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TABLE OF CONTENTS

The Impact of Foreign Direct Investment on Trade (Export and Import) in Turkey

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Abstract

It is said that after globalization processes foreign direct investment start to influence trade moreover it is very complicated to deduce the relationship between trade and FDI according to theoretical analysis. Therefore, empirical studies showed that until the 1980s international trade generated direct investment but after 1980s FDI started to heavily influencing international trade. Also, results showed that the relationship can differ from one country to another. Thus, this paper is aimed to analyze the impact of Foreign Direct Investment inflow on the macroeconomic variable as a Trade (Export, Import) in Turkey. The paper covers the time period from 1974 to 2017. The time series datasets, those are obtained from World Bank and IMF database are utilized in employed statistical models as ADF Unit Root, VAR lag selection, Johansen co-integration, and the Granger Causality tests, to fulfill empirical part of the paper. Based on results, it was confirmed that there was the presence of the co-integration between analyzed series. Additionally, results of Granger causality test showed that there is unidirectional causality from Export and Import to FDI.

Keywords: FDI, export, import, Turkey, ADF test, Johansen co-integration test, VAR, granger causality test

1. Introduction

Foreign Direct Investment is one of the important drivers of the economy in developing countries which brings to host countries the followings: finance, technologies, new management and etc. From past studies, it has been proved that they can cause economic growth, unemployment reduction, improvement of human capital and institutions in host countries, depending on the size of the market, level of human capital, infrastructure and economic stability of host country. With globalization processes foreign direct investment start to influence trade. Therefore, it is very complicated to deduce the relationship between trade and FDI according to

theoretical analysis because the relationship between them can differ from one country to another(Fontagné, 1999).

Mostly, empirical studies showed that until the 1980s international trade generated direct investment but after 1980s FDI started to heavily influencing international trade(Fontagné, 1999).

The evidence from OECD studies indicates that foreign investment abroad stimulates the growth of exports from originating countries (investing countries) and, consequently, that this investment is complementary to trade. An analysis of 14 countries demonstrated that each dollar of outward FDI produces about two dollars' worth of additional exports (OECD).

Conversely, in host countries, short-term foreign investment most often tends to increase imports, whereas an increase in exports appears only in the longer term. However, in the short term, host countries enjoy many benefits from foreign investment (technology transfers, job creation, local subcontracting, etc.)(Fontagné, 1999).

Turkey was the 18th largest economy in the world; with a GDP of US$851 billion and US$10,540 per capita, in 2017. Trade is an important part of the economy: total trade in goods and services had54% of a share of GDP in 2017; total export with $156 billion had 24.84% of a share of GDP: total import with $233 billion had29.33% of a share of GDP[1] (See Graph 1).

Graph 1: Trade Balance (Export, Import) of Turkey (share of GDP).
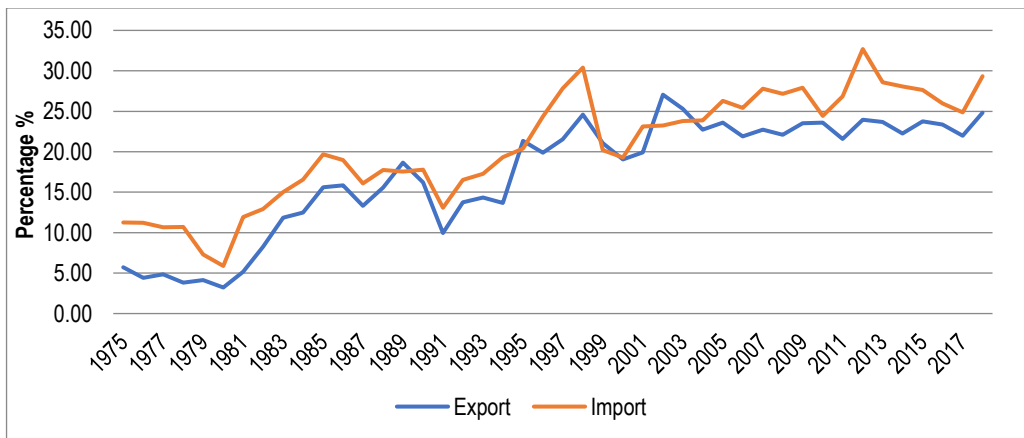
Source: Author`s own invention based on World Bank Database

According to the UNCTAD 2018 World Investment Report(UNCTAD, 2018), Turkey was the second largest recipient of FDI in West Asia, behind Israel. The crucial reasons

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[1]World Integrated Trade Solution
https://wits.worldbank.org/countryprofile/en/tur

of attraction the FDI were: strategic geographical location that makes Turkey be regional hub between Europe and Asia; the huge size of market that counts 70 million consumers; demographic vitality, the country has a developing young middle-class population with increased purchasing power and orientation towards consumption; the relative low cost labor with comparison EU market; establishment of European regulations and trade standards during repeated attempts to join European Union; attraction of FDI into services, electronics, shipbuilding, technology and telecommunications. The highest FDI flows which were detected were USD 22 billion in 2007, afterward it started to decrease to USD 13.3 billion FDI flows in 2017. The thought out reasons for dropping were: political stability, inflation, the weak currency and etc. (See Graph 2).

Graph 2: FDI inflows into Turkey in the time period 1975-2017.
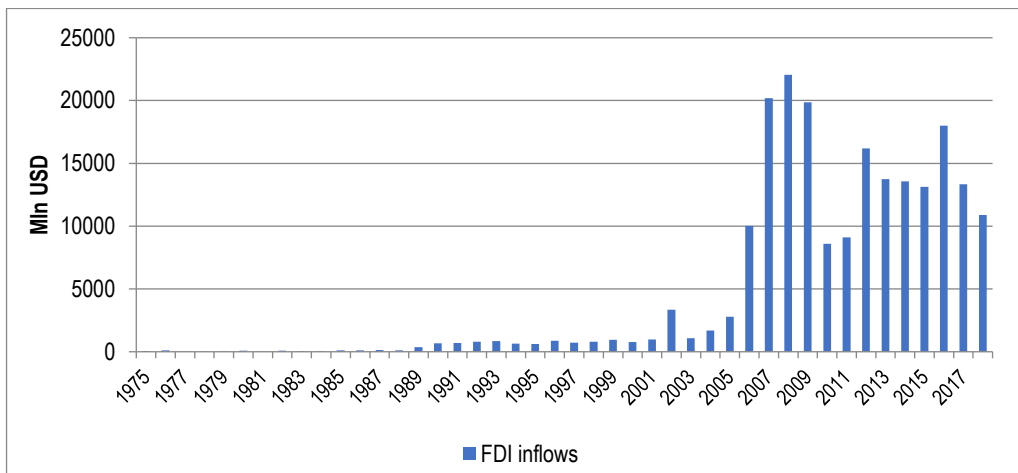
Source: Author`s own invention based on World Bank Database

Main partners of Turkey with FDI flows in 2017 were: Netherlands (23.8%), Spain (19.5%), Azerbaijan (13.6%), Austria (4.4%), UK (4.4%), Germany (4%), Japan (4%), Belgium (3%), and United States (2.3%). The main invested sectors by foreign investors in 2017 were Finance and insurance (19.5%), Transport and storage (18.2%), Manufacturing (17%), Energy (12.7%) and Construction (8.4%)[1].

The main part of Turkey's exports are vehicles (15.2%), machinery including computers$13.8 billion (8.8%), gems and precious metals (6.9%), knit or crochet clothing, accessories (5.6%), iron, steel (5.2%) and electrical machinery, equipment (5.2%). The majority of Turkey's imports contain raw materials and intermediate goods which feed into the production of higher value-added finished goods for export; the principal items being: mineral fuels including oil (15.9%), machinery including

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[1]Santander, Trade Portal, Turkey Foreign Direct Investment
https://en.portal.santandertrade.com/establish-overseas/turkey/foreign-investment

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computers (11.6%), electrical machinery and equipment (9%), gems and precious metals (7.5%), vehicles (7.5%), iron, steel (7.2%) and plastics, plastic articles (5.7%). Turkey continues to be a net exporter of services due to its significant surplus in travel services. Due to travel services Turkey is stable to be a net exporter of services. The main partners of Turkey in export are: Germany (9.6%), United Kingdom (6.1%), United Arab Emirates (5.9%), Iraq (5.8%), United States (5.5%), Italy (5.4%), France (4.2%) and Spain (4%). The main partners of Turkey in import are China (10%), Germany (9.1%), Russia (8.4), United States (5.1%) and Italy (4.8%)[1].

The main objective of this paper to analyze the relationship between Foreign Direct Investment (FDI) and Trade (Export, Import).The content of paper will be structured as follows: In section 2 literature reviews will be expounded, in section 3 data description will be shown, in section 4 methodology will be disclosed, in section 5 empirical results from employed statistical analysis will be expounded, in section 6 conclusion will be described and finally in section 7 references will be shown.

2. Literature Review

2.1 Theoretical studies

The relationship between Foreign Direct Investment and Trade has recently been a remarkable topic for many studies in the literature review. Through theoretical studies, we will discuss horizontal and vertical FDI and their linkage with the New Trade Theory Approach. It is known that firms could either produce at home and export to foreign destinations or produce abroad and substitute home country exports with foreign affiliate local sales. Horizontal FDI refers to market seeking investments, in which the MNE duplicates the production and produces similar products or services in multiple locations. One of the key components in the horizontal FDI model, developed by (Markusen, 1984), is that firms choose to serve foreign markets through foreign affiliate local sales, instead of via exports. This is done in order to achieve better market access and reduce costs coming from tariffs and transportations. Thus, the reason for firms investing abroad can be concluded in a trade-off between the gains from being near the consumer and the losses originating from production dispersion, which is illustrated in the proximity-concentration hypothesis by (Brainard, 1997) (National Board of Trade, 2008).

Hence, in the horizontal FDI model, firms will prefer FDI instead of exports, to supply goods and services. This can be explained by the fact that the proximity gains from being located near the consumers are higher than the concentration gains, created from allocating the production in a single location. That is, FDI, arising with the purpose of achieving better market access will, in general, replace exports of final goods from the home country of final goods. A remark is due, however: Foreign

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[1]Globaledge, Michigan State University, Turkey: Trade Statistics
https://globaledge.msu.edu/countries/turkey/tradestats

production may also generate new export possibilities from the home country since imported inputs and parts may be exported to final production abroad (National Board of Trade, 2008).

Platform FDI can be seen as a more intricate form of horizontal FDI. Platform FDI refers to market-access driven investments, where the MNE locates production in a foreign country positioned in proximity to the export market, as a platform, in order to facilitate affiliate exports to that market. Therefore, platform FDI generates exports from foreign affiliates (National Board of Trade, 2008).

The importance and presence of this mode of FDI, which gives an additional explanation for why firms invest abroad, has been well documented in (Hanson, Mataloni Jr, & Slaughter, 2005). In sum, horizontal FDI, which also includes platform FDI, explains why similar products are produced locally by MNEs in different parts of the world. The theory concludes that local production can increase sales volume by avoiding trade costs in exports. The theory further concludes that, in large markets with high incomes and a high willingness to pay, new investments in additional plants for local production and sales will be profitable, despite the extra investment costs. Thus, the theory of horizontal FDI explains why investments predominantly flow from rich countries to rich countries. Finally and most important, horizontal investments, made in order to increase market access, are likely to replace exports from the home country (National Board of Trade, 2008).

Vertical FDI refers to investments where the production process, or value chain, is fragmented into different parts in order to take advantage of differences in factor prices between countries or regions. That is, FDI where the prime motive is to obtain access to cheap production factors is labeled "Vertical FDI" in the literature. The vertical FDI model was first developed by (Helpman, 1984). In general, we can think of the organization of production and sales within MNEs as a production network, where different parts of the production process are located in different countries in order to take advantage of factor price differences (National Board of Trade, 2008).

This geographical dispersion of production will reduce production costs. Since different production stages require different intensities of skilled labor, and factor prices may differ across countries, it will be profitable to locate production stages which make intensive use of less-skilled labor in less developed countries (where less skilled labor is relatively abundant and Therefore, cheap). Likewise, activities which make intensive use of skilled labor, such as research and development (R&D), are located where there are abundant resources of skilled labor in developed countries, making them relatively cheap there. Since vertical FDI implies a geographical separation of the production process, this type of FDI will initiate a trade through intra-firm trade in terms of exporting and importing intermediate goods from other parts of the firm (or from external suppliers) (National Board of Trade, 2008).

Based on the OLI framework, the New Trade Theory Approach has been developed which incorporates location, ownership advantages, and internalization into general equilibrium models and predicts the pattern of trade. The market size, trade cost and differences in relative endowments of countries were included in location advantages. Knowledge-capital constitutes ownership advantage. According to location and ownership advantages, the location decision of MNEs is explained by two competing hypotheses: the proximity-concentration and the factor proportion hypothesis (Esiyok, 2010).

The factor proportion hypothesis views the phenomenon of FDI from the perspective of MNEs` ability to locate their different stages of production in different countries, considering the advantage of differences in factor costs (Markusen, 1984). For example, if firm-specific inputs (knowledge-capital) produced at headquarters could easily be transferred to the foreign affiliates at a low cost; a single plant multinational would arise to exploit possible factor cost differences. If factor propositions consideration dominates in a given industry, multinationals emerge in a single direction between countries. Then they export differentiated product back to the headquarters. The effect of this inter-industry trade on overall trade of given country depends on how MNEs in this country would meet the needs of production in terms of inputs, through import from the parent o a third country or local suppliers. Furthermore, external tariffs of regional blocs might affect the trade for inputs and induce MNEs to trade within the regional bloc (Esiyok, 2010).

Based on assumption that countries are symmetric in terms of market size, factor endowments and technological development, the proximity-concentration hypothesis (Brainard, 1993) suggest that firms prefer FDI over exporting provided that firms are motivated by proximity to customers or specialized suppliers at the expense of reduced scale. Therefore, MNEs` existence is positively correlated to high transport costs, trade barriers, low investment barriers and the ratio of scale economies at the plant level relative to corporate level (Brainard, 1993; Horstmann & Markusen, 1992). Given the symmetries in countries` market size, factor endowments and technologies, MNEs motivated by market access would invest in foreign markets to minimize transport costs associated with exporting. This setting allows for horizontal FDI, where two-way investment between similar countries in terms of both absolute and relative factor endowment occurs (Esiyok, 2010).

Trade substituting effects of FDI is likely to dominate if MNEs are concerned with proximity. If proximity considerations dominate in a given industry, multinational sales would replace two-way trade in final goods of unequal magnitudes and might generate inter-industry trade in intermediates (Brainard, 1993). In this respect, even the presence of FDI itself might have further effects on trade between home and the host country, for instance, FDI stimulates demand for imports through informational spillovers and the creation of production channels (Swenson, 2004) (Esiyok, 2010).

(Markusen, 1995, 1998; Markusen & Venables, 1998; Markusen, Venables, Konan, & Zhang, 1996) introduce asymmetries of market size, factor endowments and technological efficiency among countries in explaining the choice between countries in terms of market size, factor endowments, and technological efficiency, more firms would establish subsidiaries in these developing countries; hence FDI and trade could exist simultaneously. As a result, MNEs become more important relative to trade as countries become more similar in size relative endowments as world income grows, and multinational production would substitute trade when countries are similar (Brainard, 1997) (Esiyok, 2010).

(Markusen, 1998; Markusen et al., 1996) integrate the proximity-concentration hypothesis and factor proportion hypothesis in a knowledge-capital model, in which both vertical and horizontal FDI take place. The knowledge-capital framework combines the assumptions of proximity-concentration and factor proportion hypotheses with the assumption of investment liberalization (Esiyok, 2010).

2.2 Empirical studies

According to trade and foreign direct investment theories, those were mentioned above it can be accepted that there is link between them because export and import are one of the important factors of economy and it can be influenced by foreign direct investment actions. But still, it is a quite a complicated issue to find the relationship between them due to crucial factors that can influence this linkage between foreign direct investors and host countries. Furthermore, the empirical studies from literature gave various results according to user data and applied models. (Aizenman & Noy, 2006) examined the intertemporal linkages between FDI and disaggregated measures of international trade for the time period 1980-1990. The applying Geweke (1982)'s decomposition method, they find that most of the linear feedback between trade and FDI (81%) can be accounted for by Granger causality from FDI gross flows to trade openness (50%) and from trade to FDI (31%). The rest of the total linear feedback is attributable to simultaneous correlation between the two annual series. (Lin, 1995)examined trade effects of foreign direct investment (FDI) between Taiwan and each of the following four ASEAN countries: Indonesia, Malaysia, the Philippines, and Thailand. Regression results show that Taiwan's outward FDI has a significant positive effect on exports to and imports from the host country, whereas no such effects were consistently found for inward FDI from the same country. (Zhang, 2005) examined the relationship between FDI and export of China. The results showed that FDI indeed has had a positive impact on China's export performance, its export-promoting effect is much greater than that of domestic capital, and its effect is larger in labor-intensive industries. (Simionescu, 2014) examined the relationship between trade and foreign direct investment G7 countries for the time period 2002-2013. The results obtained by the Granger causality tests for panel data showed that there is only short-run causality between FDI and exports and FDI and imports. There is unidirectional causal relationship on the long-run between FDI and trade. Moreover,

short-run causality in both senses was observed for FDI and trade in G7 countries on the considered horizon. (Sharma & Kaur, 2013) examined the causal relationships between FDI and trade (i.e Exports and Imports) in India and China for the time period 1976-2011. The results for China show unidirectional causality running from FDI to imports and FDI to exports, however, there exist bidirectional causality between imports and exports. India gives the results which are not similar to China where bidirectional causality between FDI and imports; FDI and exports; and exports and imports have been found.

3. Data description

The secondary time series dataset, which was obtained from the World Bank Database[1] for the period span from 1974 to 2017, was applied for analyses part of paper. These three variables were utilized in the model:

FDI –Foreign Direct Investment, net inflows (current USD)

EXP – Total export of goods and services (current USD)

IMP – Total import of goods and services (current USD)

4. Methodology

4.1 Augmented Dickey-Fuller Unit Root Test

The first step of the empirical analysis is the ADF test, which was developed by American statisticians David Dicker and Wayne Fuller (1979), to check the order of integration of the series to avoid spurious results. There are 3 various cases of the test equation[2]:

When the time series is flat (i.e. doesn't have a trend) and potentially slow-turning around zero, then use the following mathematical equation of test (1):

$$\Delta z_t = \theta z_{t-1} + \alpha_1 \Delta z_{t-1} + \alpha_2 \Delta z_{t-2} + \ldots + \alpha_p \Delta z_{t-p} + \alpha_t \ldots\ldots\ldots(1)$$

Notice that this test equation does not have an intercept term or a time trend. The null hypothesis of the Augmented Dickey-Fuller t-test is $H_{0: \theta} = 0$ (the data needs to be differenced to make it stationary). The alternative hypothesis is: $H_{1: \theta} < 0$ (the data is stationary and doesn't need to be differenced)

When the time series is flat and potentially slow-turning around a non-zero value, then use the following mathematical equation of test (2):

$$\Delta z_t = \alpha_0 + \theta z_{t-1} + \alpha_1 \Delta z_{t-1} + \alpha_2 \Delta z_{t-2} + \ldots + \alpha_p \Delta z_{t-p} + \alpha_t \ldots\ldots\ldots (2)$$

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[1]World Bank Database
https://data.worldbank.org/country/turkey
[2]Southern Methodist University, Augmented Dickey Fuller Unit Root Test
http://faculty.smu.edu/tfomby/eco6375/BJ%20Notes/ADF%20Notes.pdf

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Volume 6, Issue 1

The null hypothesis of the Augmented Dickey-Fuller t-test is $H_0: \theta = 0$ (the data needs to be differenced to make it stationary).The alternative hypothesis is:$H_1: \theta < 0$ (the data is stationary and doesn't need to be differenced)

When the time series has a trend in it (either up or down) and is potentially slow-turning around a trend line you would draw through the data then use following mathematical equation of test (3):

$\Delta z_t = \alpha_0 + \theta z_{t-1} + \gamma t + \alpha_1 \Delta z_{t-1} + \alpha_2 \Delta z_{t-2} + \ldots + \alpha_p \Delta z_{t-p} + \alpha_t$ .....(3)

The null hypothesis of the Augmented Dickey-Fuller t-test is $H0: \theta = 0$ (the data needs to be differenced to make it stationary). The alternative hypothesis is:$H0 : \theta < 0$ (the data is trend stationary and needs to be analyzed by means of using a time trend in the regression model instead of differencing the data).

When you have data that is exponentially trending then you might need to take the log of the data first before differencing it to avoid risk. To estimate the significance of the coefficients in focus, the modified T (Student)-statistic (known as Dickey-Fuller statistic) is computed and compared with the relevant critical value: if the test statistic is less than the critical value then the null hypothesis is rejected. Each version of the test has its own critical value which depends on the size of the sample[1].

4.2 VAR Optimal Lag length

From past studies it is known that if wrong lag length is chosen for statistical analysis it could cause the over-fitting leads to a higher mean-square forecast error of the VAR and that under-fitting the lag length often produces auto-correlated errors. To avoid these risks VAR Optimal Lag Length has been applied to find correct lag length. The mathematical equation of test is[2] (4):

$y_t = v + A_1 y_{t-1} + \ldots + A_p y_{t-p} + u_t$ ....(4)

Based on guideline, the most significant model is with the lowest Akaike Information Criterion (AIC).

4.3 Johansen Co-integration test

Johansen Co-integration test, which was developed by Johan Soren (1991), is statistical model to test co-integration between several series those are integrated in order $I(1)$ at 1st difference. Johansen co-integration test contains trace and eigenvalue tests. The mathematical equation of test is[3] (5):

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[1]RTMath, Mathematics experts in quantitative finance
https://rtmath.net/help/html/93a7b7b9-e3c3-4f19-8a57-49c3938d607d.htm
[2]Universitat Wien, VAR Order Selection
https://homepage.univie.ac.at/robert.kunst/pres07_var_abdgunyan.pdf
[3]IMF - International Monetary Fund, Testing for Co-integration Using the Johansen Methodology when Variables are Near-Integrated
https://www.imf.org/external/pubs/ft/wp/2007/wp07141.pdf

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January - June 2020
Volume 6, Issue 1

$y_t = \mu + A_1y_{t-1} + \cdots + A_py_{t-p} + \varepsilon_t$.......................... (5)

The null hypothesis for test is: H_0= there is no co-integration between analyzed series. An alternative hypothesis is: H_1= there is at most 1 co-integration between analyzed series. Null hypothesis will be accepted if p-value > 0.05.

4.4 Granger Causality Test

Granger causality, which was developed by British statistician Sir Clive William John Granger (1969), is a statistical concept of causality that is based on prediction. According to Granger causality, if a signal X1"Granger-causes" (or "G-causes") a signal X2, then past values of X1 should contain information that helps predict X2 above and beyond the information contained in past values of X2 alone[1]. The mathematical equation of test is (6):

$y_t = \alpha_0 + \alpha_1 y_{t-1} + \alpha_2 y_{t-2} + \ldots + \alpha_m y_{t-m} + error_t$...........(6)

The null hypothesis for model is: H_0= X doesn`t Granger Cause Y, Y doesn`t Granger Cause X. Null hypothesizes will be accepted if p-values is more than 0.05.

5. Empirical Results

5.1 Augmented Dickey-Fuller Unit Root Test

As the pre-condition of Johansen co-integration test proposes, selected time-series must be non-stationary at a level and stationary at the 1st difference. Thus, the ADF test individually has been performed on the variables. According to the result of ADF test, the null hypothesis that series has a unit root at levels should be accepted, because T-statistics are less than critical values at 1% and 5% level of significance and P-values of variables are more than 0.05. Thus, after taking the first difference, the series became stationary according to these outputs: T-statistics more than critical values at 1% and 5% level of significance and P-values less than 0.05. Based on results, the null hypothesizes that series have unit root at 1st difference should be rejected. Thus, ADF results showed that the observed series appeared to be integrated of order one (I (1)) (See Table 1).

Table1: Augmented Dickey Fuller unit root test results

Null Hypothesis: (lnEXP) has a unit root					
Variables	ADF Test Statistic	Level	Critical values	Prob*	Conclusion
Export of goods and services in current USD at level: (lnEXP)	-1.689615	1%	-3.592462	0.4292	Non-stationary
		5%	-2.931404		
		10%	-2.603944		

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[1]Scholarpedia, Granger Causality
http://www.scholarpedia.org/article/Granger_causality

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European Journal of
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January - June 2020
Volume 6, Issue 1

Null Hypothesis: D(lnEXP) has a unit root					
Export of goods and services in current USD at 1st difference: (lnEXP)	-6.184469	1%	-3.596616	0.0000	Stationary
		5%	-2.933158		
		10%	-2.604867		
Null Hypothesis: (lnIMP) has a unit root					
Import of goods and services in current USD at level: (lnIMP)	-0.976994	1%	-3.592462	0.7531	Non-stationary
		5%	-2.931404		
		10%	-2.603944		
Null Hypothesis: D(lnIMP) has a unit root					
Import of goods and services in current USD at 1st difference: (lnIMP)	-7.435963	1%	-3.596616	0.0000	Stationary
		5%	-2.933158		
		10%	-2.604867		
Null Hypothesis: (lnFDI) has a unit root					
Foreign Direct Investment at level: (lnFDI)	-1.055682	1%	-3.592462	0.7245	Non-stationary
		5%	-2.931404		
		10%	-2.603944		
Null Hypothesis: D(lnFDI) has a unit root					
Foreign Direct Investment at 1st difference: (lnFDI)	-9.308990	1%	-3.596616	0.0000	Stationary
		5%	-2.933158		
		10%	-2.604867		

Source: Author`s own calculations

5.2 VAR Optimal Lag length

According to (Lütkepohl, 1993) study, the over-fitting leads to a higher mean-square forecast error of the VAR and that under-fitting the lag length often produces auto-correlated errors. The results gained by (Braun & Mittnik, 1993)show that approximates of a VAR, whose lag length varies from the true lag length are erratic. To avoid these risks VAR Lag Order Selection Criterion model was applied to find the optimal lag. According to the guideline, the best model is with the lowest Akaike Information Criterion (AIC). Based on results gained from the model the optimal lag for LnEXP, LnIMP and LnFDI are 1 (See Table 2, 3).

Table2: Optimal Lag Selection model for LnEXP and LnFDI

VAR Lag Order Selection Criteria, Endogenous variables: LnEXP LnFDI, Exogenous variables: C, Sample: 1974 2017, Included observations: 40

Lag	LogL	LR	FPE	AIC	SC	HQ

0	-100.0620	NA	0.564038	5.103099	5.187543	5.133631
1	1.340947	187.5954*	0.004330*	0.232953*	0.486285*	0.324549*
2	2.030792	1.207228	0.005120	0.398460	0.820680	0.551122
3	4.817945	4.598802	0.005465	0.459103	1.050211	0.672829
4	9.646993	7.485025	0.005287	0.417650	1.177646	0.692441

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion
Source: Author`s own calculations

Table3: Optimal Lag Selection model for LnIMP and LnFDI

VAR Lag Order Selection Criteria Endogenous variables: LnIMP LnFDI, Exogenous variables: C, Sample: 1974 2017, Included observations: 40

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-97.43903	NA	0.494711	4.971952	5.056396	5.002484
1	-15.45336	151.6735*	0.010027*	1.072668*	1.326000*	1.164265*
2	-13.59236	3.256748	0.011181	1.179618	1.601838	1.332279
3	-11.71014	3.105660	0.012488	1.285507	1.876615	1.499233
4	-11.02202	1.066582	0.014861	1.451101	2.211097	1.725892

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

Source: Author`s own calculations

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January - June 2020
Volume 6, Issue 1

5.3 Johansen Co-integration test

Based on the ADF unit root test our series are integrated of the same order, I(1) which means the Johansen co-integration test has been allowed to perform. Johansen co-integration test has been employed for LnEXP and LnFDI to analyze the long-run relationship between them. According to the obtained Johansen co-integration test results, those based on trace test and maximum eigenvalue test (p-values in both tests = 0.0054 and 0.0037<0.05), the null hypothesis is that there is no co-integration between LnIMP and LnFDI has been rejected. It has been confirmed that there is at most 1 co-integration between analyzed series (p-values in both tests = 0.5480> 0.05) (See Table 4).

Table4: Johansen Co-integration test for LnEXP and LnFDI

Johansen Co-integration test: Sample (adjusted): 1982-2017, Included obs.: 36, Series: LnEXP, LnFDI, Lags interval (in first differences):1 to 1.				
Unrestricted Co-integration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None*	0.338876	17.86794	12.32090	
				0.0054
At most 1	0.011546	0.487753	4.129906	
				0.5480
Unrestricted Co-integration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None*	0.338876	17.38019	11.22480	
				0.0037
At most 1	0.011546	0.487753	4.129906	
				0.5480
Trace test indicates 1 co-integrating eqn(s) at the 0.05 level, Max-eigenvalue test indicates 1 co-integrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values				

Source: Author`s own calculations

Johansen co-integration test was employed for LnIMP and LnFDI to analyze the long-run relationship between them. According to the obtained Johansen co-integration test results, those based on trace test and maximum eigenvalue test(p-values in both tests = 0.0029 and 0.0018<0.05) the null hypothesis is that there is no co-integration between LnIMP and LnFDI, has been rejected. It has been found that there is at most

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

1 co-integration between analyzed series (p-values in both tests = 0.5449> 0.05) (See Table 5).

Table 5: Johansen Co-integration test for LnIMP and LnFDI

Johansen Co-integration test: Sample (adjusted): 1982-2017, Included obs.: 36, Series: LnIMP, LnFDI, Lags interval (in first differences):1 to 1.				
Unrestricted Co-integration Rank Test (Trace)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None*	0.418770	23.15609	15.49471	0.0029
At most 1	0.008688	0.366504	3.841466	0.5449
Unrestricted Co-integration Rank Test (Maximum Eigenvalue)				
Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.
None*	0.418770	22.78959	14.26460	0.0018
At most 1	0.008688	0.366504	3.841466	0.5449

Trace test indicates 1 co-integrating eqn(s) at the 0.05 level,
Max-eigenvalue test indicates 1 co-integrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: Author`s own calculations

5.4 Granger Causality test

As mentioned previously, causal relationship will be checked between EXP and FDI through the Granger Causality test. The null hypothesis of the test, states the following:

H_0: LnFDI does not Granger Cause LnEXP, and

H_0: LnEXP does not Granger Cause LnFDI

Null hypothesis will be rejected if the probability value is less than 0.05%.

Table 6: Granger Causality test for LnEXP and LnFDI

Pairwise Granger causality test, Lags 2, Sample 1974-2017		
Null Hypothesis	F-statistic	Prob.
LnFDI does not Granger Cause LnEXP	0.00434	0.9478
LnEXP does not Granger Cause LnFDI	20.7306	5.E-05

Source: Author`s own calculations

According to the obtained results, from Granger causality test, the null hypothesis of no causal relationship from FDI to EXP should be accepted (P-value=0.9478>0.05). But based on P-value= 5.E-05<0.05%, the second null hypothesis of no causal relationship

from EXP to FDI should be rejected. Thus, the results of the causality test demonstrated the unidirectional causal relationship from EXP to FDI (See Table 6).

The next step to check the causal relationship between IMP and FDI through Granger Causality test. The null hypothesis of the test states the following:

H_0: LnFDI does not Granger Cause LnIMP, and

H_0: LnIMP does not Granger Cause LnFDI

Null hypothesis will be rejected if the probability value is less than 0.05%.

Table 7: Granger Causality test for LnIMP and LnFDI

Pairwise Granger causality test, Lags 2, Sample 1974-2017		
Null Hypothesis	F-statistic	Prob.
LnFDI does not Granger Cause LnIMP	3.55887	0.0665
LnIMP does not Granger Cause LnFDI	20.1379	6.E-05

Source: Author`s own calculations

According to the obtained results from the Granger causality test, the null hypothesis of no causal relationship from FDI to IMP should be accepted (P-value=0.0665>0.05). But based on P-value= 6.E-05<0.05%, the second null hypothesis of no causal relationship from IMP to FDI should be rejected. Thus, the results of the causality test demonstrated the unidirectional causal relationship from IMP to FDI (See Table 7).

Conclusion

The aim of the study was to analyze the relationship between Foreign Direct Investment inflows and Trade (Export, Import) in Turkey by using annual time series data for the period span from 1974 to 2017. It is known that depends on circumstances FDI can influence the import and export of host country and can't. If FDI uses local raw materials, and human capital and etc., then, they won't have any significant and positive impact on the import of host countries. In versus, if they will transfer machinery, equipment, raw materials, human capital, assets and etc., afterward they will have a significant positive impact on the import of host country.

The export can be stimulated by inward FDI from domestic sectors through spill-over effects. It builds strong demand incentives for domestic investors and stimulates export. Additionally, export-oriented FDI is able to create products that further will boost export of host country. Furthermore, export-led growth can be brought as an example because it will increase growth in productivity. Thus, productivity growth will enhance the competitiveness of products at the international level in the case of price and quality and by that raises its export.

The empirical findings showed us further; according to obtained results from Augmented Dickey-Fuller Unit Root Test, all series were non-stationary at levels and stationary at 1st difference which is preconditions of the Johansen co-integration test. Based on obtained results from VAR optimal lag length test, 1 lag was chosen as an

optimal lag for those series. The next step was the Johansen co-integration tests to see those series are co-integrated or not. Johansen co-integration test confirmed the existence of at most one long-run co-integration vector between EXP/IMP and FDI. The Granger Causality test was employed as a final step of the statistical analysis. Based on results there were unidirectional causal relationships from EXP to FDI and from IMP to FDI. Thus, according to the facts from theories and obtained empirical results, FDI has a positive linkage with Trade in Turkey. The lack of raw materials, management, technologies, and finance can be considered as consequences of the positive impact of FDI on the import of goods and services. Moreover, there is no doubt that the horizontal (market seeking) FDI implements investments in Turkey. Therefore, based on theories horizontal FDI manufactures products by using imported goods and services and afterward these created final products can be exported to international market. Thus, this empirical study can be the attempt to prove these above-mentioned claims.

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Dissecting Export Trade Patterns of Georgian Economy and the Growing Importance of the European Union Market

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Abstract

From the very beginning of its rebirth after leaving the Soviet Union, Georgia embarked on a transition to a free market economy and linked its fate to western culture. Since then, strengthening the private sector, creating an attractive investment climate, promoting trade liberalization and above all else fostering exports are the main concerns of the country. Thus, as an export-oriented country, close examination of the Georgian export performance is of great importance. Besides the decomposition of general export trends for the period of 2008-2017, this paper applies Balassa index of revealed comparative advantage (RCA) to identify the key export sectors with comparative advantage and correspondingly with higher growth potential; By this shaping the export promotion policy to prioritize those sectors as the main drivers to increase export earnings. Furthermore, the study employed export product diversification index to gauge the convergence degree of Georgian exports structure by products to the structure of the world; as it significantly affects the resistance of a country towards the trade shocks caused by a price instability of the exported commodities. Eventually, the EU-Georgia trade relationship will be assessed through the trade intensity index to check whether the value of trade between the EU and Georgia is corresponding to the expectations based on their importance in world trade. The results show the comparative advantage for nine products (HS4) that account for <60%> of total exports including all the major sectors of Georgian export production. The diversification degree of export products improved over the last decade but still very poor, thus, it is unlikely for Georgia to resist the external trade shocks in case of a price instability of the exported commodities. Furthermore, despite the removal of the main trade barriers between EU and Georgia, it appears that the bilateral trade relationship is characterized by a low-intensity pattern, meaning that there is much to trade between the partners. The problem of low-intensity can be linked to the lack

of accessible export-related information that limits the ability of the new entrants to survive. As a result, discouragement of new firms to become exporters limits the diversification of export basket, which in turn negatively affects the level of trade intensity between the trade partners and decreases the potential trade benefits of bilateral agreements.

Keywords: RCA index, export, trade intensity, Georgia

1. Introduction

Globalization along with internationalization of an economy is quite handy when it comes to economic development. It can complement economic development through increased trade benefits and foreign direct investment (FDI) inflow, technology spillover, and economies of scale. In this regard, the globalization of Georgia concerning the European integration process is not an exception. It is acknowledged that the coherence with EU will prompt competitive pressure for Georgian export production, but at first glance, due to the factor endowments, attractive investment climate and the untapped potential of Georgian agricultural sector, it should be the least ofa concern. Located at the crossroads of two biggest markets, namely Europe and Asia, Georgia has a capacity to develop into the intercontinental hub and fuel its economy through the export earnings.

As a newborn market economy, Georgia has a substantial base to be a competitive actor in the international market. After engaging in trade agreements with world trade organization (WTO) in 2000 and European Union (EU), which granted Georgia with Generalized System of Preferences (GSP+) and Deep and Comprehensive Free Trade Area (DCFTA), Georgian export products exhibit growing heterogeneity. Thus, suggesting that openness to an international market can enhance the degree of product diversification by this enhancing the export earnings and correspondingly the economic growth. As a whole, theoretical background along with the economic bases developed by the country during its transition process suggests the rapid growth effect on the economy. Unfortunately, the export performance of Georgia does not indicate the presumed growth effect. Thus, Georgian exports require delicate observation to identify pros and cons regarding export production by this shedding the light on the modest performance of the country in the international market. In addition, EU, as the new dimension of Georgian export market which accounts for 24% share of total export, needs further exploration and should be treated exceptionally to reap the maximum trade benefits.

2. Methodology

This paper examines the general trends of the Georgian export trade along with the growth potential of its export production in an international market, diversification degree of the products and the trade intensity with European Union (EU) as the latest

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

addition to the Georgian export market. Hence, following trade indices were employed: Balassa index of the revealed comparative advantage (RCA), Diversification degree of export products and the trade intensity indices (TII). Twenty product categories were examined for the period of 2008-2017. The data was collected from the International Trade Center (ITC) agency and the United Nations Conference on Trade and Development (UNCTADSTAT) database.

2.1 Balassa index of revealed comparative advantage (RCA)

The application of the RCA index by Balassa is useful to calculate the relative advantage of Georgia in a particular group of products. It helps us to evaluate the potential of the country's export production by revealing competitive product groups that can be traded with its partners. If certain countries have the indistinguishable RCA index values, then it is unlikely for them to engage in bilateral trade agreements except if a similar-similar trade along with the increasing returns to scale takes place. Mathematical formulation of the Balassa index can be written as follows:

$RCA_{ic}=(X_{ic}/ X_i)/(X_{cw}/X_w)$...(1)

Where RCA_{ic} is the Balassa index of the revealed comparative advantage of product c for country i, in our case Georgia, X_{ic} is the Georgian export of the product c, X_i is the total amount of Georgian exports, X_{cw} is the world export of the product c, and X_w is the total world exports. Comparative advantage in a particular product or a sector is revealed if the value of the RCA index is more than one.

2.2 Diversification index of export products

The diversification index of export products measures the divergence of a certain country's export structure from the world structure. It is an important measure for many developing countries, since the most of them are highly dependent on the limited number of primary commodities, and in case of price instability of these commodities, developing countries can be a subject of serious trade shocks. Thus, increasing the level of the export diversification enables the developing countries to resist external trade shocks. Mathematical formulation of the export diversification index can be written as follows:

$$S_j = \frac{\sum_i |h_{ij} - h_i|}{2}$$...(2)

Where h_{ij} is the share of product i in the total exports of a country j and h_i is the share of the product i in the total world exports. The value of the index ranges from 0 to 1. The value closer to 1 indicates the greater divergence from the world pattern.

2.3 Trade intensity indices

The trade intensity index (TII) identifies the degree to which trade partners are engaged in trade with each other. In other words, it is the share of a country's exports going to a partner divided by the share of the world exports going to the partner, thus,

bilateral trade flow is higher than expected, if the value of the index is more than one.[1] Mathematical formulation of export/import trade intensity indices of Georgia with the EU is written as follows:

$$ExII_{ijt}=(Ex_{ij}/Ex_i)/(Im_j/(Im_w-Im_i))\dots\dots\dots\dots\dots\dots\dots\dots\dots(3) \text{ Export intensity index}$$

Where $ExII_{ijt}$ is the export intensity index of Georgia with EU at time t, Ex_{ij} is the Georgian exports to EU, Ex_i is the total Georgian exports, Im_j is the total EU imports, Im_w is the total world imports, Im_i is the total Georgian imports, and t is the time from 2008 to 2017.

$$ImII_{ijt}=(Im_{ij}/Im_i)/(Ex_j/(Ex_w-Ex_i))\dots\dots\dots\dots\dots\dots\dots\dots\dots(4) \text{ Import intensity index}$$

Where $ImII_{ijt}$ is the import intensity index of Georgia with EU at time t, Im_{ij} is the imports of Georgia from EU, Im_i is the total Georgian imports, Ex_j is the total EU exports, Ex_w is the total world exports, Ex_i is the total Georgian exports, and t is the time span.

3. Decomposition of Georgian export market

3.1 Export trade trends

Within the last decade, Georgian exports increased by 54.66% and total external trade turnover by 26.91%. The average total export is 2.168 billion USD. Correspondingly, from 2011 Georgia has been exported over its mean value except for 2016. The annual growth rate exhibits high fluctuation but averaged to positive 10.73%. As for, the export share to GDP, it has increased steadily from 28.62 to 50.41 (See Graph 1).

Graph 1. Total Exports, Average Annual Growth Rate & Mean Value of Total Exports (2008-2017).

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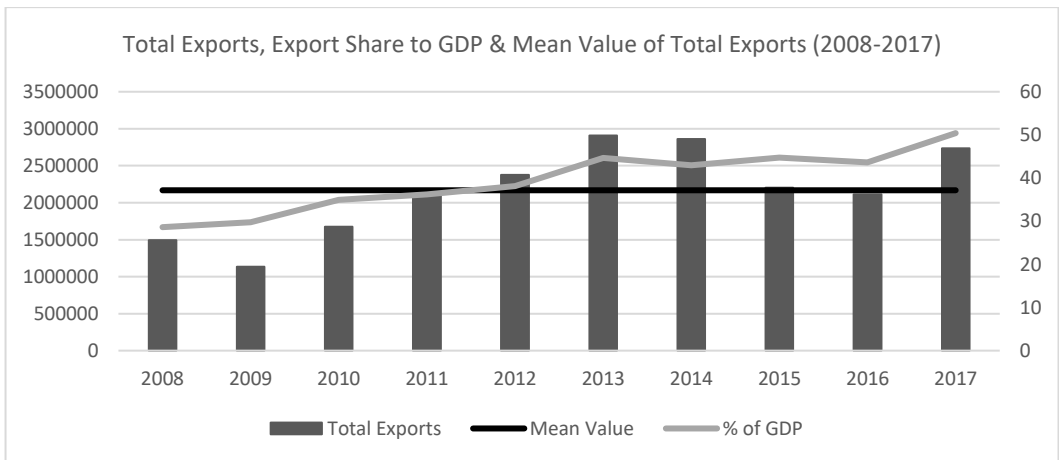
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https://wits.worldbank.org/wits/wits/witshelp/Content/Utilities/e1.trade_indicators.htm

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Source: National Statistics Office of Georgia; Authors own calculation

3.2 Trade structure by partner and product categories

Top export markets and their average share in total exports during 2008-2017 are as follows: European Union (21.87%), Commonwealth of Independent States (43.69%), Black Sea Economic Cooperation Organization (55.34%), Organization of Economic Cooperation and Development (37.13%) and GUAM countries (22.23%) (See Table 1).

Table 1. Top export markets by country groups and their export value in thousand USD alongside average share (%) in total exports (2008-2017).

Year	EU	CIS	BSEC	OECD	GUAM	Total
2008	335.153.8	540.884.8	884.007.9	749.559.2	338.714.6	1.495.345.2
2009	237.552.5	416.162.3	697.234.1	519.616.5	251.184.6	1.133.630.2
2010	309.189.5	676.618.2	898.098.3	742.692.0	374.325.9	1.677.306.9
2011	424.448.1	1.052.101.3	1.182.843.5	814.807.3	577.233.6	2.186.421.2
2012	352.950.4	1.244.575.8	1.326.382.7	796.116.4	805.398.3	2.376.635.4
2013	607.204.0	1.621.095.7	1.778.144.4	841.524.7	917.066.8	2.910.314.5
2014	624.201.4	1.465.298.7	1.676.758.4	943.526.1	689.105.1	2.861.045.2
2015	645.214.1	840.936.6	1.089.229.4	769.200.7	307.361.3	2.204.685.3
2016	565.531.0	737.522.4	967.355.2	737.263.1	227.738.7	2.112.922.0
2017	655.124.9	1.184.758.1	1.489.799.3	784.293.6	399.930.7	2.735.495.4
Av. Share	21.8726715	43.6984586	55.3429024	37.1352878	22.2351292	

Currently, one of the main concern of Georgia is the market penetration strategy regarding the EU as it represents the second largest export market for the country. The Association Agreement (AA) including Deep and Comprehensive Free Trade Area (DCFTA) prompted the dynamic increase in the value of Georgian exports to the EU, which doubled from 335.15 to 655.12 million USD with the market share of 23.94% at the end of 2017 (See Graph 2).

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Graph 2. EU market value in thousand USD and the share (%) in Georgian export.
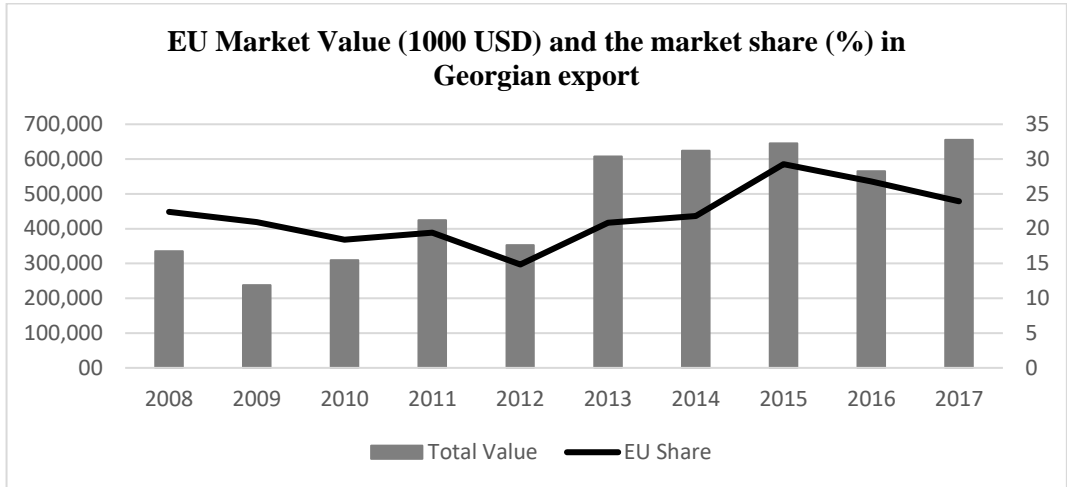
Source: National Statistics Office of Georgia; Authors own calculation

Top Georgian export products and the percentage change in the share of total export from 2008 to 2017 are as follows: Wine (+3.8%), copper ores (+7.49%), motor cars (+1.04), ferro-alloys (-6.59%), beverages, spirits (+6.05). Therefore, Table 2 exhibits the dynamic increase in all major product categories except the ferro-alloys (-6.59%) (See Table 2).

Table 2. Value of top Georgian export product categories in thousand USD and their % change in the export market share (2008-2017).

Year	Wine	Copper Ores	Motor Cars	Ferro-Alloys	Beverages
2008	36863	118265	113324	267242	138444
2009	31997	61868	78462	130081	123776
2010	41138	74504	227360	263966	152097
2011	54086	85135	450297	253617	192122
2012	64828	53535	587296	260578	233129
2013	128299	161633	703817	230748	356785
2014	180402	248008	517787	285806	444869
2015	95796	270601	179646	194766	263850
2016	113497	311703	166634	169265	299824
2017	170985	419805	234885	306932	417279
% Change in Export Share	3.8062006	7.4913745	1.0426459	-6.5947337	6.0512519

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

3.3 Demand side of Georgian export commodities in the world and EU area

Top Georgian export products include wine, copper ores, motor cars, ferro-alloys, beverages, and spirits (See Table 2). The aggregate demand for these commodities in the world/EU area seems to be highly inconsistent. However, it experienced a noticeable increment considering the overall performance from 2007 to 2017 (See Graph 3 & Graph 4).

According to Graph 3 & 4, the structure of the top imported products by the EU area and the world is perfectly matched. The top 10 imported products by HS4 products classification mostly consists of manufactured products like electronic machinery and equipment, vehicles, mechanical appliances, etc. As so, structural coherence of the main Georgian export products with the top imported products by the EU/World is far from perfect. However, convergence is held in terms of motor cars and pharmaceutical products.

Graph 3. Top 10 world import products (HS4) in trillion USD.
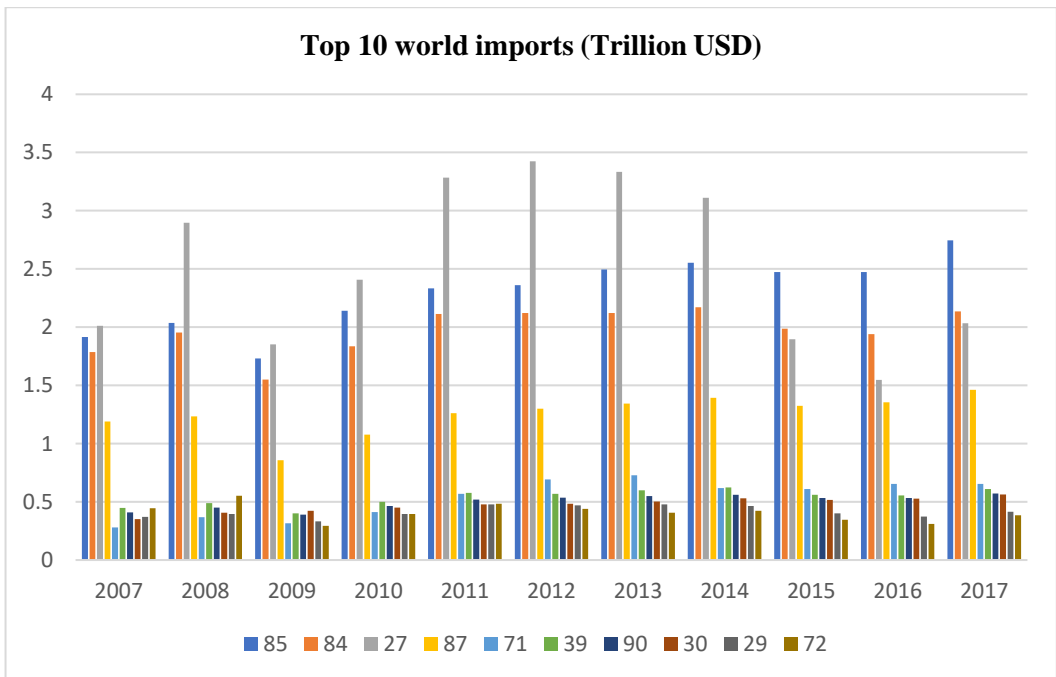
Top 10 world import products by HS4 classification and their corresponding product codes: (85) Electrical machinery and equipment and parts, (84) machinery, mechanical appliances, nuclear reactors, boilers, (27) mineral fuels, mineral oils and products of their distillation; bituminous substances, (87) vehicles other than railway or tramway rolling stock, (71) natural or cultured pearls, precious or semi-precious stones, precious metals, (39) plastics and articles, (90) optical, photographic,

cinematographic, measuring, checking, precision, medical, (30) pharmaceutical products (29) organic chemicals, (72) iron and steel.

Source: International Trade Centre; Authors own calculation

Graph 4. Top 10 import products (HS4) by EU 28 (Billion USD).
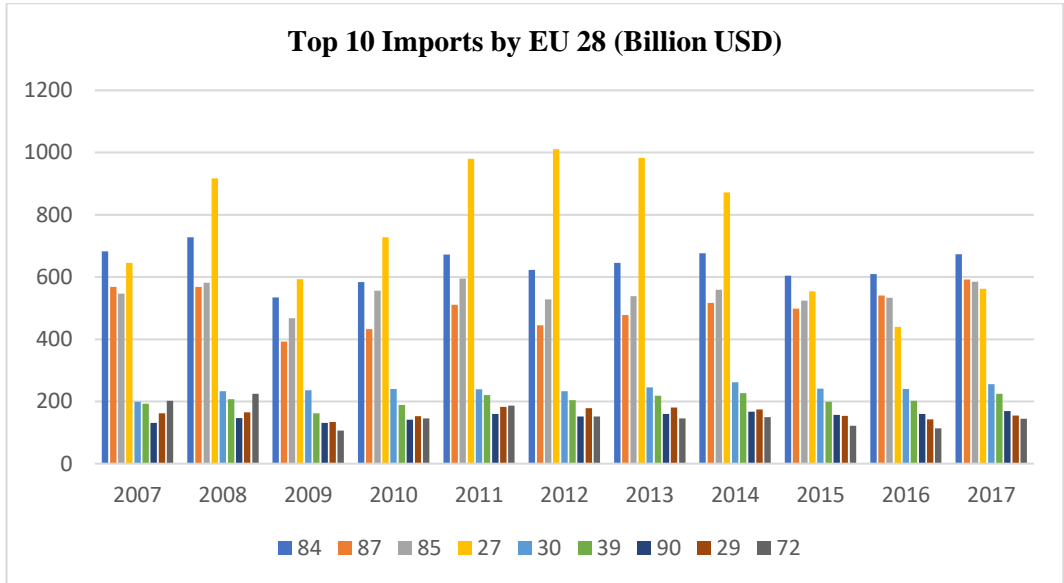
Top 10 EU import products by HS4 classification and their corresponding product codes: (84) Machinery, mechanical appliances, nuclear reactors, boilers, (87) vehicles other than railway or tramway rolling stock, and parts and accessories, (85) electrical machinery and equipment, (27) mineral fuels, mineral oils and products of their distillation; bituminous substances; mineral waxes, (30) pharmaceutical products, (39) plastics and articles, (90) optical, photographic, cinematographic, measuring, checking, precision, medical or surgical, (29) organic chemicals, (72) iron and steel.

Source: International Trade Centre; Authors own calculation

3.4 Trade indices

3.4.1 Revealed comparative advantage

Application of the RCA index helps us to reveal the portion of a country's export production that exhibits a relative advantage in a market. Accordingly, this paper examined 20 product categories including Wine, Copper ores, Motor cars, Ferro-alloys, Live animals, Pharmaceutical products, Beverages, spirits, Vegetable plaiting materials, Edible fruit and nuts, Mineral fuels, Sugars, and sugar confectionery, Preparations of meat, of fish or of crustaceans, mollusks or other aquatic invertebrates, Animal or vegetable fats, and oils and their cleavage products; prepared edible fats; animal or vegetable waxes, Lac; gums, resins and other

vegetable saps and extracts, Edible vegetables and certain roots and tubers, Live trees and other plants; bulbs, roots and the like; cut flowers and ornamental foliage, Products of animal origin, Dairy produce; birds' eggs; natural honey; edible products of animal origin, Fish and crustaceans, mollusks and other aquatic invertebrates, Meat and edible meat offal.

The results revealed the comparative advantage in 9 product categories, including: Live animals (L.A.), Pharmaceutical products (P.P.), Vegetable plaiting materials (V.P.M.), Edible fruit and nuts (E.F.N.) alongside top 5 Georgian export products, namely: Wine (W.), Copper ores (C.O.), Motor cars (M.C.), Ferro-alloys (F.A.) Beverages and spirits (B.S.).

Table 3. RCA index of 9 Georgian export product categories (2008-2017).

Year	W.	C. O.	M. C.	F.A.	L.A.	P.P.	B.S.	V.P.M.	E.F.N.	% Change in RCA
2008	13.13	37.52	1.90	79.54	1.01	0.64	16.17	3.00	6.54	137.2
2009	13.61	21.44	1.96	87.18	21.19	0.66	16.91	0.92	14.31	23.6
2010	13.23	14.84	3.68	88.27	15.93	0.75	15.73	0.84	11.08	6.5
2011	13.59	13.81	5.84	66.41	17.01	0.79	15.24	0.38	13.26	-5.9
2012	15.09	8.19	6.98	69.32	20.27	0.91	16.81	1.37	8.31	1162.8
2013	23.87	19.80	6.74	61.22	17.84	0.78	20.39	0.67	12.59	192.6
2014	34.20	31.23	4.82	69.37	13.96	1.35	25.85	0.76	12.85	44.3
2015	22.37	43.90	1.97	69.04	14.30	2.32	18.72	1.62	14.25	-91.7
2016	26.26	49.75	1.79	66.26	16.92	1.81	21.09	1.60	13.59	-10.1
2017	31.14	46.39	2.02	74.83	12.81	1.87	23.34	0.25	5.88	137.2

As for Pharmaceutical products, it reveals the comparative advantage after 2013, and the Vegetable plaiting materials exhibit inconsistence tendency (See Table 3). In addition, although the RCA values of Vegetable plaiting materials and Edible fruit and nuts decreased significantly, they maintained the comparative advantage. In general, all 9 product categories account for 60% of total Georgian export production (See Graph 5).

Graph 5. The share of 9 Product Categories with RCA>1 in Total Export.
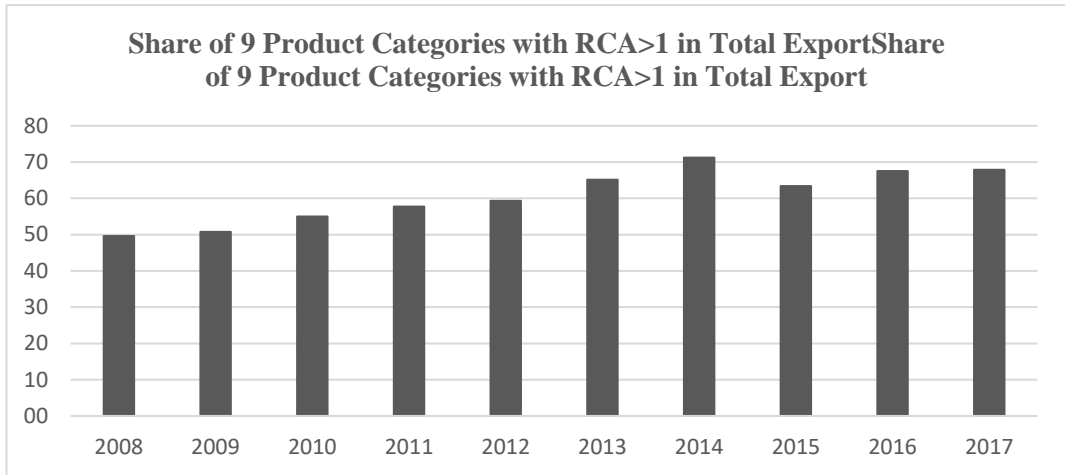
Source: Authors own calculation

The observed RCA values show the growing tendency for all the product categories except Vegetable plaiting materials, Edible fruit and nuts, and Ferro-alloys. According to the Table 3, following changes were detected regarding RCA index: Live animals (+1162.8%), Pharmaceutical products (+192.6%), Vegetable plaiting materials (-91.7%), Edible fruit and nuts (-10.1%), Wine (+137.2%), Copper ores (+23.6%), Motor cars (+6.5%), Ferro-alloys (-5.9%) Beverages and spirits (+44.3%).

3.4.2 Diversification degree of export products

Dependence of a nation on a limited number of commodities can trigger severe implications imposed by the trade shocks in terms of price instability of those commodities. As long as, developing countries are vulnerable to price instability of the exported commodities, measuring diversification degree of a country's export products is worth to be considered. In this regard, Georgia experiences a low degree of convergence with the world structure (See Table 4).

Table 4. Diversification Index of Georgian exports and number of exported products (2008-2017).

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Diversification Index	0.74	0.69	0.69	0.71	0.70	0.69	0.70	0.64	0.67	0.65
Number of Products	152	142	160	166	184	180	183	184	178	187

Although the number of total exported products increased significantly from 152 to 187, the value of the diversification index of Georgian export products did not change

much. It experienced a slight decline from 0.74 to 0.65, which is still high value (See Table 4).

3.4.3 Export/Import trade intensity indices

The EU share in Georgian export market is the smallest among other country groups (See Table 1) but holds the second place regarding the market size. The examination of the trade intensity by employing TI indices showed that the EU-Georgia bilateral trade relationship indicates a low-intensity pattern (See Table 5).

Table 5. Export/Import intensity indices (EII/III) of Georgia with the EU (2008-2017).

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
EII of Georgia with EU	0.48	0.45	0.43	0.47	0.39	0.54	0.55	0.73	0.64	0.58
III of Georgia with EU	0.60	0.61	0.64	0.69	0.75	0.69	0.65	0.65	0.66	0.61

According to Table 5, the EI index slightly increased from 0.48 to 0.58, and the II index does not experience noticeable changes.

4. Findings and conclusion

Since the very beginning, Georgia was the active player in international trade. In this regard, the geographical location of the country has a significant contribution. The natural endowment of being a trajectory between two giant markets prompts Georgia to evolve into the new mecca of international trade. In this regard, Georgian export performance indicates the positive tendency in many aspects, but still, there are a list of problems to be dealt with.

Within the last decade, Georgian exports increased by 54.66% along with overall trade turnover by 26.91%. From 2011, Georgia has been exported over its mean value. The export share to GDP increased by 21.79%. As for the export products, except the ferro-alloys, the value of all the major export commodities experienced dynamic increment. In addition, the study revealed the comparative advantage in 9 product categories, including top 5 Georgian export products. Together they account for <60%> of total Georgian exports. Most importantly, except for Ferro-alloys, the aggregate demand of these commodities in the world and the EU area experienced inconsistent but still noticeable growth from 2007 till 2017. On the other hand, Georgian exports are not so promising if we look at the top 10 products (HS4) imported by the EU area and the world, which mostly consists of manufactured products like electronic machinery, vehicles, mechanical appliances, etc. These products require highly industrialized sectors but unfortunately, Georgia experiences a lack of technological modernization in this regard. However, convergence between Georgian and the EU/world import structures holds in terms of motor cars and

pharmaceutical products. The low level of technological modernization can explain the modest performance of Georgian exports in the international market. Solution to this problem can be linked to the foreign direct investment (FDI), as it can enhance the capital accumulation in the export sectors with high growth potential and create positive externalities in terms of technology transfers and knowledge spillovers. Thus, directing the investment inflows in the most profitable export sectors can fill the gap between the actual performance of Georgian exports and its potential.

A bigger problem arose when the diversification index of Georgian export products was examined. Although the number of total exported products increased significantly, the value of the diversification index of export products remained high. As so, the low level of convergence with the world structure can cause the severe implications imposed by the trade shocks in the future. Therefore, stressing the importance of the export promotion policy changes, including the transparency of the accumulated export information. The accumulated experience of the exporting firms is the perfect guide for new entrants to become successful players and raise their chances to survive in a market. In fact, acquisition of this type of information is costly, thus, the local firms refuse to take the risk and expand their businesses to an unknown environment. For this reason, the flow of information should be organized through the state educational programs or by creating positive incentives for the exporting firms to share the experience. Currently, the Georgian government is running a similar program through the project of "Produce in Georgia" concerning export information transparency. The project grants Georgian producers to access the paid information provided by the top international research agencies, including "Euromonitor". In this regard, supporting local firms to transform into the exporters is an a priori for the diversification of the export products. Consequently, over a long period, Georgian export basket can be successfully diversified as the exporting firms will evolve through the Schumpeter's gale of creative destruction. Thus, Georgian exports will become more resistant to the trade shocks caused by the price instability of the commodities.

The significance of the main trade partners by country groups did not change much, except for the EU after the export embargos from Russia. Although Georgia experienced significant trade barriers imposed by Russia, it managed to diversify the export market to the EU through the DCFTA, which comprises reduction of the trade barriers to encourage the bilateral flow of goods and services. As a result, the value of exports to the EU doubled from 335.15 to 655.12 million USD. Apparently, the EU has the smallest share in Georgian export market and the level of the trade intensity is quite low. But, in accordance with the market size, the EU holds second place. In addition, the EU can be filtered as the new trade partner due to the ongoing process of Georgia's European integration, suggesting that there is much to trade between the parties. Thus, considering the market size of the EU and the unmatured trade intensity with Georgia evinces the importance of the region in the long-term perspective. On the other hand, reaping the maximum trade benefits from the EU market is not an

easy task due to the significant difference between the Georgian export basket and the composition of the top imported products by the EU member states. Therefore, as we have already mentioned, to catch up with the trend of the highly demanded import products by the EU, it is necessary to direct the FDI inflow to the export sectors with high growth potential, which can accelerate the modernization of those sectors through the profound benefits of the FDI. As a result, Georgia will be able to produce those highly demanded products and gradually converge its export basket to the composition of the EU imports.

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Management of Process and Infrastructure in Higher Education Institution

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Abstract

The work is dedicated to analyzing the management challenges of higher education institutions, which are discussed from two different angles: the management process and its supporting - ergonomic and infrastructural issues. The work is accomplished under the auspices of the Human Potential Management Laboratory at Ivane Javakhishvili Tbilisi State University. The present work is a continuation of the previous research items, which were devoted to studying the perceptions of university challenges. The work is based on the qualitative analysis of the Georgian higher education system and Ivane Javakhishvili Tbilisi State University management mechanisms, also the research analysis on the attitude towards the current challenges of TSU Economics and Business Faculty students and the academic personnel. 62% of the total composition of the academic personnel participated in the surve. The questionnaire included 48 closed and two open questions. The data was developed in the program "SPSS-Statistics". Preliminary hypotheses have been verified by statistical methods. Person correlation test, the Chi-square tests and linear regression, namely the ANOVA test are used to analyse the results. The analysis of the challenges based on the qualitative and quantitative research became the basis of searching ways to improve the management strategy of higher educational institutions. The challenges identified in the work and the suggested recommendations will help the stakeholders interested in the issue/field.

Keywords: higher education institution, management system challenges, ergonomics, infrastructure

Introduction

Improvement of the management process is ensured: by following the general fundamental principles of the management and taking the contextual features of the management object into account during the decision-making process. While implementing the management of higher education institutions, the following

circumstance should be taken into consideration: if the university teaches along with doing scientific activities it is in the best position, since this implies that it has more opportunities for encouraging scientific work and, therefore, has a better quality academic staff.

The management status of the higher education institution is shown in the following main aspects: staff selection and personnel reserve management system; Personnel development and career management; Personnel assessment and motivation mechanisms; Control mechanisms; Level of ensuring, planning and organization of a process; The management condition of these directions reveals two fundamental conditions for the success of the higher education institution: the quality of fairness and democracy, without which ethical principles, academic freedom, impartiality and adequate quality cannot be maintained.

Fairness is the basis for a proper motivation, career development and ultimately for attracting and retaining the best personnel; While the high level of democracy in the conditions of high-qualified personnel (which is a higher education feature) is the basis for academic freedom, high quality decision making and maintaining justice.

The work is based on analysis of scientific researches, books and reports about higher education management (Antia, Vakhtang;, 2018)**,** (Al-Hawaj, Abdulla Y. ; Elali, Wajeeh;, 2008)**;** (Hussey, Trevor ; Smith , Patrick ;, 2010)**;** (Babo, Rosalina; Azevedo, Ana;, 2012)**;** (Kasradze, Tea, 2018) (Meek, Goedegebuure, Santiago, & Carvalho, 2010)**;** the qualitative analysis of the Georgian higher education system and Ivane Javakhishvili Tbilisi State University management mechanisms, also the research analysis on the attitude towards the current challenges of TSU Economics and Business Faculty students (Gulua, Ekaterine, 2017) and the academic personnel (Gulua, Ekaterine;, 2018) 72 academic personnel - 62% of the total composition and 180 randomly selected, mainly the students of the fifth - eighth term participated in the survey.

The challenges of higher education institution management system: The main purpose of higher education institution depends on the level of knowledge of the academic personnel and the proper coordination of its work. The quality of higher education is directly created by academic personnel. The correct selection of the latter results in the implementation of other processes and functions at the appropriate level.

Academic personnel are selected in the higher education institution of Georgia by a competition. However, unified standards for selection criteria according to specialties are not developed, which would enable the quality of higher education management at a macro level. Quality process management in higher educational institutions is carried out by accreditation and authorization mechanisms, but it cannot provide regulation of the content of the process, in particular, the correctly developed programs and the syllabus issues also to be properly delivered to a student.

The survey of the academic personnel has shown that the current system of personnel selection is acceptable for 58% of the respondents while 36% of the respondents gave negative answers to this question **(See Diagram1(16)).**

Diagram 1(16). Is it acceptable for you to select personnel by competition?
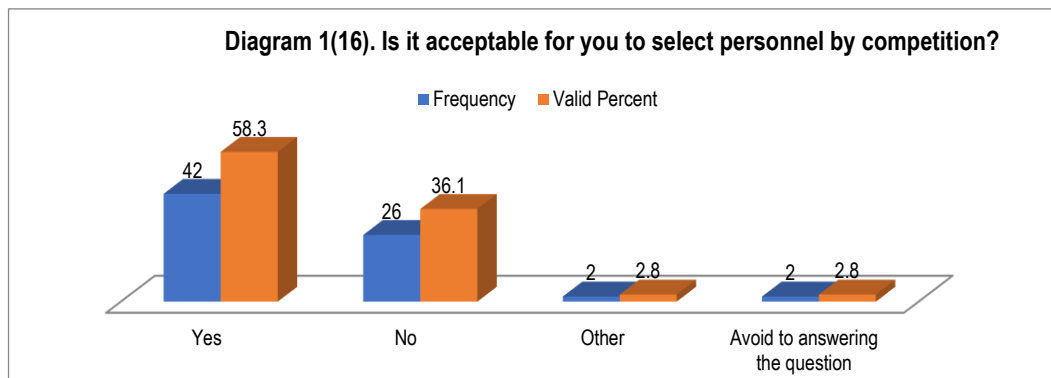
The terms and criteria of selection and the decisions connected with it taken by the academic personnel are considered transparent by 22% and 46% have a negative answer to this question; 31% consider that the development of uniform selection parameters is impossible **(See Diagram 2(17).**

Diagram 2(17). Are competition selection rules, criteria and decisions transparent?
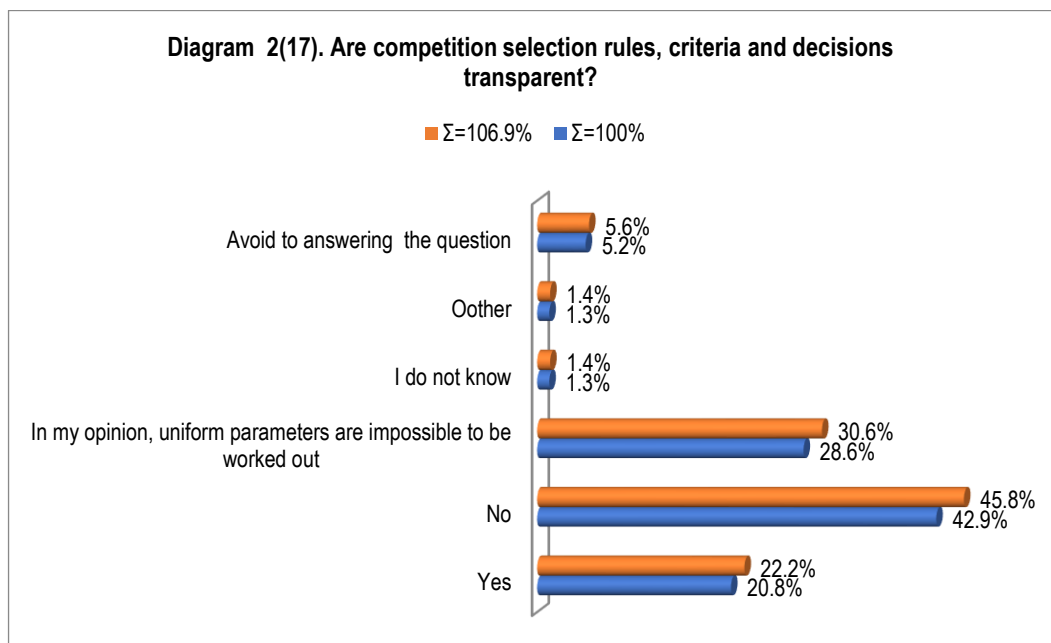
In other research, in which we studied the qualities and reasons of conflicts at TSU Economics and Business Faculty, we got interested in how transparent and objective were the criteria for selection the personnel according to the interviewed academic staff the number of which was 76. 29% gave the answer - "always", and 57% - the

answer - "often" (Placeholder2)**.** 83% of the interviewed respondents believe that selection of personnel by competition promotes the growth of professionalism and improvement of teaching quality (in total 83%); 36% considers that the contest causes conflicts, 3% thinks that selection of personnel by competition is encouraging team work **(See Diagram3(18).**

Diagram 3(18). Selection of personnel by competition improves:
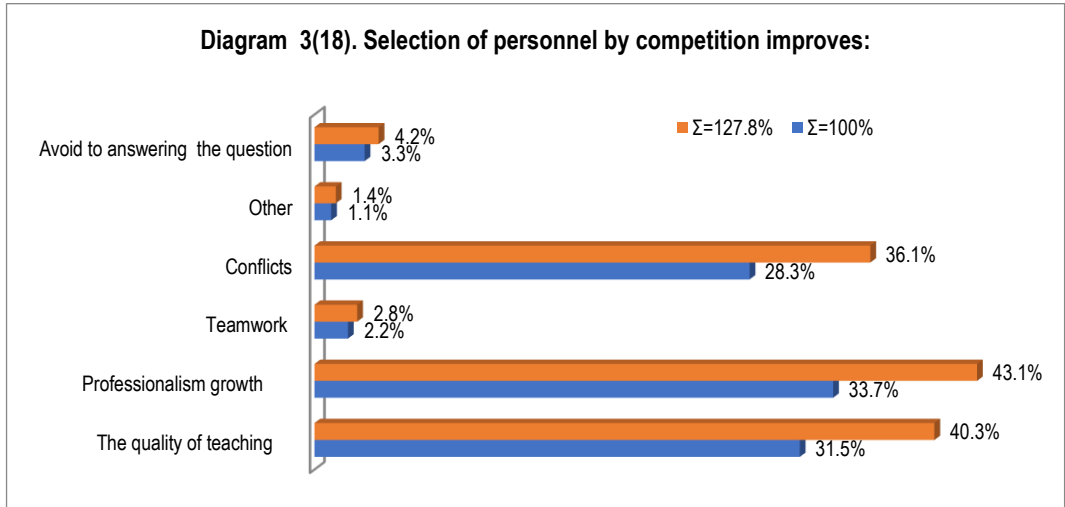
The answer to this question has been verified by another question, 61% of the respondents named the selection of staff by competition as the main reason for conflicts in the organization which is contrary to the outcome of the previous question. 44% - fight for power; 12.5% of the respondents think that conflicts take place in the organization for healthy purposes, namely, due to scientific and business disputes **(See Diagram 4(20).**

Diagram 4(20).The main reasons for conflicts in your organization are:
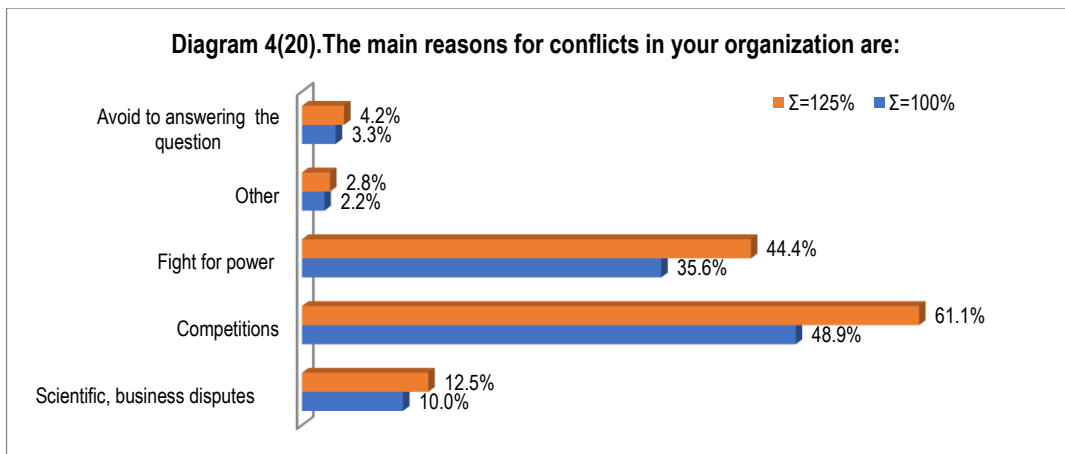
During the selection of academic staff at a higher education institution the important condition is the quality of a person's scientific work. In this regard, it is important how

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much the copyright is protected in general. Authorship of the original scientific papers significantly determines the scientist's authority. About 25% of the interviewed staff have not heard about copyright infringement, 8% believe that such a fact has not been observed; 46% reported that copyright infringement cases are rare, 18% believe that similar facts are frequent **(See Diagram 5(23).**

Diagram 5(23). Cases of copyright violations
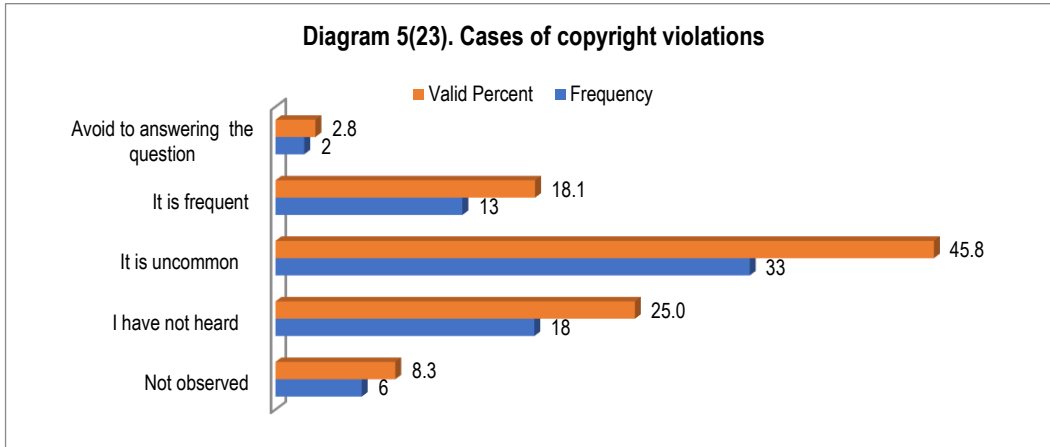
It is the best model for career management in any organization when each employee is aware of his/her career path and, moreover, he/she has taken part in the planning process of position and professional development.

The study found that for 39% personal career advancement criteria and time frames are clear (it is noteworthy that there was no official reason for such a response in the specific situation. The study was conducted before submitting the "Professors' Assessment Criteria Project"), 22% believes that these conditions are unclear for everyone, 15.3% thinks it is obvious for exceptions, 18% indicates that they are not only informed about career advancement, but it is even unclear whether they will keep the current position **(See diagram 6(13).**

Diagram 6(13). Are the conditions and time frames for your career development officially clear?

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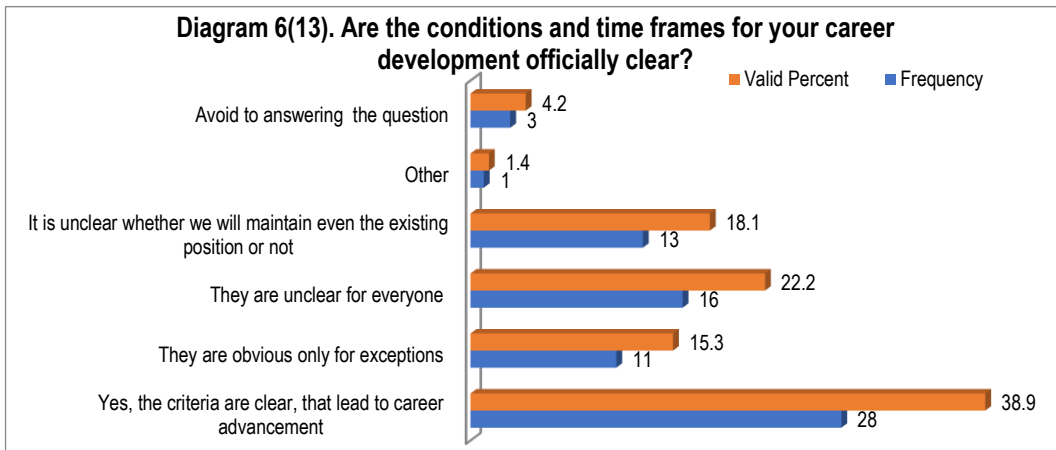
With the best modern experience a person is not promoted if he/she does not have a trained person who will replace him/her and do the job well too. The promoted person is responsible for his/her successor's future activity. This condition is especially relevant when the main resource of the organization is knowledge and its heredity (Gulua, Ekaterine;, 2017); (Gulua, Ekaterine; Kharadze, Natalia;, 2018)**;** (Kharadze, Natalia; Gulua, Ekaterine;, 2018)**.** This concept is a key value for higher education and scientific institutions. 71% do not know who will change them, 14% know and 10% - only suspect **(See Diagram 7(14).**

Diagram 7 (14). Do you know who will replace you?
- Frequency
- Valid Percent

	Yes	No	I only have an assumption	Avoid to answering the question
Frequency	10	51	7	4
Valid Percent	13.9	70.8	9.7	5.6
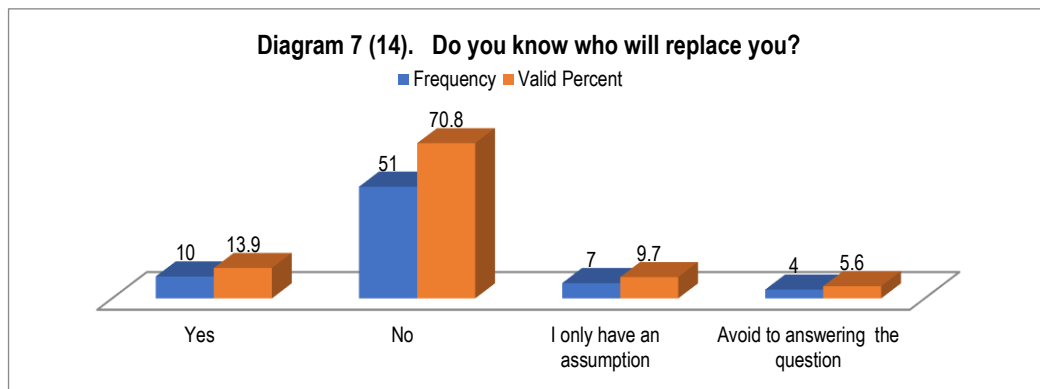
Involvement of students' decision in lecturer evaluation process is one of the approved methods of lecturers evaluation. Qualitative analysis shows that the existing practice cannot have the power of the working mechanism, because the lecturer does not have the right to a free application on the subject according to regulated schedules from the administration; In the database the students are restricted to choose lecturers, as the bases are open step by step. Students' choice would give us a real rating of lecturers if a lecturer had a right of a free application in his/her profile subjects and also the bases would be opened for all lecturers simultaneously.

57% (43%) of the interviewed academic personnel believe that the lecturer's knowledge and authority influence the choice of lecturers by students; 36% (27%) - loyal attitude towards a student; 25% (19%) think that the student's choice is determined by electronic databases managed by a special program, 8,3% (6,3%) of the lecturers consider that students choose lecturers unconsciously, 4,2% (3,2%) refrained from answering **(See Diagram 8(15).**

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January - June 2020
Volume 6, Issue 1

Diagram 8(15). Students choose lecturers mostly according to the following signs:
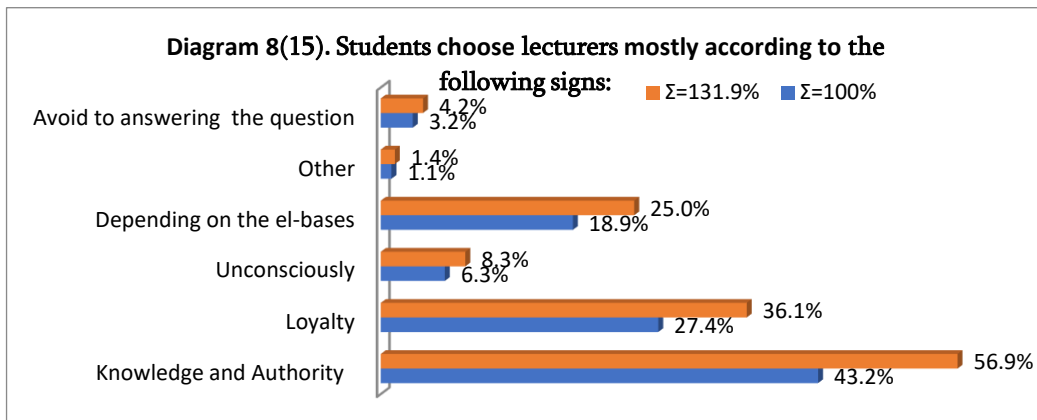
It is interesting to compare this data with students' attitude. The research on students found that 37% choose lecturers according to professionalism and competence, 35% - according to loyal attitude towards students, 27% believe that the bases restrict their freedom of choice, 2% say that they cannot make a choice.[1] The analysis of students' attitude towards professors assessment criteria showed that the vast majority of students prefer the quality of the conducted lecture among the lecturers' assessment criteria and, if possible, will make his/her choice with **this criterion** (Kharadze, Natalia; Gulua, Ekaterine;, 2018)**.**

The main indicator of the proper management process in the organization is the culture of established relationships between colleagues. 62.5% of the interviewed academic staff think that relations in the organization are calm and positive, 28% expressed negative opinions to this question **(See Diagram 9(26).**

Diagram 9(26). Relationships in the organization are:
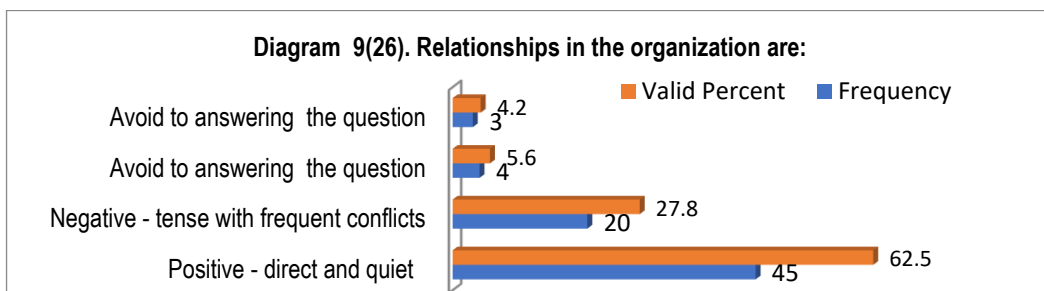
27% of the students have never noticed lecturers' disloyal and unfriendly attitudes towards their colleagues[2], while 78% of the students think that loyal and friendly relations are obvious (15,6%) and frequent (62,2%).[3] The intensity of informal

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[1] Gulua Ekaterine. Modern Challenges of Higher Education. *Economics and Business, Refereed and Reviewed International Scientific and Practical Journal of the Faculty of Economics and Business, Ivane Javakhishvili Tbilisi State University*, (2017 April-June Volume X, N2). Diagram 11, pg. 120.

[2] The Same; Diagram N16, pg. 124.

[3] The same; Diagram N15;pg.123.

relations also shows the level of relationship in the organization. The research of organizational culture of TSU Economics and Business Faculty revealed that 53% of the interviewed academic personnel (76 persons) sometimes participate in informal relationships 13% - never, 12% and 22% of the respondents indicated the answers "always" and "frequently" (Kharadze, Natalia; Gulua, Ekaterine;, 2018).

The management system has been positively assessed by 6% of the academic staff, 13% had an extremely negative position, and the majority considers it satisfactory. **(See Diagram10(31).**

Diagram 10(31). Organization management system is:
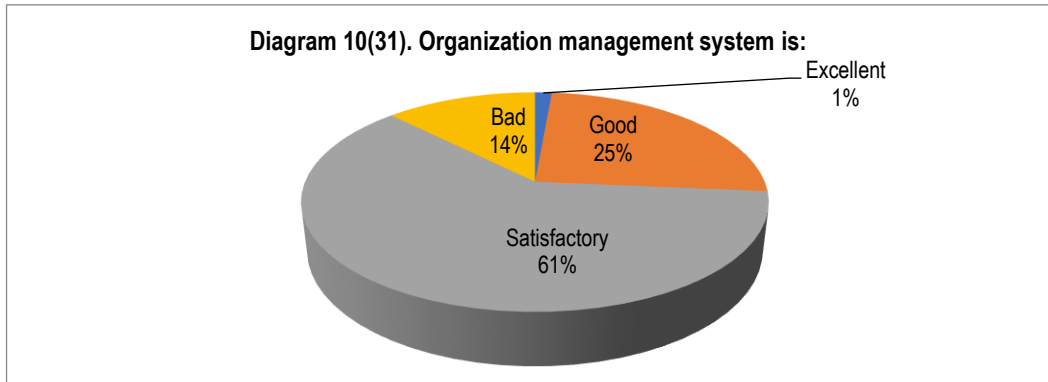
The abovementioned question was verified by the following question - 43% of the respondents believe that bureaucratic barriers prevail in the management, 36% assess the system as democratic and 17% - as chaotic **(See Diagram11(30).**

Diagram 11 (30). Organization management system is:
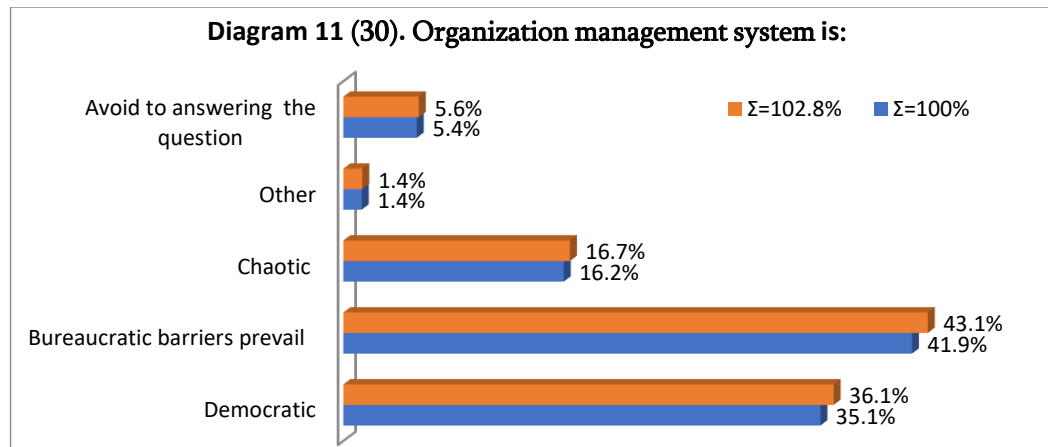
According to the students' survey results, 27% think that bureaucratic problems are severe in the administration, 38% think that it is noticeable, 30% think that it is less noticeable and 5% think that there is not such a problem in this direction.[1] The

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[1] The Same; Diagram 18; pg. 126

efficiency of the management system would be revealed by encouraging the supportive projects and activities of a knowledge triangle. However, on the example of the Faculty of Economics and Business, these links are very weak and spontaneous despite the great interest of business sector (Gulua, Ekaterine; Mikaberidze, Akaki, 2015). The knowledge-based management system, organizational culture allows for encouraging progressive, innovative ideas in any type of organization (Gulua, Ekaterine; Kharadze, Natalia, 2014), which becomes a fundamental basis for a real development, especially in the conditions of highly qualified personnel (Gulua, Ekaterine, 2013); (Gulua, Ekaterine;, 2014).

It is interesting to know how the academic personnel are reporting their positions. For 57% it is a board meeting, 46% select an informal environment, 4% - Social Network, 26.4% speak about the problems at all official meetings, almost 10% do not talk about problems. **(See Diagram 12(33).**

Diagram 12(33). I talk about the existing problems:

- Σ=141.7% Σ=100%

Category	Σ=141.7%	Σ=100%
Avoid to answering the question	1.4%	1.0%
Other	1.4%	1.0%
Basically I do not talk	9.7%	6.9%
In social networks	4.2%	2.9%
In an informal environment	41.7%	29.4%
At the chair session	56.9%	40.2%
At every official meeting	26.4%	18.6%
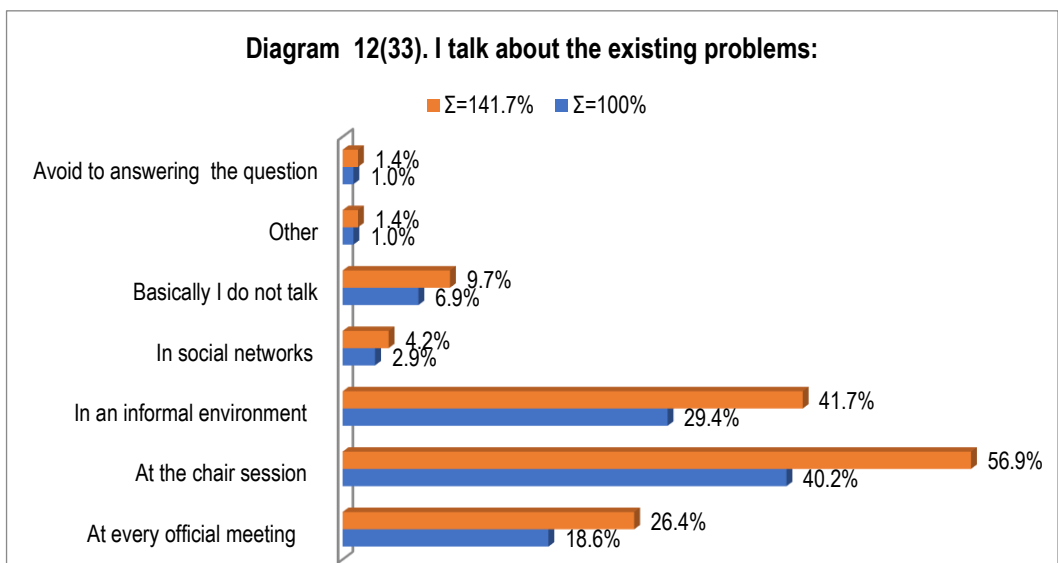
The indicator of the quality of democracy in the organization is the practice of expressing opinions also in an official form, in writing. Based on the research conducted under the auspices of the Human Potential Management Laboratory, the aim of which was to study the organizational culture at the university. 76 academic staff members were interviewed. The research analysis has shown the following: 19% (14) of the academic personnel indicate that they "always" and "frequently" express their position in an official form, in writing, 36% (27) sometimes use this form of expressing their position, 42% (32) of the academic personnel indicate the answer "never", and 4% (3) refrain from answering this question (Gulua, Ekaterine; Kharadze, Natalia;, 2018). The loyal attitude towards the employees' positions indicates to progressive and healthy processes in the organization. (76 units) 71% of the interviewed academic personnel in the research of organizational conflicts

unambiguously expressed that showing their opinion causes an aggression in the organization and 24% answered "no", 94% of the administrative staff reported that their opinion often causes an aggression. Interestingly, the respondents of all categories (458 respondents were interviewed in total) confirmed this negative situation (Placeholder4).

An important representative body of the faculty is the board, 28% (100 units) of fixed academic personnel are the members of the board according to the data of April 2018. 70% of our respondents did not turn out to be the members of the board and 16.4% reported that they are actively involved in discussions at the Faculty Council **(See Diagram 13(34).**

Diagram 13 (34). At the Faculty Board:

Σ=100%

I only express my position by voting	69.9%
I only express my position by voting	4.1%
I rarely express my opinion	9.6%
I am an active member	16.4%
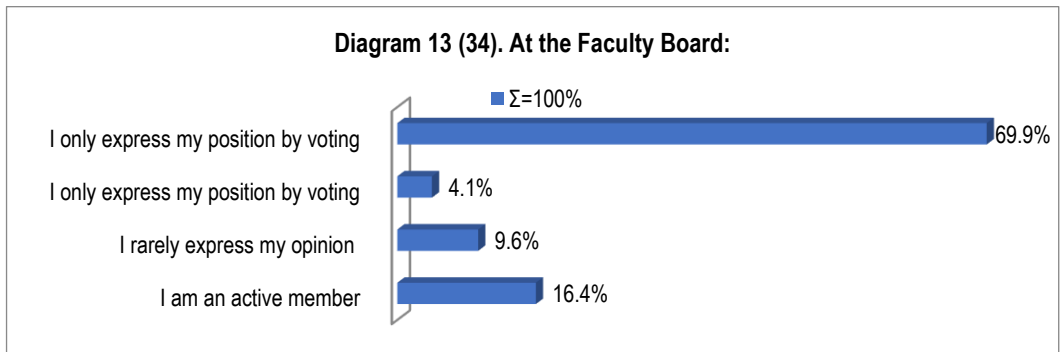
It was interesting to us how the respondents interviewed by us evaluate the board members. It was found out that 49% of the survey participants do not have information about the events in the board, 31% said that only a certain group is active in the board, 11% think that no one is active, 7% think that the activity of all members is high **(See Diagram14 (35).**

Diagram14(35) At the Faculty Board:

Valid Percent   Frequency

	Frequency	Valid Percent
Avoid to answering the question	2	2.8
I do not have information	35	48.6
Basically no one is active	8	11.1
A certain group is active	22	30.6
Activity of all members is high	5	6.9
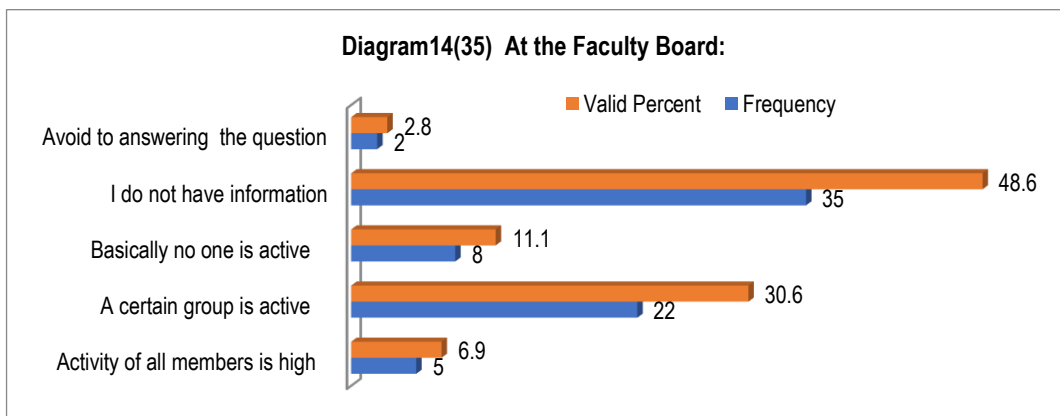
The fundamental basis of the organization functioning is the perception of justice from the members of the organization. 24% consider that the management system is fair, 51% consider the system to be dependent on individuals' good will, 7% have an

extremely negative response to this question, 3% report that they do not know about it, 8% refrained from answering, and 7% offered us their own variations **(See Diagram 15(43).**

Diagram 15(43). Do you think the University management system is fair?

■ Valid Percent

Category	Value
Avoid to answering the question	8.3
Other	6.9
I do not know	2.8
No	6.9
It only depends on the good will of the individuals	51.4
Yes	23.6
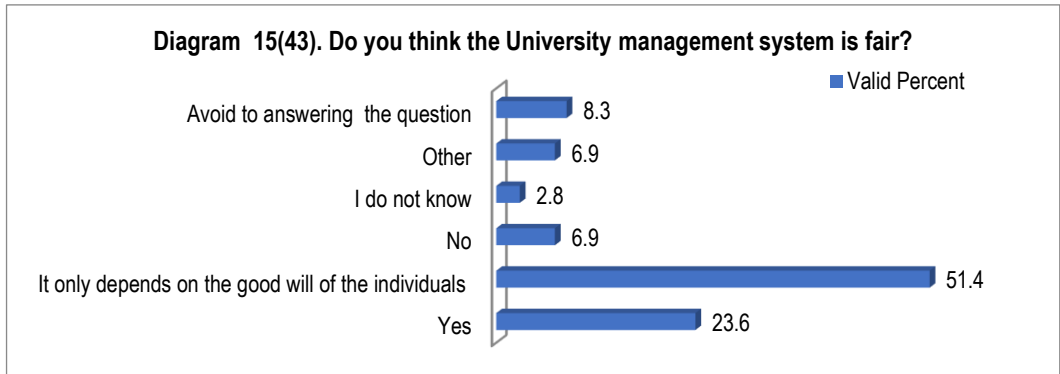
It is the most important expression of justice, whether there are equal working conditions in the organization, or there is a discrimination? The extreme polarization of the answers was observed here - 47% think that the working conditions are equal, 50% think they are unequal and 3% refrained from answering **(See Diagram16(22).**

Diagram 16(22). Are all employees working on equal terms?

■ Frequency ■ Valid Percent

	Yes	No	Avoid to answering the question
Frequency	34	36	2
Valid Percent	47.2	50.0	2.8
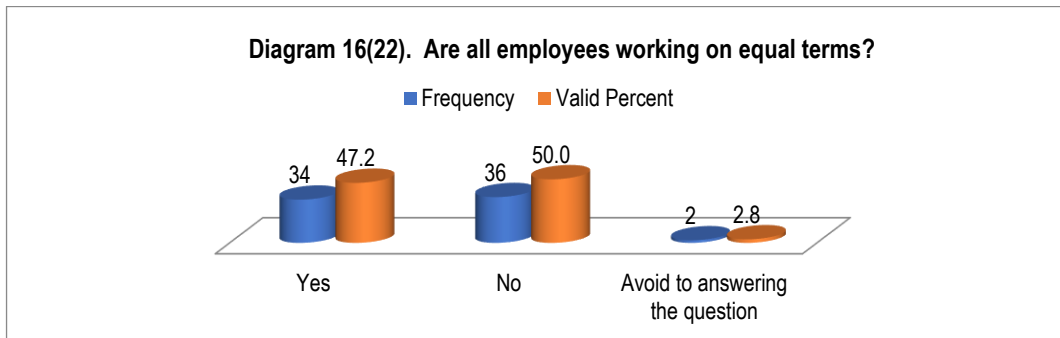
The students' survey showed that 92% of the respondents believe that lectures and seminars are not provided with equal technical conditions and 8% think that the conditions are equal. [1]

Based on the analysis of the abovementioned issues and scientific works (Kasradze, Tea, 2013) (Locke, William; Cummings, William K.; Fisher , Donald;, 2011)**;** (Locke, William; Cummings, William K.; Fisher , Donald;, 2011)**;** (Kasradze, Tea, 2016)**;**(Scott, Amy; Hershey, Metcalfe, 2006)**;** (Kasradze, Tea; Zarnadze, Nino, 2018) ; (Kasradze, Tea, 2014) the following important issues[2] were identified from the management challenges:

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[1] The same; Diagram 17, pg.125

[2] https://www.tsu.ge/ge/about/budget/

The main challenge in higher education management processes is the insecurity of democratic and fair principles. While this is the best form of management for the organizations, where the majority of their staff is highly qualified and has a high competence.

Non-transparent, unpredictable processes of management facilitate an insecure environment, maintain the culture of distrust; Prevent democracy and justice in the organization;

An important challenge is to develop and implement copyright protection mechanisms;

High and long-term stages of career development prevent attractiveness of the field for talents, highly qualified human resources;

The absence of working mechanisms for the career reserve system management of the academic staff hinders the attraction, preservation and stable growth of the best human resource;

The existing system of personnel selection does not provide transparency, trust, it promotes causing conflicts, blocking democratic processes in the organization. Thus, this system significantly hinders the fundamental principles of university success, such as ethics, academic freedom, impartiality and quality;

The formality in management processes is felt in the inability of the assessment system of lecturers by students. This process does not have a function of a managing mechanism, at the same time an evaluator's freedom, responsibility and competence are not shown;

In the existing conditions, representative elective bodies create an imitation of democracy, they cannot be creators of a real value.

Ergonomic and infrastructural challenges of higher education

It is impossible to give the proper quality of higher education services to the user – to the student without the ergonomic and infrastructural factors providing the process such as:

Well-equipped lecture and seminar halls for active teaching methods, rooms for academic personnel for individual work; a library, student groups' working space for working on team projects, proper size of auditoriums for introduction of active teaching methods, modern technical equipment, appropriate furniture, eating place, sports halls, incentives for students' informal relationships and students' relaxation environment;

Correctly regulated curriculum, an organized system of student services, correctly defined norms of loading for professors, administrative and technical personnel, electronic devices providing learning, scientific and management processes - the proper system of electronic proceedings, e-databases, proper devices of information

storage. Proper tools of communication, flexible methods of timely delivery of information, means of providing internal and external formal or informal networks.

Proper lighting, heating, conditioning, noise regulating systems, sanitary-hygienic norms, proper lifts, safety management;

Although different universities are in a different position in this regard, however, development of technique and technologies gives more opportunity to support the education system. The first university of Georgia in terms of ergonomic and infrastructure condition can be said to be in a especially difficult state.

From the interviewed academic personnel 1 person positively evaluates the infrastructural situation, 59% think that it is satisfactory, 44% evaluate the situation as difficult, and 1 refrained from responding **(See Diagram17(39).**

Diagram 17(39). Infrastructure condition is:

🟧 Valid Percent 🟦 Frequency

- Avoid to answering the question — 1, 1.4
- Terrible — 32, 44.4
- Satisfactory — 38, 52.8
- Good — 1, 1.4
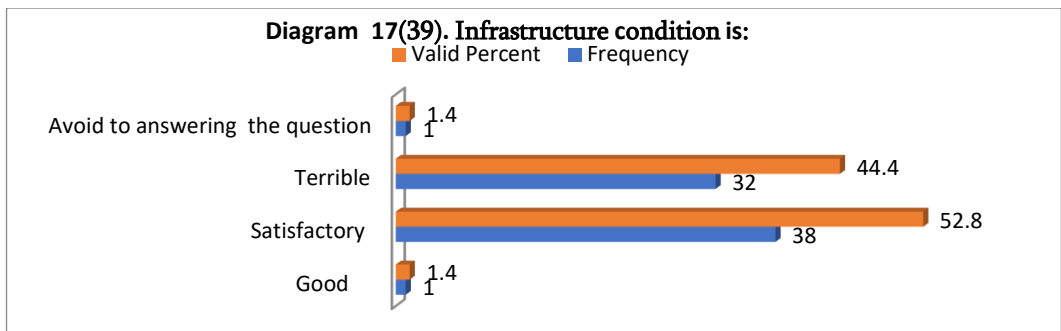
While assessing the condition of the TSU infrastructure, students are more categorical. 87% think that the situation is hard in this regard, 12% think it is average, 1% think it is very good[1].

An important resource for educational institutions is textbooks, qualifications of the employed people and the quality of services provided depend on it. 56% of the interviewed lecturers buy the necessary textbooks themselves, 44% use the resources existing at the university **(See Diagram 18(40).**

Diagram 18(40). Required textbooks:

🟧 Σ=111.1% 🟦 Σ=100%

- In most cases I buy them myself — 62.5%, 56.3%
- Are provided by the University, I use its library — 48.6%, 43.8%

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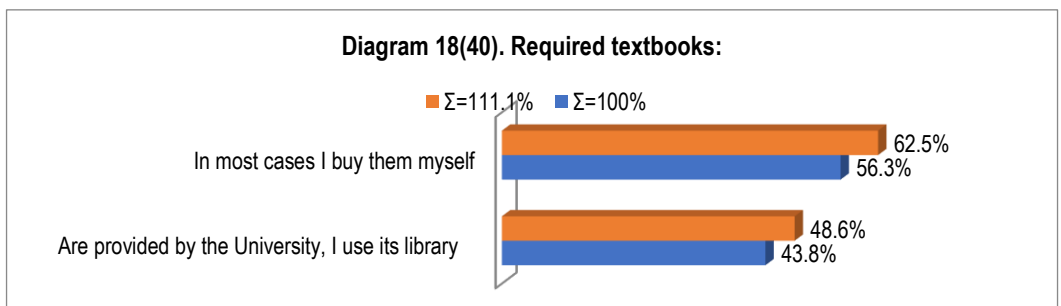
[1] The same; Diagram 24, pg.130.

ISSN 2411-958X (Print)
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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Pedagogical and scientific work is known to be related to noise because the person in parallel has to communicate with dozens of students, does teamwork with colleagues, has to attend sessions, board meetings. The necessity of constant suppression of the voices leads to a teacher's professional illness – it provokes diminished hearing. Therefore, students and lecturers' desks and chairs, the door of the room should not make a noise when moving. It is also important for the scientist after contact hours with students to have a cozy noise-free working environment for doing individual work, for evaluating students' papers, for scientific work which will help to restore energy, because this type of work is creative and needs a high level of concentration for thinking and attention.

71% of the respondents reported that they have a cozy working environment in the university building, and 26% think that they don't have such an environment, 3% refrained from answering this question **(See Diagram 19(47).**

Diagram 19(47). Do you have a cozy working environment at the university?
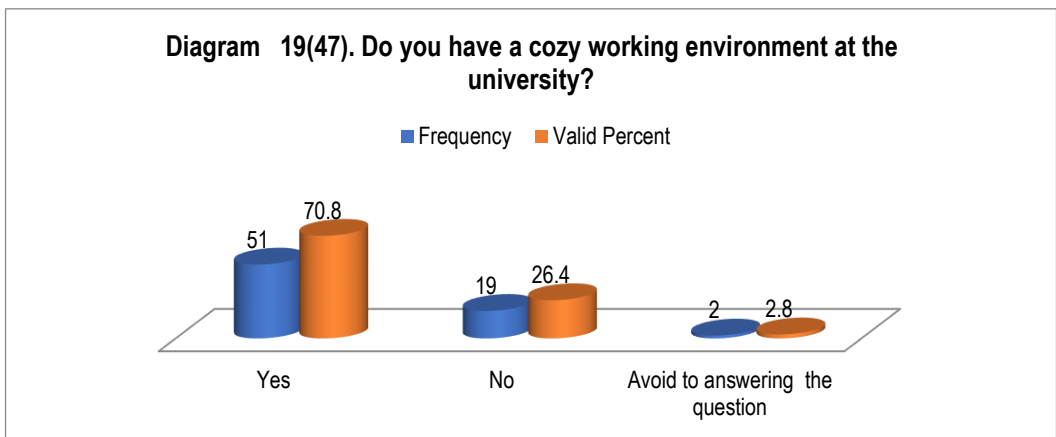
 The qualitative analysis of the existing situation shows that only professors and in exceptional cases other categories of academic personnel who work in university scientific-research units or in administration are provided with an individual working room (Gulua, Ekaterine;, 2011)**.** Their number does not actually exceed 30% while at the world's leading universities for scientific work, not only academic personnel, but also doctorate students are provided with an individual working place.

For evaluating the process of administering we also examined the condition of technical means. 24% never had any problems with the electronic bases, 40.3% rarely had - 36% of the respondents have responded to this question negatively **(See Diagram 20(36).**

Diagram20(36). Have you had problems with the el-bases?

■ Frequency ■ Valid Percent

	No	Rarely	Yes
Frequency	26	29	17
Valid Percent	36.1	40.3	23.6
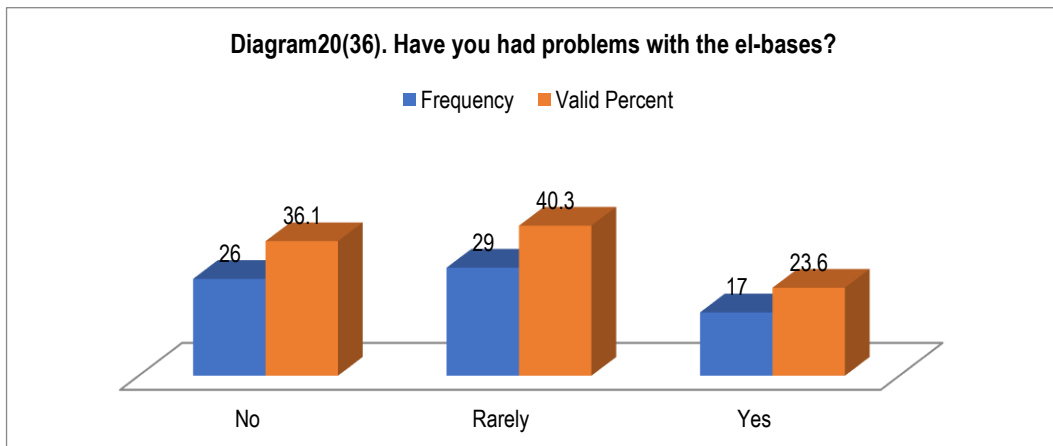
26% of the interviewed students see the same problem severely, 36% often have problems with electronic bases, 30% - rarely have, 8% did not have the similar problem [1].

How much free the lecturers are when choosing work schedule and content - is an important question because the prestige of work and attitude towards an employee are determined by this criterion. is determined by and. It has turned out that 31% are in good condition in this respect and 69% cannot choose a teaching discipline and work schedule **(See Diagram 21(32).**

Diagram 21(32). Work schedule and lecture courses:

■ Valid Percent

Are basically chosen by myself	It depends on the distribution of hours
30.6	69.4
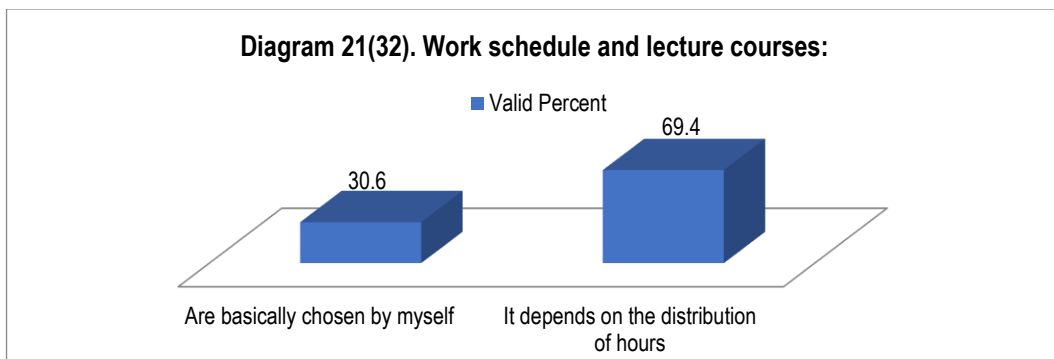
The time for students' studies is also not correctly planned, which has been demonstrated by the research conducted under the auspices of the Human Potential Management Laboratory. In particular, it has been revealed that the vast majority of students are employed, they finish work at 18 o'clock in the evening and the lectures in better case begin at 18 o'clock - the time required for transportation is nor taken into consideration, and in some universities learning begins in the morning hours or at 17 o'clock, it shows that such a schedule fundamentally objects to its implementing from the student's side, it makes a rule violation become a norm ("Prishtina"sh.a,

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[1] The same; Diagram 22, pg.129

ISSN 2411-958X (Print)
ISSN 2411-4138 (Online)

European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

March 2013)**;** (Kim & Mauborgne, 2000)**;** (Kharadze, Natalia; Gulua, Ekaterine, 2017)**;** (Crawford I, M. Keen and S. Smith, 2009)**;** (Kharadze, Natalia; Gulua, Ekaterine, 2017)**.**

A lecturer's qualification is significantly defined by the depth of knowledge, which is directly related to specialization, it was found that 6% are specialized in 1-2 subjects, 33% are specialized in 3-4 subjects, 20% - in 5-6 subjects, 42% had to study 7 and more subjects, it is too much to speak about the specialization of the latter, but it is not surprising, the change of the Soviet economics had a special impact on the specialty curricula of Economics and Business Faculty direction, respectively, studying disciplines also changed or radically changed their content. And working experience of a large part of the respondents, as I have mentioned earlier, is quite high **(See Diagram 22(45).**

Diagram 22(45). How many subjects did you have to teach at the university during your career?
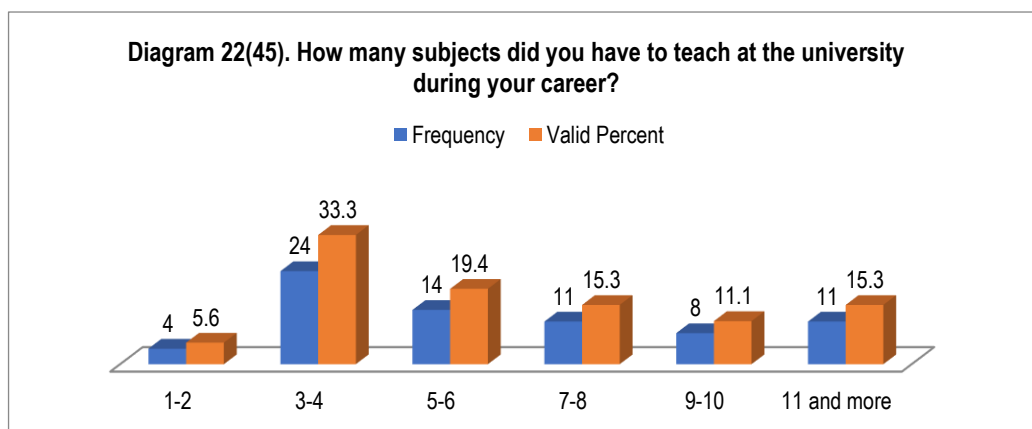
Along with the above-mentioned challenges, the reduction of the first choice of TSU as the preferred university by school-leavers also indicates the existence of important problems in the organization and the need for anti-crisis and contextual decision making. Consequently, priority directions should be defined that will help raising the university ranking (Gulua, Ekaterine, 2012)**.**

Since the study involved the academic staff of the Faculty of Economics and Business, we were interested how they evaluated the university budget management, as they were able to state the competent opinion. It has turned out that 64% are not informed in this respect, which basically can be explained by their lack of interest in this issue, 8% are satisfied and 26% - dissatisfied**(See Diagram 23(41).**

Diagram 23(41). Are amounts of the University budget optimally distributed?

■ Valid Percent ■ Frequency

- Avoid to answering the question: 1.4 / 1
- No: 26.4 / 19
- I am not competent: 63.9 / 46
- Yes: 8.3 / 6
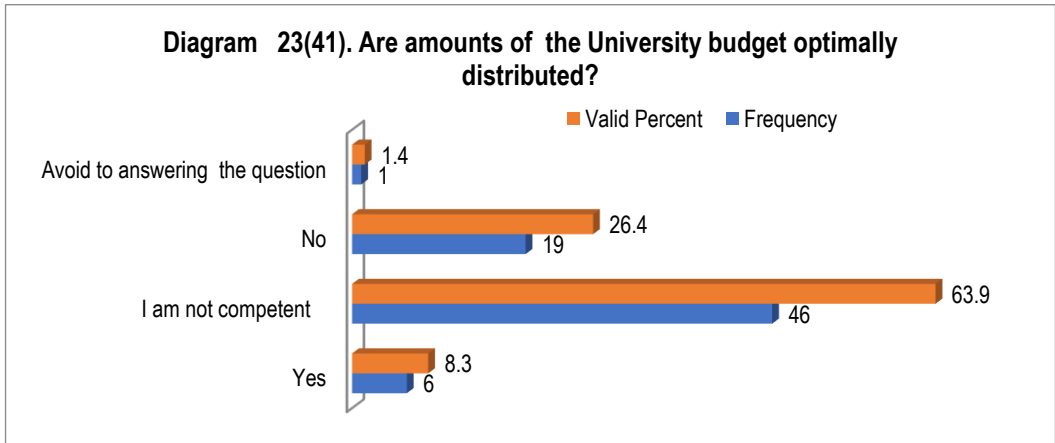
The amount of administrative staff in the whole amount of employees is interesting. In general, at TSU constantly employed is 5572, among them 47,7 % is administrative and service personnel. The latest change in the law was positively reflected on this indicator, on the basis of which the assistants of a professor were transferred from administrative personnel into academic personnel.[1] The perception of this fact by the respondents is as follows: 4% believe that the administrative personnel are insufficient; 18% believe that it is excessive; 38% report that it is sufficient, and 35% think that it is not optimally distributed according to demand **(See Diagram 24(29).**

Diagram 24(29). Administrative staff to properly ensure the quality of teaching: ■ Σ=100%

- Avoid to answering the question: 2.6%
- I do not Know: 2.6%
- Is not sufficient: 3.9%
- Is excessive: 18.2%
- Is not optimally distributed according to the request: 35.1%
- Is sufficient: 37.7%
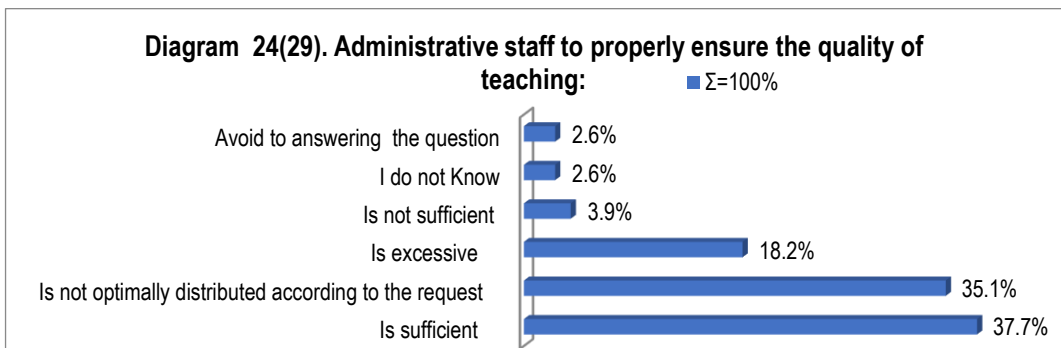
What is the attitude of academic personnel to the legislative acts regulating the field? 35% of the respondents think that the fundamental changes in this direction are necessary and 63% think that the Law on Higher Education requires slight changes **(See Diagram 25(44).**

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[1] Law of Georgia on Higher Education, Article 33, Paragraph 1.

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Diagram 25(44). Do you think that the law about the higher education requires a change?

■ Frequency ■ Valid Percent

- Yes, it needs some changes: 45 / 62.5
- It needs fundamental changes: 25 / 34.7
- Avoid to answering the question: 2 / 2.8
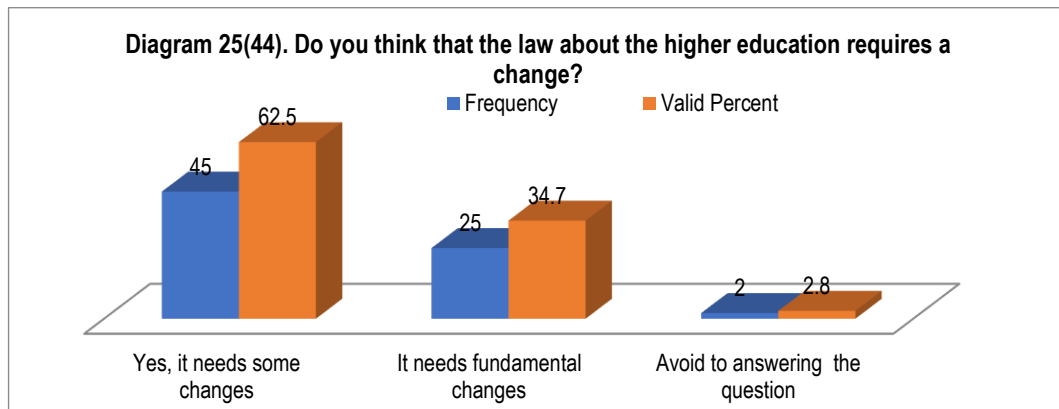
Based on the above-mentioned research and qualitative analysis, the following important issues have emerged from the challenges of Ergonomics and Infrastructure management:

The Environment is irrelevant to the content load of the higher education institution. The condition of the building makes it impossible to maintain sanitary-hygienic conditions;

The size of the most part of the auditoriums, the internal design and technical equipping level make it impossible to introduce active teaching methods, to lead a normal learning process;

Most part of the academic staff has no cozy, noise-free work space;

Unequal working conditions are an expression of discriminatory approach and exclude the feeling of equality;

There are no proper systematic mechanisms for sharing knowledge, information, cooperation and team work conditions, environmental technical capabilities;

The academic staff are limited in selecting and managing training schedules and subjects, which in every field shows that the job is non-prestigious. The similar organizing form of a job especially hinders combining the academic and scientific work, specializing in a particular scientific direction, concentrating;

Important attention should be paid to the workload norms of administrative and technical personnel, development, training, caring for promotion activities, and equipping them with proper technical means and knowledge.

We examined the preliminary prepared hypotheses with statistical methods. Namely, we used Pearson correlation analysis, the Chi-squared tests for confirming the reliability of the links between the variables and the linear regression, namely, the Anova test.

Preliminary hypotheses have been verified by statistical methods. In particular, we used Pearson correlation analysis of pyroson, the Chi-squared tests to substantiate the reliability of the connections between the variables and linear regression, namely the ANOVA test.

H1: Variable Q16 (Is it acceptable for you to select personnel by competition?) **affects the variables:**

Q22 (Are all employees working on equal terms?);
Q23 (Cases of copyright violations);
Q44 (Do you think that the law about the higher education requires a change?).

H2: Variable – Q13 (Are the conditions and time frames for your career development officially clear?) **affects the variables:**

Q14 (Do you know who will replace you?);
Q22 (Are all employees working on equal terms?);
Q23 (Cases of copyright violations);
Q44 (Do you think that the law about the higher education requires a change?).

H3: Variable – Q14 (Do you know who will replace you?) **affects the variables:**

Q13 (Are the conditions and time frames for your career development officially clear?)
Q22 (Are all employees working on equal terms?);
Q23 (Cases of copyright violations);
Q44 (Do you think that the law about the higher education requires a change?).

H4: Variable – Q22 (Are all employees working on equal terms?) **affects the variables:**

Q16 (Is it acceptable for you to select personnel by competition?);
Q13 (Are the conditions and time frames for your career development officially clear?);
Q14 (Do you know who will replace you?);
Q23 (Cases of copyright violations);
Q44 (Do you think that the law about the higher education requires a change?).

H5: Variable – Q44 (Do you think that the law about the higher education requires a change?) **affects the variables:**

Q16 (Is it acceptable for you to select personnel by competition?);
Q14 (Do you know who will replace you?);
Q22 (Are all employees working on equal terms?);

H1 Hypothesis: To prove correlation between variables Q16, Q22, Q23 and Q44 we have made Pearson Correlation Analysis Test. By the test weak connection has been confirmed (In the range between -0,5 and 0.5).

Table 1. Pearson Correlation Analysis (Q16, Q22, Q23, Q44)

Correlations		Q16	Q22	Q23	Q44
Q16	Pearson Correlation	1	.349**	.347**	.307**
	Sig. (2-tailed)		.003	.003	.009
	N	72	72	72	72
**. Correlation is significant at the 0.01 level (2-tailed).					

The Chi-squared tests have shown that the connection between these variables: Q16 and Q22, Q16 and Q44 are reliable. In both cases the sigma is less than 0,005 **(See Table 2 and Table3).**

Table 2. Chi-Square Tests (Q16*Q22)

Chi-Square Tests Q16*Q22	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.548[a]	6	.001
Likelihood Ratio	13.859	6	.031
Linear-by-Linear Association	8.653	1	.003
N of Valid Cases	72		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is.06.

Table 3. Chi-Square Tests (Q16*Q44)

Chi-Square Tests Q16*Q44	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	19.699[a]	6	.003
Likelihood Ratio	9.530	6	.146
Linear-by-Linear Association	6.699	1	.010
N of Valid Cases	72		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is.06.

By the linear regression analysis, the ANOVA test has shown that the model (Q16, Q22, Q23, Q44) is reliable, because the sigma is less than 0,005 **(See Table 4)** Between Q22, Q23, and Q44 the more important is Q44.

Table 4. Linear regression (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7218.959	3	2406.320	6.552	.001[b]
	Residual	24975.041	68	367.280		
	Total	32194.000	71			

a. Dependent Variable: 16
b. Predictors: (Constant), 44, 23, 22

H2 Hypothesis. By Pearson **Correlation Analysis Test** the correlation between Q13 and Q14, Q22, Q23, Q35 variables has been confirmed. The links between them are week (In the range between –0.5 and 0.5) **(See Table 5).**

Table 5. Pearson Correlation Analysis (Q13, Q14, Q22, Q23, Q35)

Correlations	Q13	Q14	Q22	Q23	Q35

Q13	Pearson Correlation	1	.487**	.328**	.345**	.336**
	Sig. (2-tailed)		.000	.005	.003	.004
	N	72	72	72	72	72

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

The Chi-squared tests have shown that the connection between the variables: Q13 and Q23 is reliable. In this case the sigma is less than 0,005 **(See Table 6).**

Table 6. Chi-Square Tests (Q13*Q23)

Chi-Square Tests Q13*Q23	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	44.545a	20	.001
Likelihood Ratio	43.410	20	.002
Linear-by-Linear Association	8.443	1	.004
N of Valid Cases	72		

a. 24 cells (80.0%) have expected count less than 5. The minimum expected count is.03.

By the linear regression analysis, the ANOVA test has shown that the model (Q13, Q14, Q22, Q23, Q35) is reliable, because the sigma is less than 0,005. Between Q14, Q22, Q23 and Q35) the more important is Q35   **(See Table 7).**

Table 7. Linear regression (ANOVAa)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	13929.073	4	3482.268	11.863	.000b
	Residual	19666.580	67	293.531		
	Total	33595.653	71			

a. Dependent Variable: Q13,
b. Predictors: (Constant), Q35 Q23 Q14, Q22,

H3 Hypothesis. The existence of correlation between **Q14**, Q13, Q22, Q23, Q44 variables has been confirmed by the Pearson Correlation Analysis Test. However, the connections between Q14 and Q13, Q23, Q44 are week (In the range between -0,5 and 0.5); The link between Q14 and Q22 is medium (In the range between -0,7 and 0.7) **(Table 8).**

Table 8. Pearson Correlation Analysis (Q14, Q13, Q22, Q23, Q44)

Correlations		Q14	Q13	Q22	Q23	Q44
Q14	Pearson Correlation	1	.487**	.693**	.319**	.328**
	Sig. (2-tailed)		.000	.000	.006	.005
	N	72	72	72	72	72

The Chi-squared test has shown that the connections between the variables: Q14 and Q22 is reliable. The sigma in this case is less than 0,005 **(see Table 9).**

Table 9. Chi-Square Tests (Q14*Q22)

Chi-Square Tests Q14*Q22	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.579[a]	6	.000
Likelihood Ratio	19.430	6	.003
Linear-by-Linear Association	34.063	1	.000
N of Valid Cases	72		

By the linear regression analysis, the ANOVA test has shown that the model (Q14, Q13, Q22, Q23, Q44) is reliable, because the sigma is less than 0,005. Between Q13, Q22, Q23 and Q44) the more important is Q44. **(See Table 10).**

Table 10. Linear regression (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19997.341	4	4999.335	21.476	.000[b]
	Residual	15596.979	67	232.791		
	Total	35594.319	71			

a. Dependent Variable: Q14
b. Predictors: (Constant), Q44, Q13, Q23, Q22

H4 Hypothesis. To prove **H4** hypothesis we have made **Pearson Correlation Analysis Test**. By the test the correlation between variables Q22 and Q16, Q13, Q23, Q44 has been confirmed. The link between Q22 and Q16, Q33, Q44 is week. The links between Q1 and Q19 are week (In the range between -0,5 and 0.5). The link between Q22 and Q44 is medium (In the range between -0.7 and 0.7) **(See Table 11).**

Table 11. Pearson Correlation Analysis (Q22, Q16, Q13, Q23, Q44)

		Q22	Q16	Q13	Q14	Q23	Q44
Q22	Pearson Correlation	1	.349**	.328**	.693**	.473**	.491**
	Sig. (2-tailed)		.003	.005	.000	.000	.000
	N	72	72	72	72	72	72

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

The Chi-squared test has shown that the connections between the variables: Q22 and Q16, Q14, Q23 Q44 is reliable. The sigma is less than 0,005 **(See Tables: 12, 13, 14, 15).**

Table 12. Chi-Square Tests (22*16)

Chi-Square Tests 22*16	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	23.548[a]	6	.001
Likelihood Ratio	13.859	6	.031

Table 13. Chi-Square Tests (22*14)

Chi-Square Tests 22*14	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	39.579[a]	6	.000
Likelihood Ratio	19.430	6	.003

ISSN 2411-958X (Print)
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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Linear-by-Linear Association	8.653	1	.003
N of Valid Cases	72		

Linear-by-Linear Association	34.063	1	.000
N of Valid Cases	72		

a. 8 cells (66.7%) have expected count less than 5. The minimum expected count is.06.

a. 9 cells (75.0%) have expected count less than 5. The minimum expected count is.11.

Table 14. Chi-Square Tests (22*23)

Chi-Square Tests 22*23	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.869[a]	8	.000
Likelihood Ratio	23.993	8	.002
Linear-by-Linear Association	15.906	1	.000
N of Valid Cases	72		

a. 9 cells (60.0%) have expected count less than 5. The minimum expected count is.06.

Table 15. Chi-Square Tests (22*23)

Chi-Square Tests 22*44	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.491[a]	4	.000
Likelihood Ratio	10.510	4	.033
Linear-by-Linear Association	17.145	1	.000
N of Valid Cases	72		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is.06.

By the linear regression analysis, the ANOVA test has shown that the model (Q22, Q16, Q13, Q14, Q23, Q44) is reliable, because the sigma is less than 0,005 Between Q16, Q13, Q14, Q23, Q44 the more important is Q44. **(see Table 16).**

Table 16. Linear regression (ANOVA[a])

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12179.694	5	2435.939	25.452	.000[b]
	Residual	6316.751	66	95.708		
	Total	18496.444	71			

a. Dependent Variable: Q22
b. Predictors: (Constant), Q44, Q13, Q23, Q16, Q14

H5 Hypothesis. The existence of correlation between variables Q44 and Q16, Q14, Q22 has been confirmed by the Pearson Correlation Analysis Test. However, the connections between them are week (In the range between -0,5 and 0.5); **(Table 17).**

Table 17. Pearson Correlation Analysis (Q44, Q16, Q14, Q22)

Correlations		Q44	Q16	Q14	Q22
Q44	Pearson Correlation	1	.307**	.328**	.491**
	Sig. (2-tailed)		.009	.005	.000
	N	72	72	72	72

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

The Chi-squared test has shown that the connections between the variables: Q44 and Q16, Q22 is reliable. The sigma is less than 0,005 **(see Tables: 18, 19).**

Table 18. Chi-Square Tests (44*16)

Chi-Square Tests 44*16	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.491[a]	4	.000
Likelihood Ratio	10.510	4	.033
Linear-by-Linear Association	17.145	1	.000
N of Valid Cases	72		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is.06.

Table 19. Chi-Square Tests (44*22)

Chi-Square Tests 44*22	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	20.491[a]	4	.000
Likelihood Ratio	10.510	4	.033
Linear-by-Linear Association	17.145	1	.000
N of Valid Cases	72		

a. 5 cells (55.6%) have expected count less than 5. The minimum expected count is.06.

By the linear regression analysis, the ANOVA test has shown that the model (Q44, Q16, Q14, Q22) is reliable, because the sigma is less than 0,005 Between Q16, Q14, Q22the more important is Q22. **(see Table 20).**

Table 20. Linear regression (ANOVA[a]) (Q44, Q16, Q14, Q22) ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4772.882	3	1590.961	8.071	.000[b]
	Residual	13403.993	68	197.118		
	Total	18176.875	71			

a. Dependent Variable: Q44
b. Predictors: (Constant), Q22, Q16, Q14

Thus, the listed hypotheses have been proved.

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January - June 2020
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Intercultural Sensitivity and Communication Competence of Healthcare Professionals in Oral and Dental Health Center: A Case Study in Turkey

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Abstract

Oral and dental health services in Turkey is open to international competition and a rapidly growing sector within the scope of health tourism. It is very important to maintain patient satisfaction and patient loyalty in service delivery. It is known that patient and patient relatives care about attitudes and behaviors of health workers and this experience is effective in the choose of physicians or health institutions. The aim of this study is to determine the intercultural sensitivity and communication competencies of employees in a private oral and dental health clinic in Denizli which is one of the most important tourism centers of Turkey. In this study, the Intercultural Sensitivity Scale, in which individuals evaluated themselves, was used to measure intercultural sensitivity. This scale, which was developed by Chen and Starosta (2000) and included five emotional dimensions required to be sensitive to interculturalism, was translated into Turkish by Kurban et al. (2011) and evaluated the psychometric suitability. Communication Competence Scale, which was developed by Wiemann (1977) and translated into Turkish, validity and reliability of the communication competence by Koca and Erigüç (2017) was used. Data were collected online via Google docs during January and February 2019. According to the findings of the study, it was observed that the intercultural sensitivity and communication competencies of the health workers were high and the highest score was the enjoyment of communication dimention (4.10±0.74) in the scale of intercultural sensitivity and the compliance adequacy dimention (4.13±0.97) in the communication competence scale.

Keywords: intercultural sensitivity, communication competence, oral and dental health services, healthcare professional, Turkey

Introduction

Oral and dental health centres (ODHC) are a specialized health service delivery to patients from different cultures at the national or international level. It is very important to maintain patient satisfaction and patient loyalty for the oral dental health services sector, which is growing rapidly in our country and also opened to international competition within the scope of health tourism. In the context of healthcare, patient satisfaction assessment is highly important to reflect quality care (Levin, 2004). Patient satisfaction with dental care has been widely studied (Armfield, Enkling, Wolf, & Ramseier, 2014; Hashim, 2005; Luo, Liu, & Wong, 2018; Murray, Densie, & Morgan, 2015; Stewart & Spencer, 2005; Thanveer, Krishnan, & Hongal, 2010).

The main issues affecting patient satisfaction in this area is the quality of the health service received by the patient. Quality is measured by expertise, the material used, price advantage and value obtained (Jaapar, Musa, Moghavvemi, & Saub, 2017). Although medical providers may have technical skills to successfully treat patients, intercultural skills are also important in increasing the likelihood of patient satisfaction and compliance (Abbey, 2006; Gibson & Zhong, 2005; Huckabee & Matkin, 2012). While the effect of quality on service satisfaction is realized over time, the communication experienced (patient-physician communication) by the patient while receiving health care affects patient satisfaction in a shorter time (Al Balushi, Mei, & Farella, 2017; Campbell, Roland, & Buetow, 2000).

Patient and patient relatives care about attitudes and behaviours of physicians and other employees within the scope of patient satisfaction and it is known that these experiences are effective in the selection of physician/health institutions (Campbell & Tickle, 2013; Campbell et al., 2000; de Bondt & Zentner, 2007). Therefore, it can be said that the attitudes and communication competencies of the health care workers against the patients and their relatives are effective on the patient satisfaction, and the patient satisfaction is effective in the re-preference of the institution/doctor (de Bondt & Zentner, 2007). In summary, obtaining the desired patient care results in the health service process is related to the behaviours of the physician, nurse and managers during the communication process.

At this point, we encounter two important concepts in the form of intercultural sensitivity and communication adequacy. Intercultural sensitivity (ICS) is accepting cultural difference as they are (without prejudice and ethnocentrism) and evaluating without judgement as well as approaching with positive attitudes (Bulduk ve ark., 2011; Chen ve Starosta, 2000). ICS is a complex with four main dimensions of knowledge, skills, attitudes and awareness (Byram, 1997; Deardorff, 2006; Fantini, 2009; Wiseman & Koester, 1993). It allows an individual to communicate and interact with people from different languages and cultures through the use of internal features in different intercultural settings (Byram, 1997; Fantini, 2009). These features are generally the knowledge of himself, knowledge about others, attitude, intercultural

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communication, cognitive skills, and awareness. ICS relates to the cognitive, emotional, and behavioural aspects of the interaction situation, but mainly in the emotional field. In addition, intercultural awareness, which corresponds to the cognitive level, leads to intercultural competence, which in turn points to the behavioural dimensions. As a result, these concepts are closely related, but they are seen as separate concepts (Chen & Starosta, 1998). Individuals with ICS have a motivating desire and tendency to understand, acknowledge and accept differences. This desire and tendency also bring about positive results from intercultural interactions (Chen, 1997; Chen & Starosta, 1998).

Cultural competence is seen as a critical factor and a key component in providing effective and culturally sensitive health services to an increasing population, reducing racial and ethnic differences in health care, and improving health service quality, patient satisfaction and health outcomes (Campinha-Bacote, 2002; Campinha-Bacote, 2003; Leininger, 2002; Shen, 2015). Intercultural communication is bound between culture and communication, as culture builds the framework in which communication and behaviour are interpreted (Koester & Lustig, 2012).

Intercultural sensitivity and communication competence is important not only for the effective interaction of health care providers with patients and their relatives but also for ensuring coordination among employees from different cultures. In addition to being competent in intercultural sensitivity and communication competence in contemporary workplaces, awareness of how important these matters are an important issue. Nowadays, cultural differences are seen as a reserve/resource if they are managed well. Therefore, it can be interpreted as a critical objective for the development of human relations (Hajek & Giles, 2003; Wiewiora, Trigunarsyah, Murphy, & Coffey, 2013). Indeed, looking at a holistic view of health care will bring the desired quality of service. For this reason, both the cultural and communication competence of the other employees will have an impact on service quality.

In both respects, cultural sensitivity and communication competence, which should be emphasized in the management of health institutions, are worthy of research and development. Analyzing these two issues and transferring the results to management practices will contribute to the development of the sector.

Ultimately, the integration of intercultural sensitivity and communication competence as a fundamental value in health care sectors will not only prepare staff to interact with international patients competently but will also send a strong message about the commitment of organizations to ensure equal access to all patients.

Especially in terms of quality, equal and acceptable service production, cultural differences need to be closely addressed by managers of health institutions in terms of human resources management (Lawler, Walumbwa, & Bai, 2008) and patient satisfaction.

In the literature, the studies investigating the intercultural sensitivity of health professionals are mostly concentrated in the field of nursing (Chae & Park, 2019; Cruz, Contreras, Lopez, Aqueveque, & Vitorino, 2018; Flood & Commendador, 2016; Kozub, 2013; Mesler, 2014; Peek & Park, 2013; Power et al., 2018; Rew, 2014; Roscigno, 2013; Wang, Xiao, Yan, Wang, & Yasheng, 2018). The communication competence and intercultural sensitivities of caregivers, a requirement of the patient-centred oral health care approach, have not been extensively studied in this area (de Bondt & Zentner, 2007). To fill this gap, this research aims to determine the level of intercultural sensitivity and communication competence in the scale of the dentists and other employees as a member of the team producing oral and dental health services according to their own perceptions. It was also aimed to reveal the relationship between these two variables with each other. Consequently, the findings may provide guidance on what communication skills and cultural sensitivity dimension of health care workers are, in particular, in the in-service training planning.

Methods

This study was designed as cross-sectional and descriptive research. This design was chosen since we aimed to determine the relationship between the intercultural sensitivity and communication competence of employee in the private ODHC in Denizli, Turkey. Denizli, the twenty-first most populous city of Turkey. It is famous for its textile products and the local Denizli cock. Denizli is one of the most important tourism centres of Turkey. Pamukkale is the locomotive engine of Denizli's tourism with about 1.5 million tourists per year. Therefore, from different countries, tourism, education, healthcare and commercial purposes many visitors come to Denizli.

The oral and dental health centre was established in 2005 in this study. The centre does not only serve the people of Denizli, at the same time, but it is also a health facility that serves both domestic and foreign tourists. For this reason, this centre, which serves domestic and foreign patients from different cultures, was chosen as the research universe.

Participants

This study included the employees (dental, assistant, nurse etc) in the private oral and dental health centre in Denizli, Turkey. The population of the study is 64 people working in this centre. Within the scope of the research, it wasn't chosen a sample and it was desired to reach the whole population but because the questionnaires were filled volunteering, the data could be collected from 34 people. This number constitutes 53.13% of the universe.

Instrument

In this study, the Intercultural Sensitivity Scale (ISS), in which individuals evaluated themselves, was used to measure intercultural sensitivity for employees in the ODHC.

This scale, which was developed by Chen and Starosta (2000) and included five emotional dimensions (interaction engagement-7 items, respect of cultural differences-6 items, interaction confidence-5 items, interaction enjoyment-3 items, interaction attentiveness-3 items) required to be sensitive to interculturalism, was translated into Turkish by Kurban et al. (2011) and evaluated the psychometric suitability. The ISS contains 24 statements on a 5-point scale (1=completely disagree, 2=disagree, 3=neutral, 4=agree, 5=completely agree). In the scale, items 2,4,7,9,12,15,18,20 and 22 are coded in reverse. Cronbach's alpha for the ISS Total was 0.877, with subscale scores ranging from 0.556 to 0.747.

Communication Competence Scale (CCS), which was developed by Wiemann (1977) and translated into Turkish, validity and reliability of the communication competence by Koca and Erigüç (2017) was used. The CCS is a self-evaluating scale, the original of which consists of 36 items and 5 dimensions, and the Turkish version consists of 30 items and 8 dimensions. These are social behaviuor competence, individual aspects of communication, empathy competence, compliance adequacy, sensitivity adequacy, communication-promoting competence, human relations and listening adequacy. The CCS contains 30 statements on a 5-point scale (1=completely disagree, 2=disagree, 3=neutral, 4=agree, 5=completely agree). In the scale, items 4, 8, 11 and 28 are coded in reverse. Cronbach's alpha for the CCS Total was 0.959, with subscale scores ranging from 0.502 to 0.928.

Data Collection

Data were collected online via google docs during January and February 2019. The researcher introduced the study and sent an email with a link of a questionnaire form to volunteer participants. Participants completed the questionnaires, which took about 15 minutes.

Data Analysis

The data were statistically analyzed using SPSS version 25.0. Data are described using mean and standard deviation or frequency and percentages. The relationship between intercultural sensitivity and communication competencies were investigated by Pearson correlation analysis. P values were significant at a level of 0.05 in this study.

Ethical Considerations

The participants' rights were the first priority. Therefore, the participants were given written information about research and their right to refuse to participate or withdraw at any point. Completing the questionnaires voluntary was considered as informed consent. The anonymity of the participants was ensured by not collecting any personal identifiers.

Findings

The mean age of the participants was 29.21±7.60 and the mean of work time was 4.82±4.29 years. According to the descriptive findings of the participants, 79.4% were female; 64.7% were single; 32.4% were associate graduated, 26.5% were dentist and 44.1% were medical assistant; 61.8% of the participants do not speak and understand any foreign language; 75.3% lived in a metropolitan and 88.2% worked with people from different cultures; 94.1% did not travel to another country (Table 1).

Table1. Descriptive statistics of the participants

Characteristics	χ±SD	
Age	29.21±7.60	
How long have you been worked in this hospital?	4.82±4.29	
	N	%
Gender		
Male	7	20.6
Female	27	79.4
Marital Status		
Married	12	35.3
Single	22	64.7
Graduate		
High school	7	20.6
Associate Degree	11	32.4
Bachelor	8	23.5
Postgraduate	8	23.5
Occupation/profession		
Dentist	9	26.5
Nurse	3	8.8
Medical assistant	15	44.1
Manager	1	2.9
Others	5	14.7
The place where you've been living the longest.		
Metropolitan	25	73.5
Rural	8	23.5
Foreign country	1	2.9
Being together with individuals from different cultures.		
Yes	30	88.2
No	4	11.8
Foreign language		
Yes	13	38.2
No	21	61.8
Have you ever been abroad before for tourism, education or working?		
Yes	2	5.9
No	32	94.1

Total	34	100

According to the responses of the participants to the scale of intercultural sensitivity, the mean of the total for the scale was 3.89±0.52. When examined in terms of sub-dimensions, it was seen that the highest average was "enjoyment of communication" with 4,10±0,74. The lowest average was observed as "self-confidence in communication" with 3.68 ±0.71 (Table 2).

Table 2. Mean scores on each dimension of ISS

Dimentions	χ	SD	Min	Max
Communication responsibility	3.84	0.58	1.71	5.00
Respect for cultural differences	4.06	0.63	2.50	5.00
Self-confidence in communication	3.68	0.71	1.40	4.80
Enjoyment of communication	4.10	0.74	2.67	5.00
To be careful in communication	3.83	0.73	2.00	5.00
Total	3.89	0.52	2.21	4.67

The values of total and sub-dimensions obtained from the responses of the participants to the communication adequacy scale are given in Table 3. Accordingly, the total communication adequacy score of the participants was 3,82 ± 0,58 and it was high. When it is examined in terms of subscales, it was seen that the lowest average is the dimension which in "human relations dimension" with 3,37 ± 0,89. The highest mean was "the compliance adequacy dimension" with 4,13 ±0,97.

Table 3. Mean scores on each dimension of CCS

Dimentions	χ	SD	Min	Max
Social behaviour competence	3.85	0.65	1.50	5.00
Individual aspects of communication	3.99	0.64	1.33	5.00
Empathy competence	3.87	0.72	1.00	5.00
Compliance adequacy	4.13	0.97	1.00	5.00
Sensitivity adequacy	3.85	0.73	1.00	5.00
Communication-promoting competence	3.65	0.82	2.00	5.00
Human relations	3.37	0.89	2.00	5.00
Listening adequacy	3.71	0.80	2.33	5.00
Total	3.82	0.58	1.63	4.87

The relationship between intercultural sensitivity and communication competence were examined by correlation analysis. As a result of these analyses, a statistically

significant and positive relationship was found between communication competence and intercultural sensitivity (r=0.647; p≤0.05).

Table 4. Correlation between communication competence and intercultural sensitivity

Variables	Correlations	Communication Competence	Intercultural Sensitivity
Communication Competence	Pearson Correlation	1	.647**
	Sig. (2-tailed)		.000
	N	34	34
Intercultural Sensitivity	Pearson Correlation	.647**	1
	Sig. (2-tailed)	.000	
	N	34	34

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

Discussion and Conclusion

In this research, intercultural sensitivity and communication competencies of a private oral health centre staff serving in Denizli, Turkey were examined. According to the results of this study, intercultural sensitivity and communication competencies of the employees are above average. Compared with a similar study conducted with students of communication faculties in Turkey (Bekiroglu & Balci, 2014) our findings have similarities with these results. Our intercultural sensitivity findings show that when compared with another study in Turkey, while the employees' cultural sensitivity is similar with nursing and medical students (Bulduk, Usta, & Yeliz, 2017; Meydanlioglu, Arikan, & Gozum, 2015).

In this study, which we conducted in a small group and only a single health facility, we could not investigate the factors affecting intercultural sensitivity and communication adequacy. In this study, age, gender, marital status, foreign language knowledge, place of residence and interaction with different cultures are presented as descriptive findings. However, there are studies investigating the relationship between intercultural sensitivity and communication adequacy with these variables.

Many researchers have identified bilingualism or second language skills as an important aspect of intercultural communication competence (Gibson & Zhong, 2005; Repo et al., 2017). Studies show that knowledge of a foreign language increases intercultural experience and intercultural experience has also shown that it leads to an increase in the knowledge of other cultures that cause individuals to communicate more effectively among cultures (Repo et al., 2017). According to Gibson and Zhong (2005), multicultural and multilingual staff can be more effective in terms of intercultural communication. In this study, only 38.2 % of participants know a foreign

language and 88,2% of the population has been together with individuals from different cultures.

In our study, a statistically significant relationship was found between communication competence and intercultural sensitivity. In a similar study, Ulrey and Amason (2001) found a significant relationship between effective intercultural communication and cultural sensitivity (Ulrey & Amason, 2001). The dissemination of communication competence research into the health service environment is of great importance. Health care is a field of communication research where ineffective communication can have tragic consequences for all participants (Gibson & Zhong, 2005). In a study conducted on 1191 patients in the United States, it was concluded that there was a positive relationship between the cultural sensitivity of the front office staff and the patient's compliance with the treatment, and increased the patient's health satisfaction level (Wall et al., 2013).

As a result, it is important to understand and improve the communication competence and intercultural sensitivity levels of health workers in the dental care sector. Considering the effect of employees on improving the quality of oral and dental health services, it is important to have an adequate level of intercultural sensitivity and communication adequacy. The training of health professionals can play an important role in increasing this competence.

Limitations

Data obtained from this study are based on self-report of participants from a small group and only one institution in the study sample and the obtained results cannot be generalized outside of the sample. Given the limitations of this study, results must be viewed with a degree of caution.

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

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Have You Ever Seen the Void? Interest Groups Concerns Toward the Weakening Representational Role of Political Parties in European Countries

Chiara Fiorelli

Abstract

Contemporary democracies face a trend toward the diffusion of the representational void left by under- legitimized political parties (Mair 2013). The essential functions of traditional political parties to organize and articulate political conflict and societal interests have been challenged both from the inside of the party system, by the emergence of populist habits of newcomers, and from the outside, by the progressive erosion of old political culture and corresponding increasing of hostility feeling. Intermediaries organizations of political and economic interests usually push their demands toward political actors in order to shape policy choices. What can happen when the traditional party system suffers from de- legitimation? In this paper, I will try to understand the level of concern of interest organizations toward the progressive detachment of civil society from political actors, in order to define if the risk of a void of representation is perceived as real and contingent. Thanks to a new original European dataset (the Comparative Interest Groups Survey), the analysis shows that different types of interest groups perceive the void to be real and with a possible impact on their activities and their own survival. As expected, in the regression model, differences emerge between countries with a traditional strong interests' system and countries where groups activities are usually barely regulated. The results support the idea that the distance between civil society and political representatives should be considered a prominent focus of contemporary social and political investigation in order to understand the challenge for democratic life and the possible strategy of reaction.

Keywords: representation, intermediation, interest groups, comparative perspective

Introduction

Contemporary democracies face various challenges that are threatening its representative basis. Among European countries, the trust in institutions, politicians and political parties is decreasing, along with their legitimation.

Peter Mair (2013) emphasizes the risk related to the void of representation left by the decreasing role of political parties as traditional intermediaries of civil society instances that could lead toward a change in the type of democracies western countries are used to know, not representative any longer.

The threat to democracy comes from both side of the society: on one hand, politicians, and so governments, seem to be less and less accountable for their choices because they are subject to

pressures and instances coming from a multilevel political scenario and they are also enlarging the gap between them and the citizens; on the other hand, the civil society seems to be more and more critical to the political process and also increasingly disaffected from the traditional ways in which politics, and so representation, is organized -through parties, delegation, etc. (Mair 2013).

In contemporary scenario, the void left by the disaffection and the lack of general representation can become desirable to many other actors, international or national ones, with the risk that specific interests overtake the position of collective interests in the ordinary political work, leading to a more micro-policy oriented governments responsive to specific interests.

If we move our attention toward politicians and governments, the challenge to party-government and the progressive establishment of parties as agents of the state rather than civil society' representatives has led to a decline of partisanship in policy-making and in governmental activities (Mair 2008), due in part to the concurrent decline of collective identities within western electorates. This process undermines the accountability of governments and politicians and creates the opportunity for non-majoritarian institutions to rule or take advantage of this situation (Majone 1996). Non-majoritarian agencies (es. NGOs or sectorial associations) are consider to be less accountable for their choices and their behaviour in contrast to political parties and politicians that are usually evaluated by their electorate.

Overall, the traditional political collective actors represented by political parties are losing their role as intermediaries that channel societal demands. This declining trend raises fundamental questions in democratic systems concerning the way political conflict should be managed when traditional intermediaries do not reflect the current environment.

In this scenario it is fundamental to ask whether or not interests groups react to, and perceive, the growing distance between politicians and citizens. In order to understand the strategies and the representative role of organized interests, this paper aim to define if intermediaries' associations are defining themselves as alternative to political parties (Dalton 2002).

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Therefore, the underlined hypothesis of this paper will be that the coexistence of disaffection from traditional politics by both citizens and politicians create a void in the political arena that increase the perceived relevance of specific interest groups in a society as political intermediaries.

Analysis are based on the data coming from the Comparative Interest Group Survey[1] considering the organization level as unit of investigation.

Literature review

Two basic assumptions apply to democratic societies: first, that elected politicians should pursue the public interest, and second, that citizens should be guaranteed inclusive participation (Melchionda 1997). On the one hand, inclusion and the right of opposition are the main defining features of the level of democratisation (Dahl 1971). On the other hand, modern democracy is largely based on two factors: representation, understood as meaning 'acting in the interest of the represented, in a manner responsive to them' (Pitkin 1967: 209), and the existence of repeated, transparent elections to guarantee the legitimacy of the elected representatives. In this scenario, political parties, as collective actors, play a fundamental role representing the civil society cleavages   by competing with each other in democratic elections (see Dahl 1971, Schattschneider 1942, Lipset and Rokkan 1967).

The main focus of this kind of debate is related to the role of representation, both political and societal one. The most basic definition of representation is based on the resemblance between representatives and represented. Sartori (1987) points out that the concept is multidimensional: it embraces political, sociological and legal aspects. As Urbinati and Warren (2008) indicate, parliaments are the primary loci of representation but the word can be understood as a principal- agent relationship (Pitkin 1967); or as a space within which the sovereignty of the people is identified with the state power (electoral representation); or can indicate the mechanism that ensure some measure of responsiveness; or can recall the value of political equality thanks to the universal franchise. In this scenario, "political parties are the key representative bodies within representative governments. Their representative functions include aggregating and deliberating interests and values, linking issues through programmatic visions in an increasingly segmented political environment" (Urbinati and Warren 2008:400).

The hollowing of traditional cleavages, and the way citizens behave into the political arena, as well   as the way they look for representation, has defined new interactions between the civil society and

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[1] Beyers, J., Bernhagen, P., Borang, F., Braun, C., Fink-Hafner, D., Heylen, F., Maloney, W., Naurin, D., Pakull, D. (2016) Comparative Interest Group Survey Questionnaire (Edition: January 2016). University of Antwerp.

the parties as intermediary actors of their interests. However, it is widespread among scholars the   opinion and evidence that the role of party is declining, or better changing, in advanced societies. As Ignazi (1996) noted, the party decline concerns a certain type of party: the mass party. Mass parties failed to meet the demands of a new western publics in articulating and in aggregating   interests (Lawson, 1980).

However, if political parties can be considered the most privileged actors in a political system, for   their direct access to the public decision-making process through the electoral legitimation of citizens, they are not the only ones that represent and articulate demands toward the political system. Civil associations and organized interest groups are usually created and arranged for this purpose, helping the system to articulate the specific demands of their main concern.

It is evident that in western democracy, representation is changing for parties but not for interest   groups. Parties are considered to be less and less responsible for the collective will, while the aim   of organized interests does not change: they are accountable for a specific representation, the one of their small, narrow and particular constituency

Societies are drastically changing, and are facing challenges that undermine the traditional actors in political competition. Political parties are in decline, with party membership decreasing rapidly   almost everywhere in established democracies (Mair and Van Biezen 2001, Scarrow 2002).   Increasingly few citizens choose to identify themselves and their interests with these parties (Dalton   2002), and the overall trust in political parties and their political skills has considerably decreased (Pharr, Putnam, and Dalton, 2000).

Nonetheless, political parties remain the most powerful political actors, with their direct access to   public office. Despite evidence of their decline (see Ignazi 2014), they play an important connecting   role between the state and the citizens (see Bartle and Bellucci 2009).

As Mattina (2011) stands, interest groups can answer to the demand of society for organization,   expertise, resources and legitimation. For many scholars, groups provide a mechanism through which citizens who have a shared attitude or a shared interest can come together and transform   their collective resources into political action (Thomas, 2001). For this reason, the interest group, as a secondary association, contributes to the political intermediation (Van Deth, 1997; Gunther et al.,   2007). As Bellucci et al. (2007) pointed out, in political commitment, unions and professional associations are far more effective in acting as political intermediates. Secondary associations based

on traditional cleavages still have higher capacities to encapsulate segments of the electorate than   any other civic groups. In the political system, social cleavages are

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

usually articulated through and with the help of intermediary organizations (Easton, 1965).

As Aarts (1995) shows, the increase in material wealth has made material inequalities less important and the rise of new mass media has challenged the role of social organizations. However, even if the political linkages have declined as consequence of long-term developments, there is non evidence for a general decline in individual linkages to intermediary system. The risk is straightforward, if political parties detached themselves from civil society, whilst individuals are still engaged in associations, in the long run the legitimation of the system can be at compromised (Aarts 1995).

To be representative, an interest group should be embedded in a political system as an external intermediary actor supported by the legitimation of its identity in the environment. The access of organized interests to the political system is subject to the social reputation of the group; its membership; and the presence of authoritative representatives, expertise and systemic factors, such as institutional constraints, traditions of policy making and political system features (Morlino, 1998). These factors contribute to shaping the basic distinction between insider and outsider groups: the former are those groups recognized as political interlocutors by the political system; the latter usually act outside the institutions and through indirect lobbying (Grant, 2005).

Looking at the more general perspectives, research in this field has usually followed three different approaches: the corporatist, the pluralist and the elitist (Yishai, 1991). In the U.S. literature, the pluralist and neo-pluralist approaches have attracted a lot of attention since the beginning of group studies (see Bentley, 1908; Truman, 1951). This school argues that no particular interest groups dominate in specific policy arenas but, rather, there is a plurality of actors competing or co- operating with each other (see Berry, 1984; Bosso, 1987). This perspective was in contrast with the elitist one that believed that special interests were dominating in specific policy arenas (Olson, 1965; Lowi, 1969).

On the contrary, European scholars were much more attracted by the corporatist and the neo- corporatist perspectives, due to the rise of social pacts among European countries in the 1970s (see Lehmbruch and Schmitter, 1982; Crouch, 1993). According to Wessels (1996), organized business tends to be more powerful in countries with a corporatist tradition, such as Northern Europe countries, Germany, Austria and Netherlands. In Italy the organized business sector looks

differentiated and with low pressure power. In addition, it has been described a trend, in the Italian interest system, toward fragmentation and differentiation (Lizzi and Pritoni 2017). The same pattern is recognizable for trade unions, which are powerful in corporatist countries and highly fragmented elsewhere, as in Italy, France and Spain. For the new democratic countries, such as the former URSS or the former

ISSN 2411-958X (Print)
ISSN 2411-4138 (Online)

European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Yugoslavia countries, some elements of corporatism persist in the pluralist environment of democratic transition (Luksic 2003, Hrebenar et al. 2008).

Despite the dominant theoretical perspective adopted in the past, interest group studies seem now to converge (Mahoney and Baumgartner, 2008). European scholars were usually deeply rooted in policy system dynamics, while U.S. scholars were more concerned about lobbying activities. Currently, both seem to focus on the impact of government structures on the development of national interest systems. However, the aforementioned studies considered political parties and interest groups as two autonomous actors, focusing on one side or another, or considered them as alternative intermediates (Dalton 2002), emphasizing their functional differences (Bayers et al., 2008) or their connection with governing parties.

Hypothesis and Data

The current literature has not taken under investigation the role that interest groups may absolve in contemporary democracies facing the progressive de-legitimation of traditional political actors, such as political parties. This paper wants to fill this gap by providing a first empirical attempt to analyse the perception of organized interest toward the weakening of trust in political actors.

Usually, the limit regarding the availability of data and the sectorial focus on interest groups strategies have been an obstacle toward a more systematic analysis on the relationship between groups and political parties, as well as toward a deeper understanding of groups' evaluation of the progressive de-legitimation of politicians.

The main hypothesis of this work is that those organized interests and interest associations do not consider the progressive detachment of citizens from their political representatives to be a relevant issue.

This hypothesis is based on the idea that stronger organized groups – those with membership-based participation, and those with a stronger organizational structure (thus unions and business groups)- already perceived themselves as political intermediaries, or political alternative, to political parties.

The void of representation between citizens and political parties can thus perceived as a real threat to democratic process only among those groups that present a dependence on political parties' intermediation and where the access to the policy-making process necessarily involve the intermediation of political actors.

Analysis are based on the Comparative Interest Group Survey. The project involves 9 European countries (Belgium, Netherlands, Czech-Republic, Italy, Lithuania, Poland, Slovenia, Spain, and Sweden). Up to now, data are available for 6 countries. The aim of the project is to collect and to provide data on interest organization and to map the strategies and the role of interest groups in Europe. Most of survey were collected between 2015 and the end of 2017.

Analysis and Results

The Comparative Interest Group Survey offers an opportunity to investigate the perspective of interest groups in different European countries over strategical and organizational features.

As far as the aim of this paper is to provide evidence that interest organization recognize the weakening of traditional political actors and perceive it as either an opportunity to cover the void of representation left by the progressive distance of citizens from politicians or as a threat to their own subsistence, it is fundamental to take under consideration the characteristics that can shape this perception.

The analysis that follow should be considered as explorative of a new perspective on the relation, and re-action, between interest groups and traditional political actors.

First of all, Table 1 shows the composition of the sample taken under investigation. The organizations that answered the survey were 4650 for the 6 countries considered: Belgium, the Netherlands, Italy, Slovenia Lithuania and Sweden. Most of the organizations are related to Institutional and Public interests, followed by Business and Occupational groups. The categories of interest less represented in the sample are Unions and Religious ones. The former are usually bigger groups with less internal fragmentation and the latter, although strongly present, depend on the cultural and traditional arrangements in society.

Institutional and Public groups are strongly represented in Sweden and the Netherlands, Occupational groups emerge as predominant category Lithuania and Slovenia, while economic groups -Unions and Business- are particularly relevant in the Italian sample.

Tab.1 - Sample Distribution on Type of Organization and Country (%)

	NE	BE	IT	LI	SL	SW	*N.*
Unions	1.4	2.0	16.5	5.6	7.7	2.8	207
Business	16.0	22.6	28.2	22.3	9.3	19.0	906
Institu./Publ.	30.1	23.3	23.0	14.5	10.3	49.4	1455
Occupational	17.0	23.4	12.3	35.2	36.0	14.0	932
Identity	11.8	7.5	13.8	7.5	7.1	2.9	344
Leisure	13.3	14.3	2.9	7.8	22.3	9.1	533
Religious	10.4	7.0	3.1	7.0	7.3	2.8	273
N.	874	959	478	358	439	1542	4650

Source: Comparative Interest Group Survey (www.cigsurvey.eu). Author's elaboration

There is a difference in representation dynamics of an interest group between potential and actual representation. The first one represents the complete set of individuals that are sharing a particular interest or demand for a specific political intervention on the basis of a common status/economic/cultural/spiritual goal; on the other hand, the actual representation is the effective number of

ISSN 2411-958X (Print)
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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

citizens/worker/companies that are members of a specific association. In the sample considered, Business, Institutional and Occupational association declared, on average, to represent more than 50% of their potential members, while Unions, Identity groups and Religious associations are above the half of their possibility[1].

In addition, the role of members for the various activities pursued by the associations varies among countries. Members are considered to be important for different activities in Lithuania, Slovenia, Italy and Sweden, while in the Netherlands and Belgium members received, on average on the various activities, less attention.[2]

If we want to see if and how interest organizations are acting as representational actors in a political system, the strategy of action they pursue should be evaluated trough their main activity chosen. Table 2 reports the share of organizations in each country that declared to have among the main purpose the one of representation, mobilization or media campaigns. All those activities may favour a partisan recognition of the organization by not only their specific members.[3]

Tab.2 - Interest Organizations involved in activities (%)

	Representation	Mobilization	Media Campaigns
IT	75.6	60	69.7
BE	64.5	52.2	29.8
LI	82.9	63.5	27.8
NE	61.6	32.4	27.3
SL	41.8	50.6	29.8
SW	72.9	45.7	40.9
Overall	65.9	48.3	35.9
N.	2424	1774	1315

Source: Comparative Interest Group Survey (www.cigsurvey.eu). Author's elaboration

In Italy, interest organizations responding the survey seem to cover all the activities that have a potential influence on the citizens. In Belgium, the Netherlands and in Lithuania most of the organizations prefers to focus on representational and mobilizing activities. Slovenian organizations focus on mobilization while in Sweden there is a preference toward representational activities. The case of Italy should be noted: it is the only country where the media campaigns are declared as an important activity for over the 60% of the associations interviewed.

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[1] The original question was: "What percentage of potential members are actually members of your organization?"

[2] The question asks: "How important are members to your organization with regard to the following activities?" regarding 6 different activities such as generating income for the organization, providing idea or helping to influence public policy (scale from 1= Not at all important to 5= Very important).

[3] Business groups and the Netherlands as reference category.

Table 3 shows the average share of time that organisations spend between direct strategies, such as contacts with politicians and civil servants and indirect strategies, such as media coordinating, letter writing, e-mailing or social media campaigns, rallies and demonstrations.

Business organizations seem to be more involved in Direct strategies, followed by Unions, Institutional groups and Occupational (all the groups demanding for specific policy aims). Differences among countries emerge: organizations in Italy, Sweden and Lithuania are more involved in Direct strategies of action, while in Belgium, the Netherlands and Slovenia, on average, associations declared to prefer to act through indirect pressure.

Tab. 3 - Percentage of time spent by Interest Organizations in Direct or Indirect strategies (%)

	Direct Strategy	Indirect Strategy		Direct Strategy	Indirect Strategy
Unions	46.13	49.53	IT	48.35	47.93
Business	49.48	46.27	BE	39.56	50.63
Institu./Publ.	46.56	48.76	LI	41.86	59.27
Occupational	40.04	52.18	NE	39.94	48.42
Identity	38.17	52.83	SL	31.68	50.35
Leisure	35.63	51.34	SW	45.67	53.75
Religious	34.07	58.30	TO	41.63	51.59

Source: Comparative Interest Group Survey (www.cigsurvey.eu). Author's elaboration

After the report of the activities of organizations and the role they recognize to their members in shaping their strategies, it is important to see how interest groups perceived the growing distance between citizens and politicians as a challenge for their own survival. The distance between citizens and politicians can be understood as proxy of the void of representation of political actors, as far as the latter are consider to be less and less responsive to the requests of the former and this dynamic may create a representational space to be fulfilled.

Table 4 reports the percentage of organization identifying the growing void as a challenge that they have to face[1]. Most of the organization seem not to consider the distrust over politicians important, while only 12.6% of the associations recognize it as a very important issue to be considered.

Among countries, in Slovenia and Lithuania organizations are distributed along the all points of the scale, in Belgium and, especially, in the Netherlands interest

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[1] The original question asks: "How important are the following political challenges for your organization? The distance between individual citizens and policymakers (" in a 5 points scale from 1(= not at all) to 5 (=very important). In Sweden the question was not on the questionnaire.

organizations tend to not consider it as   an important challenge to face, while in Italy the most of the respondents are well concerned about the space that divides citizens and their political representatives. Ove all the countries, 62% of Unions organizations consider this topic to be a very important challenge to face, followed by Public

groups and Religious associations (39% and 35%), while only the 20% of Business groups declared   to have the same perception.

Tab.4 - Perceived importance of the distance between citizens and policymakers as a challenge (% of organizations)

	Not at all imp	Not very imp	Neither imp nor unimp	Important	Very important	N.
IT	12.7	9.6	12.4	34.5	30.7	394
BE	39.3	16	19.4	17.1	8.1	725
LI	20	9.1	23.7	26	21.1	350
NE	75.4	8.5	8.7	5.9	1.6	698
SL	28	13	16.8	27.4	14.7	368
TOT.	40.8	11.6	15.6	19.4	12.6	2535

Chi-squared: 737.633 (0.000)

Source: Comparative Interest Group Survey (www.cigsurvey.eu). Author's   elaboration

In order to evaluate the impact of the variable consider, Table 5 reports the coefficient of a regression model (OLS with fixed effects) ran on the importance of the distance between citizens and politicians[1]. The variable does not tell us if the distance is perceived as a threat or as an opportunity for the organization but it can help to understand how they consider the detachment of civil society from political representatives to be a challenge (positive or negative) to face, how interest's organization pay attention to the representative void of political actors. Models have been   tested for collinearity and residuals distribution.

As the hypothesis wants to see if interest organizations can be considered as alternative   representative actors to political parties, I should expect that the role of members, structure of the   organization on the country and the presence of others challenging actors may be relevant: more   importance of members in shaping the political strategies, more organizational chapters and more challenging actors should rise the importance of the question of void. In addition, the type of interest covered by the organization should also affect the perception of void: economic and   institutional groups should pay more attention to the growing distrust toward

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[1] For the list of variables included see the Appendix.

politicians because   they are usually more involved in direct relations with political actors.

Tab.5 - Regression model (OLS -f.e.) on perceived importance of the distance   between citizens and policymakers [6]

	Mod.1	Mod.2	Mod.3
Members on Pol. Strategies	0.201	0.214	0.13
s.e.	0.043	0.031	0.03
Threat by others	0.472	0.317	0.327
s.e.	0.024	0.027	0.025
Local Chapters	0.484	0.373	0.121
s.e.	0.062	0.062	0.061
Unions		0.497	0.247
s.e.		0.132	0.122
Institu./Public		0.37	0.361
s.e.		0.09	0.082
Occupational		0.085*	0.104*
s.e.		0.083	0.077
Leisure		-0.262	-0.208
s.e.		0.108	0.101
Religious		0.042*	0.208*
s.e.		0.131	0.12
Changes in Public opinion			0.141
s.e.			0.024
Individualization			0.142
s.e.			0.023
BE			0.685
s.e.			0.085
IT			1.768
s.e.			0.098
SL			1.2
s.e.			0.103
LT			1.217
s.e.			0.098
R-squared	0.243	0.296	0.416

Only variables with (*) are not significant: $p > 0.05$

Source: Comparative Interest Group Survey (www.cigsurvey.eu). Author's   elaboration

Other control variables aim to cover the political and cultural environment organizations face. The   rapid changes in public opinion may be a risk for representative actors, as well as the growing individualism that threat the collective and aggregating bodies.

From the descriptive analysis, it is evident that variation between countries cannot be neglected. Country variables are a set of national assessments and historical

habits. As reminded before, tradition of neo-corporatist actions recognizes and identify a specific, and strong, role to organized interest that usually are directly included in the political system, while a pluralist, or too young, system of interest is often perceived by organization to be less legitimised and stable. As expected, with the "neo-corporatist" Netherlands as reference category the others country show positive coefficient, especially Italy.

Final remarks

The progressive distance between politicians and citizens has created a void of representation that risk to be fulfilled by non-majoritarian agencies or actors that are not accountable for their choices.

This void of representation can be also considered as an opportunity for those associations that are already acting in the name of their constituencies: those with that are presenting a structural territorial organization, those where the members are considered to determinant for their strategic political choices, those that have specific poly aims.

The aim of this paper was to investigate the perception, and the perceived risk, of void of representation by interest associations in different European countries. The results show that the progressive distance between citizen and policymakers is recognized to be a challenge to face by most of the organizations.

In addition, to be accountable to members increase the perception of void as an important issue to consider. Differences emerge between various type of associations: unions and institutional-public ones are perceiving the void as a clear challenge that should be taken under consideration, while leisure associations, with less direct policy involvement, are not.

The organisation of the interest system at national level, as revealed by the impact of country variable in the model, emphasises the national differences. Where neo-corporatist assets of interaction between the political system and the interest groups are traditional – the Netherlands and Belgium- the distance between citizens and politicians is less perceived as a challenge for the organizations, while in countries that

traditionally adopted a pluralist organization of interest system (where access to policy-making is less regulated), such as Italy, the perception increases.

Overall, it is important to stress that organizations that consider their members to be very relevant in determining their strategic political and policy choices are more aware of the risk of void of representation.

Further analysis should start from that point: interest organisations that are already acting as intermediaries of their members and are accountable to members' positions are recognizing the distance between citizens and policymakers as a challenge for their own organization.

The risk of void should be better analysed and stress in further research in order to understand where democratic government, based on the central role of political parties as intermediaries of social conflict and demands, is going through.

Appendix

Dependent variable: Perception of Void between citizens and politicians (1= not at all important; 5= very important).

Predictors:

Influence of Members on organization's decisions on political strategies (reversed: 1= not at all influential; 5= very influential).

Importance of challenges for the maintenance of the organization: Other forms of political participation (1= not at all important; 5= very important).

If the organization has local chapters (1=yes, 0=no)

Control:

Type of organization: dummy variables (1=yes): Business as reference

Country: dummy variables (1=yes): the Netherlands as reference.

Importance of challenges for the maintenance of the organization: Changing of public opinion about the issues important to your organization (1= not at all important; 5= very important).

Importance of challenges for the maintenance of the organization: Individualization (1= not at all important; 5= very important)

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Impact of Delay on Cost Overrun in Construction Projects in Algeria

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Abstract

Project success is the ultimate goal of the various project stackeholders (Salhi.R 2018). Asuccessful project means that the project is completed on time, within the agreed budget and according to the contract specifications. Delay is one of the most reccuring problems in construction project in Algeria, and it is considered as the main cause of cost overrun, time overrun, disput and claims.The objective of this paper is to mesure the impact of schedule delay on cost overrun, using the simple linear regression method and the coefficient of correlation. The proposed model can be used by practitioners as predictive mesure to address possible cost overrun.

Keywords: delay, project construction, impact of delay, cost overrun, Algeria

Introduction

"Project success is the ultimate goal of the various project stakholders" (Salhi et al 2018). And according to chan and Kumarswamy 1994, "timely delivery of projects within budget and to the level of quality is an index of successful project delivery".

"Delay in construction project is a problem facing by the whole world" (Sambasivan and soon 2007), this delay has significant effects on construction project, among these effects cost overruns, "when project are delayed they are either accelerated or have their duration extended beyong the scheduled compelation date. These are not without some cost consequence."(Aibinu and Jagboro 2002), "delays are almost always accompanied by cost overruns."(Gajare et al 2014), "due to delay the construction firms have to bear more cost labor, equipement and tools. (Sun and Ming 2009).

In Algeria, construction delays has become endemic, "62% of projects have experienced timeouts."(Salhi et al 2018), the objective of this paper is to mesure the impact of delays on cost overruns in Algerian construction project.

Research methodology

Data from 11 public construction projects in the region of Constantine in Algeria has been collected, in order to empirically investigate the effect of delay on cost overrun in Algerian construction project. These projects were classified into 2 categories according to their sector: administrative buildings and economic infrastructures and education sector. The informations obtained from the 11 selected projects includes: planned duration (PD), actual duration (AD), planned cost (PC), actual cost (AC). In order to examine the effect of delay on cost overrun we have introduced 2 variables: cost overrun (equation 1) and time overrun (equation 2), and then the effect of time overrun on cost overrun was investigated using the simple linear regression.

Regression equation,calculated Fisher statistic, and the level of significance of association beteween the 2 variables(Time overrun and Cost overrun) were computed at the level of significance of 10%.

Cost overrun (CO) = Actual Cost (AC) - Planned Cost (PC)…………………......(1)

Time overrun (TO) = Actual Duration (AD) - Planned Duration (PD)………….(2)

Discussion and results

Descriptive statistics

Data obtained from the 11 selected projects (AD, PD, AC, PC, TO, CO) were presented in table 1, and the descriptive statistics from these projects were summarized in table 2.

Planned and actual duration: the mean of actual duration for the 11 selected projects was 1147, 64 days, with a standard deviation of 687,905 days, while the planned duration was 284, 09 in mean and 110,324 in standard deviation. Regarding the project sector, the findings were as follow: for the category of administrative buildings and economic infrastructures the mean of planned duration varied from 316, 20 days to 1674 days.

However, the mean of planned and actual duration for the category of education was respectively: 257,33days and 709 days. From these results we can notice that the actual duration for each project varies considerably from the planned duration.

These results were similar for the findings of (Salhi et al 2018), "there is a large difference between the mean of planned and actual duration and a high value of standard deviation", and (Al-momani 2000), "the time required to complet construction of pulic projects is frequently gretear than the time specified in the contract."

Planned and actual cost: the mean of actual cost for the 11 selected projects was 416890, 27*10^3DA, with a hight standard deviation of 359648, 218*10^3 DA, while the planned cost for the same projects was 155034, 27*10^3DA in mean and 94241, 058*10^3DA in standard deviation.

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Concerning the sector of administrative buildings and economic infrastructures the mean of planned cost varied from 69200*10³ DA to an actual cost of 129680*10³ DA. Further, for the projects of education sector the mean of planned and actual cost was respectively: 226562, 83*10³ and 656232, 17*10³ DA.

From these results we can notice that there is a large difference between the mean of actual and planned cost and a high values of standard deviation, thus we can say that the cost required to complete contruction project is almost always greater than the cost specified in the contract, and this can be explained by the augmentation rate of time overrun, according to (Gbahabo and Ajuwon 2017) who identified schedule overruns as the primary cause of cost overruns", and (Gajare et al 2014)who affirms that "delays are almost always accompanied by cost overruns."

Table 1: Time and cost overruns

Sector	Project	PD (days)	AD (days)	PC*10³ (DA)	AC *10³ (DA)	TO (days)	CO (days)
administrative buildings and economic infrastructures	1	182	699	38000	79400	517	41400
	2	365	1461	38000	98000	1096	60000
	3	152	1930	40000	107000	1778	67000
	4	426	1784	80000	130000	1358	50000
	5	456	2496	150000	234000	2040	84000
Education	6	152	1188	155777	1242196	1036	1086419
	7	207	253	189400	410000	46	220600
	8	273	731	228700	466500	458	237800
	9	334	731	228700	466500	397	237800
	10	213	711	273000	525079	498	252079
	11	365	640	283800	827118	275	252079

*Planned duration (PD), actual duration (AD), planned cost (PC), actual cost (AC), time overrun (TO), cost overrun (CO), Algerian dinar (DA)

Table 2: Descriptive statistics

Sector	Number of project		Duration		Cost	
			Planned(PD)	Actual(AD)	Planned*10³(PC)	Actual*10³(AC)
Administrative	5	Min	152	699	38000	79400
ive		Max	456	2496	150000	234000

buildings and economic infrastructures		Mean	316,20	1674	69200	129680
		SD	140,493	661,308	48592,180	61091,833
Education	6	Min	152	253	155777	410000
		Max	365	1188	283800	1242196
		Mean	257,33	709,00	226562,83	656232,17
		SD	81,620	297,694	48648,431	323228,589
All	11	Min	152	253	38000	79400
		Max	456	2496	283800	1242196
		Mean	284,09	1147,64	155034,27	416890,27
		SD	110,324	687,905	94241,058	359648,218

Linear regression

The simple linear regression was used to describe the relashionship between the identified variables: cost overrun and time overrun. The regression equation, coefficient of determination, and the fisher values obtained from the regression analysis of cost overrun on time overrun are shown in tables (3, 4, 5, 6, 7, 8). The equations developed to mesure the cost overrun based on the time overrun are as follows:

For the projects of administrative buildings and economic infrastructure:

Y= 24, 66 X + 27000................. (3)

For the projects of education sector:

Y= 828, 8 X + 55337................ (4)

Were:

Y the dependent variable represents "cost overrun" (CO), and **X** the independent variable represents "time overrun" (TO)

The coefficients of determination R^2 were found to be 0, 806 and 0, 628 for the projects of administrative buildings and economic infrastructure, and education sector respectively. These implies that 80, 6% and 62,8% of the variation in cost overrun of the respective projects categories can be explained by time overrun(time overrun explain a high percent of cost overrun).

The regression coefficients of correlation for the projects of administrative buildings and economic infrastructures, and the projects of education sector were respectively 0, 898 and 0, 793. These indicate that the distrinution of time overrun mirrors the cost overrun with high degree of accuracy and ensure that there is a strong relationship between the 2 variables.

Also, the calculated fisher statistic (for the administrative buildings and the economic infrastructures) was

$F(1,3) =12, 430$ with p-value of $0,039<0, 05$; hence, the model is significant at the level of 95%. However, the calculated fisher (for the project of education sector) was $F(1,4) = 6, 758$ (with p-value=$0, 6 <0, 10$); so, the model is significant at the level of 90%.

Based on all this foregoing, we can say that there is a positive impact of delays on cost overrun and that the two proposed models were appropriate for prediction of cost overrun based on time overrun.

Table 3: Model summary (Administrative buildings and economic infrastructures)

Model Summary a, c									
Mo del	R	R Squ are	Adjus ted R Squar e	Std. Error of the Estimate	Change Statistics				
					R Squar e Chang e	F Chang e	df 1	df 2	Sig. F Chan ge
1	0,89 8b	0,8 06	0,741	8326,532 98	0,806	12,43 0	1	3	0,039
Sector = Administrative buildings and economic infrastructures. Predictors: (Constant), TIME OVERRUN Dependent variable : COSTOVERRUN									

Table 4: ANOVA ((Administrative buildings and economic infrastructures)

ANOVA a,b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	861814545,37 6	1	861814545,37 6	12,430	0,039 c
	Residual	207993454,62 4	3	69331151,541		
	Total	1069808000,0 00	4			
Sector = Administrative buildings and economic infrastructures.						
Dependent Variable: COST OVERRUN						
Predictors: (Constant), TIME OVERRUN						

Table 5: the coefficients of the line of regression (Administrative buildings and economic infrastructures)

Coefficientsa,b						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26999,724	10200,126		2,647	0,077
	Planned duration	24,658	6,994	0,898	3,526	0,039
Sector = Administrative buildings and economic infrastructures.						
Dependent Variable: COST OVERRUN						

Table 6: Model summary (Education sector)

Model Summarya, c									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df 1	df 2	Sig. F Change
1	0,793b	0,628	0,535	234803,91689	0,628	6,758	1	4	0,060
Sector = Education									
Predictors: (Constant), TIME OVERRUN									
Dependent variable : COST OVERRUN									

Table 7: ANOVA (Education sector)

ANOVAa,c						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	372580621335,933	1	372580621335,933	6,758	0,060c
	Residual	220531517547,401	4	55132879386,850		
	Total	593112138883,334	5			
Sector = Education						
Predictors: (Constant), TIME OVERRUN						
Dependent variable : COST OVERRUN						

Table 8: the coefficients of the line of regression (Education sector)

Coefficientsa,b						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	55326,607	172988,482	0,793	0,320	0,765
	Planned duration	828,803	318,821		2,600	0,060
Sector = Education						
Dependent Variable: COST OVERRUN						

Conclusion

"Delay considered as one of the most common problems causing a multitude negative effect on projects and its participating parties."(Gebrehiwet and Luo, 2017), among these effects are cost overruns. "When there is a delay in construction projects, they are either expedited or the scheduled time for the completion of project, is extended. The result is cost overrun in both the cases." (Saiful haq et al, 2014).

The objective of this study is to mesure the impact of schedule delay on cost overrun in Algerian construction project. Therefore, data from 11 public projects in the region of Constantine have been collected for the analysis.

The simple linear regression has been used to mesure the impact of delays on cost overruns, and the findings show that there is a strong relationship between cost and time overrun, and that delay has a positive impact on cost overrun.

Also, the results reveal that the developed model is appropriate for the prediction of cost overrun, and it can be used by practitionners in contruction projects as predictive mesure to reduce possible cost overrun.

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Higher Education in VUCA-World: New Metaphor of University

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Abstract

In the 21st century universities cannot survive if they simply support an established state of affairs because the modern world is described by the following relation: the rate of change tends to infinity; the transition interval tends to zero. This leads to the fact that universities cannot rest on their laurels and not change. The university that cannot construct new organizational ties loses its magnitude forever. The article describes the specific features of the new reality which are of great importance for building modern organizational systems in universities. Reference points have been being identified and that allows presenting the direction of development that meets the new requirements of the modern world to people, processes, technologies, structures, and systems accordingly to the university. Analysis of the selected reference points leads to the conclusion that in the conditions of dynamic changes and uncertainty of the world the concrete way of the vision of the university's situation is to see it as if in the light of the modern world. A metaphor is presented, which is based on a comparison of the university internal world with the current reality. It is expressed by the acronym VUCA.

Keywords: university's internal space, pivotal points of change, metaphor, validation, uniqueness

Introduction

The world is currently undergoing a serious transformation and presents more and more signs of what is described by the concept of VUCA: volatility, uncertainty, complexity and ambiguity (Friedman, Thomas L. 2007). The multiple increases in the

rate of changes in the VUCA world place new demands on people, processes, technologies, structures, and systems where conditions are created for the education of a personality, for the development of a mobile, vibrant and adaptive style of thinking (Bennis, Warren, 1995). The need to move from the SPOD - world (S-Steady; P-Predictable; O-ordinary; D-Definite) to VUCA gives rise to efforts to find a "metathesis" of this new world ideas. The combination of initial ideas about this new world, accumulated by the professional community, leads us to identify the specific features of the reality which are of great importance for building modern organizational systems in universities:

Discreteness is the main feature of the new reality, and its manifestation in management processes in open complex systems (socio-economic systems-organizations) is associated with the unevenness of innovation processes over time, with different rates of transformation of the components that make up these systems (Mikhailovich Y.V., 2016). Time discreteness (abrupt changes in business processes operating in previously stable systems) provides a wave-like change in their trajectories, as well as the creation of new system architecture or their components (Schumpeter, J.A., 1982).

Nonlinearity, which lies in the fact that with small changes in the parameters of the system, its state and properties change great, just in leaps and bounds. This leads to completely unexpected effects, impossible in SPOD-transformations. Non-linearity means a multiplicity of system states, multivariate and alternative management decisions and, as a result, a variety of educational system development scenarios. This feature of the new world allows its own initiating the emergence of new internal environments within organizations through the self-development of processes in the overall system.

Cognitive flexibility is seen as a change in communication, due to the need to revise previous attitudes and thoughts about many aspects of the phenomena in the context of VUCA. Under new conditions, it becomes necessary to adapt thinking in response to changes in goals and external stimuli (Scott W. A., 1962). The flexibility of thinking affects the actions speed of people who make decisions to identify areas for making adjustments to programs, changes in processes, and criteria for choosing communication channels. It allows resolving the contradiction between the actions of people to agree on solutions and the reaction of partners in a situation that seems them incredible and does not correspond to their usual ideas about reality due to the unusual VUCA context.

These features of the new world are currently affecting almost all spheres of life and are continuing to perform profound transformations in the institutions of higher education.

Methodology

The ideas about how institutions regulate this or that sphere of society are changing (Kleiner, G.B., 2004). The focus of attention is not on the functioning, but on the formation and development of institutions, which determines new ideas about universities, about the nature of the interaction of their subjects. Scientists and practitioners rethink the development trends of universities, their role as a public institution, issues of university transformations in the context of global economic changes caused by the information revolution (Barnett, R., 2012). In the information society, when changing the type of economics to the knowledge economy, the perception of educational activities changes: from books to online courses; from the implementation of the stereotypical research process to the creation of scientific collaborations with the business; from the classical forms of organization of educational activities to adaptive learning formats when generations change. Universities, products of the social, cultural, economic and political contexts that interact and develop over time, respond to a changing environment and are more and more subject to "new norms" describing today's realities. At the same time, these new norms for describing education put forward new metaphors (self-comprehension models), new guidelines for its reorganization, proclaim new values and new foundations for educational projects.

The world of VUCA is becoming a driving force for revising various adaptive models of educational practices in different countries of the world, an incentive for overcoming the systemic crisis of education through the transition from the learning paradigm of "knowledge and skills" to the school of uncertainty and the paradigm of variable motivating developmental education (Asmolov, A. G., 2015). The need for constructing the future of educational systems is growing because "… without critical reflection, any new managerial project of forecasting the future of the education system as a potential resource of positive changes in the economic life of the country has little chance of success" (Asmolov, A. G., 2015, 61). On the other hand, nowadays study of systems based on their quantitative and qualitative characteristics rests on the need to make decisions on development in an environment of uncertainty, increasing the level of complexity of the processes occurring in the world, when a minor impact on the system can have major consequences, including completely unexpected ones.

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The organization of higher education, as a system consisting of living people (a living organism), has the ability to become stronger and more enduring, passing through shocks. The pivotal points for the development of this ability, in the opinion of the journalist and economist Nassim Taleb, who is authoritative for a wide range of researchers of the new world, are: very close attention to what is happening, prompt feedback and "adaptive" interaction with the outside world (Taleb, N., 2014). Using this idea as a basis, we single out these reference points for constructing the university's vision in a new reality.

Careful attention to modern processes of socio-economic development requires a review of ideas about the components of the external and internal environment and the addition the "development space" component to them. "They are arranged in a certain hierarchy: the concept of "environment" lies at the bottom, because the environment is a combination of objective factors that, regardless of their desire, have an impact on graduates; the concept of "space" is built on above, because performs a combination of factors of a higher order. As for the environment, not all objective factors allow using intellectual resources and creating new solutions to meet the needs of students, that is, they are the environment for each individual, but only those that they perceive and respond to (Korsakova, T. V., 2015). In this context, the creation of an internal development space that meets the challenges of the time is one of the key tasks for the development of higher professional educational institutions in general. In this paper, we will not delve into the problems of the relationship between the functions of all the internal spaces of the university, their elements and types, but accept the definition of the internal space of a higher education institution as a complex phenomenon of the educational continuum, the properties of which are changed by between all its members" (Bekker, I. L., 2009). Thus, in the space of the university's development, special relations develop between its subjects - students, teachers, representatives of the economic environment, which are developed according to the laws of the new volatile world. In his space, unique communities are born, consisting of people of different status, different outlook, different experiences, and different powers. People work extremely efficiently by their own free choice, they like it, they love it, their freedom of creative expression lies in increasing the efficiency of work. Their values are so similar, and the relationships are so transparent that an increase in competences occurs, the level of consolidation of groups increases, the speed of thinking of each subject increases, the determination is enhanced when choosing the best option from the available alternatives. On the one hand, the university's development space covers the educational space (all persons, all objects and processes), on the other hand, it "captures" the environment,

which provides a focus on educating graduates with a set of personal, social and professional competencies in demand in the new world.

Operational feedback is provided by the labor market, where the requirements for professional competencies have been substantially updated in recent years, and systems for assessing the professional qualities of workers are based on the definition of their competence. At the same time, there is a discrepancy between the ambitions of university graduates and the possibilities for their self-realization in the labor market. "The modern labor market, the main characteristics of which are flexibility, variability, high innovative dynamics, makes new, not previously articulated requirements for job seekers" (Bobienko, O.M., 2008). The research conducted by the Institute of Education, National Research University "Higher School of Economics" confirms that employers want to invite employees who are able to think critically and analytically, interact effectively with colleagues, organize their own working activities and teamwork, collect and analyze information from various sources, cope with everyday working problems and make informed decisions" (Podolsky, O. A., 2016). Studying the problems of the interaction of the labor market and education, researchers come to the conclusion that the most important skills required for successful work are professional ones, which consist of competences and methods of work organization, as well as communication skills and a certain level of stress tolerance" (Trufanova, N.N., 2015). We can also consider feedback from McKinsey, an international consulting company, which believes that the majority of employers link the success of their organizations with the presence of talented employees. And this trend will continue until about 2030. Based on the results of their research, the researches of the forecast conclude that successful companies understand that it is the modern competencies of employees that correspond to the realities of the new world are the main factor determining the success of companies (Michaels, E., 20055).

Adaptive interaction, in other words - the ability to adapt, adapt to the rate of change of the external environment in the 21st century, is manifested in the orientation of the university's development space towards a person instead of orientation to tasks and results. This space is characterized by increased discreteness, since management at the level of creative associations of students, teachers and business representatives makes it possible to receive information about the object of research more often and, accordingly, to make and implement decisions more quickly (Kochetkova, A.I., 2018). Organized space of development makes it possible to increase the energy of speed with the help of common energy of connections between people

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Conclusion

Analysis of the selected reference points leads to the conclusion that in the conditions of dynamic changes and uncertainty of the modern world, they become the concrete way of forming the university's metaphor since "… metaphor, giving some literal statement, makes us see one object as if in the light of another, which entails enlightenment" (Ortega-i-Gasset, H., 1990). Based on the comparison of the university internal world and the current reality the metaphor expressed by the acronym VUCA has arisen - University VUCA.

Validation - guaranteed confidence in a high degree of university educational values adequacy to the goals pursued by students. But it necessary to understand that not only universities provide goals to the consumers of educational services: they themselves create their values and goals through interaction with economic agents, with teachers and with each other, satisfying their creative interests, and "the value they receive is the result of their total personal experience." (Prahalad, K., 2006). This adequacy makes the conformity to the changing environment of the world, which prescribes not to wall off the world and not to invent students' motivation, not to ascribe them intentions - while maintaining the focus the university needs to be both receptive and open.

Uniqueness - understanding of the internal space of the university's development as a unique tool that allows everybody to begin the process of systematic liberation from the "habitual" in favor of the "new" or as "yet unknown". An important role here is played by the delicate balance between innovation and the preservation of the status quo. Innovation is a discipline, not an accidental insight. There must be a constant assessment of what can be discarded from the old. Regular analysis of activities and getting rid of unproductive programs stimulates creativity, even in inveterate structures. New ideas begin with doubt. University helps to expand the horizons of communication, "catch" the implicit signs that will lead to grand ideas. Any person will understand where and why he goes, believe in himself and others, be able to ask questions in a situation of rapid change, constantly look for new ideas and welcome constructive criticism, throw away everything banal, patterned and ordinary to get the "essence", learn from mistakes, to seek the ability to create free, to achieve unique results in this unstable and uncertain, complex and ambiguous, fast world.

Complementarity - the reflection of the processes of mutual influence and adaptation of persons of the university's development space and the ways in which the behavior of different people, when they interact, can be combined and influence each other. So, people with formal-logical thinking will build a strong evidence system, but it will

take a long time. Those who have intuitive-sensory thinking will hardly articulate the arguments, but this method is faster. Interpersonal complementarity is achieved by trusting one another and combining foreboding and persuasive arguments.

Attractiveness – the ability of the university to attract positive attention to itself, to arouse interest, joy, and the desire to repeat contact; providing a quick understanding of what is happening and how things are going in this or that process by each person, even those who are not directly involved in it; allowance to everybody to "see", to distinguish and to compare the processes occurring in the university space and in external reality. This is important because, despite the increase of information flow, its availability increases; introduction of information systems optimizes internal processes; interaction becomes more important than control; the architecture of educational processes affects the content of education; normatively approved methods of activity give way to methods of activity that meet modern conditions. This contributes to the emergence of joint projects with business, to collaboration spaces, and the diversity of the long-term cooperation of enterprises with university laboratories. The exchange of experience and the constant verification of each other's contributions make the educational process more transparent and accurate, and, in turn, serve as a tool for making individual decisions.

It is obvious that we are waiting for the transformation of university education in a constantly changing economic context. The new metaphor can be a driving force in the formation of university flexibility, its focus on a system of relations in which people and interactions become more important than processes, unique educational projects are more important than programs, cooperation is more important than planned activities, and willingness to change is more important than following the original plan.

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Social Media Use and Students' Health-Lifestyle Modification in University of Calabar, Nigeria

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Abstract

The use of social media platforms has over the years become a veritable tool for individuals, groups, institutions and corporate bodies for the promotion of health and wellness. In recent times, social media has become one of the most potent agents of the media through which health issues are addressed as well as generated and disseminated to different populations in society. The study was conducted to examine social media use and students' health lifestyle modification in the University of Calabar, Nigeria. It sought to determine the extent to which students' use of social media (Facebook, Twitter, and WhatsApp) influences the modification of their health-related lifestyles such as eating habits, sexual behaviour, cigarette and alcohol consumption, drug use and the engagement in fitness activities. The study adopted a randomized descriptive survey design and used a sample of 300 undergraduate students. The questionnaire was the main instrument used for collection of data while simple percentages and means were used to determine the difference between the expected mean of 2.50 and the observed means across various items in the questionnaire. The results showed that apart from Twitter, social media use by University of Calabar students has significantly influenced the modification of their health lifestyles. Since social media has become a veritable tool for the promotion of positive health lifestyle, effort should be made by government through the health sector to create more awareness among students and the entire population of social media users, on the health benefits accruing from use of social media.

Keywords: social media, Facebook, Twitter, WhatsApp, health-lifestyles modification

Introduction

The world of Information and Communication Technology (ICT) added great value following the emergence of social media, which has made the world a real global

village. This is because the substantial growth of social networking sites within the last decade has facilitated the removal of time and space barriers that impeded people's interconnectivity, and rather provided them with greater prospects for the maintenance of existing social ties and expansion of social networks (Zhang, He, & Sang, 2013). Social media, by definition, is the collection of online communication channels dedicated to community-based input, interaction, content-sharing and collaboration. Reddy, Ishwarya, and Mulupuri (2015) view them as computer-mediated tools that allow people to create, share or exchange information, ideas, and pictures/videos in virtual communities and networks. Social media are designed in two forms: the open social media (which includes Facebook, Twitter, Google+, instagram, YouTube, orkut, and all online sites that allow the sharing of general purpose information), and the specific purpose or intentionally designed social media (which includes My heritage, Classmates.com, Studivz, Flixter, Linkedin, Reddit, Pinterest, Redbrick Health, PatientLikeMe, and all other online platforms that are used for specific purposes like business, sports, politics, health, etc).

In modern society, the application of social media in the health purview has gained unparalleled popularity over the past few years and shows tremendous potential (Coiera, 2013), as their functions are known to be effective in improving access to health information by users (Freyne, Berkovsky, Kimani, Baghaei, & Brindal, 2010), engagement of families in lifestyle changes (Baghaei, Kimani, Freyne, Brindal, Berkovsky, & Smith, 2011), and motivating weight loss (Hwang, Ottenbacher, Green, Cannon-Diehl, Richardson, Bernstam, & Thomas, 2010). In other words, various social media networks serve as veritable tools in the hand of corporate bodies, institutions, groups, and individuals for the promotion of health and wellness. This is succinctly captured by Elan (2012) who also saw the health benefits of social media to include facilitating group relations, building (online support) communities, normalizing help seeking behaviour, rousing healthy lifestyle modification, and building medical investigation. Consequently, the World Health Organization (WHO) is seriously leveraging the social media, (via Facebook and Twitter) to manage global health crises arising from HIV/AIDS, natural disasters, Ebola, diabetes, hypertension, tuberculosis, cancer, etc. As Olson (2012) noted, WHO may be on the leading edge of using social media to manage global humanitarian responses. Individuals on the other hand use social media to get useful health-related information, including social support, which promotes better-informed treatment decisions (Laranjo, Arguel, Neves, Gallagher, Kaplan, Mortimer, Mendes, & Lau, 2015) as well as health lifestyle modification (Baghaei, Kimani, Freyne, Brindal, Berkovsky, & Smith, 2011). For House (1981), Emotional, appraisal, informational and instrumental are categories of support from social media that influences health. Such support could boost one's abilities to deal with stressful health challenges, resulting to enhanced and improved health outcomes (Dimatteo, 2004).

Health lifestyles are known to greatly determine health. They constitute an influential factor that determines the healthiness or otherwise of individuals and populations in

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

society. To Cockerham (2001), the collective patterns of health-related behaviour due to the choices from the available options to people according to their life chances is referred to as health lifestyles. Health lifestyle issues border on eating habits, sexual behaviour, cigarette and alcohol consumption, drug use, exercise, medical checkups, dealing with stress, etc. In modern times, the role of health lifestyles in improving the health of people has gained much prominence (Cockerham, 2001). This development, according to Crawford (1984), is borne out of three factors: (i) the public recognition that disease patterns has changed from acute or contagious to chronic diseases that medicine cannot cure; (ii) the understanding that various health disasters, such as AIDS and cigarette-induced lung cancer, are caused by specific styles of living; and (iii) emphasis on lifestyle change and individual responsibility for health through the virtual campaigns by the mass media and health care providers. In recent times, social media has become one of the most potent agents of the media through which health issues are generated and disseminated to different populations in society. Consequently, studies whose interest borders on the social media and health have continued to grow. Some of such studies include that of Lee, DeCamp, Dredze, Chisolm, & Berger, (2014); Scanfeld, Scanfeld, & Larson (2010); Elan (2012), Zhang, He, and Sang (2013), Zhang (2012), Laranjo,et al (2015), Baghaei, et al (2011), House (1981), Dimatteo (2004), etc. The preoccupation of this study, therefore, is to determine whether the students' use of social media networks such as Facebook, Twitter, and WhatsApp influence the modification of their health lifestyles.

2. Statement of the problem

Students of University of Calabar constitute a very unique population that is known for their displays of distinctive lifestyle patterns that have direct bearing on their health and wellbeing. Being a predominantly youthful population, University of Calabar students adopt all manner of lifestyle patterns, which make them highly prone or vulnerable to health challenges. It has been observed that following their attainment of independence from parent and significant others, as a result of admission into the university, several students get involved in risky health lifestyles such as licit or illicit drug use and abuse, unregulated and unprotected sexual activities, improper feeding habits and dieting, trending fads and fashion, health-breaking competitions, club and cult activities, etc. which sometimes result in their development of health problems in the short or long run. As Wang, Xing, and Wu (2013) observed, several researches have shown that many college or university students display less of positive or health promoting lifestyles and more of risky behaviours that challenge their health in the short and long run. Such studies include that of Steptoe and Wardle (2001); Lee and Loke (2005); Laska, Pasch, Lust, Story, and Ehlinger (2009); Rozmus, Evans, Wysochansky, and Mixon (2005); Jorgensen and Maisto (2008).

However, the University of Calabar students are known to be among the most predominant users of the social media, employing it for both academic and non-

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

academic related purposes. Meanwhile, very little is known about their use of the social media for health-related purposes such as the promotion of healthiness and wellness through the sharing and consumption of vital or relevant health information for lifestyle modification. This study therefore seeks to determine the extent to which use of social media by students of the University of Calabar, Nigeria, promotes health-lifestyle modification.

3 Objectives of the study

The study was designed to investigate social media use and the modification of health lifestyles by students of the University of Calabar, Nigeria. Specifically, the study sought to:

Determine the extent to which use of Facebook by students of the University of Calabar promotes health-lifestyle modification;

Ascertain the extent to which use of Twitter by students of the University of Calabar promotes health-lifestyle modification;

Determine the extent to which use of WhatsApp by students of the University of Calabar promotes health-lifestyle modification.

4. Research questions

The study sought to answer the following questions:

To what extent does the use of Facebook by students of the University of Calabar promote health-lifestyle modification?

To what extent does the use of Twitter by students of the University of Calabar promotes health-lifestyle modification?

To what extent does the use of WhatsApp by students of the University of Calabar promotes health-lifestyle modification?

5. Literature review

The emergence of the social media constitutes a veritable tool for the dissemination and sharing of health information in modern society. This has thus brought a remarkable breakthrough in the promotion of individual and collective responsibility for healthy living. The understanding that the global burden of non-contagious diseases nowadays is due to lifestyle behaviours, there is increasing emphasis on the use of the social media to combat this development (Narayan, Ali, and Koplan, 2010; Smith and Christakis, 2008; and Fowler and Christakis, 2008). Centola (2013) observed that the rising recognition of using social media sites like Facebook and Twitter for improved health has also escalated the commercial applications that present fundamental new approaches. For instance to promote compliance with planned health regimens, companies like Redbrick Health, Stay Well and Healthways have been using online social support platforms. Strømme, Mosdøl, Nordheim and

Vist (2014), and Elan (2012) also noted in their studies that individuals, businesses, organizations and others spread health related content in social media, which inspire healthy lifestyle changes. For Elan (2012), to achieve health goals such as starting an exercise plan, losing weight, lowering blood pressure or cholesterol and quitting smoking, many people use social media as a motivational tool. He noted further that to foster an anti-smoking culture among the youths in South Australia, health promotion experts are working at using social media like Facebook and Twitter by developing an evidence-based website that will highlight data about smoking and the tobacco industry with the aim at using peer pressure to stop the youths from taking up smoking. Umberson, Crosnoe, and Reczek (2010) have observed that to aid our understanding of how social networks influences the collective dynamics of health behaviour, recent studies of large network data sets have made important advances. For example, Howard (2010) maintained that people fighting chronic illnesses are finding information and connecting with others suffering from similar illnesses through the use of social media. Salathé and Khandelwal (2011) reported that a range of social tools such as Google+, Twitter, Facebook, etc have produced innovative opportunities to draw the interactions between health and social connectivity. They added that on the dynamics of opinion dissemination on health behaviours, recent work using open social technologies has provided significant new insights. For instance, studies on Twitter networks have found that sentiment about vaccines can be propagated through chains of Twitter feeds.

6. Research methods

6.1 Research design

The study adopted the randomized cross-sectional survey design. This is because the main aim of survey is to measure knowledge, attitude and value. Thus, since the study is to determine an attitudinal issue, which is social media use and promotion of health lifestyle modification, use of survey design becomes inevitable.

6.2 Research setting

The study area is the University of Calabar, Calabar. The University of Calabar, popularly known as Unical is one of the second-generation federal universities in Nigeria. It is located in Calabar, the capital of Cross River State, Nigeria. It was formerly a campus of the University of Nigeria (UNN) Nsukka, but gained the status of a full-fledged university in 1975, with the motto "knowledge for service". University of Calabar is a coeducational higher institution with an enrolment range of 40,000 to 44,999. Its male students are referred to as "malabites" while its female students are referred to as "malabresses".

It has a good number of academic programmes run within different colleges, institutes, and faculties which include Agriculture, Allied Medical Sciences, Art, Basic Medical Sciences, Biological Sciences, College of Medicine and Dentistry, Law, Physical Sciences, Education, Social Sciences, Management Sciences and Institute of

Oceanography, Unical Consultancy services, and the Graduate School. University of Calabar also provides, or serves as a fertile ground for the provision of other non-educational services such as health care (medical) centre; banking services; accommodation for staff and students; hospitality, recreation, religious, transport, and entertainment services; including agricultural or farming services etc. Furthermore, the growth of the University of Calabar, with its attendant increase in students' enrolment, has given rise to the establishment and operation of a lot of other formal and informal economic activities to service the needs of both staff and students of the university. They include banks, communication outfits, fast food joints, restaurants, pharmaceutical shops, transport companies, ICT centres, and a host of other outfits that deliver economic services to staff and students. Also, University of Calabar hosts a large number of students and non-students who are known to be among the largest users of social media networks such as Facebook, WhatsApp, Twitter, Instagram, LinkedIn, etc.

6.3 Sample and sampling technique.

The study used a sample of three (300) hundred undergraduate male and female students. They were drawn in equal proportion (50 each) from six (6) faculties through the simple random and accidental sampling techniques. The faculties include Social Sciences, Education, Arts, Sciences, Management Sciences, and Agriculture.

6.4 Research instrument

The study used the structured questionnaire to elicit responses from respondents on the issues under investigation. Social media use and students' health lifestyle modification was assessed using a four-point Likert scale order –Strongly Agreed (SA), Agreed (A), Disagreed (D) and Strongly Disagreed.

7. Result and discussion of findings.

7.1 Question 1: to what extent does the use of Facebook by students of the University of Calabar promote health lifestyle modification?

Table 1: Frequency distribution and percentage analysis of Facebook use and health lifestyles modification by students of University of Calabar.

Health lifestyle modified	SA (%)	A (%)	D (%)	SD (%)	Expected Mean $(\bar{x})$	Observed Mean $(\bar{x})$	Remark
Eating habits	77 (25.7)	79 (26.3)	80 (26.7)	64 (21.3)	2.50	2.56	Remarkable
Avoidance of unprotected sexual behaviour	70 (23.3)	81 (27.0)	82 (27.3)	67 (22.3)	2.50	2.51	Remarkable

Carry out regular fitness activities	59 (19.7)	84 (28.0)	97 (32.3)	60 (20.0)	2.50	2.47	Unremarkable
Avoidance of use of tobacco product	68 (22.7)	87 (29.0)	80 (26.7)	65 (21.7)	2.50	2.53	Remarkable
Avoidance of alcohol use	68 (22.7)	84 (28.0)	96 (32.0)	52 (17.3)	2.50	2.56	Remarkable
Use of prescription drugs	50 (16.7)	90 (30.0)	90 (30.0)	70 (23.3)	2.50	2.40	Unremarkable

Source: Field survey, 2018.

The result from table 1 revealed the number of responses with percentages in brackets, as well as the expected and observed means of the respondents. Result of item one which seeks to determine whether use of Facebook modifies the eating habits of students revealed that the observed mean of 2.56 is greater than the expected mean of 2.50. This implies that the use of Facebook has helped in modifying the eating habits of University of Calabar student. Result of item two also revealed that the observed mean of 2.51 is also greater than the expected mean of 2.50, implying that use of Facebook has modified the sexual lifestyle of University of Calabar students. Item three sought to determine whether the use of Facebook influences the engagement in regular fitness activities or exercise, and results revealed that the observed mean of 2.47 is less than the expected mean of 2.50. This implies that Facebook use has not helped to modify the students' lifestyles in terms of making them engage in regular fitness activities. Result of item four showed an observed mean of 2.53 which is greater than expected mean of 2.50 implying that use of Facebook has modified their tendencies towards use of tobacco products. Finally results in items five and six revealed observed means of 2.56 and 2.40 respectively as against the expected mean of 2.50. These imply that use of Facebook has modified the students' use of alcohol, but has not modified their use of prescription drug. In other words, the results in table 1 shows that Facebook use by students of University of Calabar has significant influence on the modification of their health life styles.

7.2. Question 2: to what extent does the use of Twitter by students of the University of Calabar promote health lifestyle modification?

Table 2: Frequency distribution and percentage analysis of Twitter use and health lifestyles modification by students of University of Calabar.

Health lifestyle modified	SA (%)	A (%)	D (%)	SD (%)	Expected Mean $(\bar{x})$	Observed Mean $(\bar{x})$	Remark

ISSN 2411-958X (Print)
ISSN 2411-4138 (Online)

European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

Eating habits	61 (20.3)	91 (30.3)	92 (30.7)	56 (18.7)	2.50	2.52	Remarkable
Avoidance of unprotected sexual behaviour	54 (18.0)	84 (28.0)	88 (29.3)	74 (24.7)	2.50	2.39	Unremarkable
Carry out regular fitness activities	54 (18.0)	99 (33.0)	89 (29.7)	58 (19.3)	2.50	2.50	Remarkable
Avoidance of use of tobacco product	55 (18.3)	77 (25.7)	106 (35.3)	62 (20.7)	2.50	2.42	Unremarkable
Avoidance of alcohol use	48 (16.0)	77 (25.7)	101 (33.7)	74 (24.7)	2.50	2.33	Unremarkable
Use of prescription drugs	50 (16.7)	82 (27.3)	97 (32.3)	71 (23.7)	2.50	2.37	Unremarkable

Source: Field survey, 2018.

The results from table 2 revealed the number of responses with percentages in brackets, as well as the expected and observed means of the respondents. Result of item one which seeks to determine whether use of Twitter has helped in modifying the students' eating habits revealed an observed mean of 2.52 which is greater than the expected mean of 2.50 and thus shows that Twitter use has helped in the modification of the students' eating habits. Result of item two revealed an observed mean of 2.39, which is lower than the expected mean 2.50. This implies that the use of Twitter has not modified the number of sexual partners University of Calabar students keep. Result of item three also revealed an observed mean of 2.50 which is equal to the expected mean of 2.50, implying that use of Twitter has perfectly modified the practice of regular fitness activities by University of Calabar students. Item four sought to determine whether the use of Twitter has modified their use of tobacco product, and results revealed that the observed mean of 2.42 is less than the expected mean of 2.50. This implies that Twitter use has not modified the use of tobacco product. Result of item five which sought to determine whether use of Twitter has modified their attitude towards alcohol use showed an observed mean of 2.33 which is less than expected mean of 2.50 implying that use of Twitter has not modified their attitude in this regard. Results in items six which sought to determine whether Twitter use has modified the students' attitude towards the use of prescription drugs, revealed an observed mean of 2.37 which is less than the expected mean of 2.50, implying that Twitter use has not modified their lifestyle in that direction. In other words, the results in table 2 show that Twitter use by students of University of Calabar has no significant influence on the modification of their health life styles.

7.3. Question 3: to what extent does the use of WhatsApp by students of the University of Calabar promote health lifestyle modification?

Table 3: Frequency distribution and percentage analysis of WhatsApp use and health lifestyles modification by students of University of Calabar.

Health lifestyle modified	SA (%)	A (%)	D (%)	SD (%)	Expected Mean $(\bar{x})$	Observed Mean $(\bar{x})$	Remark
Eating habits	74 (24.4)	98 (32.7)	74 (24.7)	54 (18.0)	2.50	2.64	Remarkable
Avoidance of unprotected sexual behaviour	61 (20.3)	89 (29.7)	79 (26.3)	71 (23.7)	2.50	2.47	Unremarkable
Carry out regular fitness activities	78 (26.0)	101 (33.7)	74 (24.7)	47 (15.7)	2.50	2.70	Remarkable
Avoidance of use of tobacco product	69 (23.0)	95 (31.7)	85 (28.7)	57 (17.0)	2.50	2.63	Remarkable
Avoidance of alcohol use	59 (19.7)	89 (29.7)	72 (24.0)	80 (26.7)	2.50	2.42	Unremarkable
Use of prescription drugs	67 (22.3)	97 (32.3)	76 (25.3)	60 (20.0)	2.50	2.57	Remarkable

Source: Field survey, 2018.

The results from table 3 revealed the number of responses, with percentages in brackets, as well as the expected and observed means of the respondents. Result of item one which seeks to determine whether use of WhatsApp influences the students' modification of eating habits revealed an observed mean of 2.64 which is higher than the expected mean of 2.50. This implies that the use of WhatsApp has influenced their eating habits. Result of item two, which seeks to determine whether use of WhatsApp influences their attitude of unprotected sex revealed an observed mean of 2.47 which is less than the expected mean of 2.50, implying that use of WhatsApp has not modified the attitude of engaging in unprotected sex. Item three sought to determine whether the use of WhatsApp has modified their attitude towards regular fitness activities, and results revealed that the observed mean of 2.70 is greater than the expected mean of 2.50. This implies that WhatsApp use actually modified the students' attitude towards regular fitness activities. Result of item four which sought to determine whether use of WhatsApp has promoted their attitude towards tobacco product showed an observed mean of 2.63 which is greater than the expected mean of 2.50 implying that use of Facebook significantly modified their attitude in that

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European Journal of
Interdisciplinary Studies

January - June 2020
Volume 6, Issue 1

regard. Results in items five which sought to determine whether WhatsApp use has modified the quantity of alcohol they consume, revealed an observed mean of 2.42 which is less than the expected mean of 2.50 implying that WhatsApp use has not modified their lifestyle in that direction. Item six sought to determine whether WhatsApp has significantly improved their knowledge of the dangers of illicit use of prescription drugs. The result showed that WhatsApp has influenced the students with an observed mean of 2.57, which is greater than the expected mean of 2.50. In other words, the results in table 3 show that WhatsApp use by students of University of Calabar has significant influence on the modification of their health life styles.

Discussion

The findings reveal that use of social media platforms by students of University of Calabar has significantly influenced the modification of their health lifestyles. In other words apart from Twitter, their use of Facebook and WhatsApp has shown significant influence on the modification on their lifestyles and attitudes in various health related issues that were measured. The results showed that the three social media platforms have significantly affected the students' modification of their eating habits. Twitter and WhatsApp have also influenced their regular involvement in fitness activities. Their use of tobacco product has been influenced by the use of Facebook and WhatsApp while Twitter has no effect in this regard. The finding is in agreement with some studies like that of Chou, Hunt, Beckjord, Moser, and Hesse (2009), Centola (2013) and ALrukban (2014). Chou et al (2009), for instance, averred in their study that social media has become a permanent part of public health and is employed in various healthcare activities such as web-based appointment scheduling, online guidance for withdrawal from smoking and weight reduction. Also, Centola (2013) in his work maintained that the growing popularity of social media sites like Facebook and Twitter has also given rise to applications that provide new and far-reaching methods towards the use of social media for improved health. For instance, companies such Redbrick Health, StayWell, and Healthways have started promoting compliance with designed health regimens using online social support platforms and that through extensive recruitment and regular interactions, these sites create communities that encourage increased involvement in exercise and diet programs among their members. Similarly, ALrukban (2014) in a study of 816 social networking sites (SNS) users, found that over 81% of the study population using social networking sites have benefited from health information from social networking sites and 93.5% of users advocated the use of SNS to create awareness about harmful habits.

Conclusion/ Recommendations

Although social media use has become a veritable tool for the promotion of health in modern society, students of the University of Calabar are yet to take full advantage of the health gains inherent in it since some health life-styles have not been modified through the social media platforms. Stakeholders in the health sector should be

encouraged to collaborate with social media service providers to ensure greater utility of the technology for the dissemination of health information to society in general and students in particular. Social media service providers should be encouraged to partner with university authorities in order to expand the health information dissemination to students. Students should be encouraged to put their social media use to more health promoting purposes. In other words, more awareness need to be created on the health benefits of social media use as majority may be ignorant of such benefits

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