Analysis of the Spatial Pattern of Voting; Case Study: Tenth Parliamentary Elections in Northern Electoral District of Ilam Province

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Abstract

Investigation of the spatial patterns of voting as a function of electoral geography shows the dispersion of different ideas in voters' political action in an electoral district. This pattern as a result of human decision making has been created over time and is capable of converting to geographical map. This article investigates such pattern in tenth parliamentary election in northern electoral district of Ilam province. Therefore, in terms of purpose, the research is applied and is a descriptive- analytic in terms of nature and method. Data gathering procedure is based on library and field (questionnaire) findings methods. Data analysis method is based on qualitative and quantitative methods like Giss, T-test, and one-way ANOVA. The research findings show that geography of voting in this electoral district is affected by sociological, reformed rational choice, geographical, and Chicago school models.

Keywords: Electoral Geography, Spatial pattern of voting, Ilam Province.

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Introduction
Regarding that place is a key conception geography (Ahmadipour & et al, 2010:12), and human ecological relations with place and space is a powerful philosophical base for citizenship rights and political role playing in a democratic process, humans have the right to participate in democratic processes such as parliamentary and presidential elections (Hafeznia, 2006: 174). Of political role playing methods a voting can be mentioned whose relationship with place is appeared through tribe, political processes, parties etc. Analysis of this relationship is feasible by electoral geography. In this regard three types of maps are usually used as follows: 1. The geography of support for parties and/or candidates that are in many cases substitute of the social groups; 2. The geography of the constituencies (Electoral districts, riding etc.) within which votes are cast and counted; 3. The geography of representation that emerges when the votes are counted and the winners and losers are determined (Johnston, 2015: 345). Study of the spatial patterns of voting as function of electoral geography show electoral behavior which is repeated in different periods which can be useful in prediction and judgment of the distribution of votes and the result of election (Kavianirad, 2015). Investigation of this pattern can recognize factors influencing voting and also their intensity. This research is intended to study "which pattern do follow geography of voting in northern electoral district of Ilam province? To do this, a model is derived from the integration of sociological, reformed rational choice, geographical, and Chicago school models.

Research method
The research is applied in terms of purpose and is descriptive- analytic in terms of nature and method. Data gathering procedure is based on library and field (Questionnaire) finding methods. Data analysis method is based on qualitative and also quantitative methods like Giss, T-test, and one-way ANOVA. Statistical population includes people older than 18 years old (qualified for voting) in counties and cities of northern electoral district of
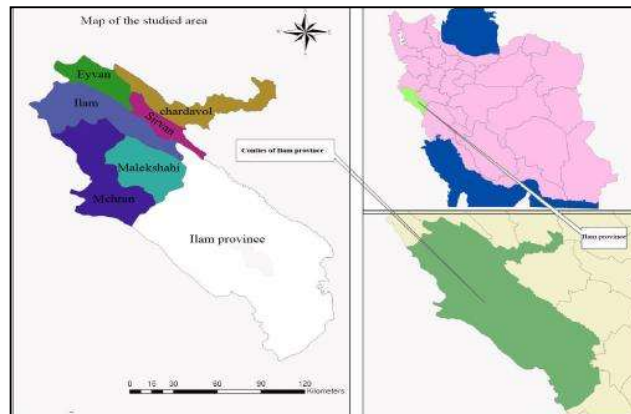
Ilam province. Sample size of the research equals with384 calculated using Cochran formula. Sampling was done through multi stage cluster sampling. Questionnaire is designed by authors because there is no a standard questionnaire in this domain. Cronbach alpha is used to calculate the reliability of questionnaire.

Table 1. The number of questionnaires filled in the counties of Northern electoral district of Ilam province

Counties	Ilam	Eyvan	Sirvan	Chardavol	Malekshahi	Mehran	Total
Number of questionnaires	213	48	16	56	23	28	382

The area of study

Ilam province with an area of 20133 km2constitutes about 1.2 percent of total area of Iran. This province is located at the west of Zagros Mountain, and is neighboring with Khozestan province to the south, with Lorestan province to the east, with Kermanshah province to the north, and has 425 km common border with Iraq. Based on 2011 census population of Ilam province is 557599 people, the smallest province in Iran (Statistics Center of Iran, 2010). Most of people are Shiite and they speak in Kurdish, Lak, Arabic and Lorish. Up to now 10 parliamentary elections has been held in this province. The area is divided into two electoral districts: North district including Ilam, Eyvan, Sirvan, Chardavol, Mehran, and Malekshahi with two parliamentary seats; and south electoral district including Dehloran, Darehshar, Badreh, and Abdanan with one parliamentary seat. In this research, Northern electoral district is studied. Main tribes in this district are Eyvan living in Eyvan, Arkavazi, Dehbalaee living in Ilam city, Khezel and Lak living in Chardavol, Zangavan and Khezel livingin Sirvan, Malekshahi living in Malekshahi county, and Mehranand Shohan living in Mehran and some parts of Ilam.

Map1. Geographical location of area

Theoretical approaches

By reviewing related theories, one can divide them into four main groups. The first group includes sociological theories derived from studies of Colombian school, the second group is in the domain of political studies, and these theories were almost formed by researchers of Michigan University and in opposition to Colombian school. The third group includes theories of political economy, and finally the fourth group is geographic-environmental theories.
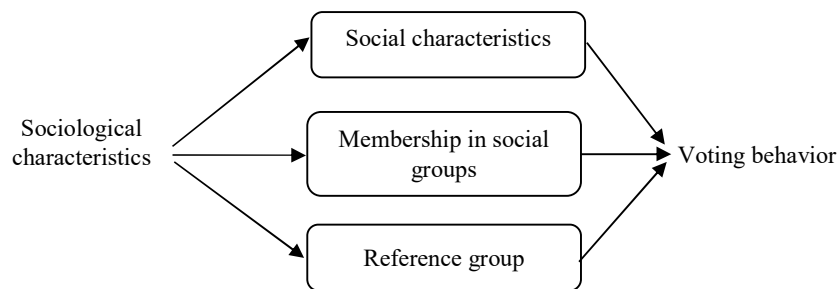
Sociological models

Sociological model of voting behavior called Colombian model was formed in order to study the impact of media on voting method (Timbancaya, 2014: 6). Findings of Lazarsfeld & et al. showed that social groups are determinant of individuals' voting behavior. It turns out that voters are influenced mainly by their social characteristics, and some of these characteristics are specially telling. Three factors were found to predict voters 'choices: socioeconomic status, religious affiliations, and area of residence (Antunes, 2010:146).

Lazarsfeld and Berelson in a research indicated that individuals' social

relations network is determinant in their voting behavior. In fact, lazarsfeld &et al. found that first of all people are willing to relate to individuals whose social characteristics in social groups are similar to them in terms of membership. In other words, electoral behavior is influenced by a relative continuous chain of contacts and individual's relations. So in this study reference group was noticed in addition to membership group. The problem with this theory, however, is that if the vote choice is determined by sociological stable factors, the election results will remain unchanged for a long time (Adams & Agomor, 2015: 367).

Figure1. Sociology of voting behavior
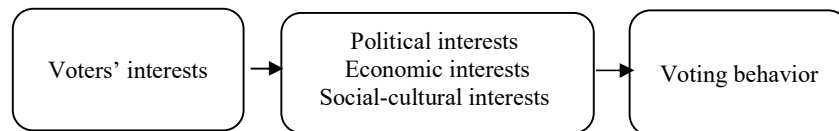

Political economy model

Rational choice model

The rationale theory of voting focuses on the fact that human being behaves in the same way in both political and economic settings. In sum, the model predicts that voters derive the most utility from the candidate or party closest to them on some ideological or policy continuum. On one hand, it establishes a direct analogy between consumers and voters and on the other hand, between enterprises and political parties (Adams & Agomor, 2015: 367).

Generally, based on this point of view, people choose candidates who create most interest/utility for them. In the struggle for suitable distribution

of power, voters and citizens are seeking three economic, social-cultural, and political utilities (Darabi, 2009: 66). In other words, this model predicts the voters' behavior based on triple interests (political, economic and cultural). Regarding drawbacks of this model some changes were considered and it was used here under the title of reformed rational choice model.

Figure 2. Rational choice model

Voters' interests	→	Political interests Economic interests Social-cultural interests	→	Voting behavior

Reformed rational choice model
The concept of framework in the study of social environment is introduced by Goffman. For Goffman framework denoted descriptive schema that enable individual to understand, perceive, and categorize different phenomena(Goffman, 1974: 21). Framework helps to react to meaningful events and thereby affect organization of experiences and guide actions. Based on the concept of framework, definitions of individual and group interests and also voters' bias towards candidates become meaningful and finally lead to voting. In the frame of collective action (tribe, neighborhood, and political movements) voters support for electoral candidates of election(Snow and Benford, 1988: 198). Snow believes that individuals choose in a frame which is formed under special time and place. This frame is a field and space which determines scale for interest, lose, and rationality and makes meaningful individuals' actions, their interaction with peripheral environment, and occurrences in the society (Sayedemami and Madadloo, 2015: 27).

Psychological model

Cognitive approach

Central in most cognitive accounts of electoral decision-making is the concept of schema, organized prior knowledge, abstracted from experience with specific instances that guides the processing of new information and helps to the retrieval of stored information (Conover Fedlman, 1948:96). The focus of cognitive perspective is on individual's cognition from surroundings. Cognitive model seemed to have two main advantages. First, the cognitive approach is both general and flexible. Second, the cognitive approach accounts for variation in individual thinking and action in similar situations over time; subtle differences in context or stimuli can engage different schemata, resulting in a different judgment (Bennet, 1981: 164-167).
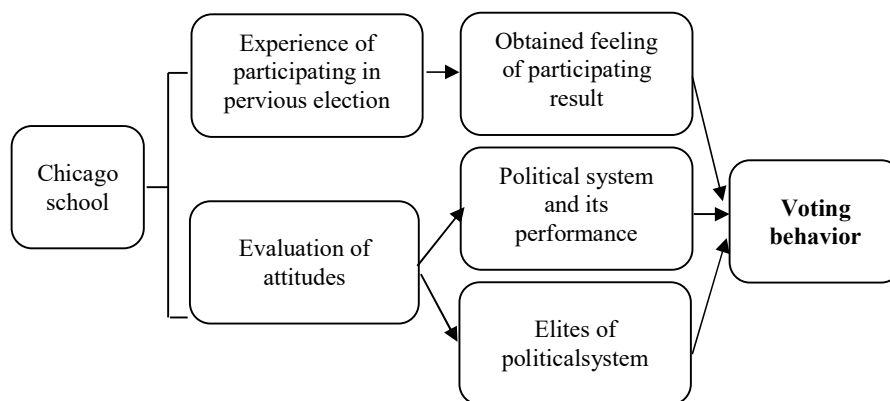
Ronald Inglehart's view

Maslow believes that each individual has some natural needs which are activators and guidance of his/her behavior. These needs are as follows respectively: Physiological, safety, belongingness, esteem, and self-actualization (Visser, 1998: 75-76). Maslow believes that each need in the lowest hierarchy has more power, ability, and priority. He also believesthat there are another set of needs (need to know and understand) which consist of a hierarchy of cognitive needs (Ibid). To the existing stock of intervening variables in voting research (opinions, attitudes, perceptions) Inglehart added concepts of value and need. He combines Maslow's third and fourth levels in the pyramid in onecategory,and that he uses the extra-pyramidal cognitive and aesthetic needs as a rough operationalization of the self-actualization need (Visser, 1998: 80). In hierarchy of Maslow's theory, right-wing parties are in a high level and left -wing parties are in low level of the pyramid. In Inglehart's view, post-materialist needs (esteem, belongingness, cognitive, aesthetic) had more representation than materialist needs (safety and life needs) in voters' behaviors in western industrialized nations during first decade of 20th century (Ibid: 81).

Chicago school psychological- political views of voting behavior analysis
One of the most outstanding voting behavior analysis in the realm of political psychology is of Chicago school. From Chicago school's point of view, voters' characteristics, the groups that they belong to, the characteristics which individual attributes to political people or groups, and accumulation of individual's past experiences are determinant of political behavior (Bashiriyeh, 2005: 8-20). This school strongly focuses on political views. In order to understand attitudes it considers concepts, pervious experience and general motivations of political actor. According to this point of view, a set of social and political forces in political space is determinant of voting behavior. A set of political elements are voter, candidates, and their special characteristics such as party affiliation, tribe affiliation candidates' views toward different subjects, individual's internal need, and past experience in the political area. In sum, based on this view, experience of participation in previous elections and the level of satisfactory resulted from these participations, and also evaluation of attitudes toward political system and elites and its performance determine voting behavior (Darabi, 2009: 70).

Figure 3. Voting behavior of Chicago school

Geographical- Environmental Theories

This point of view was introduced in the 1960s by Kevin Cox who saw voters as decision-makers are influenced by their local contexts. Cox (1969) conceptualized voters as nodes in a network, receiving, processing, and transmitting political information. The extent to which individuals might be influenced by the views of those they lived among, he argued, would be influenced by variety of biases: Geographical distance bias, acquaintance circle bias, force field bias, reciprocity bias and ideological bias (Cox, 1969: 92-95).

Place Identity

In geography, identity of each place is a function of biosphere motives, functions, and its symbols (Shokoee: 2007, 275). Proshansky and colleagues coined the term place identity, to describe the physical world socialization of the self or the self-definitions that are derived from places. This occurs when individuals draw similarities between self and place, and incorporate cognitions about the physical environment (memories, thoughts, values, preference, and categorizations) into their self-definitions (Proshansky&et al., 1983: 57). Place identity is defined by a combination of memories, concepts, interactions, ideas, and emotions formed in the form of special physical domains. Places are important sources of identity elements. In other words, identity characteristics originate from place in which we belong to; because places are symbols which are meaningful for human. Place also provides information about one's distinctive or similarity, information that may be based on physical or social features. Similarity would represent a sense of belonging to a place, and could be attained in a neighborhood(Scannell & Gifford, 2010: 3). Place attachment as a multidimensional concept includes person, physiological process, and place dimensions (Ibid: 2). Place identity appears with progress of place attachment over time.

One of other elements of identity expression is trying to attain

development and facilities. In marginal areas of a country, due to low level of welfare and development and lack of spatial justice and also existence of tribalism which is considered as one of main obstacles of development, participation in elections is a kind of identity expression.

Neighborhood effect
Results of a research about British elections in 1992 indicated that voters' decisions in fact are influenced by people who contact with voters in person. Most of people who did not vote to a party in previous elections (1987) after talking with a special party' fans were made to change their idea in support for mentioned party (Huckfeldt & Sprague, 1995). However, another research suggests that the conversation effect is, to some extent, culturally specific. For example, Japanese voters are less willing than Americans to give their opinions to others, and hence are less likely to encounter the heterodox view of other citizens (Ikeda & Huckfeldt, 2001). Key's "friends and neighbors" voting, in which voters in a particular area give greater support to candidates with local connections than to candidates from outside the area, is a distinctive variant of neighborhood effect. At a more local scale, analysis of voting behavior in the 63 electoral districts of the multi-member Galway west constituency at the 1977 Irish general elections reveals that the further from the district a candidate lived, the fewer votes the candidate gained there (Parker, 1982: 243). However, the neighborhood effect is neither sufficient nor necessary for the creation of a distinctive electoral geography. Voters can also be influenced by what they see around them, even if they do not talk to others in their local communities (Pattie & Johnston, 2007: 9).

Analysis and Evaluation of Research Theories
It can be said that voters' individual motivations are not considered in sociological models and the individuals' attitudes towards candidates is interpreted according to their cultural and social conditions. In fact, problem

with this model is that if vote choice is determined by sociological stable factors, the election results will remain unchangeable for a long time. In rational choice model voters are willing to individual thoughts, and personal interest is determinant of voters' behavior more than other factors, although reformed rational choice covers this interest as collectivism in the frame of tribe, county and political factions. Each Psychological model view has been identified according to special variables. Inglehart's view which is determined based on variable of materialist and post-materialist overlaps geographical models, (identity expression in order to achieve development and facilities) and reformed rational choice. Chicago view which contains candidates' evaluation, political orientation, and experience of participation in previous elections only includes individual motivations in voting. Additionally, variable of evaluation of candidates' situation leads to voters' recognition which is resulted in forming schema in their minds that covers cognitive view. Geographical model which includes neighborhood variables, place attachment, and localism cannot explain spatial pattern of voting in an area by itself, because voters can be affected by different events. In addition, neighborhood effect is the most important factor in small scales. Each model has emphasized on a special dimension of citizens' voting behavior. These models have focused on following factors, respectively: 1. social group and political culture; 2. citizens' interests; 3. interests in the form of frame; 4. individuals' schema about candidates; 5. voting based on realizing materialist and post- materialist needs; 6. experience of participation in previous elections, voters' political orientations, and candidates evaluation; 7. neighborhood effect, localism and sense of place. Since geography of voting is a place- related phenomenon, a global model cannot be achieved to analyze political action and also spatial pattern of voting. Therefore, an integrated model is considered hereby comparing and adjusting models and regarding their overlapping.

Neighborhood,
Place attachment,
and place identity

Social group
Local beneficiaries

Sociological
model

Geographical
model

Geography of
voting

Reformed
rational choice
model

Chicago
model

Evaluation of
candidates, Experience
of participation in
previous elections,
Political view of voters

Interests based on
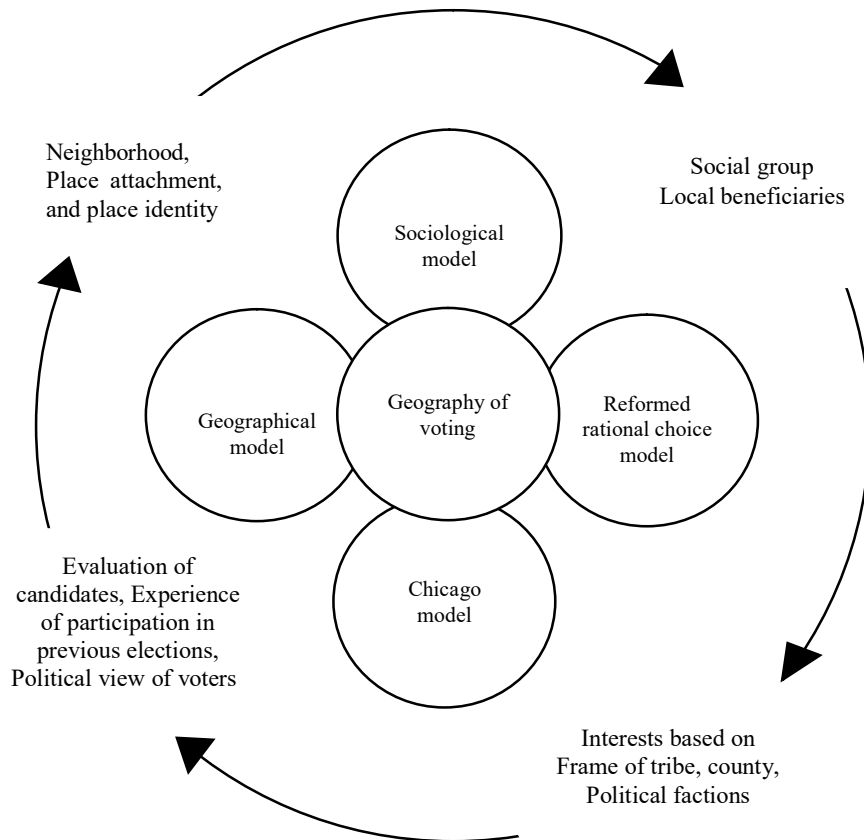Frame of tribe, county,
Political factions

Figure 4. Research theoretical model

Research Findings and data analysis

Library Findings

Tenth parliamentary elections was held in 2015 throughout the country. In this period, eighty people registered for two parliamentary seats in Northern electoral district of Ilam province. From the aspect of number of candidate who registered in elections, Ilam province was considered as62nd electoral

district throughout the country (the average was sixty candidates). Four candidates canceled their registration, thirty-six candidate's qualification was validated by provincial supervisor committee, thirty candidate's qualification was rejected and ten candidate were disqualified (Election Affairs and Country Divisions Group of Ilam Governor General, 2016). Five qualified candidates resigned in favor of other candidates. In terms of county distribution the most candidates were from Mehran (7 people), in terms of tribal distribution the most candidates were from Malekshahi tribe (3 people), and in terms of distribution of political orientation, Conservatives were in majority (14 people).In the first round no candidates could gain most votes (at least ¼ of votes), therefore 4 candidates who gained the most votes entered second round.

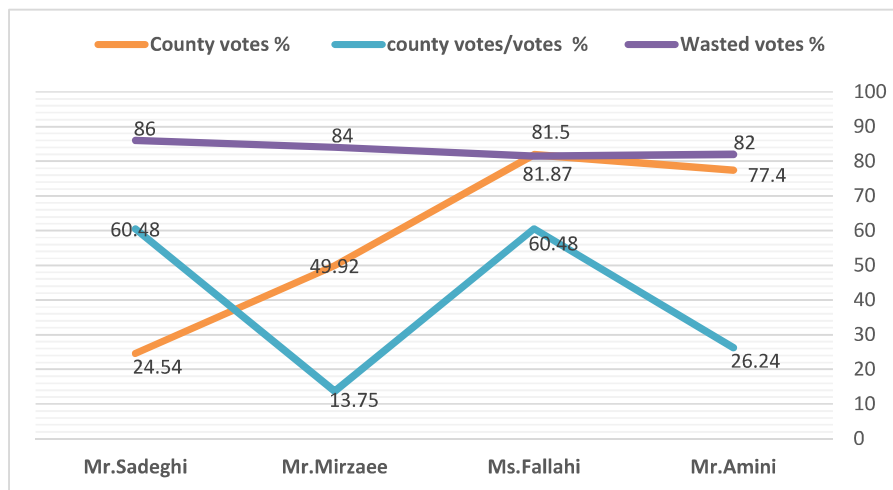Table 2. Candidates who gained the most votes in the first round

candidates	Tribe	Political orientation	hometown	county						Total votes	Percent of votes
				Ilam	Eyvan	Sirvan	Charda vol	Maleks hahi	Mehran		
Salam Amini	Malekshahi	Independent	Malekshahi	17800	901	290	2156	10330	7886	39363	17.79
Sara Fallahi	Eyvan	Independent	Eyvan	10771	23320	527	1880	441	1618	38557	17.42
Jallal Mirzaee	---	Reformist	Sirvan	20404	3946	4968	4734	647	1409	36108	16.31
Latif Sadeghi	Arkavaz	Independent	Ilam	27620	892	334	1288	146	1077	31357	14.17
Total vote cast				112508	28482	9950	36197	13288	20866	221291	---

Source: (Election affairs and country divisions of Ilam Governor General, 2016)

Findings show that hometown and tribal votes had more impact on proceeding Fallahi and Sadeghi to the second round of election than two other candidates (figure 1). Salam Amini proceeded in election campaign with political experience who had gained second place in pervious mid-term election. Regarding solidarity of Malekshai tribe, Amin could gain 70 % of votes of his hometown which share to 26% of all his votes. The most important base of his votes was Ilam city. Among factors influencing this issue were the presence of people from his tribe (about 6000 people) in Ilam city, support of teacher community of Ilam city (social group), use of local beneficiaries in attracting votes, and creation of emotional ties with voters.

Although Jalal Mirzaee gained 50% of votes in his hometown, but this only share to 14% all of his votes (figure 1), Mirzaee who had the support of reformists could attract political votes of other counties. Daryoush Ghanbari's (charisma character of reformists and Member of Parliament in 2 chambers) supports and speeches in favor of him led to increase in his vote's number.

Figure 5. Percent of cast and wasted votes of candidates in proceeded to second round

A survey of percentage of candidates' votes that proceeded to second round indicates numerous wasted votes (on average 82%) (Figure 5). This matter is the cause of frequency of candidates and two-round electoral system. Like other previous elections, no candidates could go to the Parliament for the second time (except 1 case) and the case of Omran Ali-Mohammadi who was the Member of Parliament in the previous period but in this period could gain only 5 percent of votes and was ranked 12thamong 31 candidates in first round shows this fact (Chicago school). Among interesting points of this period is hiding political orientations by some candidates in order to attract most tribal and county votes.

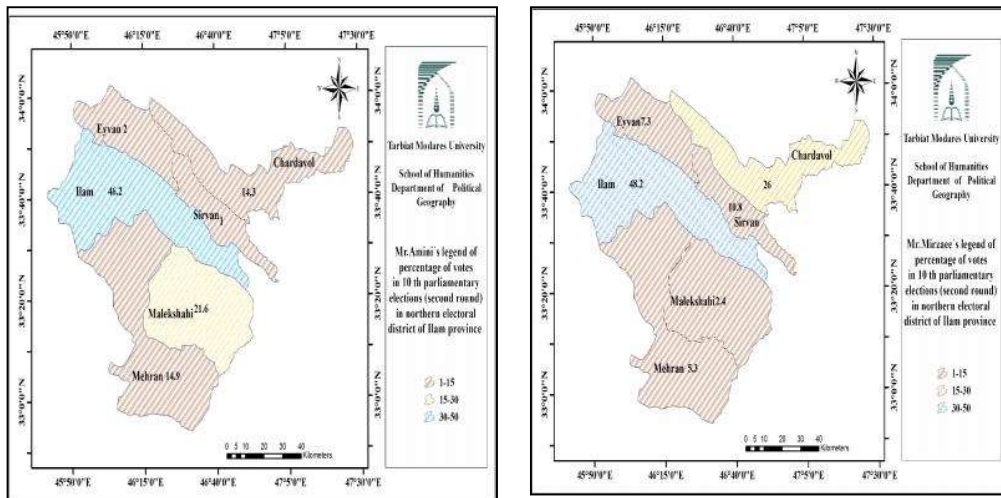Table 3. Candidates' votes that entered parliament in second round

Candidates	Tribe	Political orientation	hometown	county						Total votes	Percent of votes
				Ilam	Eyvan	Sirvan	Chardavol	Malekshahi	Mehran		
Jallal Mirzaee	---	Reformist	Sirvan	30000	4543	6742	16228	1421	3319	62253	36.9
Salam Amini	Malekshahi	Independent	Malekshahi	28302	1210	670	8748	13267	9079	61276	36.33
Total vote cast				83815	24415	7559	25448	13882	13525	168644	--

Source: (Election affairs and country divisions of Ilam Governor General, 2016)

Results of elections in this period reveal some facts as follows:

1. Decisive support of Malekshahi and Shohan tribes(Mehran and Malekshahi counties), Malekshahi people living in Ilam (about 6000 people), use oflocal beneficiaries of this tribe in attracting votes of other counties (specially Ilam), support of teachers community of Ilam city were of main reasons influencing election on Amini as a Member of Parliament. These reasons denote that spatial pattern of voting of this candidate is an integration of cognitive, geographical, and reformed rational choice models.

2. Political votes of reformists in different counties had a determinant role in Mirzaee's success. However, votes of his hometown (Sirvan) and neighboring county (Chardavol) are among effective factors that contributed to his election. Above-mentioned factors are confirmative of this quarry that Mirzaee voting spatial pattern is an integration of geographical, reformed rational choice and Chicago school models.

3. Tribal and hometown supporting were not the determinant factors to win the elections in this district (see maps 2 and 3).

Map 2: percentage of votes (10thchamber) of Salam Amini and Jalal Mirzaee,in Northern electoral district of Ilam province

Field findings

Descriptive findings indicate that 239 people (62.2%) of sample size are men and 145 of them are women. Most responders were in the age group of 25-30 years old. This group covers 163 people (42.4%) of total sample size of study. Next age group is people between 31-40 years old with 163 subjects (42.4%) of total sample size participated in this study. Also people under age of 25 and above 41 with respectively 14(3.6%) and 71 people (18.5%) have smallest sample size in the study. Responders' education were as follows: 25 people (6.5%) diploma, 100 people (26%) AD, 194people (50.5%) BA, 52 people (13.6%) MA, 13 people (3.4%) PhD. In terms of occupation, 151people (39.3) of sample size were practitioners, 144 people (37, 5%) were unemployed, 11 people (2.9%) were retired, and78people (20.3%) were households.

Statistical descriptive of indicators

Table 4. Statistical Description of Items

Raw	title	Indicators(questions)	Strongly disagree	Disagree	No idea	Agree	Strongly agree
1		Since I like my city I vote for my fellow-citizen.	19.3	18.5	5.2	40.6	16.4
2		In spite of presence of candidate from town, I vote non- townsman who has a better plan.	7.6	29.7	14.8	38.8	9.1
3		I try to convince my friends to vote our townsman who has a better plan.	5.5	10.7	22.9	44.8	16.1
4	Geographical model	People participate in elections in order to show power of their city.	5.5	16.9	16.4	46.4	14.8
5		Native candidate as a Member of Parliament notice his/her hometown in plans and decision making.	5.7	14.6	16.1	45.1	18.5
6		Voting for a townsman is a kind of competition with other counties of that electoral district for achieving more development and facilities.	8	16.4	12.5	40.4	22.7
7		Since I like my tribe I vote for my fellow-tribe.	17.2	17.7	8.1	33.3	23.7
8		In spite of presence of my fellow-tribe I vote for non-fellow-tribe candidate who has a better plan.	11.7	34.6	12.8	27.4	13.5
9		I try to convince my friend to vote for our co-tribe who has a better plan	6	13.5	21.4	40.6	18.5
10	Sociological model	People's participation is not in order to show the power of their county or tribe.	26.3	33.1	19.5	14.6	6.5
11		Fellow-tribe candidates as a Member of Parliament focuses on his/her tribe in plans and decision makings more than.	7.6	15.6	16.4	38	22.4
12		Voting for a fellow-tribe is a kind of competition with other tribes of that electoral district for achieving more development and facilities.	5.2	14.1	19.5	43.5	17.7
13		I vote for a candidate who is confirmed by tribal elders and make propaganda for him/her.	18.2	15.9	26	31.8	8.1
14		Before voting, I study the candidates' education status and resume.	2.9	14.1	23.4	44	15.6
15		I vote for a candidate whose political orientation is mine.	19	22.7	18.5	26.8	13
16	Chicago model	I try to vote for elites even if their politics orientations are different from mine.	7	14.8	16.9	33.9	27.4
17		Candidate's county and tribal competition in previous elections affect type of my choice.	12.2	22.7	25.5	34.1	5.5
18		I understand from pervious elections that pervious members of Parliament are not qualified to be chosen again.	9.4	8.3	14.3	38.3	29.7
19		My county's interest is that I vote for my townsman.	10.4	19.5	13.5	44.4	12.2
20	Reformed rational choice	My tribe's interest is that I vote for my fellow-tribe	12.8	19	16.9	43.2	8.1
21		My interest is voting a candidate whose political partiality is mine.	17.2	21.4	28.1	21.6	11.7

H1: Voting geography of Northern electoral district of Ilam Province is an integration of geographical, sociological, reformed rational choice, and Chicago school models.

In order to test the hypothesis, scores of models were separately combined and tested using T-test statistics (table). By use of this test both significance level and differences means were determined. In this regard, comparison of the average level of impact of integrated model which is 3.26 and the average level of evaluated models which is 3,and also calculated significance level (sig) which is a number less than 5 %, H1is confirmed.

Table5. Test results of four models

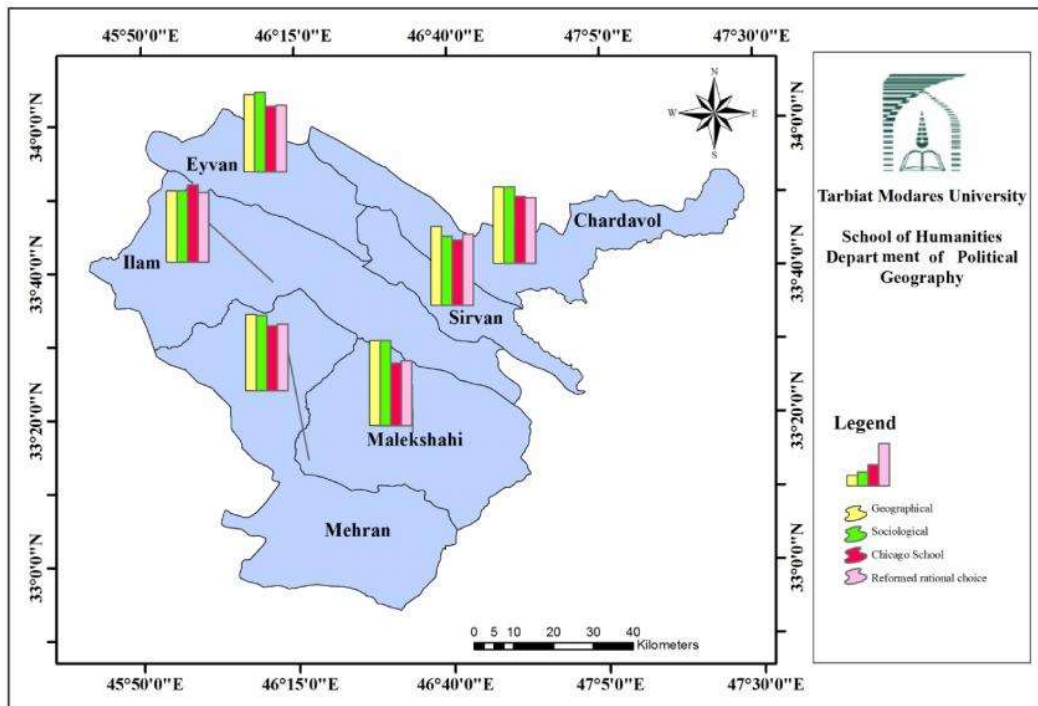| Model	N	Mean	Std. deviation	T	D.F	sig	Mean difference	95% confidence interval of the difference	
								lower	upper
Geographical	384	3.36	96%	7.34	0.36	0.0000	0.36	0.26	0.46
sociological	384	3.34	98%	6.97	0.35	0.0000	0.35	0.25	0.44
Chicago	384	3.11	57%	3.9	0.57	0.0000	0.57	0.06	0.17
Reformed rational choice	384	3.1	82%	2.6	0.1	0.0000	0.1	0.02	0.19
Integrated model	384	3.26	66%	7.73	0.26	0.0000	0.26	0.19	0.32

Before 6th parliamentary elections, geographical and sociological models had more representation in spatial pattern of voting in northern electoral district of Ilam province. The next one is Chicago and reformed rational choice that had more representation by creating a relatively open political atmosphere. This integrated model was more balanced in 10thparliamentary election which is not uniformed throughout electoral district (map 3). One–way ANOVA (Tukey test in order to compare means) indicates that representation of geographical, sociological, and reformed rational choice models in Malekshahi County and Chicago model in Ilam city are more than other counties. Ofreasons of more representation of geographical and sociological models in Malekshahi county following cases can be mentioned: tribalism, intense competition with other counties and cities in order to achieve development and facilities. Ilam County (the capital of

province) attracts population of counties because of development and more facilities that has led to reduce tribalism among them. Also regarding this matter that Ilam city has several universities, the presence of several thousand university students in this city is very effective in variety of voting pattern. These students naturally notice candidates' ways of thinking and attitudes instead of voting to fellow-citizens and fellow-tribe due to academic conditions, professors' trend of thought, educations and more radical ways of thinking rather than previous generations. Such people undoubtedly affect families and friends' political attitudes. These factors increase in socialization of Ilam and as a result the more representation of Chicago Model.

Table 6. Comparison of means of models using Tukey test

Model	N	F	Sig. level	Mean					
				Ilam	Eyvan	Sirvan	Chardavol	Malekshahi	Mehran
Geographical	384	2.39	0.037	3.22	3.46	3.57	3.46	3.83	3.45
sociological	384	2.54	0.028	3.22	3.55	3.13	3.46	3.83	3.4
Chicago	384	5.73	0.000	3.4	2.92	2.96	3.03	2.81	2.93
Reformed rational choice	384	1.03	0.039	3.14	2.99	2.98	2.98	3. 34	3.02

Map 3: Spatial pattern of voting in Northern electoral district of Ilam Province in 10th parliamentary election

Conclusion

In Ilam province, as one of boundary and peripheral provinces of Iran, participation in elections for most people is considered as a kind of identity expression and tribal and county competition because of low level of welfare and development, lack of spatial justice, and tribalism. Northern electoral district of Ilam province is not exceptional. From voters' view, choosing a Member of Parliament from a special tribe or county pave the way to achieve development and facilities. It has more representation in less developed counties, counties that are famous with tribalism and strong place

attachment (Malekshahi). Although, parties are not very active in this province, but political orientations affect spatial pattern of voting in the capital of province. Its intensity is high because of increasing insight and political socialization of residents. Since geography of voting is a place-related phenomenon, a global model cannot be achieved to analyze political action and also spatial pattern of voting. Therefore an integrated model is considered here by comparing and adjusting models and regarding their overlapping in order to explain spatial pattern of voting in Northern electoral district of Ilam Province in 10th parliamentary elections. Also, two-round electoral system has been effective in forming such model. Variables such as support of social groups (tribe, teachers and devotees) and use of local beneficiaries in attracting other counties' votes and hometown votes as factors affected Salam Amini's votes show the impact of sociological, geographical, and reformed rational choice models. Also Jalal Mirzaee's hometown votes and his political votes in other counties and Omran Ali Mohammadi's (pervious Member of Parliament) failure indicates the impact of Chicago school and geographical model in Northern electoral district of Ilam Province in 10thparliamentary elections. However, field findings shows that geography of voting in Northern electoral district of Ilam Province can be explained by an integration of above- mentioned models.

Acknowledgments

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