

AYBU BUSINESS JOURNAL

MARCH 2023

Volume: 3

Number: 1

e-ISSN:2792-0119



ANKARA
YILDIRIM BEYAZIT
UNIVERSITY

AYBU BUSINESS JOURNAL

Volume: 3 • Number: 1 • March 2023

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Phone: (0312) 906 16 /21 / 47 /48

E-mail:bsdo@ybu.edu.tr

<https://aybu.edu.tr/isletme/tr/sayfa/5218/AYBU-BUSINESS-JOURNAL>

PUBLISHER

Ankara Yıldırım Beyazıt University, Esenboğa Campus, Esenboğa/Ankara

Authors bear responsibility for the content of their published articles.

The publication language of the journal is English.

Publication Type

Periodical

AYBU BUSINESS JOURNAL

Volume: 3 • Number: 1 • March 2023

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How Consumer Attitudes Shape Brand Equity?: A Comparison Of Bayern Munich And Barcelona Football Clubs' Fans

Tamerlan MASHADIHASANLI ^{a*}

^aIstanbul University, Institute of Social Sciences, Department of Economics, Istanbul, Turkey

Abstract

In recent years, developments in the sports industry have made it possible for professional football clubs to be accepted as brands and to be managed from this perspective. The main purpose underlying the brand management efforts of club managers is to create “brand equity”. The creation of brand equity in professional football clubs and the importance of fan attitude in creating brand equity attracts great attention from both academics and practitioners in many countries. In the research, some evaluations are provided in terms of fan attitudes and brand equity to improve inadequate strategies such as the increase in competition in the field of sports, the weak connections between the fan and the club, the emergence of club debts, and the inadequate brand strategies. In this respect, an investigation of the effect of fan attitude on brand equity in terms of professional football clubs constitutes the basis of the research. In the research, a comparison was formulated based on F.C. Bayern Munich and F.C. Barcelona. The findings state that consumer attitude had a positive effect on the brand equity of the club. It is an important effect for the literature to reveal how consumer attitudes affect brand equity in such a big market rather than general consumer goods.

Keyword

Consumer attitude,
Sports consumers,
Brand equity

1. INTRODUCTION

Football has become a worldwide industry competing for its share of leisure time. Recently, it has spread to a wide audience with the development of technology and as a result has become a service sector that stands out with its economic features. Individuals and organisations in the mentioned sector have changed over time and the clubs have turned into businesses, as well as the fans and the audience have turned into consumers.

The rapid day by day increase in competition in the sports industry has shown that professional football clubs cannot survive without economic efficiency. In this respect, the trend in the sports industry in recent years is that professional football clubs are seen as a brand and managed with this view. The main purpose of club management in brand management studies is to create “brand equity” for the club. Aaker (1991, 1996)

*Corresponding author.

Contact: Tamerlan Mashadihasanli ✉ tamerlan.mashadihasanli@ogr.iu.edu.tr

To cite this article: Mashadihasanli, T. (2023). How Consumer Attitudes Shape Brand Equity?: A Comparison Of Bayern Munich And Barcelona Football Clubs' Fans. *AYBU Business Journal*, 3(1), 1-21.



defined brand equity as “a set of assets and liabilities linked to a brand, its name, and symbol, that adds to or subtracts from the value provided by a product or service to a firm and/or to that firm's customers.” The assets mentioned here are brand awareness, brand association, perceived quality and brand loyalty.

Considering all global industries, it is noteworthy that the sports industry is becoming more and more important as consumers tend to spend increasingly in the sports market. Although the sports industry develops, it also raises some problems. For example, the increase in competition in the sports sector, the emergence of club debts, the weak connections between the fan and the club, and the inadequate brand strategies make it necessary for the institutions that make up the sports industry to develop new strategies to fix these problems. The creation of brand equity in professional football clubs and the importance of fan attitude in creating brand equity attracts great interest from both academics and practitioners in many countries. In the research, some evaluations are provided in terms of fan attitudes and brand equity to improve the above-mentioned inadequate strategies in the field of sports. In this respect, in the research it was aimed to reveal how consumer attitudes affect brand equity. In this context, football club fans are considered as consumers and their attitude and brand equity perception are examined within the framework of professional football clubs. In the research, a comparison was formulated based on F.C. Bayern Munich and F.C. Barcelona.

The research is structured as follow. In the section 2, we discuss the recent studies in the literature about the topic and develop hypotheses. Research method, data and model are given in Section 3. Findings are described in Section 4. And lastly, conclusion and discussion are given in Section 5.

2. LITERATURE REVIEWS AND HYPOTHESIS DEVELOPMENT

With the formation of awareness that realises the process of recognising and remembering the brand, some important information about the brand is learned. The strengthening of this learning provides brand familiarity. Messages that connect with information stored in memory through brand familiarity affect the formation of associations. At the end of this described process, brand attitude occurs ([Tosun, 2010:138](#)). Nguyen, Barrett & Miller (2011: 222) examined relationships between advertising attitudes and brand awareness. According to the results of the research, there are positive relationships between advertising attitudes and brand awareness. In research by Na, Marshall & Keller (1999), the effect of brand awareness on brand attitude was examined. According to the results of the research, the higher the level of awareness on a brand, the attitudes towards that brand will be high or vice versa. In the research on sports sponsorship, it was found that attitudinal loyalty affects sponsorship awareness, the attitude toward both sponsors and purchase intentions, as well as sponsorship awareness significantly affects attitude towards sponsors ([Biscaia et al.2013: 288](#)). According to the research conducted by Jensen & Limbu (2016: 44), a positive relationship was found between awareness, attitude and behaviour. Based on these, it was thought that attitude had an effect on brand awareness dimension of brand equity and H1a has been proposed;

H1a: Fan attitude has a positive and statistically significant effect on **brand awareness** of the club's brand equity.

Keller (1993) found that there is a relationship between brand association and attitude towards the brand. In their research, Praxmarer & Gierl (2009) concluded that positive associations have a positive effect, negative associations have a negative effect on brand attitude. The findings of the research conducted by Rohit and Panda (2018: 61) show that a cause-brand association has a positive effect on attitude towards the association, the brand, the company and the cause which in turn increases purchase intentions. In another study, it was found that alliances with poor overall attitudes are often linked to associations of attributes of the original product class. However, alliances with strong attitudes are linked to positive associations concerned to the fit between the alliance partners ([James, 2005: 14](#)). In their research, Faircloth et al.(2001: 61) found that brand equity can be manipulated at the independent construct level by providing consumers

with specific brand associations or signals and that these associations will result in images and attitudes that affect brand equity. Maderer et al.(2016: 2) observed the impact of brand associations on attitudinal loyalty in the football industry and according to the results of the research, brand attributes/attribute associations have a negative effect on attitudinal loyalty, while brand benefits/benefit associations positively affect attitudinal loyalty. Kerr & Gladden (2008) stated that star players play an important role in building attitudinal loyalty. On the other hand, the stadium has a greater impact on the fans who attend games and make experiences first hand ([Gladden & Funk, 2002](#)). Increased involvement leads to higher loyalty and stronger attitudes ([Funk & Pastore, 2000](#); [Hill & Green, 2000](#)). Thus, the effect of benefits on attitudinal loyalty increases over time. Based on the aforementioned studies, it was thought that attitude had an effect on brand association dimension of brand equity and H1b has been developed;

H1b: Fan attitude has a positive and statistically significant effect on **brand association** of the club's brand equity.

Upon completion of the research, it was revealed that there is a strong relationship between perceived quality and consumer attitude ([Santoso, 2014](#), [Khan, Ahmed & Hussain, 2018](#)). Research conducted by Zafar & Khan (2011) to the Pakistani university students, attitudes towards social network advertisements were examined and it was concluded that reliability, informativeness and entertainment perceptions towards social network advertisements have positive effects on attitudes. Shin et al (2014: 1) concluded that perceived quality and brand image, which are the components of brand equity, have an effect on brand attitude, brand attitude to brand loyalty, and also brand awareness to brand loyalty. Kwun & Oh (2007: 81)'s research founded that brand awareness, brand image and perceived quality have an effect on the attitude of corporate image. A positive quality can determine a positive attitude towards the website, even if the consumer is not satisfied with the website. Alternatively, sports organisations should pay attention to maintain a high-quality of the website if they want to increase the attitude towards the brand in order to attract the consumer to the sports event ([Alonso-Dos-Santos et al. 2017: 54](#)). In the research conducted by Papadimitriou et al.(2016: 2), it was found that sports sponsor-event fit indirectly affects sponsor brand purchase intentions through brand attitude and perceived brand quality. In this context, it was thought that attitude had an effect on perceived quality dimension of brand equity and H1c has been proposed;

H1c: Fan attitude has a positive and statistically significant effect on **perceived quality** of the club's brand equity.

When looking at the literature, one notices that there is very little research to examine the relationship between attitude and brand loyalty. However, there are several types of research to measure the relationship between these two variables. MacKenzie, Lutz & Belch (1986) argued that there is a positive relationship between attitude and brand loyalty. At the same time, Shamdasani & Balakrishnan (2000) concluded that attitude has a significant effect on brand loyalty. Consumers do not change their preferences for certain brands and they are attached to these brands when purchasing products ([Brown et al.1991](#)). And these consumers develop positive attitudes toward certain brands they buy constantly ([Assael, 2003](#)). Buyers who are loyal to the brand are likely to buy the same brands in the future due to their brand attitudes. Buyers with low loyalty towards the brand are more likely to be converted if they have a positive view of products that they have not yet purchased ([Baldinger & Rubinson, 1996](#)). In the research conducted by Yücel & Gültür (2015: 145), it was found that the components of brand equity (brand awareness, brand association and perceived quality) have positive effects on fan loyalty. Fan loyalty is positively affected by the brand attitude of the fan. The non-product-related brand attributes (i.e., logo or tradition) have an impact on attitude and behaviour ([Bauer et al.2008: 205](#)). Fans who have a more positive attitude towards their favourite teams, establish a higher social attachment with the team and its players. Thus, this attachment results in repurchase behaviour and positively affects behavioural loyalty ([Martin, 2013](#)). In previous sports studies, attitudinal loyalty was investigated as a prerequisite that has a strong positive impact on behavioural loyalty ([Bauer et](#)

[al.2005](#); [Funk et al.2000](#); [Mahony et al.2000](#)). Based on the aforementioned studies, it was thought that attitude had an effect on brand loyalty dimension of brand equity and H1d has been developed;

H1d: Fan attitude has a positive and statistically significant effect on **brand loyalty** of the club's brand equity.

The research model created in line with the literature review and the assumptions put forward is given in Figure1.

3. RESEARCH METHOD

In the research, some evaluations are provided in terms of fan attitudes and brand equity to improve inadequate strategies such as the increase in competition in the field of sports, the weak connections between the fan and the club, the emergence of club debts, and the inadequate brand strategies. In this respect, an investigation of the effect of fan attitude on brand equity in terms of professional football clubs constitutes the basis of the research. In this context, football club fans are considered as consumers and they were analysed according to various criteria. As well as, in the research, the effect of the attitudes towards the football clubs on the brand equity of the football clubs in terms of brand awareness, brand association, perceived quality, and brand loyalty were examined, Bayern Munich and Barcelona clubs were compared.

4. SAMPLE AND DATA COLLECTION

The targets of the research are the supporters of Bayern Munich and Barcelona clubs. The main reason for choosing these teams is that both clubs have recently dominated their domestic leagues, have the same number of championships (5) in the Champions League, Europe's most prestigious tournament, both clubs are the closest in Europe's most valuable club ranking in recent years, and the values of the clubs are close to each other in terms of brand equity: Bayern Munich USD 1.41 billion and Barcelona USD 1.51 billion.

Limiting the sample size consists of two different methods ([Kline, 2011](#)). According to the first method, ten times the question statement is a sample size. According to the second method, 200 participants constitute the sample size as a standard sample size. In the research, more than 200 participants (269 Bayern Munich, 284 Barcelona) were reached for each club based on the second method. As the sampling method, the simple random sampling method was preferred.

The research was carried out by making an online survey to 269 Bayern Munich and 284 Barcelona fans, to a total of 553 fans. The survey was shared on "Facebook" social media platform, "The Bayern Times - BM.DNA", "FC Barcelona Is In My DNA" and "Avropa Liqaları" football club fan pages. The data collection process covers the dates November 26-December 20, 2018.

5. RESEARCH DESIGN

The data of the research was collected by method of a survey. The survey consists of 3 parts. In the first part, 11 questions about fan attitude ([Mahony, Madrigal & Hovk'ard: 2000](#)), in the second part, 3 questions about brand awareness ([Schivinski & Dabrowski: 2014](#); [Atilgan, Aksoy & Akinci: 2005](#)), 12 about brand association ([Gladden & Funk: 2002](#)), 4 about perceived quality ([Keller & Aaker: 1992](#); [Kumar: 2005a](#); [Kumar: 2005b](#); [Taylor & Bearden: 2002](#)) and 4 about brand loyalty ([Schivinski & Dabrowski: 2014](#)) (total 34), and in the third part, 4 questions were asked to determine the demographic characteristics of the participants. The research was measured with a 5-point Likert scale. The participants were asked to show their level of participation in these items. In the research, the scale grading was done as follows: "Strongly Disagree: 1", "Disagree: 2", "Neutral: 3", "Agree: 4" ve "Strongly Agree: 5"

6. RESEARCH MODEL

Although the originally established model of the research is the model in figure 1, the model of the research changed after factor analysis for each club (see pages 14 and 15).

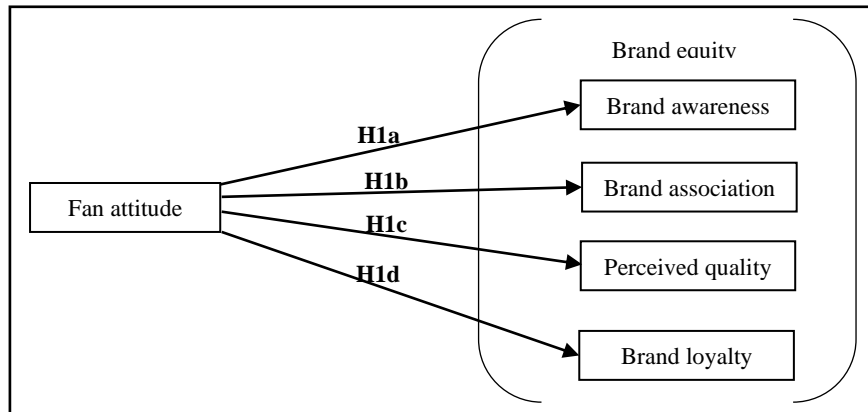


Figure 1. Research model

7. FINDINGS

Demographic findings

Table 1. Demographic characteristics of Bayern Munich fans

	FREQUENCY	(%)		FREQUENCY	(%)
GENDER			MARITAL STATUS		
<i>Female</i>	33	12,3	<i>Married</i>	16	5,9
<i>Male</i>	236	87,7	<i>Single</i>	235	87,4
<i>TOTAL</i>	269	100	<i>Other</i>	18	6,7
	FREQUENCY	(%)	<i>TOTAL</i>	269	100
AGE				FREQUENCY	(%)
<i>18-26</i>	245	91,1	EDUCATION		
<i>27-35</i>	16	5,9	<i>Primary school</i>	5	1,9
<i>36-44</i>	4	1,5	<i>Secondary school</i>	17	6,3
<i>45-53</i>	2	0,7	<i>High school</i>	99	36,8
<i>54-62</i>	1	0,4	<i>Bachelor</i>	116	43,1
<i>Over 63</i>	1	0,4	<i>Master</i>	30	11,2

TOTAL	269	100	Doctorate	2	0,7
			TOTAL	269	100

12.3% of Bayern Munich fans are female and 87.7% are male fans. 91.1% of Bayern Munich fans are 18-26 years old, 5.9% are 27-35 years old, 1.5% are 36-44 years old, 0.7% are 45- 53 years old, 0.4% are 54-62 years old, 0.4% are over 63. 1.9% of Bayern Munich fans are primary school graduates, 6.3% secondary are school graduates, 36.8% are high school graduates, 43.1% have a bachelor degree, 11.2% have a master degree, 0.7% have a doctorate degree. 5.9% of Bayern Munich fans are married, 87.4% are single and 6.7% are other.

Table 2. Demographic characteristics of Barcelona fans

	FREQUENCY	(%)		FREQUENCY	(%)
GENDER			MARITAL STATUS		
<i>Female</i>	19	6,7	<i>Married</i>	38	13,4
<i>Male</i>	265	93,3	<i>Single</i>	245	86,3
TOTAL	284	100	<i>Other</i>	1	0,4
	FREQUENCY	(%)	TOTAL	284	100
AGE				FREQUENCY	(%)
<i>18-26</i>	233	82,0	EDUCATION		
<i>27-35</i>	46	16,2	<i>Primary school</i>	2	0,7
<i>36-44</i>	3	1,1	<i>Secondary school</i>	10	3,5
<i>45-53</i>	1	0,4	<i>High school</i>	31	10,9
<i>54-62</i>	1	0,4	<i>Bachelor</i>	176	62,0
<i>Over 63</i>	0	0	<i>Master</i>	62	21,8
TOTAL	284	100	<i>Doctorate</i>	3	1,1
			TOTAL	284	100

6.7% of Barcelona fans are female and 93.3% are male fans. 82% of Barcelona fans are 18-26 years old, 16.2% are 27-35 years old, 1.1% are 36-44 years old, 0.4% are 45-53 years old, 0.4% are 54-62 years old, 0% are over 63. 0.7% of Barcelona fans are primary school graduates, 3.5% are secondary school

graduates, 10.9% are high school graduates, 62% have a bachelor degree, 21.8% have a master degree, % 1.1 have a doctorate degree. 13.4% of Barcelona fans are married, 86.3% are single and 0.4% are other.

Table 3. Mean, standard deviation and Cronbach's Alpha values of variables of all scales

Scale	Code	Item	Mean	SD	α	Scale	Code	Item	Mean	SD	α
Bayern Munich Fan Attitude	TM1	I might rethink my allegiance to my favourite team if this team consistently performs poorly.	1,30	0,670	0,715	Barcelona Fan Attitude	TM2	I would watch a game featuring my favourite team regardless of which team they are playing.	4,12	1,167	0,772
	TM2	I would watch a game featuring my favourite team regardless of which team they are playing.	4,35	0,933			TM4	Being a fan of my favourite team is important to me.	4,34	1,002	
	TM4	Being a fan of my favourite team is important to me.	4,56	0,898			TM5	Nothing could change my allegiance to my favourite team.	4,20	1,164	
	TM5	Nothing could change my allegiance to my favourite team.	4,46	0,971			TM6	I am a committed fan of my favourite team.	4,47	0,858	
	TM6	I am a committed fan of my favourite team.	4,64	0,752			TM7	I could easily be persuaded to change my favourite team preference.	1,34	0,910	
	TM7	I could easily be persuaded to change my favourite team preference.	1,22	0,677			TM8	I have been a fan of my favourite team since I began watching professional football.	4,29	1,130	
	TM8	I have been a fan of my favourite team since I began watching professional football.	4,26	1,137			TM9	It would be unlikely for me to change my allegiance from my current favourite team to another.	4,54	0,933	
	TM9	It would be unlikely for me to change my allegiance from my current favourite team to another.	4,60	0,877			TM10	It would be difficult to change my beliefs about my favourite team.	4,38	0,985	
	TM1	It would be difficult to change my beliefs about my	4,34	1,058							

	0	favourite team.								
Bayern Munich Brand Loyalty	SD1	I think I am loyal to my favourite team.	4,69	0,710	0,968	Barcelona Brand Loyalty	SD1	I think I am loyal to my favourite team.	4,61	0,686
	SD2	I consider myself a fan of my favourite team.	4,72	0,702			SD2	I consider myself a fan of my favourite team.	4,54	0,752
	SD3	I am attached to my favourite team.	4,67	0,745			SD3	I am attached to my favourite team.	4,61	0,701
	SD4	I will continue to support my favourite team.	4,75	0,678			SD4	I will continue to support my favourite team.	4,69	0,662
Bayern Munich Brand	FK5	I can recognise my favourite team among the opponent teams.	4,75	0,715	0,903	Barcelona Brand Awareness	FK5	I can recognise my favourite team among the opponent teams.	4,68	0,741
	FK6	Some characteristics of my favourite team come to my mind quickly.	4,63	0,768			FK6	Some characteristics of my favourite team come to my mind quickly.	4,57	0,686
	FK7	I recognise my favourite team's logo.	4,81	0,659			FK7	I recognise my favourite team's logo.	4,82	0,563
Bayern Munich Brand Association	CG1₂	It is important for me that my favourite team is successful in their matches.	4,37	0,848	0,850	Barcelona Brand Association	CG1₂	It is important for me that my favourite team is successful in their matches.	4,39	0,912
	CG1₃	I like the manager/head coach of my favourite team.	3,08	1,079			CG1₃	I like the manager/head coach of my favourite team.	3,41	1,410
	CG1₄	My favourite team has star players that I like to watch.	4,30	0,953			CG1₄	My favourite team has star players that I like to watch.	4,13	1,111
	CG1₅	The management of my favourite team does its best to create a good team.	3,30	1,174			CG1₅	The management of my favourite team does its best to create a good team.	3,69	1,218
	CG1₆	My team has successes from the past.	4,79	0,718			CG1₆	My team has successes from the past.	4,59	0,833
										0,942
										0,802
										0,817

Bayern Munich Perceived Quality	CG1 7	My favourite team's stadium enhances the enjoyment of attending games.	4,66	0,722	Barcelona Perceived Quality	CG1 7	My favourite team's stadium enhances the enjoyment of attending games.	4,34	0,987
	CG1 8	I like the colours of my favourite team.	4,75	0,679		CG1 8	I like the colours of my favourite team.	4,73	0,687
	CG1 9	I like the logo of my favourite team.	4,78	0,645		CG1 9	I like the logo of my favourite team.	4,72	0,680
	CG2 0	My favourite team's uniforms are attractive.	4,52	0,794		CG2 0	My favourite team's uniforms are attractive.	4,57	0,778
	CG2 1	Watching, reading and talking about my favourite team provides a temporary escape from life's problems.	4,44	0,919		CG2 1	Watching, reading and talking about my favourite team provides a temporary escape from life's problems.	4,33	1,007
	CG2 2	My friends and family recognise me as a fan of my favourite team.	4,52	0,900		CG2 2	My friends and family recognise me as a fan of my favourite team.	4,46	0,882
	CG2 3	The team offers me a place to spend time with friends.	3,76	1,152		CG2 3	The team offers me a place to spend time with friends.	3,78	1,173
Bayern Munich Perceived Quality	AK8	My favourite team is of high quality.	4,69	0,693	Barcelona Perceived Quality	AK8	My favourite team is of high quality.	4,51	0,829
	AK9	In general, I believe that my favourite team is superior in quality compared to other teams.	4,36	0,877		AK9	In general, I believe that my favourite team is superior in quality compared to other teams.	4,29	0,941
	AK1 0	My favourite team is of good quality.	4,58	0,780		AK1 0	My favourite team is of good quality.	4,43	0,818
	AK1 1	My favourite team is better quality than most teams.	4,57	0,781		AK1 1	My favourite team is better quality than most teams.	4,41	0,907

0,897

0,906

1					1				
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In Table 3, it is seen that in the fan attitude scale of Bayern Munich club the lowest average (1.22) is in "I could easily be persuaded to change my favourite team preference" item, the highest average (4.64) is in "I am a committed fan of my favourite team" item, in brand loyalty scale the lowest average (4,67) is in "I am attached to my favourite team" item, the highest average (4,75) is in "I will continue to support my favourite team" item, in brand awareness scale the lowest average (4,63) is in "Some characteristics of my favourite team come to my mind quickly" item, the highest average (4,81) is in "I recognise my favourite team's logo" item, in brand association scale the lowest average (3,08) is in "I like the manager/head coach of my favourite team" item, the highest average (4,79) is in "My team has successes from the past" item, in perceived quality scale the lowest average (4,36) is in "In general, I believe that my favourite team is superior in quality compared to other teams" item, the highest average (4,69) is in "My favourite team is of high quality" item.

At the same time, in Table 3, it is seen that in the fan attitude scale of Barcelona club the lowest average (1,34) is in "I could easily be persuaded to change my favourite team preference" item, the highest average (4,54) is in "It would be unlikely for me to change my allegiance from my current favourite team to another" item, in brand loyalty scale the lowest average (4,54) is in "I consider myself a fan of my favourite team" item, the highest average (4,69) is in "I will continue to support my favourite team" item, in brand awareness scale the lowest average (4,57) is in "Some characteristics of my favourite team come to my mind quickly" item, the highest average (4,82) is in "I recognise my favourite team's logo" item, in brand association scale the lowest average (3,41) is in "I like the manager/head coach of my favourite team" item, the highest average (4,73) is in "I like the colours of my favourite team" item, in perceived quality scale the lowest average (4,29) is in "In general, I believe that my favourite team is superior in quality compared to other teams" item, the highest average (4,51) is in "My favourite team is of high quality" item.

8. FACTOR ANALYSIS

To determine the validity of the scales used in the research, first-level multi-factor confirmatory factor analysis was applied to fan attitude and brand equity scales. Confirmatory factor analysis were performed in the "SPSS 25.0 for Windows" package program.

Table 4. Results of factor analysis (Bayern München)

		Consumer Attitude	Brand Awareness	Brand Association	Perceived Quality	Brand Loyalty
KMO		0,877	0,707	0,906	0,831	0,882
Bartlett's	Chi-Square	812,881	620,372	1588,126	655,424	1389,530
	df	36	3	55	6	6
	Sig.	0,000	0,000	0,000	0,000	0,000

According to the results of factor analyses, the items in fan attitude scale were gathered in 2 factors

and the factors were named as “commitment to the club” and “tendency to change club” according to the items they contained. According to the results of the reliability analysis, the Cronbach’s Alpha value of “tendency to change club” factor has been 0,313 and *inter-item correlation test* has been applied to measure reliability. As a result of the inter-item correlation test, the value has been 0,186, and since it was within the desired value range (0.15 and 0.50), the factor was accepted as reliable and related analysis were continued. At the same time, the items in brand association scale were gathered in 2 factors and the factors were named as “club characteristics” and “club management” according to the items they contained. Item CG23, which is one of brand association items, was excluded from factor analysis because the factor load of item CG23 was less than 0,500. According to the results of the reliability analysis, the Cronbach’s Alpha value of “club management” factor has been 0,458 and *inter-item correlation test* has been applied to measure reliability. As a result of the inter-item correlation test, the value has been 0,298, and since it was within the desired value range (0.15 and 0.50), the factor was accepted as reliable and related analysis were continued. In the research, the model and hypotheses of the research were revised as a result of the factor analysis regarding Bayern Munich club. The new model (figure 2) and hypotheses are as follows;

H1a: Commitment to the club has a positive and statistically significant effect on **brand awareness**.

H1b: Tendency to change the club has a positive and statistically significant effect on **brand awareness**.

H2a: Commitment to the club has a positive and statistically significant effect on **club characteristics**.

H2b: Tendency to change the club has a positive and statistically significant effect on **club characteristics**.

H3a: Commitment to the club has a positive and statistically significant effect on **club management**.

H3b: Tendency to change the club has a positive and statistically significant effect on **club management**.

H4a: Commitment to the club has a positive and statistically significant effect on **perceived quality**.

H4b: Tendency to change the club has a positive and statistically significant effect on **perceived quality**.

H5a: Commitment to the club has a positive and statistically significant effect on **brand loyalty**.

H5b: Tendency to change the club has a positive and statistically significant effect on **brand loyalty**.

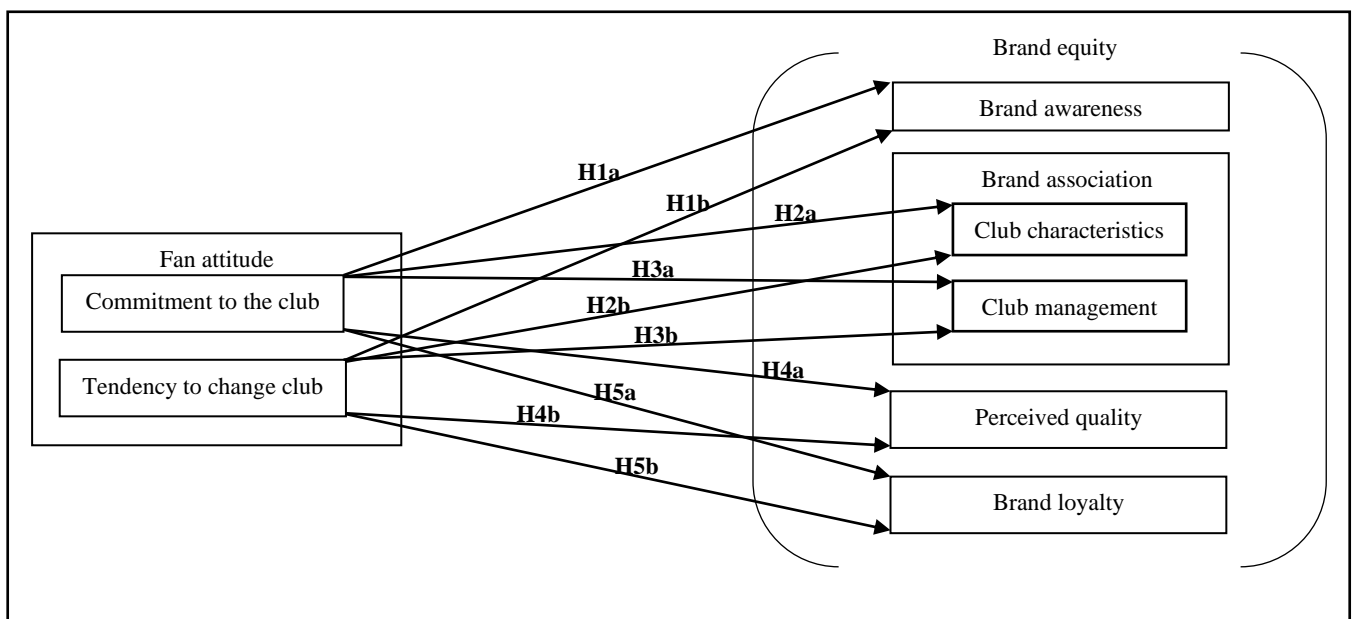


Figure 2. Revised research model for Bayern Munich club

Table 5. Results of factor analysis (Barcelona)

		Consumer Attitude	Brand Awareness	Brand Association	Perceived Quality	Brand Loyalty
KMO		0,848	0,704	0,822	0,847	0,866
Bartlett's	Chi-Square	727,011	288,535	1390,109	745,855	1061,730
	df	15	3	66	6	6
	Sig.	0,000	0,000	0,000	0,000	0,000

According to the results of factor analyses, the items in fan attitude scale were gathered in 2 factors. According to the results of the reliability analysis, Cronbach's Alpha value of the second factor has been 0,122 and *inter-item correlation test* has been applied to measure reliability. As a result of the inter-item correlation test, the value has been 0,067, and since it was not within the desired value range (0.15 and 0.50), these items (TM7 and TM8) were excluded from the factor analysis and the related analysis was continued. According to the re-factor analysis, it was determined that the items in fan attitude scale were gathered in 1 factor and the factor was named as "attitude towards the club" according to the items it contained. At the same time, the items in brand association scale were gathered in 3 factors and the factors were named as "club values", "socialising" and "technical crew" according to the items they contained. Items CG17, CG15 and CG12, which are brand association items, were excluded from factor analysis because the factor load of these items was less than 0,500. According to the results of the reliability analysis, Cronbach's Alpha value of "technical crew" factor has been 0,394 and *inter-item correlation test* has been applied to measure reliability. As a result of the inter-item correlation test, the value has been 0,252, and since it was within the desired value range (0.15 and 0.50), the factor was accepted as reliable and related analysis were continued. In the research, the model and hypotheses of the research were revised as a result of the factor analysis regarding Barcelona club. The new model (figure 3) and hypotheses are as follows;

- H1:** Attitude towards club has a positive and statistically significant effect on **brand awareness**.
- H2a:** Attitude towards club has a positive and statistically significant effect on **club values**.
- H2b:** Attitude towards club has a positive and statistically significant effect on **socialising**.
- H2c:** Attitude towards club has a positive and statistically significant effect on **technical crew**.
- H3:** Attitude towards club has a positive and statistically significant effect on **perceived quality**.
- H4:** Attitude towards club has a positive and statistically significant effect on **brand loyalty**.

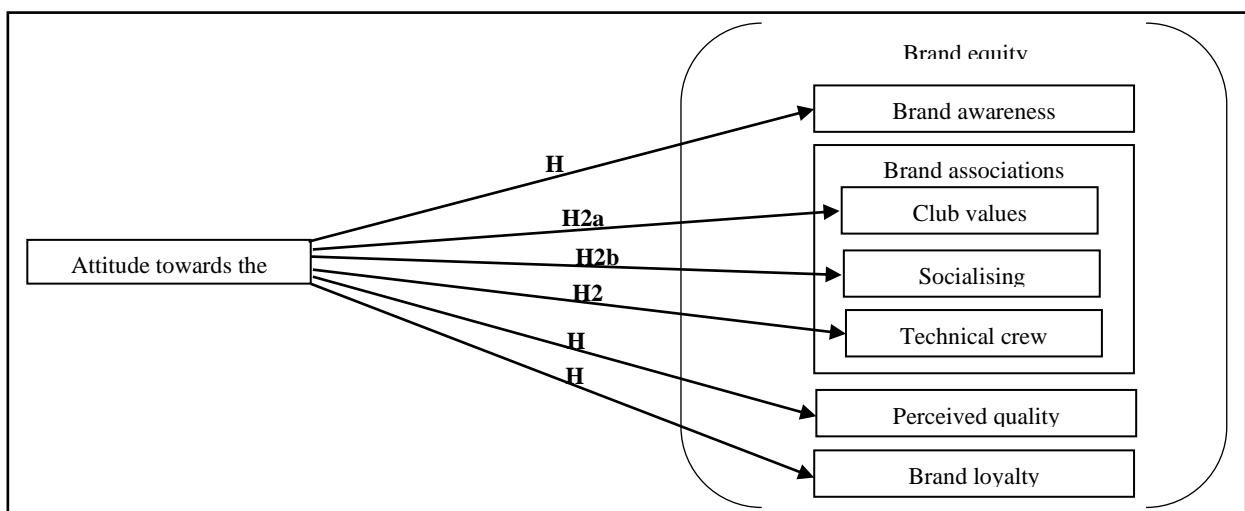


Figure 3. Revised research model for Barcelona club

In the research, averages were taken for the items of each factor and regression analysis was performed with these averages.

Table 6. Results of regression analysis (Bayern Munich)

		UnStd. Coefficients	Std. Coefficients	T	Sig.	F R Square
Model (Hypothesis)	B	Beta				
Model 1 (H1a)	(Constant)	2,326		6,281	0,000	F= 129,111 R ² =0,493
	Commitment	1,049	0,717*	15,143	0,000	
Model 2 (H1b)	(Constant)	2,326		6,281	0,000	
	Tendency	0,079	0,042*	0,880	0,380	
Model 3 (H2a)	(Constant)	1,648		7,053	0,000	F= 111,070 R ² =0,455
	Commitment	0,627	0,704*	14,350	0,000	
Model 4 (H2b)	(Constant)	1,648		7,053	0,000	
	Tendency	0,103	0,089*	1,820	0,070	
Model 5 (H3a)	(Constant)	1,711		3,659	0,000	F= 7,244 R ² =0,052
	Commitment	0,319	0,236*	3,652	0,000	
Model 6 (H3b)	(Constant)	1,711		3,659	0,000	
	Tendency	0,047	0,027*	0,418	0,677	
Model 7 (H4a)	(Constant)	1,486		5,191	0,000	F= 81,037
	Commitment	0,657	0,643*	12,268	0,000	
Model 8 (H4b)	(Constant)	1,486		5,191	0,000	

	Tendency	0,111	0,084*	1,596	0,112	R²=0,379
Model 9 (H5a)	(Constant)	1,455		6,196	0,000	F= 176,667 R²=0,571
	Commitment	0,745	0,739*	16,965	0,000	
Model 10 (H5b)	(Constant)	1,455		6,196	0,000	
	Tendency	- 0,052	- 0,040*	- 0,923	0,357	

*p<0, 05

Model 1 (H1a) Dependent Var.: Brand awareness management

Model 6 (H3b) Dependent Var.: Club

Model 2 (H1b) Dependent Var.: Brand awareness quality

Model 7 (H4a) Dependent Var.: Perceived quality

Model 3 (H2a) Dependent Var.: Club characteristics quality

Model 8 (H4b) Dependent Var.: Perceived quality

Model 4 (H2b) Dependent Var.: Club characteristics

Model 9 (H5a) Dependent Var.: Brand loyalty

Model 5 (H3a) Dependent Var.: Club management

Model 10 (H5b) Dependent Var.: Brand loyalty

In Table 6, H1a shows that commitment to the club has a positive and statistically significant effect on brand awareness (β :0.717-sig:0.000), while H1b shows that tendency to change club does not have a positive and statistically significant effect on brand awareness (β :0.042-sig:0.380). For this reason, H1a has been accepted and H1b has been rejected. H2a hypothesis indicates that commitment to the club has a positive and statistically significant effect on club characteristics (β :0.704-sig:0.000), while H2b hypothesis indicates that tendency to change club does not have a positive and statistically significant effect on club characteristics (β :0.089-sig:0.070). According to the findings, H2a has been accepted and H2b has been rejected. H3a shows that commitment to the club has a positive and statistically significant effect on club management (β :0.236-sig:0.000), while H3b shows that tendency to change club does not have a positive and statistically significant effect on club management (β : 0.027-sig:0.677). For this reason, H3a has been accepted and H3b has been rejected. H4a hypothesis indicates that commitment to the club has a positive and statistically significant effect on perceived quality (β : 0.643-sig:0.000), while H4b hypothesis indicates that tendency to change club does not have a positive and statistically significant effect on perceived quality (β :0.084-sig:0.112). According to the findings, H4a has been accepted and H4b has been rejected. Finally, H5a shows that commitment to the club has a positive and statistically significant effect on brand loyalty (β :0.739-sig:0.000), while H5b shows that tendency to change club does not have a positive and statistically significant effect on brand loyalty (β :-0.040-sig:0.357). For this reason, H5a has been accepted and H5b has been rejected.

Table 7. Results of regression analysis (Barcelona)

	UnStd. Coefficie	Std. Coefficie			
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		nts	nts	T	Sig.	F
Model (Hypothesis)		B	Beta			R Square
Model 1 (H1)	(Constant)	2,555		15,133	0,000	F= 164,600 R²=0,639
	Attitude	0,539	<i>0,717*</i>	12,830	0,000	
Model 2 (H2a)	(Constant)	2,988		13,968	0,000	F= 62,290 R²=0,181
	Attitude	0,420	<i>0,425*</i>	7,892	0,000	
Model 3 (H2b)	(Constant)	1,742		6,416	0,000	F= 83,697 R²=0,229
	Attitude	0,618	<i>0,478*</i>	9,149	0,000	
Model 4 (H2c)	(Constant)	2,215		6,071	0,000	F= 18,804 R²=0,063
	Attitude	0,394	<i>0,250*</i>	4,336	0,000	
Model 5 (H3)	(Constant)	2,455		9,237	0,000	F= 55,651 R²=0,165
	Attitude	0,494	<i>0,406*</i>	7,460	0,000	
Model 6 (H4)	(Constant)	1,578		9,832	0,000	F= 367,515 R²=0,566
	Attitude	0,766	<i>0,752*</i>	19,171	0,000	

*p<0, 05

Model 1 (H1) Dependent Var.: Brand awareness

Model 4 (H2c) Dependent Var.: Technical crew

Model 2 (H2a) Dependent Var.: Club values
quality

Model 5 (H3) Dependent Var.: Perceived

Model 3 (H2b) Dependent Var.: Socialising

Model 6 (H4) Dependent Var.: Brand loyalty

In Table 7, H1 shows that the attitude towards the club has a positive and statistically significant effect on brand awareness (β :0,717-sig:0,000) and therefore H1 has been accepted. H2a hypothesis reveals that the attitude towards the club has a positive and statistically significant effect on club values (β :0,425-sig:0,000) and according to this finding, H2a hypothesis has been accepted. H2b shows that the attitude towards the club has a positive and statistically significant effect on socialising (β :0,478-sig:0,000) and therefore H2b has been accepted. H2c hypothesis reveals that the attitude towards the club has a positive and

statistically significant effect on technical crew ($\beta:0,250$ -sig: $0,000$) and according to this finding, H2c hypothesis has been accepted. H3 shows that the attitude towards the club has a positive and statistically significant effect on perceived quality ($\beta:0,406$ -sig: $0,000$) and therefore H3 has been accepted. Finally, H4 hypothesis reveals that attitude towards the club has a positive and statistically significant effect on brand loyalty ($\beta:0,752$ -sig: $0,000$) and according to this finding, H4 hypothesis has been accepted.

Correlation analysis was conducted to explain whether there is a relationship between dependent variable brand equity and independent variable fan attitude and if there is a relationship, the direction, and severity of this relationship.

Pearson Correlation Coefficient was used to determine the relationship between the fan attitude factor and brand awareness, brand association, perceived quality and brand loyalty that create brand equity. It can be said that there is a positive or negative relationship for each statistically significant relationship ($p<0.01$ or $p<0.05$).

Table 8. Results of correlation analysis (Bayern Munich)

	1	2	3	4	5	6	7
1. Commitment	1	-0,386	0,701	0,670	0,226	0,610	0,754
2. Tendency	-0,386	1	-0,235	-0,182	-0,064	-0,164	-0,325
3. Brand awareness	0,701	-0,235	1	0,835	0,138	0,757	0,871
4. Club characteristics	0,670	-0,182	0,835	1	0,209	0,792	0,806
5. Club management	0,226	-0,064	0,138	0,209	1	0,220	0,137
6. Perceived quality	0,610	-0,164	0,757	0,792	0,220	1	0,728
7. Brand loyalty	0,754	-0,325	0,871	0,806	0,137	0,728	1

According to Table 8, as a result of the correlation analysis, a positive and significant relationship was found between the fan attitude regarding Bayern Munich club and brand awareness, brand association, perceived quality and brand loyalty, which are the dimensions of brand equity.

Table 9. Results of correlation analysis (Barcelona)

	1	2	3	4	5	6	7
1. Attitude	1	0,607	0,425	0,478	0,250	0,406	0,752
2. Brand awareness	0,607	1	0,629	0,497	0,248	0,474	0,747
3. Club values	0,425	0,629	1	0,497	0,339	0,546	0,553
4. Socialising	0,478	0,497	0,497	1	0,227	0,355	0,525

5. Technical crew	0,250	0,248	0,339	0,227	1	0,405	0,327
6. Perceived quality	0,406	0,474	0,546	0,355	0,405	1	0,536
7. Brand loyalty	0,752	0,747	0,553	0,525	0,327	0,536	1

According to Table 9, as a result of the correlation analysis, a positive and significant relationship was found between attitude towards the club regarding Barcelona club and brand awareness, brand association, perceived quality and brand loyalty, which are the dimensions of brand equity.

9. CONCLUSION AND DISCUSSIONS

In recent years, developments in the sports industry have made it possible for professional football clubs to be accepted as brands and to be managed from this perspective. The main purpose underlying the brand management efforts of club managers is to create "brand equity". The creation of brand equity in professional football clubs and the importance of fan attitude in creating brand equity attracts great attention from both academics and practitioners in many countries. In this research, some evaluations were provided in terms of fan attitude and brand equity to improve inadequate strategies in the field of sports. In this respect, an investigation of the effect of fan attitude on brand equity in terms of professional football clubs constitutes the basis of the research. In the research, a comparison was formulated based on F.C. Bayern Munich and F.C. Barcelona.

According to the results of the research regarding Bayern Munich club;

- Although commitment to the club has a positive and statistically significant effect on **brand awareness**, tendency to change club does not have a positive and statistically significant effect on brand awareness.
- Although commitment to the club has a positive and statistically significant effect on **club characteristics**, tendency to change club does not have a positive and statistically significant effect on club characteristics.
- Although commitment to the club has a positive and statistically significant effect on **club management**, tendency to change club does not have a positive and statistically significant effect on club management.
- Although commitment to the club has a positive and statistically significant effect on **perceived quality**, tendency to change club does not have a positive and statistically significant effect on perceived quality.
- Although commitment to the club has a positive and statistically significant effect on **brand loyalty**, tendency to change club does not have a positive and statistically significant effect on brand loyalty..

When it is looked at the difference between the variables in terms of impact, in Bayern Munich club, it is seen that the biggest effect of "commitment to the club" dimension of fan attitude is on brand loyalty and the least effect is on "club management" dimension of brand association.

According to the results of the research regarding Barcelona club;

- Attitude towards the club has a positive and statistically significant effect on **brand awareness**.

- Attitude towards the club has a positive and statistically significant effect on **club values**.
- Attitude towards the club has a positive and statistically significant effect on **socialising**.
- Attitude towards the club has a positive and statistically significant effect on **technical crew**.
- Attitude towards the club has a positive and statistically significant effect on **perceived quality**..
- Attitude towards the club has a positive and statistically significant effect on **brand loyalty**.

When it is looked at the difference between the variables in terms of impact, in Barcelona club, it is seen that the biggest effect of attitude towards the club is on brand loyalty and the least effect is on "technical crew" dimension of brand association.

When all these results are evaluated, it can be said that fan attitude has an effect on brand equity of the club in terms of the fans of both clubs. Generally,

- fan attitude positively affects brand awareness. These results are almost similar to the studies of Na, Marshall & Keller (1999), Biscaia et al. (2013) and Jensen & Limbu (2016).
- fan attitude positively affects brand association. These results are almost similar to the studies of Keller (1993), Praxmarer & Gierl (2009), Maderer et al. (2016), Kerr & Gladden (2008), Gladden & Funk (2002) and Funk & Pastore (2000).
- fan attitude positively affects perceived quality. These results are almost similar to the studies of Santoso (2014), Khan, Ahmed & Hussain (2018), Zafar & Khan (2011), Alonso-Dos-Santos et al. (2017) and Papadimitriou et al. (2016).
- fan attitude positively affects brand loyalty. These results are almost similar to the studies of MacKenzie, Lutz & Belch (1986), Shamdasani & Balakrishnan (2000), Bauer et al. (2008), Martin (2013) and Funk et al. (2000).

When it is looked at the difference between the clubs in terms of the effect, in terms of Bayern Munich fans, fan attitude has more effect on brand awareness, brand association and perceived quality of the club than Barcelona fans. Considering the effect of fan attitude on brand loyalty of the club, it can be said that the effect is higher in Barcelona fans than Bayern Munich fans.

Based on the above results, one can assume the following suggestions in terms of building and raising brand equity of the club with the loyal fan or fan attitude of professional football clubs;

- To differentiate their clubs in the minds of the fans, the brand managers of football clubs should work hard to make the fans recognise the brand name, to raise brand awareness of the club, to create strong associations for the brand, to increase perceived quality of the club, and to build a solid, strong customer-fan loyalty.
- Brand managers and other managers of the club should build awareness for the target audience by spending money on important events or events, as well as famous people.
- Professional football clubs should first know how their customers-fans perceive the brand. In this respect, the first task of the club managers should be to motivate, listen to fans and develop solutions to reveal the needs and demands of them. In this context, establishing sincere relationships is considered important in terms of effective communication with the fans. Social media, sports stores, fan clubs, sports bars, and chat rooms are examples of where fans can contact players and coach of the club and club managers.
- To meet the expectations of the fans, the stadiums should be modernised, security measures should be improved and the quality of the services offered to the fans in the stadiums should be increased. To increase customer satisfaction, there are also examples of repairing the stands, building modern

lodges, opening restaurants, small bars and shopping malls within the stadium. It is thought that taking such measures will increase the number of loyal fans and bring additional income to the clubs.

- In terms of creating brand equity, the brand managers of clubs should create positive and unique associations regarding the club.
- One of the biggest mistakes of sports clubs is that the clubs think the loyalty of fans towards the club will be permanent. The fact that mistakes made on brand equity also affects fan loyalty is inevitable. In this respect, to keep loyal fans, they should be made to feel special.

These or similar suggestions are thought to be beneficial for professional football clubs to build and increase brand equity of the club with their loyal fan or consumer attitude.

The fact that the research covers only Bayern Munich and Barcelona clubs is one of the most important limitations of the research. However, not being able to reach all fans in terms of time and cost also includes another limitation of this research.

Finally, in the research, while examining the effect of fan attitude on brand equity, the cognitive, emotional and behavioural components of the attitude was not discussed. In this respect, these components of the attitude can be examined in future research.

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DYNAMICS OF INTERNATIONAL LAND DEALS IN THE 2000s: THE CASE OF TURKEY

Melek MUTIOĞLU ÖZKESEN *

*Business School, Ankara Yıldırım Beyazıt University, Ankara, Turkey

Abstract

This study aims to reveal the political and economic motivations and dynamics behind the international land deals accelerated in the 2000s within the framework of the “land grabbing” literature. The Turkish case with the country’s land deals abroad and within its own territories will be problematized within a global context defined by financial and food crises. The study will specifically argue that financial liberalization process since the 1980s, impinging balance of payment problems on individual states on a global scale, has been experienced by the Turkish state as currency deficit and cash constraint. Commercialization of lands and other resources is seen as a way out of these constraints in that their property regimes have been reorganized in order to facilitate foreign investment, specifically on agricultural lands, and for the investors from Gulf countries.

Keyword

Land grabbing,
international land
deals, financial
liberalization,
Turkey

1. INTRODUCTION

International land deals attracted the attention of non-governmental organizations, academics, and international organizations such as the World Bank (WB) dealing with agriculture, food and land issues when the GRAIN¹, an international non-governmental organization published a report titled “Seized! The 2008 Land Grabbers for Food and Financial Security” in 2008. The report points out to the transformations and trade in land savings, specifically for agrifood production, and draws attention to the overseas land investments made by countries that do not have sufficient resources in terms of food and fuel supply after the financial crisis in 2007-2008, where land has been seen as an emerging financial investment asset. The report has identified international land deals as “grabbing” due to their long-term purchase or lease of fertile lands in poor countries by rich countries or the companies of those countries (GRAIN, 2008), drawing attention also to the unequal division of labor in the world. According to another report published in April 2009 by the

*Corresponding author.

Contact: Melek Mutioğlu Özkesen ✉ mmutioglu@ybu.edu.tr

To cite this article: Mutioğlu Özkesen, M. (2023). Dynamics Of International Land Deals In The 2000s: The Case Of Turkey. *AYBU Business Journal*, 3(1), 22-35.

¹ GRAIN is an international non-profit, non-governmental organization based in Barcelona to support small farmers and social movements fighting community-based and biodiversity-based food systems since the early 1980s.



International Food Policy Research Institute (IFPRI)², as of 2006 to 2009, 15-20 million hectares of agricultural land in various countries were put up for sale or lease to be open to foreign companies and countries ([Von Braun & Meinzen-Dick, 2009](#)). Likewise, a WB report on land agreements in 2010 informs that approximately 50 million hectares of land in 81 countries were subject to international deals and almost two-thirds of these lands are in Sub-Saharan Africa (39.7 million hectares), followed by East and South Asia (8.3 million hectares), Europe and Central Asia (4.3 million hectares) and Latin Americas and Caribbean (3.2 million hectares) region ([World Bank, 2010](#)). The Land Matrix platform³ tracks the geographic distribution, forms, procedures, and scales of a growing number of land agreements. The platform identifies the countries with the most land deals in the world as the USA, Canada, China, Switzerland, Russia, Malaysia, Spain, Singapore, Great Britain and Japan ([Land Matrix, Web of Transnational Deals, 2019](#)), making global power relations visible in this manner.

Even though agrifood production is said to be the fundamental motivation of land deals in the world, the mechanisms and actors of the transformation in land savings can be very diverse. However, in all respects, international land deals have become a striking phenomenon that international organizations, non-governmental organizations, and academic researchers have directed their attention and contributed to the development of “land grabbing” literature through their research. This article aims to provide firstly a comprehensive overview of “land grabbing” practices in the world by a closer look into the changing status of lands and other resources in time and their correlation with global economic imperatives. Then the analysis will move to problematize the development of this process in Turkey in the 2000s by focusing on the historically specific dynamics and motivations behind them. To this end, journals, newspapers, statistical data, statements of government officials, and legal changes will be examined in detail.⁴ On the basis of the research done on Turkey, the article will argue that the financial liberalization process, launched in the 1980s, impinges balance of payment problems on individual states on a global scale, The Turkish state has been facing the same problems in the form of current deficit and cash constraints since the 2000s, which forces the state to attract foreign investments –so foreign exchange inflows- to the country to handle them. In this sense, lands and other resources have been reorganized in order to facilitate foreign investment on specifically agricultural lands and from mostly Gulf countries.

2. “LAND GRABBING” IN THE WORLD

The transformation in land savings, which could be observed through international land deals today, has attracted academic attention in the 2010s and gave way to “land grabbing” literature. Many field studies conducted from this perspective have been revealed that the commercialization process of land has not only focused on agricultural production (i.e. not only agriculture-based), as GRAIN points out, but also on various other production processes and services ([Borras et al., 2011](#)). Although the main products acquired from the invested lands are food, animal feed and biofuels, these are all outputs of four basic agricultural products.

² It is a member of the Washington-based Consultative Group on International Agricultural Research (CGIAR), established with the initiative of World Bank President Robert McNamara in 1971 in order to support and expand international research centers on agriculture and supported by Ford Foundation, Rockefeller Foundation, Food and Agriculture Organization (FAO), United Nations Development Program (UNDP), World Bank and various donor institutions. These research centers were responsible for researching the cultivation of basic agricultural products such as rice, wheat and corn, especially in Third World countries, while they have also researched in various fields such as products, legumes, livestock and genetic resources since the 1970s.

³ The Land Matrix Initiative was established in 2009 to address the lack of robust data on international land deals. With its global and regional stakeholders and supporters, the initiative aims to bring transparency to agreements, especially in low- and middle-income countries. (<https://landmatrix.org/the-land-matrix-initiative/>)

⁴ The critical point here is that international land deals in Turkey could not be followed and monitored through formal sources. Hence, there is the need to search for different media channels, statistics, and analyses in the literature in order to be able to lay out Turkey’s situation in this current trend of international trade. That is why it is not taken account of reaching at cross-referenced data in the case of Turkey’s deals.

These are corn, palm oil, soybeans, and sugar cane. However, the product that offers the most diverse use is undoubtedly grain because it can be used as food, animal feed and biofuel altogether (Figure 1). Hence, these crops are called "flex crops and commodities" as the main cultivation area of land deals (Borras *et al.*, 2013). In addition to these, the field studies also show that tourism management, mining, forestry, infrastructure projects, speculative investment are also common in some countries such as China and India (Levien, 2012; Zoomers, 2010). Moreover, all land investments bring with them problems such as water grabbing, "blue grabbing" (Benjaminsen & Bryceson, 2012), or the plundering of green areas, "green grabbing" (Fairhead, Leach, & Scoones, 2012). Regardless of the products produced, the markets in which they will be marketed also vary. Some countries, renting or selling their land, oblige by the agreements they signed to sell some of the produced products in their local markets. However, this is not a very common practice. Mostly, investor countries export almost all the products they produce to their own countries or countries with which they have trade agreements (Zoomers, 2010). The lands, on the other side, can be sold directly or leased for different terms with an investment agreement. The common trend seems to be leasing, but lease terms vary from country to country, while 30-, 50- or 99-year "renewable" term leases are common in general. Land seizures also include the long-term "immunity" demands of the enterprises, that would ensure their independence from the regimes, political changes and authorities (Cotula *et al.*, 2009). In short, land deals differ from each other depending on the form of the agreements, the products produced, the stage of production, and the market in which the product is marketed.

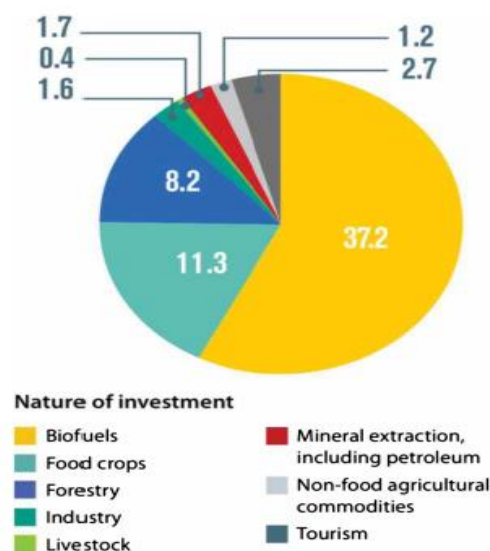


Figure 1. Global land deals by sector

Source: (Anseeuw *et al.*, 2012, p.24)

The geographical distribution of land deals embodies a visibly unequal distribution of labor in that land grabs are most common in the African continent. Latin America and Southeast Asia are also regions preferred by land investors. While most of the seized lands in Africa are in Sudan, Mozambique, Mali and Ethiopia; in South East Asia they are Madagascar, Cambodia, Laos, Philippines, and Indonesia. However, land rentals/sales are not only in underdeveloped countries, but also in the developed and developing countries such as Brazil, Russia, and Eastern European countries increasingly (Deininger *et al.*, 2011). The USA, Great Britain, South Korea, BRICS countries (Brazil, Russia, China, India, and South Africa), MICS countries (Argentina, Mexico, Thailand, Vietnam, Chile) and Gulf countries are the countries that mostly invest on grabbed land from a foreign country. Brazil, on the other hand, as a country that is included in all these categories, allows both land grabbing in its own country and has grabbed lands in various African countries (Figure 2).

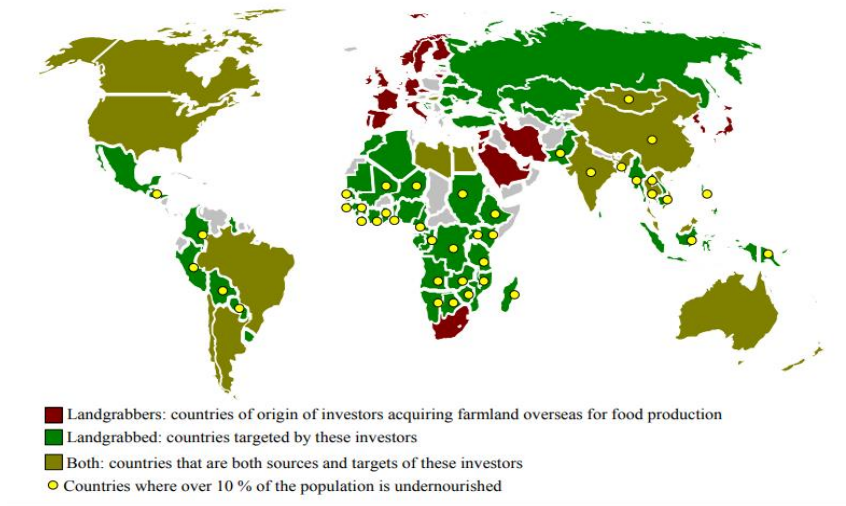


Figure 2. Geographical distribution of land agreements

Source: (GRAIN, 2011).

States are not the only actors that rented or bought land in a foreign country through international land deals. There are also national enterprises renting or buying land abroad with the support of their states or other national and/or international firms. Investments of sovereign wealth funds also stand out, which make mostly joint investments with their counterparts in other countries. Large-scale multinational companies, international financial institutions and even domestic companies also invest on land in different countries. Although international land agreements are commonly initiated by transnational and international capital in the world, national capital cooperating with international agriculture, industry and financial capital are also very active at making new deals. For example, according to the World Bank report, 90% of the land deals in Nigeria; 50% of deals in Cambodia, Ethiopia, Mozambique, and Sudan were signed with domestic companies (World Bank, 2010). In the territorial agreements of South Asia and South America, some transnational capital groups played an active role at the regional level. For example, Vietnamese and Thai companies in Cambodia and Laos, South African companies in Africa, and Brazilian companies in South America have been the dominant groups in land agreements (Akram-Lodhi, 2012). GRAIN's report that collected information from 14 countries highlights that investor countries/companies concentrate their efforts in some specific countries. For example, investments from India dominate in Ethiopia; from South Korea in Madagascar; from Saudi Arabia and the United Arab Emirates in Sudan; and from China in Mali. China is also one of the important investor actors in Mozambique. Qatar is also seen as one of the active investors signing land deals especially in Madagascar and Sudan. In the GRAIN report published in 2011, listed some of the important land grabs in the world. According to this report, Beidahuang, the largest state-owned agricultural company in China, cultivates soy, corn and many other products in Argentina, the Philippines and Australia. Shaanxi Kingbull Livestock Company, a Chinese state enterprise, has invested in cattle breeding in Australia. Also, China National Whole Import and Export Corporation grows sugarcane and cassava in Jamaica, Benin and Sierra Leone, which are important raw materials for biofuels. Another Chinese state-owned company, Chongquin Grain Group, grows soybeans in Bahia and Brazil; rapeseed in Canada and Australia; rice in Cambodia; and palm oil in Malaysia. Tianjin State Farms Agricultural Enterprises Group produces corn, alfalfa and sunflower in Bulgaria and Colombia. Supported by the Japanese government, Sojitz Company makes large-scale food investments in Argentina, Brazil, and some other South American countries. Hassan Food company, supported by Qatari government funds, has invested in Australia, Sudan, Turkey, Vietnam, Pakistan and India. The state enterprise Socie'te' Djiboutienne de

Se'curite' Alimentaire produces wheat in Sudan and Ethiopia; the Egyptian National Bank produces grain in Sudan; governments of Ghana and Qatar jointly produce various food products for Qatar in Ghana; governments of Laos and Kuwait jointly produce rice for Kuwait in Laos; Korea and the Philippines jointly invest in land in the Philippines; Saudi Arabia establishes farms in Pakistan; Abu Dabi's Al Dahra Agriculture Company makes food investments in various parts of Europe; America, South Asia and North Africa provide food to the United Arab Emirates; Brunei Investment Corporation in Mindanao; Oman Ministry of Agriculture in the Philippines; Malaysian Soil Development Corporation is making various investments in Sierra Leone and many other countries ([GRAIN, 2011](#)).

Despite various actors that take part in international land deals, "states" still remain the key actors since they are made directly between the central government of the state in which the land is leased or purchased, and its local and regional organizations. So much so that, even in the investments made by large international / transnational companies, the state that the company is affiliated with is mostly involved as a support element in all communicative and bureaucratic transactions. Additionally, the banks and insurers as financiers, international institutions (World Bank, United Nations) as regulatory / problem-solving actors are also part of this process. Large farmers' organizations such as *Via Campesina*, which organized campaigns against these deals and resisted through various mechanisms, are also in the process as opposition actors ([Cotula, 2011](#)).

Here comes the question of why all these actors realized renting or buying the land of a foreign country as an attractive investment; or what the dynamics and motivations behind these investments are. International organizations, like the World Bank and GRAIN, claim that land investments have increased as the need to grow food for the world's growing population and the search for an alternative to the increasing food prices after the 2008 food crisis with the hope of making the inefficient agrifood practice in the invested countries productive. It is claimed that the countries which have inadequacy in agricultural production, such as the Gulf countries and the drought-stricken countries (such as Saudi Arabia, United Arab Emirates), are usually investing in food production in African countries such as Sudan, and they export almost all the food they produce to their own countries. On the other hand, the industrialized countries such as the USA, Great Britain, China and India, mostly mobilize their capital for biofuel production. In some other kind of investment, the lands were rented for a long time or directly purchased, but almost no infrastructure investment or production was realized. Such investments are speculative investments and are kept with the expectation of an increase/increase in land prices, as seen especially after the 2008 crisis. What is common and obvious in these deal forms is that land is becoming a financial and commercial asset. Considering various forms of land deals, Borras emphasizes that they generate very different experiences and results in that it is better to conceptualize them as "control grabbing" instead of land grabbing. According to him, these deals "occur primarily because of and within the dynamics of capital accumulation strategies responding to the convergence of multiple crises: food, energy/fuel, climate change and financial crisis" ([Borras et al., 2012, p. 404](#)). On the one hand, as Borras, Franco and Wang (2013) claim, "new actors" such as BRICS, MICS⁵ or Gulf countries want to balance the dominance of the Northern countries over the food regime⁶, but they cannot find an institutionalized mechanism or regulation for this. Therefore, countries like Saudi Arabia aim to reduce their dependence on food imports, while China leases and/or buys land to expand its production sites in order to gain a competitive position in biofuel production. On the other hand, problems of financing current account deficit and cash shortages, led by financial liberalization, have also pushed the states towards seeking new revenues and financial resources since the 1980s. It is in response to such concerns that lands and other resources have turned into important sources of finance, and thus were privatized through various property regimes and commercialized via international land agreements laid out

⁵ BRICS is the abbreviation of the countries, Brazil, Russia, India, China, South Africa, while MICs countries are the abbreviation of Middle-Income Countries, like Argentina, Mexico, Thailand, Indonesia, Pakistan, Chile, Philippines.

⁶ See: Friedmann ve McMichael, 1989.

in this new process. Rediscovery of lands as an investment asset is the most explicit part of this process, that is observed in the case of Turkey very clearly as well.

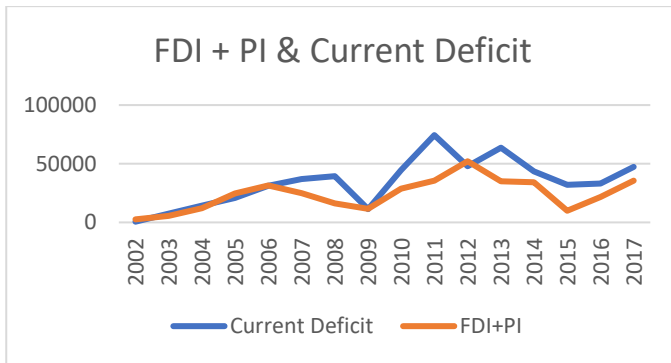
3. DYNAMICS AND MOTIVATIONS BEHIND LAND DEALS: THE CASE OF TURKEY

Werner Bonefeld (1993) argues that the most important development of world capitalism has been the deregulation of international money markets after the 1970s. Having been driven by the capital's search to integrate labor class into capital accumulation via indebtedness, the process led to the credit crunch in 1980s followed by deficit financing of accumulation and a policy of austerity. The diversion of money to the terrain of speculation has led to the further expansion of financial liberalization in the world thereafter. The falling rates of profit in the West and political risks prevailing in the developing countries in front of direct investments led global capital to search for financial profits elsewhere and to transform the world into a suitable area for financial investments (O'Brien and Williams, 2016). The financialization as uneven and combined development has brought the formation of new fictitious capital forms based on the proliferation of derivative transactions, household income flows, stock market transactions and speculation in the early capitalist countries, while it is followed by a financial deepening process through the creation of new financial instruments like the establishment of stock exchanges, and the constitution of enabling states in the late capitalist and middle income countries after the 1980s (Güngön, 2014; Gowan, 2009).

Financial liberalization in Turkey has been consolidated by indebtedness and tight fiscal policies of the state which have expanded, rather than shrunk since the 1980s. Interest rates have been kept high as a result of fiscal policies that aimed at controlling inflation and attracting international funds into the country, resulting ultimately in the persistent increase in foreign currency debts from abroad. (Akçay, 2017).

The main development that enabled indebtedness as an economic strategy has been the expansion of financial assets since the 1980s in general, and the expansion of US-based credit expansion across the world in the 2000s in particular. Turkey has also benefited from this process by large-scale financial expansion and cheap credit facility since 2001. However, the inflow of funds has brought instability in exchange rates, the increase of the current account deficit and credit expansion along in the Turkish economy (Akçay, 2017; Yeldan, 2009). Current account deficit reached unprecedented levels after 2002 and continued to deteriorate in the post-2010 period. In this context, Turkish current account deficit has taken its place among the worst examples in the world (Cömert & Türel, 2017). As Bonefeld suggested, credit expansion and financial liberalization brought along not only fiscal problems but also budget deficits and problems of current account deficit in Turkey. Current account deficit has become chronic by financial liberalization turning deficit financing into the main concerns of the state. During the 2000s, growing external deficits (current account deficits) have been financed through hot money flows into Turkey enabled by high interest rates, mergers and direct investment financing obtained by the privatizations (Yeldan, 2009). As investments have increased and flowed into the country in accordance with the course of international capital cycles, Turkey's deficit could be financed and captured by high growth rates via the surge in domestic demand. Although the 2008-2009 global financial crisis did not directly affect banking and finance sector in Turkey, the country saw a 4.8 % decline in GDP due to the decrease in foreign direct and portfolio investments and shrinkages in productive sectors.

Graph 1: Foreign Direct Investment, Portfolio Investment and Current Deficit



Source: [\(Central Bank of Turkey, Balance of Payment and Related Statistics, 2019\)](#)

Turkey's economy could control its current account deficit through financial inflows until the 2008-2009 crisis, a process which enabled stable exchange rate and balanced inflation as well (Graph 1). Thus, the share of the public sector budget deficit in GDP decreased and taken under control by fiscal discipline. As Boratav (2010) argues however, in emerging economies with a fragile economic structure, like those of Turkey and Brazil, it is not sufficient to preserve the level of financial inflows, what is more important is to ensure that these inflows should always be enough to meet cash shortages of the internationally integrated economies. Unless this outsourcing is created, the budget deficits and current account deficit could not be financed, which would result in instability in the economy as experienced indeed in Turkey in the 2010s. Since the 2008 global crisis, followed by the 2009 Eurozone crisis, led to the shrinking of international financial markets leading to the deterioration of foreign inflows and outsourcing capabilities in the South ([Yeldan, 2009](#)). Declining foreign inflows has brought about imbalances in inflation rates and exchange rates instabilities, resulting in the high indebtedness of both the private sector and the state. In addition to growing debt and the current account deficit, the budget deficit problem⁷ force the Turkish state to try all ways to attract foreign investments. Funding through privatizations is one of the most common sources as was the case in the 1990s and early 2000s but it could not meet the cash shortage and finance current account deficit in a sustained way. Given that investments in research and development to enable a sustainable growth were much harder under crisis conditions, the state has introduced other short-term cash-inflow strategies to attract foreign investors.

The first legal amendment conducted to this end in Turkey was the Law No. 4875 on FDIs issued in the first half of 2003, which aimed to change property regimes of land and real estates. This law, providing freedom of ownership to the foreign investment and trade companies, was in fact a process related to Turkey's adaptation to the European Union's *acquis*. In this way, all obstacles to the acquisition of land and real estates by EU-origin investments were removed. It meant that there was no barrier for EU countries to invest in lands and real estates of Turkey. Another important regulation that aimed to facilitate the flow of foreign capital into the country and accelerate FDIs was made in 2003 with the amendment to the Law No. 2644 on Land Registry. The most important arrangement regarding this was the revision of the 35th article of the Law and the exclusion of the 10% limitation for the acquisition of land area by foreign trade companies, equalizing them with the Turkish trade companies, and to remove the reciprocity⁸ requirement. This makes land and real estate acquisition possible for not only EU countries but also other countries wishing to acquire lands in Turkey, such as the Gulf countries. Article 36 of the same amendment was repealed and foreigners were allowed to own 30 hectares of land and independent farms that are not connected to a village. The article requiring the permission of the Council of Ministers for more than 30 hectares of lands was revoked,

⁷ The budget deficit, which fell to \$ 3.7 billion in 2007, rose to 34.2 billion dollars in 2009 during the crisis period (Central Bank of Turkey, Balance of Payment and Related Statistics, 2019).

⁸ It describes the principle of responding to the behavior other states in the same way in international relations.

thereby increasing the proportion of foreigners' access to village lands and the total land that could be acquired. Moreover, Article 87 of the Law No. 442 on Village was repealed with the same regulation, and the ban on foreign land and property acquisition in the villages was abolished. In this way, both land pieces that could be purchased were increased and the numbers and origins of investors that could acquire lands were expanded. For example, with the amendments made within the scope of the Industrial Zones Law in 2004⁹ and Tourism Incentive Law in 2003, land was allowed to be allocated to domestic and/or foreign real or legal persons/companies that promise to realize an industrial or tourism investment. As a result of all these arrangements, land and other natural resources have been re-organized as an important field for foreign investments and have become more privatized in time. In return, the share of incomes derived from land purchase by foreign real persons¹⁰ has increased in a very clear sense (Table 1). All these amendments did not only facilitate land purchase by foreigners but also brought considerable change in the spectrum of capital origins due to removal of reciprocity clause (Table 2) and paved the way for increasing numbers of investors from the Gulf countries.

Table 1. Land Sales to Foreign Investors

2003	1.779.803 m2
2004	3.977.477 m2
2005	3.388.316 m2
2006	6.268.290 m2
2007	9.027.327 m2
2008	14.373.829 m2
2009	11.438.853 m2
2010	12.845.510 m2
2011	18.402.131 m2
2012	75.893.700m2

Source: [\(Turkish Grand National Assembly, 2011\)](#)

Table 2. Changes In Land Sales To Selected Countries/Citizens

Nationality	1923 to July 2012		August 2012 to August 2013		
	Quantity (Buyer)	Area (m2)	Nationality2	Quantity (Buyer)3	Area (m2)4
Belarus	0	0	Belarus	41	3.116,35
United Arab Emirates	1	4.319,15	United Arab Emirates	230	131.972,49
China	19	1.548,57	China	89	12.053,27
Palestine	0	0	Palestine	12	12.771,36
Iraq	23	1.288,82	Iraq	413	59.500,13
Iran	64	175.221,29	Iran	599	68.381,45
Kazakhstan	19	3.586,61	Kazakhstan	286	30.819,62
Kuwait	2	166,35	Kuwait	590	147.594,92
Libya	0	0	Libya	59	10.111,90
Lebanon	45	4.799,01	Lebanon	90	21.529,14

⁹ The scope of this law was expanded in 2017 and 2018.

¹⁰ Real person is legally different from legal entities and companies in their status. In Turkey, it is not possible to reach the datas about land and/or real estate purchases by legal entities and companies.

Saudi Arabia	35	62.081,89	Saudi Arabia	504	571.381,34
Turkmenistan	0	0	Turkmenistan	58	4.758,60
Jordan	31	5.706,66	Jordan	117	57.662,90

Source: [_\(Tanrıvermiş & Apaydın, 2013\)](#)

The foreign investment mobility observed in specifically agricultural lands confirms the economic policy of Turkey since the 2000s and turns the land into an investment source in terms of attracting investors and foreign currency to the country. According to the data available to Land Matrix, which follows international land agreements in the world, a total of 44.500 hectares of agricultural land in Turkey was allocated for the use and investments of foreign investors ([Land Matrix, 2020](#)). As land grabbing literature specifically refers, interest in agricultural lands –specifically treasury lands- has increased considerably after 2010. These are the years when foreign investments started to increase slightly, but they still remain below the levels of pre-2008 period. During this period, real estate properties re-entered to the agenda as an alternative way of triggering foreign inflows and investments. As of 2010, both foreign investment on real estates and their share in FDIs increased. In January 2010, the chairman of the Investment Support and Promotion Agency of Turkey declared that “[l]ands that could be improved will be included in the project without being sold. In this way, we will both create employment and establish facilities and enable revival in supplier industries. We are in the final stage [of talks] with three big funds. One of them will be announced very soon” ([Boyacıoğlu, 2010](#)). On September 2010, President Erdoğan stated that “Turkey has around 24.3 million hectares of agricultural land while currently 16.2 million hectares of this is used. Four million hectares are uncultivated, and three million hectares are perennial. The rest, 1.2 billion hectares, mostly in the southern regions, attracts foreign capital as agriculture will be a crucial sector very soon and can even be the cause of wars. Foreign investors know that there is a large market in Turkey and they are trying to invest in trade, production and technology of the agricultural sector. Meanwhile, hedge funds and lenders are also preparing to purchase or rent arable land. Due to food crises and global warming, the importance of the agricultural sector has increased” ([Hurriyet Daily News, 2010](#)). On September 2011, United Arab Emirates-Turkey Joint Economic Committee was organized and a joint agricultural investment in Turkey was agreed on. Minister of Agriculture of that period, Mehdi Eker, pointed out South Eastern Anatolian lands and said “[o]pportunities are especially plentiful in the south-east of the country, where there are 1.8 million hectares of land. Furthermore, TİGEM's (General Directorate of Agricultural Enterprises) lands have been formally transferred to the Turkish private sector for up to 30 years. There are successful projects and if Qatar establishes cooperation with these companies, they can develop investment opportunities” ([Daily Sabah, 2014](#)). Some of the news in the press following these statements are as follows:

The state-supported Qatari company Hasat Hud has asked for “tens of thousands of acres of Treasury land” from Turkey’s Finance Ministry. Turkish officials told them it was legally impossible to sell the Treasury land for agriculture-based foreign investments. “But this could be done by renting the land for 49 years,” an official told the agency, speaking on condition of anonymity. “We are handing over land to tourism investors in this way. We can do the same thing for agricultural land.” ([Hurriyet, 2011](#))

Agriculture in Turkey has recently seen an uptick in foreign investment as Food, Agriculture and Livestock Minister Faruk Çelik confirmed that 85 foreign nationals from 23 different countries have procured 2,159 decares (534 acres) of agricultural land in 20 provinces.” ([Ates, 2017](#))

Turkish and Kuwaiti business people have invested \$100 million in greenhouses in Turkey's southeastern province of Şanlıurfa to increase the geothermal greenhouse area there, which has reached 500 decares over time and where indoor ornamental plants are also grown up to 5,000 decares by 2023. ([Daily Sabah Energy, 2018](#))

The Saudi-based International Agriculture and Food Investment Corporation (AgroInvest) announced that it would invest 5 billion dollars in Turkey with the support of King Abdullah directly and that they were planning to purchase agricultural land. ([Mahdi, 2011; Reuters, 2009](#))

The Kuwait-based company Tijaria announced that it would invest 10 million dollars in Turkey and that they would lease the Treasury lands for 8-10 years; it was stated that the first 2 years of this investment will be spent on making the lands arable, and the 6 years will be spent on growing agricultural products. ([Sambidge, 2014](#))

In 2009, the world-famous Saudi company Planet Food World Corporation said that it would invest 3 billion dollars in Turkey in the next 5 years and stated that this investment would be spent on fruit, vegetable, poultry, sheep, and goat breeding. They started five prototype farm applications in Northern-west region of Turkey. ([Grove, 2009](#))

Not only does Turkey open its lands to foreign investors. In addition to providing opportunities for investments on its own agricultural lands, Turkish state also makes agricultural investments by renting or purchasing lands abroad. Similarly, many private companies of Turkish origin made use of Turkey's first step towards agriculture-oriented international investments in 2014 by the General Directorate of Agricultural Enterprises (TİGEM), with the lease of 78 thousand hectares of land in Sudan for 99 years. Pursuant to this agreement with the Sudanese government, Turkey will establish a pilot farm on a total of 12,500 hectares of land in Sudan; It will increase the production of tropical fruits and oilseeds and cooperates in fisheries and livestock. In addition, it is stated that Turkish private sector entrepreneurs are planning to invest in the 5 designated regions, and the products grown there are planned to be sold in the Middle East and African markets as well as in Europe ([Şimşek, 2018](#)). Recently Turkish authorities announced that they are also holding agreements with Latin American countries, like Venezuela, and Eastern Europe countries, like Ukraine to lease lands ([Babacan, 2022](#)). In addition to state-level initiatives, many private companies originating in Turkey are eager to make agricultural investments by renting or purchasing land abroad as well. According to the data that Land Matrix can reach and confirm, Turkish capital groups made fourteen land agreements in Africa on 949 thousand 462 hectares; on 65 thousand 493 hectares by making two land agreements in Eastern Europe; on 20 thousand hectares of land via one land agreement in Asia ([Land Matrix, 2020](#)). It is known that some large food companies have invested in countries such as Ethiopia, Mali, Mozambique, Madagascar, Romania, Macedonia, Argentina, Pakistan, Malaysia, Sudan. Anadolu Holding, Cevahir Holding, Süttaş Holding, Altınbaş Holding, Boyhan Gıda and Ayka Yatırım are the most important of these companies and they grow products such as corn, wheat, sunflower, dates, apricots and pineapples ([Doğan, 2018](#)).

4. CONCLUSION

Re-organization of agricultural lands and real estate properties of land with commercial concerns and international land deals carried out in almost all parts of the world have started “land grabbing” discussions in the literature. Data gathered through several field works indicates that there are various experiences concerning land grabbing. For instance, while the land grabbing practices common in Africa and Southeast Asia has aimed at food, feed, and fuel production ([Cotula, 2011](#)), they operate for mining and infrastructural management in China or India; through concentration and monopolization in central Europe ([Borras Jr, Franco, & van der Ploeg, 2013](#)); while transnational and international capital dominates land investments in Africa, domestic capital plays a more critical role in the process in India and Bangladesh ([Levien, 2012](#)). The forms of agreement have also varied on the basis for rental or sale as well as different durations. All these factual variations have had a common ground in their argument that the 2008-2009 crisis have led to an

increase in the food prices with the implication that agricultural lands have become subject to financial policies (Akram-Lodhi, 2012; Borras, Kay, Gomez, & Wilkinson, 2012). This trend might further intensify in the aftermath of the Ukrainian-Russian war.

This study has put land grabbing literature in the spotlight and proposed that land investments in Turkey can be problematized from this perspective. The rate of increase in international land deals including various options of renting, leasing or sale in Turkey accelerated since the mid-2000s. All initiatives and regulations made after the 2008 global financial and food crises confirm the arguments of land grabbing literature. In other words, it is certainly not a coincidence that the rapid change in property regimes and the increasing number of agreements/initiatives are parallel to the intensification of pressures of the financial liberalization policies and agri-food crisis over the state. Policies that facilitate foreign currency-generating investments on the one hand, alternative-generating options to current food regime and agricultural scarcity on the other push the Turkish state to effect new regulations in order to introduce different property regimes on land and respond to economic imperatives at both global and national scales in that way. These regulations, which make it possible to reuse and distribute agricultural lands through various legal interventions, became a part of the policies to attract foreign investors after 2010, and international land deals started to be initiated in Turkey as well. Even though specifically agricultural lands have been targeted with these agreements for the moment, other natural resources and public lands can also be subjected to different commercialization and privatization processes by the help of these amendments in law. Legal amendments so far have been organized to facilitate land purchase for foreign investors and to diversify the spectrum of their origins. This has resulted in the increasing interest of the investors and states of the Gulf countries in Turkey's lands in the context of international land deals. All these specific characteristics of land grabbing in Turkey show that Turkish state has been forced by the imperatives of global economic order and financial liberalization to turn its lands into functional financial asset through various regulations in order to ease foreign investments.

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INSTITUTIONAL WORK ANALYSIS OF MANAGEMENT IDEAS: A CASE STUDY IN TURKEY

Sedat Ilgaz GÜNAY *

*Business School, Ankara Yıldırım Beyazıt University, Ankara, Turkey

Abstract

This paper examines the forms of discursive work during the dissemination of a management idea in Turkey from the perspective of organizational institutionalism. The idea of financial literacy is defined as the ability to make sound and rational financial decisions to improve one's own financial well-being. Especially in the aftermath of the global financial crisis in 2008, the international organizations have promoted financial literacy for its potential to enhance household wealth, financial stability, and national growth. In Turkey, the efforts to promote financial literacy have been taken on primarily as a corporate social responsibility activity by the financial corporations, their associations, non-profit organizations, and by the social enterprises. The paper aims to contribute to the debate with the aid of institutional work literature, focusing on how actors construct meaning in selectively attending to societal discourses in the context of institutional transformations. In this vein, the institutional work studies propose a framework that emphasizes the need for focusing on agential practices in analyses of institutional processes. This paper draws insight from the institutional work to understand the actors' purposive practices in engaging in discursive work around an issue. The analysis delineates four discursive works employed during the social constitution of meaning in the corporate sustainability practices of the financial field in Turkey. These interrelated discursive works consist of neutralizing transformations, constituting subjects, constructing technologies of governance, and creating chain of equivalence around the common good.

Keyword

Institutional work,
Discourse analysis,
Management ideas

1. INTRODUCTION

Organizational Scholars' calls towards incorporating the analyses of agency and change in a historically contingent and contextually informed perspective have precipitated a new debate in institutional studies ([Lawrence and Suddaby, 2006](#); [Micelotta et al., 2017](#); [Ocasio et al., 2016](#)). Concomitant with this turn in attention, the institutional analyses have increasingly engaged in a conversation with the critical theories and woven insights from the latter perspectives ([Lawrence, Leca, and Zilber, 2013](#); [Dey et al., 2016](#); [Levy et al., 2016](#); [Marti and Scherer, 2016](#); [Hardy and Maguire, 2016](#)). In particular, discourse studies may contribute channeling our attention to meaning constituting role of language and to the contingent and mutable processes of power-ridden social structuration ([Langley and Abdallah, 2011](#), [Al-Amoudi and Wilmott, 2011](#);

*Corresponding author.

Contact: Sedat Ilgaz Günay ✉ sgunay@ybu.edu.tr

To cite this article: Günay, S. I., (2023). Institutional Work Analysis Of Management Ideas: A Case Study In Turkey. *AYBU Business Journal*, 3(1), 36-54.



[Dey et al., 2016](#); [Lawrence, Leca, and Zilber, 2013](#)). Another critical contribution draws insights from the sociology of practice and contributes to coming to terms with the role of agency, particularly how the situated actors can enact and change the structures they inhabit ([Lawrence and Suddaby, 2009](#); [Malsch and Gendron, 2013](#); [Nicolopoulou, 2015](#); [Thornton et al., 2012](#)). In this stream, the institutional work studies propose a framework that emphasizes the need for focusing on agential practices in analyses of institutional processes. The institutional work suggests channeling the focus of analysis to the role of reflexive agency in “creating, maintaining, and disrupting institutions” ([Lawrence and Suddaby, 2006, p. 215](#); [Meyer and Höllerer, 2014](#); [Ocasio et al., 2016](#)). This paper draws insight from the institutional work to understand the actors’ purposive practices in constructing and reconstructing meaning around management ideas.

Accompanying the turn toward critical literature, the scholars suggest a turn toward critical stances and meaningful contributions to the societal challenges ([Lok, 2017](#); [Zhao and Wry, 2016](#); [Marti and Mair, 2009](#); [Marti and Scherer, 2016](#); [De Cock and Nyberg, 2016](#)). The recent societal challenges cover a wide range of issues, including not only poverty, inequality, precariousness, and underdevelopment, but also social struggles for environmental concerns and sustainability ([De Cock and Nyberg, 2016](#); Weiss and Huault, 2016; Zhao and Wry, 2016; de Bakker et al., 2013; Levy et al., 2016; Özen and Özen, 2016). When these societal challenges are put in the wider context, many of these studies focus on the vagaries of global financializing capitalism ([Meyer and Höllerer, 2014](#); Lapavitsas, 2011; [De Cock and Nyberg, 2016](#); Weiss and Huault, 2016; [Marti and Scherer, 2016](#)). In particular, the scholars emphasize the need for focusing on the vicissitudes of the 2008-2009 global financial crisis, which arguably has kept its impact on the societies in the following decade ([Marti and Scherer, 2016](#); p. 316; e.g., [Summers, 2018](#)). In this vein, this paper suggests focusing on the development of “financial literacy” as a management idea in the financial field in Turkey. Financial literacy is defined as “a combination of awareness, knowledge, skill, attitude and behaviour necessary to make sound financial decisions and ultimately achieve individual financial well-being” ([OECD, 2012, p. 2](#)). Although, in the early 2000s, the international organizations, particularly the OECD, WB, and UNDP, had inaugurated the need for financial literacy among individuals in the wake of expansion of financial systems, the stronger interest on the financial literacy mainly took off following the global financial crisis in 2008. Similarly, in 2009, the first financial literacy project had been set off with a non-profit educational workshops and panels campaign in Turkey. The idea of financial literacy in a developing country context has not been taken up as a point of analysis from the institutional perspective before. This paper seeks to assume this undertaking.

This paper poses the research question how the actors process the discourses emanating from macro-societal institutions to make sense of a novel management idea. In particular, the case is how the financial literacy is constructed in an organizational field on the nexus between individual prosperity, financial stability, and national development. The research question calls for a deeper understanding of the role of discursive articulations in the micro-processes in an established field. The financial literacy provides a valuable field for the study of discourse, for the actors try to engender an image of inevitability and acuteness for individuals to develop these skills to navigate in the exigencies of the global financial system and even to channel its instruments to their advantages. This discursive framework also communicates a specific imagination of the ‘real’ world context, how the actors make sense, while discarding the possibility of any alternative. Further, for the institutional work, it will be argued that the actors in the field demonstrate contextually informed purposive and reflexive actions as they use their discourse to shape the upcoming changes and challenges, to show a specific course of action against them, and to accentuate the prospects of that response. In the following sections, the paper tries to construct a case for contributing to the literature in these respects.

2. INSTITUTIONAL WORK APPROACH

Recent institutional scholarship has opened a debate to reinvigorate the research agenda of institutionalism from an interrelated set of shortcomings. These would include essentializing a deterministic view of institutions ([Lawrence and Suddaby, 2006](#)), reducing the actors to ‘cultural dopes’ ([Lawrence and Suddaby, 2006, p. 219](#); [Lawrence, Suddaby, and Leca, 2009, p. 1](#); [Greenwood et al., 2011, p. 322](#); [Delbridge and Edwards, 2013, p. 928](#)), relegating cultural context to mere background ([Zilber, 2006, p. 283](#); [Meyer and](#)

[Höllerer, 2014; 2016, p. 380; Özen and Akkemik, 2012](#)), and finally neglecting the historicity of institutions ([Ocasio et al., 2016, p. 677](#)). These challenges are interwoven on the question of how the relations between micro-foundations and macro-structures of institutional processes can be conceptualized. To address this question, the institutional work puts forward a contextually informed micro-oriented perspective that focuses institutionalism on situated agential practices. This section of the paper elaborates on the challenges to the institutional studies and contributions of institutional work approach to the micro/macro divide.

The notion of institution refers to “structures and activities that provide stability and meaning to social behaviour” ([Scott, 1995, p. 33](#)). However, scholars underline that an unduly excessive focus on structures in institutional research prioritizes the view of institutions as ‘totalizing structures’ ([Lawrence and Suddaby, 2006, p. 238](#)). More often than not, prescriptions of the macro-institutional orders are “naturalized” ([Lawrence and Suddaby, 2006, p. 248](#)), which is arguably an outcome that is discerned in some “institutional logics” studies that assume away the structures of institutional orders ([Greenwood et al., 2011, p. 332; cf., Smith and Besharov, 2017](#)). The institutional logics are defined “as the socially constructed, historical patterns of cultural symbols and material practices, by which individuals and organizations provide meaning to their daily activity, organize time and space, reproduce their lives” ([Thornton et al. 2012, p. 2](#)).

This structurally linear reading of institutional orders and institutional logics precipitates a series of limitations. First, these perspectives tend to conceive institutional logics as self-prescribed, fully coherent, consistent, and fixed categories that are constituted in isolation before they interact with each other. Second, to the extent that the orders and logics are self-contained, they are rendered as ahistorical categories ([Ocasio et al., 2016, p. 677](#)). They are conceived as fixed categories, immutable across time and space, instead of a desirable view of institutional processes in “flux”, i.e., continuously changing phenomena ([Meyer & Höllerer 2016, p. 381; Greenwood et al. 2011, p. 319; Delbridge & Edwards, 2013, p. 928](#)). Furthermore, the view of ‘totalizing structures’ eschews the attention to the ‘actual’ practices and meanings ascribed to the institutional orders and logics in the context of idiosyncrasies of cultural, social, and national scales ([Zilber, 2006; Meyer & Höllerer 2014; 2016, p. 380; Meyer & Höllerer, 2016; Özen & Akkemik, 2012](#)). In this context, the interplay between cultural structures and actors discursive practices construct only temporary stability in the values, meanings and cognitive frames of the institutional orders and logics. Hence the suggestion that the institutional studies should also pay due attention to the context.

Finally, the view of institutions as ‘totalizing structures’ arguably envisages a conception of seamless institutional phenomena, in which norms and rules of the game are uncontested, singular, homogenous, and immutable. In doing so, the agency is conceived as “embedded” and “inculcated” with the monolithic meaning systems, which inherently exclude power, contradictions, and contestation ([Greenwood et al., 2011, p. 322](#)). As an upshot, the role of agency is reduced to the “cultural dopes” that can only mechanistically reproduce the institutional constellations through which one is defined ([Lawrence, Suddaby, and Leca, 2009, p. 1](#)). Hence, there is a need for emphasizing the open, contingent, and contested forms of institutional processes and accentuating the role of agency in social construction of those processes ([Lawrence, Leca, and Zilber, 2013, p. 1024](#)).

The institutional work refers to “the purposive action of individuals and organizations aimed at creating, maintaining and disrupting institutions” ([Lawrence and Suddaby, 2006, p. 215](#)). The institutional work approach takes a different pathway of focusing the agency-side of micro/macro divide in the institutional literature ([Lawrence and Suddaby, 2009, p. 1](#)). This perspective draws three insights from practice approach to sociology set forth by theoreticians like Bourdieu and Giddens. First, the actors are conceived as having capabilities of “awareness”, “sensitivity”, “creativity”, and “reflexivity” ([Lawrence and Suddaby, 2009, p. 7](#)). Second, the actors involve in “purposive” and “conscious” recursive practices as they enact institutional dynamics in their daily activities (p. 7). Third, this purposive actor view, however, is still critical of “rational actor” conceptions, since the “practice” is always situated in the institutional matrix and is always conceived in relationship to the dynamics of structuration (p. 7; [Zilber, 2006, p. 282](#)).

Against “naturalizing” and “totalizing” views of institutions, the institutional work approach objects to the “taken-for-grantedness” of the reproduction of institutions ([Lawrence and Suddaby, 2006, p. 217](#)). Hence,

the “maintenance” of institutions is enunciated as a contingent process open to the actor’s efforts in, through, and against the institutional structures. The inherently contingent nature of actor’s practices is emphasized with the focus not necessarily on successful institutional outcomes but on “work” or “effort” on the part of the actors ([Lawrence and Suddaby, 2009, p. 10](#)). There is a vast variety of types and categories of institutional work studied in the literature. In this vein, an institutional work can proceed on one or all of Scott’s (1995) pillars of institutions, namely regulative, normative, and cognitive ([Lawrence and Suddaby, 2006, p. 217](#)). On the other hand, Lawrence and Suddaby (2006) prefer categorizing works whether they aim at creating, maintaining or disrupting institutions. Further, there are numerous other typologies of work focusing on forms and modalities, such as, justification, discursive, resistance, and defensive institutional works ([Lawrence, Leca, and Zilber, 2013, p. 1024](#)). Finally, there are categories of work defined in terms of the macro-institutional references, such as, political, cultural, emotional, and technical work ([p. 1024; Raviola and Norback, 2013](#)). Therefore, it can be argued that research from the institutional work perspective should be attentive to the lack of clarity on the conceptual boundaries and the disorganized look of the abundance of categories. Recently, several contributors have tried to alleviate these shortcomings discourse focuses.

One of the earlier answers to the question of how actors can enact noticeable institutional changes was the concept of “institutional entrepreneurship” by DiMaggio (1988) ([Lawrence, Suddaby, and Leca, 2009, p. 1](#)). This view has been criticized for envisaging a “hypermuscular” and “heroic” individual with the assumptions of atomistic and ahistorical “rationality” ([Lawrence, Suddaby, and Leca, 2009, p. 1; Micelotta et al., 2017, p. 1893; Malsch and Gendron, 2013, p. 870; Martin et al., 2017, p. 120](#)). Instead, the institutional work approach draws upon Bourdieu to study the role of situated actor intertwined with a plurality of “nested” institutional fields, which, in turn, provides the actor with the “capitals”, meaning, values, identity and “sensibility” to practice institution transforming activities ([Lawrence and Suddaby, 2006, p. 248](#)). The concept of “capitals” for Bourdieu simply refers to the multiplicity of resources that can be accumulated, invested, and transferred ([Tath et al., 2014](#)). Further, it is also a fertile conduit for conceiving the institutional fields in terms of power relations, hierarchies and inequality.

The concept of “habitus” is employed to denote that actor’s dispositions, which register “the sense of the game”, understand the stakes of “the field”, and in so doing creatively generate new constellations in the field ([Malsch and Gendron, 2013, pp. 874, 875](#)). Habitus indicates that instead of “heroic” acts of “rational” individual, the institutional work can be the result of “mundane” and largely “invisible” actions ([Lawrence, Suddaby, and Leca, 2009, p. 1; Marti and Mair, 2009, p. 101; Nicolopoulou et al., 2015, p. 169](#)). Further, the habitus practice is also more likely to require “collective action” rather than individual practices to enact institutional processes ([Norback, 2017, p. 1](#)). Finally, however, it should be noted that “habitus” together with “capital” continue to attribute the actor the power to initiate change not only in transformation, but also in the long-term maintenance of the field. The institutional work emphasizes that it is the actors who enact institutionalization. The actors practice this process by working in, through, and against macro-institutional structures. However, the question for the institutional research still is coming to terms with how in the micro-level actors and organizations enact institutions by dealing with the nested macro-institutional systems ([Kok et al., 2017, p. 3; Nicolini et al., 2016, p. 245](#)).

One answer to this question posits that the agency employs the macro-institutional orders, logics, discourses, and material artifacts, i.e., culture, as “tools” or “tool kit” ([McPherson and Sauder, 2013, p. 167; Zilber, 2006, p. 298](#)). Nevertheless, these instrumentalist view bears the danger of undermining the relational and power-ridden aspects of societal institutions and rendering them as ahistorical fixed categories. These views also seem to miss the ability to conceptualize the power relations. Nevertheless, in this respect, instrumentalist views lack rigorous answers to the questions such as, which group of actors can get more effective access to which societal institutions, what type of institutions may be more amenable to desired ends in which forms of institutional works, and which contexts and fields render which societal institutions more accessible.

Zilber (2006) investigates how the prevalent discourses in high-tech industry is related to the macro-level societal institutions in Israel. This study presents a deep understanding of the effects of Israeli context in terms of societal institutions, namely, “national-religious”, “secular”, and “individualist” (Zilber, 2006). To put it otherwise, this mode of explanation may offer a way to shed light on the repercussion of drawing the discourse from the societal institutions; that is its impact on the power relations in the particular field of high-tech.

From the perspective of using institutional logics in the micro-level, McPherson and Sauder (2013, p. 168) retain the conception of ‘cultural toolkits’. The actors, who participate in the decision-making processes in the US drug courts, practice a considerable degree of latitude in their decisions by drawing not only from the logics of their own professions (e.g., clinicians not necessarily defending rehabilitation) but also from the other available logics in the courts. McPherson and Sauder (2013, p. 183) refine the “toolkits” conception by emphasizing the structural and contextual themes, such as, procedural, definitional and positional constraints, in which the actors are limited and differentiated in their capacity and power to raise the institutional logics.

In addition to structural and contextual constraints, Martin et al. (2017) refines our understanding further with a focus on conditions of success in raising institutional logics by the actors. This success, the scholars contend, depend on the “status”, i.e., power and resources agency control; “creativity”, i.e., ability to reflexively realize and reconfigure the “logics” in the field; and “embeddedness”, i.e., degree to which agency is instantiated by the prescriptions of a particular logic (Martin et al., 2017, pp. 121-123). In this vein, to recapitulate on Bourdieu’s concepts, the actors can construct successful bridges to the macro-level institutions concomitant with their capital, habitus, and reflexivity. Furthermore, elites have the advantages of economic and political capitals, which are the two preponderant categories of capital that are used in transferring power from a field to another (Malsch & Gendron, 2013; Tatlı et al., 2014). On the other hand, the professionals and experts in a field acquire status via cultural and symbolic capitals, which leverage these actors’ skills to draw on societal institutions.

2.1. DISCOURSE ANALYSIS AND THE INSTITUTIONAL WORK

The institutional work literature benefits from the insight of discourse analysis on the issue of how actors work through macro-cultural institutional frameworks (Lawrence and Suddaby, 2006, p. 216). The term discourse is defined as a series of material and semiotic elements that are constitutive of “phenomenal experiences” (Chia, 2000, p. 513). Discourse analysis can help overcome the view of institutions as ahistorical, self-referential, autonomous, and pre-constituted categories (Chia, 2000, p. 514). There are several distinct perspectives that study the role of discourse in institutional processes. From the Foucauldian perspective, Hardy and Maguire (2016) and Curtis (2014) underline the role of discourse in the constitution of orders of knowledge and identity. On the other hand, drawing on the translation approaches, Zilber (2006) and Özen and Berkman (2007) focus on the role of individualist, nationalist, and rationalist macro-cultural discourses on the legitimation and justification of different managerial practices in Israel and Turkey.

Laclau and Mouffe’s discursive analysis takes a closer look at the linguistic and semiotic dynamics of discourse, through which the institutional field is structured as a result of hierarchical, contingent, contested and multifarious practices. Laclau and Mouffe draw on ‘post-structuralist’ problematization of knowledge claims as relations of power and prioritization of linguistics as constitutive of the social (Dey et al., 2016; Özen and Özen, 2016, p. 3). From semiotics, where there is no representational relation between signified and signifier, they borrow the system view through which discourse imbues meanings to human activity. In this system view, “floating signifiers” are ambiguous terms in flux with no determinate meaning (Dey et al., 2016, p. 1453). Then, a discourse is an attempt to organize and provide unequivocal meanings to floating signifiers around “nodal points”. More importantly, this stability around a discourse can only be “temporary”, provided through the exclusion of alternative ways of meaning, i.e., putting a halt on “difference” (p. 1453). It is always a contingent ‘fix’, since a discursive hegemony is “never complete”; it needs “an outside” (p. 1453), a symbol of what it’s not - the “difference”, which always threatens its hegemony. Indeed, a discursive project of legitimacy needs this openness exactly because its success lies in

its ability to present itself not in the partial interests of its proponents but as the non-particularistic common interests of all the stakeholders ([Özen and Özen, 2016, p. 3](#)).

Laclau and Mouffe's approach to hegemony has several ramifications for the study of institutional work. First, discourse is also constitutive of the actor's experience, namely, the social structure itself, with its institutions, norms, and material practices ([Dey et al., 2016, p. 1453](#)). Second, discourse is constitutive of the "natural order" and "common sense"; hence, it reveals the power, hegemony, and historical contingency of the 'taken-for-granted' notions of social life; i.e., institutions. Third, legitimacy in an institutional order and organizational field is not equally open to all discursive articulations; that is, it is not a case of 'anything goes' ([Özen and Özen, 2016, p. 3](#)). The context's structural qualities might make it more amenable to a certain group of macro-cultural signifiers and nodal points at the expense of their alternatives (e.g., [Meyer & Höllerer, 2016](#); [Greenwood et al., 2011, p. 319](#)). Therefore, again, in an organizational field, actors, such as elites and professionals, with access to critical capitals, i.e., critical with respect to their ease of access to the rules of the game of the field, might be more likely actors to start discursive, power-ridden and hegemonizing processes of institutional emergence, maintenance, and disruption.

3. METHODOLOGY

Case Context

Financial literacy encompasses not simply knowledge of financial system, but also wide range of individual behavior and attitude that can have financial implications. For instance, it covers capability of making "sound" financial decisions, restraining from short-term gratification in return for long-term financial achievements, and a mindset, which appreciates the value of saving over spending money ([OECD, 2017, pp. 15, 27, 39](#)). From the mid-2000s onwards, international financial organizations, monetary authorities, finance experts and scholars raised concerns about financial systems and households excessive exposure to risk emanating from expansion of financial products and services to the low-income households.

In Turkey, in the 2010s there have been several public campaigns and projects, majority of which is preeminently run by non-profit organizations, government agencies, associations, foundations, and social enterprises. Furthermore, there are several financial organizations, mainly in banking and insurance, that approach to these programs as a corporate social responsibility (CSR) undertakings ([Hürriyet, 18.05.2018](#)). Briefly, we observe majority of the projects run by collaborations across sectors, including non-profit, private, public, and international organizations (Table 1).

Organization	Project	Collaborators	Sectors
Financial Literacy Association (FODER)	Parayön	BDDK, J.P. Morgan	Non-profit, Public, Private
	Hesap Uzmanı	Ministry of Family and Social Policy	Non-profit, Public
	3 Kumbara	Ministry of National Education, Doğu Holding Co.	Non-profit, Public, Private
Para Durumu	-	-	Social Enterprise
Habitat Association	Paramı Yönetebiliyorum	UNDP, Ministry of Development, Visa Turkey	International, Non-profit, Public, Private
	Kız Kardeşim	TOBB, Coca Cola Turkey	Non-profit, Private,

		Co., ITU	Public University
	İmece Vakti	UNCHR, Ministry of Internal Affairs	International, Non-profit, Public,
Mother Child Education Foundation (AÇEV)	-	Citibank	Non-profit, Private,
Association of Business Women in İzmir (İZİKAD)	Kadınca Birikimler	TEB	Non-profit, Private,
Junior Achievement Foundation Turkey	-	-	Non-profit
Foundation for the Support of Women's Work (KEDV)	-	-	Non-profit, Social enterprise
Turkish Economy Bank	Aile Akademisi	UNICEF, MEB	International, Private,
ING Bank	Turuncu Damla	MEB, Regional Environmental Center Turkey, Koç Uni.	International, Non-profit, Public, Private, University
Müze İşbank	Child education	-	Non-profit, Private
Sabancı Volunteers	Kozadan Kelebeğe İzmir	-	Non-profit, Private
BIST Istanbul Stock Exchange	Bilinçli Yatırımcı	-	Private, Public
Turkish Association of Capital Markets	Param ve Ben	-	Non-profit
Central Bank	Herkes İçin Ekonomi	-	Public
Capital Markets Board	Financial education	BDDK	Public
Ministry of National Education	Bütçemi Yönetebiliyorum	-	Public

The international monetary authorities anticipated for the financial system to reach billions of underdeveloped populations in the developing countries in the 2010s ([World Bank, 2009, p. viii](#)). As a result, financial literacy was promoted as one of the most 'critical life skills' of the individuals to navigate in the increasingly complex financial economy ([Visa Turkey, 2011, p. 8](#)). The need for financial literacy has been preeminently raised by the international governmental and non-governmental organizations, including the European Union, OECD, G20, IMF, World Bank, and UNDP. In the practical applications side, the leading organizations for the promotion have been non-profit, non-governmental organizations. Financial

corporations, especially banking and insurance corporations have approached to the issue largely as a corporate social responsibility (CSR) activity. For the European Union, financial skills are pointed amongst the key competences for lifelong learning framework ([European Commission, 2019](#)). In the EU, financial literacy is conceived to be one of the key requirements for household economic well-being, especially in the age of digitalization and digital expansion in financial services ([Deuflhard et al., 2015](#)).

The critical event that brought the issue to the international organizations' agenda was the global financial crisis of 2008. The conclusion reached by these organizations was that the crisis was largely precipitated by the vicissitudes of the chasm between overly complex financial system and the knowledge of individual consumers about the risks involved (World Bank, 2009, p. 1). In 2009, the World Bank (2009, p. 1) acknowledged that even the members of the financial system had very limited knowledge of the exigencies of the novel and complex financial products. There are several accounts, which underline the role of systemic tendencies created by debt securitization through asset-backed securities (ABSs), mortgage-backed securities (MBSs), and collateralized debt obligations (CDOs) ([Lapavitsas, 2011](#)). Nevertheless, one can discern that, in the following years, the emphasis on systemic factors was mostly washed off, while the role of the individual capability side would be accentuated.

There are several other reasons provided for the benefits of increasing financial literacy ([OECD, 2012](#)). First, deregulation and liberalization of global financial transactions increase the household's exposure to complex financial products ([Karataş, 2017, p. 36](#)). This tendency creates frailty for the populations particularly in the developing countries in the potential case of diminishing international financial inflows ([World Bank, 2009, p. 2](#)). Second, international organizations underline a group of demographic changes especially increasing rate of elderly people ([OECD, 2012](#)). Individuals, governments, and the financial system are expected to plan for securing viable financial income for the increasingly aging population in the near future. For the poverty, financial literacy has been told to have the potential to address several Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) ([Hürriyet, 18.05.2017](#)). Up until 2030, under several of these goals, international organizations and national governments aim to seek economic "empowerment" of households in a sustainable financial system ([OECD, 2017, p. 3](#)). Financial literacy is one of the three pillars of these efforts together with financial inclusion and financial consumer protection (p. 3). The Group of 20 (G20) governments strive to expand the outreach of the financial products and services to the world's poor and they argue financial literacy would be indispensable for the sustainability of the financial system ([OECD, 2012; G20, 2016](#)). Raising the awareness of financial literacy in low-income households and underdeveloped regions is singled out as an indispensable priority for the global financial system ([G20, 2016, p. 17](#)). Finally, international organizations also emphasize, together with the rising variety of financial instruments, the introduction of digital channels and the exposure to the risk of theft, fraud, and data breach ([OECD 2017, p. 3; G20, 2016, p. 17](#)).

In Turkey, the financial literacy educational programs follow the OECD's and other international initiatives' educational contents and largely adopt them to programs' needs ([Hürriyet, 18.05.2012](#)). In 2009, the founding of the first educational project "I can Manage My Money" (Paramı Yönetebiliyorum) by the Financial Literacy Association, Habitat Association, Visa Turkey, and UNDP brought the financial literacy to the public attention. Concerning the CSR activities of financial organizations, mainly banking and insurance firms use volunteering efforts of financial workforce and experts to channel their expertise, knowledge, and skills to the education of individuals ([Hürriyet, 18.05.2017](#)). Although governments via ministries and independent regulatory authorities (IRAs) took part in the efforts from the beginning, the publication of financial inclusion, financial education, and financial consumer protection Strategy and Action Plans by the Financial Stability Committee in 2014 accentuated their desires to further involvement in the efforts. The Capital Markets Board (SPK) has conducted OECD PISA financial literacy survey in Turkey in 2015 ([SPK, 2015](#)), and Turkish Economy Bank (TEB) and Boğaziçi University also conduct another financial literacy survey annually ([TEB, 2017](#)). Overall, campaigns and programs in financial education commonly include teachings on financial instruments, budgeting, income, spending, saving, investment, borrowing, risk evaluation, and financial rights and obligations. Although the initial objective of the programs has been to reach to the demographics that are "excluded" from or outside of the financial system,

they include various target groups, including primary and high school students, higher education students, young adults, girls and women in the rural areas, farmers, young potential entrepreneurs, poor women as potential entrepreneurs, as well as well-educated urban middle class women, owners of small enterprises, and immigrants from Syria.

3.2. Data

To explore the institutional work approach and the management idea of financial literacy, the qualitative case study design appears to be most appropriate ([Yin, 2003](#)). A quest for theoretical contribution by problematizing theory calls for a deep understanding of considerably few, if not a single, cases ([Gehman et al., 2017, p. 4](#)). Second, a study of institutional work based on practice and discourse theories imply deeply involving in “hard to measure” concepts and their complex interrelations with the actual field ([Eisenhardt, in p. 4](#)). For the research purposes of this paper, the financial literacy as an idea predicates a singular case study of the activities

in the field as a whole. In this field in Turkey, there are only a handful of related non-profit organizations, financial corporations, projects and campaigns, and social enterprises. Further, reminding that this field is a relatively recent phenomenon and all the organizations and projects in the field appear to work on close issues raise the feasibility of a single case study design.

Process-oriented data collection has been widely recommended for the research in institutional work ([Lawrence, Leca, and Zilber, 2013](#); [Helfen, 2015](#)). The process analysis tries to capture organizational processes in flow and in continuous change with a ‘rich longitudinal data’ ([Gehman et al., 2017, p. 6](#)). In line with the process analysis, this paper aims to capture the critical events with a ‘thick description’ of the case and simplifying and understanding the field in terms of distinct periods or phases, the so-called ‘temporal bracketing’ ([Smith and Besharov, 2017, p. 7](#); [Langley and Abdallah, 2011, p. 219](#)). With periodization, the paper aims to discern if there are changes in the field discourse around critical events, e.g., global financial crisis, the inflow of excessive financial assets via quantitative easing, and the reversal of monetary abundance by the central banks.

This paper relies on the secondary data from and about the financial literacy educations. Thus, the data is aggregated through newspaper research in the archives of *Hürriyet*, *Dünya* and *Habertürk* web sites, and collected reports, archives, educational materials. The objective is to reach actors such as organizations, founders and managers, leading educators, and some of the participants, field experts, and academicians sense making efforts on the idea of financial literacy. In the discursive research, it is important to evaluate the subjects of which the discourse recalls or identifies, i.e., how the subjects make sense of the discourses around financial literacy. Finally, the paper focuses on the discursive efforts about the issues of problems and outcomes, identity, mission, goals and objectives, legitimacy, justification.

In the data analysis, the open method of coding is used similar to other studies in the organizational institutionalism literature ([Gehman et al., 2017, p. 5](#); [Slager et al. 2012, p. 771](#); [Langley and Abdallah, 2011, p. 214](#)). This method has a theory building orientation so that the analysis starts with “open coding”, which only gets extracts of themes from the first-hand experience of the actors in the field ([Gehman et al., 2017, p. 3](#); [Langley and Abdallah, 2011, p. 214](#)). In the institutional work literature, the first-order concepts generally assume the form of labeling the actors’ discursive practices, e.g., “justifying”, “bridging”, “defining”, “convening”, “activating”, “upholding”, and “resisting” ([Dey et al., 2016](#); [Slager et al., 2012](#); [Helfen, 2015](#)). Afterwards, first order concepts are further abstracted with reference to theoretical literature and through ‘axial coding’ they are further made sense in the second-order concepts ([Langley and Abdallah, 2011, p. 214](#)). In this second-level of abstraction, the paper comes out with the types of discursive works to illustrate the institutionalization processes, namely, creating, maintaining, disrupting, expanding and/or resisting ([Lawrence and Suddaby, 2006](#); [Marti and Mair, 2009](#); [Malsch and Gendron, 2013](#)).

4. ANALYSES

In the following section, some observations will be made based on the reading of reports and documents published by various international organizations, national government agencies, other financial companies, and a newspaper articles. The newspaper articles are results of the key term search, “financial literacy”, on Hürriyet’s online archive covering a period from January 2009 to June 2018. In the analysis sample quoted extracts are illustrated in terms of how they are coded in first- and second-order themes. First-order coding focuses on institutional work the actors engage in, whereas second-order coding aims at abstractions to identify discursive work related to legitimation and justification of practices and processes in the field. These group of sample extracts are chosen on the criteria of whether actors underline the financial literacy exigencies, rationales, its objectives, requirements, and consequences. In Table 2, a summary of first and second-order coding is presented. The first-order codes take a look at the discursive practices in the field and tries to read them with cross-references to the literature on institutional work. Whereas the second-order codes focus on the repercussions of the practices with respect to constitution of meaning, in particular the discursive works as forms of institutional works.

Table 2. Summary of First and Second-Order Coding

First-Order Codes (Practices)	Second-Order Codes (Discursive Works)
1. Making sense of changes / challenges	1. Neutralizing Transformations
2. Deferring the ‘talk’ on social challenges	
3. Re-framing the social welfare terms	
4. Reinterpreting the rationality	2. Constructing Disciplined Subjects
5. Promoting prudence	
6. Enhancing/Empowering the ‘disadvantaged’	
7. Generating demand for the financial literacy	
8. Developing standards / measurements	3. Constructing Technologies of Governance
9. Promoting individual risk-management	
10. Defining the social benefits	4. Creating chain of equivalence around the ‘common good’
11. Addressing the social challenges	

4.1. Neutralizing transformations

In the field of financial literacy, neutralizing transformations consist of three intertwined moments, namely, making sense of changes / challenges, reframing the concepts of social welfare, and deferring the ‘talk’ on social challenges. For the discursive work, neutralizing transformations refer to articulating a sense of urgency and inevitability while glossing over the viability of alternatives and/or the public deliberation. Furthermore, transformations become reified like a natural phenomenon to the extent that transformations can no more be seen as the result of deliberate decisions or indecisions against the systemic tendencies,

eschewing the role of the national, international, and global governance processes ([Marti and Scherer, 2016, pp. 304-305](#)).

“The origin of the current crisis, which began in developed- country markets, is rooted in housing price bubbles that were fed by providing overextended consumers with access to credit. Financially literate consumers, it is argued, would have been more cautious in taking on credit they couldn’t afford.” ([World Bank, 2009, p. 1](#))

“With the fast transformation brought about by digitalization, digital world expose individuals to increasingly complex financial products, services and systems, in particular youth, which is the most involved with the digital world.” ([Director of a private bank, Hürriyet, 18.05.2018](#))

In the above examples, the discursive work around the global financial crisis in 2008 constructs a narrative that consistently communicate the responsibility of poor individuals in triggering the sub-prime mortgage-based financial meltdown. Although dominant actors in the field do not exactly deny the role of financial system and the financial corporations, they do not discuss in any length how the financial corporations created secondary securitization products by packaging and selling the risk itself, even when they did not perceive the risks involved. It can be argued that the financial actors defer the discourse on social vicissitudes created by the financial system itself and the resulting poverty, inequality, and precarity. The discursive work of neutralizing transformations involves a perception of futility of being involved in problems and contradictions of the financial system and entrenches the prevailing perception of inevitability ([De Cock and Nyberg, 2016, p. 474](#); [Weiss and Huault, 2016](#)).

Relatedly, the neutralizing work engages in selecting and prioritizing an individualized responsibility understanding of social security and welfare ([Hardy and Maguire, 2016, p. 100](#); [Marti and Scherer, 2016](#)). Hence the practices are the re-framing of social security as “financial resilience” and social welfare as “financial well-being”. These actions serve the individualization of systemic vulnerabilities and glossing over the redistributive alternatives. Second, the term “social” is aptly replaced with “financial”, which replaces possible collective, redistributive social welfare provisions with the calculations of financial systems. The individual’s welfare transmutes into the function of one’s savings, return on investments, risk premiums, and credit scores and so on. Thus, when [OECD \(2017, p. 52\)](#) states that “individuals become increasingly responsible for building their own retirement income in many countries”, the discursive work leaves the act and decisions involved out of the frame and express the transformation in passive terms.

4.2. Constituting subjects

For the financial literacy, the individual is the main target of the institutional work. For this form of discursive work, the financial literacy efforts seek to construct subjectivities and identities to be governed and disciplined for the financial ends. As for the [World Bank \(2009, p. 7\)](#), financial literacy must avail itself of the new insights from the behavioral economics. Recently increasing attention paid to the behavioral economics precipitated a nuanced understanding of rational individual that is boundedly rational, open to social influence, and open to contextually primed selective attention. In this vein, both behavioral economics and financial literacy take a distance from holistic approaches to the social and financial challenges. The programs aim at piecemeal interventions into the individual’s habits, such as spending, saving, investing, borrowing:

“With the financial education, individuals are steered toward more responsible behaviors in financial matters. Thanks to financial education, while planning their budget, individuals are expected to be more cautious in planning their positions in the assets and liability sides... and will contribute their ability to make a neither less, nor more than necessary, but a balanced life plan.” ([Central Bank, 2011, p. 82](#))

“Knowing your consciousness is actually to know yourself. Managing your money is managing yourself and your life. Thus, the precondition of managing your money is to have control on your life. One of the greatest challenges is to know limits to borrowing and the other is to calculate the risks better when investing your savings. For this reason, Paramı Yönetebiliyorum focuses on such issues in education sessions.” (Financial literacy educator, *Hürriyet*, 18.05.2012)

Relatedly, the disciplined subject is further constructed with references to an image of individual exercising “prudence”, and is “more responsible”, “more careful”, living a “balanced life” (Central Bank, 2011, p. 82). With the financial literacy programs, the desire is an individual, who seeks information on the financial products and services, compares alternatives, make long-term plans, and make “sound” decisions. The “prudent” individual would not only achieve progress and eschew negative consequences in the financial matters, but also “manage one’s own life” (Bank executive, *Hürriyet*, 18.05.2018). The discourses assume no distance between “managing one’s money” and “managing one’s life” (Academic, *Hürriyet*, 18.05.2012). The individual self-management, then, eliminates any distinction between individual life span and maturity, return, risk, and planning of one’s financial assets and obligations. To put it otherwise, the discourse arrests the chain of difference and articulates the individual experiences with the unequivocally financial mechanisms.

Third, discursive work (Marti and Mair, 2009) involves the expansion of the financial services to the poor in the underdeveloped economies. In the case of financial literacy, the term ‘empowering’ individuals is raised with respect to inclusion of the low-income or poor individuals and households. Financial literacy field seeks to expand the constitution of financially disciplined subjects to the poor and marginalized demographics. Financial companies are keen to draw a shortcut between their financial literacy efforts as corporate social responsibility with promoting new products and services to these demographics.

4.3. Constructing technologies of governance

The financial literacy discourse also seeks to construct technologies of governance that not only aims to control the processes and outcomes of the projects but also promote self-controlling subjectivities. The institutions of financial governance display a propensity towards developing measurements, quantifications and rankings etc. that echoes the “standardization” discourse in the institutional work literature (Leca and Neccache, 2006, p. 697; Slager et al., 2012, Marti and Scherer, 2016). For the financial literacy, the standardization of educational materials, content, and process at the international level is mentioned as a priority (OECD, 2017). In Turkey, the projects in the field seek approval of international certification programs about financial education (*Hürriyet*, 18.05.2018). Furthermore, Turkey also conducts OECD’s PISA international survey on financial education to youth and adults. A few banks together with the universities develop and conduct their financial literacy, financial behavior, and savings trends surveys.

“Further exploration of the wealth of data collected to develop this report at national levels and for particular target audience and consumers’ profile, where permitted; Further data collection using the OECD/INFE toolkit at national and regional levels (e.g. in Eurasia, Asia, Latin America, Africa) to establish a global database on adult financial literacy; Future coordinated global data collection based on the toolkit and PISA financial literacy exercises to track progress and gaps in the adult and student populations.” (OECD, 2017, p. 54)

“Paramı Yönetebiliyorum education content has been approved by Child and Youth Finance International (CYFI), which works on improving children and youth financial literacy worldwide. The evaluation has been conducted in terms of international standards determined by international organizations such as UNICEF, OECD; civil society organizations and educators of CTFI Education Working Group.” (*Hürriyet*, 18.05.2018)

What Hardy and Maguire 2016 refer to as ‘riskification’, i.e. promoting individual risk-management, is closely related with two other types of discursive work in the field. The discourse on individual risk-management glosses over the retreat of the social welfare provisions and identifies the individual with the systemically created ‘risk’ in the global financial economy. Further, the technologies of governance envisages preeminently a self-regulating actors who would take responsibility for one’s own financial vulnerabilities and vicissitudes. The financial literacy as governance seeks to limit itself to enable the subject to gather information oneself, evaluate it, make financial decisions and take appropriate action accordingly. Individual is expected to cover for oscillations in income, hedge for financial turbulences, pay insurance for medical care, unemployment, and plan long-term investments for old-age income, all the while keeping an informed eye on one’s borrowing levels, rates of interest, and most advantageous credit alternatives.

4.4. Creating chain of equivalence

The actors in the financial literacy field seek to justify their efforts with linking their efforts to individual prosperity, financial stability, and national development. They describe a series of desirable and hard to object social benefits and claim to address similar social challenges. In doing so, they try to articulate chain of equivalence around the image of a ‘common good’, to augment the desirability of their discourses.

“Exactly similar to the way a functioning cog in the wheel improve the working of the whole system, financial education play a crucial role in increase in the individual wealth by contributing to the consumers, then improving the efficiency and stability in financial markets, afterwards by contributing to the progress in whole economy and increase in social welfare.” (CBRT, 2011, p. 84)

“We believe that with the higher levels of financial literacy, becoming a fundamental life skill, savings rates will rise and with the correct investment of savings the national economies will become more resilient against crises. We believe increasing the level of financial literacy awareness in our society will become a foundation for sustaining the growth in Turkish economy.” (Director of a private bank, Hürriyet, 18.05.2018)

This particular imagination would bridge a link between the disciplined subject demanding and supporting financial products and services that channel resources for the purposes of national development. In the case of Turkey, the low depth of financial system and the low savings rates of individuals precipitate recurring financial turbulences and unsustainable national growth rates. In response, financially literate individuals would raise the savings and trust and invest in the financial system. In the process, the conversation largely discards the considerations of the type of investments and their potential returns to the wider society in the context of global financial system. Finally, in a related aspect, addressing the social challenges of poverty, inequality, and precarity is limited to the repercussions of financially disciplined subjects, whereas any debate over collective and redistributive efforts is again ‘deferred’ indefinitely.

5. Discussion and Conclusion

This paper sought to contribute to the institutional work literature by focusing on how the actors construct discursive articulations and the ramifications of these actions. Methodologically, it is based on collection of data focusing on processes, analyzing the data by coding it in terms of institutional works the actors engage in. This paper aimed to explore the discursive institutional work with references to the extant literature on institutional work and discourse studies. In order to track the events in the field, it follows discursive coding techniques based on construction and channeling of meaning around the issue of financial literacy. Further, it proposes to make sense of the discursive articulations in the field by evaluating it with the reading of contextual changes related to the individual’s relationship with the financial trends.

In the analysis, the paper uses secondary data published by international organizations, national-level profit, non-profit and governmental organizations, and material generated from the key term research in newspaper archives. In choosing the sample of quotations, the priority is given to the illustrative cases in terms of

discursive practices of individual subjectivity, and financial system and national economy. To increase the credibility of the selection, the effort was trying not to put the words in the actors' mouth and not to cut a section of their expressions in order to omit the sections that might give the text segment a meaning that is different from the one inferred by the researcher.

The analysis delineates eleven practices and four discursive works from the financial literacy issue in the field of finance in Turkey. These interrelated discursive works are neutralizing transformations, constructing disciplined subjects, constructing technologies of governance, and creating chain of equivalence around the 'common good'. In the context of global financializing capitalism, the transformations are presented as 'neutral', indispensable and inevitable while the talk on substantial challenges and possible alternatives to address them are 'deferred' indefinitely as futile and aimless efforts. The disciplined subjects are expected to take responsibility of their prospects and life trajectories in the wake of risks created by the systemic tendencies. While the systemic tendencies are presented as subject to individual risk-management, the standardization and riskification discourses provide new technologies for the governance of the subjects in a financializing economy (Slager et al., 2012; Hardy and Maguire, 2016). To conclude, the hegemonic articulation brings an unequivocal meaning to the ambiguous terms of ensuring 'common good'. The novel interpretation of 'common good' can arguably be based on a particular bridging of individual welfare, financial stability, and national development.

Studying financial literacy in Turkey can be significant for several reasons in terms of discourse and institutionalism literatures. First, the international organizations, and the organizations, actors, and experts at the national level invariably attribute a sense of 'crucial imperative' to the financial literacy, in the wake of global financializing economy. It is viewed as a 'globally recognized' 'critical life skill', that would be the language of money in the new economic conditions (OECD, 2017, p. 45; Visa Turkey, 2011, p. 8). The higher levels of financial literacy among individuals would purportedly alleviate crisis tendencies, ensure financial stability, improve sustainable higher national income growth rates, and leverage the developing country economies to reach high-income levels (OECD, 2012; World Bank, 2009). Second, for the institutional work, this field can present an opportunity to contribute to the literature, for the actors show reflexivity and awareness of the exigencies and transformations in the wider world economy, and intentionality to construct, maintain, adjust, and alter a field as a response to their perceived priorities, problems and towards their desired ends. Third, the field is also amenable to discursive approach, because the practice in the field mainly relies upon speech acts, conversations, teaching materials, public campaigns that generate generous texts. Further, the actors in the field engage in discursive practices in order to construct a sense of truth, an image of undisputable reality, and in particular a narrative of subjectivity of financially literate individuals. Finally, the field has apparent repercussions for the specific research question of this paper that is how the actors process the discourses emanating from macro-societal institutions to make sense of a novel management idea. In particular, the financial literacy appears to gain meaning in the nexus of individual identity, national development, and a changing global financial system.

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THE IMPACT OF HOFSTEDE'S NATIONAL CULTURAL DIMENSIONS ON TRUST: A RESEARCH IN GAZZA STRIP SECONDARY SCHOOLS IN PALASTINE

Abeer J. ABUIYADA ^{a*}, Özge GÖKBULUT ÖZDEMİR ^b, Ayşe Elif ŞENGÜN ^b

^aUnited Nations Relief and Works Agency, Department of Education

^bBusiness School, Ankara Yıldırım Beyazıt University, Ankara, Turkey

Abstract

This study examines the impact of Hofstede's (1980) four national cultural dimensions (collectivism, power distance, uncertainty avoidance and masculinity) on trust between school teachers and their principals in secondary schools in the Gaza Strip in Palestine using both quantitative and qualitative methods. Using qualitative data from eight informants and drawing on our review of cross-cultural trust literature, we define interpersonal trust and derive a model of Hofstede's national cultural dimensions on interpersonal trust between school teachers and their principals in Gaza Strip in Palestine. Regression analysis results indicate that three of Hofstede's national cultural dimensions namely collectivism, uncertainty avoidance and masculinity are positively related to trust, however, power distance is negatively related to trust between teachers and principals.

Keyword

Culture, Trust, Hofstede's national cultural dimensions, Employee-manager trust relationship, Gaza Strip, Palestine, Education Industry

1. INTRODUCTION

Recent changes in the global modern organization presents new and unstoppable challenges for effective relationship building. This has brought about changes in the organizational behaviors of individuals working at these organizations and as a response, organizations have begun to implement strategies to enhance, protect and maintain the quality of the relationships between individuals working at these organizations. Managing such relationships demands trust.

Trust is important in social interactions inside and outside organizations. It is found to have to positively influence both cooperation ([Dirks & Ferrin, 2002](#); [Kramer, 1999](#); [Malhotra & Lumineau, 2011](#)); and efficiency ([Granovetter, 1985](#)) and help managers to practice an effective leadership ([Dirks & Ferrin,](#)

*Corresponding author.

*The paper is bases on PhD thesis of Abeer Abulyada.

Contact: Abeer J. AbuIyada ✉ english42moro@hotmail.com; Özge Gökbulut Özdemir ✉ ozgegokbulutozdemir@aybu.edu.tr ; Ayşe Elif Şengün ✉ ayseelifs@yahoo.com

To cite this article: Abulyada, A. J., Gökbulut Özdemir, Ö., & Şengün, A. E., (2023). The Impact Of Hofstede's National Cultural Dimensions On Trust: A Research In Gazza Strip Secondary Schools In Palastine. *AYBU Business Journal*, 3(1), 55-85.



2002). For long, it has been argued that no variable effects interpersonal and group relationship the way trust does ([Golembiewski & McConkie, 1975, p.131](#)).

Despite the substantial advantages of trust mentioned above, we surprisingly know very little about how peoples' national culture affects trust ([Noorderhaven, 1999](#); & [Gibson, Maznevski, & Kirkman, 2009](#)). Our argument is that since trust has been shown to be an important variable; it is very important to be in harmonization with the culture of society to be perceived and interpreted correctly among individuals of the same cultural group. In this study, we explore the effect that culture have on trust using Hofstede's (1980) four dimensions of culture (e.g., Collectivism, Power Distance, Uncertainty Avoidance, and Masculinity).

Our choice for Hofstede's cultural dimensions is not arbitrary. First of all, Hofstede's cultural dimensions are dominant and cover major conceptualizations of culture developed earlier ([Clark, 1990](#)). As such, Hofstede's national cultural dimension is widely accepted and until now it is the most recognized measure of culture worldwide.

Secondly, Hofstede's (1980) dimensions were empirically developed. While many other cultural constructs remained at the conceptualization stage. As such, Hofstede's framework of culture provides a useful analysis of the effect of well-established dimensions of culture. To clarify, Hofstede (1980) identified all of collectivism, power distance, uncertainty avoidance, & masculinity using a survey of more than 100, 000 IBM employees in 66 countries.

Third, Hofstede's (1980) dimensions of culture are well known and cited in almost every piece of research on culture. It has been globally verified and used by various scholars at different levels of analysis including the individual and country level in studies across cultures. Triandis (2004) dictates a passage to Hofstede for the influence of his dimensions on his work demonstrating his deep recognition and thanks to Hofstede's contributions in the field. According to Triandis (2004), Hofstede is the basis for the greater majority of modern research into national cultures.

This study will be conducted using a large sample of employee-manager relationships between teachers and school principals in Palestine. Our research fills three related research gaps. First, we add to the existing literature on trust by adopting an emic approach that studies trust as a local phenomenon in a developing country locating in the east such as Palestine. Until now, the majority of studies in trust have adopted an etic perspective ([Zaheer & Zaheer, 2006](#)) using models, measures and concepts of trust developed in the West to study samples from the east without applying the necessary modifications that reflect the real meaning of trust in the new contexts. Noorderhaven (1999), criticized this approach by arguing that "it is much more productive to explore and compare the meaning of trust and its antecedents and consequences as perceived in various cultures". Still there is limited research of perceptions of trust between teachers and principals ([Tschannen-Moran & Hoy, 1998](#)). Also, in the Palestinian context we could find one single study on the effect of Hofstede national cultural dimensions on accounting practices, ([Darwish, 2014](#)), but we could not find any in relation to trust. This study is an attempt to fill this gap.

Second, our research is an important contribution to the stream of research on culture. To demonstrate, using Hofstede's cultural dimensions in a country like Palestine is considered unique. Hofstede in his research on the national cultural differences between countries, does not include Palestine in the group of countries he studied. Consequently, studying Hofstede's cultural dimensions in a country like Palestine will contribute to the field literature on culture, and will add to the importance of this study.

Third, this study adds an important contribution to the stream of literature linking national culture to trust. As far as we know, only a few existing studies include more than two dimensions of national culture in one study to empirically investigate its relationship with trust. In the current study, we are empirically investigating the impact of Hofstede's (1980) four cultural dimensions on trust, We believe measuring all the four dimensions in one model provides a more complete picture of the phenomena.

The current study uses a combination of quantitative and qualitative methods to study the impact of culture on trust. Qualitative investigation is conducted first at the initial stage. The purpose is to understand the details in the relationship between teachers and school principals in Palestine, to get close to the context and to identify the components of trust and their meanings in this particular context. The results of the qualitative analysis are essential for the operationalization of trust measure and for the customization of study hypotheses to the current study context. On the other hand, quantitative investigation is used to collect data as well. A questionnaire is developed by the researcher based on the qualitative analysis and on our review of related literature. Data are collected from schoolteachers working at state secondary schools of Palestine/Gaza. Trust is treated as the dependent variable and all of collectivism, power distance, uncertainty avoidance and masculinity are treated as independent variables.

In summary, in this current study, we explore the effect of Hofstede's (1980) cultural dimensions on trust in a large sample of employee-manager relationships between teachers and school principals in the Gaza Strip in Palestine using both quantitative & qualitative methods. By doing so, we seek to answer the following questions: 1) What impact does culture have on employee-manager trust? 2) What trust dimensions are relevant in a study of culture and trust in an educational institution in Palestine?

2. THEORETICAL MODEL AND RESEARCH HYPOTHESES

In the current study, we investigate the impact of four of Hofstede's, cultural dimensions on trust. More specifically, we are interested to study the impact of all of collectivism, power distance, uncertainty avoidance, and masculinity on trust. Below, we talk about each relationship in separate based on our review of related literature and the results of our qualitative analysis.

2.1. Collectivism and Trust

The Collectivism dimension refers to the degree of interdependence between individuals. It relates to how people see the others in relation to the self in terms of "I" or "We". The argument is that collectivists are more interdependent and nurture relationships with care more than individualists ([Triandis, 1989, 1995](#); [Chen et al. 1998](#); [Hofstede, 1980](#)).

In the relationship between collectivism and trust, a common theme between scholars implies that trust is high in collectivist cultures who are interdependent and nurture relationships with care ([Triandis, 1989, 1995](#); [Chen et al. 1998](#); [Hofstede, 1980](#)). This indicates a positive relationship between collectivism and trust which means the higher the level of collectivism, the more likely that trust will exist.

For integrating collectivism with trust, Doney et al. (1998) proposed some prepositions in the relationship between Hofstede's collectivism dimension and trust demonstrating how collectivism as a cultural value is related to a group of trust building processes presented in the literature. According to Doney et al., trust is more dependent on prediction –(i.e. based on confidence that the target behavior can be predicted), intentionality –(i.e. based on an assessment of the target's motives) and transference –(i.e. based on third party or proof sources from which trust is transferred to a target). However, these prepositions are needed to be tested to give profound evidence of the relationship between collectivism as a cultural value and trust. This study is an attempt to study the impact of Hofstede's collectivism as a cultural value on trust in the relationship between teachers and school principals in Palestine. It is argued that subordinates with collectivist cultural orientation show a higher willingness to maintain high quality relationship compared to subordinates with individualist cultural orientation due to their perception of the benevolent practices of their superiors which signals a positive relationship to exist between superiors and subordinates at work in collectivist societies ([Triandis, 1989, 1995](#); [Chen et al. 1998](#); [Hofstede, 1980](#)).

In addition to the above support from the literature, results from our content analysis suggested a positive relationship between collectivism and trust. Participants from our qualitative sample demonstrates a tightly knit social framework between individuals and a willingness to share problems with the ones they trust. Also, participants from our qualitative sample demonstrate a willingness to take care of each other in order to solve problems. This is purely collectivists and done only with the ones they trust. This reflects the high degree of interdependence between individuals and gives the feeling that they are complementing each other. The higher the degree of interdependence between them, the more likely they trust. This reflects a positive relationship between collectivism and trust. As put by one of the participants from individual interviews:

"Sharing their feelings together, yes gets us closer to each other. Work will be done, it has to be done, but about relationships, about for example whenever I have a problem at work, you have others to consult, to refer to, and to share your feelings. You discuss it with other colleagues that you trust. I think it creates a relaxing atmosphere among us. It is not just work that controls our relationships." (Participant 3).

Based on the above findings, we expect a positive relationship to exist between collectivism and trust in that the higher an employee is on the on collectivism, the more likely he/she will trust in his/her direct manager at work. Therefore, we posit the following hypothesis:

HYPOTHESIS 1: *There is a positive relationship between collectivism and trust.*

2.2. Power Distance and Trust

Another dimension of Hofstede's framework of culture is power distance. This dimension refers to the tendency to accept hierarchy in a relationship. Literature reveals that in high power distance societies, people accept hierarchy in their relationships and accept that power will be translated into visible differences in status ([Hofstede, 1980](#)).

In all cultures, models of behavior are carried out over from one domain of life to the other ([Hofstede, 1980](#)). Reflecting this to the organizations, the same pattern is expected to appear in the relationship between superiors and their subordinates. Superiors in countries high in power distance exercise autocratic or paternalistic leadership and hardly invite employees in a lower status to take a decision with them ([Smith et al., 2002](#)). On the other hand, superiors in countries low in power distance exercise participative/democratic styles of leadership and expect employees from a lower status/position to freely express their opinions over a decision ([Botero et al., 2009](#)). As a result, employees in low power distance countries are fortunate enough to develop better relationships with superiors than their counterparts in high power distance countries, because in such cultures subordinates presume a safe distance from superiors.

Another thing is that, previous research on management trust has found out that it has long been related to empowerment (e.g., [McCauly et al., 1992](#)), autonomy (e.g., [Hart et al., 1986](#)), feedback (e.g., [Ilgen et al., 1979](#)), supervisory supportiveness (e.g., [Roberts et al., 1974 b](#)), and communication (e.g., [Roberts et al., 1974 a, b](#)). These attributes could be reflected in low power distance organizations.

For integrating power distance with trust, Doney et al. (1998) proposed some prepositions in the relationship between Hofstede's power distance dimension and trust demonstrating how high perception of power distance as a cultural value is related to three of trust building processes presented in the literature. For example, they proposed that in high power distance cultures, trust is more likely to form through a calculative –(i.e. based on the cost versus rewards of a target acting in an untrustworthy manner) prediction

–(i.e. based on confidence that the target behavior can be predicted), and capability —(i.e. based on an assessment of the target's ability).

Ji et al. (2015) empirically investigated the relationship between power distance and two types of trust namely cognitive based trust and affective based trust, using a large sample of subordinates and supervisors working in different types of firms including telecommunications, electronics, real estate, manufacturing, and service. Results revealed that power distance orientation is negatively associated with cognitive-based trust and affect-based trust.

In similar attempts, Islamoğlu et al. (2005) investigated the relationship between power distance and trust using a sample of professional employees who were working regularly in an office environment of different corporations in Turkey including service, manufacturing and education. Findings reveal that power distance has significant negative effect on total organizational trust and a significant negative effect on trust towards immediate supervisor. As power distance increases, total organizational trust and trust towards immediate supervisor decreases.

It is also argued that subordinates with high power distance cultural orientation are hesitant to maintain high quality relationship compared to subordinates with lower power distance cultural orientation due to their perception of the power distance gap between them and their superiors at work ([Ji et al., 2015](#) & [Islamoğlu et al., 2005](#)). We believe that this type of argument has to be analyzed further as part of this study.

In addition to the above support from the literature, participants from our qualitative sample demonstrate a keen awareness of the reality of power distribution at work. Teachers at schools identify the principal as occupying a higher position in the hierarchical social structure. As a result of this, they described in details the hierarchal steps employees take before they can reach to the manager. To demonstrate, all participants showed preferences to control and overcome their work-related problems by themselves. If they failed to do so, they might refer to other employees around them (e.g., colleagues, educational guide etc.). Finally, if the problem is too complex and it is too hard to be solved, they may go to their manager by the end! Here, there is an evidence of some hierarchy while solving problems, which we can think alludes to power distance. This indicates a negative relationship between power distance and trust in that the higher the power distance between employees and managers, the less likely they will solve problems and trust. As put by one of the participants from individual interview:

"First I don't go to the manager, if it is related to the students, sometimes we have naughty students, we go to the school counselor, or the educational guide who is the mean between the students and the teacher and he can solve these problems. If it is not related to the students, we can go to the deputy, if the deputy cannot do anything, we can go to the manager. Not directly, sometimes we can solve the problem, not everything goes to the manager, no, and he has lots to do. But finally, if it is a complicated one, we will go to him." (Participant 6).

All these findings provide us with a profound evidence of the negative relationship between power distance and trust in that the higher an employee in power distance, the less likely he/she will trust in his/her direct manager. Therefore, we posit the following hypothesis:

HYPOTHESIS 2: *There is a negative relationship between power distance and trust.*

2.3. Uncertainty Avoidance and Trust

The third dimension of Hofstede's framework of culture is the uncertainty avoidance dimension. This dimension refers to the degree to which individuals feel unrelaxed with deviant ideas which generates an uncomfortable status of uncertainty. In the current study, we attempt to test the relationship between uncertainty avoidance and trust. We ask the question that if trust is the willingness to take risk in a relationship, then how does uncertainty avoidance as a cultural value affects trust. We believe that much work must be done to address this question. The current study is an attempt to further our understanding on the relationship between uncertainty avoidance and trust.

For integrating uncertainty avoidance with trust, Doney et al. (1998) showed that Hofstede's uncertainty avoidance dimension of culture is related to four of trust building processes presented in the literature. To demonstrate, they proposed that individuals in high uncertainty avoidance cultures are more likely to form trust via a prediction process – (i.e. based on confidence that the target behavior can be predicted), intentionality process, – (i.e. based on an assessment of the target's motives), capability process – (i.e. based on an assessment of the target's ability) and transference process – (i.e. based on third party).

Further, Hwang Yujong (2009) empirically investigated the relationship between uncertainty avoidance and three dimensions of online trust (integrity, benevolence, and ability) of undergraduate students. Results of the data analysis revealed that uncertainty avoidance positively influences the benevolence and ability dimensions of trust respectively. In the same vein, Ferrin et al., (2010) reviewed the literature of trust differences across national–societal cultures to understand the role of risk taking in trust building (Cook et al., 2005). Findings reveal that in high uncertainty avoidance cultures, like Japan, people show a higher willingness to trust. The author concluded that risk taking is a critical element of trust building for the Japanese. They explained the results by the high uncertainty avoidance exhibited in the Japanese culture. And concluded that in high uncertainty avoidance cultures, individuals are more willing to put trust in their partners which signals a positive relationship between the two variables.

It is also argued in the literature that subordinates with high uncertainty avoidance cultural orientation show a higher willingness to maintain high quality relationships and thereby high trust which signals a positive relationship between superiors and subordinates at work (Hwang Yujong, 2009 & Cook et al., 2005). We believe that this type of argument has to be analyzed further as part of this study.

Moreover, quotes obtained from our qualitative sample participants show that the preferred style of the respondents in dealing with uncertainty and conflict was very much like keeping away from it. Evidence from our qualitative analysis shows that there was almost uniform response to the question about the sanctity of rules, and instructions at work in that they were guidelines to behaviors. One of the respondents had addressed this issue directly by devising a code of conduct in place of the way he manages work related situations. This creates a relaxing atmosphere among them, as they believe that uncertainty is prejudicial and should be reduced. This suggests a positive relationship between the Uncertainty Avoidance dimension and trust. According to them, that the higher the level of uncertainty, the higher the need to trust. As put by one of the participants from individual interviews:

"When we want for example to perform a competition, to make sure it is fair, to make sure it is confidential, and to make sure it is well organized, we give instructions like the time should be accurate, all questions should be designed objectively and the deadline should be stated clearly. Instructions are very necessary because without them, this will lead to disruption and confusion in the work. Instructions not only have to be accurate and clear, but they have to be followed up and should be always reminded with ..." (Participant 2).

Basing on all the above, we see that the uncertainty avoidance dimension can be a predictor of trust in relationships and we expect a positive relationship to exist between uncertainty avoidance and trust in that the higher an employee in uncertainty avoidance, the more likely he/she will trust in his/her direct manager. Therefore, we posit the following hypothesis:

HYPOTHESIS 3: *There is a positive relationship between uncertainty avoidance and trust.*

2.4. Masculinity and Trust

Another dimension of Hofstede's framework of culture is Masculinity vs. Femininity. According to Hofstede (2001), masculine cultures respect achievement, success and rigidity. As such, masculinity is associated with a "performance society". For example, in their model, Schoorman et al. (2007) argued that culture can affect the perception of ability, benevolence, and integrity and the importance given to each of these variables. For example, they argued that "more action-oriented, competitive, performance-oriented cultures—what Hofstede has called "masculine" cultures—tend to place a higher value on the ability component of trust" ([Schoorman et al., 2007](#)).

In addition, Ferrin et al. (2010) studied trust differences across national—cultures and found some prepositions in the literature in the relationship between masculinity and trust. To demonstrate, scholars proposed that in high masculine societies, individuals trust each other based on calculative processes – (i.e. based on perception of rewards vs. costs of a target actor) and on capability processes – (i.e. based on the assessment of the target's ability) ([Doney et al., 1998](#)).

Further, respondents from the qualitative sample do not see their gender as an issue, nor did they perceive themselves to behave differently in their relationship role toward men or women. When asked about how being a male affects their relationship, some of the participants used the word 'professional' to describe the manner in which they managed the relationship between themselves and other staff. However, looking closely at their quotes revealed a high level of masculinity demonstrated by the inequality between females and males. While talking, participants argued that gender effects on one's ability to perform his/her work related tasks well. According to them, it is easier for males to do some work related tasks compared to females because females have a very limited time due to their out of the job responsibilities (e.g., raising children, housework etc.). In addition, females could not impose authority compared to males which effects on their ability to perform as required. This suggest a positive relationship to exist between masculinity and trust in that males are considered more capable and thereby more trustable compared to females. As put by one of the participants from individual interviews:

"Sometimes in some cases it's easier for a male to do some tasks, like you know for example females sometimes they are more absent in work places than male. In this case, they need someone to take their role and it is almost colleagues in the same place. When I take my colleague's female place, because she is pregnant, or she is taking a sick leave two or three months off because of her pregnancy and she is delivering a baby, expecting a baby, this means she is going to be absent from the work place three or four months. It would lead sometimes to a burden in the job, so it becomes harder for us to work in two areas... okay... to take her role or totally work instead of her or taking all of her duties. That is why sometimes doing tasks for the job for males are easier than females." (Participant 2).

Basing on all above, we argue that there is a relationship between masculinity and trust and we expect this relationship to be positive in that the higher an employee in masculinity, the more likely that he/she will trust in his direct manager at work. Therefore, we posit the following hypothesis:

HYPOTHESIS 4: *There is a positive relationship between masculinity and trust.*

The hypothesized model of culture-trust relationships is shown in (Figur 1 below). These hypotheses will be tested on the teacher-principal relationship in Palestine based on a sample of English teachers working at State Secondary Schools in the Gaza Strip. In the section that follows, the methodology of the research will be discussed.



Figure 1. Hypothetical model of the relationship between Hofstede's four national cultural dimensions and trust

3. METHODS

This study consists of two consecutive phases, beginning with a qualitative analysis and continuing with a quantitative analysis.

3.1. Qualitative methods

The qualitative part allowed us to understand the context, which is new, compared to other contexts in the literature (i.e., an educational sector in a developing country such as Palestine, the Gaza Strip) and to identify the components of trust and its meanings in this particular context. Also, this qualitative analysis is essential for the operationalization of the trust measure and for the customization of hypotheses to the current context under study. As a result, we use qualitative methods to assist our development of quantitative instrument in order to record meanings in a more accurate and nuanced manner.

In the current study, an adequate number of semi-structured interviews is conducted with all key informants. In such type of interview, the outline of the broad categories relevant to the research topic is identified as a framework for the main questions and the rest of the dialogue is determined in the course of the interview (Fontana et al., 1998).

During the qualitative investigation, we tried to understand the meaning of trust and its components without directly asking questions about trust. Consequently, individual interviews were based on indirect inquiry, and we used semi-structured questions in order to uncover what trust means from the social relations that relate to it.

Table 1.1. Qualitative Sample Structure

No.	Name	Sex/Age	Profession	Time in Hours	Years of Experience
1.	Participant 1	F / 40	University Professor	2	16
2.	Participant 2	M / 40	English Supervisor	3	15
3.	Participant 3	F / 37	English Supervisor	3	15
4.	Participant 4	M / 47	School Principal	3	22
5.	Participant 5	F / 45	School Principal	3	20
6.	Participant 6	M / 28	English Teacher	3	6
7.	Participant 7	F / 35	English Teacher	3	8
8.	Participant 8	M / 33	English Teacher	3	10
Total	8 Participants	-	-	23 Hours	-

3.1.1. Content Analysis of Trust

Before starting our content analysis, we made sure all individual interviews were transformed into text. As such, eight transcripts were ready for our analysis. The results of the qualitative study were analyzed using open coding and axial coding. According to Berg (1998), open coding involves categorization of what is said in the transcripts without much constraint aside from the research topic under study. Consequently, we simply started by reading and re-reading of the transcripts. We gave phrasal descriptions to the sentences and expressions in the transcribed material. We tried to do it with an open mind without imposing an interpretation based on pre-existing theory (Gibbs, 2007). Codes created in this way were our own creations, in that we identified and selected them ourselves. Some of these more detailed codes came from the informant's words, and others were our summary glosses of what the informant referred to or described at a particular point in the text. These codes were expanded and changed as our ideas developed through repeated interactions with the data. We stopped the process of open coding at a point in which we felt that the repetition allowed us to move rapidly through the transcripts (Berg, 1998). As a result of open coding, around two hundred codes were identified. Coding at such a very general level helped us to organize our data. It was our first stage in our analysis. Once completed, we moved to the second stage of coding referred to as the axial coding.

During axial coding, the phrasal descriptions identified during open coding were moved to a more abstract level (Berg, 1998). The attention in this phase was given to the larger narrative to form broader categories (Coffey et al., 1996). As such, all data bits that relate to a particular code were retrieved to combine quotes that are all examples of the same idea. After closely reading all the resulting quotes, we combined them into categories in order to display our data in such a way that can be read easily. As a result of our content analysis, categories were derived inductively from patterns emerged from the data (Coffey et al., 1996). Each data set or category that we made contained quotes that exemplify the same descriptive idea that were identified and they were linked with a name for that idea—the code to develop categories. As such, we relied on an emic approach during the qualitative stage of content analysis, which means that the categories used were based on the data obtained from the local informants rather than theory driven categories (Coffey et al., 1996). This level of abstraction resulted in twenty one antecedents related to meanings/components of trust. Iterations between the transcripts, comparisons, contrasts, induction, deduction, and verification combined the below twenty one antecedents into four components/meanings of trust related to a higher level of abstraction. These are: "Competence, Benevolence, Openness, and Fairness". Afterwards, we saw that the "Benevolence" component of trust subsume the "Openness" component in the analysis, which ended up with our three main components of trust: Competence, Benevolence, and Fairness. The majority of the antecedents are classified under the category of 'Benevolence' with a total of ten antecedents, followed by that of 'Competence' with a total number of seven antecedents, and finally 'Fairness' with four antecedent only.

3.1.2. Content Analysis Findings

In the principal–teacher dyadic relationship in Palestinian secondary schools, trust between the two parties is important for the accomplishment of work related tasks through interpersonal interaction. In this particular relationship, trust is composed of three components.

In the principal-teacher dyadic relationship benevolence has two meanings. It means that one's well-being or something one cares about will be protected and not harmed by the trusted party (e.g., Mayer et. al. 1995; Hoy & Tschannen-Moran 2003; & Wasti et. el., 2007). It also means confidence that the information shared will not be exploited.

Our qualitative analysis also revealed that competence is also important for the formation of trust between the parties. In the relationship between teachers and school principals, competence means being capable to perform as expected. In the context of schools, teachers are dependent on the competence of their principals if the former view the latter as having the group of skills, knowledge, experience, decision

making, and success for task accomplishments. A teacher may believe that his/her principal is benevolent and wants to help, but if the principal lacks the knowledge, skills and experience of the job related tasks, and can't adequately communicate them, then the teachers' trust in their principals may be limited.

Fairness also appears as another component of trust in the teacher-principal relationship. Fairness means trustee is just, objective, and treats everyone in the same way. For example, teachers perceive that fairness in assessment is strongly associated with beliefs about supervisor trustworthiness.

From the above findings, we argue that in the context of schools in Palestine, interpersonal trust between teachers and school principals has three distinct components namely: benevolence, competence & fairness. These insights into trustor's perceptions help identify how trust arises in the minds of employees working in schools and guide school principals to reflect on their practices because they have the majority impact on building trust and they are responsible for initiating trust while working with other employees at schools

In view of the above discussion, it can be concluded that the qualitative study of the dyadic relationship between teachers and school principals in the state secondary school in Palestine provides support for the generic hypotheses outlined above. In the next section the quantitative methods used for testing the hypotheses of the study are outlined.

3.2. Quantitative methods

This part describes the quantitative methodology that was used for this thesis study. Information about the quantitative data collection procedures including (a) research design, (b) sampling plan, (c) survey distribution and data collection method, (d) and measure development of the study will be explained.

3.2.1. Research Design

To test the relationship between Hofstede's (1980) cultural dimensions and employee-manager trust, a multiple regression analyses were used. Trust is treated as the dependent variable while all of collectivism, power distance, uncertainty avoidance and musicality are treated as the independent variables. In addition, factors identified by previous researchers ([Mayer and Gavin, 2005](#); [Chua et al., 2008](#); [Brower et al., 2008](#); [Dirks and Skarlicki, 2008](#); [Colquitt et al., 2011](#); [Schaubroeck et al., 2013](#) and [Hernandez et al., 2014](#)) as possible determinants of trust were employed as control variables. Thus, all of age, gender, and tenure of employment at the organization in years, educational level and nationality were included in the model. Regression analyses were used to test hypothesis one as follows: In the first step, all control variables were entered into the model. In the second step, control variables, the independent and the dependent variable were entered to test hypothesis one. Regression analyses were also used to test hypothesis two, three and four using the same statistical steps mentioned above.

3.2.2. Sampling

The target population for this study is all the English Teachers who work at the State Secondary Schools of the Gaza Strip in Palestine. This currently constitutes around 730 teachers working in 149 secondary schools all over Gaza. The sampling frame is the list of all English teachers who currently work at state secondary schools all over Gaza. The list is organized with respect to the locations of schools in seven districts in Gaza. The sampling procedure is a cluster sampling: "A random sample which uses multiple stages of clusters to cover wide geographical areas" ([Neuman, 2006](#)). Consequently, instead of using a single sampling frame, we used a sampling design that involves multiple stages and clusters. This has a significant practical advantage especially when it becomes very costly to reach the sample elements who are geographically spread out all over the Gaza Strip.

To demonstrate, all state secondary schools all over the Gaza Strip were divided into separate clusters. Then a simple random sample of schools was drawn from each cluster. School principals were kindly asked to share the questionnaire with English teachers inside the schools. In order to increase accuracy and sample correctly, we will rely on probability proportionate to size (PPS). In other words, we will allow the sample to contain a representative proportion of sample elements from each cluster, then each final sampling element will have an equal probability of being selected. As such, an adjustment in cluster sampling will be made if we discover that the clusters will not have the same number of sampling elements.

The sample size is determined to be above 252 since this is the minimum number required for a population of 730 based on the statistical measurement equation. As a result of quantitative data collection method, a total number 276 responses were retained and included in the study sample which is considered good enough as it is above the required number.

3.2.3. Survey Distribution & Data Collection Methods

Due to the COVID-19 pandemic prevailing recently all over the Gaza Strip, it becomes very difficult and dangerous for us to travel all over the locations of the schools for the purpose of collecting the study data. However, we thought about a remote distribution and data collection method. The procedure is that we thought about sending questionnaires to a simple random sample of teachers in each cluster electronically through an email as an alternative way for a safer survey distribution and data collection method. We contacted the Ministry of Education and Higher Education in the Gaza Strip to facilitate the distribution of survey instrument and to provide the necessary assistance in this regard, they indicated that they are not able to directly provide us with a listing of emails for all teachers. However, they are able to send emails on my behalf free of charge to a representative random sample of schools from each cluster upon their approval of my research. Given permission to contact, principals were sought to help administering the survey, each principle would share the survey with teachers inside the school through the Whatsapp group dedicated for principal-teacher communication. English supervisors were personally contacted to facilitate the data collection process. The Questionnaire was designed using Google Form and consists of four parts: **Part (1):** It includes questions about culture. **Part (2):** It includes questions about trust. **Part (3):** It includes the demographic information about respondents: Gender, Age, Education, Years of Experience and Location of School (See Appendix 1). A link was used to connect the responses to a data base to record answers.

Upon completion and testing of the survey instrument, three e-mails were sent to a representative proportion of schools in each cluster at different intervals. The first email invitation was sent directly after appropriate completion and testing of the survey instrument. The second email invitation was sent approximately two weeks after sending the first email. The final email was sent later on with the hope that many participants would complete the survey. In addition, school principals in the sample clusters were personally contacted by phone kindly asking for their support and help. All questionnaires were accompanied with an email invitation letter kindly asking for teachers' participation. For confidentiality purposes the names of the respondents will not be asked. Since English was used as the language of the quantitative investigation, teachers were randomly chosen based on their ability to communicate effectively in English. Teachers who demonstrate a sufficient level of spoken and written English were randomly chosen. Schools will be offered a copy of a summary report upon completion of the study to motivate the completion of the questionnaires.

3.2.4. Pre-testing

Before doing the pilot study, the questionnaire items were reviewed by professionals/experts from diverse backgrounds. After the revision of the items, a pilot test of the study tool was conducted between the middle and end of May 2021. As part of this pilot testing, the questionnaire was designed using Google Forms and a link was transmitted via Whatsapp to a none-random sample of English secondary school

teachers (n=35) from all regions of the Gaza Strip including: North Gaza, East Gaza, West Gaza, Middle Area, Khan Younis, East Khan Younis, and Rafah regions in the Gaza Strip.

As a result, a total of twenty-eight responses were retained. Respondents (n=28) were asked to write down their comments on the study tool in a separate file and kindly asked to send them electronically via Whatsapp. Comments made by respondents in the pilot study regarding the questionnaire were considered and some items were revised once more in light of these comments.

After these changes, three colleagues (i.e., teachers) evaluated the measures for comprehensibility. On the basis of these reviews, the questions were revised once more. By the end of this stage, we were able to apply the necessary modifications which do accord with these changes. No translation and back translation was conducted as the questionnaire was administered in English language and only respondents who work as English language teachers at state secondary schools and consequently demonstrate an ability to communicate effectively, both verbally and in writing, in English were selected and included in the study sample. These steps took place between the middle and end of May 2021.

3.2.5. Measure Development

From the analysis of the qualitative data set, the following three components of trust emerged: (a) competence (b) benevolent and (c) fairness. Also, results from the qualitative analysis showed evidence of a relationship between Hofstede's (1980) four cultural values (i.e. collectivism, power distance, uncertainty avoidance & masculinity) and trust. Moreover, the in-group favoritism appeared as a context specific variable and it was included to the model as a moderator between collectivism and trust. All the above categories served as headings for the large-scale sections within the instrument. However, a major question remained was how to operationalize these categories. We consider the following scales as relevant for the current study: [Schoorman et al. \(1996\)](#); [Hoy et al. \(2003\)](#); [Gillespie \(2003\)](#) & [Ovaice \(2001\)](#).

First of all, Schoorman et al. (1996) measure of trust, is a twenty-one item scale developed to reflect the ability, benevolence, and integrity of the Mayer et al. (1995) model of trust. Later on, the complete items of Schoorman et al. (1996) measure was adapted, and published in Mayer and Davis (1999). The fact that Schoorman's et al. (1996) operationalization was based on Mayer et al. (1995) model is considered an advantage in itself. The reason is that the Meyer et al. (1995) model is generally applicable and is used across multiple disciplines. To demonstrate, Meyer et al. (1995) model has been cited over three thousand one hundred and thirteen (n: 3,113) times (Google Scholar, Aug. 2020). Meyer et al. model has been cited in such diverse areas (i.e., law, health, engineering, agriculture etc.). In their article, Schoorman's et al. mentioned that over 20 percent of studies that cited Mayer et al. (1995) were written in a language other than English. In addition, our review of Schoorman's et al. (1996) scale revealed a match between the items the researchers used and the trust definition we adopt. Based on what is mentioned above, we consider that Schoorman's et al. (1996) scale appropriate to be used in the current study.

Secondly, the trust scale developed by Hoy & Tschannen-Moran (2003) and referred to as the Omnibus T-Scale will be adopted too. The Hoy & Tschannen-Moran (2003) attempts to operationalize trust in a school setting resulted in the development of the Omnibus Trust Scale that can be used in both elementary and secondary schools. However, the Omnibus T-Scale empirically explored four referents of trust in schools: faculty trust in principal, faculty trust in colleagues, and faculty trust in clients (students and parents). Each of the three referents of faculty trust was measured by a sub-scale. As long as we are investigating trust between teachers and principals in a school setting, only the items related to the faculty trust in the principals will be adopted. Consequently, a sub scale of the Omnibus T-scale measure was chosen. This constitutes an eight-item scale that measure trust in principals working at schools. Trust was conceptualized as a concept with multiple facets (i.e., benevolent, reliable, competent, honest, and open."

([Hoy et al., 2003](#)). The Hoy and Moran items are considered as convenient to the current study context not only for the match between the items the researchers used and the trust definition that we adopt, but also for the match between Hoy's et al. context and the current study's context (i.e., trust between teachers and principal in a school setting).

Thirdly, the trust scale developed by Gillespie (2003) and referred to as the Behavioral Trust Inventory (BTI) was adopted too. The BTI has congruence with the most widely accepted definition of trust provided by Mayer et al. (1995). Also, there is a match between the items used by the BTI and the trust definitions we adopt for the current study. All the above mentioned reasons provide evidence that the BTI of Gillespie (2003) promises to be a useful tool that can be used in combination with the other measures to operationalize trust in the current study.

Finally, a modified five-point scale version of Ovaice (2001) trust instrument was adopted too. The relevance of trust definition used in Ovaice (2001) to the trust definition that is used in the current study is obvious. Ovaice (2001) definition of trust is multidimensional and the items used in Ovaice's scale captured the definition of trust we adopt in this thesis study. Moreover, the context in Ovaice's study totally fits the current study context. To demonstrate, Ovaice (2001) explored the relationship between national culture and interpersonal trust in work-place relationships. In their operationalization of interpersonal trust they defined trust as consisting of Reliability, Openness, Concern, and Competence. For these reasons we see that the items used by Ovaice (2001) as appropriate to be used for this thesis study in combination with other relevant scales mentioned earlier.

Apart from our operationalization of trust measure, the questionnaire will contain items that reflect Hofstede's four dimensions of culture namely: Collectivism; Power Distance; Uncertainty Avoidance; and Masculinity. However, before we arrive at our adopted scale that reflects Hofstede's cultural dimensions, it is very important to direct your attention to the fact that Hofstede's dimensions of culture cannot be applied to individuals. Consequently, we choose not to ask questions designed primarily by Hofstede (e.g., the Value Survey Module 2013: VSM 2013).

In order to operationalize Hofstede's four dimensions of culture namely: Collectivism; Power Distance; Uncertainty Avoidance; and Masculinity, we choose the Cultural Value Scale CVSCALE developed by Yoo et al. (2011) to measure Hofstede's cultural dimensions at the individual level.

Some of the items of the above-mentioned measures were eliminated due to irrelevancy for the constructs we study (i.e., Long term vs. short term orientation). To clarify, participants in our qualitative sample demonstrated the need to long term planning to gain future rewards, however, they do not mention trust as an ingredient to or outcome of this. Based on this, we concluded that there is no relationship between time orientation and trust from our qualitative analysis, therefore we don't consider the long vs. short term orientation dimension developed in Yoo et al. (2011) as part of our quantitative analysis and thereby all items related to it will be eliminated from our quantitative analysis. Other items from the above mentioned measures will also be eliminated due to redundancy (i.e., only one of the items is chosen among those having the same meaning). Some items will also be adjusted based on our knowledge of the context and the relationships in Palestine, and few items will be created to capture the indigenous meanings created by respondents from the qualitative sample interviews conducted earlier .

All scales were measured on five-point Likert-type scales (ranging from 1= 'Strongly Disagree' to 5 = 'Strongly Agree'), and respondents were asked to think of their direct manager and answer the questions with that particular manager in mind. It was thought that having the same scale for all questions would increase the uniformity of the overall questionnaire. (See Appendix-1. for a copy of this study questionnaire).

4. RESULTS

4.1. Characteristic of the Sample

Sample characteristics were sought in questions 50-57 in the questionnaire. The main characteristics of sample's members, of (276) teachers working in state secondary schools of the Gaza Strip are shown in (Table 7.1.) below. According to **Gender** the results showed that the females represent 68.8% of the sample where males represent 31.2% and the **Age** of the most of respondents are between 36-45 with percentage 46.7%, and 30.1% of them are between 25-35 years , while 8.7% of them are between 46-55 years (See Table 7.1. below).

According to **educational qualifications** 81.5% of respondents have Bachelor degree and 16.3% of them have Master degree, only 1.8% have PhD. According to their **position**, 94.6% are teachers, and 5.1% are supervisors. According to **work experience**, the analysis showed that 59.8% of the respondents have 10 – 19 years' experience, 19.2% have experience with more than 29 years, and 8.7% have 5 – 9 years' experience. (See Table 7.1. below).

The sample includes teachers and supervisor from different cities in Gaza Strip, 24.6% of respondents work in Middle Area, 15.9% in North Gaza, 14.9% are in East Khan Younis, 10.9% in Khan Younis, 13.4% in East Gaza, others are distributed in each of Rafah and West Gaza with a percentage of 10.1% for each of them.

Table 1.2. Characteristics of Samples' respondents

Variable	Classifications	Frequency	Percentage (%)
		N= 120	
Gender	Male	86	31.2%
	Female	190	68.8%
Total		276	100.0%
Age	Less than 25	2	0.7%
	25-35	83	30.1%
	36-45	129	46.7%
	46-55	56	20.3%
	55+ years old	6	2.2%
Total		276	100.0%
Position	Teacher	261	94.6%
	Supervisor	14	5.1%
	School Principle	1	0.4%
Total		276	100.0%
Educational Level	Bachelor degree	255	81.5%
	Master degree.	45	16.3%

	PhD degree	5	1.8%
	Other	1	0.4%
Total		276	100.0%
Years of experience	Less than 1 year	11	4.0%
	1 – 4 years	18	6.5%
	5 – 9 years	24	8.7%
	10 – 19 years	165	59.8%
	20 – 29 years	53	19.2%
	30 + years	5	1.8%
Total		276	100.0%
Location of School?	East Gaza	37	13.4%
	East KhanYounis	41	14.9%
	Khan Younis	30	10.9%
	Middle Area	68	24.6%
	North Gaza	44	15.9%
	Rafah	28	10.1%
	West Gaza	28	10.1%
Total		276	100.0%

4.2. Measure Validity & Reliability

Pearson correlation is conducted to check the correlation between main constructs. Results show that the different components indicating different traits are smaller than 0.90, which indicates discriminant validity between constructs measures.

Table 1.3. Correlation between main construct measures

	Collectivism	Power Dis.	Unc. Avo.	Masculi.	Trust	In-group Fav.
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Collectivism	1					
Power Dist.	.281	1				
Unce. Avo.	.283	.311	1			
Masculinity	.289	.345	.583	1		
Trust	.289	.280	.434	.443	1	

The reliability of the questionnaire was checked by calculating Cronbach's alpha for the three measures. Results show that the reliability coefficient is high for each construct, so it is considered acceptable for the current study.

Table 1.4. Reliability statistics of questionnaire's items

Measure	Cronbach's Alpha
Culture	0.818
Collectivism	0.754
Power Distance	0.613
Uncertainty Avoidance	0.844
Masculinity	0.684
Trust	0.953

4.3. Suitability for Factor Analysis

Before doing exploratory factor analysis, all the indicator variables for the Collectivism, Power Distance, Uncertainty Avoidance, Masculinity, Trust and In-group Favoritism constructs were checked to understand whether they were suitable for factor analysis or not. Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) was tested too for all indicator variables and results show that Bartlett's Test is significant. After determining the suitability of each construct for factor analysis, exploratory and confirmatory factor analysis of the construct measures were done.

Exploratory factor analysis of the culture measure (21 items; questions 1-21 in the questionnaire) was done using SPSS 19 and yielded four factor solutions. This four factor solution was then tested using SPSS AMOS 21 through confirmatory factor analysis. The results showed relatively good fit of the four-factor model to the data where the model's goodness-of-fit indexes were satisfactory (RMR= 0.04, GFI = 0.71, NFI = 0.74, CFI = 0.81, IFI= 0.80). Therefore these components of the Culture measure could be named as: Masculinity, Collectivism, Uncertainty Avoidance and , Power Distant respectively.

Then, exploratory factor analysis of the trust measure (22 items; questions 22-43 in the questionnaire) yielded three-factor solution. This three-factor solution was then tested using SPSS AMOS 21 through confirmatory factor analysis. The results showed relatively good fit of the three-factor model to the

data where the model's goodness-of-fit indexes were satisfactory (RMR= 0.74, GFI = 0.69, NFI = 0.78, CFI = 0.79, IFI= 0.77). A second factor analysis was run to test the fit of the data to a four factor model that incorporates four dimensions of trust. The results of this four factor model showed that a better fit of the three-factor model to the data (RMR= 0.81, GFI = 0.54, NFI = 0.62, CFI = 0.51, IFI= 0.51). Therefore, the ultimate components of the Trustmeasure could be named as: Competence, Fairness and Benevolence respectively.

Table 1.5. Factor loadings of culture measure

	Factor	Factor	Factor	Factor
	1	2	3	4
Culture_1		0.636		
Culture_2		0.653		
Culture_3		0.75		
Culture_4		0.743		
Culture_5		0.559		
Culture_6		0.575		
Culture_7				0.722
Culture_8				0.783
Culture_9				0.527
Culture_10				0.763
Culture_11				0.689
Culture_12			0.69	
Culture_13			0.714	
Culture_14			0.712	
Culture_15			0.764	
Culture_16			0.792	
Culture_17	0.684			
Culture_18	0.389			
Culture_19	0.255			
Culture_20	0.594			
Culture_21	0.405			

Extraction method: Principal component / Rotation method: Varimax

4.4. Hypotheses Testing

In this part firstly, the main effect of collectivism, power distance, uncertainty avoidance, and masculinity on trust is assessed, then the moderator effect of in-group favoritism in the relationship between collectivism and trust is sought. Finally, a further analysis is done to analyze the effect of collectivism, power distance, uncertainty avoidance, and masculinity on the components of Trust (i.e., competence trust, benevolent trust, and fairness trust). Moreover, further analysis was conducted to find out the moderating effect of in-group favoritism in the relationship between the other three dimensions of culture (i.e., power distance, uncertainty avoidance, and masculinity) on Trust.

4.4.1. Main Effect

The regression analysis of the relationship between national culture (i.e., collectivism, power distance, uncertainty avoidance, and masculinity) on trust was performed by using Statistical Package for Social Science (SPSS) version 19. Results indicate the following:

The first hypothesis sought a positive relationship between Collectivism and Trust and the expectation was a positive relationship between the two constructs. To test the first hypothesis, regression analysis is used, and results show that p-value < 0.05, which indicates that there is a positive relationship between collectivism as a cultural value and employees trust in their direct manager at work. Thus H1 is supported. (See table 1.6. below).

The second hypothesis suggests a negative relationship between Power Distance and Trust. To test hypothesis two, regression analysis is used, and results show that p-value <0.05, which indicates that there is a negative relationship between power distance as a cultural value and employees trust in their direct manager at work. Thus H2 is supported. (See table 1.7. below).

Hypothesis three suggests a positive relationship between Uncertainty Avoidance and Trust. To test hypothesis three, regression analysis is used, and results show that p-value <0.05, which indicates that there is a positive relationship between uncertainty avoidance as a cultural value and employees trust in their direct manager at work. Thus H3 is also supported. (See table 1.8. below).

Hypothesis four denotes a positive relationship between Masculinity and Trust. To test hypothesis four, regression analysis is used, and results show that p-value <0.05, which indicates that there is a positive relationship between Masculinity as a cultural value and employees trust in their direct manager at work. Thus H4 is also supported. (See table 1.9. below).

Table 1.6. Collectivism - trust Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		

1. (Constant)	57.903	4.178		13.857	.000
collectivism	.937	.189	.287	4.953	.000

Dependent Variable: Trust

Table 1.7. Power distance – trust Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	54.076	5.108		10.587	.000
Power distance	-1.402	.293	-.278	4.782	.000

a. Dependent Variable: Trust

Table 1.8. Uncertainty avoidance – trust Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	42.055	4.667		9.011	.000
Uncertainty Avoidance	1.726	.220	.429	7.855	.000

a. Dependent Variable: Trust

Table 1.9. Masculinity – trust Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	40.193	4.724		8.507	.000

Masculinity	2.024	.248	.442	8.155	.000
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a. Dependent Variable: Trust

5. DISCUSSION

In this study, the relationship between Hofstede's (1980) national cultural dimensions and trust were examined. The unit of analysis was the teacher-principal dyadic relationship. The results of this study are decomposed into qualitative and quantitative parts.

The qualitative findings of the study comply with the findings in the literature with respect to the fact that trust is composed of different components ([Schoorman et al. 1996](#); [Hoy & Tschannen-Moran 2003](#); [Gillespie 2003](#); [Ovaice 2001](#)). These findings revealed that in the context of schooling in Palestine, specifically in the relationship between teachers and principals at schools, trust between the two parties is composed of three components which conform to those reported in the literature: competence ([Schoorman et al. 1996](#); [Ovaice, 2001](#); [Gillespie 2003](#)), benevolence ([Schoorman et al. 1996](#); [Ovaice, 2001](#); [Hoy & Tschannen-Moran 2003](#) & [Gillespie 2003](#)), and fairness ([Schoorman et al. 1996](#); [Ovaice, 2001](#); [Hoy & Tschannen-Moran 2003](#); [Gillespie 2003](#)).

An interesting finding from our qualitative analysis is that in the context of schooling in Palestine, specifically in the relationship between teachers and principals at schools, the benevolent component of trust subsumes the openness component in the analysis. To demonstrate, our qualitative findings revealed that benevolence means two things. First it means that “one's well-being or something one cares about will be protected and not harmed by the trusted party” (e.g., [Mayer et. al. 1995](#); [Hoy & Tschannen-Moran 2003](#); & [Wasti et. el., 2007](#)). Second, benevolence also means confidence that the information shared will not be exploited. ([Hoy & Tschannen-Moran 2003](#); [Athos & Gabarro, 1978](#); [Hoy & Tschannen-Moran, 1999 etc.](#)). This finding is considered unique and is an important contribution to trust literature.

Results from quantitative analysis suggest the following components for the trust measure: competence, benevolence and fairness. Quantitative findings also revealed that the highest mean score for trust formation was in the benevolent component of trust followed by the competent component and the fairness component respectively. This finding indicates that in the teacher-principal dyadic relationship in Palestine, employees are placing more emphasis on the benevolent component of trust while rating the relationship. That is benevolent is likely the factor that employees pay attention to the most when determining how much trust they have in their direct managers. Therefore, it is beneficial for managers to focus on the benevolent practices in their interaction with their employees. This finding confirms arguments in the literature where researchers argued that in collectivist cultures they observed several incidents where benevolence was primarily in a relationship – a finding in line with [Ng et al. \(2006\)](#) and [Wasti et al. \(2011\)](#). In addition, this finding confirms arguments in the literature by [Şengün \(2010\)](#) and [Şengün and Önder \(2011\)](#) who investigated trust in collectivist cultures and their findings reveals that in collectivist societies and in the lack of strong legal systems, it is benevolent trust that counts the most in business exchanges. Their findings also revealed that in the prevalence of collectivist values, the perception of benevolent trust effectively initiates trust more than the perception of competence trust.

Besides identifying the components of trust, the current study contributes to the awareness of the importance of cultural dimensions for school managers in terms of teacher-manager interactions. For example, results draw managers' attention into the linkages between culture and trust which might help them to increase the quality of their annual plans in terms of teacher-principal interactions in the context of schools in Palestine. In addition, Quantitative results indicate that 24.5% of the variance in an individual's trust in their direct manager is explained by culture. These cultural effects appear to derive mainly from collectivism

followed by uncertainty avoidance and masculinity respectively, while the effect of power distance was not so overt.

To demonstrate, in the relationship between culture and trust, quantitative analysis provided support for the possible impact of culture on trust. First of all, results from our quantitative analysis find support for H1 which indicates that collectivism cultural dimension is found to be positively affecting interpersonal relationship by increasing trust significantly. This can be explained by the tightly knit social framework between teachers in the context of schools and a willingness to share problems with the ones they trust. This is purely collectivist and done only with the ones they trust. Also, teachers and principals working at secondary schools in Palestine demonstrate a willingness to take care of each other to solve problems. This reflects the high degree of interdependence between them and gives the feeling that they are complementing each other. This finding confirms with findings from the previous literature that proposes and confirms a positive relationship between collectivism and trust ([Doney et al., 1998](#); [Yamagishi et al., 1994](#); [Fukuyama, 1995](#) & [Huff and Kelley, 2003](#)).

Second, our quantitative analysis provided support for the negative impact of power distance on employee-manager trust. A good explanation for this finding is that teachers at secondary schools in Palestine demonstrate a keen awareness of the reality of power distribution at work. As a result, they identify the principal as occupying a higher position in the hierarchical social structure. As a result of this, they described in detail the hierarchal steps they take before they can reach to the manager (i.e., principal). For example, results from our qualitative analysis show that teachers prefer to control and overcome their work-related problems by themselves. If they fail to do so, they may refer to other employees around them (e.g., colleagues, educational guide etc.). Finally, if the problem is too complex and it is too hard to be solved, they may go to their direct managers by the end. Here, there is evidence of some hierarchy while solving problems which alludes to power distance. This finding confirms findings from the previous literature that propose/confirm a negative relationship between power distance and trust ([Doney et al., 1998](#); [Ji et al., 2015](#); [Islamoğlu et al., 2005](#)). However, findings from our quantitative analysis revealed that the negative impact of power distance is not so strong, it is only a mild impact (not so overt).

Third, results from our quantitative analysis provided support for a positive relationship between uncertainty avoidance and trust. A good explanation for this is that teachers show that the preferred style for them in dealing with uncertainty and conflict was very much like keeping away from it. This creates a relaxing atmosphere among them, as they believe that uncertainty experiences during schoolwork are harmful and should be minimized. As a result, they emphasize the need to feel secure and to talk freely without fear with the manager they have something confidential with. According to them, the higher the level of uncertainty, the higher the need to share information and trust. This justifies the positive relationship between the uncertainty avoidance dimension of culture and trust found in our quantitative analysis results. This finding also goes with findings from the previous literature that suggest a positive relationship between uncertainty avoidance and trust in the sense that uncertainty avoidance breeds trust ([Doney et al., 1998](#); e.g., [Hwang Yujong, 2009](#); & [Cook et al., 2005](#)).

Fourth, results from our quantitative analysis revealed a positive relationship between masculinity and trust. A good explanation for this result is the high level of masculinity demonstrated by the inequality between females and males. For example, teachers see that gender effects on one's ability to perform their work-related tasks well. For example, it is more difficult for female teachers to perform their work-related tasks well compared to male teachers because females have a very limited time due to their out of the job responsibilities (e.g., raising children, housework etc.). In addition, female teachers could not impose authority compared to male teachers which effects on their ability to perform as required. As a result of this, males are considered more capable and thereby more trustable compared to females. This justifies the positive relationship between the masculinity dimension of culture and trust found in our quantitative analysis results. This finding also confirms arguments from the previous literature that suggests a positive relationship between masculinity and trust ([Doney et al., 1998](#); [Schoorman et al., 2007](#)).

Fifth, results from our quantitative analysis revealed the existence of common cultural norms that Palestinian employees demonstrated preferences to work in groups and consequently more group oriented. Findings from this study also comply with arguments in the literature which indicate that collectivist cultures rely on group memberships for developing trust as individuals sacrifice self interest for the group where group welfare is more important than individual success ([Doney et al., 1998](#); [Hofstede et al., 1984](#)) and that the perception of in-group-out-group biases between individuals influences the formation of trust between them and thereby at the core of trust foundation process ([Yamagishi et al., 1994](#); [Yamagishi, 1998a,b](#); [Fukuyama, 1995](#); [Triandis et al., 1988](#); [Yamagishi et al., 1994](#); [Huff et al., 2003](#)).

In view of the above discussion, it can be concluded that results from our quantitative analysis of the dyadic relationship between teachers and school principals in the State Secondary Schools in Palestine provide support for the main hypotheses outlined above. Also, findings from this study are in accordance with most of the existing theoretical views on the relationship between national cultural dimensions and trust.

Results from our qualitative analysis revealed that in the context of a school in Palestine, there is a strong reliance on experts and expertise. For example, principals seek to mitigate uncertainty by establishing trust based on evidence of a targets' expertise, ability, or competence. These findings confirm the arguments found in the literature that people with high uncertainty avoidance seek to mitigate uncertainty and be likely to establish trust based on evidence of a target's expertise, ability, or competence ([Doney et al., 1998](#)). Thirdly, results from our quantitative analysis revealed that the fairness component of trust has a significant effect on the uncertainty avoidance dimension of culture. A good justification for this finding, based on my eleven years of experience as an English teacher is that school principals in their assessment of their employees at work try to mitigate uncertainty by engaging in highly standardized assessment procedures that is fair enough to avoid the fearful consequences. For example, if an employee expresses his/her dissatisfaction about the assessment process by complaining to an upper authority, an investigation by the area head-officer may take place. As such, school principals are very cautious in this regard and thereby engage in a fair assessment process for all.

Our quantitative analysis also revealed that the competence component of trust is significantly related to the masculinity dimension of culture. Schoorman et al., (2007) provided some propositions in the relationship between masculinity and the ability component of trust, and findings from the current study give support to their proposition that in masculine cultures, the assessment of an individuals' trust in his direct manager at work is evaluated based on an assessment of the manager's ability ([Schoorman et al., 2007](#); [Hallikainen et al., 2018](#)).

In addition, Doney et al. provided some propositions in the relationship between masculinity and trust. To demonstrate, they proposed that "In masculine cultures, trust is more likely to form through calculative – (i.e. based on the cost versus rewards of a target acting in an untrustworthy manner) and capability – (i.e. based on the assessment of the target's ability) processes". And findings from the current study give support to their proposition that in masculine cultures, trust is more likely to form via capability processes. That is the assessment of an individuals' trust in his direct manager at work is evaluated based on an assessment of the manager's ability ([Schoorman et al., 2007](#); [Hallikainen et al., 2018](#); [Doney et al., 1998](#)).

5.1. Generalizability of the Findings

The results of the study should be approached cautiously with respect to generalization to other research contexts. The fact that the study was done in a single case study context of a single country, brings about the usual reservations about the generalizability of the findings.

Also, the current study is limited to study the relationships between the variables in a specific regional area: the "Gaza Strip" only. One difficulty that we faced in the current study is manifested in the

absence of statehood and the separation between Palestinian territories (e.g., Gaza and West Bank). The limitation is that travelling between Gaza and West Bank is limited due to the recurring denial of access from Gaza to the West Bank and vice versa which is often rejected by Israeli authorities. This geographical separation is a big obstacle in collecting data and affects on the generalization to other research contexts.

5.2. Implications for Managers / Practitioners

This study has important implications for both managers and practitioners in the educational institutions in general and in the contexts of schools in Palestine in particular. Based on qualitative results, trust was found to be comprised of three distinct components of trust. These are: competence trust, benevolence trust and fairness trust. These findings provide insights for managers into examined attributes that have the power to explain how to foster trust between individuals and employees in the context of schooling in Palestine.

To demonstrate, trust has long been proven as context specific ([Kramer, 1999](#)). Therefore, it is the responsibility for managers to initiate and to breed trust between individuals working at organizations. For example, managers need to consider re-assessing the way they forge relationships with their subordinates. First of all, they need to continually develop their own knowledge, skills, and competences and foster that continuous learning and development with their work force exist. Second, manager need to encourage a dialogue within workplace around trust issues by simply showing employees that they "care" about their workplace relationships that tend to enhance more opportunities for building trust. Third, managers need to work towards fostering an open culture within their work setting through sharing information, maintaining an open and approachable rapport with all (i.e. peers, managers, and subordinates) which will more likely foster mutual trust. Fourth, managers need to understand that fairness in assessment is key for trust to exist.

Thus, based on all above, we argue that the leadership practices matter for building trust and thereby it is the responsibility of management to foster trust. Moreover, findings from this study give insight to school managers into the importance of culture in their interaction with employees at work setting. As such, managers should learn the cultural values for progression in the context of a school. In addition, findings from this study help to inform managers about the nature of culture-trust interchange. Considering these findings, managers are advised to adapt to changes in the society by developing adaptive capacities to follow those cultural values.

Similarly, understanding the linkages between culture and trust in schools is considered important because this will hopefully lead to better communication between employees and managers and will benefit schools in decision-making process. For example, understanding the impact of culture on trust between teachers and principals at schools may help managers in educational institutions to draw conclusions, based on the results of this study, in the linkages between national culture and trust. This may hopefully lead to a high level of trust to exist between teachers and school principals which may result in a higher quality of education and overall improvements at schools.

Practically speaking, Palestinian managers should be aware of the role that power distance plays in their interaction with their employees. Therefore, to foster employee-manager trust in the context of schooling in Palestine, Palestinian managers should mitigate this power distance cultural gap between them and their employees. This can be done by developing benevolent practices and creating a safe platform for all employees to share their problems, ideas and hidden conflict ([Yin et al., 2018](#)). By following those cultural values, they can develop adaptive capacities to act out accordingly. For example, the negative effect of power distance on trust may be mitigated by evaluating, for example, how individual practices mitigate this power via the benevolent practices and the perception of an individual's ability.

This study may also give insights to the major question of what can Palestinian managers do to overcome a cultural tendency to distrust outsiders? Finally, the results might be useful for the ministry of

education in Palestine to better predict the culture-trust intertwining that may be of help in putting their annual strategies for education in Palestine.

Based on all above, trust is foundational to relationship building and managers who understand the dimensions of trust especially how they relate to culture will then be able to better serve their employees. As such we argue that it is important for managers to understand the culture of their societies and the nature of the connection between culture and trust. At the same vein, it is important for managers to understand how trust is developed in the mindset of employees with whom they are interacting.

5.3. Limitations and Implications for Future Research

While this study provides important contributions to literature linking national culture to trust, future research is needed to fully understand different impact of the findings of culture on trust across cultures. The fact that the study was done in a single case study context of a single country, brings about the usual reservations about the generalizability. Further studies should be conducted in other contexts and organizational settings before broad generalizations can be made.

Moreover, given that understanding the effect of individual personality and organizational culture on the formation of trust are not included as part of this current study, further studies are needed to understand the interplay between national culture and these variables and how they influence the formation of trust in organizations ([Doney et al., 1998](#)). Further research should also explore the impact of the different components of trust on national culture in other academic disciplines and professions. This is needed for a better interpretive analysis between these variables

In addition, levels of trust may vary across the same culture whether collectivist or individualist. More research should study the different variations of collectivism and individualism, and then determine how they would influence trust for organizations ([Huff et al., 2003](#)).

Also, this current study is limited to understand the relationship between culture and trust at the individual level. Scholars are encouraged to conduct further multi-level studies to understand this relationship at other levels of analysis (i.e., group and organizational levels).

Another avenue for future research maybe directing scholars' attention to include more than four of cultural dimensions in one model to understand culture-trust relationship. This research is limited to study the impact of four of Hofstede's cultural dimensions on trust. Further studies are needed to measure other cultural dimensions in one model to provide a more holistic picture of the phenomena.

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Appendix 1 (Questionnaire Items)

A. Collectivism (6 items, Cronbach's alpha = 0.754)

1. Individuals should sacrifice self-interest for the group.
2. Individuals should only pursue their goals after considering the welfare of the group.
3. Group loyalty should be encouraged even if individual goals suffer.
4. Individuals should stick with the group even through difficulties.
5. Group welfare is more important than individual rewards.
6. Group success is more important than individual success.

B. Power Distance (5 items, Cronbach's alpha = 0.613)

1. People in lower positions should participate with people in higher positions in most decisions.
2. People in lower positions are willing to share work-related problems with people in higher positions too frequently.
3. People in higher position should encourage social interaction with people in lower positions.
4. People in lower positions should not disagree with decisions by people in higher positions.
5. People in higher positions should not delegate important tasks to people in lower positions.

C. Uncertainty Avoidance (5 items, Cronbach's alpha = 0.844)

1. It is important to have instructions spelled out in detail so that I always know what I'm expected to do.

2. It is important to closely follow instructions and procedures.
3. Rules and regulations are important because they inform me of what is expected of me.
4. Standardized work procedures are helpful.
5. Instructions for operations are important to get the work done.

D. Masculinity (5 items, Cronbach's alpha = 0.684)

1. Men and women have an equal right to have a professional career.
2. Men usually solve problems with logical analysis.
3. Women usually solve problems with intuition.
4. Solving difficult problems usually requires an active, forcible approach.
5. Men and women perform their tasks equally well in professions.

E. Trust (22 items, Cronbach's alpha = 0.953)

1. My principal is very capable of performing his/her job.
2. My principal is known to be successful at the things he/she tries to do.
3. My principal has specialized capabilities that can increase our performance.
4. I'm willing to rely on my principal's task –related skills and abilities.
5. The principal in this school is competent in doing his or her job.
6. I trust that my principal can help solve important problems in our organization.
7. I trust that my principal can help our organization succeed in the next decade.
8. My needs and desires are very important to my principal.
9. My principal would not knowingly do anything to hurt me.
10. My principal will go out of his/her way to help me.
11. I'm willing to share my personal feeling with my principal.
12. I'm willing to discuss how I honestly feel about my work, even negative feelings and frustrations.
13. I'm willing to share my personal beliefs with my principal.
14. The principal in this school typically acts in the best needs of the teachers.
15. I trust that my principal places our school's interest above his/her own concern.
16. I trust that my principal expresses his/her true feelings about important issues.
17. I trust that my principal cares about the future of our school.

18. My principal has a strong sense of justice.
19. I trust that my principal treats us equally.
20. The teachers in this school have faith in the fairness of the principle.
21. I'm willing to depend on the fairness of my principal at this school.
22. I like fairness as principal's value.

AN APPLICATION ON FINANCE DATA FOR CRITICAL LIMITS OF ASSUMPTIONS IN COUNT DATA

Ali İhsan ÇETİN ^{a*}

^aBusiness School, Ankara Yıldırım Beyazıt University, Ankara, Turkey

Abstract

Regression analysis is used to analyze many cases in real life. The type of data obtained varies according to the type of cases and the variable to be studied. For example, in the most widely used linear regression analysis, the dependent variable must be continuous. Otherwise, the desired results will have a high standard error and will be inconsistent. Alternative regression techniques have been developed according to the types of dependent variable. Two of them are Poisson and Negative Binomial Regression, which are frequently used in case of discrete dependent variables. However, the fact that the dependent variable is discrete does not mean that correct results will be obtained by applying the aforementioned models. Because besides the type of dependent variable, the parameters of the relevant models have been developed and various sub-models have emerged according to its distribution and spread. In this study, a data set containing real data such as HDI, GDP and credit score, which has an crucially important place in the field of finance, was used and the results were compared and interpreted using AIC, RMSE and MAE metrics by applying Poisson, Negative Binomial Regression and their zero-truncated models according to the characteristics of the data set. The empirical results can be interpreted as the negative binomial regression model gives better results when the dependent variable has insufficient distribution, but Poisson regression produces more meaningful results when the assumptions are at the limit. In addition, it was examined whether the number of zeros in the data set is sufficient to go to the Zero Truncated models. As a result, it has been revealed that the Negative Binomial distribution cannot always be used in cases where analysis will be made with Poisson regression, even though there is over- or under-distribution according to the assumptions.

Keyword

Count Data, Poisson,
Negative Binomial,
Zero Truncated,
Finance

*Corresponding author.

Contact: Ali İhsan Çetin  aliihsancetin@aybu.edu.tr

To cite this article: Çetin, A. İ., (2023). An Application On Finance Data For Critical Limits Of Assumptions In Count Data. *AYBU Business Journal*, 3(1), 86-103.



1. INTRODUCTION

Regression analysis is a statistical analysis method that has been used and studied for a long time, thanks to its consistency and easy interpretability. With the increase in the importance of data, the increase in access to information and data all over the sectors in the world, statistical analysis techniques, which have become more valuable due to the competitive environment, have started to be used with advanced estimators or reinterpreted with high-developed parameters. Others are being replaced by machine learning models that are more suitable for the real world and do not require assumptions.

Classical linear regression analysis focuses on establishing a connection between the target variable and the features and revealing the properties of this connection. Here, the structure of the target variable is vital for choosing the right regression analysis. Because it is inevitable to obtain inconsistent, biased, ineffective and high standard error results as a result of wrong model selection, and there are many assumptions such as normality, homoscedasticity, multicollinearity and linearity that can hinder the analysis in classical linear regression analysis. Looking at real-life data, the most common type of response variable is the continuous variable. However, a lot of work has been done on data sets with discrete response variable. There are also target variables of the count data type, which is a subtype of the discrete type. Count data regression models can produce convincing results when the response variable is the number of times a case occurs. Some alternative models based on poisson and negative binomial distributions, which are more suitable for count data, have been proposed.

Poisson regression (PR) and negative binomial regression (NBR) models are used in many fields such as management and organization, traffic, biology, finance, medicine, actuarial. However, even if the case of interest never happened, some problems occurred in the use of the regression methods in question and the desired consistent results could not be produced. The reason for this situation is that there is overdispersion in the data due to the large number of zeros and the variance grows. In such a case, classical PR and NBR models may not be sufficient for count data modeling. As an alternative, zero-truncated methods have been developed for this purpose. Zero-Truncated Poisson Regression (ZPR) and Zero-Truncated Negative Binomial Regression (ZNBR) have been proposed to deal with this problem in the presence of extreme zeros.

2. LITERATURE REVIEW

One of the most useful and easy methods in the analysis of count data is the Poisson Regression model, which is one of the generalized linear models. While constructing the Poisson regression model, the poisson distribution is used to determine the probabilities of the data. One of the important features of the distribution in question is that the mean of the result obtained is equal to its variance. However, it is observed that the variance exceeds the mean in the applications performed in general. This situation is defined as overdispersion. In these cases, negative binomial regression models work. ([Kabacoff, 2015](#)). The most important

difference between the classical regression model and the poisson regression model is that in the poisson distribution created for the dependent variable in the poisson regression model, the values consist of non-negative data. However, it fits a discrete distribution.

Graff et al. (2020), created two different poisson regression models to predict the effectiveness of forest fires between one and five days. It has been observed that the created regression models give more accurate results than permanent models in predicting fires.

Gao et al. (2021), in the study titled "Dispersion modeling of outstanding claims with double Poisson regression models", it is aimed to develop a new distribution structure in the double Poisson chain ladder model by ignoring the existing limitations of the extremely dispersed Poisson chain-ladder models, which are frequently used for compensation provisions in insurance. It is concluded that the proposed method is much more flexible than the currently used methods.

Benz et al. (2021), in the study titled "Estimating the change in soccer's home advantage during the Covid-19 pandemic using bivariate Poisson regression", it was investigated how the matches played without fans affect the home team in an environment where the home team has a great advantage in the matches played with spectators. For this purpose, bivariate Poisson regression models were used by taking data from 17 different leagues. As a result of the research, it is seen that the findings are mixed, the advantage disappears in some leagues, and the advantage increases in others.

In the study titled "Households' Access to Communication and Information Technologies: A Poisson Regression Analysis" prepared by Ercan (2021), it is aimed to investigate the factors that will affect the number of information and communication technology tools in households with the Poisson regression model. In the study, it was concluded that factors such as the city of residence, the difficulty of accessing schools, income status, and the number of students affect the number of technological devices.

Vicuña et al. (2021), in the study titled "Forecasting the 2020 COVID-19 Epidemic: A Multivariate Quasi-Poisson Regression to Model the Evolution of New Cases in Chile", it is aimed to analyze the situation of Covid-19 in Chile, to prevent its spread and to analyze the alternative ways that may be necessary in order to pass the process with the least possible damage. According to the results, the spread of the disease was expected to be higher, but contrary to expectations, it was seen that the rate of spread decreased in the future thanks to the quarantine policies implemented in the country.

İşçi et al. (2021), in the study titled "Comparison of Some Count Models in Case of Excessive Zeros: An Application", it was stated that multi-zero poisson regression and poisson hurdle regression models were used in case the census data had multiple zeros, and negative binomial regression and negative binomial hurdle regression models were used in case of overdispersion. Comparisons of these models were made using a sample data set.

Models except the classical models should be considered as powerful alternatives for modelling count and give better insights to the researchers in applying statistics on working similar data structures Yıldırım et al. (2022).

There are cases where the dependent variable is discrete but not categorical. Such situations

are called count data. Count data is among the generalized linear models in practice. There are many models that give precise properties of counting results. However, the Poisson regression is considered the starting point for many analyzes. The Poisson regression model is the most commonly used and simplest method for counting data. In the Poisson regression model, the link function connecting the linear structure of the independent variables to the expected value of the dependent variable is logarithmic. With this model, the probability of counting is determined by the Poisson distribution. The most distinctive feature of the model is that the conditional mean of the result is equal to the conditional variance ([Deniz, 2005](#)). However, in practice, sometimes the conditional variance may exceed the conditional mean.

In the Poisson distribution, when the variance is greater than the mean, it is called overdispersion, and when the variance is less than the mean, it is called underdispersion ([Cox, 1983](#)). In the case of overdispersion in the dependent variable, two paths are generally followed. The first is by estimating a propagation parameter (α) with it the test statistics and correcting for the residuals. The second is the application of the negative binomial regression model, which is one of the methods that eliminates the effect of overdispersion ([Hilbe 2007](#)). In practice, we see that the negative binomial regression model is widely used, while the generalized Poisson regression model and the Poisson quasi-Lindley regression model are also used. In the data set, the goodness-of-fit statistic of deviance is widely used to determine whether there is overdispersion.

Count regression models have been used in many fields from past to present. King ([1988](#)) analyzed the party change behavior of members of the House of Representatives in the United States between 1802 and 1876. The number of members of the House of Representatives who changed parties in a year was used as the independent variable.

Michener and Tighe ([1992](#)) examined fatal accidents on highways in the United States.

Using the Poisson regression model, Khalat et al. ([1997](#)) the differences in fertility levels in Beirut during the war, Burg et al. ([1998](#)) examined the rise of male and female academics in the academic labor market.

Şahin ([2002](#)) applied Poisson regression for the determinants of strikes in Turkey for the 1964-1998 period and Arısoy and Yaprak ([2016](#)) for the 1984-2015 period. Memiş and Önder (2018) compared artificial data with Poisson regression estimation methods.

Data obtained by count generally do not show normal distribution and have a structure starting from 0 and consisting of positive values ([Zorn, 1996](#); [Cameron & Trivedi, 1998](#)).

Since the dependent variable obtained based on the count does not show a normal distribution, applying linear regression to this type of data causes some statistical problems. The application of linear regression methods to such data may result in biased parameter estimates. The use of methods that do not destroy the original structure of the data eliminates this problem. The dependent variable obtained by count shows the Poisson distribution and Poisson regression is used in its modeling ([Ridout et al., 1998](#)).

The most basic feature of the Poisson distribution is that the variance and the mean are equal. In practice, this feature is not always possible ([Frome, 1983](#); [Rose et al., 2006](#)). When this equality is not achieved, there are two situations. These; If the variance is greater than the

mean, it is called overdispersion, and if the variance is less than the mean, it is called underdispersion ([Banik & Kibria, 2008](#); [Jansakul & Hinde, 2009](#)).

There may be various causes of overspread. Some of these are many zero values or unobserved heterogeneity ([Rose et al., 2006](#)).

In case of overdispersion, applying Poisson regression leads to biased parameter estimates ([Cox, 1983](#)). To avoid this and to obtain more accurate results, negative binomial (Negative Binomial = NB) or generalized Poisson (Generalized Poisson = GP) regression is used ([Sileshi, 2008](#)).

While NB takes into account overdispersion, GP is an alternative method to Poisson regression that considers over- and under-dispersion. The existence of zero values in the dependent variable and the intensity of these zero values should be taken into account when modeling the dependent variable. If there is more zero density than expected in the dataset, this is called zero value weight (Zero Inflation=ZI) ([Lachenbruch, 2002](#)). In this case, it is recommended to use zero value-weighted regression models for modeling such dependent variables ([Khoshgoftaar et al., 2005](#)). In this case, the methods that can be used are zero-weighted Poisson (Zero Inflated Poisson=ZIP), zero-weighted negative binomial (Zero Inflated Negative Binomial=ZINB) and Hurdle models ([Cameron and Trivedi, 1998](#); [Hall, 2000](#); [Minami et al., 2007](#)).

In this study, Poisson regression, which is frequently preferred in cases where the dependent variable consists of count data, and negative binomial regression models, which are a generalization of Poisson models, and zero-truncated types of these models were applied. It has been tried to be explained in detail with an example set. Human Development Index and Credit Scoring, which are important macro indicators frequently used in finance, were included in the study as independent variables, and Gross Domestic Product as dependent variables. Model analyzes were made with the open-source Python program. AIC, RMSE, and MAE values for all models were obtained and interpreted.

3. MATERIAL AND METHOD

3.1. Poisson Distribution and Regression Model

The Poisson distribution models the dependent count variable y with the formula ([Field, 2009](#)):

$$P((Y = y|\mu) = \frac{e^{-\mu} \mu^y}{y!} \quad (3.2)$$

where μ is the mean of the distribution and y is the counting variable expressing the

frequency or rate desired to occur ($\mu > 0, y = 0, 1, 2, \dots$). In log-linear versions of the model, the mean is shown as:

$$\mu_i = \exp(\mathbf{x}_i' \boldsymbol{\beta}_j) \tag{3.2}$$

$$= \exp(x_{1i}\beta_1)\exp(x_{2i}\beta_2) \cdots \exp(x_{ki}\beta_k) \tag{2.3}$$

As can be seen from Eq. (3.3), in Poisson regression, models are created with the assumption that μ parameter is determined by a series of x_i variables. Hence, the μ parameter can be represented as an exponential mean function:

$$E(y_i/x_i) = \mu_i = e^{x_i\beta_j} \tag{3.4}$$

$$\mu_i = \exp(\beta_1x_1 + \beta_2x_2 + \cdots + \beta_kx_k) \tag{3.5}$$

$$\mu_i = \mu(\mathbf{x}_i' \boldsymbol{\beta}) \tag{3.6}$$

Here, the regression coefficients $\beta_1, \beta_2, \dots, \beta_k$ are unknown parameters to be estimated using the data set. If the natural logarithm of Eq. (3.2) is taken, a linear shape of the conditional mean according to the x_i variables is obtained. Although the dependent variable is a discrete random variable, Poisson regression models are nonlinear models due to their functional form as can be seen in Eq. (3.4).

Regression coefficients are estimated using the maximum likelihood method. The logarithm of the likelihood function is (Field, 2009):

$$\ln[L(\mathbf{y}, \boldsymbol{\beta})] = \sum_{i=1}^n y_i \ln[\mu(\mathbf{x}'\boldsymbol{\beta})] - \sum_{i=1}^n \mu(\mathbf{x}'\boldsymbol{\beta}) - \sum_{i=1}^n \ln(y_i!) \tag{3.7}$$

With the solution obtained by taking the differential of Eq. (3.7) with respect to the $\boldsymbol{\beta}$ parameter, the Poisson maximum likelihood estimators $\hat{\boldsymbol{\beta}}_i$ are calculated using the following equation:

$$\sum_{i=1}^n (y_i - \exp(\mathbf{x}'\boldsymbol{\beta}))x_i = 0 \tag{3.8}$$

Likelihood equations are created by taking derivatives according to each regression coefficient and equating the result to zero. Doing so leads to the emergence of a set of nonlinear equations that accept no closed form solution. For this reason, iterative algorithms such as Newton-Raphson are used to find regression coefficients that maximize likelihood. It is seen that Fisher iteration method is used frequently in the literature.

One of the consequences of not finding an analytical solution for $\hat{\boldsymbol{\beta}}$ is the difficulty of obtaining exact distribution results for $\hat{\boldsymbol{\beta}}$ estimators. There are several ways to infer for $\hat{\boldsymbol{\beta}}$. First,

consider $\hat{\beta}$ as the estimator that maximizes Eq. (3.7) and maximum likelihood theory should be applied. Second, the estimator $\hat{\beta}$ must be considered as defined by Eq. (3.8). These equations have a similar interpretation to Ordinary Least Squares (OLS) estimators. Therefore, the unweighted residuals $(y_i - \mu_i)$ are orthogonal to the estimators. Therefore, as for OLS, it is possible to perform the inference only under assumptions about the mean and possibly variance. This is a generalized linear models approach. Third, since Eq. (3.6) implies the equation $E(y_i - \exp(\mathbf{x}'\beta))x_i = 0$, an estimator can be defined that is the solution of the moment condition in the sample. This estimator is also the solution of Eq. (3.8). This approach is the moment-based models approach (Cameron and Trivedi, 2013:23).

3.2. Negative Binomial Regression Model

The Poisson regression model is used when the mean of the distribution is equal to its variance. However, this situation is rarely encountered in practice. Negative Binomial regression model is used, which ensures the efficiency of parameter estimations, as a result of overdispersion when the variance of the distribution is greater than the mean of the distribution (Agresti, 2007: 81). Counting variables in applications do not show normal distribution, as they usually have variance greater or less than the mean. In such cases, Negative Binomial regression should be applied instead of Poisson regression model or test statistics and residuals should be corrected with the spread parameter. Negative Binomial regression is a generalization of Poisson's regression, in which the variance is equal to the mean calculated by the Poisson model, loosening the constraining assumption. This model is based on a Poisson-Gamma mixed distribution. For the Negative Binomial model, the variance is given by Eq. (3.9).

$$r_s = 1 - \frac{6 \sum_{i=0}^n d_i^2}{n(n^2-1)} \quad (3.9)$$

According to this model, the Negative Binomial regression model is expressed as in Eq. (3.10).

$$\text{Var}(y_i|x_i) = \lambda_i + \alpha \lambda_i^2 \quad (3.10)$$

In this model, $\beta_1, \beta_2, \dots, \beta_k$ represent unknown parameters.

$$\lambda_i = \exp(\ln(t_i)\beta_{1i}x_{1i} + \beta_{2i}x_{2i}, \dots, \beta_{ki}x_{ki}) \quad (3.11)$$

3.3. Akaike Information Criterion

The criterion proposed by Akaike and widely used in comparing different models is defined as the Akaike information criterion. Akaike information criterion is expressed as;

$$AIC = 2k - 2\ln(L) \tag{3.12}$$

In this equation, L is the maximum value of the log likelihood function; k represents the number of explanatory variables. Among the existing models, the model with the smallest AIC value calculated by Eq. (3.12) is selected as the appropriate model (Akaike, 1973).

4. FINDINGS AND DISCUSSION

In this study, it is aimed to examine the factors affecting the 2011-2020 volatility of GDP through counting models. In the study, the data set was obtained by taking the GDP average of the years in question and counting the years that were 10% below and above the average. As the attributes affecting this variable, the scores given to the countries by the Fitch Credit Rating Agency in the same years and the human development index (HDI) of the countries were used. While creating the dataset, 10 data of 90 countries between the years 2011-2020 were used for this purpose. AIC, RMSE and MAE metrics of Poisson Regression, Negative Binomial Regression, Zero Truncated Poisson Regression and Zero Truncated Negative Binomial Regression models were compared. Generalized linear models were used in Poisson and Negative Binomial Regression analysis.

Fitch Credit Rating denotes credit scores in letters. Credit scores have numerical equivalents in the literature (Genc and Basar, 2019). In Table 1, their equivalents transformed to numerical data are given.

Table 1. Credit Scoring Transformation Table

Credit Ratings					
TE	S&P	Moody's	Fitch	DBRS	Description
100	AAA	Aaa	AAA	AAA	Prime
95	AA+	Aa1	AA+	AA (high)	High grade
90	AA	Aa2	AA	AA	
85	AA-	Aa3	AA-	AA (low)	

80	A+	A1	A+	A (high)	Upper medium grade
75	A	A2	A	A	
70	A-	A3	A-	A (low)	
65	BBB+	Baa1	BBB+	BBB (high)	Lower medium grade
60	BBB	Baa2	BBB	BBB	
55	BBB-	Baa3	BBB-	BBB (low)	
50	BB+	Ba1	BB+	BB (high)	Non-investment grade
45	BB	Ba2	BB	BB	speculative
40	BB-	Ba3	BB-	BB (low)	
35	B+	B1	B+	B (high)	Highly speculative
30	B	B2	B	B	
25	B-	B3	B-	B (low)	
20	CCC+	Caa1	CCC	CCC (high)	Substantial risks
15	CCC	Caa2		CCC	Extremely speculative
10	CCC-	Caa3		CCC (low)	In default with little
5	CC	Ca		CC	prospect for recovery
5	C	C		C	
0	D	/	DDD	D	In default
		/	DD		
			D		
			RD		
			WD		

The histogram graph of the GDP deviation numbers, which is the dependent variable, is given in the Figure 1.

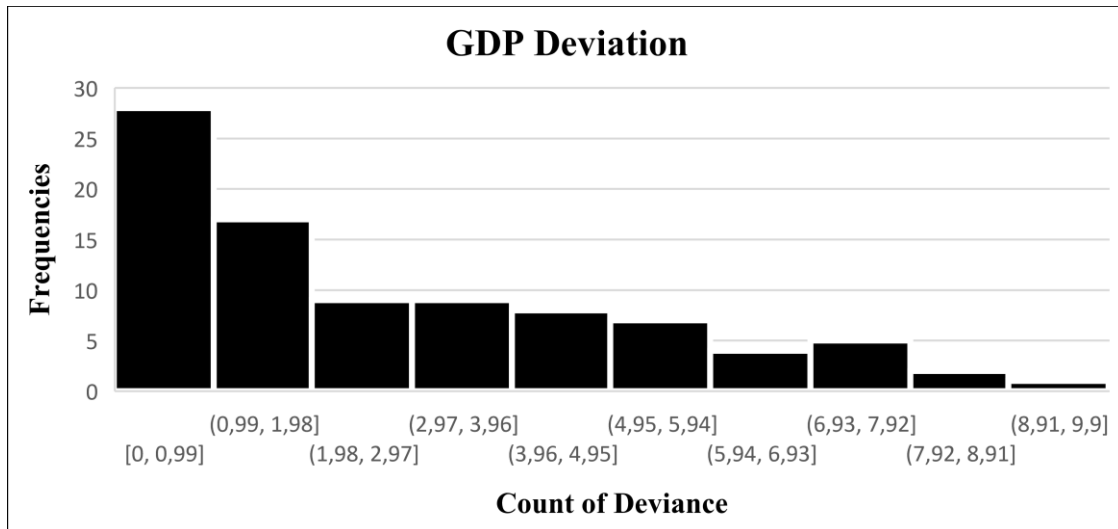


Figure 1. Count of Deviance Frequencies

Frequencies, Relative Frequencies and Poisson probability values for GDP deviation are given in the Table 2.

Table 2. GDP Deviance Frequencies Values

GDP Deviation $X=x$	Frequency f_x	xf_x	Relative Frequency f_x/n	λ =Weighted Mean	Poisson Probability
0	28	0	0.31	2.37	0.094
1	17	17	0.19	2.37	0.222
2	9	18	0.10	2.37	0.263
3	9	27	0.10	2.37	0.207
4	8	32	0.09	2.37	0.123
5	7	35	0.08	2.37	0.058
6	4	24	0.04	2.37	0.023
7	5	35	0.06	2.37	0.008
8	2	16	0.02	2.37	0.002
9	1	9	0.01	2.37	0.001
Toplam	90	213	1.000		0.99982

One of the variables affecting the GDP deviation is the credit score variable. Figure 2 shows the average credit scores for each category of GDP deviations of 90 countries between 2011 and 2020.

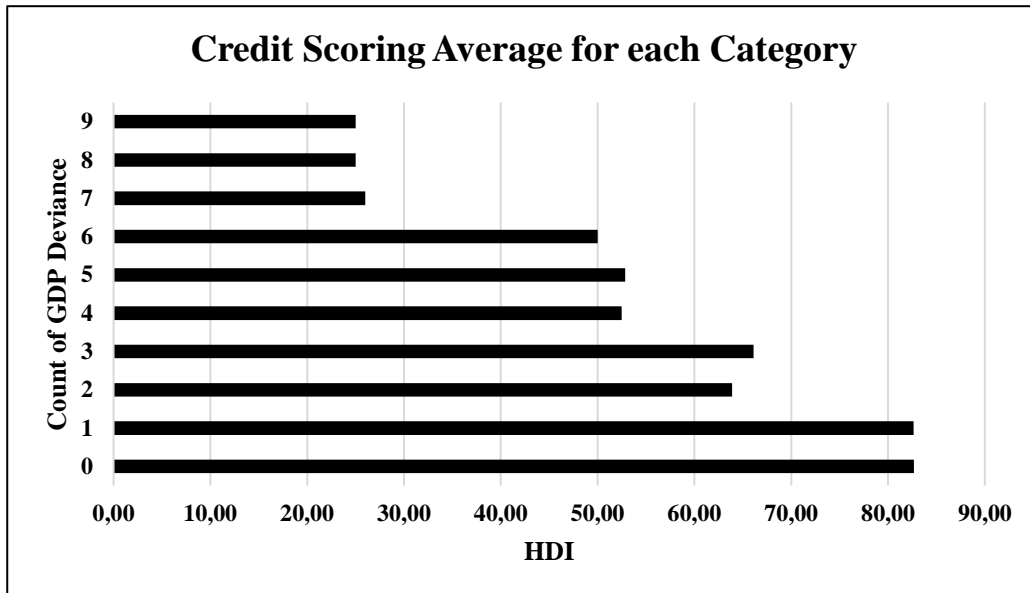


Figure 2. Average Credit Scores for each Category of GDP Deviations

The other variable affecting the GDP deviation is the Human Development Index variable. Figure 3 shows the average HDI for each category of GDP deviations of 90 countries between 2011 and 2020.

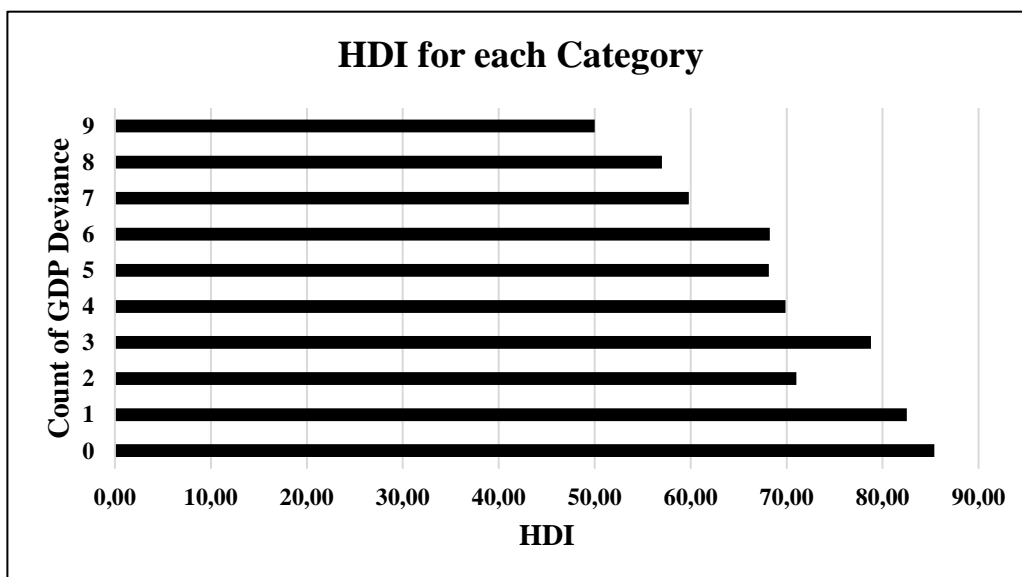


Figure 3. Average HDI for each Category of GDP Deviations

Table 3. Descriptive Statistics

	Count of GDP Deviance	Human Development Index	Credit Score
count	90.00	90.00	90.00
mean	2.36	77.32	68.44
std	2.44	13.42	23.29
min	0.00	50.00	20.00
25%	0.00	66.00	50.00
50%	1.50	79.50	75.00
75%	4.00	90.00	88.75
max	9.00	95.00	100.00

Although the mean of the dependent variable for the data used in the study is smaller than the variance, since the difference is very small, the difference can be neglected and the analysis can be continued with the assumption of equality. In this case, it is expected that the metrics of Poisson distribution will give better results in the Negative Binomial distribution as explained above. ($2.36 \leq 2.44$). The reason for this situation is the absence of underdispersion or overdispersion in the data. In addition, although the number of zero values is higher than the other values, it is not known whether it requires the use of zero truncated models due to the low difference. For this reason, the analysis was performed with zero-truncated models of the poisson and negative binomial, and the results are given in Table 4.

Table 4. Comparison of Model Metrics

	POISSON	NEGATIVE BINOMIAL	ZIP	ZINB
AIC	288.49	290.83	304.39	299.53
RMSE	1.69	1.76	1.56	2.14
MAE	1.17	1.21	1.07	1.30

As can be seen in the Table 4, Poisson and Negative Binomial Regression according to the AIC criterion are the most suitable models for this data set. On the other hand, when looking at RMSE and MAE, models with low error are Poisson and Zero Truncated Poisson. So, there is no case of under- or over-dispersion in the data because the metrics of the Negative Binomial

Regression model were high. Therefore, if the mean and variance are very close to each other, the analysis can be continued without any dispersion problem and equality. Also, the Zero Truncated models do not give high accuracy predictions based on the results of the AIC measurement metric. This situation can be interpreted as follows; The number of zeros in the data set in the study is not large enough to require the application of Zero Truncated models.

In Figure 4, Figure 5, Figure 6 and Figure 7, there are the measurement results and prediction graphs of the compared models.

AIC : 288.4929360135082
 RMSE POISSON : 1.6901678568964271
 MAE POISSON : 1.177760300298698

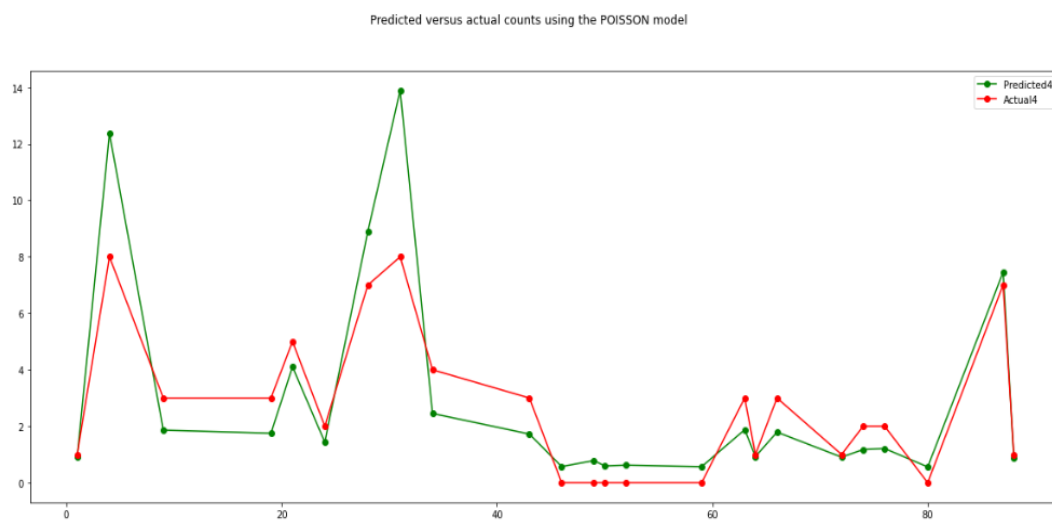


Figure 4. Poisson Model Prediction Graph and Model Metrics

AIC : 290.83450081447063
 RMSE NB : 1.7651409821449673
 MAE NB : 1.211132389182864

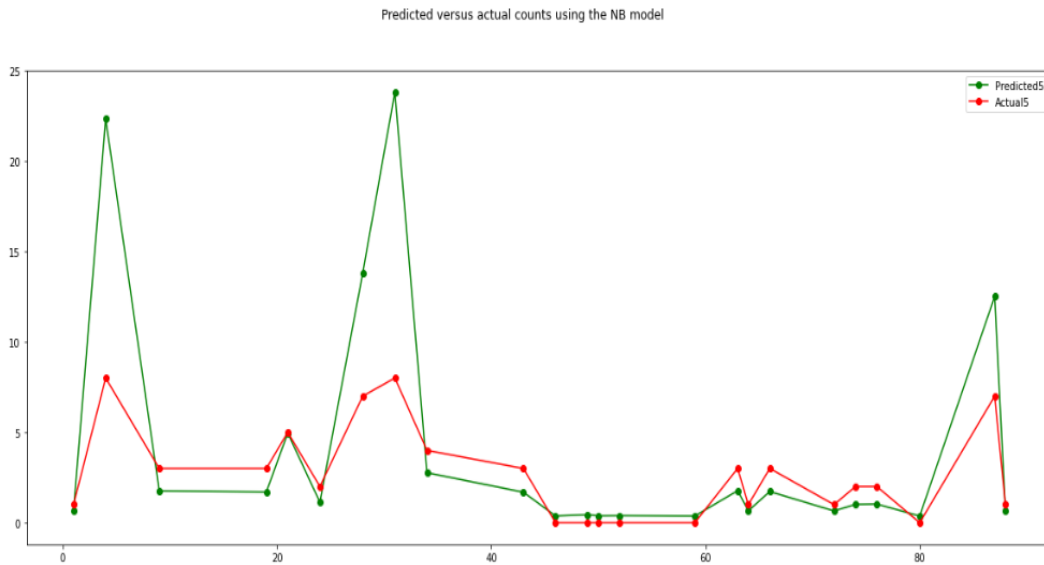


Figure 5. Negative Binomial Model Prediction Graph and Model Metrics

AIC : 304.39648300163407
 RMSE ZIP : 1.5699132696376144
 MAE ZIP : 1.0746182921318879

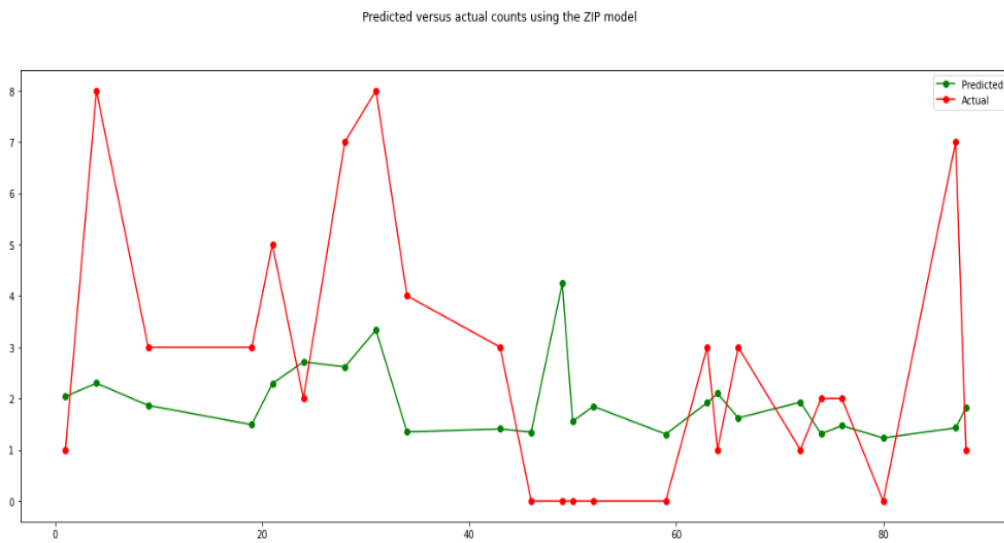


Figure 6. Zero Truncated Poisson Model Prediction Graph and Model Metrics

AIC : 299.5341651402747
 RMSE ZINB : 2.141804500920089
 MAE ZINB : 1.3049847758937874

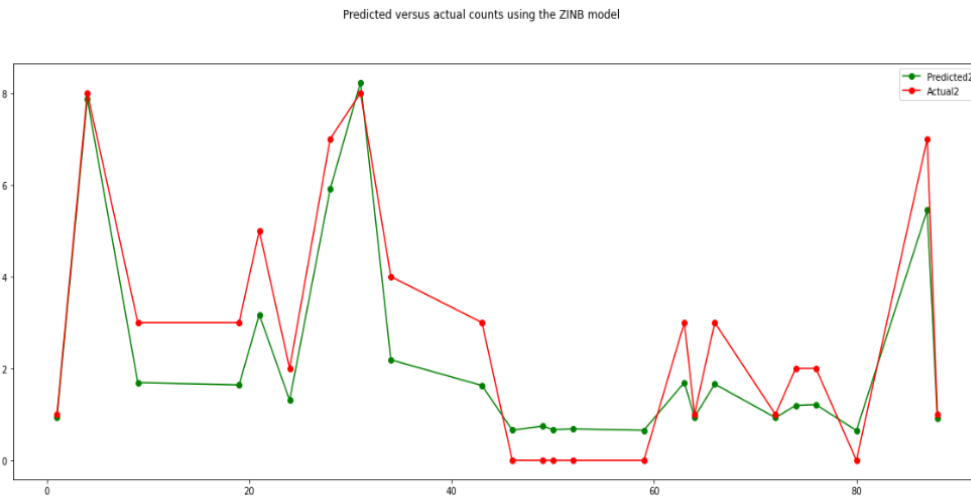


Figure 7. Zero Truncated Negative Binomial Model Prediction Graph and Model Metrics

5. RECOMMENDATION AND FUTURE STUDIES

If the dependent variable is discrete or count data, analyzes using linear regression models will yield inconsistent and highly erroneous results. Therefore, alternative regression models are used for count data. The most well-known among them are Poisson and negative binomial regression models. The most important condition for using the Poisson model is that the conditional variance value is equal to the conditional mean value. This is rare in practice. In many applications, the conditional variance value exceeds the conditional mean value. In such cases it is not correct to use Poisson regression. When such an overdispersion (or underdispersion) occurs, negative binomial regression should be applied or corrected by test statistics and residuals dispersion parameter. In a negative binomial distribution, the variance is assumed to be a square function of the mean. This statement is one of the most important assumptions for the elimination of overdispersion.

The results obtained from the analyzes and the issues that can be focused on in future studies are given below:

- For the data used in the study, the mean of the dependent variable was smaller than the variance ($2.36 < 2.44$), but since there was little difference, the analyzes applied in both cases were applied in order to talk about any dispersion problem, and as a result, the difference was due to better Poisson Regression measurement results. It can be said that the variance is equal to the mean.

- According to AIC metric results; Poisson Regression gave the lowest value. This means that the multiplicity of zero values in the data is insufficient to apply the Zero Truncated Poisson model. In addition, it has been understood that it is not necessary to apply the Negative Binomial model, which is applied when there is a dispersion problem.

- According to RMSE and MAE metric results; It has been observed that Poisson models make less erroneous predictions than Negative Binomial Models. This once again confirms that

there is no dispersion problem.

- In this study conducted with GDP deviation numbers, the variable of credit score was found to be significant in Poisson regression and Negative Binomial regression models, while the variable of HDI was found to be insignificant. However, in the Zero Truncated models, both of the independent variables were found to be insignificant. This can once again be interpreted as the number of zeros being insufficient to go for Zero Truncated models.

- Based on these comments, it can be said that which model will be preferred and which metrics will give more meaningful results in studies where mean and variance are not equal but very close to each other as a subject that can be focused on for future studies.

- In addition, in the literature, there is not a clear statement about how many zeros should be present in the data set, either numerically or as a percentage, in order to be able to apply Zero Truncated models. Future studies can be conducted with a data set suitable for this subject.

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