by at least 18% by 2020. Following the summit acquis in Copenhagen in 2009 that had no results, Doha Amendment to the Kyoto Protocol was adopted in 2012, introducing a second commitment period 2013-2020. In December 2014 experts met in Lima, specialists and lawmakers to negotiate a text that follows the Kyoto Protocol. European Parliament sent to Lima 12 MEPs. Between 1 and June 11, the Bonn talks were held at the conference on climate change and the agreement was adopted at the climate change conference in Paris in December 2015 and implemented from 2020.

Limiting global warming to 2 degrees Celsius from the average temperatures of the era pre-industrial verification of all commitments of signatory states every five years and financial support to countries emerging from the south, from the developers - they are the main provisions of final agreement presented at the International Conference on Climate Change (COP21) in Paris. The text of the agreement proposes to limit the average global temperature increase "with no more than 2 degrees Celsius" and "continuing efforts to lower that limit growth to 1.5 degrees Celsius." The objective of 2 degrees Celsius, the report period preindustrial was established in 2009 in Copenhagen and requires emissions cuts of greenhouse gas (GHG) emissions and measures to save energy and investment in renewables and plans to extensive reforestation. (International Conference on Climate Change (COP21) in Paris, November 30 to December 12, 2015).

Of the 195 countries represented at the conference in Paris, 186 have announced measures aimed at limiting or reducing greenhouse gas emissions by greenhouse in 2030. To achieve the 2 degrees Celsius text proposes a "peak gas emissions Greenhouse as low as possible and swift

adoption of the rapid reduction of pollution to reach a balance between emissions from human activities and that can be absorbed ", a reference to possible forests, but also new technologies capture and storage of carbon dioxide. Many countries, especially island states are threatened by the prospect of increasing premiums oceans are in danger if average global temperatures rise 1.5 degrees Celsius exceed. In terms of reducing emissions of greenhouse gases, this "differentiation" remains active: developed countries "must be on the point of adopting goals of reduction of pollutant emissions in absolute terms", while countries developing "must continue to improve their efforts" in the fight against global warming, according to their national situation. (Agerpres, Ace, editor Codrut Balu, December 12, 2015)

One of the key provisions of the agreement concerns the establishment of a voluntary mechanism for verifying compliance with national commitments, which will take place every 5 years and represent a continuation of the previous report, the first meeting being planned for 2018, an assessment Collective Action is planned for 2023, the first mandatory inspection would take place 2025.

UN Convention on Climate of 1992 introduced a strict distinction between developed countries and developing countries in terms of sharing obligations in this area. Industrialized countries such as the US, want to split this clear line, and countries emerging as India refuses to accept the deletion of demarcation on behalf of their right to development and historical responsibility of the northern hemisphere in terms Excessive pollution and climate change. In terms of reducing emissions of greenhouse gases, this "differentiation" remains active: developed countries "must be on the point of adopting goals of reduction of pollutant emissions in absolute terms", while countries developing "must continue to improve their efforts" in the fight against global warming, according to their national situation.

Important provisions relate to clear responsibilities for monitoring and reporting, and a commitment by developed countries to mobilize sources of funding for developing countries, technology transfer and capacity of these countries to adapt to climate change. (International Conference on Climate Change - COP21 Paris, 30 November-12 December 2015)

Another important provision is on financial assistance of countries in the southern hemisphere, developed countries have vowed in 2009 will shed 100 billion per year from 2020 to finance climate policies in developing countries development, which called for a progressive increase this amount and greater clarity about the practical means of implementing that provision.

Developed countries do not want to bear the costs and contributions and requests from some countries in the booming economy like China, South Korea, Singapore or from countries with rich oil reserves. The proposed formula is that "developed countries should provide financial resources to help developing countries' to adapt to climate change and take action to reduce emissions of greenhouse gases.

European Commissioner for Climate, Miguel Arias Cańete stressed that the Paris agreement is a victory for the entire European Union and demonstrates that Europe is strong, united, ambitious and speaks with one voice. "That was our strength in negotiations. Today we got what we wanted ", it conveyed Commissioner Cańete EU environment ministers. The last part of the negotiations, was established a coalition ad hoc member ambitious, which includes more than 100 countries, including the United States, all EU Member States, Canada, Norway, Australia, Mexico, Brazil and 79 countries African, Caribbean and Pacific.

3.1. Analysis of climate and energy prospects in România

Romanian National Strategy on Climate Change 2013-2020, addresses two distinct parts: the reduction of gas emissions greenhouse to achieve national objectives assumed, and adaptation to climate change, taking account of European Union policy in the field climate change and documents developed at European level and above, and the experience and

knowledge gained in actions of cooperation with foreign partners and international prestigious institutions. The component of adaptation to climate change in the National Climate Change Strategy 2013-2020 aims to be a general approach and practice of adapting to climate change in Romania, providing direction and guidelines of various sectors to establish specific plans of action that will be regularly updated, taking into account the latest scientific findings on the climate scenarios and the needs of the sector.

This approach is an integration of adaptation into all relevant sectors and each sector will leave the freedom to find the best solutions for adapting sectors. In this context, the component of adaptation to climate change in national climate change strategy will be adopted and continuously improved at local government level by specific measures relevant to the geo-political, economic, local needs; while local government authorities will develop action plans on climate change. (Romania's National Strategy on Climate Change 2013-2020)

At COP21, held in Paris from 30 November to 12 December 2015 Romanian Minister of Environment, Cristiana Paşca Palmer, who led the Romanian delegation to COP21 works, he said on this occasion that the signing of the agreement is a truly historic achievement. The international community has shown that despite all differences, can unite and overcome any obstacle to achieve a common objective, to ensure the future of the planet. It is clear that this agreement, as it was adopted shows that the transition to a low carbon economy is inevitable.

We're talking about a historic document, global, sustainable, dynamic and that many found it impossible to adopt. Romania has fulfilled a key role in the negotiations, Minister Cristian Pasca Palmer was appointed to represent the EU in negotiations on adaptation to climate change, says the release. (COP 21 held in Paris in the period 30 November to 12 December 2015)

Conclusion

EU energy policy is adapting to new market realities. Responses U.E. starting from the inside, the new framework for energy and climate policies in 2030, and efforts to complete the internal energy market, develop domestic resources, including renewables, to diversify sources of supply, improve energy efficiency and reduce CO2 emissions, while reducing exposure to unforeseen factors EU by strengthening resilience to crises by emergency stocks and interconnections, and increasing competitiveness. At the same time, changing global energy landscape creates new challenges and opportunities for foreign and security policy of the EU.

The future policies on energy and climate change should aim to balance different objectives: ways of sustainable and credible towards a low-carbon, affordable energy, competitiveness and European energy systems secure a full unit to achieve the objectives set.

Package policies on energy and climate contains clarifications on the level of pollutant emissions accepted, so they should be reduced by 40% compared to the rate at which it stood in 1990, and production of renewable energy should account for 27% of consumption at EU level. The objective of the framework is to stimulate continuous progress towards a low-carbon and secure energy system that provides affordable energy for all consumers, enhances security of energy supply to the EU, reduce our dependence on energy imports and create new opportunities for growth and jobs, taking into account potential impacts on long-term price.

In reducing emissions of greenhouse gases, there is a differentiation remains active: developed countries must adopt targets of reductions of emissions in absolute terms, while countries developing should continue to increase efforts in the fight global warming, according to their national situation.

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4.The Council Europei- international agreements on climate policy

5.The European Council (23 to 24 October, 2014)

6. European Council Strengthening ETS

7. Environment Council of March 3, 2014

8.COP 21 held in Paris during November 30 to December 12 2015

9.Romania's National Strategy on Climate Change 2013-2020

MEDIATION ROLE OF ABSORPTION CAPACITY ON THE RELATIONSHIP BETWEEN RELATIONAL NETWORK AND THE ENTREPRENEURIAL ORIENTATION OF TUNISIAN CONTRACTORS

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Abstract

The objective of this paper is to analyze the mediating effects of the absorption capacity between relational network of contractors and their entrepreneurial orientation in the specific case of Tunisian SMEs. The originality of this approach lies in the development of the concept of absorption capacity for SMEs which lack the means to profit from their own relational fabrics in terms of identification and exploitation of opportunities business.

Keywords: Absorption capacity, knowledge, entrepreneurial orientation, relational network, Tunisia.

JEL Classification:L26

1. Introduction

Today, SMEs operate in an environment marked by increased competitive intensity and a hardening global competition. Indeed, SMEs are constrained in terms of price, quality, quantities and time. Moreover, competitive strategies refer to major decisions taken by contractors to ensure the sustainability of their businesses. These decisions are a response to an environment marked by unpredictability, threat and hyper-competition.

In this context, the company must deploy strategies and resources to meet the new challenges posed by this new competitive environment and stand out from its rivals thanks to a competitive advantage (Venkataraman & Prescott, 1990; Chorn, 1991; Nath & Suharshan, 1994).

In fact, the concept of entrepreneurial orientation (EO) emerged following the work of D. Miller, (1983) on which this author postulates that in the simple organization (according to the concept advocated by Mintzberg, 1973) is the personality of the leader and leadership that matter; For this purpose, unlike the planner organization in which the company's performance is enhanced by planning, in the organic organization, what counts is the adaptation of the business and its adjustment to the specific features of environment. Moreover, in order to assess the entrepreneurial intensity, D. Miller, founded a proxy integrating innovation, pro-activity, and the propensity to take risks. Therefore, the EO is treated as an organizational phenomenon that incorporates planning, analysis, decision making and other aspects of organizational culture (Hart, 1992 ;Lumpkin & Dess, 1996). Based on these ideas, EO refers to various policies and practices that are embodied by strategic decisions and entrepreneurial actions. In addition, it is treated as a process of formulating business strategies in which policy makers can modify the organization and see the future of their businesses.

In this regard, entrepreneurship is a process that allows companies to earn economic rents by identifying opportunities, evaluate and select those with the greatest potential, and then put up the operating strategies for marketing and maximizing value (Oviatt & McDougall, 2005;Shane & Venkataraman, 2000). Companies that focus on this process as part of their corporate strategies, tend to be more related to innovation, pro-activity and risk taking, comparing to those who did not (Lumpkin & Dess, 1996; Miller, 1983; Wiklund, 1999; Zahra & Covin, 1995). These three dimensions have also been processed by Danny Miller (1983). This author defined the EO through these three dimensions, namely innovation, risk taking and pro-activity.

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For their part (Covin & Slevin, (1989); Voss and al., (2008)) have defined entrepreneurial orientation as a strategic posture, a nested organizational philosophy that facilitates decision taken specific to the organization. Therefore, the EO is not synonymous with entrepreneurship, but rather to articulate the perspective of the strategic choices leading to an entrepreneurial trend, in accordance with the definition of Lumpkin & Dess, (1996:136).

Moreover, given the lack of resources to pursue their entrepreneurial orientation, SMEs are required, actually more than other time, to benefit from their relational networks thanks to a sufficient absorption capacity. Therefore, the objective of this paper is to analyze the mediating effects of the absorption capacity between relational network of contractors and their entrepreneurial orientation in the specific case of Tunisian SMEs.

2. Absorption capacity and entrepreneurial orientation

Todorova & Durisin, (2007) have examined and refined the concept of absorption capacity of Zahra and George (2002). They had also re-conceptualized the model proposed by Cohen & Levinthal (1990). From their side, Mahroum and al., (2008) have inserted the absorption capacity in their innovation model. More recently, Julien and al., (2009) had applied the model of Zahra & George (2002) in a context of Congolese small businesses while identifying the various informational sources. To build on the knowledge gained from the outside, these later must be relayed by individuals within their functional area, and between different services (e.g. between R & D and production). This is the "realized absorptive capacities" within the meaning of Zahra & George, (2002) which are assimilated as "inward looking absorptive capacities". In this regard, absorption capacity is essential for processing and operation phases, and allows the commercial exploitation of knowledge. Once knowledge has been acquired outside, by people, qualified as "gatekeepers who stand at the interface of the firm and the external environment" (Cohen and Levinthal, 1990:133), they must be disseminated as widely as possible within the company. This is to build the absorption capacity at a service in which individuals possess similar technical knowledge. Then, this absorption capacity will be targeted to all the organization, where individuals have very diverse backgrounds, including through the "boundary spanning" (Cohen and Levinthal, 199:133). To allow a good flow of knowledge within the company, it is necessary that individuals possess knowledge and common modes of reasoning[1]. Individuals who communicate must share either the same scientific discipline or the same type of practical know-how, and often also have a vision of common goals. For example, a researcher and a mechanical engineer may communicate on the development and the industrialization of a new type of engine developed by the R & D[2]. This case is all the easier for both parties since they master the same field of expertise and therefore, they have the same vocabulary and a common understanding of problems to solve. If there is no redundancy[3], no communication is possible.

2.1. Absorption capacity and pro-activity

The absorption capacity enhances the existing knowledge base of the company and encourages new knowledge creation activities, which in turn influence entrepreneurial success (Bojica & Fuentes Fuentes, 2011). In addition, the absorption capacity allows the exploitation and the integration of external knowledge, increasing the likelihood of reaching a better understanding of entrepreneurial companies (Zahra et al., 1999).

The capacity of absorption represents a form of learning that involves the pursuit of knowledge that does not exist in the organization in order to enrich the current value, starting with the internal management of this new knowledge by the organization. On the other hand,

[1] That is to say, an overlap in their respective areas of expertise.
[2] Through the knowledge acquired from universities or collaborators.
[3] For example, each individual control an area of expertise totally different from those of others.

the exploitation involves being able to transform existing knowledge to an added value created by the organization to its current customers (Prieto, 2010).

Absorptive capacity affects competitive advantage through the development of new products, processes, systems and forms of organization, activities related to corporate entrepreneurship. The continuous pursuit and the exploitation of new business opportunities of entrepreneurial companies (Hayton & Kelley, 2006) require injection of resources and new knowledge in business operations from several external sources (Zahra et al., 2009). Therefore, companies that develop their absorption capacities and knowledge exploitation through the use of different external sources (e.g. alliances) can boost the results of their entrepreneurial activities (Bojica & Fuentes Fuentes, 2011).

The ability to acquire knowledge is important, but the company must also be able to integrate and use the knowledge gained to his advantage. The need to integrate and use knowledge focuses on the absorption capacity of the enterprise. The literature of entrepreneurship is filled with examples of the role of capabilities related to learning in business performance. For example, Hurley and Hult, (1998) have showed that market orientation and learning orientation are associated with the company's ability to innovate in order to achieve favorable results. In addition, Hult, Nichols, Giunipero, and Hurley, (2000) find that organizational learning improves relationships in the supply chain. Organizational learning is a dynamic process of creation, acquisition and integration of knowledge necessary to the development of resources and capabilities that improve organizational performance (Lopez, Peon and Ordas, 2005). Previous studies (e.g., Dale, 1994; Nevis et al., 1995) have highlighted the place of organizational learning which can be identified as a complex process integrating knowledge acquisition, dissemination and shared implementation (interpretation). Therefore, this process facilitates the exploitation of knowledge, distribution, application and transformation of this knowledge to resources for the organization, and thus, serving as a database, procedures and systems important for the expansion of the business. Hence, one can formulate the following Central hypothesis.

H.1: *The absorption capacity affects directly and indirectly the pro-activity of the contractor.*

2.2. Absorption capacity and innovation

The absorption capacity is defined as a set of organizational routines by which firms acquire, assimilate, transform and exploit knowledge to produce a dynamic organizational capability (Zahra & George, 2002). Knowledge acquisition is the ability to recognize, value, and acquire external knowledge which is essential for a company's operations (Lane & Lubatkin, 1998 ; Zahra & George, 2002).

The acquisition, assimilation, transformation and exploitation of knowledge are important for organizational innovation. The absorption capacity appears to be one of the most important determinants of a company's ability to acquire, assimilate, and to use new knowledge in order to enhance its performance of innovation. Companies need to increase their absorption capacity to acquire, assimilate, transform and exploit knowledge that can lead to organizational innovations (Daghfous, 2004). Therefore, businesses absorption capacity can affect the efficiency of innovation activities (Cockburn & Henderson, 1998). In addition, the absorption capacity enables businesses to acquire and use external and internal knowledge which affect their innovation capabilities (Daghfous, 2004).

The absorption capacity is the capacity to acquire, assimilate, transform and exploit knowledge that can determine its levels of organizational innovation and competence (Cohen & Levinthal, 1990; Daghfous, 2004 ; Vinding , 2006). In this regard, Cohen & Levinthal, (1990) ; Daghfous, (2004) emphasized that the absorption capacity of a company is beneficial for organizational learning and R & D activities. From his side, Schilling, (1998) stated that with the absorption ability, companies expand their knowledge base and skills to improve their ability to

assimilate, to use future information and thus, the possibly improve of technological developments. Therefore, when companies have a higher absorption capacity, it would increase their innovation performance (B.H. Tarek & A. Sami, 2014). Therefore, in this study we consider that innovation activity that relies on the creation and sharing of information tends to pool knowledge in space. The sharing of tacit knowledge, usually transmitted by direct contact, makes this point vividly. Moreover, the proximity, the prior knowledge (Shane, 2000), the trust and the sharing of information help to transform information into knowledge. For the entrepreneur, relational network (Aldrich & Zimmer, 1986; Julien & al., 2004) and the absorption capacity of the organization (Cohen & Levinthal, 1990 ; Zahra & George, 2002) help to transform information into knowledge. The latter, in turn stimulates innovation and identification of business opportunities, and facilitates appropriate decision-making (Vaghely et al., 2007). In other words, the apprehension guides action, and it can also facilitates understanding of the information. For his part, Zeleny, (2005) showed that knowledge is synonymous with contextual, relevant and developed information. In addition, a more detailed distinction between the two concepts can be apprehended by postulating that "knowledge is an action and information is a description of the action. "

Furthermore, many research (Daft & Weick, 1984 ; Thomas et al., 1993) showed that firms can be considered as interpretation systems that analyze the environment and carry out a filtration of technologies to guide future action. From this point of view of demand, knowledge providers are considered static owners of relevant knowledge waiting to be discovered by active researchers in possession of sufficient absorption capacity. The studies focusing on networks suggest, however, that the knowledge providers are not that dumb, or knowledge dispersed easily recognizable and easily integrated. This is especially true in emerging technological environments where many companies lack of knowledge internally and established routines required for the absorption capacity (Bogner & Barr, 2000) due to a lack of both past experience (Zollo & Winter, 2002) and an appropriate business orientation to knowledge (Wiklund & Shepherd, 2003). In what follow, we try to test the following hypothesis:

H.2: *The absorption capacity affects directly and indirectly the innovation of the contractor.*

2.3. Absorption capacity and risk taking

Innovation is not without risk. Innovation, as Schumpeter foresaw, is a destructive processes, new tools and methods, and it always includes that part of leap in the dark, synonymous with risk. It carries within it a feature that hinders its development: the concept of failure; we do not innovate without the risk that is to say before the action without accepting the failure and the discovery of unpredictable elements at one time, given the state of knowledge. These risks are mainly of two types: In one hand, the technical risk that is to say that the characteristics of the product or service may not comply with specifications, or simply the expected performance. The many delays in the marketing of "new" products come in large part of this deviation from the forecast. In the other hand, social or societal risk related to the reaction of the consumer, the customer or distribution channels, competition, the legislator, the most diverse lobbies which can inhibit the dissemination of new ideas.

To these reserves, or obstacles, have been added in recent years so more and more, the concept of a global risk that is to say the refusal to accept the error, trial and error or possible collateral damage.

Thus, innovation can provide greater opportunities for growth, but also, a higher risk (Danneels, 2002). In the same way, several studies have showed the idea that the diversity of sources of information affects the potential negative learning (Lane & Lubatkin, 1998 ; Fleming & Sorenson, 2001). In fact, this idea goes back to Cohen & Levinthal (1990) who eagerly analyzed the concept of absorption capacity. For this purpose, these authors have demonstrated that the absorption capacity of a firm is positive depending on its level of prior knowledge. Moreover, Lubatkin & Lane, (1998) highlighted the fact that the similarity of the

sources of knowledge determines positively differences of absorption capacity of firms as a result of a greater capacity for learning different innovation partners. This issue has already been addressed in an individual perspective by psychologists, who proposed that the prior knowledge facilitates learning because treatment of knowledge is established by associative memory (Bower & Hilgard, 1981; Lindsay &Norman, 1977). In other words, the potential absorption capacity prevents companies to lock in a specific area of expertise and run the risk of not seeking alternative technologies by providing strategic flexibility to adapt in various contexts of industry.

If we follow conceptualizations of Zahra & George (2002) ; Lane & al. (2006) and apply them to the context of cross-industry innovation, we see that the notion of potential absorption capacity comprises the steps of recognition process, assimilation and retention of knowledge from other external industries to prepare the ground for future knowledge transfer. Hence, we can formulate the following hypothesis:

H.3: *The absorption capacity affects directly and indirectly the risk taking of the contractor.*

3. Methodology and results

Before presenting the results of the confirmatory analysis, we want to clarify the conditions for its implementation. The majority of variables cannot be considered normal or pseudo-normal. This is the reason that the use of Bootstrap procedure with 100 replications of the sampling and the method of Maximum Likelihood (ML) has been selected for the parameter estimates. We try in what follow to test the mediation of the variable related to the absorption capacity between relational network and entrepreneurial orientation. We expose below the necessary calculation steps in order to identify the mediating effect and the strength of this indirect effect will be tested through the complete model. The technique of structural equations, as recommended by Keny & Baron, (1986) was used among all possibilities of analysis of causal effects. Several indices will be mobilized to assess the validity, quality and relevance of a measurement model. The use of confirmatory factor analysis with adjustment function (ML) is sensitive to the violation of the assumption of normality of the different multi-dimensional relational network.

However, we preferred to use a bootstrap procedure to ensure the validity of results. As for the validity of relations, two types of service must be assessed. Statistical significance is assessed through e "t-student" tests on correlations. The practical significance is assessed by the value of R-square. Given this wealth of information, the use of indices to compare the suitability of several models between them (NFI NNFI, CAIC, GFI, AGFI) and an index associated with a confidence interval (RMSEA). In consequence, we retain the indicators according to their availability in STATISTICA 5.1.

All data collected by a questionnaire were subjected to a number of statistical analyzes with the aim to discover, describe and understand the process of access to external resources. However, the information provided by the questionnaire was not all directly usable as is. They were submitted to a preparatory work to make them operational for statistical processing. Preparing data includes a number of steps which are intended to transmit the questionnaires variable file on which will be considered complete statistical processing. Two main phases can then be distinguished: the verification of questionnaire" and "codification of answers.

This systematic work has shown that the successful questionnaire is completed legibly. Only a very few cases involved minor anomalies. It was essentially a few unintentional oversights responses to an item, generating few missing values. Thus, there was no removal of relevant questionnaires.

The questions were articulated as follows:

• First, questions related to innovation adopted by companies (including their industry, specialization in the IT sector, characteristics of the innovation model to follow, innovation typology and the minimum values of innovation);

• Then, questions on attitudes towards risk and related to the factors of assuming the risk necessary to the transition to the act of creation. In this regard, items were measured by measuring scale to 4 points;

• Finally, questions related to the pro-activity and which was focused on benefits to anticipate needs in terms of business creation.

After filtering, our sample consists of 140 Tunisian SMEs. To study the dimensionality of the entrepreneurial orientation, a first factor analysis with SPSS 17 software, the vari-max rotation method with Kaiser normalization were selected because of the various scales are not assumed to be independent. Before the analysis, we first checked whether the conditions for the factorization of the variables were observed. Measuring KMO is of the order of 0.617. This value is satisfactory for the exploratory phase. The statistical picture of the anti-correlation matrix is satisfactory. The Bartlett sphericity test is also significant to the threshold of 0.001. This analysis has reduced the number of items from 34 to 28 (total outstanding items) which justify the use of a second factor analysis. Three factors were obtained and their interpretation is specified in the table 1.

Table 1: Items and variables of entrepreneurial orientation

Items	Variables
- Sector of company *-Specialty In the IT sector* *-The Model to follow in the innovation system* *- Product type according to the degree of innovation* *-Conductor and project monitoring* *-The Minimum values of innovation*	Innovation
- Risks towards the economic environment *- Risk towards the relational and family members* *-Risk towards institutions* *-Risk towards funding* *-Risk towards the competence and training skills* *- Lack of customer responsiveness towards the product* *- Lack of flexibility and insufficiency of regulations* *-Lack of market information* *-Lack of information on technology* *-Lack of qualified people* *- Organizational rigidities within the enterprise* *-Lack of appropriate funding sources* *- High cost of innovation* *- Excessive perceived economic risks*	Attitude towards risks
-Fort need for independence *-Search Job* *-The need for recognition* *-The taste of defiance* *-The Need for self-esteem* *-Search of power*	Pro-activity

The first factor related to innovation is interested in different types of organizational innovation (product, process, and marketing) that can be implemented to develop the new production methods, a new idea, and thus, to give a dynamic entrepreneurial and latent capacity in both forms: technological form and behavioral form. From 6 items we have valued innovative capacity of the contractor based mainly on the exploitation of his innovative skills and his experiences with the product and technology used and therefore, to have a good knowledge of markets, technologies or industry. The second factor which is related to attitude towards risk, it reflects the perception of risk and the deterioration of well -being staff (extra work, uncertainty) incurred during the creation. For some, this risk can be an element of entrepreneurial orientation, whereas for many others, there is a brake factor. This reflects exposures to behavioral and emotional risks which depend on both of its features and the perception developed in the literature. The 14 items express the will of the contractor to incur significant resources, seize opportunities, and also making the allocation of resources. The third factor related to pro-activity, it includes items of dynamic organizational behavior as a facet of assertiveness and a strategy of competition. Pro-activity is represented by six items to assess the competitive position of the contractor in relation to his competitors in order to achieve continuous monitoring of the environment, allow companies to generate competitive advantages.

Five explanatory variables may influence the absorption capacity. Indeed, in order to measure the relational network of the entrepreneur, we opted for five key variables namely: Scale of network, density of network, structural holes, nature of social ties and attribute of alters.

The values shown in the following two tables are those of the bootstrap (100 replications with identical size to that of the sample). The adjustment indices of are satisfactory. However, the results of the causal model indicate significant and positive statistical relationship with the absorption capacity (although the correlations are significant at the 5% and 10%).

Table 2: Validation of the determinants of absorptive capacity using index

Index	Value (ML function)
AGFI	0.94
GFI	0.99
RFI	0.87
TLI	0.89
CFI	0.95
RMSEA	0.02 [0.007 ;0.041]

Table 3: Statistical and practical significance of the determinants of absorptive capacity

Statistical significance	Practical significance
Scale of network → Absorption capacity Correlation :0.218 (t=3.16)*** After Bootstrap :0.217 (s=0.032) **Density of network→ Absorption capacity** Correlation :0.07(t=1.18)*** After Bootstrap : 0.01 (s=0.124) **Structural holes → Absorption capacity** Correlation :0.324 (t=3.24)*** After Bootstrap :0.284 (s=0.034)	R^2= 0.274 After booststrap =0.289

Nature of social ties → Absorption capacity Correlation :0.229 (t=5.12)** After Bootstrap :0.135 (s=0.007) **Attribute of alters → Absorption capacity** Correlation :-0.141 (t=3.28) After Bootstrap :0.101 (s=0.004)	

Threshold of significance: *** (1%), ** (5%), no stars (not significant)

The table highlights the value and significance of the correlations between the components of relational network (Xi) and variable absorption capacity (M '), the correlations between the (Xi) and the variable entrepreneurial orientation (Y) and finally, the correlations between (X) and (Y) when mediation (M') is controlled.

Table 4: Correlation between relational network components and the absorption capacity

Relation	X_i→CA	X_i→OE	X_i→OE(M' controlled)
Density of network (X_1)	Correlation : 0.144 (t=1.77) Boostrap :0.122(s=0.024) R^2=0.08	Correlation : 0.131 (t=1.66) Boostrap :0.112(s=0.041) R^2=0.06	Correlation : 0.0077 (t=0.45) Boostrap :0.008(s=0.66)
Scale of network (X_2)	Correlation : 0.125 (t=1.89) Boostrap : 0.122(s=0.018) R^2=0.036	Correlation :0.167 (t=2.12) Boostrap :0.184(s=0.04) R^2=0.09	Correlation :0.084 (t=1.69) Boostrap :0.095(s=0.041)
Structural holes (X_3)	Correlation : 0.244 (t=3.16) Boostrap :0.188(s=0.032) R^2=0.125	Correlation :0.149 (t=5.28) Boostrap :0.451(s=0.03) R^2=0.369	Correlation :0.053 (t=0.94) Boostrap :0.064(s=0.017)
Nature of social ties (X_4)	Correlation : 0.123 (t=2.17) Boostrap :0.144(s=0.028) R^2=0.28	Correlation : 0.354 (t=2.47) Boostrap :0.298(s=0.015) R^2=0.128	Correlation :0.144 (t=1.98) Boostrap :0.098(s=0.032)
Attribute of alters (X_5)	Correlation : 0.28 (t=2.08) Boostrap :0.301(s=0.04) R^2=0.32	Correlation : 0.125 (t=2.12) Boostrap :0.128(s=0.018) R^2=0.08	Correlation : 0.075 (t=1.68) Boostrap :0.065(s=0.032)

Regarding the mediating effect of the absorption capacity (M), the results show that the relations between the Xi and absorption capacity are significant at the 1% level, and the relationship between X and Y when M is controlled are more significant than for the variables related to the density of the network and relational structural holes), but for the other structural components of the relationship network, correlations are lower when M is controlled.

This result is convergent with that of the study and Kelly Hayton, (2006), and pursuant rather to the organizational model proposed by Prieto.

If you want further explanations offered for this phenomenon, it may be noted, for example that according to Zahra and al., (1999) in rich countries where cultures are more

individualistic, the absorption capacity takes the form of a learning process. At this level, absorption capacity increases the likelihood to achieve a better understanding of the mind.

5. Concluding remarks

This paper reveals an interesting result, the preponderant weight of the absorption capacity in predicting new business opportunities which are formulated by the entrepreneurial orientation. Indeed, the absorption capacity appears each time as a set of organizational routines which improve relationships in the supply chain.

Finally, we conclude the evidence of partial mediation in the relations between relational network and entrepreneurial orientation by the variable absorption capacity". This result confirms partly organizational modeling.

In this respect, in the specific case of SMEs, the absorption capacity is equated with a better interlocutor for an entrepreneur in order to strengthen and identify strong entrepreneurial orientation and, by leveraging its relationship network whether its mechanisms. This observation is all obvious that such companies do not have sufficient resources to choose them- selves their entrepreneurial orientation.

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CHINA'S REFORM AND THE TRANSITION FROM NATIONALISM TO MODERNISM DURING THE DINASTIC PERIOD

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Abstract

China is a multi-millenary civilization that has survived throughout its troubled history demonstrating that tradition and culture reinforce the national values and keep alive the social body. The paper analyzes the period of the Chinese dynasties, which reformed the management system and influenced the economic development, but without taking into account the human and natural potential of the country. The Chinese leaders' desire to impose their power and domination over the native population generated an undemocratic society and influenced the mentality of the people who accepted tyranny quite easily.

Keywords: *China, dynasties, reforms, economic development*

1. Introduction

Multi-millenary China, known as the "cradle of universal civilization", was periodically reformed by dynasties that reigned throughout its history. They induced tenacity and industriousness to the Chinese people, specific features that made it overcome the difficult moments from its evolution. To make an objective assessment of China's history, it takes courage, patience and energy because of its economic and cultural changes happened at a large scale. Currently, the economic reform in China has reached a stage of maturity with the clear aim of developing a socialist market economy system. It is an ongoing process that has been taking place for over a quarter century and which has been trying to separate the macro- and microeconomic mechanisms.

2. The hallmark of the main dynasties in China's reform and development

The first epoch in the history of China was certainly marked by the **Xia Dynasty** (2205-1766 BC), during which "a settlement defended by a rammed rampart, 1.5 km long and 3 m high, but whose 9 m base showed that it could be much higher." [1] During it, the supremacy of the state began to be felt and Ancient China benefitted from tranquillity and stability throughout its territory.

The Shang Dynasty (1766-1122 BC) was formed in the northwest of China as a still primitive monarchy, relying on a social system which would be outlined in the 9th century BC and which had the king as the ruler of the state cult. During this period the first cities fortified in order to avert possible attacks from the neighbouring tribes began to be built, although they were not of economic importance.

Agriculture played an important role during this period, the main crops being the grains. The development of the bronze industry highlights the very varied production techniques.

The Shang state was the first Chinese state with a well-defined political and cultural form, which has exerted its influence beyond the national borders, being nearly impossible to trace its borders. It collapsed because of the internal social movements, but also as a consequence of the pressure of the Zhou tribes, that shaped the **Zhou Dynasty**, which formed the "*classical epoch*" of China.

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In agriculture cropland was expanding and thanks to the progress of the agricultural tools, it evolved significantly. The land ownership represented the basis of the hierarchical system of social relations of production.

In the second half of the eighth century BC, the Chinese political and social system began to enter a crisis. "*The immeasurable opulence of the royal courts, the intrigues and the murders, the barbaric mores of the nobility accelerated the decay of the ruling class.*" [1]

The result of this chaos, which lasted 260 years (the Warring States Period – 479-221 BC), marked the beginning of a new historical stage in which China became a unitary state for the first time, thanks to the **reforms** imposed by the Qin military state (255-206). It abolished the feudal system, it introduced the compulsory military service, it established a unified legislation, it standardized the units of measurement, it unified the monetary system and the calendar, and it intensified the silk trade. The **Qin Dynasty** also reformed the educational system, prohibiting the freedom of thought and the private schools. Furthermore, in 212 BC all the books that were not consistent with the policy and ideology of the Qin system were destroyed.

The place of the Qin Dynasty was taken by the **Han Dynasty** (208 BC-220 AD), as a consequence of a civil war. The territories of China today were reunited for the first time and divided into provinces, rigorously controlled by the state power. Numerous inventions have revolutionized the economic and social life (porcelain, paper, ink and brush writing).

The Han emperors gave great importance to the urban trade and development, increasing the money supply. Agriculture was also supported and enriched with vines and hemp and the overtime of the peasants was more relaxed. The basins of the great rivers began to be used for agriculture, the agricultural workshops were developed and those for processing iron objects, using the hydraulic force. [2]

However, the state has seized the sale of timber, wine, salt or water distribution, monopolizing the trade with these products.

Mutilation penalty was abolished in the year 167 BC and the criminal laws were reformed in the year 130 BC.

In the year 9 AD a program of reforms which mitigated the major social contradictions was introduced: [3]

- the State is the sole owner of the land;
- the prohibition on selling slaves;
- stabilizing the prices for some products;
- the monetary reform.

The Sui Dynasty (581-618) reformed the fields of justice and finance, and the field of constructions was its strength. The reconstruction of cities, the enhancement and construction of roads, and the reorganization of the monetary system made possible the communication between distant areas favouring the development of trade and industry. That was also the period when exams were introduced for the selection and recruitment of officials. Agriculture also developed as a result of the land re-division policy, which resulted in strengthening the position of the Chinese population in society.

China developed economically, politically and militarily, strengthening its position during **the Tang Dynasty** (618-907). "*The central government was organized in six ministries, the system of exams for the state officials was improved, the peasants were given land, but the great landed property also multiplied*." [4] The State built workshops, in which the individual industry was developed and the rural economy recorded a great progress. The fields of shipbuilding and metallurgy also developed, as well as the hydraulics and communications ones. The Tang Empire reached the peak of power and prosperity, managing to make China the largest and most civilized country on earth. After the removal of the Tang Dynasty there was a troubled period ("the Five Dynasties"), during which the military anarchy led to the formation of **the Song Dynasty** (960-1279). During this dynasty, the

statute labours were replaced by a personal tax, the trade was nationalized, pensions were granted to the elderly, to the sick and to those who did not find work, the monopoly on tea was also abolished. The development of the rural economy and the land deforestation were also concerns of the Song Dynasty. Due to the imperial policy the political unification was necessary in order to organize bureaucratic state system with centralized power and authority.

During 1279-1368, China was conquered by the Mongols as a result of Genghis Khan's invasion. **The Yuan Dynasty** was founded, during which the Mongolian population became the privileged class who used the land for their own interest. Thus, under this dynasty, China did not develop economically. The garrison farms appeared, the farmers were forced to give away their horses and animals to the army and to perform numerous statute labours. The class contradictions and the despotism of the officials increased, generating losses in administration with a direct impact on the Han population. The Han Dynasty disappeared under a bloody peasant war.

During 1368-1644, China was restored by the **Ming Dynasty**, which promoted an autocratic policy and which separated the political function from the military one. During this dynasty the peasants were freed from the Mongolian oppression, they were exempt from taxes and received the necessary seeds for farming. The lands were divided into *the public's*, which belonged to the state, and *the people's*, belonging to the private owners. The trade relations with countries overseas were developed; the state put a monopoly on the foreign trade and limited the internal trade. The land taxes and all the contributions that the peasants paid were unified by a tax measure. Taxes, increasingly higher, and the natural disasters hindered people's lives, and they organized an insurrection, founding the **Qing Dynasty** (1644-1911).

During the Qing Dynasty, the political power remains centralized and it repressed any idea considered as anti-Manchurian. The Chinese had been allowed to keep their traditions, but the Manchu language had become, along with the Chinese language, the official language of the court. The mining industry experienced a strong growth, favouring the creation of mining companies, some operated and funded by the state. A series of reforms were initiated, aiming at the education system, revising the criminal code, the administration and the finances. Regarding the foreign trade, a series of treaties with European countries were signed, which favoured the growth of their economic and political pressure on China. European colonialism caused a stagnation of agriculture and crafts, and boosted the development of trade, making China a huge market for the European products, but also a source for obtaining the raw materials.

After several failed attempts to reform China which resulted in high casualties in 1911, the Revolutionary League of China, under the leadership of Sun Yat Sen ended the Dynasty epoch and proclaimed it a republic governed by *the three principles of the people: nationalism, democracy and prosperity*.

3. Conclusions:

A special feature of the Chinese civilization is that it appears more like a permanent natural phenomenon rather than a conventional nation-state.[5] With several centuries ahead of Western Europe, in terms of economy and technology, China nevertheless regressed, up to the stage of medieval country, because of several factors. The closing against the outside world not only prevented further advancement, but it also meant that the existing discoveries had become unused. In fact, technological leadership is a process, not a state, demanding the drastic opening towards all that is foreign.[6] The rigidity towards the outside generated unstable situations in the trade relations, as long as the history of these relations clearly shows that the world has always moved either towards greater freedom or towards greater protectionism, which is called by international trade experts the "bicycle theory."

Consequently, if the Chinese dynasties had applied a development model that took into account the human and natural potential of the country, in which the power of the state

developed the economic liberalization and not its centralization simultaneously with the promotion of an isolation policy, the course of Chinese history would have been much smoother, and the development would have also been much earlier. Undoubtedly, national prosperity is based on economic growth, and this requires commercial expansion, both domestically and externally, as it also happened with China after 1979. The important fact is that, despite these tough times, full of profound changes that China faced over its history, the Chinese people developed a certified cultural heritage, explained archaeologically and historically as well. This was undoubtedly China's development architecture nowadays and it demonstrated the superiority of the civilization of the Chinese people.

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THE STIMULATIVE OR INHIBITOR IMPACT OF THE ASSOCIATIVE STRUCTURES OF LOCAL AUTHORITIES ON LOCAL FINANCIAL AUTONOMY

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Abstract:

This paper attempts to emphasize the effects generated by different forms of association of local authorities upon the local financial autonomy. This empirical analysis we put forward highlights the extent to which we can speak about a legislative support and agreement in relation to the process of association of several local authorities and the financial impact such associations may have upon the local budget of a local authority.

The data set we used highlights the particular case of a local community which became member of an intercommunity development association of Timis County (contracts with operators before and after accession in ADID, budgetary planning and the amount of local taxes sanitation).The empirical results we got underline the financial impact such association may have upon the town hall and the extent to which the town hall and the decisions of the local council may effectively apply the principles of local autonomy conferred and supported by the law no. 215/2001.

Key words: *local autonomy, local communities, intercommunity development associations, local authorities.*

JEL Code: *H72, H76*.

Introduction

In Romania, the intercommunity development associations (hereinafter referred to as "IDAs") represent a brand new concept which has been approached by far too few studies. Due to the fact that the legislation is too fuzzy concerning some aspects related to the association of local communities and seeing that the local budgets are insufficient in terms of making investments or supplying different community services, most of the territorial-administrative entities often associate with each other in order to make such investments or to supply certain community services in compliance with the EU standards.

It is essential that every local community which decides to join an IDA clearly understand the implications such associations may have upon the local budget, the autonomy in terms of decision-making process and most importantly, upon the various changes at the level of every implementation phase of all projects designed and coordinated by IDA. The concept of forms of association has rapidly spread in Romania. However, this concept will be mandatory for all counties in relation to the management of certain community services, such as the waste management services.

Today there are quite a few intercommunity development associations which are completely operational in terms of a full implementation of the integrated management systems they manage, even in relation to the perfect concord with all governmental agencies and authorities. This is the explanation for the limited number of relevant analyses and studies addressing these aspects.

This study is composed of four sections, respectively: the opening part, the related studies and legislation are analyzed in the second part, the third part comprises the methodology of the study and evaluation of the findings and finally the conclusions, limitations of the study and recommendations for further research in the final section of the paper.

Reference literature

In order to underline the effects of IDA-based associations upon the local autonomy, we have to clearly define a series of concepts specific to local administration, such as the local financial autonomy and the intercommunity development associations. It is also highly important to make an

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exhaustive analysis not only of the laws and regulations applicable to the local financial autonomy and the intercommunity development associations but also of the various interpretations thereof.

The constitutional guarantee of the local financial autonomy is conferred upon the local government authorities under the Law no. 215/2001 (art. 2) which entitles all public administrations from the territorial-administrative units to organize themselves and to operate under the principles of local autonomy, decentralisation of public services, eligibility of local government authorities, legality and consultation of citizens in terms of solving the local matters of a particular interest.

In light of the provisions set out by the Romanian Law no. 286/2006 (art. 38), we point out the importance of duties and powers assigned to the local government authorities, at the level of the local councils which: i) are responsible for the proper organisation and function of the specialised body within the Mayor's office, the local public institutions and services, the trade companies and the government business enterprises of local interest; ii) are actively involved in the social, economic and environmental development of townships, towns and cities; iii) manage and control the public and private real estates of townships, towns and cities; iv) manage and control the services supplied to the community, and v) set up the bases of internal and external inter-institutional cooperation.

In exercising their powers, local councils are also responsible for supplying certain public services of local interest for the community, such as: water supply, natural gas supply, sewer and sanitation services, heating services, public illumination and local public transportation, if applicable.

The supply of community services, particularly in the countryside has become a much more difficult and complex task for the local councils once with Romania's accession to the European Union in 2007 and the gradual alignment of all such services to the European standards. The impossibility of using the local budgets as exclusive financing sources for the investments required for setting up, upgrading, management and designing proper infrastructures needed for the supply of community services has determined the local councils to join forces and set up an associative structure characterized by a bigger budget and much more possibilities to access the European funds. However, such association of local authorities has often been a prerequisite in terms of eligibility of the projects that have been put forward.

The associative structures (generically referred to by the lawmaker as intercommunity development associations) set up by the local government authorities are clearly defined by article 2 of the Law no. 286/2006. Therefore, the intercommunity development associations represent "cooperation structures with legal private law personality, established under the Romanian law, by the administrative-territorial units with a view to jointly carry out several development projects of area or regional interest or to jointly provide certain public services".

The administrative-territorial units are entitled to cooperate and to join forces, within their decision-making and executive limits and under the legal conditions, setting up private-law and public utility intercommunity development associations with legal personality. Although such entities are set up by the association of several public entities (e.g. townships, cities and counties), the IDAs are in fact private-law structures. By derogation from the Government Ordinance no. 26/2000, the lawmaker has considered and defined the IDA as structures that serve the public interest.

One of the first and most popular attempts to theorize the local autonomy is the theory offered by Clark (1984), by means of which the author substantiates the premises according to which the actions taken by local governments are exclusively governed by their purposes, as these local governments are nothing but rational players striving to maximize their powers. Clark (1984) defines the local autonomy taking into consideration two principles: the *power of initiative*, which basically refers to the capacity of local governments to act starting from the rights and privileges to which they are entitled, in order to pursue their interests, and the *power of immunity,* which basically refers to the capacity of such local governments to act without being supervised; in other words, the local government benefit from a certain degree of immunity towards the higher governmental authorities. Correlating Clark's theory with the concept of association identified in IDAs, we find that the power of initiative is fully satisfied in terms that the administrative territorial unit pursues its interest and voluntarily becomes an IDA member in order to make certain investments or to implement certain projects of regional interest, in strict compliance with its legal rights and privileges. On the other hand, the power of immunity is slightly losing its validity. According to the Romanian Government Ordnance no. 26/2000, IDAs are governed by certain rules regarding their operation. Consequently,

the following elements are compulsory for the proper operation of an IDA: its memorandum and relevant articles of incorporation and well as its Shareholders' General Assembly which is the IDA's supreme executive body. The Shareholders' General Assembly determines, among others, the association's strategy and objectives as well as any changes of IDA's memorandum and articles of association. As every shareholder is entitled to express one vote within the Shareholders' General Assembly, it is obvious that such shareholder is no longer able to act without being supervised and this translates into the fact that IDA basically becomes a higher-level authority than the local government concerned, which, in its turn should obey to the SGA's majority. To sum up, it is obvious that the power of immunity is breached.

The definition of the concept of local autonomy is also found in the European Charter of Local Autonomy (self-government), signed in 1985 at Strasbourg and prepared at the initiative of the Standing Conference of European Local and Regional Powers. The European Charter sets the contents, operation and structure of local self-government as well as the duties and the proper management of the resources pertaining to administrative territorial units.

The European Charter of Local Self-Government (1985: art. 3) defines the concept of local self-government as: "*the right and the effective ability of local authorities, within the limits of the law, to regulate and manage a substantial share of public affairs under their own responsibility and in the interests of the local population. This right shall be exercised by councils or assemblies composed of members freely elected by secret ballot on the basis of direct, equal, universal suffrage, and which may possess executive organs responsible to them*."

Krisztina Beer-Tóth (2009), after a thoroughgoing analysis of the local financial self-government, argues that, compared to the previous attempts to define local self-government, the definition put forth by the European Charter incorporates *three new elements*:

- The right to regulate and manage certain public affairs should be complemented by some of the most efficient means; (for most of the countryside communities, joining the IDA is the single opportunity to make certain technical and urban planning investments or to secure the supply of public community services at the European standards);
- This right may be defined more clearly and comprehensively by the legislation in force; (law no. 215/2001, article 11 par. 1);
- Local authorities should not be restricted to act as agents of the higher-level authorities (by setting up an IDA in order to jointly establish, organise, use, supervise or manage a community service, the IDA, seen as a whole, becomes a higher authority compared to each of its members). Therefore, these new elements incorporated in article 3 of the European Charter are also valid for the associative structures.

Goldsmith and Page (1990) put forward a new approach of the local self-government, as a response to the legal and political statuses of the local governments. A high level legal status takes into consideration several aspects which virtually make references not only to the existence of a constitutional guarantee regarding local self-government and the clear delimitation of competences and responsibilities but also to a more permissive financial regimen based on a general support system and several minor restrictions applied to the local taxation conditions. As for the political status or the capacity to influence political decisions, this concept assumes the fact that the local governments may exercise a direct influence over the higher level authorities.

The capacity to influence political decisions assumes the fact that local governments are able to exercise a direct influence over the higher level governments. After several studies and thoroughgoing analyses, Goldsmith and Page (1990), identified the following *typology* of local self-government:

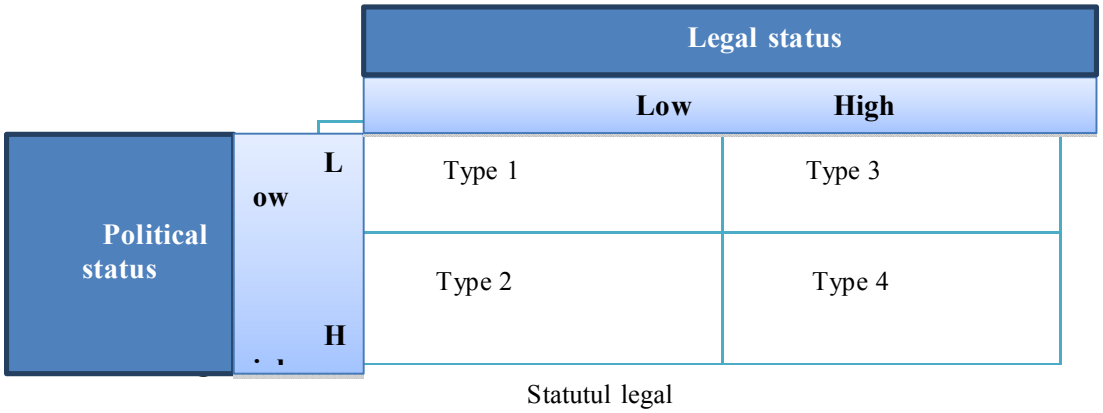

Figure 1-Political status of local self-government

Goldsmith and Page (1990) put forth a *classification of the municipal governments* of the Western European countries:

The local governments pertaining to Type 1 would be characterised by several aspects such as: low legal and political status, limited access to the political decisions of the central government, no constitutional recognition of autonomy, limited possibilities to develop political functions and powerful intervention capacity, being completely different from those pertaining to *Type 4* which benefit from a higher political and legal status.

The local governments pertaining to Type 2, with no recognition of local autonomy would characterize a political system which is opened to the requirements of the local authorities, indicating the relevance of the negotiation processes and strategies developed by the municipality to give a relevant content to all jurisdictional and economic aspects of the policies that have been applied.

The local governments pertaining to Type 3 are characterized by a higher legal status as defined by the constitutional guarantees, assuming at the same time, a higher level of competence and participation in the management of national finances.

Fully adhering to the study signed by Goldsmith and Page (1990), we consider that the authors have prepared one of the most relevant and significant approach / description of the local financial autonomy. Their study is a description that reflects a practical dimension of such an abstract concept. By balancing the local budgets of townships, towns, cities and counties directly through the Ministry of Finances and by cancelling the powers and prerogatives of the County Councils to that effect, the Law no. 186/2014 does nothing else but to repeal the political component that affects the local Romanian communities and about which the two authors are talking in their study. Consequently, the political component becomes weaker and weaker for the IDAs too. The managing body within an association is the shareholder's general assembly which gathers up the legal representatives of each and every shareholder. Almost all Romanian IDAs have been set up as a result of implementing several European funds through which there has been provided the necessary infrastructure to supply certain services. Customarily, IDAs play an important role in supervising and sometimes in assigning the management of a particular service, through public procurement procedures, to an economic agent, acting thus as an assignor. Moreover, the IDA's budget, which frequently derives from the membership fees, is used to provide a proper function and operation of IDA's technical body. Therefore, we find no justifications whatsoever for a political component. On the other hand, the legal component is clearly stipulated by the Law no. 215/2001 and therefore, we consider that IDA can be classified as a Type 3 extended form of municipality, as per the aforementioned model.

One of essential objectives pursued by the intercommunity development associations is to support the financially weaker local communities and to eliminate the discrepancies between the services provided for the urban and rural communities. A successful operation of IDAs would automatically void the concept of "tax competition" and the implications thereof, which was

introduced for the first time by Charles M. Tiebout (1956). The tax competition between the lower level public authorities assumes the fact that the citizens are free to move to a jurisdiction which is able to offer public facilities as per their needs and preferences; a local jurisdiction works better than the central government because it can accurately perceive the citizens' individual utilities, needs and preferences. In other words, taxpayers may choose those residences which offer the best combination between public facilities and utilities and acceptable taxes which satisfy their preferences. In their turn, the fiscal authorities will attempt to attract taxpayers to their own jurisdictions by offering their targeted tax/public facilities combination up to the point the optimal taxation basis is reached, minimizing thus the costs of all public facilities that are being offered.

Consequently, joining the IDA and absorption of European funds provide a unitary supply of public utilities and services while assignment of community services under concession contracts awarded based on public procurement procedures will determine the charge of the same rates for the services supplied to the rural communities and the charge of higher rates for the services supplied to the urban communities. These measures are very useful to eliminate not only the efforts to balance the costs for public services but also a potential competition regarding the quality of such services. Consequently, the single component that accepts the fiscal competition is the component that provides for the local financial collections by means of local taxes and charges.

Methodology and data

This empirical analysis attempts to highlight the effects of affiliation of the Township of Jebel (Timis County) to Timis County Intercommunity Development Association for Waste Management. We have analyzed the extent to which the township manages to preserve its local financial autonomy, paying a special attention to the costs generated by the collection and transport of wastes outside the township before and after its affiliation to Timis County Intercommunity Development Association for Waste Management, as well as to the changes occurred in the contracts entered into with the waste collection operator due to such affiliation.

The European Accession Treaty provided for Romania a series of transition measures related to the implementation of the EU legislation on waste management, which mainly referred to the EU Directive on waste storage and the EU Directive on packaging and packaging waste. At the local level, the implications of the obligations undertaken by Timis County have been addressed and clarified though a set of documents that regulate the waste management process: The National Waste Management Plan (NWMP), the Waste Management Plan for the Development Region 5 West (PRGD) and the Master Plan for Waste Management in Timis County (MPWMJB).

Thus, it is imperative to build a single landfill for non-hazardous waste at the county level, several transfer stations or collection centres and to observe the waste flow according to the collection area. The "Integrated waste management system in Timiş county" (SIMD) is here to answer these requirements, being financed from European funds, by the Sectoral Operational Program for Environment 2007-2013, Priority axis 2 –Development of the integrated waste management systems and rehabilitation of historical contaminated sites. The Beneficiary of the project, in total amount of 162,201,736 ron, is the Timis county, by the Timiş County Council.

Table 1-Investment made under the „SIMD" Project

The main investments of the Integrated waste management system funded under the Project
Building a transfer station in Timişoara and three collection centres in Jimbolia , Faget and in Deta
Building a central waste storage in Ghizela (Zone 0);
Building a waste selection centre within the waste storage already built in Ghizela
Building a compost centre for vegetal wastes from public gardens and parks
Building a TMB plant within the waste storage already built in Ghizela

Closing 6 non-compliant urban storages

The Intercommunity Development Association for Waste Management of Timis County was established for the purpose of founding, organizing, regulating, exploiting, monitoring and jointly managing the sanitation service for the localities from the range of competency of the member administrative-territorial units, as well as accomplishing in common some public investment projects of zonal or regional interest intended for founding, modernization and/or development, as the case may be, of the public utilities systems pertaining to the Service, based on the development strategy. Its members are the Timiş County Council and all the Local Councils from the county (2 municipalities, 8 cities, 89 communes). Each associate by means of its representative, has an equal vote in the General Assembly of the Association.

The most important objectives of the Association concern: i) ensuring an interface in the discussions with the public administration authorities; ii) active partner in these discussions in order to coordinate the general interest policies and actions; iii) responsibilities in the process of contracting/ delegation with the operators, on behalf of and for the involved member administrative-territorial units; iv) monitoring the execution of the delegation contract/contracts and informing its members about them; v) supervision of the fulfilment of the obligations undertaken by the operators; vi) enforcing the contractual penalties according to the mandate received and to the contractual provisions.

The most important aspects of the implementation of this system are the clearance of the irregularities from the provision of the sanitation service from the rural as well as the urban environment, providing some collection equipment (euro-waste bins, barrels for collecting glass, individual compost units), closure of the non-conforming landfills, creation of a healthier environment, selective waste collection.

The manner in which the waste collection, transport and storage process took place in the Timiş county was non-conforming to the European standards. In order for it to be in conformity, investments were needed, that no local authority had the financial capabilities to accomplish. Thus, we got to the implementation of SIMD. The project is not fully implemented, and the representatives of the town halls were reluctant in giving me information about the impact that the Intercommunity Development Association for Waste Management of Timis County had over the locality and the community that they represent.

A milestone in the analysis that is to be made, is given by the identification of the number of inhabitants because the public services are organized and supplied according to this number, and the taxes pertaining to these services are established either per inhabitant, or per household.

Jebel has a population of 5000 inhabitants, a number of 1500 homes and is located at a distance of 20 km from Timişoara. Before becoming a member of the Intercommunity Development Association for Waste Management of Timis County, the Jebel local council outsourced the sanitation service of the locality by contract with direct award. The town hall as contracting authority would pay the service provided by the operator, levying a sanitation tax from the population in amount of 3 RON / household / month. The tax collection rate was 95% and in this manner the Town hall was collecting monthly from the population the amount of 4,275 RON. In the end, the Town hall was sustaining additionally from its own budget the money difference up to the amount of 5,000 RON / month, approximatively 700 - 800 RON / month. I must emphasise the fact that the sanitation operator did not have to make investments in collection equipment, all being provided by the Town hall (120 L waste bins, one for each household).

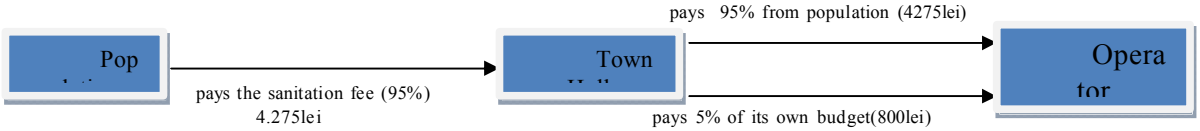

Figure 2- cash flow before accession in ADID

After the moment it adhered to the Intercommunity Development Association for Waste Management of Timis County and created the infrastructure pertaining to SIMD, the Town hall in its member capacity had to observe the conditions imposed in the Position Document and the Articles of

Association of the Intercommunity Development Association for Waste Management of Timis County. Thus, the waste collected at the level of the locality could no longer be stored in the same location, the old landfill being declared non-conforming and closed by project, and in compliance with the new flux the Town hall had to sign contracts with the operator delegated by bidding by the Intercommunity Development Association for Waste Management of Timis County of a collection centre and with the operator of the Central landfill for non-hazardous waste from Ghizela. The cumulated value of the two contracts is 145 RON / ton of waste stored VAT excluded as compared to 10 RON/ ton what it paid before, a tariff included in the price of 5,000 RON/ month directly to the local operator. In this stage of the SIMD implementation, the Timiș Local Council together with the Intercommunity Development Association for Waste Management of Timis County delegated the management of the operation of the collection centers and of the landfill, and the bidding for delegating the area operator for waste collection-transport is under way. Thus at this moment, the Town halls members of the Intercommunity Development Association for Waste Management of Timis County, including the Jebel Town hall, function with the old collection operators, with whom they renegotiated their contracts and adapted them to the current operating conditions, among which selective waste collection on three fractions: wet, dry and glass and a higher collection frequency than before. The previous contract with a total value of 60,000 RON/ year, 5,000 RON/ month became one of 132,000 RON/ year and 11,000 RON / month without VAT. In correlation with the tariffs paid by the Town hall to the two operators of the centre and the landfill, calculated to a monthly average of 60 tons of waste generated, of 8,700 RON/month there results a monthly cost of the service of 19,700 RON/month, 4 times the price that was practiced before entering in the system. Nevertheless, the Town hall spared its citizens and increased the sanitation tax to 10 RON/household, resulting a total of 15,000 RON, but the tax collection degree decreased to 70%, therefore the Town hall recuperates only 10,500 RON each month from the population, sustaining the rest of approximately 9,000RON from its own budget.

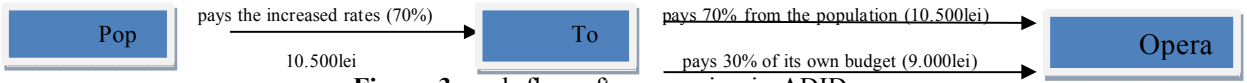

Figure 3- cash flow after accession in ADID

Once the system is fully implemented, the operator delegated by the Intercommunity Development Association for Waste Management of Timis County for waste collection, will sign individual contracts with each citizen individually. However, the problem of waste is a particular one compared to the other community services. All the citizens are waste generators and the law 101/2006 obligates the waste operators to collect the waste from all the citizens, regardless if they signed an individual contract or not. The same law 101/2006 (art. 26) obligates the Town halls to sustain from the local budget the costs for collection of waste from those that do not have a contract signed with the operator. In this manner, even though they chose to outsource the management of the service, the Town halls will not be exonerated from the problem of paying the waste collection in full.

The tariff that the delegated operator shall provide will be of 5 RON / month / person in the rural area, thus also in Jebel. If we keep the current collection rate and we assume that 70% of the inhabitants of the commune will sign a contract with the operator and 30% will not sign, it means that the Town Hall must pay 30%x5000 inhabitants x5RON/month=7,500 RON per month from the local budget, 90,000RON per year for the citizens that do not sign a contract with the delegated operator and it must also establish a tax for these larger than the tariff charged by the operator in order to force all the citizens to sign an individual contract with the operator.

Results

The results show us a reality where we find excessive growths of the operation costs. The increments are reflected both in the fees paid by the population and the amounts covered by the town hall from its own budget.

Table 2-Costs prior and after affiliation to IDA for Waste Management

Moment	Price of contract(s) entered into with the operator	Amount paid by population	Amount covered by the town hall from its own budget	Fees applied by town hall to population	Rates paid by town hall for waste storage/tone
Prior to affiliation to IDA for Waste Management	LEI 5,000.00	LEI 4,275.00	LEI 800.00	LEI 3.00	LEI 10.00
After affiliation to IDA for Waste Management	LEI 19,500.00	LEI 10,500.00	LEI 9,000.00	LEI 10.00	LEI 145.00

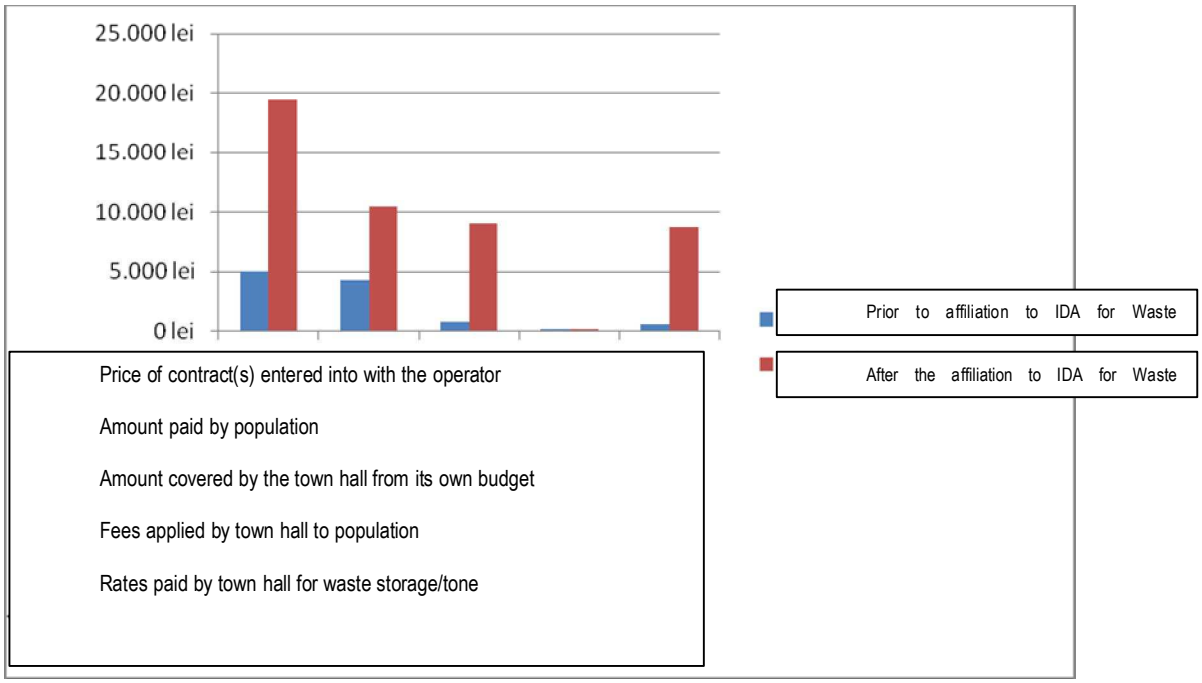

Chart 1-costs prior and after affiliation to IDA for Waste Management

The monthly costs pertaining to this public service grew from RON 5,000.00/month to RON 19,700.00/monh, resulting thus a growth rate of 394%. The costs covered by the town hall from its own budget grew from RON 800.00/month to RON 9,200.00/month, resulting thus a growth rate of 1150%, while the fees paid by the population were increased from RON 3.00/month to RON 10.00/month (growth rate: 333%).

Nowadays the town hall is no longer entitled to reduce such costs. Timis County Council has assigned and the IDA for Waste Management has accepted the management of the waste collection centres and landfills for a period of 10 years and consequently the rates cannot be changed unless they are adjusted according to the inflation index. Moreover, the public procurement procedure regarding the waste collection and transport contracts is organised by IDA for Waste Management which is also the party responsible for entering into the relevant contracts with the citizens. The town hall cannot

leave the IDA for Waste Management unless it pays a fine equal with the share of the investments made in the county. However, no town hall in the county can afford to pay such fine.

The monthly royalties paid by the waste collection operators are cashed in by Timis County Council as the beneficiary of the SIMD Project.

In light of these aspects, we consider that the affiliation to IDA for Waste Management is contrary to both the local financial authority and to the principle of financial decentralization. At the time of affiliation to IDA for Waste Management, no town hall was aware of the rates that were going to be charged by the waste collection operators as the public procurement procedures have not been organised by the town halls.

The outrageous growth of costs for these services is not welcomed by the representatives of the local councils who are now able to see the system flaws. Moreover, these representatives argue that it is impossible for a rural town hall to affiliate to several associations for every community service under the same or similar terms and conditions as those practiced for the waste collection and transport services.

Conclusions

This analysis brings to light a reality that may general contrary opinions and positions. The local governments are the only entities which may decide whether the affiliation to IDA serves their best interests and implicitly the local communities they represent. Nevertheless, the decision is made after a thoroughgoing evaluation of several studies such as a feasibility study, an opportunity study and an institutional analysis, all developed prior to the project implementation by IDA. In spite of the fact that the local government knows the price schedule estimated over the concession period of that particular public service, it is fully unaware of the costs implied by the various phases related to the project implementation process. This was the case of the Township of Jebel which, at the time of affiliation, considered it has managed to outsource the community sanitation service, saving thus significant funds from its own budget. However, after the affiliation and until the completion of the public procurement for the award of the waste collection and transport contract, the local authorities had to cover additional costs that exceeded the pre-affiliation expenses by 11 times or more. As for the matter of waste management, during the following years all Romanian counties will have to implement an integrated waste management system. Under these circumstances, all local governments will have to join forces and set up intercommunity development associations in order to provide the services at the EU standards, even if such services impose some technical and urban planning investments at the regional or county level and not at the local levels.

The associative structures are a new concept that has began to spread in Romania as the laws in force encourage and support such structures but, on the other hand, do not provide for any additional financing possibilities to support the increased costs deriving from such associations.

From the local financial autonomy perspective, after the affiliation to an IDA, we may speak about a setback which the local governments should anticipate from the very beginning. As this is a quite new concept and process, as we mentioned earlier in this paper, it is somehow understandable that the potential suppression of the local financial autonomy has not been fully foreseen. However, we strongly believe that in the near future, the local governments (in this case the town halls) will be able to overcome and eliminate the flaws of this system and will find the best solutions to preserve their decision-making rights within the IDAs.

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