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FOREWORD

Recently, the World Economic Forum Annual Meeting took place from 17-20 January 2017 at Davos-Klosters, Switzerland and then key topic was Global Governance and the related issues such as: Fourth Industrial Revolution, responsive and responsible leadership, restoring economic growth and global collaboration.[1]

Important changes are expected regarding size, speed and scope of these transformations that Fourth Industrial Revolution generated. The transformations consist mainly of new systems built on the infrastructure of the digital revolution. Also, this will fundamentally change the way in which we produce, consume, move, communicate and interact with one another. Nanotechnologies and given new powers of genetic engineering will impact dramatically who we are and how we think and behave[2] .

Nevertheless, the fundamental nature of this revolution will affect the labor markets and the future of work, will generate income inequality and even social value systems and ethical frameworks will need to be changed.

Also, the environmental changes should be constantly monitored to be able to take measures before anything dramatically occurred. In the past 20 years, it has become obvious that our major global issues are interconnected and must be approached as a whole. Acting to solve a global problem is a tremendously difficult task and it needs to start from a critical approach to the existing situation. Defining a problem can be more challenging than even finding the solution. But, Buckminster Fuller said: “*you never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete*”.

“*These are critical times. We need critical minds*” says Menard Gabel and I am totally agreed with, therefore JEDEP encourages young and critical minds to share their views with our readers and to have the courage to be the first suggesting new and unconventional approaches to today's global challenges. Networking brilliant minds could make the difference for the next centuries. Also,

[1]https://www.weforum.org/events/world-economic-forum-annual-meeting-2017

[2]adapted from Klaus Schwab, *The Fourth Industrial Revolution*, 2016

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collective work due to the new digital technologies is possible and accessible to a large number of people, and the benefits will emerge in the near future.

The current issue includes papers discussing: the social partnership as a need to tackle the environmental problems and the dimensions of atypical employment in Romania, from global to particular issues ensure readers with a two-sided perspective at a glance. Networking platforms as digital solutions to encourage collective thinking and work become more popular among small and medium-sized businesses, and with a small investment, all have access to the results of collective work.

JEDEP editorial team is seeking new ways of making the young researchers' work more visible internationally and is working to develop a new collaborative tool in order to encourage interdisciplinarity and cooperation between "critical minds" no matter where they are located.

Editor in-chief,

Prof. Manuela Epure, PhD

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The Effects Of Global Economic Crisis of 2008 to Financial Statements and Liquidity Ratios on Companies Operating In BIST Energy Sector (2005-2013 Term Review) [*]*

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Abstract. *The purpose of this study is to compare and analyze whether the 2008 global economic crisis affected the balance of the energy companies which are listed in the İstanbul Stock Exchange and have not shown continuity in 2005-2013 period by using a variety of analyzing methods. Companies that demonstrate continuity between the years 2005-2013 were not assessed in this study. Horizontal and vertical analyses were made on the financial statements of the companies which are evaluated and liquidity ratios were assessed. Based on this analysis, it was found that these companies were differently affected by the crisis.*

Keywords: Financial Crisis, Balance Sheets, Financial Analysis

JEL Codes: ***F65, G12, O16***

1. Introduction

Etymology of the word “crisis” comes from the Greek “krisis”, where it is used as a synonym of “depression” and “despondence” in social sciences and means serious breakdowns in normal relationship in facing unexpected social, economic or psychological development and situations occurred when common solutions to the problem translates into a failure (Işık, 2011: 3). In 20th century, world economy witnessed to Great Depression of 1929 considered as the biggest global crisis and the Mortgage Housing Financing Crisis originated from USA. Global economic crisis of 2008 is considered as the worst financial crisis ever since 1930.

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[*] A version of this research was presented at the 3rd International Conference on Economic Sciences and Business Administration – ICESBA2016, held on 29-30th September 2016.

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Economic crisis that began in 2008 affected both Europe and our country, but especially United States. Despite all the negative effects of the crisis, it is not possible to tell the same thing for the real sector in our country in which all banks survived. Interest rates increased under the influence of the crisis, inflation pressure, currency fluctuations and demand shrinking both inland and outland seriously affected the real sector (Gümüş and Aydemir, 2014: 2).

The purpose of this study is to investigate the effects of 2008 global economic crisis on the financial statements and liquidity ratios of the energy sector companies operating in Istanbul Stock Exchange (BİST). 2005-2008 and 2008-2013 periods were subjected to the analysis separately to reveal the pre-crisis and post-crisis periods, respectively. Statements were examined using ratio analysis, horizontal and vertical analyses techniques.

According to the results, there were no financial statements identical for all companies operating in the field of energy. Some of the companies maintained the financial discipline and preferred a balanced growth during crisis. Other companies did not gave up, getting into debt and continue to grow and acquire real assets. Actually, every single company was affected by the crisis at different levels, because its distinct financial structure and strategic projections.

2. Crises In Globalized Economies

Economic crises usually affects developed and large economies, in parallel with the liberalization of the capital movements and globalization of capitalism and spreads rapidly worldwide(Terzi, 2009: 153). A crisis broke out in one country affects not only that country, but also many other countries, depending on the scale of the crisis caused by the absence of trade restrictions.

Therefore, crises deeply affects especially emerging countries. Developing countries are forced to attract the capital necessary to their economic growth. Otherwise, economic growth will decelerate and, even de-growth will emerge. Developing countries must review their macro-economic policies in such periods and introduce new regulations based on the current conditions.

A slowdown is experienced in world economy together with the 2008 global economic crisis and many countries grew at a slower pace compared to the past. Money and capital flow towards the developing countries were also affected and many countries faced financing problems.

Mortgage is a consumer credit in which the creditor bank receives temporary housing pledge from the customer as repayment warrant. Customers can buy any house or finance any of their needs through a mortgage credit in exchange for a house mortgaged to the bank.

(http://www.denizmortgage.com.tr/mortgage_nedir).

A great deal of participants such as individual investors, institutional investors and investment banks are involved in mortgage markets which comprises of primary markets regulating the mortgage credit and secondary markets in which instruments created based on these credits are traded. Mortgage credits are based on certain distinctions such as the mode of payment, structure of interest and the reputation of the borrower. As such, mortgage credits can be divided into three main categories:

Prime or A-quality (high-income group)

Subprime or risky group (low-income group)

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The purpose of this distinction is to ensure that the credit is provided on the basis of the interest rates suitable for the risk structure, by determining the risks according to the group of which the borrower belongs. Although, subprime and Sub-A concepts are not an official description developed by an authority or rating institution, these concepts are developed in order for gaining a better understanding of the difference between more risky debtors and other debtors. Particularly, subprime mortgage credit is an innovation designed for the customers who have a high insolvency risk, due to some factors in relation to the credit or lower credit quality, and fall into the low-income group to become a homeowner (Öztürk and Gövdere, 2010: 384).

The securitization process of mortgage credits as primary market products to be traded in secondary markets is a process based on the issuance of securities by the bank for the price of the real estate after pledging. Credits provided by the bank are sold for long-range to the domestic and foreign direct investors or intermediary firms. This system transfers the interest expense paid by the borrower to the holders of the security as interest income. By this means, financial intermediary firms both distribute the interest risk in financial statements and generate intermediary and commission revenue. House acquisition purpose of the mortgage credits provided in the USA changed to a housing speculatorship particularly due to the lack of inspection and problems started to arise in the system (Öztürk and Gövdere, 2010: 384).

In the early 2000's, providing housing credits to the economic actors carrying the risk of high repayment and earning low income in the USA and this led to higher interest rates and increasing house prices. Outbreak of financial crisis in the USA in 2007 affected the real sectors of other countries in a negative way by spreading to the rest of the world economy, particularly as of 2008 Fall (even as of the early 2008 in certain countries). Serious decreases in industrial production and massive increases in unemployment rates were experienced as of 2007, after the enormous increases in house prices in the USA reversed in the early 2006. Thereafter, a great regression occurred in the merchandise trade of the world in the second half of 2008 (http://mpra.ub.uni-muenchen.de/29470/1/MPRA_paper_29470.pdf).

Many finance experts points the 2008 global economic crisis as the result of granting too easily of mortgage credits on a large scale. This hand-over operation so called *derivative products* includes the agreements that allows companies to subject their risks coming from other operations, to commerce. These agreements served to translate the default risk from the creditor to the debtor and transfer it to the third parties. While the company is transfer the risk, this process entails higher risks and the investments made on derivative products through these credits were growing like a snowball. Derivative products that served to transfer the risk and as such, functioned as insurance in the system,they started to become themselves a factor increasing thrisk. 2008 crisis is a financial crisis stemmed from the combination of mortgage credits provided to individuals and institutions through marginal areas and derivative products with no end. Insufficient regulations and lack of inspection are considered as the main causes of that growth of this problematic area (Eğilmez, 2011: 67-68).

A cash measurement package towards the banking system in Turkey was not needed for the first stage of 2008 global economic crisis. The application of a similar package after 2001 crisis may be considered as the most important reason of the lack of additional measurements in banking system in the 2008 global economic crisis. Many of the bailout packages and regulations applied by many countries towards the financial markets in 2008 crisis had already been implemented in Turkey after 2001 February crisis.

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However, whether it was necessary to prepare a package involving the utilization of public resources and provision of credit support by public sector to real sector was debated seriously (Berberoğlu, 2011: 110).

The growth rate in agriculture, industry and service sectors of the economy in Turkey decreased since 2007, and therefore GDP had a stable course in 2008. GDP shrank 4.8% in 2009 due to the spread of the crisis. Rates of capacity utilization also dropped in those years, due to insufficient demand from companies (Yıldırım, 2010: 54).

3. Data Set And Application

3.1. Companies Included in Evaluation

Financial statements whose data is open to access in the relevant period and which belong to the companies traded in Istanbul Stock Exchange (BIST) were evaluated in order for revealing the effects of crisis on the financial statements of energy companies. Companies subject to the study are listed in Table 1.

Table 1: BIST Energy Companies included in evaluation.

Code	Name of the Company
AKENR	AKENERJİ ELEKTRİK ÜRETİM A.Ş
AKSUE	AKSU ENERJİ VE TİCARET A.Ş
AYEN	AYEN ENERJİ A.Ş.
ZOREN	ZORLU ENERJİ ELEKTRİK ÜRETİM A.Ş.

Liquidity ratios of Ak Enerji A.Ş. covering the years between 2008-2013 are shown in Table 3. 2008-2013 ratios of Ak Enerji A.Ş fell below the generally accepted ratios and this fall continued from 2008 to 2012. Other ratios except for Cash Ratio remained below the generally accepted ratios in the end of 2013.

Financial statements of 2005-2008 and 2008-2013 were evaluated separately to compare the pre-crisis term, crisis term and post-crisis term. One or more techniques of horizontal analysis, rate analysis and vertical analysis were used for every single company individually and pre-crisis, crisis and post-crisis terms were evaluated by comparing the findings obtained.

3.2. Examining the Financial Statements on the Basis of Companies

Current ratios of 200% for the companies whose liquidity rations are evaluated by Western finance councils and 150% for the countries with a high inflation are considered as sufficient. These councils considered the 100% liquidity ratio and 20% cash ratio as sufficient (http://www.bilgaz.net/dosyalar/OranAnalizi.pdf).

Calculations of liquidity ratios are as given below:

Current ratio % = Rev. Ass. / STL

Liquidity ratio % = Liquid Assets (Cash Equivalents+trade receivables+other receiables) / STL

Cash ratio % = Cash Equvalents / STL

Financial statements of the 4 energy field operating companies whose financial data related to the period between 2005-2013 are evaluated separately for the pre-crisis and post-crisis terms.

Liquidity ratios of Ak Enerji A.Ş. covering the years between 2005-2008 are shown in Table 2. As can be seen in the data of Table 2, 2005-2008 ratios of Ak Enerji A.Ş can be considered as having good ratios,

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because these are above the generally accepted ratios. However, there seems to be a great decline in 2008 in which the crisis emerged, despite sufficient ratios.

Table 2: 2005-2008 Liquidity Ratios of Ak Enerji A.Ş

	AK ENERJİ			
RATIOS	**2005**	**2006**	**2007**	**2008**
Current Ratio %	345	322	297	203
Liquidity Ratio %	200	251	254	187
Cash Ratio %	173	215	154	91

Ak Enerji A.Ş.'nin 2008-2013 yıllarını kapsayan likidite RATIOSı Table 3'de gösterilmektedir. Ak Enerji A.Ş'nin 2008-2013 dönemi RATIOSı, genel kabul görmüş oranların altına düşmüş ve 2008 yılından 2012 yılına kadar düşüş devam etmiştir. 2012 ile birlikte düzelme başlasa da 2013 yılı sonu itibariyle Nakit Oranı hariç diğer oranlar genel kabul görmüş oranların altında kalmıştır.

Table 3: 2008-2013 Liquidity Ratios of Ak Enerji A.Ş.

	AK ENERJİ					
RATIOS	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Current Ratio %	203	83	40	36	63	104
Liquidity Ratio %	187	71	37	28	55	90
Cash Ratio %	91	44	9	14	36	64

As can be seen in the Table including the 2005-2008 liquidity ratios of Aksu Enerji A.Ş, the liquidity ratio in 2005 seem to be quite low. In addition to this, it can be said that STL's were kept low and the company operated with high cash position, because liquidity ratios of 2006-2008 were significantly above the generally accepted ratios.

Table 4: 2005-2008 Liquidity Ratios of Aksu Enerji A.Ş.

	AKSU ENERJİ			
RATIOS	**2005**	**2006**	**2007**	**2008**
Current Ratio %	20	7.059	1.912	2.968
Liquidity Ratio %	0	6.229	1.797	2.828
Cash Ratio %	0	5.930	1.647	2.825

2008-2013 liquidity ratios of Aksu Enerji A.Ş are given in Table 5. 2008-2013 ratios of Aksu Enerji A.Ş. are significantly above the generally accepted ratios. It shows that the company preferred to keep cash and similar assets high.

Table 5: 2008-2013 Liquidity Ratios of Aksu Enerji A.Ş.

	AKSU ENERJİ					
RATIOS	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Current Ratio %	2.968	949	1.275	1.473	3.392	754
Liquidity Ratio %	2.828	870	1.186	1.354	3.381	741
Cash Ratio %	2.825	108	1.136	1.249	3.357	717

2005-2008 liquidity ratios of Ayen Enerji A.Ş are given in Table 6. Current ratios and liquidity ratios of Ayen Enerji. A.Ş remained under the generally accepted ratios, however current ratios are above the generally accepted ratios, despite fluctuating.

Table 6: 2005-2008 Liquidity Ratios of Ayen Enerji A.Ş.

	AYEN ENERJİ			
RATIOS	**2005**	**2006**	**2007**	**2008**
Current Ratio %	50	76	133	166
Liquidity Ratio %	44	61	9	60
Cash Ratio %	22	51	1	47

As can be seen in Table 7 including the liquidity ratios of Ayen Enerji in 2008-2013, current ratios and liquidity ratios of Ayen Enerji A.Ş seem to remain under the generally accepted ratios and these ratios continued to get smaller after the crisis, however these ratios had a course above the generally accepted ratios in last two years.

Table 7: 2008-2013 Liquidity Ratios of Ayen Enerji A.Ş.

	AYEN ENERJİ					
RATIOS	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Current Ratio %	166	108	145	36	72	62
Liquidity Ratio %	60	36	49	8	38	43
Cash Ratio %	47	14	24	1	24	29

2005-2008 liquidity ratios of Zorlu Enerji A.Ş. are given in Table 8. In this period, all ratios of Zorlu Enerji A.Ş were under the generally accepted ratios. Particularly cash ratio seems to be quite low.

Table 8: 2005-2008 Liquidity Ratios of Zorlu Enerji A.Ş.

	ZORLU ENERJİ			
RATIOS	**2005**	**2006**	**2007**	**2008**
Current Ratio %	100	30	24	62
Liquidity Ratio %	78	16	7	29
Cash Ratio %	1	0	2	1

As can be seen in Table 9 including the liqudity ratios of Zorlu Enerji A.Ş. in 2008-2013, all ratios of Zorlu Enerji A.Ş. remained under the generally accepted ratios after the crisis, and no recovery was achieved.

Table 9: 2008-2013 Liquidity Ratios of Zorlu Enerji A.Ş.

	ZORLU ENERJİ					
RATIOS	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**
Current Ratio %	62	48	49	64	39	32
Liquidity Ratio %	29	37	39	34	35	24
Cash Ratio %	1	6	17	7	13	10

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Table 10: Balance Sheet Changes and Ratios of Ak Enerji A.Ş. in 2005-2008

FINANCIAL SITUATION TABLE											
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED	
TERM	31.12.2005		CHANGE	31.12.2006		CHANGE	31.12.2007		CHANGE	31.12.2008	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS											
CURRENT ASSETS	228.624.754	36	-9	208.929.728	33	-6	196.027.872	33	21	238.049.931	28
REAL ASSETS	399.269.278	64	7	428.333.721	67	-7	399.016.736	67	56	622.744.754	72
TOTAL ASSETS	627.894.032	100	1	637.263.449	100	-7	595.044.608	100	45	860.794.685	100
SOURCES											
SHORT-TERM LIABILITIES	63.876.868	10	1	64.826.024	10	-12	556.877.292	10	95	111.161.309	13
LONG-TERM LIABILITIES	74.660.331	12	91	142.813.239	22	4	148.848.268	25	85	270.428.208	31
EQUITY CAPITALS	488.259.491	78	-12	428.340.381	67	-9	388.013.975	65	24	479.205.168	56
PAID-CAPITAL	65.340.000	10	0	65.340.000	10	0	65.340.000	11	0	65.340.000	8
NET TERM PROFIT/LOSS	-79.091.304	-13	-24	-59.790.065	-9	-33	-40.280.291	-7	-321	126.888.622	10
NET WORKING CAPITAL	164.747.886	26	14	144.103.704	23	4	139.150.580	23	10	126.888.622	15
TOTAL SOURCES	626.796.690	100	-1	635.979.644	100	7	593.739.535	100	-31	860.794.685	100

Table 10 shows the consolidated balance sheet including the items of Ak Enerji A.Ş on a pro rata basis. As can be seen in the relevant Table, the share taken by current assets item from active assets in 2005-2008 seem to be gradually decreasing. Share of current assets decreased from 36% in 2005 to 28% in 2008. Real assets item showed a substantial increase in the same term. Although there was no serious difference in short-term borrowing in terms of ratios, long-term borrowing showed a significant increase on a pro rata basis.

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Table 11: Balance Sheet Changes and Ratios of Ak Enerji A.Ş. in 2008-2013

FINANCIAL SITUATION TABLE																		
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED	
TERM	31.12.2008		CHANGE	31.12.2009		CHANGE	31.12.2010		CHANGE	31.12.2011		CHANGE	31.12.2012		CHANGE	31.12.2013	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS																	
CURRENT ASSETS	238.049.931	28	48	352.724.408	23	-22	274.897.785	14	-20	220.195.047	10	139	525.686.641	19	-24	398.264.030	12
REAL ASSETS	622.744.754	72	85	1.152.868.719	77	42	1.638.274.143	86	23	2.009.016.999	90	14	2.297.863.384	81	22	2.803.118.614	88
TOTAL ASSETS	860.794.685	100	76	1.505.593.127	100	27	1.913.171.928	100	17	2.229.212.046	100	27	2.823.550.025	100	13	3.201.382.644	100
SOURCES																	
SHORT-TERM LIABILITIES	111.161.309	13	283	426.230.535	28	11	471.568.868	25	30	611.824.119	27	-21	484.794.349	17	-21	381.928.345	12
LONG-TERM LIABILITIES	270.428.208	31	35	364.785.475	24	86	676.880.446	35	61	1.092.808.294	49	28	1.394.321.527	49	43	1.991.426.717	62
EQUITY CAPITALS	479.205.168	56	49	714.577.117	47	7	764.724.614	40	-31	524.579.633	24	80	944.434.149	33	-12	828.027.582	26
PAID-CAPITAL	65.340.000	8	156	167.328.910	11	125	375.814.000	20	0	375.814.000	17	0	375.814.000	13	94	729.164.000	23
NET TERM PROFIT/LOSS	88.950.920	10	-74	23.422.693	2	-213	-126.369.923	-1	700	-211.048.080	-9	-137	79.014.305	3	-261	-127.081.836	-4
NET WORKING CAPITAL	126.888.622	15	-273	-73.506.127	-5	-63	-196.689.083	-10	-50	-391.629.072	-18	-1.058	40.892.292	1	150	16.335.685	1
TOTAL SOURCES	860.974.685	100	-43	1.505.593.127	100	-21	1.913.173.928	100	-14	2.229.212.046	100	-21	2.823.550.025	100	-12	3.201.382.644	100

Table 11 shows the consolidated balance sheet including the items of Ak Enerji A.Ş on a pro rata basis. The share taken by current assets from active assets in 2008-2013 seems to gradually decrease. Share of current assets decreased from 28% in 2008 to 12% in 2013. In spite of this, real assets item quadrupled in 5 years. Long-term borrowing in the same period showed a serious increase. Net working capital became a deficit account in those years due to great increases in short-term liabilities of the company and the lack of a change in the current assets.

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Table 12: Balance Sheet Changes and Ratios of Aksu Enerji A.Ş. in 2005-2008

FINANCIAL SITUATION TABLE											
TYPE OF FINANCIAL TABLE	CONSOLIDATED		CHANGE	CONSOLIDATED		CHANGE	CONSOLIDATED		CHANGE	CONSOLIDATED	
TERM	31.12.2005			31.12.2006			31.12.2007			31.12.2008	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS											
CURRENT ASSETS	4.638.219	100	-32	3.151.701	11	41	4.442.149	16	16	5.161.524	14
REAL ASSETS	19.938	0	123.539	24.651.067	89	-3	23.869.435	84	28	30.585.674	86
TOTAL ASSETS	4.658.157	100	497	27.802.768	100	2	28.311.584	100	26	35.747.198	100
SOURCES											
SHORT-TERM LIABILITIES	210.468	5	-79	44.647	0	420	232.377	1	-26	172.326	0
LONG-TERM LIABILITIES	0	0	#SAYI/0!	1.959.610	7	-3	1.900.973	7	74	3.298.456	9
EQUITY CAPITALS	4.447.689	95	480	25.798.511	93	1	26.178.234	92	23	32.276.416	90
PAID-CAPITAL	858.000	18	873	8.352.000	30	0	8.352.000	30	0	8.352.000	23
NET TERM PROFIT/LOSS	779.493	17	-310	-1.635.028	-6	-123	379.723	1	33	505.252	1
NET WORKING CAPITAL	4.427.751	95	43	3.107.054	11	-26	4.209.772	15	-16	4.989.198	14
TOTAL SOURCES	4.658.157	100	-83	27.802.768	100	-2	28.311.584	100	-21	35.747.198	100

Table 12 shows the consolidated balance sheet including the items of Ak Enerji A.Ş on a pro rata basis. As can be seen in the Table, the share taken by current assets from active assets in 2005-2008 seems to gradually decrease. Share of current assets decreased from 100% in 2005 to 14% in 2008. Real assets investments of the company showed a substantial increase in this 4 years period. Long-term borrowing in the same period increased significantly. However, these liabilities do not occupy share in passive total liabilities due to the strong structure of the equity capital of the company.

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Table 13: Balance Sheet Changes and Ratios of Aksu Enerji A.Ş. in 2008-2013

FINANCIAL SITUATION TABLE																	
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED	
TERM	31.12.2008		CHANGE	31.12.2009		CHANGE	31.12.2010		CHANGE	31.12.2011		CHANGE	31.12.2012		CHANGE	31.12.2013	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS																	
CURRENT ASSETS	5.161.524	14	23	6.349.938	16	3	6.514.787	16	-74	1.704.117	5	116	3.678.984	9	27	4.670.125	11
REAL ASSETS	30.585.674	86	8	33.025.589	84	2	33.674.270	84	-7	31.430.450	95	19	37.488.836	91	-3	36.538.007	89
TOTAL ASSETS	35.747.198	100	10	39.375.527	100	2	40.189.057	100	-18	33.134.567	100	24	41.167.820	100	0	41.208.132	100
SOURCES																	
SHORT-TERM LIABILITIES	172.326	0	288	669.319	2	-24	511.003	1	-77	116.687	0	-12	102.085	0	490	602.364	1
LONG-TERM LIABILITIES	3.298.456	9	16	3.826.594	10	8	4.134.814	10	-8	3.810.696	12	26	4.801.392	12	36	6.542.895	16
EQUITY CAPITALS	32.276.416	90	8	34.879.614	89	2	35.543.240	88	-18	29.208.184	88	24	36.264.343	88	-6	34.062.873	83
PAID-CAPITAL	8.352.000	23	0	8.352.000	21	0	8.352.000	21	0	8.352.000	25	0	8.352.000	20	0	8.352.000	20
NET TERM PROFIT/LOSS	505.252	1	681	3.948.202	10	-40	2.377.654	6	-314	-5.076.799	-15	-239	7.056.159	17	-131	-2.201.469	-5
NET WORKING CAPITAL	4.989.198	14	-12	5.680.619	14	-5	6.003.784	15	276	1.588.430	5	-56	3.576.899	9	-12	4.067.761	10
TOTAL SOURCES	35.747.198	100	-9	39.375.527	100	-2	40.189.057	100	21	33.134.567	100	-20	41.167.820	100	0	41.208.132	100

Table 13 shows the consolidated balance sheet including the items of Aksu Enerji A.Ş on a pro rata basis. As can be seen in the Table, no significant change exist with respect to the share taken by current assets item from active assets in 2008-2013, however current assets item showed a 20% increase. Regarding the borrowing structure of this period, short-term liabilities seem to increase 3 times in 2009 in which the impacts of crisis were felt, compared to the previous year, however this amount has a small share in total amount. Real assets doubled in the 5 years after the crisis. We can conclude that the structure of the equity capital of the company is strong. The company did not achieve its pre-crisis growth in the post-crisis term and showed a stable growth.

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Table 14: : Balance Sheet Changes and Ratios of Ayen Enerji A.Ş. in 2005-2008

FINANCIAL SITUATION TABLE											
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED	
TERM	31.12.2005		CHANGE	31.12.2006		CHANGE	31.12.2007		CHANGE	31.12.2008	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS											
CURRENT ASSETS	57.076.549	10	24	70.734.487	14	-30	49.225.880	11	174	135.020.216	26
REAL ASSETS	516.119.156	90	-14	444.856.884	86	-12	391.032.539	89	0	390.712.315	74
TOTAL ASSETS	573.195.705	100	-10	515.591.371	100	-15	440.258.419	100	19	525.732.531	100
SOURCES											
SHORT-TERM LIABILITIES	117.255.403	21	-22	92.045.151	18	-25	68.999.980	16	18	81.502.885	16
LONG-TERM LIABILITIES	240.388.745	43	-6	225.898.780	44	-36	144.805.322	34	40	203.204.192	39
EQUITY CAPITALS	207.606.107	37	-7	193.678.785	38	11	215.299.149	50	7	231.345.374	45
PAID-CAPITAL	119.610.000	21	0	119.610.000	23	0	119.610.000	28	0	119.610.000	23
NET TERM PROFIT/LOSS	4.897.216	1	-419	-15.642.328	-3	-238	21.620.364	5	93	41.721.884	8
NET WORKING CAPITAL	-60.178.854	-11	182	-21.310.664	-4	8	-19.774.100	-5	-137	53.517.331	10
TOTAL SOURCES	565.250.255	100	10	511.622.716	100	19	429.104.451	100	-17	516.052.451	100

Table 14 shows the consolidated balance sheet including the items of Ayen Enerji A.Ş on a pro rata basis. As can be seen in the Table, the share taken by current assets item from active assets in 2005-2008 seems to gradually increase on a pro rata basis. Share of current assets decreased from 10% in 2005 to 26% in 2008. Real assets investments of the company significantly decreased in 2007, both quantitatively and proportionally. With respect to the liabilities, both short-term and long-term liabilities of the company in the same period decreased both quantitatively and proportionally. Net working capital of the company remained as a deficit account in 2005, 2006 and 2007. Current assets of the company are quite low in this period. Net working capital of the company rose to account in credit together with the significant increase in current assets in 2008.

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Table 15: Balance Sheet Changes and Ratios of Ayen Enerji A.Ş. in 2008-2013

FINANCIAL SITUATION TABLE																		
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED		
TERM	31.12.2008		CHANGE	31.12.2009		CHANGE	31.12.2010		CHANGE	31.12.2011		CHANGE	31.12.2012		CHANGE	31.12.2013		
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%	
ASSETS																		
CURRENT ASSETS	135.020.216	26	-36	86.392.716	17	-2	84.410.348	17	5	88.521.817	10	56	138.090.340	14	50	206.919.140	18	
REAL ASSETS	390.712.315	74	5	408.946.174	83	0	408.915.079	83	101	821.464.551	90	0	821.937.671	86	17	961.357.557	82	
TOTAL ASSETS	525.732.531	100	-6	495.338.890	100	0	493.325.427	100	84	909.986.368	100	5	960.028.011	100	22	1.168.276.697	100	
SOURCES																		
SHORT-TERM LIABILITIES	81.502.885	16	-2	79.751.500	16	-27	58.386.755	12	323	246.718.196	28	-22	193.082.267	21	71	331.113.199	29	
LONG-TERM LIABILITIES	203.204.192	39	-20	161.890.911	33	8	174.374.570	36	110	366.825.290	41	30	476.363.986	51	24	594.765.388	52	
EQUITY CAPITALS	231.345.374	45	5	241.888.340	50	3	249.067.431	52	9	272.536.947	31	-5	260.196.926	28	-16	219.855.345	19	
PAID-CAPITAL	119.610.000	23	0	119.610.000	25	0	119.610.000	26	43	171.042.300	19	0	171.042.300	16	0	171.042.300	15	
NET TERM PROFIT/LOSS	41.721.884	8	12	46.759.410	10	-13	40.852.812	8	-42	23.587.121	3	-4	22.611.347	2	-316	-48.846.437	-4	
NET WORKING CAPITAL	53.517.331	10	706	6.641.216	1	-74	26.023.593	5	-116	-158.196.381	-18	188	-54.991.927	-16	-56	-124.194.059	-11	
TOTAL SOURCES	516.052.451	100	7	483.530.751	100	0	481.828.756	100	-46	886.080.435	100	-5	931.643.179	100	-19	1.145.733.932	100	

Table 15 shows the consolidated balance sheet including the items of Ayen Enerji A.Ş on a pro rata basis. As can be seen in the Table, while there were a significant decrease in the share taken by current assets item from active assets in 2008-2011, great increases were seen in the following years, contrary to this situation. Real assets item had almost no change in 2008-2010, however a great increase was observed in 2011 and 2013. With respect to the liabilities, although short-term liabilities reduced in 2009 and 2010, a 3.2 times increase was observed in the following year. Long-term liabilities structure was also reduced in 2009 and 2010, however high amounts of increases were observed in the following years. The period between 2008 and 2010 as a whole, the share of the liabilities in total resources increased from 55% to 81%. In parallel with current assets remaining low, net working capital of the company had a negative course in the last three years.

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Table 16: Balance Sheet Changes and Ratios of Zorlu Enerji A.Ş. in 2005-2008

FINANCIAL SITUATION TABLE											
TYPE OF FINANCIAL TABLE	CONSOLIDATED		CHANGE	CONSOLIDATED		CHANGE	CONSOLIDATED		CHANGE	CONSOLIDATED	
TERM	31.12.2005			31.12.2006			31.12.2007			31.12.2008	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS											
CURRENT ASSETS	113.055.828	10	-24	86.337.863	10	74	150.188.054	13	112	318.055.000	12
REAL ASSETS	445.291.748	80	70	755.675.566	90	30	983.024.706	87	131	2.275.008.000	88
TOTAL ASSETS	558.347.576	100	51	842.013.429	100	35	1.133.212.760	100	129	2.593.063.000	100
SOURCES											
SHORT-TERM LIABILITIES	66.780.090	12	328	285.605.093	35	116	618.162.091	57	-17	509.991.000	20
LONG-TERM LIABILITIES	169.133.706	31	49	252.618.336	31	-22	197.277.287	18	956	2.083.437.000	80
EQUITY CAPITALS	315.287.305	57	-9	285.779.429	35	-4	273.380.013	25	-100	-365.000	0
PAID-CAPITAL	*81.665.350*	*15*	*0*	*81.665.350*	*10*	*0*	*81.665.350*	*8*	*0*	*81.665.350*	*3*
NET TERM PROFIT/LOSS	*46.275.738*	*2*	*-655*	*-46.143.724*	*-6*	*-79*	*-9.553.735*	*-1*	*3.420*	*-336.254.000*	*-13*
NET WORKING CAPITAL	551.201.101	8	-123	-199.267.230	-24	-57	-467.974.037	-43	144	-191.936.000	-7
TOTAL SOURCES	565.250.255	100	-33	824.002.858	100	-24	1.088.819.391	100	-58	2.593.063.000	100

Table 16 shows the consolidated balance sheet including the items of Ayen Enerji A.Ş on a pro rata basis. As can be seen in the Table, active assets of the company in 2005-2008 seem to increase every year consistently. A high amount of increase was observed particularly in real assets item. With respect to the liabilities, both short-term and long-term liabilities showed significant increases both quantitatively and pro rata basis in parallel with the increases in the real assets. Net working capital had a negative course in 2006, 2007 and 2008, because short-term liabilities showed an increase in high amounts in proportion to the current assets.

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Table 17: Balance Sheet Changes and Ratios of Zorlu Enerji A.Ş. in 2008-2013

FINANCIAL SITUATION TABLE																	
TYPE OF FINANCIAL TABLE	CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED			CONSOLIDATED	
TERM	31.12.2008		CHANGE	31.12.2009		CHANGE	31.12.2010		CHANGE	31.12.2011		CHANGE	31.12.2012		CHANGE	31.12.2013	
REPORT CURRENCY	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%	%	TL	%
ASSETS																	
CURRENT ASSETS	318.055.000	12	9	345.937.000	14	11	383.157.000	15	69	648.001.000	16	-10	581.471.000	13	1	586.365.000	9
REAL ASSETS	2.275.008.000	88	-9	2.068.433.000	86	8	2.228.113.000	85	57	3.489.399.000	84	13	3.944.507.000	87	46	5.767.605.000	91
TOTAL ASSETS	2.593.063.000	100	-7	2.414.370.000	100	8	2.611.270.000	100	58	4.137.400.000	100	9	4.525.978.000	100	40	6.353.970.000	100
SOURCES																	
SHORT-TERM LIABILITIES	509.991.000	20	41	721.476.000	30	9	785.499.000	30	40	1.103.209.000	27	35	1.491.185.000	33	13	1.685.479.000	27
LONG-TERM LIABILITIES	2.083.437.000	80	-30	1.463.613.000	61	14	1.668.733.000	64	99	3.327.161.000	80	-15	2.843.196.000	63	37	3.897.566.000	61
EQUITY CAPITALS	-365.000	0	-62.917	229.281.000	9	-32	157.038.000	6	-289	-296.089.000	-7	-164	189.394.000	4	304	764.217.000	12
PAID-CAPITAL	81.665.350	3	245	281.665.000	12	0	281.665.000	11	0	281.665.000	7	78	500.000.000	11	0	500.000.000	8
NET TERM PROFIT/LOSS	-336.254.000	-13	-129	97.891.000	4	-168	-66.725.000	-3	511	-407.362.000	-10	-247	598.585.000	13	-152	-309.171.000	-5
NET WORKING CAPITAL	-191.936.000	-7	-49	-315.539.000	-16	-7	-402.342.000	-15	-12	-455.208.000	-11	-50	-909.714.000	-20	-17	-1.099.114.000	-17
TOTAL SOURCES	2.593.063.000	100	7	2.414.370.000	100	-8	2.611.270.000	100	-37	4.134.281.000	100	-9	4.523.775.000	100	-29	6.347.262.000	100

Table 17 shows the consolidated balance sheet including the shares taken by the items of Ayen Enerji A.Ş on a pro rata basis. As can be seen in the Table, while no significant change in the share taken by current items from active assets in 2008-2010 observed, a great increase is seen in 2011, contrary to this situation. This fluctuating increase continued in the following two years. Real assets item had almost no change in 2008-2010, despite the significant increases in the following year. With respect to the liabilities in this period, a significant increase in short-term liabilities for every year is observed. Long-term liabilities were reduced in 2009-2010; however these liabilities showed a significant increase in 2011. Although the liabilities were decreased in 2012, these increased again in 2013 and their share in the total resources became 61%. Net working capital was in deficit account in this 5 years period, because short-term liabilities of the company increased consistently and current assets couldn't respond to this.

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4. Conclusions and Recommendations

Global economic crisis emerged in 2008 took effect around the world, particularly in the USA and Europe. The crisis increased the need of developing countries for an external financing. Generally, developing countries can finance their foreign trade deficit due to the lack of sufficient savings. Therefore, these countries that are dependent on finance markets are necessarily affected by any negative development in finance markets. Turkey as a developing country was also affected by the global economic crisis in 2008 and fluctuations were observed in exchange rates, inflation and interest rates.

In this study, the effects of 2008 global economic crisis on the financial statements and liquidity ratios of energy sector companies traded in BIST. 2005-2008 and 2008-2010 periods were evaluated separately and compared to demonstrate the pre-crisis and post-crisis terms, respectively. Balance sheets were evaluated by using ratio analysis and vertical and horizontal analysis techniques.

When looked at the effects of 2008 global crisis on financial statements and liquidity ratios of energy companies traded in BIST and evaluated within the scope of this study, it can be said that no common situation is in effect and every single company had individual situations due to the different operations of their financial structures.

When a horizontal and vertical analysis is applied for the balance sheet of Ak Enerji A.Ş; it can be seen that short and long term liabilities showed a significant increase and, in the following 3 years, the company operated with negative net working capital in parallel with the significant increase in short-term liabilities. This situation is an indicator of facing a cash problem in the short term. While liquidity ratios of the company were above the generally accepted ratios, they remained under the standards after the crisis. In the light of all these data, Ak Enerji A.Ş. can be considered as negatively affected by the crisis.

Although the turnover of Aksu Enerji A.Ş. was relatively lower than other companies evaluated, there were no risk in terms of liquidity ratios and balance sheet analysis, because the company preserved its financial discipline in both pre-crisis and post-crisis terms. Equity capital structure and net working capital are positive. Therefore, this company is considered as not affected by the crisis.

It can be said that Ayen Enerji A.Ş did not affected by the crisis financially, through the vertical and horizontal analysis on the balance sheets. There was no considerable increase in the share of liabilities in the total balance sheet of the country in both pre-crisis and post-crisis term. The company continued its investments in the years in which the effects of the crisis reduced in the world and in our country, and acquired real assets by increasing the short and long term liabilities. There was an increase in the liquidity ratios of the company in immediately before and after the crisis. This indicates that the company received the signals of the crisis and increased its cash level. There seem to be a decline in liquidity ratios of the company, because the effects of the crisis reduced in the world and in our country in the following years.

Zorlu Enerji A.Ş. acquired real assets in crisis years and financed this acquisition by both short-term and long-term liabilities. The company did not give up this tendency after the crisis and turned on to acquisition of real assets through huge liabilities. The company operated with negative networking capital in those years and this amount showed an increase in every passing year. Therefore, the risk of finding short-term cash for the company gradually increased. Debts of the company decreased considerably, because the

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company preferred to grow in crisis periods too. While the share of liabilities in balance sheet was 75% before the crisis, this increased to 107% after the crisis. That being said, the liquidity ratios remained low continuously and the company can be considered as affected by the crisis in a negative way.

As can be understood from analyzing results of the companies evaluated, they were affected by the crisis in different ways due to the differences in their strategies. With reference to these data, no negative effect of the crisis can be considered as common for whole energy sector. 2 of 4 companies were affected by the crisis financially in a negative way. When looked at the turnover increases of the companies, there were great increases and the energy companies of our country maintained their growth policies. As a result of all these evaluations, given foreign-source dependency of our country in energy area, these energy companies need to adopt financial discipline as a central focus. To have an energy sector with a competitive, strong financial body and a sustainable profitability in global markets is crucial for our national economy. Matters such as branding, technology, R&D investments should be put maximum importance to provide a healthy development and deliver products with added value. Governments must implement policies directed at both contributing to the growth of energy sector and reducing the foreign-dependency in energy.

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Bioeconomy and entrepreneurial ecosystem patterns

Case study for Romania - USH Pro Business

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Abstract. *This paper is investigating various patterns of entrepreneurial relations and engagements that may help the shift to bio economy and the ways they can facilitate entrepreneurial understanding and access to markets and business opportunities in this field. It also investigate the role of universities and cluster in transfer of knowledge towards bio economy and possibilities of interaction making a case study on USH Pro Business in Romania. Main conclusion of the paper is that participation of entrepreneurs, especially SME but also large companies in active Entrepreneurial Ecosystems (EE) plays an essential role in transposing bioeconomy from strategy to action, but some regions may be well advanced and other lagging behind. High trust and large EE in terms of networking are better fit to accelerate the knowledge and innovation process and universities may play a major role in this direction, as important catalyst.*

Keywords: bio economy, entrepreneurial ecosystems, universities, knowledge transfer, clusters, smart specialization, communities of practice

JEL Codes: A1

1. Introduction

Bioeconomic paradigm defines a shift in the way economic activities are conducted in order to meet sustainability goals in terms of production, transportation and commercialization. In spite of the fact that national, supra-national, macro-regional or regional strategies are setting goals for new value chains, new markets and smart specialization in several sectors of bioeconomy, at the entrepreneurial level there are certain knowledge and understanding barriers related to this evolution. Many managers and organizations are unable to understand and tap the market opportunities and, therefore they lack entrepreneurial engagement into the new bio economy emerging markets. Based on the assumption that bio economy shift has to be done in the new emerging markets, as an entrepreneurial experience, it has to be developed as a part of entrepreneurship engagement.

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2. Bioeconomy and its sectors

Bioeconomy have been categorized in many sectors and the role of regional specialization has been highlighted. Many comparisons has been made in different regions in order to better understand synergies and interactions of the various elements involved in the formation of bioregions, generic term indicating capacity building of some advanced region in terms of adherence to this new paradigm. According to BERST research project (http://www3.lei.wur.nl/BerstPublications) there are eight important sectors such as: biomass, food and feed, construction, chemicals and polymers, pulp and paper, textile and clothing, energy, R&D services. Since it implies various sector economy is considered as well a meta sector worth 2 trillion euro in Europe, creating 22 million jobs, representing 9% of the overall workforce, according to the data released by the European Union. Companies with an interest in bio economy may include agriculture and food industry, green chemistry and industrial biotechnologies, construction, textiles and many others.

Other studies are mapping worldwide the bioregion. In Europe studies like EU-ERRIN (http://errin.eu/content/boosting-economic-growth-and-facilitating-investments-through-bioeconomy-how-build-effective) are indicating that out of 40 active regions analyzed only few regions have a specific strategy for bio economy. Most of the regions have strategies on different sectors of bio economy (e.g. on energy, food, waste, bio mass).

There is a large amount of evidence that regions worldwide are indicating bioeconomy a top priority. It is also largely accepted that bioeconomy is related to smart specialization processes. In other words, bioeconomy is a high narrated subject and most of statements indicate that the meta sector is important and prevalent in regional strategies. On the other hand, creating a bio economy industrial base implies integrating value chains of different sectors. An horizontal approach of cross specialization among all the sectors is required but still that approach is subject to debates and only at the beginning. The case for entrepreneurial discovery of smart specialization in bioeconomy is therefore an important issue to be analyzed and understood as well as how smart specialization may be effective based on horizontal approach for a process considered to be rather vertical.

3. Smart specialization and entrepreneurship ecosystems

It is generally recognized that smart specialization healthy trends are not related to a planning doctrine or method but rather a community of good practice of several entrepreneurial discoveries, targeting market opportunities. (Lianu 2015), While specialization is rather vertical, always looking to the value chain of a products or services, multi-sector bioeconomy industrial base has to be more cross sector niche related which has to deal with horizontal understanding of multi sectors in bioeconomy. Having this complex dimensions entrepreneurs may find difficult to get specialized smartly in bioeconomy and identify cross sector niches in the field.

Among different perspectives of entrepreneurship (Borzillo, Straub, Voicu Dorobantu 2016), risk taking visionary entrepreneurs in creating new products and services based on consumer's demand, may be the most interesting from the point of view of bioeconomy. Indeed entrepreneurs tapping into these new markets should perceive the bioeconomy new frontiers as 'light houses" of a new economic interactions. Even more, due to the complexity of the value chains which will emerge, requiring interdisciplinary knowledge, building specific regional entrepreneurial ecosystems based on bioeconomic communities is part of the entrepreneurial challenges. The member of such ecosystems has to include not only suppliers, producers but a wide range of other stakeholders.

One entrepreneurial ecosystem widely considered to be best fitted for cross sector specializations are clusters. Clusters "are cross-sectoral by their nature, as they refer to a concentration of related industries and institutions, and thus, they can be platforms for innovation and industrial change "(European Cluster Trends, Preliminary Report, European Commission, Brussels 2014, p. 12). Clusters and network of clusters may overcome with necessary knowledge difficulties to develop new products in bioeconomy. Cross-clustering is based on strategic cooperation of two or more clusters in broad industries like bioeconomy across different sectors previously mentioned in this paper. Seeking ways to create new value chains may find in clusters and network of clusters the right environment. Clusters and networks can be considered as "springboards" for enabling collaboration among companies and research institutions and universities within the same region, the same country or in different countries (Lämmer-Gamp, Meier zu Köcker, Nerger 2014), Even more, cross-clustering has a geographical dimension being more regional or macro-regional. Most of European clusters cooperate within regions and at national level but, in some cases there is an emerging cooperation at macro-regional level like in the case of EU Strategy for the Danube Region.

4. Clusters and bioeconomy

Before clusters took off, large enterprises were predominant players of in house innovation processes, from basic research to the marketing of new products. Since value chains become more complex and global, innovation processes has to deal with complex production challenges which requires cooperation of various economic and non-economic actors. The interest in clusters of big companies and multinationals or small entrepreneurs is not merely linked to their business potential but also to the value of knowledge transfer, strategic planning capacity to develop large entrepreneurial ecosystem. Clusters aggregate small and medium enterprises, research centres, universities, large companies or investors which may compete but cooperate in the same time.

One major European cluster based on bioeconomy is Central Germany's Bioeconomy Cluster (http://www.bioeconomy.de) situated in Halle (Saxony-Anhalt). Local business and research partners, universities as well, work together in order to use non-food biomasses for energy and new materials production. Wood industry, chemical and petro-chemical sector as well as engineering co-operate into a regional center for bio economy where the common objective is to expand from testing to industrial production. Fraunhofer Centre for Chemical-Biotechnological Processes CBP in Leuna is developing processes through a combination of chemical and biotechnological methods to allow extraction of basic chemical products from biomass for possible industrial use.

In another example Cluster for Biotechnologies (CLIB 2021, http://www.clib2021.de), of North Rhine-Westphalia, combines concentration of German excellence in the field of research and develop production and marketing in all sectors of bioeconomy. Worth to mention that Germany's big manufacturers like Altana, Basf, Henkel, Evonik, Lanxess and Bayer are active in these clusters. In addition, there are over forty SMEs, universities and high-level research centres, associations, banks and venture capital. The clusters also include foreign members. Since 2010 the CLIB has started a coordination programme of scientific projects in the field of biotechnology or the Belgian Bio base Pilot Plan. "The international nature of the clusters appears from the strong international relations that over the years have reached agreements with Brazil, Canada and Malaysia. The cluster is an independent entity, requiring stakes by its members according to their ability-to-pay principle and able to create a turnover" (http.renewablemater.eu).

The reason for which German clusters are a good model of best practice is based on the way Germans manage national strategies. German clusters are part of a strategy ("Bioeconomy 2030") coordinated by the Federal Ministry of Research and Innovation outlining the national approach resulting in a post-oil economy, thanks to the use of renewable resources and biomasses. It has been created a Federal Bioeconomy Council, an institution "whose task is to come up with proposals to submit to the central government. Manufacturing and academia have to build strategic alliances along the whole production chain of bioeconomy in order to receive federal funds (http.renewablemater.eu)

Other Western countries have chosen to implement the German example. Most representative cluster of the French bioeconomy is in Picardy. It is the point of cooperation of Industries and Agriculture Resources best known as IAR Pole (http://www.iar-pole.com), specialized in green chemistry and industrial biotechnologies with 200 active regional members which work together. Among them one can find Michelin, Roquette, Veolia, L'Oreal, Danone and Lacoste. IAR Centre houses the European Institute of Bio refinery, one of the biggest in the world. Every year it transforms 3 million tons of biomass into sugar, glucose, nutritional alcohol, surgical spirit, ethanol and active ingredients for cosmetics. The French cluster is characterized by the principles of sharing and synergy: the Centre in Reims also includes a shared R&D lab (ARD), an industrial demonstration plant (Biodemo) and a research centre that links several colleges of further education (CEBB). In Reims a new project is also being developed, Futurol, for the production of second-generation bio fuels that do not use biomass from crops. The French cluster, like in the case of German one, is not limited to regional scale but boasts partnerships with Europe, Canada, USA, Japan, Brazil and India. For many cluster specialists bio refinery international inter clustering is a normal phenomenon. The French bioeconomy landscape also includes Axelera (http://www.axelera.org), a Chemistry and Environment cluster of Lyon & Rhône-Alpes Region specialized in green chemistry and recycling of materials; Agrimip, Agri Sud-Ouest Innovation (http://www.agrisudouest.com), a cluster for agriculture and the agricultural and food industry of the Aquitaine and Midi-Pyrénées Regions(http://www.xylofutur.fr). In France these clusters together with the IAR Centre created the United Bio economy Clusters (UBC), an association aiming at sharing a national strategic development vision focused on green chemistry and presenting French bioeconomy in a unified way abroad.

Looking at these best practices, research has been carried on in order to understand critical success factors for bio economy cluster approach. The BERST research project (www.berst.eu) that focuses on benchmarking and smart strategies for building regional bio economies. In BERST, entrepreneurs, policymakers, supportive bodies, and knowledge institutes have been identified the main actors together with a consistent provision of biomass resources and competitive bioeconomy products.

The relevant main findings of the BERST project are as follows:

- Entrepreneurs, including large-scale industries and small and medium enterprises, and the presence of a certain entrepreneurial culture, play a pivotal role in driving clusters towards successful development of the bioeconomy in a region.

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- Policymakers and supportive bodies who are willing to support the development of the bioeconomy by providing governance, institutional structures and financial support, are prime movers in a bio economy
- Bioeconomy R&D institutes and educational organizations provide the technical know-how and innovation without which the development of bioeconomy products would not be possible.

In Italy as well, a series of clusters devoted to bioeconomy have been created. The importance of communities of practice dealing with the challenges posed by the development of this meta sector is also clearly emphasized. The creation and development of eight national technological clusters was promoted in 2012 by the Ministry of Education, University and Research with the aim to identify opportunities – clusters organized by companies, universities, private or public research institutions and individuals focused on innovation and active in different national areas – able to act as catalysts of sustainable economic growth both at local and national level. The most important is surely the national green chemistry technological Cluster created by three of the major players in the Italian bio economy: Novamont, Versalis (Gruppo ENI) and Biochemtex (MossiGhisolfi Group), in collaboration with Federchimica, the Italian Federation of Chemical Industry.

5. Romania: USH Pro Business cluster activity in Bio Economy

There is a development gap regarding to clusters in Europe and, in spite of the fact that in less developed Eastern European countries clusters and networks has alos emerged, they are only at the beginning of their becoming strong alliances in smart specialization or technological change (Lianu C,2016). There are several causes for this gap from the lack o of a proper support from the public authorities and the lack of proper entrepreneurial environment, culture and trust.

In this respect, the paper further investigate the role of universities to fill this gap based on the experience of USH ProBusiness, an university entrepreneurial center (www.uhsporbusiness.ro). As stated, high school may become ideal places for cluster interactions. Attracting clusters and economic concentrations in this filed may be the best way to manage innovation in today global competitive environment especially in countries with inconsistent cluster policies. Active economic concentrations cooperating and competing in the same time are based on strategic alliances. We consider that these alliances are build to share and manage knowledge and best qualified to become communities of practice (CoP). A simple model of understanding complex interactions between the players is in that presented figure nr. 1 where the cooperation area may become be named as high potential area for COPs

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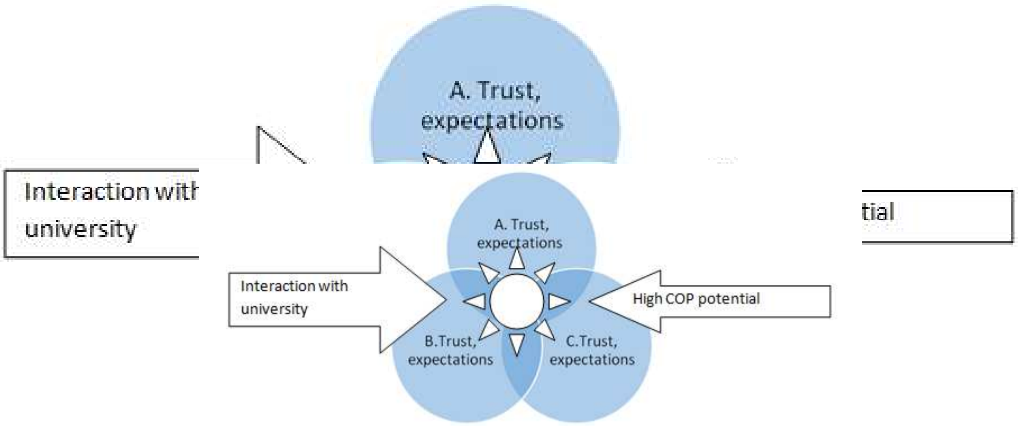

Figur
e 1:Business alliances from trust management to high COP potential area

Source: author interpretation

What we see clearly from all the model of viable economic concentrations is their capacity to cooperate based on trust. Acknowledge and re acknowledged trust is the very essence of economic performances of such alliances. As per our assessment building trust on an agreed are of cooperation between companies A, B and C is the pre-requisite of forming CoPs with mutual benefits for the partners in research and innovation. Bringing universities inside is beneficial not only for the trust management but also for the innovation processes and developing CoP s as well.

In Romania there are few clusters related to bioeconomy in spite of the fact that the country has considerable potential for bioproducts. In 2015, *USH Pro Business, form its very beginning*, put in focus cluster development as well as participation of clusters in the EU Strategy for Danube Region (EUSDR). The center assisted formation of clusters and is taking an active role in it, its management trying to bring together smart specialization issues in the field of bioeconomy with the following cluster partners:

BIODANUBIUS, a cluster dedicated to the bioeconomy, biodiversity and to the organic production in the Danube Delta. The objective of the cluster is to systematically approach the regional value chain to identify the strategic options to create, intake or retention the value, and starting from the present value chain to develop it using the smart specialization until getting new connected value chains. It is targeting eco-sectors or bioeconomy specializations, mixing not just the tourism with the bioproducts but with other unexplored fields such as be the industry of biomass, new renewable resources, health and treatments, health.

BIOTECH PRAHOVA VALLEY

It is an emerging cluster only at the beginning situated north of Bucharest. It Is targeting increase of innovation potential of the enterprises in the following sections:

- Bio Agriculture and Bio Horticulture, Bio Medical, Bio Technology
- Bio Economy
- Balneo, medical, cultural and trip tourism;
- Nutrients, cosmetics
- Environmental protection and conservation
- Renewable energy
- Cultural and creative sectors

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CERMAND (Black Sea and Danube Renewable Energy Cluster - BLESDREC)

Cermand is a cluster that focuses on the renewable energy, on green energy and energetic efficiency in the southern region of Romania (Oltenia, Muntenia, Dobrogea), in the Danube, Black Sea and EUSDR macro-region.

The cluster aims to promote the micro generation of energy at regional level with national and European impact. In the same time, using it's own resources, the cluster makes sure that the transition to the renewable energy is included in the local development projects of the authorities, in order to protect the environment. One important objective is the development of bio economic models of business in order to reduce the CO2 emissions.

SMART ALLIANCE

Smart Alliance is a IT&C cluster. One major objective of the cluster is to participate from the angle of this sector in bio economy.

ROMANIAN TEXTILE CONCEPT

Romanian Textile Concept is a textile industry cluster. One major objective of the cluster is to participate from the angle of this sector in bio economy for a sustainable development of the textile industry.

CONSTRUCT CLUSTER OLTENIA

Construct Cluster Oltenia operates in the construction industry and related sectors: design, innovation, research, training and development, production and logistics of building materials. One main objectives is also bioeconomy.

In order to enhance awareness for bioeconomy, several cross cluster meetings has been organized by USH Pro Business. Their aim was to try to create CoPs able to further cooperate to shape out future value chains in bio based on existing knowledge and business experiences and on the transfer of knowledge from one business group to another,. Researcher, academic professors and students as well were part of this knowledge transfer.

According to studies carried out by our experts connection of economic agents with the research activity or with the professional training or the academic environment were sporadic or insignificant until the formation of the cluster and their internationalization activity was concentrated on the export mainly of raw materials or primary products processed without complex marketing activities and research or trading on foreign markets under own brand (Andrei M, Lianu C, Gudei C, 2016). Main result of the research shows also:

- The companies in the cluster are still insufficiently familiar with the concept of cluster and still at the beginning of the road regarding the establishment of strategic alliances in business or the development of forms of collaboration on the local value chain.
- In an early development stage, well managed, the cluster can capture value on the local value chain through bioprocessing and through the development of new connections with other local value chains of the bioeconomy (ecotourism, reed, bulrush and other local resources capitalization, waste capitalization, etc.).

- In order to function in the new paradigm of bioeconomy it is particularly necessary a constant managerial effort to bring together the members in order to understand and realize the importance of the cluster.
- Using and applying the methodology of the communities of practice to the regional value chain analyses, clusters in wetlands may identify best strategic option for the sustainable development of those regions based on bioeconomy principles.

6. Conclusions

Interaction of broad group of stakeholders in well-structured ecosystems and public support are critical issues in bioeconomy sector in order to enhance understanding and knowledge transfer. Therefore, it is important to consider participatory stakeholder dialogue methodology base on long term communities of practice that can facilitate deliberative practices. There are several strategic initiatives in the bioeconomy but most of them with some exceptions are at the beginning or lack consistency.

In Romania, smart specialization among clusters in bioeconomy is still in an incipient stage and, due to the lack of the support from public policies, universities may play a crucial role in the process.

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Methodological Framework for ex-ante Assessment of Active Policies on the Labor Market - Experimental Approach

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Abstract. *Ex-ante assessment is a mandatory step before the process of implementation of policies because it brings, through the analyses undertaken improvements for initial design, contributing, on a case by case basis, to increasing of efficiency, effectiveness, relevance, sustainability, equity and of its internal and external coherence. In recent years, at international level, but especially in the EU countries (EU), the ex-ante socio-economic programs and public interventions have become an extremely necessary instrument in decision-making, which is linked own economic and social development of the EU Member States.*
The article presents a methodological framework for ex-ante assessment of active measures for the employment growth in the context of rural areas, on the bases of efficiency, effectiveness and coherence criteria. Ex-ante social impact assessment of an active policy can have beneficial effects on employment under quantitative and qualitative aspects. The novelty of the article consist in the specific, experimental approach of the development and of ex-ante evaluation of active labor market policies, in the context of rural areas.

Keywords: ex-ante assessment; active policies; labor market; social impact; rural area

JEL Codes: *J08; J43*

1. Introduction

Over the past few years, in EU countries, ex-ante evaluation of socio-economic impact of public intervention programs has become extremely necessary in decision-making. Ex-ante evaluation represent an impact analysis, by means of which is desired effects assessment that a public policy implementation have. This type of assessment is a mandatory step before the implementation of a public policy in the view of successfully achievement of objectives. This stage enables readjustment of measures, through the elements of improvement which it emits, representing an integral part in process of formulating and implementing of public policies.

Depending on the stage in the which intervenes, ex-ante evaluation has a key role in: 1) choosing active policy alternatives; 2) calibration and readjustment of the design of the active policy developed in the first phase, in manner to have a logic of intervention well-articulated and to bring real contribute to fulfill

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targets of increase the employment in terms of quantity and quality; 3) establishing mechanisms for subsequent development of the monitoring and evaluation functions in the event of policy implementation.It is therefore necessary that all active labor market policies to be supported by an ex-ante assessment.

Ex-ante evaluation must be oriented towards a goal which bring quality of life, prosperity and new opportunities for citizens. Makers responsible for policy planning together with professionals try to anticipate, using different quantitative and qualitative study methods, the impact on society as a result of policy implementation [1]. Better coordination of policies, both within Member States and at European level too, implies that the social impact of policy initiatives to be more carefully evaluated to minimize potential negative social consequences, through measures targeted on providing opportunities and reduce poverty. E.U. strengthened its objective to improve the capacity of member countries to carry out assessments of ex-ante, social impact assessment respectively, by promoting good governance, transparency and increasing stakeholder involvement in the design, implementation and monitoring of policies.

This article aims to investigate problems related to: the conceptual delimitation of the term of ex-ante evaluation; ex-ante evaluation phases; ex-ante evaluation criteria; tools and methods for ex-ante impact of active measures in the context of outlining specific elements for the ex-ante evaluation of active labor market policies in rural areas. An implicit component of our approach to ex-ante evaluation was setting limits thereof, as a result of factors generally valid.

Methodological elements presented in the article resulting from the analysis of patterns of social impact assessment of the literature [2], [3], [4], [5] and the authors' experience gained in a research project [6], which will be described briefly in the following section. Partial results achieved in the project, such as: the main structural deficiencies on the rural labor market and quality employment; increasing the quality of employment in rural areas through education adapted to the labor market requirements; social business models in the context of Romanian rural environment, have been presented at scientific conferences [7], [8], [9]. The results obtained in this work process can be, by adapting specific elements, an important methodology for ex-ante evaluation of the impact of active labor market policy with beneficial effects on employment growth.

2. Project description

The main goal of the project "System of measures to increase the employment-oriented rural population" is to develop a robust scientific substantiation of the proposed measures for increasing employment rate in rural areas. The specific objectives are: 1. Development of the SWOT analysis of the rural employment; 2. Formulation of a set of active measures aimed to increase the rural employment rate focused on the transfer of labor from the field of subsistence agriculture to the field of non-agricultural activities with added value, with growth and competitiveness potential, as well as focused on the entrepreneurship development; 3. Ex-ante assessment of the effects of the active measures proposed on the basis of efficiency, effectiveness and coherence criteria. In the first phase of the project were proposed ten measures to increase rural employment and of these could be assessed ex ante only five. Their exclusion was justified, presenting the constraints and limitations specific to each measure, depending on

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its characteristics. This article will present the steps that led to the fulfilment of the third objective of the project mentioned above.

At the public policies level were outlined three types of impact: economic, social and environmental, which can vary in intensity from one policy to another [10]. In the literature there is no universally accepted definition of what constitutes "social" effects. The most social effects may be limited to the following types of impact, namely: i. Employment (including rights standards and the labor market); ii. revenues; iii. access to services (health, education, social services, etc.); iv. respect for fundamental rights (including equal opportunities); v. public health and safety [11]. Given this classification, scientific approach in this article focuses on the features ex-ante evaluation of the social impact of active policies on employment. The main criteria on which the ex-ante assessment of social impact is made are: efficiency, effectiveness and coherence (internal and external). Among the specific techniques we can mention the following: SWOT analysis, micro-simulation technique (MS), macro-economic modelling, case studies, analysis of causality, experiment, etc. At the end of the article are presented some constraints, general limitations that the evaluation team had to take into account.

3. Ex-ante evaluation stages of an active policy on the labor market in rural areas

Assessing the impact of policy measures involves collecting, processing, analysing and processing data, which means establish a scientific research tool for reaching it. Good assessment requires consideration of several factors that can modify the design of initially proposed measure, namely:

1. Variations of component policies involved;
2. Variations in inputs used;
3. Variations for different time scenarios.

3.1. Identifying needs and social problems in rural areas

To achieve a qualitative ex-ante evaluation of impact of a measure / policy the issues should be more clearly and accurately defined, in a comprehensive way and justifying with data the appropriate to intervene in the labor market. Identified problem shows the need for public intervention and the proposed measure represent its materializing.

To identify existing problems in the rural labor market was delimited investigated area, was established limits of statistical indicators used in subsequent analyses and performed an analysis of the general characteristics of rural areas, disparities, gaps and development potential. This analysis was structured on two levels: 1) the delimitation of the economic and social importance of rural development and 2) investigation of major structural deficiencies facing it. The importance of developing rural areas and agriculture was highlighted by contributing in a determining manner to the following objectives: restoring economic growth at nationally level, ensuring food security and safety, conservation and protection of natural resources, favourable food balance (and payments) and increasing Romanian food exports, poverty reduction and improved quality of life, alternative green energy sources, etc.

Investigation of structural weaknesses faced by rural supposed systematic analysis of the following aspects: the structure of the national economy and human capital on each activity sector, the structure and dynamics of farms and quality of financial and technological rural domestic capital.

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To complete the above described procedures, were carried out two further analysis, in-depth regarding: a) *legislative and institutional framework regarding the rural areas in Romania in terms of employment* and b) *socio-economic characteristics of rural areas*.

The analysis of the legislative and institutional framework regarding the rural areas in Romania in terms of employment, which focused on three levels: the strategic framework of Romania in the EU policies context, programs and rural development measures or which affect the development of the rural areas; financing instruments of the policies, programs and rural development measures or which have an impact on the rural development and the institutional framework on rural development.

The identification process of the main policy approach on employment in the Romanian rural areas started from the analysis of the Government Programme and Partnership Agreement 2014-2020 for development and investment in Romania (PA 2014-2020); it was followed by examining the European strategies (the Strategy for smart, sustainable and inclusive growth - Europe 2020, the Cohesion Policy and the Common Agricultural Policy) under which were structured the national program of governance and the strategic documents in force at the reporting date; and it ended with the analysis of the planning/programming documents at national level (National Reform Programme 2015, National Rural Development Programme 2014-2020, Human Capital Operational Programme 2014-2020, National Strategy for Employment 2014-2020, National Strategy for Competitiveness 2014 - 2020, National Sustainable Development Strategy of Romania Horizons 2013-2020-2030, The Romanian National Climate Change Strategy 2013 – 2020, The Government Strategy on Development of Small and Medium-Sized Enterprises and Improvement of the Business Environment in Romania - Horizon 2020).

Analysis of socio-economic characteristics of the rural areas which covered a range of relevant statistical indicators for rural areas in relation to the degree of development and economic competitiveness; demographic trends; employment and unemployment growth. Three categories of indicators were analysed: *economic context indicators* (gross domestic product (GDP), gross value added (GVA), gross fixed capital formation (GFCF), labor productivity in agriculture, the number of people employed in agriculture, the annual income per farming family of workers, the monthly average net nominal wage earnings per total economy and agriculture); *demographic indicators* (resident population by sex in the rural areas, the demographic dependency ratio, school population, domestic and international migration flows); *indicators on the labor market* (active population, inactive population, the activity rate, the inactivity rate, people discouraged from looking for a job, employed population, job vacancies, rate of job vacancies in agriculture, the number of unemployed and the unemployment rate etc.). The statistics were as sources: National Institute of Statistics Romania (INS), Eurostat, The Common Agricultural Policy (CAP) indicators, etc.

3.2. Identification and describing in an intermediate form of the active policy

The analyzes undertaken in the first stage that had a decisive role in identifying issues will also form an important basis for describing the active policy. This step was performed to further analyze the potential for employment in rural areas, to collect in-depth information that was not available, on certain vulnerable groups, in statistical databases, needed for identification and description of the measure tailored to labor market needs of rural area. Analysis of the employment potential in the rural area from Romania was achieved through a quantitative research - households' survey. This sub-stage targeted collection and interpretation of data, related to: socio-demographic household members, employment in rural areas, labor market and employment services in rural areas, opportunities for employment growth, satisfaction with public services, causes which impeding the development of municipalities, corresponding risks of climate change, income and expenditure in rural households, household activities, labor migration. The sample included 1,070 respondents, representative of both households and the heads of household or respondents in a maximum error of ± 3% at a confidence level of 95%. The sample was designed to be layered on seven development regions (not included in the sample Bucharest-Ilfov region), probabilistic (random selection of villages and households) and multistage.

The results of this survey that was taken into account in the design / ex-ante assessment of measures reflect actuality of rural employment, confirming and complementing previous analyzes. These results relate to: the character of work in rural areas, the degree of satisfaction with the current job, the availability to geographical and occupational mobility, the degree of addressability of public employment services (PES), poor efficacy of active employment measures promoted by PES, lack of employment opportunities and "ease" with which it comes in long-term unemployment, expectations of rural people on minimum wages that would like to get a job, the current situation on labor market for those with low levels of training, which in significant percentage hold a job with no future, that weak sought locally, unattractively and lack of interest in terms of courses and retraining, especially for older workers, the unemployed, including long-term unemployed and in particular the unemployed people seeking first job, day laborers, unpaid family workers and housekeepers, farmers/workers on their own; need for diversification of agricultural activity, the importance of non-agricultural economy, creation quality jobs, the need to diversify the service sector and rural infrastructure development etc.

The analyzes were completed with a SWOT analysis of rural employment which aimed to characterize brief, real and profound employment in rural areas, thus creating an instrument of scientific support and management necessary design, implementation and ex-ante assessment of measures aimed at employment in rural areas.

Among the categories of information required for a proper description, materializing of the active policy include:

- Name
- Justification
- The institutional framework
- The legal framework
- Objectives
- Beneficiaries
- The target group (participants)
- The period of time of action
- Risks and opportunities
- Measurement indicators (outcome and impact indicators)
- Sources of funding

3.3. Evaluation of reason and active policy consistency

This stage is the essence of the ex-ante assessment as it involves complex issues of interconnection and the basis for appropriate formulating of active policy. To determine the reason of the policy must be taken of its objectives and priorities. Consistency should be evaluated by analysing the relationships and complementarity between the priorities of the measure, particularly in the case of integrated active policies. Also in this stage must consider the potential risks and opportunities that may arise following the implementation of the measure and how they can be minimized, maximized respectively. Ex-ante evaluation should explore and weigh the balance between the standard measures that are easy to implement, and those that are riskier but have a greater impact.

In designing measures in a form which is appropriate to the needs identified in relation to the characteristics of the target groups to be addressed in full compliance with investment programs and economic development of the rural areas it was necessary an exercise of their validation through an qualitative investigation.

Thus, a first evaluation of active reason and consistency of the policies proposed to increase employment in rural areas was carried out by analysis of perceptions of key experts / stakeholders at the local level on issues investigated. This qualitative assessment was performed by in-depth interviews that led to the validation / improvement the preliminary set of measures to increase rural employment. It has a sample of specialists consists of 28 people from the 7 development regions (except Bucharest-Ilfov region) and in 16 counties. The four categories of respondents - representatives of county agencies for employment, NGOs, Local Action Groups (LAGs) and municipalities were selected to cover a wide range as high as aspects of issues investigated. The research methodology was based on using an interview guide structured on two levels, who watched: 1) expression of popular opinion on employment in rural areas, the main disadvantaged groups in the labor market in rural areas, measures taken locally versus necessary measures in the view of respondents, the local development strategy and development priorities; 2) assessment of actual each measure proposed, aiming at obtaining useful information regarding: perceived usefulness, institutions may charge, potential sources of financing, risks and opportunities, pros and cons opinions. The results of the qualitative analysis showed the justice of measures proposals, the respondents' perception of their being generally positive. Five of measures have met in a greater consensus but it should be noted the consensus of respondents to support the measures under assessment. This shows firstly the very need for intervention in rural areas as diverse and complex measures to cover potential diversity of existing target groups. However, respondents pointed permanent that such measures are only effective if they are coupled with measures to invest in infrastructure development in rural areas and in health services and education.

3.4. Establishing criteria for ex-ante assessment

There are several criteria for ex-ante, among them: relevance; effectiveness; efficiency; impact; sustainability, consistency, community involvement, equity [12]. Ex-ante evaluation of the measures proposed in the project described above was made on the basis of three criteria: coherence, effectiveness and efficiency.

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Internal and external coherence is a specific evaluation criterion that refers to structure policy and financial allocation for its implementation, namely its relation to other policies regional, national or Community. All measures were analyzed in terms of internal and external coherency.

In assessing internal coherency were the following aspects: coherence of the measure structure, coherence of the intervention lines and of their logic array; overlaps or contradictions within the measure that may arise especially in integrated measures case; consistency of financial allocations.

Regarding the external coherence, a major importance have the strategic guidelines at regional, national, European. In the case of active policies for employment growth in rural areas, an important role play policies, programs and measures in Romania and the EU referring to rural development. External coherence of the proposed measures with strategies, programs, policies that relate to rural development in Romania and the EU was assessed in terms of objectives, results and financial allocations.

Effectiveness is the extent to which policy achieves its objectives. The degree to which the results meet the needs identified in the design phase. It is a measure of the effectiveness of policies.

Efficiency consider a further aspect, essential in implementing projects and programs, namely finance. Moreover, efficiency takes into account the following aspects:

- It could have obtained the same results with fewer resources?
- Unit costs are too high?
- Even if the objectives are achieved, the project / program too expensive to be continued?

3.5. Outcome and impact assessment

The methods used for ex-ante assessment in terms of efficiency and effectiveness are specific to each measure. Of quantitative and qualitative techniques used in the project, remarked:

- econometric analysis both at the macroeconomic level, the panel, and at the micro level;
- micro-econometric approach has considered micro-simulation technique which was followed by shaping behavior in the absence and presence of micro units of measure proposed for insertion in the labor market;
- analyses and normative scenarios;
- case study;
- causal analysis;
- inquiry-based focus group;
- SWOT analysis

A very important part of any ex-ante methodology is to establish a set of indicators and databases for quantification. The set of indicators is determined by the desired impact to be evaluated and the evaluation criteria. Mention may be two broad categories of indicators: financial and physical. Intake of data necessary for the ex-ante active policy on the labour market may come from statistical databases at national or international level or own database, collected by various methods and tools.

In evaluating the results and impact of active policies, it has a key role in gathering information derived from analyzes conducted in rural areas, in the early stages, namely, analysis of socio-economic

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characteristics, analysis of the legal and institutional frameworks, quantitative and qualitative analysis, SWOT analysis.

Among the sources which were at the basis of ex-ante analysis, providing a history of the effects of applying the provisions that support employment in rural area, mention: Law regulations. 72/2002; SAPARD program; I RDP in the period 2007 - 2013; NEA reports, etc.

3.6. Evaluation of the proposed implementation system including the mechanisms for the subsequent monitoring and evaluation functions

Detailing the measure must contain elements of the provisions implementing, including the designation of bodies and procedures for the implementation of the monitoring and evaluation, partnership agreements, procedures for advertising and the exchange of computerized data to meet the payment requirements for the implementation of the measure. The quality of these systems is essential for implementing the objectives. At this stage, assessing implementing provisions proposed for managing, monitoring and evaluation. In doing this, it would be considered examination of previous experience, possible bottlenecks which might impede implementation of the measure and should make recommendations for preventive action. It would also assess the quality and extent of partnership arrangements.

3.7. Recommendations for alternative actions

Following ex-ante evaluation of each measure, the steps above, making recommendations for corrections to improve the design of the original measure so that its implementation to provide maximum employment opportunities for the beneficiary. Value recommendations is given both, the rigor of following steps of the ex-ante assessment and evaluators experience in implementing active labor market policies.

3.8. Development of an ex-ante assessment report on active labor market policy

The final report should include a summary of the measure active social impact assessment, methodological issues, key findings, corrections made and the final design of the measure.

4. Limits of ex-ante analysis

The choice of methods for ex-ante assessment depends on the nature of the effects to be assessed (economic, social and environmental); the criteria by which the assessment is made and data availability (structure, the period of time for implementation, length data series, etc.). A problem that arises in the research process is the uncertainty regarding certain information. There are situations where scientific data / statistics available may be missing altogether (Davies, 2004).

Ex-ante evaluation of the new measures are achieved too, based on the results of similar programs and measures under the current application. The assessor is able to rely on the experience of the current programming period (for example, by mid-term evaluation) and previous programming periods (the ex-post) to improve the design and implementation of new programs.

Another problem is the existence of weaknesses in the monitoring of the measures already implemented, which could be an important source of data for ex-ante evaluation of the proposed new measures. Mention of these shortcomings: some of the selected indicators for the construction of data

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series (which led to the conception evaluation of econometric models) of monitoring reports are presented by different characteristics; some data are presented only at the aggregate level without being broken down by residence, counties (e.g. spending on active measures not settled in the residence); the data aren't sufficiently structured on the active measure characteristics and participant (ex. civil employed population by occupational status and county etc.); variations in data collection methodologies, etc. Thus, the research team had to resort to analyzing existing contextual data, to estimate/calculate the missing data. In situations where the available data are initially insufficient can be used case studies or pilot experiments designed to collect specific information.

The success of ex-ante evaluation of measures, including in terms of risks and opportunities, is dependent of the awareness by the assessor too, on the part of the existing problem and the environment to which it belongs, of the legal, institutional framework of the implementation measure, and on the other side of its evaluation methodology. The evaluator must take into account, in the allocation of public resources, the opportunity cost of choosing a specific action / intervention judging rationally based on advantages and disadvantages of other ways of resources allocation. In other words, to consider the existence of an alternative action that can achieve better results for the individual, firm, society with the same resources, using another type of intervention. Also, the evaluator should consider the opportunity cost of choosing affordability measure by the beneficiary in material and time resources allocation of the beneficiary of the active measure.

Having regard to the above mentioned, it becomes essential for the success of any effort being assessed and coordinated operational information system and continuously updated.In. An ex-ante assessment well done can contribute to more efficient use of available funds, to enhance the effectiveness and relevance of the intervention, and time optimize of active measure implementation.

5. Conclusions

Ex-ante evaluation is an integral part in the formulation and implementation of public policies. It is necessary for any public policy to be supported by an ex-ante assessment, especially if new measures where success is not guaranteed, and implementation is not always an easy task. When applied properly, ex-ante assessment can help to cope with complex socio-economic situation, full of uncertainties, unmanageable. Its purpose is to remove some unwanted issues that may arise in the implementation of the measure. For example, designing a tool to improve employment prospects for a population group can have negative consequences for others.

It requires synergy and complementarity with other rural development programs. Implementation of active policy to increase employment must be in tandem with carrying out investment plans at local, regional and sectoral level, investment in physical capital coupled with the human capital for to achieve a critical mass of economic growth and development socio-economic parameters.

At the U.E country level they were identified as the main obstacles on the ex-ante social impact assessment: discrepancies between quantitative targets for research and qualitative nuances of reality; lack of appropriate tools, methodologies and data sources for the quantitative assessment of the social impact; social impact assessment is often performed by public servants who are not familiar with social policies,

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feeling the lack of written guidelines; training and formation of ad hoc technical assistance; limited resources advice to those involved in the assessment processes.

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The Organizational Leaders Administrative Justice and its Impact on Employees' Career Performance

(A practical study on private University Colleges of Economic Sciences Al-Ma'mun in Baghdad)

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Abstract. *The goal of this study is to help us to know the degree of Organizational Justice practiced by the administrative leaders in Baghdad for Economic Sciences and of Al-Ma'mun private university colleges in Baghdad and its relationship to the employees' work or Career Performance. In order to achieve this goal, the study will seek to answer the following questions:*

- *What is the degree of Organizational Justice practiced by the administrative leaders in the above mentioned colleges from the employees' point of view?*
- *What is the level of Career Performance of employees from the point of view of their leaders?*

The study group consists of administrative leaders and department heads of the institution under discussion. Researchers will use a questionnaire for data collection and it will include, the responder's demographic information, the measuring tool for the Organizational Justice practiced by the administrative leaders, the measurement of Career Performance of their employees.The instruments of the study were verifiedby informing the referees jurisdiction, and by the appropriateness of using the test method and the test itself. To respond to the questions, researchers will use arithmetic averages, standard deviations and Pearson Linklabs.

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Keywords: Organizational Justice, Career Performance, Employees' satisfaction

JEL Codes: *M31*

1. Introduction

All organizations, whether producers of goods or services providers, are affected by the evolution of technology and the rapid changes in the world, and these changes are reflected in the education system, in all its areas. No leader can ignore these evolving conditions, but he or she must interact with these changes and meet the challenges of the institution to find a new valid working environment and to enable the educational institution adapt to rapid changes in economic environment the success of these educational institutions deeply depends on the efficiency and activity of its members, to increase the productivity.

These changes and developments in science and technology has accelerated the emergence of the concept of a new management style,followed by the educational leader in his/her leadership to his/her subordinates within, the broader organizational process of building within the institution. Organizational justice requires special attention to enhance the fairness and equality for rights and the benefits to individuals and groups, participation in the system of the regulatory of the work enterprise and to raise the level of functionality and access in the institution to achieve its goals and objectives in the best manner, in an atmosphere of harmony and adaptation positive harmony and harmonizing to install and to enhance efficiency and effectiveness. Organizational justice is based on the comparing process done by an individual between him/herself with his/her colleagues from the same career position within the Organization in terms of the amount of effort and the amount of the wage. An employee will be motivated by work if he/she feels some sort of justice compared with his/her colleagues, but on the other hand an employee will start in reducing the effort both in the amount of production and its quality when he or she feels the injustice which in turn will lead him/her to either skip or leave the work and to seek another work. (Himshry, 2001)

In the light of that (AlTaweel, 2001) emphasized the need to develop a policy governing ethical behaviour that is supposed to abide by the administrative leader in an effort to ensure that the conduct of the two types of reflecting the dignity of the profession, honor, and also to maintain the objectivity and impartiality in the application of the regulations and instructions, and the need to respect the dignity and value of each employee, and giving every employee his/her right. Respect for laws and regulations and instructions of adherence to the standards of high moral and affiliation sincerity and observance of the principles of democracy, a lack of hiding to any evidence or information might be of assistance in the realization of justice.

In addition, not to allowed any pressure that would affect the principles of justice and equality or freedom of expression, and commitment to the use of human and material resources and reducing of effectiveness and efficiency.

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2. Research Methodology

2.1. Research Problem

The administrative leader of an educational organization, like any other administrative leader in any other organizations, can not be able to achieve success in his/her work, and to achieve the goals of the organization, unless he/she shows a real commitment to the administrative principles known in the forefront of dealing with his/her subordinates and his staff on the basis of justice and equality. This principle has also been confirmed by all administrative schools without exception, who created his own way in practice administrative morality as "organizational justice".

Theme investigated is determined by the following questions:

- Is there any actual practice of the organizational justice by the administrative leaders in the discussed colleges able to achieve an improvement in the career performance?
- What is the level of the efficiency of the workers from the point of view of their leaders?

2.2. Research Objectives

The study aimed to know the degree of the organizational justice exercised by the administrative staff leaders in educational institution in Baghdad under discussion and their relationship with the functionality of workers and faith and trust they have in their administrative leaders through the achievement of the following objectives:

- The achievement of organizational justice when exercising administrative leadership in these colleges in terms of employees.
- Improving career performance in above mentioned colleges by applying the concept of organizational justice by the leaders.
- Raising the degree of confidence between the administrative leaders in colleges, on the one hand and with the employees on the other hand.

2.3. The Research Importance

The importance of the study is that it seeks to investigate the views of those working in educational institutions on the concept of organizational justice and its relevance in work organization. As the efficiency of the human element depends on the availability of a proper work environment that takes into account his/her considerations, emotions and needs, where there is a climate established by a regulatory framework, this will help the development of the administrative system and increase its effectiveness and contribute to improve the level of performance of their personals, and reduce its operational costs. It is to be hoped that the results of this research will be of a great help to the administrative leaders in discussed colleges through knowing the degree of their exercise of organizational justice. It is also to be hoped that it will help university librairies, as well as source of informations for researchers and all those interested in the variables of organizational behaviour in business organizations to conduct further studies and research in this area.

2.4. Research Hypothesis

By analyzing responses to the questions and the various arising problems, researchers admit following assumptions:

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The first main hypothesis: there is a statistical relationship **(0.05 ≥ α)** of the organizational justice variables for estimating administrative leaders and the career performance in the discussed colleges in Baghdad.

Flowing from this first main hypothesis derived following Sub-hypotheses:

- **The first Sub-hypothesis:** there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice and in career performance in the discussed colleges.
- **The second Sub-hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for interactive justice and in career performance in the discussed colleges.
- **The third Sub-hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice and the level of work performance in the discussed colleges.
- **The fourth Sub-hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice and the level of work performance in the discussed colleges.
- **The second main hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice and the four dimensions of work performance of the workers in the discussed colleges.

Flowing from this first main hypothesis the following Sub-hypotheses came:

- **The first Sub-hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice after the state of creativity is achieved by an employee in the discussed colleges.
- **The second Sub-hypothesis**: there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice after the state of sufficiency and full activity is achieved by an employee in the discussed colleges.
- **The third Sub-hypothesis:** there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice after the process of enhancing carrier performance for employees in the discussed colleges.
- **The fourth Sub-hypothesis:** there is a relationship of statistical significance **(0.05 ≥ α)** indicating the exercise of administrative leaders for procedural justice after the state of completion of carrier performance is achieved for the employees in the discussed colleges.

2.5. The Default Research Model

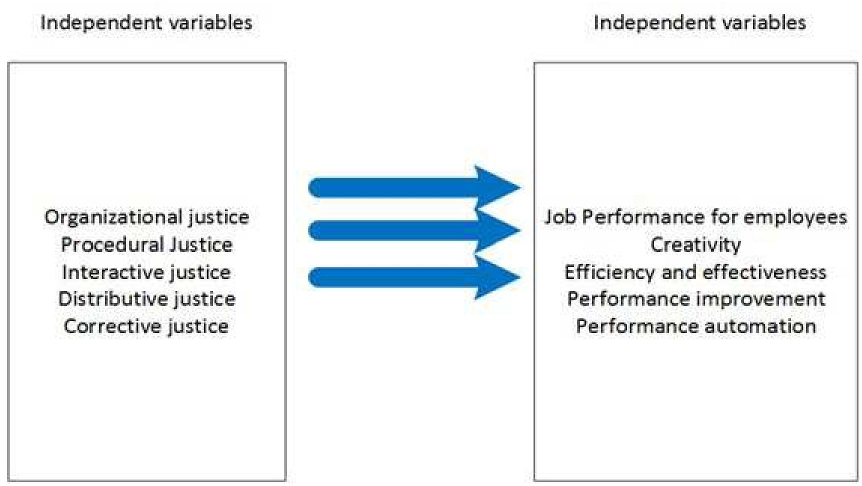

Fig. 1: Research model.

2.6. Procedural Definitions for the Research Variables

The following are the procedural definitions:

a. **Administrative Leaders**: rushing Al-Qarioti (2000) as the leaders who influence on a group of individuals or a group, earning their voluntarily cooperation under their leadership and prospering homogeneity and persuade them to achieve their goals.

b. **The Organizational Justice**: as the outcome of the agreement between the efforts made and obtained outcomes, in a way that contributes to achieving the desired objectives of the Organization. (Byars and Rue, 1997).

- **Distributive Justice**: as the equitable distribution of the sources of the organizational opportunities, as individuals are subjected to the assessment of the results of their work in accordance with the rule of distributive justice based on the principle of equality (Khalipha, 1997)
- **Procedural Justice**: the feeling of the positive sense of justice and institutional procedures used in determining the output, (Niehoff & Moorman, 1993)
- **Interactive Justice**: the extent of a sense of justice the workers may feel when they are subjected to official procedures or when they are aware the reason behind those procedures
- **Corrective Justice**: is that justice which includes the operations, specific procedures and systems ensuring that the rights of workers and their performance levels are rectified in a fair and impartial manner, to secure their stability and career development (Katawna, 2003).

c. **Job Performance:** as a set of behaviours that evaluates performance in their job, his/her responsibilities accomplishment, and it also includes the quality of performance and efficiency of implementation and the technical expertise that a job requires, as well as the communication and interaction with the rest of the members of the organization and the acceptance of the new tasks, creativity and commitment to the administrative aspects of the work, and to respond to them with care and effectiveness. (Sizlaqi, Wallace, 1991):

- **Creativity**: is a combination of capacity-building and preparations as well as the personal characteristics, which if found in an appropriate environment could lead the mental processes to reach genuine and useful achievements to both previous individual or expertise and the institution's or the community or the world if the results reach the level of creativity breakthroughs in one of the fields of human life. (Bin Antar Abdul Rahman, 2008, 148)
- **Efficiency and Effectiveness**: efficiency is defined as: the extent to which the objectives achieved and therefore is measured in terms of the relationship between the results achieved and goals, while effectiveness means the ability to minimize the levels of use of resources without prejudice to the goals measured in terms of the relationship between the results determinants, or results and resources used. (Marchesnag, 1988:27)
- **Improve Performance**: the use of all available resources to improve output and productivity of the operations and the complementarity between the right technology which employs capital and the best way to improve the performance and the balance of a set of elements operating in the quality and productivity, technology and cost the balance of these elements the expectations and needs of the stakeholders in the enterprise has underlined into account, this is called acumilitative curriculum" administrating overall improvement" (lavender, 1999: 11)
- **Performance Automation**: using the computer and devices based on the processors or software in various industrial and commercial sectors and service in order to ensure the conduct of the proceedings and work will be in the most accurate, safe way, and with the least errors (Zaareb, 2008:18)

3. Theoretical Framework

3.1. Organizational Justice

3.1.1. The Concept of Organizational Justice

It takes its roots from the theory of equality (Equity Theory) of Adams (Adams 1965) which is based on justice and equality in the treatment of the individual in his/her career, as an individual believes that the main factor for the process of assessing his/her work performance efforts and the satisfaction is the degree of justice and equality, or the lack of justice and equality that an the individual is aware of, and the evident of this theory in job satisfaction when individuals and workers feel that organization's rewards like salary and appreciation evenly distributed among them, in accordance with their personal functional professionalism.

As defined be (Assaf, 2005): the proportion of inputs (work effort) to output (salary or income or the recognition and appreciation) compared with others, justice include three steps: (evaluation, comparison, behaviour), justice is obvious in the job satisfaction for workers when he/she (staff member) feels that the rewards of the Organization (salary and the recognition and appreciation), evenly distributed among them, in accordance with their capabilities (i.e. the degree of entitlement to each and every one of them).

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Thus, the organizational justice is a sense of conscious value directed towards the completion of the institutional Justice reassuring the staff in the organization rights functional gains, despite their disagreement in the level of awareness comparisons.

3.1.2. Types of Organizational Justice

Almaghreby 1994, said that there were four types of Organizational Justice concerning any organization or institution, they are distributional justice, corrective justice, procedural justice, and interactive justice, and they are as follows:

a. **Distributional Justice**: The fairness of the outputs obtained by the staff member. As defined by Khalifa, (Khalifa 1997) as the equitable distribution of the sources of the organizational opportunities, as subject to the assessment of the results of their work in accordance with the rule of distributive justice based on the principle of equality. Koopman (Koopmann, 2003) classified distributive justice in three types:

- **Equity** - it is based on the position of the staff member to work according to the extent of its contribution and productivity and his/her efforts and the need for action, who carries a full time does not equate with the part-time and, in the case of equal remuneration and proceeds, it is a breach of the rule of equity.
- **Equality** - it is based on the principle of public revenues regardless the concepts of race, color, sex, and all should be on the same level of distribution on the basis of knowledge and skill and productivity.
- **The Need** - it is need to distribute the proceeds according to the level and the large need for the employee for his or her spouse. In other words, the needs of an employee who has a family with three children will be higher than those of a family with one child, while the other conditions are equal.

b. **Procedural justice**: it is the positive sense of justice that determines the institutional procedures usually applied (Niehoff & Moorman, 1993). Koopmann noted (Koopmann, 2003) that there are two types of procedural justice:

- **Systematic Justice –** it is the use of a clear methodology of the procedures used in taking distributive decisions, according to the basic rules of procedural justice.
- **Informational Justice -** it is justification for the procedures of a decision to provide clear information to workers of the beneficiaries of the output regarding the decision taken at the distribution procedures.

The extent to which a sense of the workers of the justice of treatment received by the working group, when applied by some official proceedings, or to know the reasons for its application of those procedures, (Niehoff and Moorman, 1993).

Altaheeh, Mohamed, 2003 noted that the realization of the workers' interactive justice depends on four factors:

- the extent of clear justifications for the decisions taken.
- the extent insofar as there is sincerity and frankness when officially discussing with the workers.
- official's respect for the workers.
- official's commitment of ethics dealing with the workers.

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c. **Evaluation Justice** - is that form of justice which includes the operations, procedures, and specific systems ensuring that the rights of workers and levels of their performance be rectified in a fair and impartial manner, to secure stability and career development (Alqatawna, 2003). It is for the justice system should be a system of assessing the performance of workers, which could affect the performance level as follows:

- To give a chance to the individuals to highlight their voluntary activities.
- Inclusion of the weights in the system of performance evaluation for the volunteer activities.
- Pressing the voluntary activities to use when needed.
- The balance between official activities and voluntary activities.

Performance evaluation is important in order to ensure the continued success of the institution enables it to keep those employees with the outstanding performance and also to improve those with the weak performance, and the importance of the results of the performance evaluation of the influence the behavior of workers.

3.2. Functional Performance

3.2.1. The Concept of Functional Performance

As defined by Arnold Publick (Arnold & Publick, 2003) career performance is "the volume of the positive impact of individuals toward their work in institutions in which they work".

And also defined (Walas and Sizlaqi 1991) as a set of patterns of administrative behaviour with a relevant relationship expressing the employee's performance of his/her tasks and responsibilities. They include the quality of performance, efficiency of implementation and technical expertise required in function, as well as the communication and interaction with the rest of the members of the organization, and the acceptance of the new tasks, creativity, and commitment to the administrative aspects of the work and seek to respond to them with care and effectiveness.

Was defined (AlYazageen: 2003) as the activity by which the individual will be able to accomplish the tasks and objectives and obligations planned, diligently, and implementation, as is a decree to job description. Also defined by Rao (Rao, 2004) as what an individual was expected to do within the specific framework. In the light of we already said, the Functional Performance can be defined as the functionality of carrying the burdens of the requirements, the duties and responsibilities of the function of the Administrative Section or the administrative unit to fully accomplish the tasks entrusted to him/her to the.

There is a group of factors that could affect the Functional Performance of an organization as was identified by Abdul Mohsen, in 2002, including the following:

- The volume of work that might affect the functionality of the workers in an organization dealing with the nature of the presence of a large volume of work. The needs of the administrative unit had more or less on some of the units within an organization.
- The backlog or deferred in a manner more than the usual could cause the most cursory higher rate of production. Such a hurry or speed to accomplish generates a decline in the quality of the final product. While the shortage of some available works generate a decrease in the rate of production.

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- Organizational and procedural structuring have a direct impact on the functionality, because production rate depends on several factors including the appropriateness of the organizational as well as procedural arrangements. The organizational amendment that changes the flow of work clamors, usually consequents a change in the rate of achievement, and a shortcut in the work steps in the process of reducing the resources required to end the work.
- Technical factors: the follow-up and continuity in the introduction of modern technology, evaluation equipment, to both the hardware and software, because the performance of the employees set by level of the available technology and quality.

4. Scientific Framework

4.1. Description of the Sample Study

The study sample included the discussed colleges where a distribution of 40 questionnaire form for professors and staff, 34 forms have been retrieved to measure the organizational justice and its impact on the functionality.

4.2. The Diagnosis of the Research Variables

The calculation of the standard deviations responses to special sample organizational justice:

	Dimensions of Organizational Justice	Expected Arithmetic Mean	The standard deviation	The average standard
Procedural Justice				
1		3.6471	0.88360	Moderate
2		3.5294	0.74814	Moderate
3		3.5882	0.85697	Moderate
4		3.5882	1.07640	Moderate
The average		**3.5882**	**0.67667**	Moderate
Interactive Justice				
1		3.5588	0.89413	Moderate
2		3.6765	1.00666	Moderate
3		3.9706	0.67354	Moderate
4		3.9706	0.83431	Moderate
The average		**3.7941**	**0.65271**	Moderate
Distributive Justice				
1		3.5000	1.02247	Moderate
2		3.5294	1.07971	Moderate
3		3.4118	0.82085	Moderate
4		3.7353	0.93124	Moderate
The average		**3.5441**	**0.73203**	Moderate
Corrective Justice				
1		3.5294	0.89562	Moderate
2		3.6765	0.94454	Moderate
3		3.3824	1.04489	Moderate
4		3.2941	0.79884	Moderate
The average		**3.4706**	**0.66505**	Moderate
The main average of the organizational Justice		**3.5993**	**0.48950**	Moderate

Recalling the results of the Table No. 1, results that organizational justice has got the SMA in the amount of USD (3.5993) and the standard deviations (0.48950) which indicates the homogeneity of the sample answers about the value of covariance level where dimensions came after interactive justice is more homogenous in terms of staff answers as he got the SMA of (3.7941), and a standard deviation of (0.65271), the direction of this dimension is (OK) and to the level of the average (moderate), while at the level of the paragraphs, paragraph No. (3), in this dimension which are (the deanship encourages teamwork among staff) is more homogenous, where it got the medium (3.9706) with the standard deviations of (0.67354) and the direction of this paragraph is (OK) with the average level of (moderate), the general direction of the organizational justice is (OK) and at the average level of (moderate), therefore the order of the dimensions of the organizational justice would be indicated in the table no. 2.

Table 2. The arrangement of the dimensions of the organizational justice among a research sample

Ranking	Organizational Justice	Arithmetic Mean	The standard Deviation	Overall Direction
First	Procedural Justice	3.7941	0.65271	Agree
Second	Interactive Justice	3.4706	0.66505	Agree
Thirdly	Distributive Justice	3.5882	0.67667	Agree
Fourthly	Corrective Justice	3.5441	0.73203	Agree

We can note that the procedural justice came first, followed by interactive justice, distributive justice came secondly and thirdly, and fourthly came corrective justice.

4.3. The SMA and the Standard Deviations to Sample Responses of Special Functionality

Table No. (3) below describes the research variables of the special Job Performance

	Dimensions of Organizational Justice	Expected Arithmetic Mean	The standard deviation	The average standard
Creativity				
1s		3.7647	0.95533	Moderate
2s		3.5588	0.78591	Moderate
3s		3.5882	0.85697	Moderate
4s		3.5588	0.95952	Moderate
The average		**3.6176**	**0.64030**	Moderate
Efficiency and Effectiveness				
1c		3.0882	1.05508	Moderate
2c		3.5000	0.78817	Moderate
3c		3.4706	0.96091	Moderate
4c		3.5000	0.92932	Moderate
The average		**3.3897**	**0.59094**	Moderate
Performance Improvement				
1g		3.8235	0.71650	Moderate
2	This has been deleted			
3g		3.7059	0.75996	Moderate
4g		4.0000	0.81650	Moderate
The average		**3.8431**	**0.54578**	Moderate
Performance Completion				
1g		3.3824	0.95393	Moderate

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2g		3.6471	0.84861	Moderate
3g		3.3824	1.07350	Moderate
4g		3.3824	1.04489	Moderate
The average		**3.4485**	**0.75322**	Moderate
The main average of the Job Performance		**3.6195**	**0.49173**	Moderate

Recalling the results of the Table No. (3) that job performance had SMA in the amount of (3.6195) and the standard deviation in the amount of (0.49173) this indicates the homogeneity of the sample answers about the value of covariance level where dimensions came after improving the performance is more homogenous in terms of staff answers as it got the SMA in the amount of (3.8431) and the standard deviation of the normative amount of (0.54578) and to the level of the average (moderate), and the direction of this dimension is (OK) or at the level of the paragraphs the paragraph No. (1) in this dimension which is (college management seeks the overall and the continuity the development and training of workers for the purpose of improving their performance) is more homogenous, where it got the medium (3.8235) with the standard deviation of (0.71650) and the direction of this paragraph is (OK) at the average level (moderate), and the general trend of the functional performance is ok and to the level of the average (moderate).

4.4. Testing the First Main Hypothesis

Which provides for the moral correlation between the organizational justice and job performance.

H_0: there is no moral relation to link between **organizational justice** and the functionality

H_1: there is a moral link between **organizational justice** and job performance.

To stem the assumptions of the following:

- There is a moral correlation between the procedural justice and job performance.
- There is a moral correlation between the interactive justice and job performance.
- There is a correlation between the moral distributive justice and job performance.
- There is a moral correlation between the calendar justice and job performance.

Table 4. The connecting relationship

Correlations						
Organizational Justice	Corrective Justice	Distributive Justice	Interactive Justice	Procedural Justice		
0.543*	0.661*	0.289	0.315	0.306	Pearson Correlation	Job Performance
0.001	0	0.098	0.07	0.078	Sig. (2-tailed)	
34	34	34	34	34	N	
		*. Correlation is significant at the 0.05 level (2-tailed).				

Table No. (4) refers to the moral correlation between the organizational justice and the job functionality, where the moral value Pearson parameter equals (0.543) because SIG moral value equals

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(0.001), which is less than 0.05, meaning that the achievement of the first main premise is a moral link between organizational justice and job performance.

At the level of the Sub-hypotheses there is a correlation, where there is a moral link between the Correction justice and the job performance where the value of the link equal (0.661), and the rest of the sub-hypotheses were not moral because the moral value SIG is more than (0.05) leading to the acceptance of the Null Hypothesis, this means the acceptance of the fourth Sub- Hypotheses and the refusal of the first, second and third ones.

4.5. Testing the Second Main Hypothesis:

Which indicate that there is a significant moral impact of organizational justice on job performance.

H_0: There is no impact of the **organizational justice** on job performance.

H_1: there is no impact of the **organizational justice** on job performance.

Table 5. Variance Analysis

ANOVA[b]						
Sig	F	Mean Square	Df	Sum of Squares	Model	
0.001[a]	13.401	2.355	1	2.355	Regression	1
		0.176	32	5.624	Residual	
			33	7.979	Total	
				a. Predictors: (Constant), X		
				b. Dependent Variable: Y		

The results of the test of F to the presence of the impact of the organizational justice on job performance set forth in the table No. (5) that the value of calculated F had reached (13.401) at the moral level of (0.05) where the value of P-value equal (0.01), which is less than (0.05) this means the rejection of the Null hypothesis and the acceptance of alternative hypothesis this means that there is the impact of organizational justice on job performance.

Table 6. Organizational Justice Influence on Job Performance

	Job Performance		
Variable / Certified variable Independent	**F**	**R^2**	**B**
Organizational Justice	10.652	0.295	0.546

Table 6. indicated that the value of R^2 equal (0.295), and this means that the organizational justice had interpreted the value of (29.5%) of the changes in the job performance of the values of B = (0.546) which

means the increase in the organizational justice variable of one unit of the standard deviations will lead to an increase in job performance by 54.6 % of the standard deviation.

5. Results

The researchers to the following results:

1. That colleges which are concerned with the means, the decisions and laws that achieve organizational justice to its employees can achieve the highest job performance.

2. Most of the respondents to the questions were males aged between 45-55 with a Master's degree by the length of service of 10 - 20 years, showing that the cultural and scientific level of the college staff demonstrates that it belongs to the highly educated class.

3. It turned out that the direction of the sample answers within the axis of the organizational justice is toward (approve), meaning that the sample confirmed the presence of organizational justice exercised by the deanships in the discussed colleges.

4. The interactive justice dimension is the best within this axis of organizational justice and this indicates that the Deanships pay a well attention to interactive justice.

5. There is a moral correlation between the corrective justice and job performance this means that Deanships if it want to achieve a high level of organizational justice should be interested in corrective justice.

6. There is no moral link between (interactive, procedural, and distributional impacts) justice and job performance.

7. It turned out that there is a direct link between the positive organizational justice and job performance.

8. It turned out that there is an impact of organizational justice on job performance and this means that justice played an important role in upgrading the level of organizational performance to the workers.

6. Recommendations

Based on the above mentioned conclusions the researchers recommend the following set of recommendations:

1. Deanships are to work harder to support colleges with highly education certificates (doctorate certificate holders in particular) for both of the teaching and administrative staffs.

2. The Deanships in the discussed colleges are to be much interested in all dimensions of the organizational justice to be a reason for the main factor in achieving a high level of job performance.

3. Placing a special interest in the corrective justice being the most influential factor in achieving the functionality of the subordinates.

4. The adoption of the method of dialog with the staff by Deanships, whether they were members of the teaching or the administrative staff to know the reasons Hinder the application the achievement of organizational justice in civil faculties.

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5. To continue to strengthen organizational justice in civil colleges as a fundamental value in the organizational culture and continue in its assessment.

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Social Networks Usage Implications at the Level of Medical Services Consumption in Romania

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Abstract. *The social networks usage degree increase is evident in recent years, with a lot of implications for the most types of products and services consumption. A very special field of research is presented by consumption of healthcare services, which, in terms of consumption motivations, decisional buying process or consumer behavior is having peculiarities and specific traits. In this context, the present article aims to investigate the role that social networks usage can have regarding changes within the consumer behavior in case of healthcare services consumption. In order to achieve the scientific endeavor, authors have conducted a quantitative marketing research as a field survey, using a questionnaire administered online to patients from different medical institutions, both from the public and private sector.*
The research results reveal key issues from the perspective of emotional involvement within consumption for the patients and the influence of key variables such as level of education, personality and lifestyle within social networks usage context.

Keywords: healthcare services consumption, social networks, consumer behaviour

JEL Codes: M31, I12, P36

1. Introduction

Healthcare services consumption behaviour presents special certain features that are dealing to the intense emotional involvement of the consumers, the complex search of information and the impossibility for patients to measure properly all the aspects concerning the quality of the services provided. In this

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context, the dynamic of consumption is very strong related to the social dimensions of healthcare services also, a high degree of social involvement being correlated with certain perceptions upon providers and consumption satisfaction.

In the last years, the development of social media and especially of social networks users' activity brings in front of the researchers new challenges from the point of view of complex implications that social networks usage can have at the level of goods and services consumption. A large amount of scientific literature is dealing already with this type of correlations, still at the level of healthcare services implications, where there are a lot of things to be done. The specific features of healthcare services consumption are demanding for a careful analysis of implications that social networks can have, from the point of view of the patients' decisional process or from the point of view of effects at the level of attitudes and perception upon the medical act.

The present paper is trying to determine through an exploratory type demarche, the possible effects that social networks usage can have at the level of Romanian urban healthcare services consumers' behaviour taking into account different aspects concerning the way of using the information in and out of the networks, the correlations that can be established with the perception upon formal healthcare treatments and medical staff interactions etc.

2. Social networks and social media influence upon consumer behaviour

The consumer behaviour is evolving continuously because of multiple layers of effects determined by various factors. Among them, factors implying the social influences are contributing a lot to the evolution of consumption patterns for every individual.

Individuals are expressing numerous social needs like the one to self-express or self-present. Many of these social needs are empowering different types of behaviour that also can be related with consumption behaviour patterns. The involvement within social networks was becoming higher and higher as this process offer the possibility for people to build-up and strengthen-up their social ties with the others. Through this type of relationships developed over the network individuals can present a certain social image that highlight certain features of their personality or concerns. People are looking over a feedback when are using social networks, the feedback being perceived more important if it is received from strong ties – friends that are sharing a personal connection [Ryu and Feick, 2007]

Also, studies have shown that for users of Facebook that have strong ties over the network, the use of the social network becomes a significant predicator for behaviours that are showing little self-control. [Wilcox and Stephen, 2013]. Authors are advancing the idea that even in the case of health-related behaviours, the level of self-control is dropping after the high involvement of an individual for a certain period with the social network usage.

The use of social networks is different taking account of the nature of the needs concerning health. In another study, it has been highlighted the fact that the experiential nature of information received over the network from family members or peers is very much valuated in case of first-time mothers, as they feel the pressure to comply with the social status of "good mother" [Loudon, Buchanan, Ruthven, 2016]. Still,

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because of this special situation, the behaviour related with the use of information was characterized by tension, conflict and a kind of information overload.

In case of cancer patients, there has been pointed out the evidence related to the capacity of social networks usage to determine a better psychological well-being state through the development of the social support and social bond through the activities over the network (browsing content and actively posted content and communicated with other members) [Erfani, Blount, Abedin, 2016]. The possibility offered by the network to develop their social presence and capacity to connect to the others has been improving the mental state of the patients and self-confidence.

Another interesting aspect revealed by researchers is concerning the size of the social networks in which individuals are involved and perception over stress factors that can induce a subjective health condition. A survey applied on 246 Austrian healthcare services consumers revealed that individuals that are involving in larger social networks, having more trust and support from the network are considering potential stressful factors less threatening which implies a better level of subjective health condition perceived [Gerick, 2014].

The social ties that are present in the case of a larger network are mediating the appraisal of the stressor factor, individual being able to cope better with its pressure in comparison with other that are involved in much smaller networks.

When we are referring to the potential impact of social networks upon healthcare consumers' behaviour it is interesting to take into consideration the potential effects that can be observed also at the level of medical staff activity. From this perspective, the impact of social networks usage can be highlighted also at the level of doctors' activity more precisely. Sharing of knowledge between doctors is playing an important role, thus this type of knowledge is often considered the most valuable experiential know-how that allows them to make rapid judgements in different clinical situations. Studies have revealed that tacit knowledge transfer between doctors is possible with the help of social networks, themes such as socialising, practising, networking, storytelling and encountering being approached by the doctors within their communication over the networks [Panahi, Watson, Partridge, 2016].

As regarding the possibility to share information within other forms of social media as it is the case with forums, on a study made on a sample of 252 participants to a forum concerning breast cancer over a period of 11 months, it has been revealed that in the absence of normative assumptions, forum participants transfer knowledge about their own personal healthcare experience, being able to co-create value for each other [Keeling, Khan, Newholm, 2013].

The vast development of internet in the last 20 years have provided for the modern consumers a large range of possibilities to interact with specific information. The healthcare field doesn't make an exception, the greater access to different sources of medical information leading to a better-informed patient, and a real shift towards a kind of patient-doctor partnership.

3. Methodology of research

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In order to achieve the desired information, it was implemented a quantitative type marketing research, seen as an exploratory demarche. Among the research objectives we can highlight: measuring the degree of usage for social networks, determining the degree in which the social network can be perceived as an viable source for medical information, characterising the pattern of usage of the social network from the point of view of healthcare information, measuring the degree of trust given to the medics, determining the behaviour of the individuals within the social network in the context of a disease diagnostic, determining the degree of consumers availability referring to the importance of social network information for the actual treatment of a current disease etc.

As for the research hypothesis, the main ones can be highlighted as:

- H1: majority of respondents are using frequently a social network
- H2: a low number of respondents are considering the social network as being a viable source of information in the medical field
- H3: at least 35% of the respondents are sharing with their friends within the network, posts or other interesting information (regarding medical field)
- H4: majority of the respondents are having a high degree of trust in the medical staff that they are usually interacting with
- H5: a minor part of the respondents is using social networks in order to influence friends or acquaintances opinions regarding medical treatments
- H6: there is a correlation between the perception that the social network can be a viable source of information within the medical field and the degree of trust regarding the medical staff that is usually involved in relationships with the respondents
- H7: there is a correlation between the perception that the social network can be a viable source of information within the medical field and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases.
- H8: there is a correlation between the type of medical speciality corresponding to the last disease encountered by respondents, the severity of the disease and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases
- H9: there is a correlation between the degree in which respondents are using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases

The selected sample comprised adult population above 18 years of age from the urban area, which is using at least one social network currently, the number of final valid questionnaire being 285. The method of administration of the questionnaires was the field investigation conducted online.

4. Results and Discussion

The main results concerning advanced hypothesis testing are showing the main tendencies recorded at the level of the considered sample. Thus, as regarding the H1, the average score obtained for the variable concerning the degree of social networks usage was 3,667 measured with the help of semantic differential

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scaling method with 5 steps. This means that the usage of social networks among the considered sample is frequent, people being involved with at least one social network currently. This data is correlated with the available statistics that are showing for June 2016 a degree of 38.9% penetration rate for Facebook among Romanian users [http://www.internetworldstats.com/europa.htm#ro]. The hypothesis no 1 is validated.

Hypothesis no 2 is concerning the degree in which respondents are considering the social network as being a viable source of information in the medical field. The average score measured with the help of semantic differential scaling method with 5 steps is 2,423 corresponding to a low frequency of the variable considered. The hypothesis no 2 is also validated.

Hypothesis no 3 is validated as a percent of 67% of the respondents are retransmitting interesting posts and information from internet to their friends within the social network used. The entire behaviour related with the usage of the social networks depicted through the respondents' answers can be seen in the figure below:

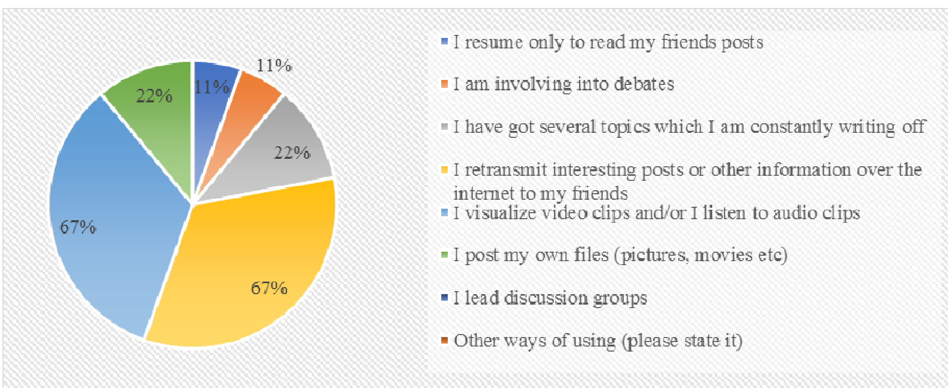

Fig 1: The respondents' behavior regarding the activities within social networks, Source: own research

The hypothesis no 4 is concerning the degree of trust in the medical staff that respondents are usually interacting with. The answers show an average score of 4,211 (measured with semantic differential scaling method with 5 steps), meaning a high degree of trust available for the medical staff. So hypothesis no 4 is validated.

Hypothesis no 5 is testing the degree of usage of social networks to influence friends or acquaintances opinions regarding medical treatments. The average score measured with semantic differential scaling method with 5 steps, is 1,438 meaning a very low degree of usage of the social networks for influencing friends. Hypothesis no 5 is validated.

Hypothesis no 6 is concerning the correlation between the perception that the social network can be a viable source of information within the medical field and the degree of trust regarding the medical staff that is usually involved in relationships with the respondents. The analysis of the answers shows the respondents that have a high degree of trust in the medical staff consider that the preferred social network does not represent a viable source of information regarding the medical field (approximatively 38% of the respondents). In the same time, respondents who have choose the neither-nor option, regarding the social network as a viable source of information, have a high degree of trust in medical staff (27% of the

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respondents). There are considering the preferred social network as a viable source of information persons that have a little and a very little degree of trust in medical staff. These individuals are calling to the medical staff only in the case of severe medical conditions. In the light of responses received the hypothesis no 6 is validated.

Hypothesis no 7 is concerning the correlation between the perception that the social network can be a viable source of information within the medical field and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. From the analysis it can be seen that exists a strong and direct correlation between variables implied (Pearson Correlation = 0,960, and Sig. 0,000).

Table no 1. Correlation table between variables regarding extent of a social network to be a viable source of information in medical field and willingness to consider opinions and information from social networks

Correlations			
		To what extent you consider your favorite social network is a viable source of medical information?	Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?
To what extent you consider your favorite social network is a viable source of medical information?	Pearson Correlation	1	.960**
	Sig. (2-tailed)		.000
	N	285	285
Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?	Pearson Correlation	.960**	1
	Sig. (2-tailed)	.000	
	N	285	285
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: own research input analysis

So, also the hypothesis no7 is validated.

Hypothesis no 8 is concerning the correlation between the type of medical speciality corresponding to the last disease encountered by respondents, the severity of the disease and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. The information obtained through analysis is showing the following different situations depending of the type of medical field implied by the disease:

- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the disease was chronic, the willingness to consider opinions and information's from social networks is very low, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the condition was moderate, the willingness to consider opinions and information's from social networks is very low also, the great majority of these respondents being females;

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- If the treatment corresponding to the last disease encountered by the respondents was in the dental healthcare field and the condition was light, the willingness to consider opinions and information's from social networks is high, the great majority of these respondents being females;
- If the treatment corresponding to the last disease encountered by the respondents was in the dermatology field and the condition was chronic, the willingness to consider opinions and information's from social networks is very low, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the cardiology field and the condition was chronic, the willingness to consider opinions and information's from social networks is very low also, the great majority of these respondents being males;
- If the treatment corresponding to the last disease encountered by the respondents was in the ophthalmology field and the condition was light, the willingness to consider opinions and information's from social networks is high, the great majority of these respondents being females.

Information provided by the data analysis shows that the degree of illness or medical condition is correlated with the willingness to consider opinions and information's from social networks regarding the medical treatment of the respondents. As the degree of intensity for the medical condition is higher the willingness to take account opinions about possible medical treatments from the social networks interaction is becoming lower. Also, it was observed a correlation with the sex of the respondents in the respect that women, in majority of cases have a higher willingness to consider opinions and information from the social networks than males.

Hypothesis no 9 is concerning the correlation between the degree in which respondents are using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases.

The data analyzed are showing a direct and strong correlation between the two variables taken into consideration (Pearson Correlation = 0,838, Sig. = 0,000), as can be seen in the table below:

Table no 2. Correlation table between variables regarding the degree in which respondents are using social networks to influence friends and acquaintances opinions and the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases

Correlations			
		To what extent are you using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions?	Are you willing to consider information / opinions / views expressed within social networks regarding the treatment necessary for your current medical conditions?
To what extent are you using social networks to influence friends and acquaintances opinions regarding treatments for various medical conditions?	Pearson Correlation	1	.838**
	Sig. (2-tailed)		.000
	N	285	285
Are you willing to consider information / opinions / views expressed within social networks regarding	Pearson Correlation	.838**	1
	Sig. (2-tailed)	.000	

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the treatment necessary for your current medical conditions?	N	285	285
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: own research input analysis

Respondents that are willing to use social networks for influencing friends or acquaintances opinion over medical treatments are strongly taking account of information and opinions from the social networks regarding their own medical treatments.

5. Conclusions

The research conducted among urban respondents has the character of an exploratory demarche aimed to highlight some aspects regarding the influence exerted by social networks at the level of healthcare services consumption. Researched problem is very complex, being possible a diversified type of relationships between different variable involved as it can be seen also at the level of the scientific literature review in the beginning of the paper.

First, participating and involve themselves within a social network has become for a large number of modern individuals a constant need, the expression of not just merely a fashion or a social convenience but an entire behavior and a kind of lifestyle. Especially some of the younger individuals have developed in later years an attitude characterized by full embracement of all the instruments offered by social media browsing. Even if some specialists have rung alarm bells regarding the negative effects of the prolonged navigation within a social network (depression, anxiety etc), majority of young people are developing a behavior that is entailing the use of social networks or/and social media for extended periods of time. The development of telecommunications and internet technology to a level hard to imagine with 50 years ago, was also a firm background for this type of behavior.

Second, changes at the level of consumers' behavior itself has determine apparition of new jobs, an integration of new technologies in much of products and services being parallel with the need for more information and exchange of this information. Thus, social networks and social media in general has become the perfect vehicle for this, allowing individuals to connect to others consumption experiences and valuable information.

When we are coming to the healthcare field, things are becoming even more complex, because multiple facets of the holistic concept of modern health are implying also acquisition of a wellbeing state of mind, dependent on the capacity of every individual to connect, to socialize with the others. From this respect, social networks offer a perfect instrument to overcome the lack of socialization for some people that don't have intrinsic qualities in this respect. The usage of social networks at the level of urban Romanian population has evolved proportionally in the last years, as the penetration rate of internet access and especially smartphones at the level of middle to low income layers of population has grown significantly.

The first validated hypothesis of the article research is confirming this trend people being involved with at least one social network currently. Still, the national healthcare system doesn't have the possibility neither the logistics to offer and impose an ease to use/ find medical information database that can be accessed online by any interested person. This could be a part of the explanation behind the validation of

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second hypothesis that was assuming that the respondents are not considering social networks being reliable as a viable source of information. People are not used to find over the internet reliable medical information from official sources, so they don't have the habit to rely on such information. The general medical culture has also a low level, discussions and posts used over networks not being able to offer sufficient trust for people in general.

This is correlated also with the degree of trust granted to doctors that is still high for consumers. As long as we don't have a strong community of specialists in the medical field willing to share their professional knowledge within a kind of professionals' social network, the patients will look upon the direct communication with their doctors in order to understand the evolution of a disease or the correct way of administrating a treatment. Still, there is a growing influence of blogs and other forms of social media that allows patients to interact and provide information about their own evolution and experience with a particular disease.

The hypothesis that is confirming a very low degree of usage of the social networks for influencing friends is showing also the lack of trust in the capacity of social networks to offer viable medical information.

In the same line, we have the correlation between the high degree of trust in the medical staff and the perception that social network does not represent a viable source of information regarding the medical field.

Still, for the people that are willing to consider medical information from social networks reliable, is presented a strong correlation with the willingness to consider opinions, information express within the social networks referring to the treatment of respondents' current diseases. Also, respondents that are willing to use social networks for influencing friends or acquaintances opinion over medical treatments are strongly taking account of information and opinions from the social networks regarding their own medical treatments.

Another conclusion drawn after the analysis was that as the degree of intensity for the medical condition is higher the willingness to take account opinions about possible medical treatments from the social networks interaction is becoming lower.

Future directions of research could embrace the issues referring to the comparison between different elements of social media from the point of view of the effects upon the healthcare services consumption, such as blogs, wikis, social networks, podcasts, forums, content communities, and micro blogs.

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