

## FORMATION OF THE SOCIAL CAPITAL BY ITS DIMENSIONS IN RURAL AREAS OF ERZURUM PROVINCE IN TURKEY

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### ABSTRACT

In this study, the formation of and the factors influencing social capital, the link between the rural lifestyle and the social capital were investigated. The levels of the social capital by their dimensions in rural areas were determined. The main material of the study is comprised of the cross sectional data, obtained from surveys conducted with random sampling method in 2016 from the counties and villages outside the Erzurum City Center. In the study, which utilized the Structural Equation Model, LISREL 8.72 software packages were used. The results of the study show that the elements that can be considered as the sources of social capital have become subjects that restrict social mobility and the cooperation instead of having a capitalistic value due to the fact that such elements are not supported by a sufficient and effective tradition of the society. The social capital, with its dimensions can only be realized in rural areas in a strong manner to the extent that the norms as well as ethnic and religion based strong social bonds play a unifying and infusive role instead of being a source of discrimination and marginalization in the society.

**Keywords:** Social capital, dimension, rural development, structural equation model, Turkey.

### INTRODUCTION

Social interactions and networks establish the mutual respect, trust, acting in union, living together and working towards common purposes. Within this context, the sense of unity that holds the society together and the cooperation that ensures the continuity of the society is called the social capital. Although the importance of the physical, natural and the human capital in the economic development is often underlined in related studies, the answers of the questions like “how the development process is organized and how it is spread” have largely been ignored (Demir, 2011). Grootaert (1998) states that what is ignored here is the social capital, the very the missing link of the economic and the social development.

There are many theoretical and empiric studies conducted recently regarding the concept of social capital. Today, the social capital has entered into the field of various scientific branches from economics, sociology and medicine to political sciences. Scholars from different disciplines approaching the social capital as a different subject of study increase the definitions, types and size of the concept. According to a widely used definition, the social capital is defined as the capacity to collaborate and to cooperate in order to attain common goals (Carroll, 2001). In addition, the social capital is expressed as the norms and networks that provide space to people to perform for common actions (Woolcock and Narayan, 2000). Lin (2001) defines the social capital as a type of capital that is arisen out of the access to the social networks, which are made up of social interactions, by

the actors that are in such networks. Whiteley (2000) approaches to the social capital in terms of its contribution to the economic growth and defines it as people’s desire to trust their own family members, to their relatives, to neighbors, and to other people in general.

On the other hand, studies also reveal that the social capital has a dualist nature as being “collectivist” and “individualist” (Esser, 2007). The first scholar to approach the social capital from an individualist point of view in a systematic manner was Bourdieu (1986). Bourdieu asserts that the source of the social capital is collective but its accumulation and utilization naturally varies depending on the position of the individuals within their respective class, their power and their access to the social networks.

From the viewpoint of a collectivist approach, the social capital, with the social networks within its essence, is regarded as a collective value such as the common values, norms and trust that everybody in the society holds (Coleman, 1988; Fukuyama, 2001; Portes, 1998; Putnam, 1993). Fukuyama (1997) defines the social capital as the institutionalized sum of the cooperation, value and norms and by indicating that the social capital is built upon the trust, defends that the trust accelerates the information exchange between the official bodies and the individuals, thereby increasing the efficiency and the wealth. Putnam (1993) suggests that the social capital is a value that materialize within the social organization in the form of civic and religious

groups, non-official communities, and relationships with relatives and friends, sacrifices, trust and values.

The social capital is a very fundamental source to ensure the efficient use of the social networks. The social capital, by increasing the family, business, friendship and kinship ties, may boost the efficiency of the social ties in line with the mutual benefit and social benefit. On the other hand, the social capital also increases the social participation therefore helping the democracy to thrive (Putnam, 1993). How the power of social capital that is arisen from the social life is formed around the rural community under the harsh conditions of the rural areas, how it is perceived and how it has become useful has not been exactly and clearly revealed.

For those reasons, utilizing the available local physical, human and social resources and opportunities first to develop the rural areas is highly important. Underdevelopment is not solely the result of the deficiency in physical and human capital but it is also the result of the lack of social capital as well. The social capital leads to the increase in efficiency and decrease in the costs through the development process via some mechanisms and plays complementary and substituting roles between the state and the market (Tüylüoğlu, 2006). Therefore, the social capital, which is an important factor within this context, is regarded as the key to the rural development today (Grootaert, 1998).

The social capital, due to its characteristics, described above have become a crucial concept in terms of the rural development attempts and policies, which have found an important place within the Turkish agricultural policies in recent years. The components of the social capital in rural areas, its types, its dimensions and the individuals' status on using the social capital is of utmost importance in terms of the rural development policies.

The dimensions and the types of the social capital in Turkey in general and in Erzurum Province in particular have not been analyzed sufficiently to this day. If the level of presence of the social capital in rural areas by its types can be measured, the policy makers and practitioners in the field of rural development will have the ability to harness this potential as a tool of development. The determination of the social capital in rural areas will also contribute to the works of the academic circles in the rural areas. The most important original value of the study is its measurement of the social capital by its dimensions and the fact that it is the very first study, where the Structural Equation Model is employed for the aim of determining the social capital in rural areas.

The general purpose of the study, in other words the result that is attempted to be reached, is to define the level of social capital in the rural areas by its dimensions and ultimately to assist the policy makers and

practitioners for the formation of the alternative development models. The specific purpose of the study in this regard is to measure all the dimensions of the social capital, which is dubbed by Grootaert (1998) as the missing link of the economic and social development in rural areas. Therefore, in this study, how the social capital is accumulated between the farmers in direct and indirect manner and what the factors that influence the social capital are aimed to be determined.

## MATERIALS AND METHODS

The main material of the study is comprised of the data obtained from the surveys, conducted in the counties and villages, outside Erzurum City Center. The indicated data are the cross sectional data from 2016. In this study, LISREL 8.72 and SPSS 13 software packages were used as the software material.

**Determining the Sample Size:** The area of the study was selected as the rural regions of Erzurum Province. Erzurum province is divided into 20 counties. The northern counties fall within the limits of the Eastern Black sea part of the Black Sea region and makes up around 30% of the total land area of the province, while the rest, which is a substantial part that makes 70% of the region, is within the limits of the Eastern Anatolian Province (Emiroğlu, 1972). In the study, the determination of the number of the household heads, to which the surveys would be implemented, was performed with a margin of error of 5% within the confidence limit of 95%. In order to make comparisons in the study, the sample size of the northern and southern provinces were calculated separately and it was assumed that the target audience may have similar characteristics, which would also mean that the sample size would be homogenous. Within this context; the sample size was calculated as 175 for northern counties while it was calculated as 149 for the southern ones.

As the result of the calculations, performed based on the random sampling method, the number of the surveys was determined based on the formula below; (Çiçek and Erkan, 1996).

$$n = \frac{N \cdot S^2 \cdot t^2}{(N-1) \cdot d^2 + S^2 \cdot t^2}$$

n= Sample Size

N= Total number of units within the sample frame

$\bar{X}$  = Median (Geometrical)

S= Standard Variation

d =  $\bar{X}$  \* 0.10

t = Confidence Limit

**Preparation of the Scales (The Survey Questions) and the Data Analysis:** Preparation of the survey questions

and their implementation took more than a year. The survey questions, implemented in the model, were adopted from the study of Gómez-Limón *et al.*, (2013), which was aimed to determine the social capital in Rural al-Andalusia region of Spain. The similarities with the survey, utilized by Onyx and Bullen (2000) were taken into account as well.

Structural Equation Modeling was used for the data analysis. When the data was being analyzed; the observed variables were determined first and the path analysis was applied. After that, a measurement model, which demonstrates how the latent variables or the hypothetical structures are defined by the observed variables and shows the measurement characteristics of the observed variables (reliability and validity), was defined (Jöreskog, 1996). This model forms a cluster of the links between the observed and latent variables. After the measurement model was completed, the structural equation model was built. After this, the accordance criterion of the structural model was calculated and finally the model estimation was made.

### Theoretical framework

**Structural Equation Model:** Structural Equation Model (SEM) is a statistical approach, used to test the models, where the causal and correlational relations between the observed, measurable variables and the latent variables are present together. The main feature of the method is that it is purely based on theory and it assumes that there is a structure of causality between the sets of latent variables (Yılmaz, 2004). In addition, the Structural Equation Model clearly takes the measurement errors into account when analyzing the data in an statistical manner. In addition to overcoming the measurement errors, the Structural Equation Model is also useful for developing, estimating and testing multi-variable complex models and takes the direct and indirect effects of the variables in a given model into account.

**The Mathematical structure of the Structural Equation Model:** The linear equations, formed for the observed variables of the independent latent variables are as follow;

$$x = \Lambda^x \cdot \xi + \sigma$$

x : The Matrix of the observable variables,

$\Lambda^x$  : The factor index of the measured independent variables, which are affected by the independent latent variables.

$\xi$  : Independent latent variable,

$\sigma$  : Error Vector for the observed variables of the independent latent variables.

The linear equations, formed for the observed variables of the dependent latent variables are as follows;

$$y = \Lambda^y \cdot \eta + \varepsilon$$

y: The observed vector of the observed variables of the dependent latent variables,

$\Lambda^y$  : The factor matrix of the observed variables, sense of belonging to the dependent latent variables,

$\eta$  : Dependent latent variable,

$\varepsilon$  : The Error vector for the observed variables, sense of belonging to dependent latent variables.

The linear equations, formed for the structural model is presented below;

$$\eta = \Gamma \cdot \xi + B \cdot \eta + \zeta$$

$\Gamma$  : Regression factor matrix of the dependent latent variables, which are influenced by the independent latent variables,

$B$  : Regression factor matrix between the dependent latent variables, influenced by the independent latent variables,

$\zeta$  : Regression factor matrix of the dependent latent variables that are not influenced by the independent latent variables.

### Assumptions of the Model

1. The observed variables have a normal distribution with multiple variables,
2. The latent variables have a normal distribution with multiple variables,
3. There are linear relations between the latent variables,
4. There are linear relations between the observed and the latent variables,
5. There are outliers present,
6. The error terms are with no correlation,
7. There are no multicollinearity problems,
8. The sufficient sample size was attained.

In the model, which was employed for the study, the exogenous dependent latent variable is the level of social capital (SCAPITAL). The observed variables are listed below;

### The Exogenous Dependent Latent Variables of the Social Capital Measurement Model by Dimensions

- Groups and Networks (GN), (Rural communal participation)
- Cooperation and solidarity (CS),
- Political participation and Coalition (PPC),
- Rural values and norms (RVN),
- Neighborhood relations and social cohesion (NRSC),
- Information and communication,
- Trust (TRUST),
- Sense of belonging (BELONGING)

**Capital Measurement Model by Dimensions:** The studies conducted in this regard, (Narayan and Cassidy, 2001; Grootaert *et al.*, 2003; Karametou and Apostolopoulos, 2010) approached the social capital based on eight dimensions in general despite different definitions and viewpoints. These dimensions are groups

and networks, solidarity and cooperation, political participation and coalition, rural values and norms, neighborhood relations and social cohesion, information and communication, trust, and sense of belonging.

It is noticed that the studies, which aimed to measure the social capital, all make the same error to approach to each one of the dimensions as if they are the social capital themselves. However, when all of the indicated dimensions come together, they form the social capital and despite contributing the meaning of this concept, none of the dimensions is sufficient to put the concept forth completely by their own (Ekşi, 2010). According to Narayan and Cassidy (2001), the social capital has seven different dimensions, being the qualities of the group, generalized rules, synergies, assertiveness, and connections with the neighbors, volunteering and trust. Grootaert *et al.*, (2003), in their study they conducted within the scope of the World Bank, to determine question banks for the measurement of the social capital, listed the six dimensions of the social capital and the elements that make up the indicated dimensions. Groups and networks, trust and solidarity, collective actions and cooperation, information and communication, social participation and social coalition and the political movement make up six main dimensions of the social capital. This study, which has a comprehensive survey content, is also one of the main references that was influential for the conception of this hereby study.

In the model, which was conceived in light of the above indicated works and studies, it was assumed that the social capital in rural areas have eight different dimensions and each one of the dimension has a positive effect on the social capital.

**Groups and Networks (Participation of the Rural Communities):** The network mechanism approach and (Katz *et al.*, 2004) that is based on several scientific disciplines such as social physiology, sociology, economics, mathematics, anthropology and politics, focuses on the structures, relations and results in relation to the operation of networks (Dhanaraj and Parkhe, 2006). Thanks to the network mechanism approach, the bonds between the organizations and individuals and the dimensions of the social relations can be analyzed.

The main purpose in the participation of the groups and networks in rural areas is the organization for the aim of “self-help” that determines the quality and scale of the organization is the local conditions. The rural communities adhere to the traditional values and usually they have developed organization models that operate on non-written rules. The domestic cooperation and solidarity may be carried onto the organizations via unique methods. The survey questions regarding this dimension aim at determining the participation of a member of the household to any types of social

organizations and informal networks as well as the contributions and gains that a member gives and takes. The participation of a member of the household to a professional or vocational association(s), his/her reason for participation and the contributions and gains of that member gives and takes are questioned. The Table 1 shows the Group and Network scale that demonstrates the participation in rural areas.

**Table 1. Group and Network scale that demonstrates the participation in rural areas.**

Variable	Question
	<b>Membership Status (Member 1, Not a member 0)</b>
A8 :	Vocational associations, farmer’s unions, farmer cooperatives. <b>Likert Scale: Always 5, Generally 4, Sometimes 3, Occasionally 2, Rarely 1</b>
A14 :	Getting together with friends and neighbors and conduct Islamic memorial services, having religious themed talks.
A15 :	Offering some of the food, prepared in our house, to our friends and neighborhoods.
A18 :	Spending time in the village teahouse or local club in the spare time.
A21 :	How often do you cooperate with your neighborhoods and have an exchange of ideas

**Solidarity and Cooperation:** The solidarity and cooperation dimensions shows how much of the social capital turns into the act in solidarity and cooperation within a society. The solidarity and cooperation is a crucial component of the community life in many countries. In some countries, the infrastructure building and the performance of the general services are realized with cooperation and the solidarity of the state and people. (Grootaert *et al.*, 2002). The solidarity and cooperation in rural areas is a very significant dimension of the social capital. The many tasks is carried out together in the family, between the neighbors and within the village. The common use of the agricultural tools, acting in line of the interests of the village, cooperation between the neighbors at harvesting and the sowing time are all included into this scale. However, the solidarity and cooperation scale was excluded from the study because it has characteristics close to the neighborhood relations and social cohesion scale.

**Political Participation and Coalition:** The dimension of political participation and coalition includes the participation of the members of the household to the administration to the petitions, to the political meetings and to the demonstrations and campaigns as it includes meeting with politicians and voting. Different members

of the household, depending on the demographic, economic and social characteristics, would form different types of coalitions and separations would occur in political movements. Table 2 presents the Political Participation and Coalition scale. The questions of the scale have two types of answers, being Yes (1) and No (0). The scale is comprised of 15 questions.

**Table 2. The Political Participation and Coalition scale.**

Variable	Survey Question
S1	: Undertaking political activities,
S3	: Do you cast your votes solely based on your own free will?
S4	: Having an active role in a political party
S5	: Establishing a personal link with a powerful individual (such as a statesman, mayor etc.
S11	: Does an act against the government
S13	: Applying to police or court regarding a problem
S16	: Helping out people in other countries

**Values and Norms:** Norms are effective sanctions that by defining the moral standards of the social relations, urge individuals to follow the rules (Carroll, 2001). Although norms raise some restrictions to the behaviors of the individuals that make up the community, they are important in the formation of social capital. Therefore, the norms are considered as one of the elements that produce social capital. The importance of the norms in terms of the social capital stems from the fact that the norms prompt the individuals to give up their own interests for the good of the society. Norms, which are supported with rewards like social belonging, status and honor, require people to prioritize the public interests and thus strengthens the bonds between people (Ozdemir, 2006). Norms ensure that the individuals act in a collective manner and therefore bring the society together. In the end, it is ensured that people scramble for the realization of the common goals and prioritized the interests of the society instead of acting for their own interests (Adler and Kwon, 2002).

Table 3 presents the scale of rural values and norms. The scale is comprised of 13 questions. The Likert scale includes I certainly do not agree (1), I do not agree (2), neither I agree nor I do not (3) I agree (4) and I certainly agree (5).

**Neighborhood relations and Social Cohesion:** The communities are considered as heterogeneous units that include conflicts are divisions in various forms rather than being completely homogenous units. The questions that are featured in this category aim at determining the characteristics and scope of such differences.

Neighborhood relations and social cohesion dimension questions the general perceptions of the social unity and the social coalescence or divisions are not analyzed. It is attempted to find out whether the public services are restricted due to gender, sect or ethnic related reasons or not. Table 4 presents the Neighborhood relations and Social Cohesion scale. The scale is comprised of eight questions and the scale includes the following; I certainly do not agree (1), I do not agree (2), neither I agree nor I don't (3) I agree (4) and I certainly agree(5)

**Table 3. The scale of rural values and norms.**

Variable	Question
N4	: We have a lot in common with the villagers
N6	: The people of my village is trusted
N7	: I usually do my shopping from the village artisans
N8	: The village folks keep their words
N9	: My villagers are never unfair
N11	: My villagers are always honest to me
N12	: My villagers never try to take advantage of me.

**Table 4. The Neighborhood Relations and Social Cohesion Scale.**

Variable	Question
K1	: My relations with my neighbors in village is a part of my daily life
K2	: The expectations of mine and my fellow villagers from the village are similar
K3	: I have helped a sick neighbor of mine within the last 6 months and I do it again.
K4	: I visit my neighbors on special days such as death, birth etc.

**Information and Communication:** The information and communication dimension demonstrates what sources of communication make accessing to the information both at household level and at the social level possible. The questions aim to reach two targets. First, conducting an analysis of the relative importance of the organizations and communications network second is gathering information about the state activities and the market. Although it does not provide a direct source of income or a monetary contribution, the information and communication dimension, because of its contribution in the increase of the level of wealth, can be considered as an informative variable in the determination of the wealth of the household (Grootaert *et al.*, 2002). However, since the reliability of the information and communication dimension is low, (Cronbach's Alpha = -0,118) it was excluded from the model.

**Trust:** Trust, which is a multi faceted concept, has been the subject of various branches of the social sciences (Bhattacharya *et al.*, 1998; Sheppard and Sherman, 1998). Trust is an important determining factor of the group behavior. Trust is also defined as one of the key conditions of the social capital. (Field, 2006). Trust is considered as a precursor to the social capital, as it is an indicator, a product and as one the elements that ensure that other benefits can be obtained as much as the trust is benefitted. This makes the trust almost as if it is equal to the social capital (Prusak and Cohen, 2001). Fukuyama (2005) and Uslaner (1999) regards the trust as the main component of the social capital or perhaps as the social capital itself.

In this study, by taking the cultural values into account, the emotional trust, (trust to the friends and relatives and to the public institutions) and the cognitive trust (trust to the strangers, who are not familiar) were attempted to be determined and the survey questions were scaled in this regard. The trust is an emotion-based concept in collectivist societies as it is cognitive based in individualist societies (Chen *et al.*, 1998). Table 5 summarizes the questions that make up the trust scale.

**Table 5. The Trust.**

Variable	Question
<b>Trust to the inner circle (Emotional trust)</b>	
G2	: My relatives, who do not live with us, are trustworthy.
<b>Trust to Institutions</b>	
G7	: People in this village are really honest and trustworthy.
G8	: I trust to my state.
G12	: I trust to the municipality.
G17	: The university provides sufficient information and support to the villagers regarding the agricultural activities.
<b>General Trust (Trust to outer circle)</b>	
G18	: Most of the people are trustworthy
G24	: Institutions such as Agricultural Chamber, / Provincial Agricultural Directorate etc. support the farmers for innovation.

The scale measures the emotional trust with 6 questions, measures the institutional trust with 10 questions and measures the cognitive trust with 8 questions. The Likert scale includes; I certainly do not agree (1), I do not agree (2), neither I agree nor I don't (3) I agree (4) and I certainly agree (5).

**Sense of Belonging:** Hofstede (1980) analyzes the societies within the scope of the individualist and collectivist culture based on some certain cultural values. The main feature that separates the collectivist societies from the individualist ones is that in collectivist societies, individuals consider themselves not as an independent

individual but rather as a part of a group (such as a family, state, tribe etc.). The result is the anxiety to ensure that the individuals' goals and behaviors are in harmony with the norms and expectations of the group (Wasti and Erdil, 2007; Triandis, 1995). In the individualist cultures on the other hand, the purposes of an individual may not be common with the group he / she is a part of. The personal goals are often have higher priority.

When approached in terms of the a specific region, the space based communities such as the rural areas, urban areas etc. form communities by the means of social interactions in a relational level as the result of the common interests, values, behaviors, culture and the common religion, language etc. that they produce over time. Citizenship bond continues due to such relations even if the space changes. The social components such as values, emotions beliefs, sense of solidarity that transcend the space may help the formation of a community. The communities draw their members to the area of common values with rituals and symbols and create a sense of sense of belonging (Aydemir and Tecim, 2012). In this regard, the individuals' sense of belonging is created by their sense of attaching importance to the community that they are a member of and by the belief that their needs can be met by the way of their loyalty to each other (McMillan, 1996). Table 6 shows the questions of the survey that make up the Sense of belonging Scale.

**Table 6. Belonging Scale.**

Variable	Question
B5	: When I feel the need of talking, I can have a chat with any one of the people in my village
B15	: I care about what my neighbors think of my attitude and behaviors.
B22	: I am planning to live in this village for many years.
B30	: My sense of belonging to my village is a part of my identity.
B32	: I consider myself as a member of this village.

The sense of belonging and community scale is comprised of 32 questions. The Likert scale includes; I certainly do not agree (1), I do not agree (2), neither I agree nor I don't (3) I agree (4) and I certainly agree (5).

## RESULTS AND DISCUSSION

**Measurement Model:** Before forming the measurement model, the reliability tests of the scales were conducted. As the most widely used method, the Cronbach's Alpha coefficient was calculated (Kalaycı, 2006). The reliability results regarding the models and scales are presented in Table 7.

Table 7. The reliability results regarding the models and scales.

Model and Scale	Cronbach's Alpha value	Standard Cronbach's Alpha Value	Result
<b>Social Capital Model by Dimension</b>	<b>0,954</b>	<b>0,944</b>	Highly Reliable
Groups and Networks, (Rural communal participation)	0,779	0,829	Quite Reliable
Cooperation and solidarity,	0,806	0,830	Highly Reliable
Political participation and Coalition,	0,818	0,816	Highly Reliable
Rural values and norms,	0,922	0,924	Highly Reliable
Neighborhood relations and social cohesion,	0,837	0,832	Highly Reliable
Information and communication,	-0,118	0,222	Not Reliable
Trust	0,885	0,891	Highly Reliable
Sense of belonging (Attachment)	0,945	0,948	Highly Reliable

Source: Original calculations.

The reliability test regarding the models and scales revealed that the "Information and Communication" scale in the Social Capital by Dimensions Model is not reliable and thus it was excluded from the structural equation model. The remaining scales have high level of reliability. Although eight latent variables were planned for the Social Capital by Dimensions in the beginning, the number of the latent variables was decreased down to six after the information and communication dimension (due to low reliability) and the cooperation and solidarity dimension (due to being included to the other dimensions) were discarded.

As for the measurement criterion, used for analyzing the harmony between the model and the data; the  $\chi^2/DF$ , p value and RMSEA (Root - mean-square error approximation) value were examined. The  $\chi^2/DF$  value was calculated as 2.22 for the model (1139.27/512). This result is considered within the acceptable range of 5 and below 5. In the same manner, RMSEA value was found out to be 0.10 and below, which can be considered as within the acceptable range (0.063). The study model is statistically significant at 5% significance level due to the fact that it was calculated to be  $p < 0.0000$ .

When the non - standardized regression coefficients are calculated, one of the indicative variables, which are used for measuring each of the latent variable, is randomly given the value of 1. By taking this value into account, the loads of the other indicator variables are calculated. After this, the aforementioned values are standardized (Yeniceri and Erten, 2008). The standardized coefficients should not exceed 1. The standardized analysis values are crucial due to the fact that they indicate how well each one of the observed variable represent its own latent variable (Şimşek, 2007).

In the model, the standardized coefficients are not above 1.

When the  $t$  values of the observed variables in Table 8 are analyzed, all the observed independent variables with the exceptions of casting votes and neighborhood relations in the political participation and coalition dimension, (S3); neighborcare in social cohesion dimension (K4), trust to family in trust dimension (G2) and loyalty in belonging dimension (B30) were found to be statistically significant at the 5% significance level. In addition, the relation between the groups and networks dimension and sense of belonging dimension as well as the relation between the groups and networks dimension and the neighbor relations and social cohesion dimension were revealed as statistically insignificant at 5% significance level while the relation between the other dimensions were calculated as significant at 5% significance level.

The most important factor in groups and networks dimension is the spending time in the village teahouse or local club in the spare time (A18) as it is followed by the frequency in decision-making (A21). The most important factors in Political participation and Coalition dimension is knowing politicians and ability to procure them for work (S4) while the party membership factor (S1) takes the second place. The factors that get the first two ranks go to honesty (N8) and Justice (N12) in rural values and norms dimension respectively. Two important factors in neighborhood relations and social cohesion dimension are the interests of neighbors (K1) and reciprocity (K2) respectively. In the trust dimension, trusting the family (G7) and trusting the neighbors (G8). One of the most important factors in the belonging factor is feeling comfortable (B5), which is followed by loyalty (B22).

**Table 8. The values of the observed variables of the social capital by dimensions.**

Latent Variables	Observed Variables	t Value	Standard Error	R2
Groups and Networks (GN)	A8	3.91	0.021	0.048
	A14	3.23	0.092	0.13
	A15	2.87	0.070	0.028
	A18	5.07	0.058	0.14
	A21	4.08	0.15	0.090
Political Participation and Coalition (PPC)	S1	5.38	0.019	0.10
	S3	0.19	0.018	0.00024
	S4	10.25	0.030	0.66
	S5	5.34	0.019	0.10
	S11	5.28	0.017	0.10
	S13	4.77	0.019	0.069
Rural Values and Norms (RVN)	S16	2.37	0.020	0.014
	N4	10.87	0.094	0.18
	N6	10.47	0.11	0.34
	N7	6.33	0.12	0.15
	N8	12.29	0.075	0.43
	N9	6.31	0.091	0.16
	N11	11.15	0.10	0.40
Neighborhood Relations and Social Cohesion	N12	11.61	0.10	0.42
	K1	11.75	0.11	0.49
	K2	11.23	0.11	0.42
	K3	6.58	0.13	0.18
Trust (TRUST)	K4	0.89	0.11	0.0036
	G2	1.82	0.11	0.013
	G7	13.39	0.089	0.57
	G8	13.01	0.096	0.58
	G12	5.34	0.16	0.11
	G17	4.39	0.11	0.067
Sense of belonging (BELONGING)	G24	2.64	0.14	0.021
	B5	8.83	0.15	0.37
	B15	3.61	0.16	0.062
	B22	6.65	0.14	0.17
	B30	0.37	0.19	0.00
	B32	4.72	0.13	0.10

Source: Original calculations.

**The Structural Model:** The main purpose of the structural model is to define the relationship between the latent variables and to test the proposed cycle (Kline, 2005). The conformity stats of the structural model, defined by the measurement model, are the same with the measurement model. In contrast to the measurement model, the structural coefficients between the latent variables are analyzed (Bagozzi and Yi, 1988; Sümer and Bek, 2012). Figure 1 represents the structural model and

the standard values. Based on this, the  $X^2/DF$  value for the structural equation model was calculated as 2.35 (1226.47/521). This value is within the acceptable range of values, which are five and above. In the same manner, the RMSEA value is also within the acceptable range of values, which are 0.10 and below (0.066). Due to the fact that the model gets the value of  $p < 0.0000$ ; it is statistically significant at 5% significance level.

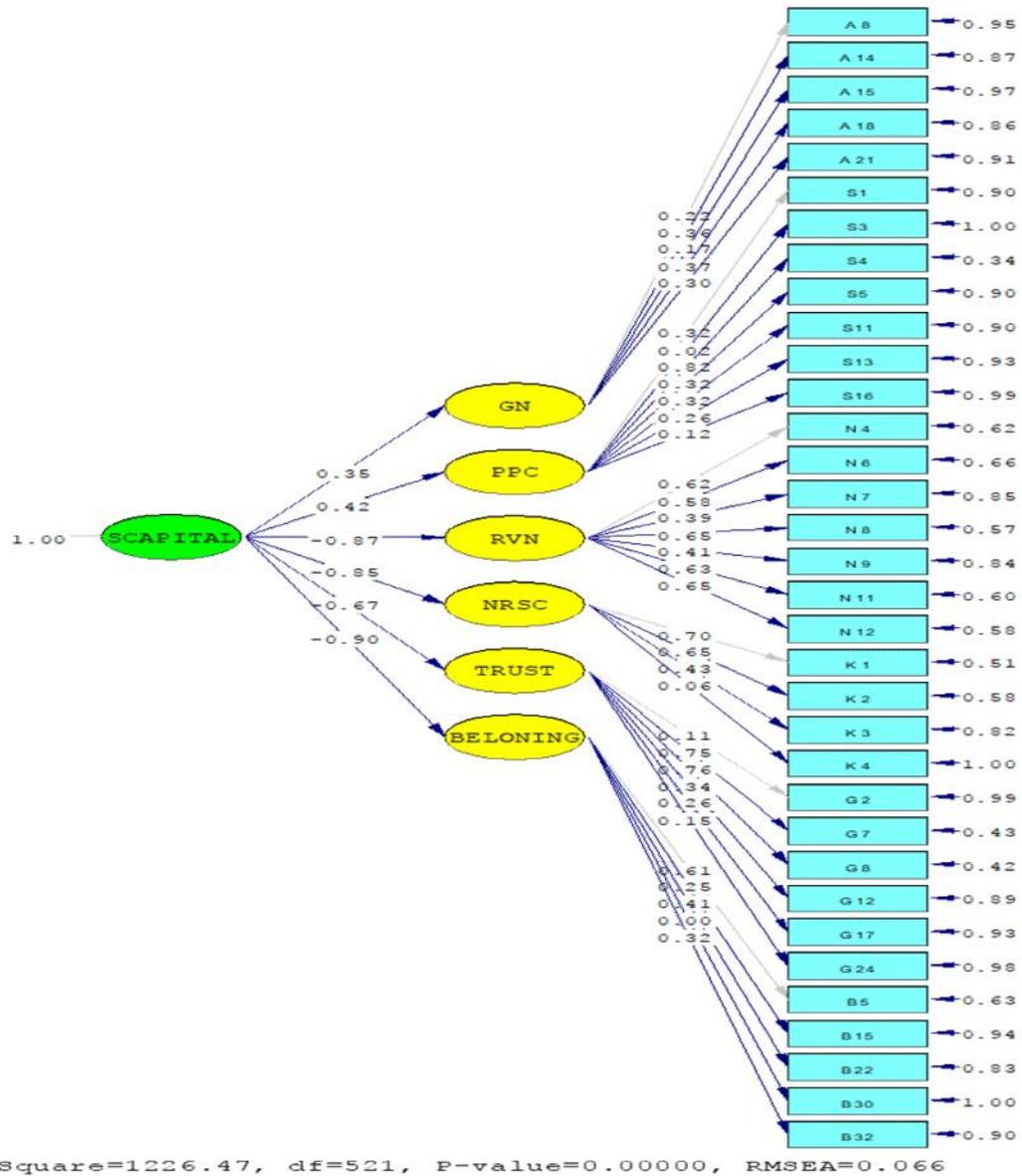


Figure 1. The Structural Model of the Social Capital by dimensions and its standard values

The criterion, used to determine how well the model fits into the data set is presented in Table 9. The fact that the indicated values are close to 1 demonstrates that the fitness between the data and model is perfect while the “Zero” represents disharmony (Külter, 2012). In this study, the aforementioned values are close to 1. This proves the fitness of the model with the data set.

In figure 2; the *t* values of the structural model of the social capital by types are given. According to this, the groups and networks dimension (1.90), and the trust dimension (-1.73) were determined as statistically insignificant at the significance level of 5%. The other dimensions of social capital were found out to be statistically significant at the significance level of 5%.

Table 9. The Conformity indexes of the Structural Model.

Conformity indexes	Conformity Symbols	Model Value
Goodness-Of-Fit Index	GFI	0.81
Adjusted Goodness-Of-Fit Index	AGFI	0.78
Normalized Fitness Index	NFI	0.69
Tucker-Lewis index	NNFI	0.78
Relative Fitness Index	RFI	0.67
Comparative Fitness Index	CFI	0.80
Incremental Fitness Index	IFI	0.80

Source: Original calculations.

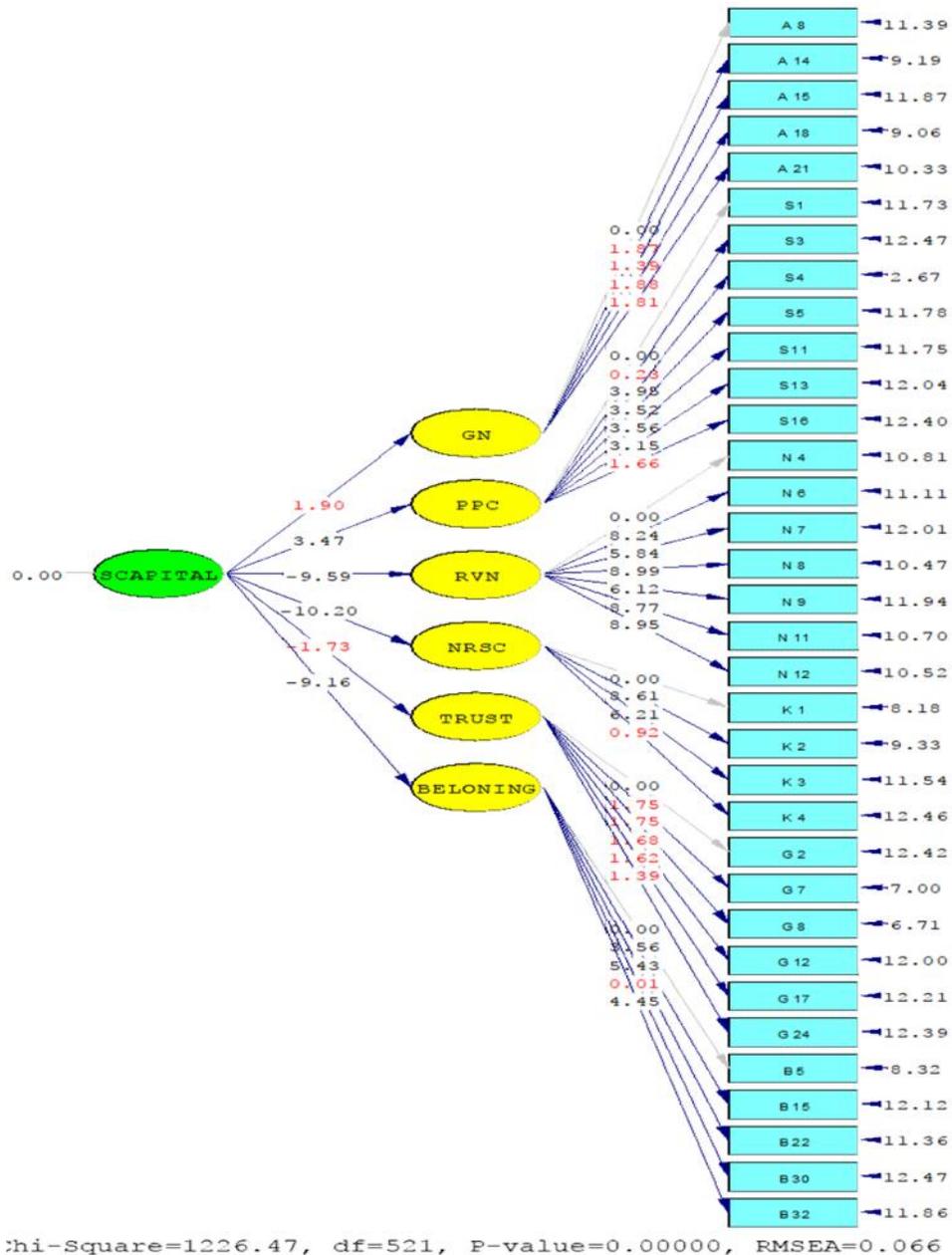


Figure 2. the values of the structural model of the social capital by dimension

The structural model for the social capital by dimensions as well as its standard values indicates that not all the dimensions of the social capital contribute to the formation of the social capital in a positive manner. The dimension of political participation and coalition provides a positive contribution to the formation of the social capital while the rest of the dimensions have negative impact in this regard. The most important dimensions in the formation of the social capital are, in order of importance sense of belonging dimension (-0.90), rural values and norms (-0.87), neighborhood relations and social cohesion (-0.85), and trust (-0.67).

Two of the most important factors in the sense of belonging dimension are unity (B5=0.61) and loyalty (B22=0.41) while caring for the neighbors in sickness (K1=0.70) and cooperation and solidarity (K2=0.65) within the dimension of neighborhood relations and social cohesion, honesty (N8=0.65) and Justice (N12=0.65) within the rural values and norms dimension, trust to public institutions (G8=0.76) and trust to neighbors (G7=0.75) within the trust dimension were determined to be the most significant factors membership to a party (S4=0.82) and casting votes (S1=0.32) were

determined as the most important factors within the social participation and coalition dimension.

In light of the findings of the study, the fact that the Groups and Networks dimension have a negative impact at a lower level demonstrate that there is an organization problem in the rural area. There is no professional organization regarding the farmers in rural areas of Erzurum Province. In addition, there are no agriculture related professional associations in rural area nor is there a possibility for a membership to an association. Cooperatives are generally established with state support. This prevents the governance of the cooperatives by their partners in a democratic manner and makes the cooperatives state controlled entities. The cooperative system in Turkey is rather a top down affair with state support than being a grassroots movement. There are only a few and insufficient and ineffective consumers' or producers' cooperative in rural Erzurum that were formed as the result of civic organization. This restricts the organization and entrepreneurship in rural Erzurum. Therefore, the organization problem causes the group and networks dimension to have a negative impact on the formation of social capital. A similar study, conducted in rural Şanlıurfa points out the organization related problems in rural areas (Çekiç, 2012). In addition, the failure of the investments, made possible by the union of the congregations in the study area and the infiltration of the intermediaries into the groups and networks led this dimension to have a negative impact on the social capital as well.

The communal people, who live in rural areas and who adopted the collective culture of production and consumption, show a cooperative behavior far from the conflicts of interest simply due to the fact that they internalized the norms such as moral and religious rules. Those internalized norms steer the individuals to virtues such as acting in a responsible manner, keeping the promises and being honest. Loyalty, upholding the agreements, honesty and fairness are the primary rural values. The rural values and norms dimension, having negative contribution to the formation of the social capital despite the fact that the standardized factor load values of the observed (independent) variables of the rural values and norms dimensions in the measurement and structural models had positive values is the result of the fact that the farmers in rural areas exhibit a collectivist culture and adopt a self enclosed lifestyle. The rural values inhibit the competition and the desire to produce and to get rich as they promote contentment. Tütengil (1983) in his work titled "The Structure and the Problems of Rural Turkey" underlines determinist approach of the farmers and their attitude far from ambitions with a submissive manner.

The negative influence of the neighborhood relations and social cohesion dimension on the social

capital should not be interpreted as the neighborhood relations in rural areas are worsening. On the contrary, this should be interpreted as the neighborhood relations in rural areas is increasing and thus by turning the community upon itself, transforming the rural community to a self-enclosed entity. This sense of trust and cooperation increases the social capital within the community (bonding) but in the expense of decreasing the social capital outside the community. The sense of cooperation, necessitated by the rural conditions, turn into an internalized life style in rural Erzurum and weddings, funerals and religious days bond the rural communities. This situation, by causing the decrease in the trust and the relations to non-village entities, leads to a negative contribution in the formation of the social capital. In an empirical study, where the relationship between the social capital and the workforce efficiency in small and middle scale enterprises in Italy was examined, it was revealed that the strong bonding social capital that includes strong family ties, friendship and kinship have a negative effect on the economic performance and personal development (Sebatini, 2006).

The trust dimension also influences the social capital in a negative way. In scope of the study, the trust dimension was analyzed in three groups. Those groups are intra community trust (emotional), extra community trust (cognitive) and the general level of trust. In rural areas, intra community trust is high so as the level of trust to the state and to public institutions, to fellow villagers, to familiar people and to the family. This decreases the level of trust to the entities outside the community, meaning that the trust of the rural communities to the strangers and outsiders are low, which prevents doing business together and inhibits entrepreneurship. Therefore, the trust dimension plays a negative role in the formation of the social capital. This finding also supports Fukuyama's claim, which states that strong family ties bond the close circles while weakening the ties the ones that are not family, fellow villagers or neighbors (Fukuyama, 2001; Fukuyama, 2005). In the rural areas, where the family ties and the cultural values still hold strong, the elements that can be considered as the sources of social capital have become subjects that restrict social mobility and the cooperation instead of having a capitalistic value due to the fact that such elements are not supported by a sufficient and effective tradition of civic society. This finding shows similarities with the view, asserted by a study, conducted by Çekiç (2012) in, Siverek, Şanlıurfa, which states that the strong family ties affect the social capital in a negative manner instead of positive manner.

The negative impact of the sense of belonging dimension on the social capital shows that the farmers in rural Erzurum have a deep sense of belonging towards their villages and villagers. Villagers, who live in

rural Erzurum, are deeply attached to their villages. They do not want to leave their villages, as they want to live there. However, the economic and social conditions force them to abandon their villages and to immigrate to elsewhere. The insufficiency of the agricultural income, the lack of education and health services in rural areas, the job opportunities that the cities present and the poverty triggers the immigration. This sense of attachment to the village and village folks in rural areas closes the individual to the outer world and causes him to act within groups of fellow villagers even if he migrates to the city.

Political participation and the coalition is the only dimension that has a positive impact on the social capital. The fact that the villagers cast their votes in election with high percentages is because the rural areas have high expectations from the government and political institutions.

## RESULTS

In general, the social capital has been defined and viewed as the relations between the individuals and groups that contribute to economic and social development and the behaviors, values and institutions that regulate such relations. The social capital has become a crucial concept in terms of the rural development efforts and policies, which has become a relevant player in Turkish agricultural policies in recent years. The components, types and the dimensions of the social capital as well as the status of the utilization of the social capital by the individuals are of utmost importance in terms of the rural development policies.

According to the results of the study, although each one of the dimensions of the social capital which is comprised of six dimensions, yielded positive results in terms of factor load values. It was determined that all dimensions in the structural model, with the exception of political participation and coalition dimension, had negative contributions. Social capital contains major themes within a wide array of statements such as civic society, rural development and the strengthening the democratic participation. The dimensions of the social capital being negative shows that people in rural areas developed family bonds, kinships and friendships within a strong informal network between themselves and as they carried out such relations within a closed environment, an inward oriented community spirit began prevailing. This situation, which is also dubbed as the bonding social capital, has a negative impact on the ability to organize.

The most important dimensions in the formation of social capital within the study area were determined as the sense of belonging, neighborhood relations, social cohesion, rural values and norms and trust respectively.

While the unity and loyalty were the two most important factors in sense of belonging dimension, caring for the neighbors in sickness and cooperation and solidarity were the prevailing factors in the dimension of neighborhood relations. Virtue and honesty within the rural values and norms dimension were the most important factors respectively while the trust to neighbors and trust to public institutions were determined as the most important factors within the trust dimension. The social participation and coalition dimension is the only dimension that had positive contribution to the social capital. Membership to a party and casting votes were determined as the most important factors within the social participation and coalition dimension.

In this regard, the national and local government should infuse the sense and belief of justice to the society in order to establish a trust based healthy civic society and to ensure the democratic participation, as they should develop policies that ensure the cohesion of the individuals, living in rural areas, with the entirety of the society. The efforts of the political systems to operate, grow and develop the "Civic Society" under the state or government control usually end up with failure without the presence of the civic participation. The political systems should provide the conditions, necessary for the educated and informed individuals to express their opinion freely to participate into the social and political processes and to cooperate. At this point, the norms, ethnicity and religion based strong social bonds that are shared within the families and other homogenous groups may play an infusive and unifying role instead of being divisive and marginalizing. Therefore, the potential to form the social capital with its dimensions in rural areas may be realized in a strong manner. In addition, developing policies towards the establishment of successful producer and consumer cooperatives aiming at the problem of organization, which can also be considered in this regard, is very crucial. For this reason, successful entrepreneur projects that are based on the cooperation of the governments, local governments and NGO's should be supported.

Since the social values may differ from the other fields within the region of the study, faulty conclusions may be drawn when comparing the results regarding the social capital. Therefore, the results should be interpreted carefully when a comparison is to be made.

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