BUILDING A SOCIOECONOMIC STATUS INDEX FOR TURKEY

Lütfi Sunar, Yunus Kaya, and Seran Demiral
Istanbul University

Social Stratification Research Seminar
Milano, September 6-8, 2015

Studies on SES in Turkey

- In contrast to the liveliness of debates in world sociology on class, stratification and mobility, these are among the least developed areas in Turkish sociology.
- It is not yet possible to talk about a commonly accepted SES scale in Turkey.
- Nearly all institutions use their own “scales”, of which theoretical and statistical basis are not quite strong. In this framework, we see that marketing, research and advertising companies have been involved inseveral attempts to develop their SES scales
- The only SES index in Turkey which is based on sociological theory and methodology is the ‘Research on Social Stratification, Mobility and Socio-Economic Status in Ankara City Center’, which was conducted in 2008 by a group of researchers, members of which were Sibel Kalaycıoğlu, Kezban Çelik, Ümit Çelen ve Sinan Türkyılmaz.

THEORETICAL FRAMEWORK OF TURKEY SES INDEX (T-SES)

T-SES is Developed at the Household Level

- Although at first glance, socio-economic status seems like a personal characteristic, it is a concept formed and experienced on a household level.
- A SES index formulated not on a household level will be mostly restricted to working adult population; groups such as children and elderly people who not working and not earning income will be left out.
- In addition, it will overlook the division of labor which is widely seen in a household level. Women in Turkey mostly stay at home and men work.
- Similarly if one of the members of the household has a demanding and/or well-paid job, it is common for other other members to have less demanding jobs, or havea lower status and income.
- For that reason a SES index developed for Turkey should be on the household level.

Main Components of SES Indexes

- In the literature many variables such as education, income and occupational prestige which affect socio-economic status are mentioned. In addition to these variables, it can be seen that sometimes the accumulation of property can also affect socio-economic status.
- Throughout the world, other variables such as access to clean water, access to transportation, living in rural or urban areas, ethnicity are also used in SES models. However, these variables that are used for the countries which are less developed or have their specific geographical features cannot be used inTurkey
- SES indexes are sometimes formulated around one variable, and sometimes multiple variables are used.
- Generally, in models formulated around one variable, occupational prestige is taken into consideration. It is supposed that occupational prestige already includes variables such as education and income.
- However these models are made for developed and industrial countries where occupational market is more institutionalized and acquiring many occupational titles are dependent on some certain preconditions.
- In a country like Turkey where work and occupational market have not still been stabilized and some occupations are still devoid of formal regulation, occupational prestige alone cannot reflect socio-economic status.
- For that reason a socio-economic status model in Turkey should include multiple variables.

Main Components of T-SES

The main components of T-SES were supposed to be:

1. Educational Attainment
2. Income
3. Occupational Prestige Score
4. Property/Ownership

First Component: Education Score of Household

- Education has always been one of the most important components of social status and mobility.
- In Turkey, the most important channel for one to reach another status from his/her current status is access to education.
- Those who cannot have a formal education generally have lower status.
- For this reason in a SES index formulated for Turkey should include education as one of its basic components.
- Along with this in a SES scale developed on a household level, the educational level of the household becomes more important than one person's level of education.
- Educational level of a household is determined by the highest educational level in that house. The effect of education on socio-economic status requires that the highest-educated person in the household should be the determinative one.

Second Component: Household Income

- Income is also one of the basic components of SES.
- Income level of a family mostly affects the place of a household in social structures.
- Income level closely affects consumption and lifestyle.
- Although there are debates on dealing with total or average income, in SES models income is generally taken as average of the total household. The total income can pose problems in comparative analyses. At the same time it is stated that rather than the income of the household, the spendable income is more effective on SES. And this closely relates to the number of persons in a household.
- Thus, we regarded income as the average household income in our model.

Third Component: Occupational Prestige Score

- Occupational prestige is one of the main components of SES models.
- It is often stated that occupation is the most basic factor in determining one's social status in modern life.
- Besides, occupation is seen as a complementary factor to education and income.
- Occupations can be said to be important determinants of peoples' identities. Today it is believed that the source of concepts as identity, prestige, income and lifestyle is occupation.
- Although occupation is something personal, lifestyle and identity that comes within the occupation are reflected on the household.
- Thus, the way occupational prestige is dealt with in a SES index formulated on the household level is important. It is mostly stated in the literature that occupational prestige of a household or a family is determined by the highest-prestige occupation in the household.
- Also in Turkey it is seen that occupational status of a household -as it is in the education- is determined by the highest-prestige occupation in the household.

Fourth Component: Total Property of Household

- Another component which is often referred to as a variable that should to be taken into SES indexes is property. However, property is a very complex variable.
- We see that especially the property value of durable goods such as computer, refrigerator or TV were added to the model in various SES researches conducted in Turkey. Especially in today's consumer society, we know that properties do not change the status of households. We also know that digital TVs, washing and dish machines can be found even in very poor households. It is possible to say that these goods which showed the socio-economic status of a household up until 1990 is not an indicative anymore.
- However, a stronger claim can be made that real estate property and car property is effective on SES. Both the question of ownership (whether it is present or not) and the value of the real estate and car that is owned can be added to SES model.
- There are some problems in Turkey regarding this issue. In Turkey, house ownership in Turkey is especially widespread, comparable to developed countries.
- In our theoretical model, we thought that property should be included as a SES component. However, in our statistical analyses, we have seen that property variable only marginally affects SES,

DATA COLLECTION

Two Stages of Research

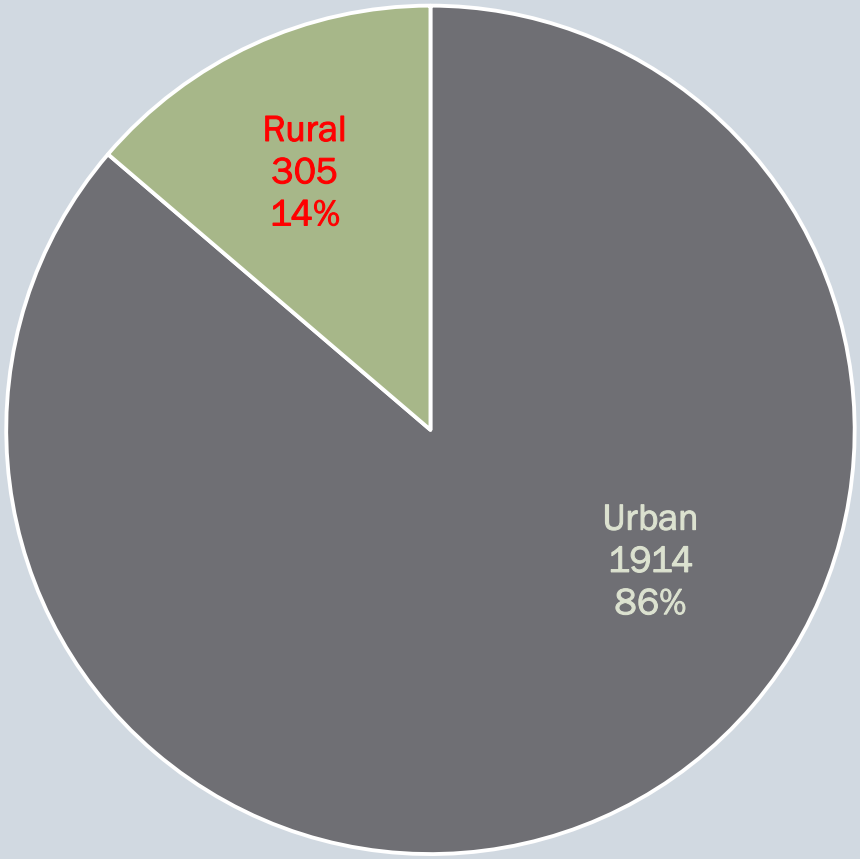
- As stated above, occupational prestige knowledge constitutes an important component to develop SES scale.
- For this reason, for Building a Socioeconomic Index for Turkey we conducted two-staged research progress:

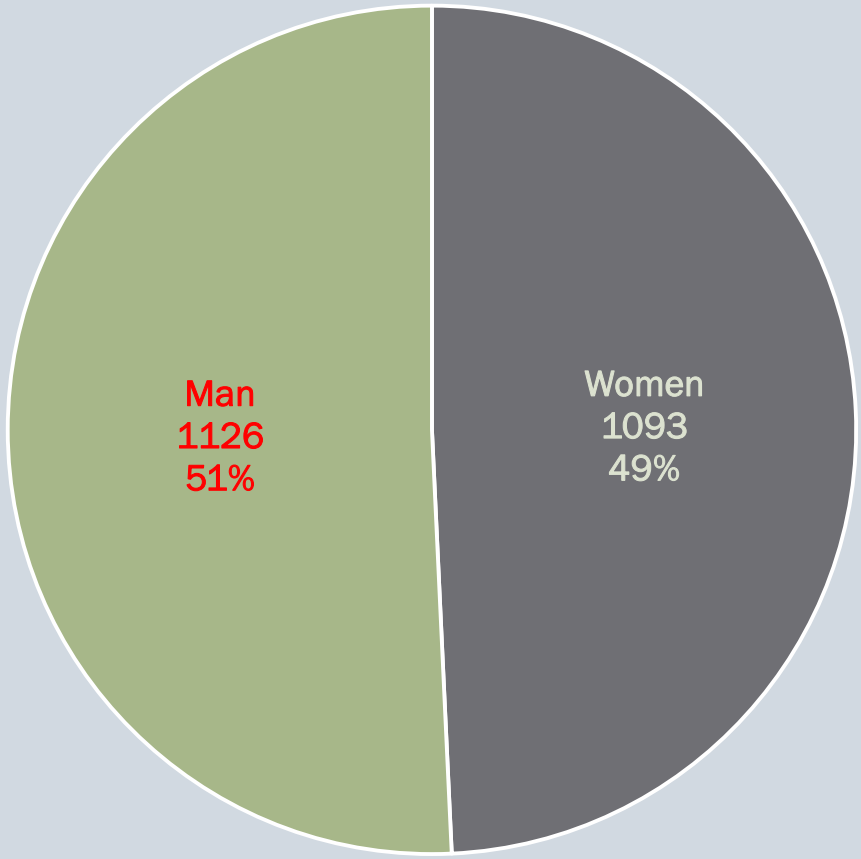
  1. First survey was conducted for creating an **Occupational Prestige Scale.** This scale was used to determine the hosehold's occupational prestige in our second research.
  2. Second survey was conducted for **Building a Socioeconomic Index for Turkey**

About the Survey on Occupations

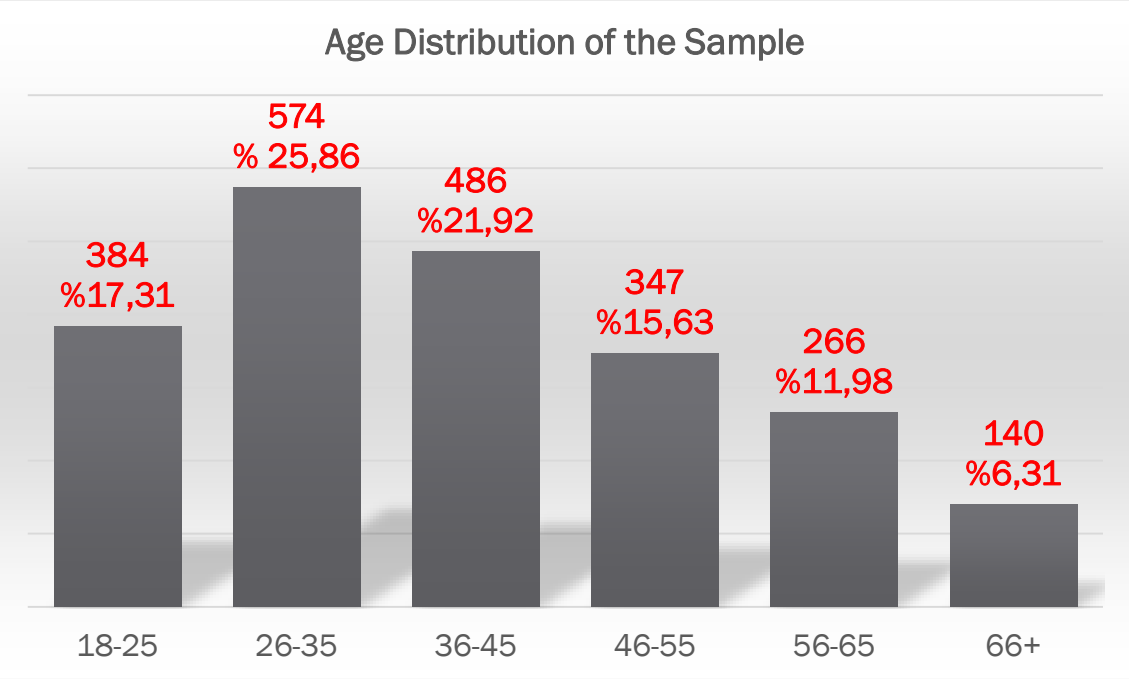
- Occupations and work life in Turkey have always been ambiguous and thus hardly ever been studied. In Turkey, occupations in this sense have not yet become a particular field of study for sociological research. Likewise, studies conducted across Turkey on this issue have not properly gathered data on occupations.
- The first survey was conducted throughout Turkey, in 32 provinces in 2500 household
- We assessed occupational prestige and attitudes toward work and occupations

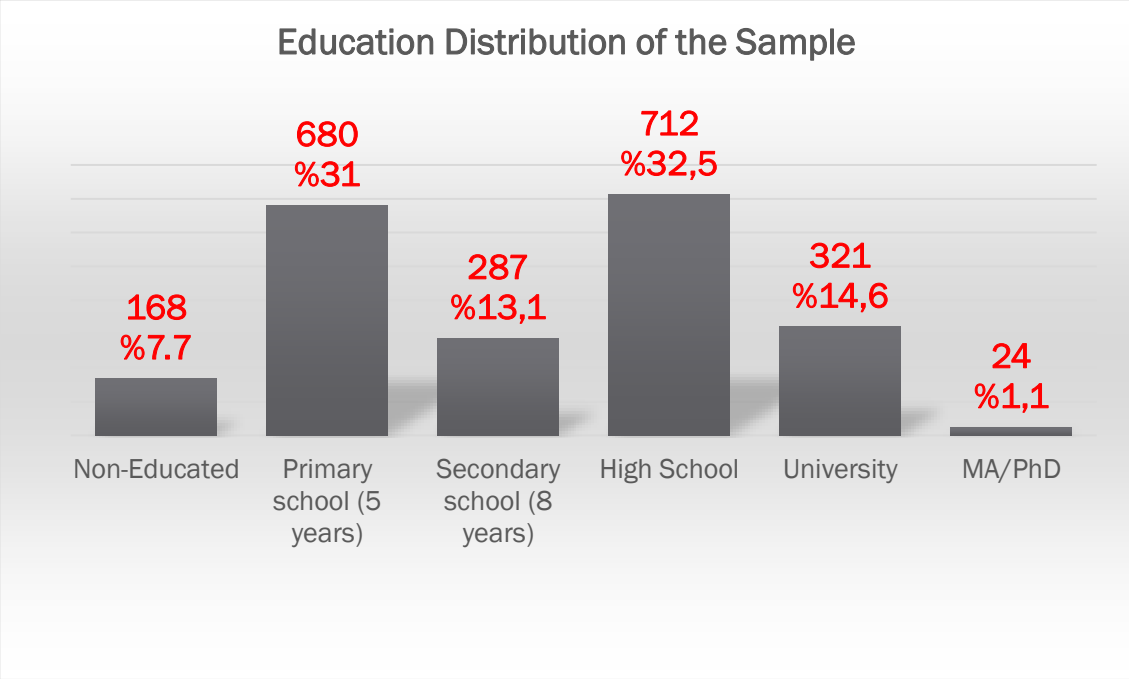
Structure of Sample of 1st Survey





Structure of Sample of 1st Survey





Results of T-MIS

- In this research, participants graded 126 occupations between 1-100
- These occupations were selected from 3rd level occupation groups of TÜİK's adaptation of ILO's ISCO 08 (International Standard Classification of Occupations).
- The occupations were listed according to these points and the occupational prestige scale was created.
- By applying points in this scale to each 4th occupation below 3rd level occupations, a prestige point and alignment can be obtained for all occupations.

OCCUPATIONS WITH HIGHEST SCORES		
RANK	OCCUPATION	SCORE
1	Medical Doctor	88,3
2	University Professor	83,32
3	Judge	82,17
4	Teacher	80,98
5	Dentist	79,5
6	General	78,31
7	Governor	78,15
8	Captain	77,9
9	Ambassador	76,68
10	Architect	76,23
11	Pharmacist	75,79
12	Psychologist	75,55
13	Mechanical engineer	75,26
14	General Manager (Public)	73,42
15	Electrical engineer	73,1
16	Lawyer	72,87
17	Research Assistant (University)	72,84
18	Mayor	72,78
19	Construction engineer	72,69
20	Petty Officer (Military)	70,73

OCCUPATIONS WITH LOWEST SCORES		
RANK	OCCUPATION	SCORE
107	Bazaar Vendor	48,95
108	Plasterer (Builder)	48,91
109	Fisher	48,87
110	Typist	48,82
111	Painter	48,67
112	Blacksmith	48,66
113	Sign Maker	48,34
114	Gardener	48,08
115	Office Staff	47,87
116	Cashier	47,8
117	Domestic Staff /Maid	47,54
118	Dishwasher	46,73
119	Office Maid	45,87
120	Shoeshiner	45,63
121	Washerwoman	44,65
122	Porter	44,17
123	Parking Attendant	44,11
124	Street Vendor	41,45
125	Astrologer / Psychic	27,41
126	Belly Dancer	26,82

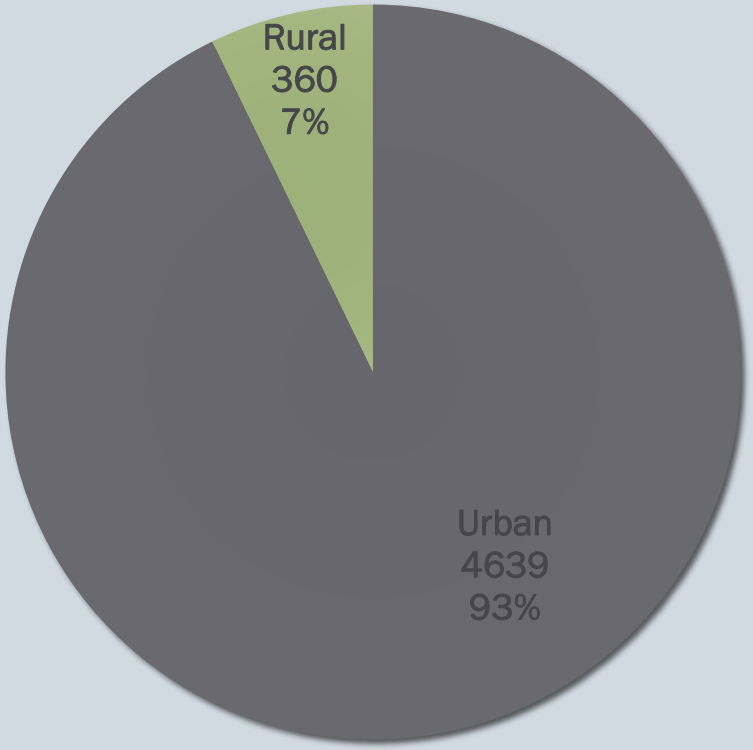
FOR FULL LIST

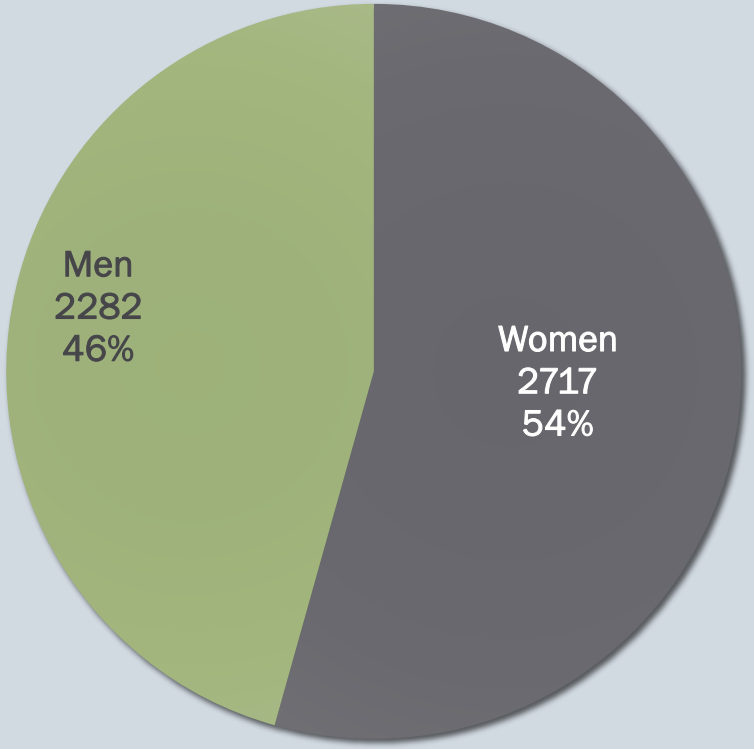
http://turkeyses.net/meslekiitibar/

About the 2nd Survey on SES

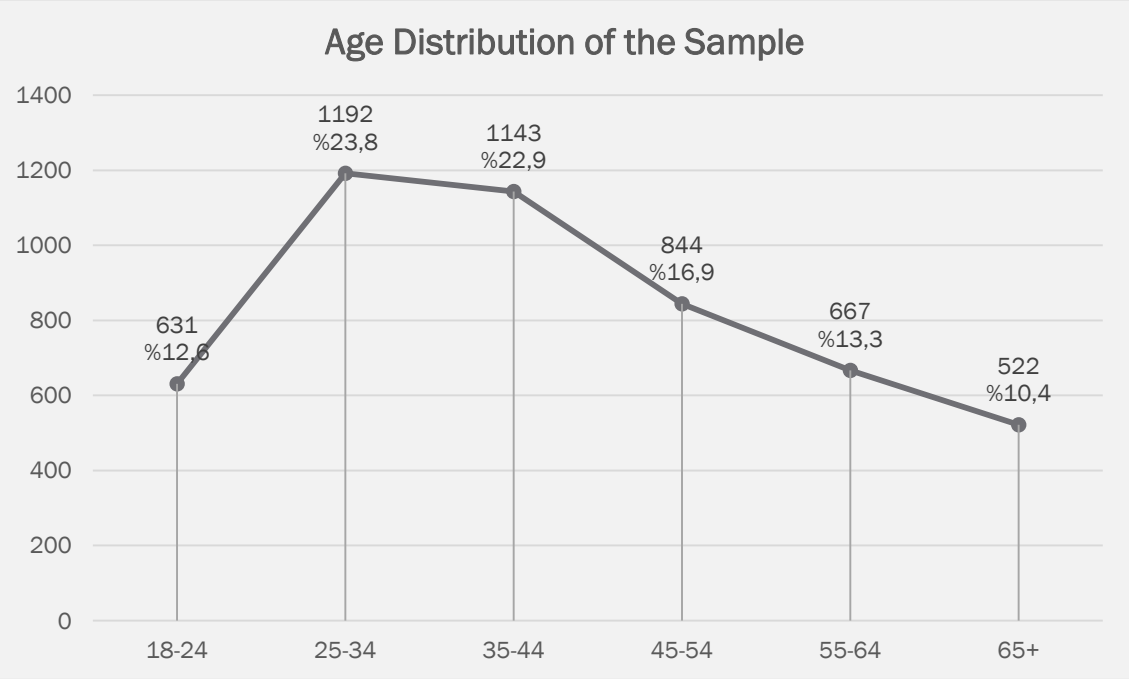
- T-SES Research was conducted with NUTS 2 level Turkey urban-rural sample supplied by TUİK.
- It was conducted at February and March 2015, in 47 provinces with 4999 persons.
- 340 questionarres was filled in countryside, 4640 questionarres were filled in city centers.
- The sample represents Turkey’s socio-demographic characteristics such as gender, age and education.

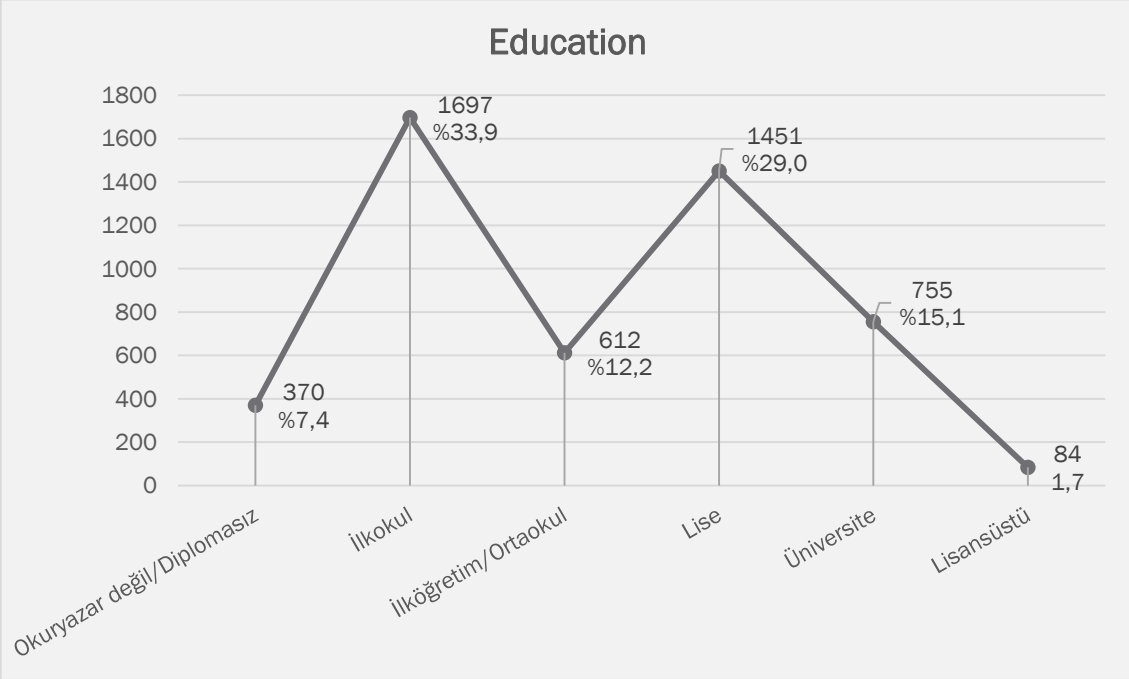
Structure of Sample of 2nd Survey



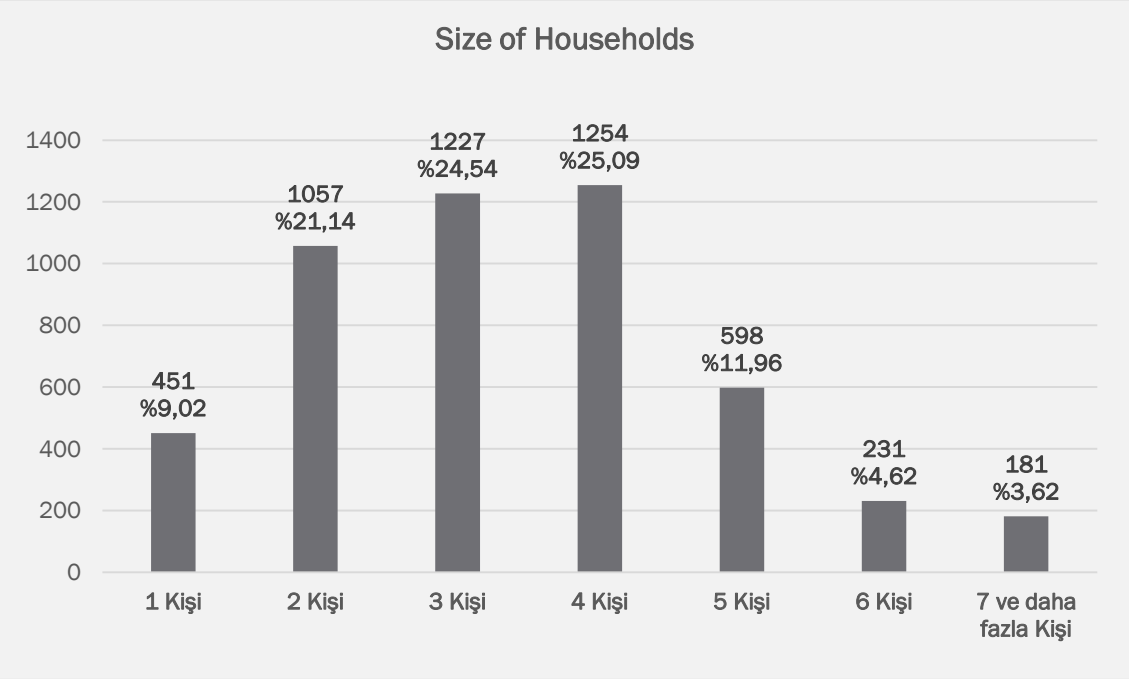


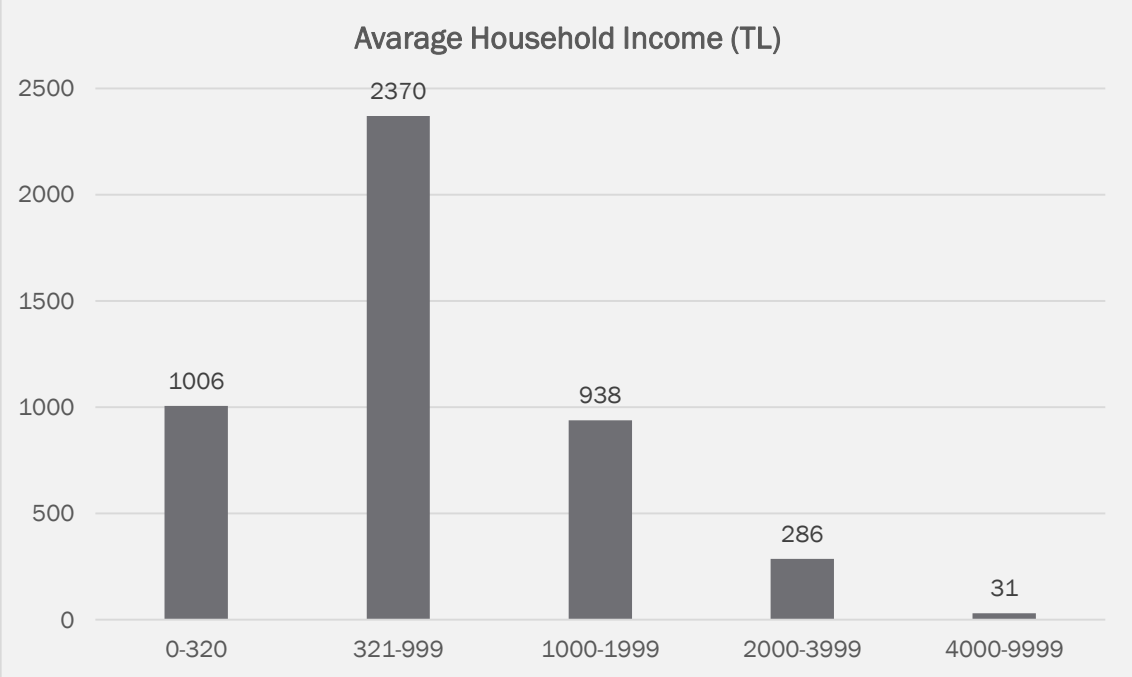
Structure of Sample of 2nd Survey





Structure of Sample of 2nd Survey





The average size of the households of the sample is 3,42. According to TÜIK, average household size in Turkey in 2014 is 3,6.

ESTABLISHING COMPONENTS

1st Component: Highest Occupational Score of Household

- Prestige scores of the research were taken by Occupational Prestige Scale of Turkey (T-MIS) which was developed in the first stage of the research.
- In the second research we obtained the information regarding occupations of all the members of households.
- An occupational prestige score was acquired for every household member and then the highest score were stated as the household score and used in SES analysis.

2nd Component: Highest Educational Score of Household

- Education level of every household member in our survey was obtained.
- Based on this information, an education score were created based on every individual's education year of the school of which they were graduated from.
- In this way, a scale was obtained in which the illiterate persons get 0 and doctoral graduates get 22.
- Then highest education score in the household were stated as the household education score and used in SES analysis.

3rd Component: Average Income of the Household

- In the survey, the income of every household member was asked separately in terms of both amount and type.
- Incomes of each household were added as amount and total amount of income were defined.
- Then this amount was divided into total individuals living in that house and average income amount were obtained.
- By doing that, the size of the household and dependent and revenue generating people balance were indirectly added to the SES index.

4th Component: Total Property Value of the Household

- At the beginning of the research project, inclusion of a property variable to the SES index was considered and for this purpose, questions were asked to people who participated in the survey regarding total market value of the real estates and cars and commercial vehicles owned by the household.
- Property ownership such as house, land and shops and their market sales value were also asked.
- By adding these values, house total value of real estate property were obtained. Similarly, ownership of cars and commercial vehicles and information about them such as brand, type and model year were also asked.
- Then the values of these vehicles were determined and total value of the vehicle property was calculated by checking the current insurance values list made by Insurances Association of Turkey.
- By adding real estate property value and vehicle property value, total property value was obtained.

T-SES STATISTICAL MODEL

1. Factor Analysis

- To create socioeconomic status index scores, a principal components factor analysis was conducted.
- We first did principal components analysis with the four aforementioned variables (occupation, education, income and property).
- Kaiser Meyer Olkin (KMO) and Bartlett were calculated. KMO test examine whether distribution is enough for factor analysis or not. Kaiser states that if value is becoming closer to 1 then it is perfect but if it is under 0.50, then it cannot be accepted. KMO was ,643 and Bartlett is (x2=1382,05; p<,001). KMO value supports the hypothesis that variables could be factorized while Bartlett value supports the hypothesis that data come from multi-variable normal distribution.
- In the analysis with four variables there was one factor with Eigen value above 1 and this factor explained 42.20% of total variance. However, in the component matrix property variable took a value under 0.40 (0.165). In other words, property variable doesn't contribute so much to SES value. That's why it is decided to eliminate the property value from factor analysis and analysis has been repeated with three variables.

1. Factor Analysis (cont.)

- Kaiser Meyer Olkin (KMO) and Bartlett values were again used in order to define whether data can be factorized or not in the three variable factor analysis. After all these calculations, KMO=,623 and Bartlett is (x2=1201,27; p<,001). KMO value support the hypothesis that variables could be factorized and Bartlett value support the hypothesis that data come from multi-variable normal distribution.
- Again there was only one factor with an eigen value above 1and this factor explained 53.79% of total variance. Tavşancıl (2010) states that it is not possible to reach very high variance rate in social sciences and variance rates between 40% and 60% are acceptable.
- Variables in trio model have a more explanatory power about 10% than variables in quartet model and it was remarkable. This supports the idea of taking out the property variable from SES index.

2. Regression Analysis

- After deciding variables which go into the SES index with factor analysis, it was time to create SES scores.
- To create SES scores, first three variables were standardized by taking their t values. So, three variables created and their average is =50,00, standard deviation is 10,00 and the values are between 0 and 100.
- Then, raw SES score was created by adding the values of these three variables. However, these three variables don’t equally affect the net SES score so their regression analyses were done one by one.

continuing in next slide ➲ ➲ ➲

Results of Regression Analysis

	Model 1	Model 2	Model 3
Occupational Prestige	.552		
Education		.546	
Income			.515
Fixed	22.410	22.756	24.588
R^2	.508	.575	.530

In these analyses, net SES score was dependent variable and occupational prestige, education and income were independent variable as one by one. The results of regression analysis have been shown in the table below. As is seen in the table, regression model gave a weight value for every independent variable and fixed rate for every model. The R2 values are above .5 which shows the explanatory power of dependent variables for independent variables

Formula of SES Scores

- After regression analysis, SES score formula has been made by using fixed values and weights that came out from regression analysis done one by one.

Formula used for creating SES scores and index:

[(22.410) + (.508* Occupational Prestige Score of Section)] + [(22.756) + (.575* Education Score of Section)] + [(22.410) + (.530* Income of Section)]

- Dividing the scores to maximum values and multiplying with 100 gave a standard scale of 100. The lowest SES score was 48 and the highest was 100. Minimum SES score is not 0 because everyone has some status.

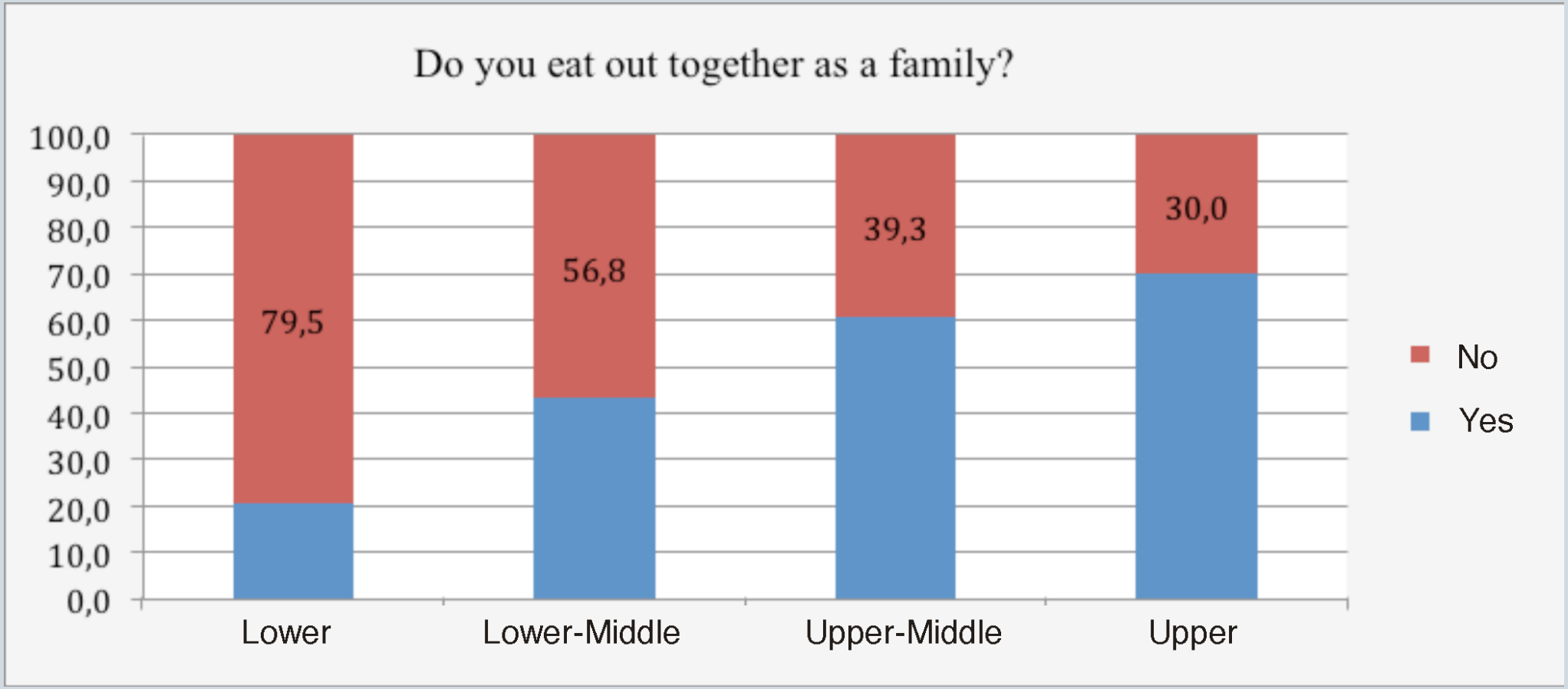
3. Identifying SES Groups: Cluster Analysis

- After calculation of SES scores of the households, SES groups were established.
- House SES scores which were created to determine the SES groups were used for cluster analysis.
- Four SES clusters/groups were created using set of midpoints that are numerically equidistant. These groups are named as lower, lower-middle, upper-middle and upper.

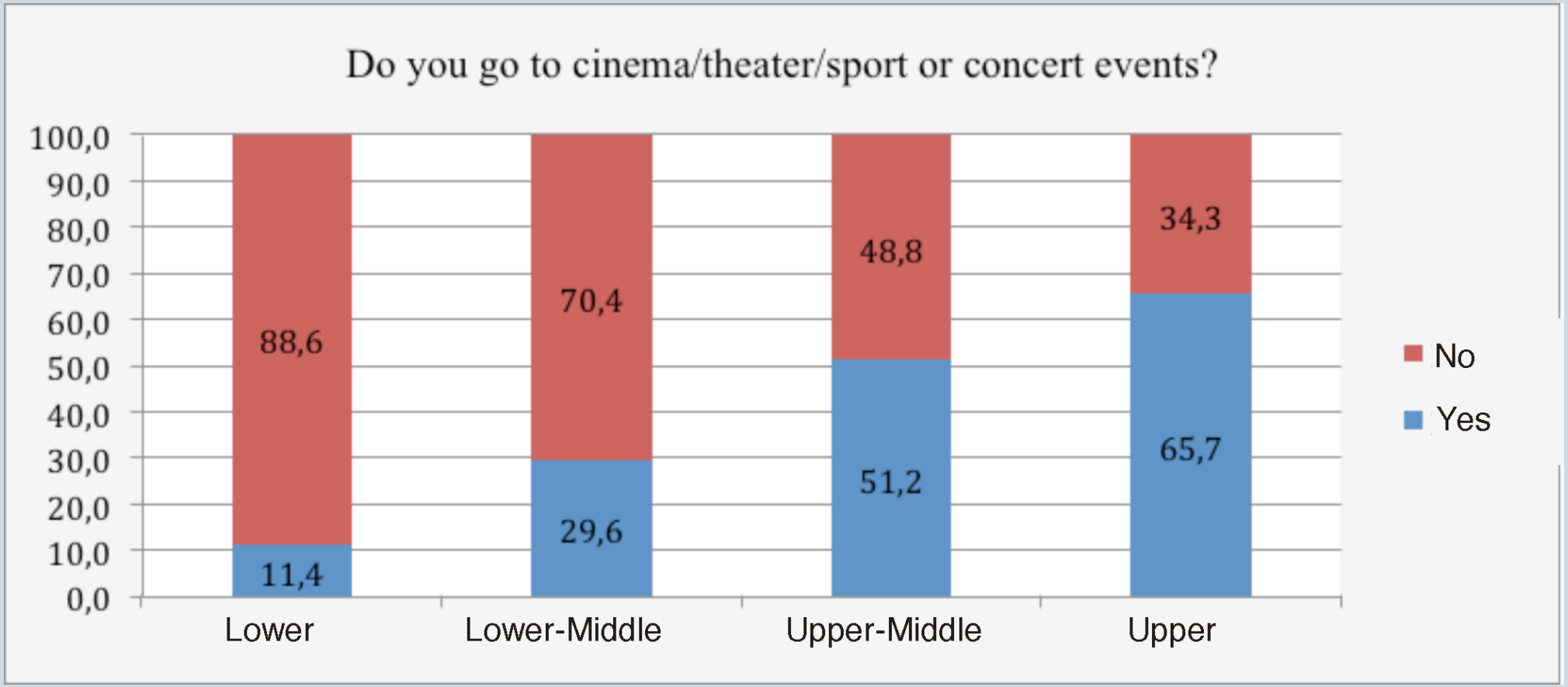
SES Groups

Group	Clustering Point	Clusters	Number of Households	%
Upper	81.98	78-100	100	2.2
Upper-Middle	74	70.95-77.99	678	14.6
Lower-Middle	67.89	65.26-70.94	1798	38.8
Lower	62.64	0-65.25	2054	44.4
Total			4630	100

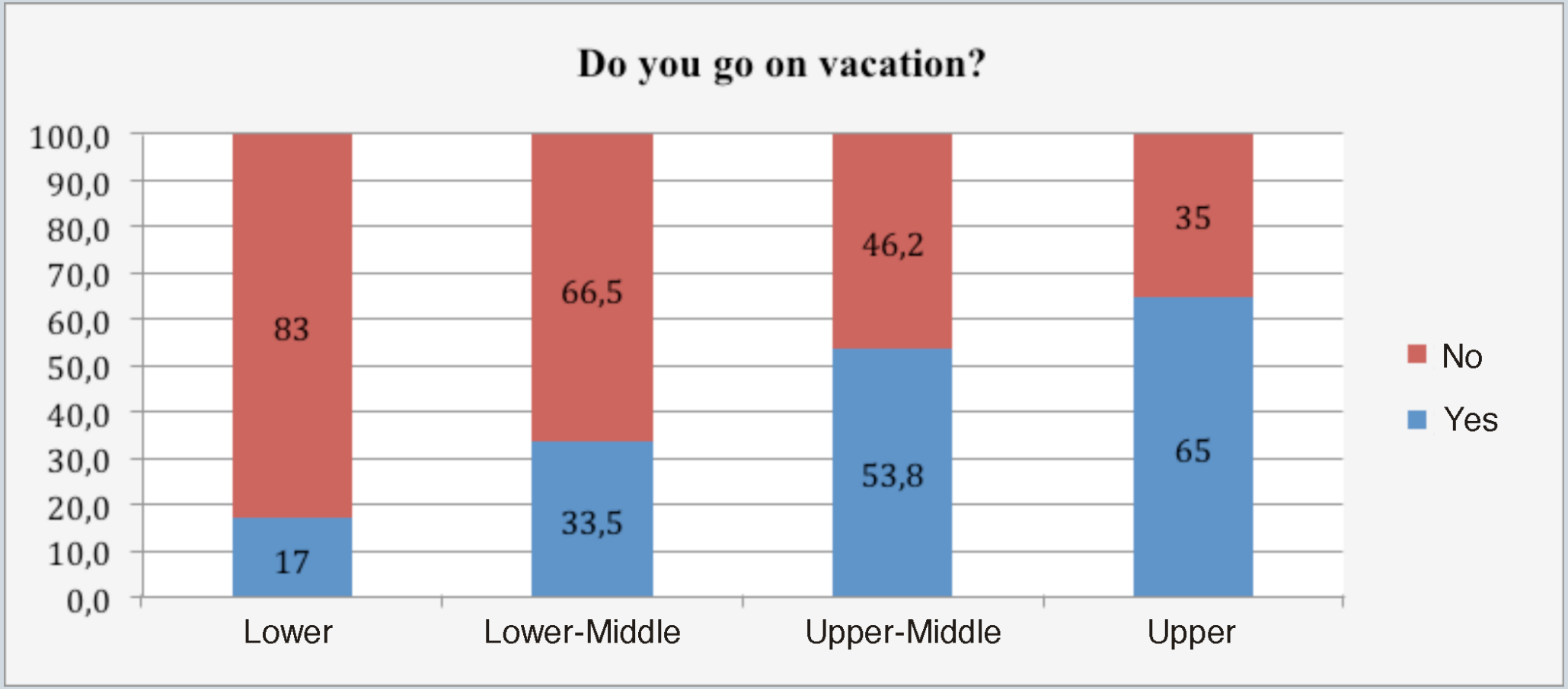
Some Socio-Economic Outcomes and SES Groups



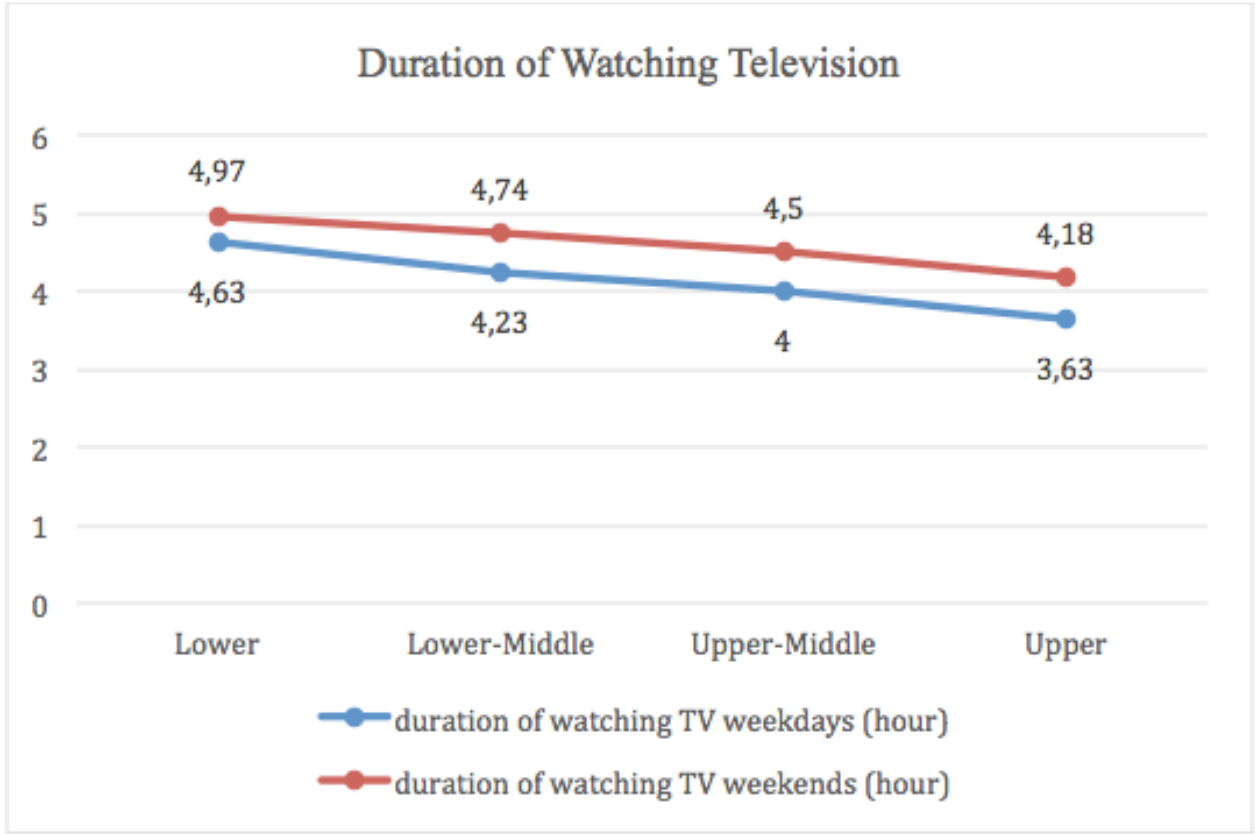
Some Socio-Economic Outcomes and SES Groups

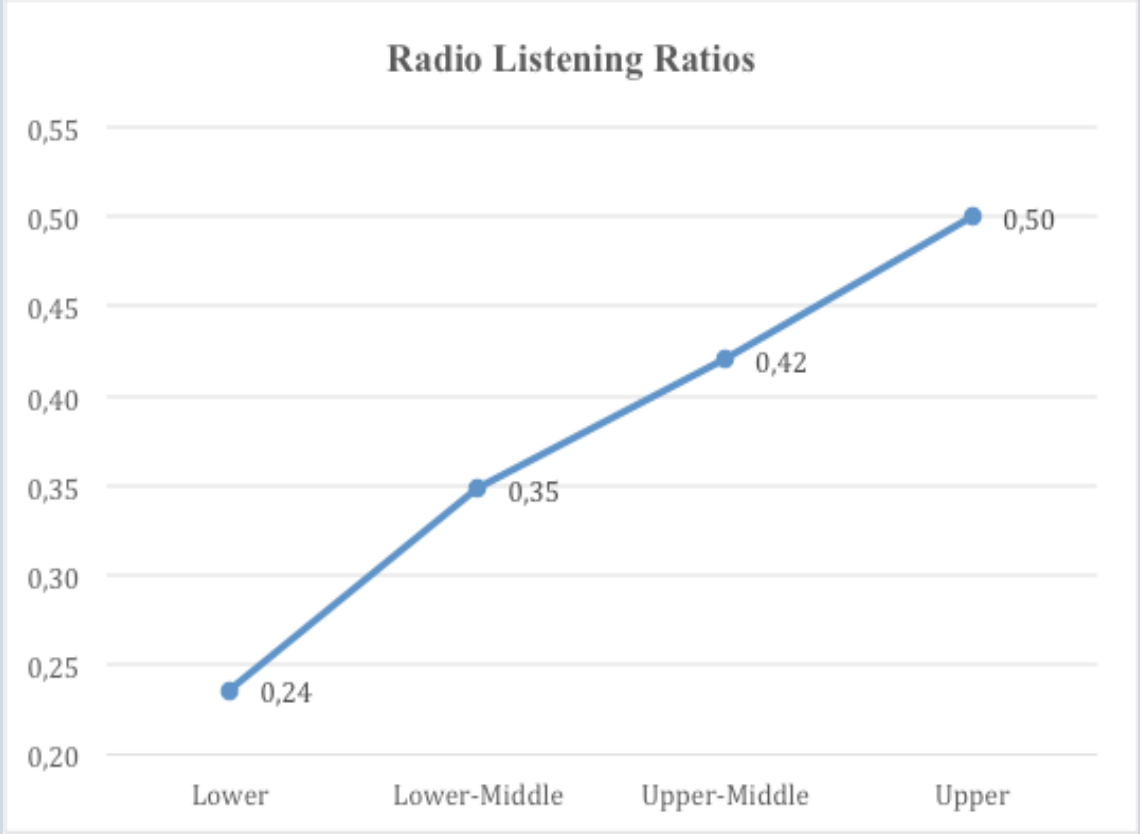


Some Socio-Economic Outcomes and SES Groups

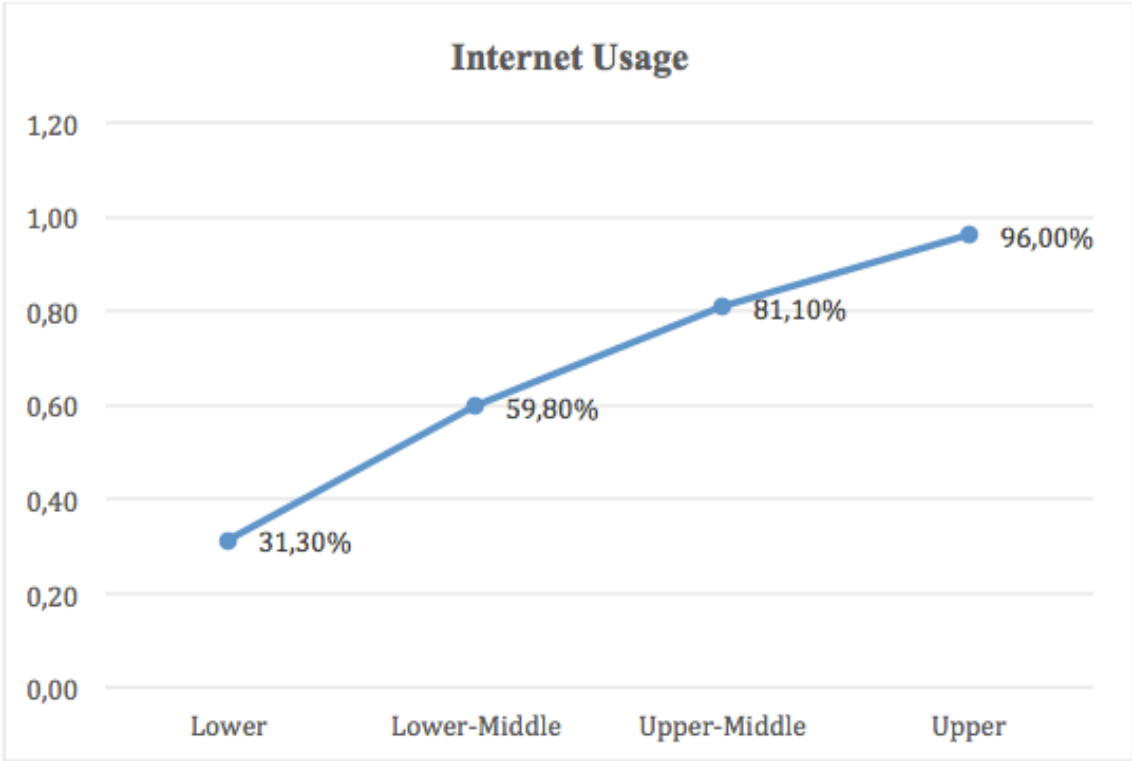


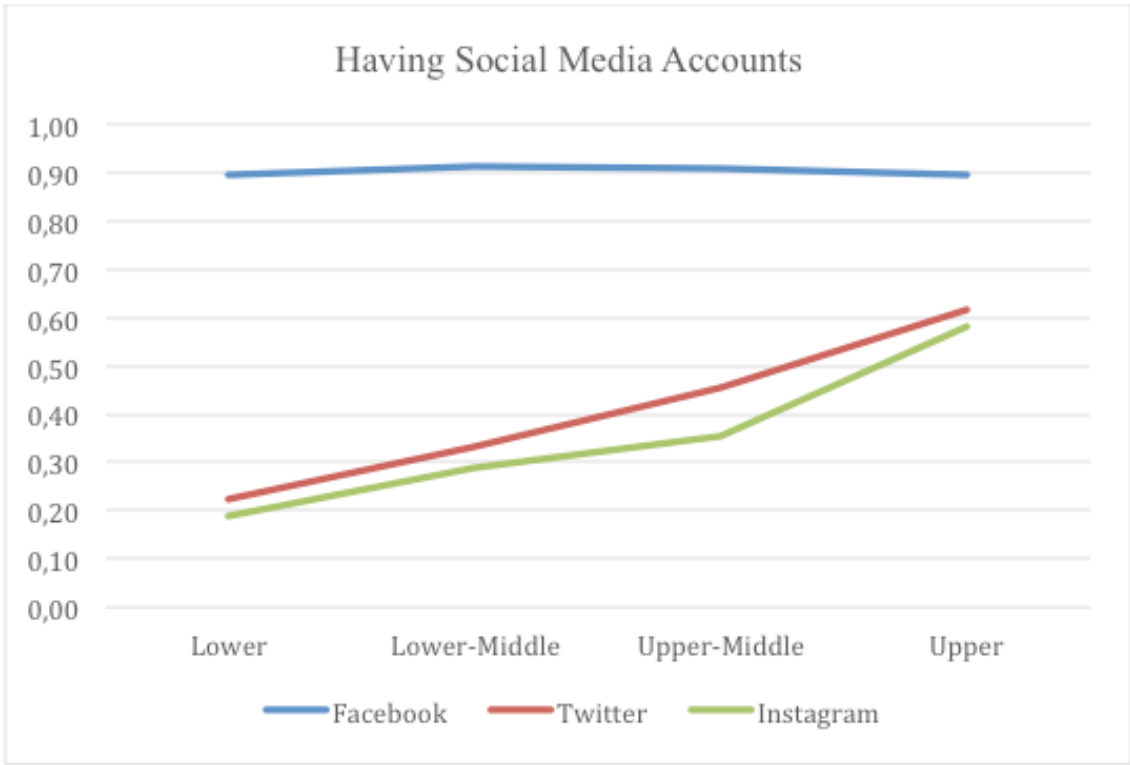
Some Socio-Economic Outcomes and SES Groups





Some Socio-Economic Outcomes and SES Groups





CONCLUSION

- Concentration in the middle
- Small number of high status households
- Large number of low status households
- Need for comparable over time data collection efforts