

# Identity Evolutions, Models of Using Internet and Bonding Social Capital in Iran

## (A Step in the Direction of Presenting a Structural Model (Path Model) with Case Study of Kerman City)

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### Abstract

In this research, we are attempting to review the relationship between users' models of using internet and bonding social capitals in Iran. The theoretical framework of the research are based on theoretical approaches of Dearnly and Feder, Velleman, Katz in the field of internet and models of using it and views of Putnam, Woolcock regarding social capital. The method used in this research is a qualitative – quantitative mixed method and the sampling method which has been used in the qualitative method is the purposive sampling method (theoretical sampling) and in the quantitative method, a combination of clustering, systematic and stratified sampling method in proportion with age and gender has been used. The statistical population of all persons who are 15 years old and more in Kerman city has been estimated to be 515114 persons in 2019 and the research sample has been estimated to be about 400 persons.

Research results indicate that the rate of citizens' usage of internet in Kerman city is very low (less than 5 hours per week). Other results of the research indicate that regarding the model based on information associated with news, mostly filtered and unpermitted news sites such as VOA, BBC and other networks have been used. Research data regarding social identity is indicative of formation of identity evolutions in the contemporary society of Iran. The results of the path model test of the research indicate that news and economic information based models have about (0.11) direct and positive impact and ethnic identity has a direct and positive impact (0.189) and group identity has about (-0.131) impact and entertainment based model has about (0.130) impact on social capital. The results of variables' indirect impacts have also been expressed in the research.

**Keywords:** *models of using internet, bonding social capital, social identity*

### Introduction and expression of research issues

Due to the daily increasing growth of technologies impacts caused by it, permanent evolution has turned into an unavoidable truth of social life. Among manifestation of these innovations, we can refer to the internet. Internet has intensified the flow of information throughout the world. Emergence of new forms of association in large computer networks such as internet provides the field for new social spaces. One of the

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issues which are crucially important in association with users' usage of internet is the model shown by the person in terms of using internet. A group of people become members of social networks, a group is interested with watching movies and TV series and a group selects educational and scientific sites.

In researches which have been done in association with the impact of using internet on social capital and each of its composing components, contradictory results have been reported. Some of the researches have evaluated the impact of using internet on social capital to be positive. For example, in the researches of (Sproull and Kiesler, 1991), (Rheingold, 2000), (Shah and Eveland, 2005), (Katz and Rice, 2004) and (Hampton and Wellman, 2003), the obtained results indicate that the positive impact of using internet on transmission of information and creation of social associations among big groups of people who don't have physical interactions with one another, creating new ways are for increasing civil commitments, enhancing political knowledge, informing adults and issues as such.

But there are also other researches which mention negative impacts of using internet. According to the results of some of these researches, the users of internet spend less time for social interaction and have more tendency to be stressed and depressed (Fernback, 1997: 36 – 54; quoted by Fernback, 2007).

In this research, by considering the models shown by each of the users in the regard of sites and weblogs, we are attempting to measure the rate of their social capital and we review the relationship between models used by internet users and bonding social capital. Of course bonding social capital can be evaluated as negative factors, because this type of social capital, in fact lead to bonding coherence, and it is able to encourage the members of a group to behave badly with those who are not in the range of group boundaries by coherence and emotional supports of them (a problem that Iran faces given its special social conditions). In this research, it has been attempted to study the internet users in the internet cafes of the city Kerman. The cause of this is that many citizens either don't have access to internet in their houses (they are students or soldier and so on) or they face some limitations in the house (parents' supervision) or they go to internet cafes due to higher speed of internet in some of them compared to the house.

## **Research literature**

In their researches, Zheng et al(2020) Review of education during the Kovid 19 period argued During COVID pandemic, proactive personality strengthens online interaction quality and Internet self-efficacy. In this study, they aim to explore the relationship between proactive personality and social capital through underlying mechanisms (such as internet self-efficacy and online interaction quality), especially to obtain data during the peak of the COVID-19 pandemic. Resoult show that the proactive personality of students

strengthened their social capital through online interaction quality during the COVID-19 pandemic. Similarly, perceived social support strengthened the mediating effect of online interaction quality in the association between proactive personality and social capital during the COVID-19 pandemic. Furthermore, the implications and future research directions are also discussed. In the opinion of Alkandri et al (2012), the result of having access to internet can be creation of cautious people who have power and will. They pay attention to the role of internet (Arabic spring) in Arabic countries. In their opinion, Arabic authorities have deprived the Arabs from political interventions and they see themselves as unable people. But internet and growth of satellite technologies lead to the current chaos in the Arabic countries. And also, in their opinion, internet and satellite will influence on people's religious approaches and beliefs in a way that it will expose information that they governments try to hide from them and there will be some paths for Arabs so that they would express their beliefs. Hashemi et al (2011), in reviewing the effective factors on using internet, some factors have direct relationship with using virtual space (internet) including communicative literacy, time of using the internet, family social database, trusting virtual space, having access to internet, location of accessibility to internet, satisfaction of services of virtual space, gender and living location and factors such as age and economic database of the family don't have any relationship with virtual space. Dyczewski(2020) in analysis relationship between social capital and internet used pattern argued that Active online, passive online and gaming are main models of internet use by youth. The Results of this article shows that Three models of using the Internet were distinguished: active online, passive online and Internet gamer. These models are significantly connected with students' personal social capital, and the family's economic capital. Cheng(2019) in analysis relationship between social capital and Internet crowdfunding argued that Making full use of social capital can attract more donations. Through the analysis of marginal cost, The result of this article shows that the organization can achieve higher level of cooperation at lower cost. Furthermore, there is an optimal threshold for publishing donation lists on the Internet to achieve better cooperation. We also find that network structure, historical information and the existence of altruists have influences on cooperation. Our research helps organizers effectively solve the dilemma of insufficient public participation in public utilities and high construction cost of public goods. Three models of using the Internet were distinguished: active online, passive online and Internet gamer. These models are significantly connected with students' personal social capital, and the family's economic capital.

Pashayi and Nikbakht (2008), by using the qualitative method, the four primary qualitative issues have been recognized as effective factors on using internet including the internet world as adults' virtual ideal, a change in lifestyle, enclosed internet for loneliness, a change in mental and physical situation. All of the participants in this study

have assumed internet world to be the ideal world due to facing internet's exceptional and attractive world and a great gap between real world and internet world.

### **Theoretical framework of the research**

Some of the researchers have adopted an optimistic approach compared to the relation above and they believe that man has entered a new world which is in conflict with the old one. Virtual world or the world of networks which is also called cyber space gradually replaces the real world. In this respect, internet helps the promotion of positive changes (Dearnly and Feder, 2005: 24 – 26). Velleman (2001: 438; quoted by Breton, 2003: 20) believes that internet, by providing a meeting space for people who have mutual interests and overcoming time and place limitations, revives social life, promotes democratic and free discussion, presents multiple perspectives and makes collective actions. Relationships formed in information space gradually extend to physical space and ends with modern forms of society which is a combination of network and non-network interactions.

Another approach is the pessimistic approach. In this view, Breton (2003: 21), using internet can lead to the reduction of social capital. And since the followers of this approach believe that using internet prevents people from paying attention to the real world, their network interactions become more than their direct relations. Internet links rarely end with promotion of deep friendship, supplement of intangible sources (such as emotional support) and real financial help (Dearnly and Feder, 2005: 29).

Various societies, based on the type of their sovereignty, meet the needs of the people of the society in various ways. Some governments consider more satisfaction of various needs of society members their priority (welfare governments) and there are also governments whose main purpose is to fulfill the needs of the citizens.

In the theory of usage and satisfaction, Katz refers to this point that social roots and social psychology of the needs which create some expectations of social media, lead to various models of using internet which have satisfaction associated with need as results and other consequences which are often undesirable. On the other hand, a person's needs are reflective of his social and economic environment. A person considers things with relatively lesser supply the most valuable (quoted by Ganji, 2006: 31), so it can be said that internet has a supplementary role. Making a judgment about the fact that internet leads to reduction or enhancement of social capital, finds meaning in the personal framework of a person's life.

Citizens, based on their needs, show some models in terms of using internet and these models are associated with their social capital, but the features of model of using internet are formed through society's social conditions in which persons' social identity plays an obvious role.

People achieve a special social identity by considering the role they play in the society. In Iran's society, people achieve all types of identities including religious, ethnic, group and national identities of their environment based on the available social conditions. They adopt some definitions from their environment for religion, religion's efficiency, rituals and social traditions and customs and so on and these definitions define a special religious identity for each of them. Or on the other hand, discriminations, inequalities, prejudices and etc, can form an ethnic identity for each of them that this ethnic identity can affect their group identities alongside with their religious identity and define it specifically for the person. This matter, alongside with limitations which are expressed for them in contrast with using internet (filtering), they go after fulfillment of their own needs and in the meantime, using models using models which will have most satisfaction for him (including overcoming limitations through VPNs) and therefore, a person can show passive and active models. According to this framework, the following hypotheses can be expressed:

1. There is a relationship between models based on family and entertainment information and models based on news information and bonding social capitals (Pearson coefficients for both variables are significant (0.000) and are respectively 0.306 and 0.291).
2. There is a relationship between religious identity, ethnic identity and group identity and bonding social capital (Pearson coefficients for group and ethnic identity are significant (0.000) and are respectively 0.225 and 0.142 but it is not significant for religious identity).
3. There is a relationship between religious, ethnic and group identity and models based on family and entertainment information (Pearson coefficients for group and religious identity are significant (0.000 and 0.046) and are respectively 0.223 and 0.100 but it is not significant for ethnic identity).
4. There is a relationship between virtual space and bonding social capital (Pearson coefficient is 0.094 and it is significant at a 0.009 level).
5. There is a relationship between how internet is accessed and bonding social capital (Pearson coefficient is not significant).
6. There is a relationship between the location of having access to internet and bonding social capital (Chi-square coefficient is twice 0.339 and 0.301 and it is significant at a 0.000 level).

Table 1: conceptual and operational definition of research variables

variables	Conceptual and operational definition
Model based on news	If we can consider a model or a model as series of laws which can be used to produce anything or a section of a thing. News information based model refers to the maximum rate of user's visitations to news websites, weblogs,

information	and journals and so on. This model can include permitted or unpermitted sites (filtered by Iran's government) and sites that provide economic information for the users (price of coin, automobile or dollar and so on).	
Model based on entertainment and family information	On one hand, it refers to the maximum rate of user's visitations to entertainment sites which the users visit for fun to such sites and on the other hand, it refers to the sites favored by families that they visit for needs such as counseling, etc. in various fields.	
Bonding social capital	<p>If social capital can be considered as norms, values and an understanding that facilitates bonding and intergroup cooperation in the respect of achieving mutual interest and this capital is often expressed with the rate of people's participation in social life and presence of the factor trust among them. Bonding social capital refers to social networks, social participations and confidence with a limited radius in a way that this limited radius draws a red line between relatives and others who are outside of the limited radius of family, relatives and close friends and they can be considered as a capital which is mostly damaging and disturbing. Some of the indexes and reagents are as follows: bonding participation (informal participation in charity: some of reagents: financial help to my family members so that they would improve in their lives, financial aid to my friends so that they would achieve their goal and so on. Religious informal participation: participating in religious mourning ceremonies in the house of close friends and relatives, holding a religious ceremony at home, visiting relatives and friends who have returned from pilgrimage. Cooperative participation: helping the elderly and children of his family, helping their families in daily jobs, spiritual and emotional supports to their family members and relatives.</p> <p>Social networks: association with homogenous groups, strong personal relationships, evoking feelings of people with special abilities to mobilize others, very strong relationship among family members, adjacency and closeness between members.</p> <p>Strong interpersonal trust: the rate of persons' trust in family members, secondly relatives and thirdly friends, how much do you trust your family? How much trustworthy do you consider your relatives to be? How much trustworthy do you consider your friends to be?</p>	
How internet is accessed	How internet is accessed refers to the limitations applied in the internet network and that whether the user stays loyal to these limitations or he is attempting to overcome the limitations by using various methods and software (using VPN and so on) and use internet freely.	
Social identity	Identity in the cultural substrate of social system (religious culture,	Religious identity: necessity of doing religious practices, religious commands

	<p>national culture, ethnic culture, sexual culture and etc.) determines the rate of the theoretical and practical loyalty of persons and social groups to a series of commands, regulations, and behavioral models of a specific cultural substrate (religion, nationality, ethnicity, etc.). Identity means who and what a person is.</p>	<p>being implementable in the entire life and etc.</p> <p>Ethnic identity: the importance of ethnicity in a person, tendency to marry children with relatives or others and etc.</p> <p>Group identity: tendency to communicate with friends instead of family, feeling peaceful in association with friends and etc.</p> <p>National identity: Iran's importance to the person, being proud of being Iranian, tendency or lack of tendency to immigration to foreign countries, being proud of Iranian culture.</p>
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**Used methods**

The method used in the present research is mixed research methods. This discovery is initially obtained by using the qualitative method and the technique of deep interviews with internet users and then the findings are linked with the quantitative research. The statistical population of all persons who are 15 years old and more in Kerman city, who live in any of the five municipal areas of Kerman, the population of Kerman is equal to 515114 persons according to the census of the year 2019 of Iran's statistical center and 400 persons have been estimated by using the Cochran formula. In terms of research validity, construct validity has been used and in research liability, the Cronbach alpha has been used and the Cronbach alpha coefficient has been reported to be more than 0.7 for all of the research variables which is acceptable. This coefficient is (0.880) for news information based model, (0.8) entertainment and family information based model, (0.805) bonding social capital, (0.750) trusting virtual space, (0.679) religious identity, (0.724) ethnic identity, (0.770) group identity and (0.818) national identity.

**Research data**

The sample of the present research has been 400 persons among which 62.8% of them have been men and 36.9% women. The age mean of the respondents has been nearly 32 years and in terms of being local or not, 41.1% of the respondents were originally from Kerman and 52.9% of them weren't local and those had moved to Kerman from other places and weren't originally from Kerman. The obtained results in terms of models of using internet indicate that in the model which is based on news information, respectively, the highest rate of visiting filtered journals and newspapers, forbidden news

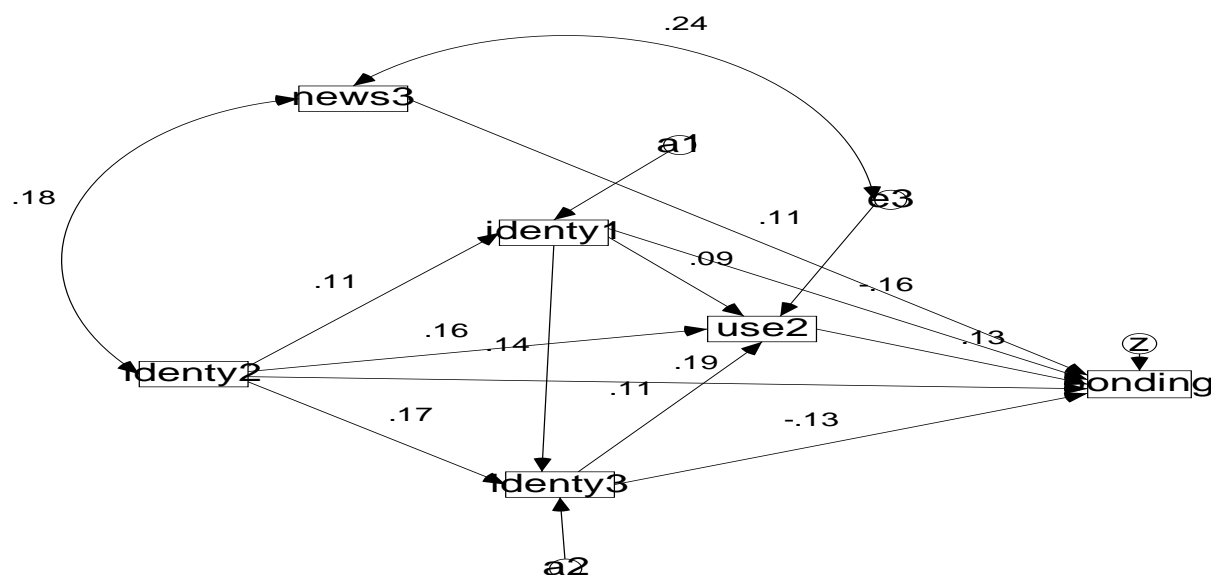
sites including (BBC, VOA and etc.) and visiting sites associated with Iran's economic conditions. The means obtained from statistics (out of 5 scores) is respectively 4.08, 3.99 and 3.85. In terms of the model based on entertainment and family information, the highest rate of users' visitation is respectively associated with sites of online games in a network, cooking sites and sites associated with counseling. The mean of given responses (out of 5 scores) have respectively been 4.02, 3.91 and 3.87. And also the research data provides important results for us in terms of users' social identity.

The mean score provided for each of statistics associated with religious identity indicate that Kerman's society has evolved in the field of religious identity. The mean obtained for all of the statistics associated with religious identity is less than average (the average extent is equal to 2.5 out of 5 scores). This shows that users' religious identity has been damaged in Iran's society. When they are asked if it is necessary for humans to do all of the religious practices? The obtained mean score is 2.37 which is very undesirable and when they are asked if the religious commands can be implemented in all of life issues; again the average score is low (2.45). The minimum average associated with this statistic: vow resolves people's problem most of the times (average 2.34).

In contrast with the obtained results in terms of religious identity, the average scores of the respondents' provided responds are associated with the statistics associated with ethnic identity. The provided average scores for each of the associated statistics are higher than average (higher than 2.5 out of 5 scores). This indicates that ethnic identity is very strong among users and this can make them motivated to achieve bonding social capital; because the bonding social capital draws a red line among relatives and strangers, and has tendency to maintain close and bonding networks and to destroy communications outside the group. Also users' group identity unfortunately has a more limited radius which often doesn't go further than close friends. This can be indicative of bonding relationships in the formation of group identity as well. The average scores of the statistics: I have more tendency to be with my friends than my family, it is most fun with friends than any other persons, if my friends have a plan, I go with them than with my family, are respectively 2.59, 2.39 and 3.52 (out of 5 scores). In the regard of users' national identity, also the results indicate that the mean is lower than average (which is 2.5 out of 5 scores) and among associated statistics, unfortunately the least presented mean which is associated with this statistic that: I'm proud of being Iranian, has been calculated to be 1.71 (average). This indicates that users are not happy that they are from Iran and they are not proud of it, they don't imagine Iranian people are people who have culture (3.72) and they believe immigration to foreign countries is better (3.50). if we put these results together with the results obtained for religious identity, unfortunately we hear an alarm which is on for Iran's society.

In terms of the relationship between models of using internet and bonding social capital, the following graph which has been designed by using the software amos 17, it shows the relationship between models of using internet and social capital. The CMIN or Chi-square index has been reported to be (0.136) which has a significance level (0.934). This indicates that there is not a significant difference between model and empirical data and model's fitting is high and the model has been confirmed. Other fitting coefficients have been provided in table 2.

Graph 1: path model of relationship between models of using internet and bonding social capital



Identity 1(religious identity),Identity 2( ethnic identity),Identity 3 ( group identity),News 3(economic and business news),Use 2( usage for entertainment and fun),Bonding(bonding social capital),a1, a2, z, e3(out of model error)

Table 2( fitting coefficients of path model)

	RMR	RFI rho1	NFI Delta1	PNFI	PRATIO	RMSEA	PCLOSE
Default model	.054	.993	.999	.133	.133	.000	.975

In the table above, the RMR coefficient (total fitting) is at least zero and the smaller this coefficient is, the better the fitting of model will be. NFI which is the acceptable rate for this index is at least 0.90 and a desirable fitting is 0.95. The PRATIO index is a rate between 0 and 1. The smaller this coefficient is, the better the fitting of model will be. The rates, which are higher than 0.60, are desirable for the coefficient PNFI. The other

index reported in the table is RMSEA. This index is 0.05 in the acceptable models. In our model, it has been reported to be equal to 0.000 which is very desirable.

Table (4) shows the estimation of standard and nonstandard impacts of research variables on each other in the significance level (p). Tables (5) and (6) respectively show covariance and correlation coefficient between research variables. The first point which we can understand from coefficient of impact of variables of the model is that the model based on business and economic news information has a change with ethnic identity, which means that these two variables changes together (they have covariance) and on the other hand, this model has a direct and positive impact (0.11) on bonding social capital. So it can be said that those who show a model which is based on business and economic news information have a strong bonding social capital. These are those persons that when they enter internet, they are trying to find sites associated with economic conditions of Iran and world, the price of coins and currency or employment sites and job opportunities.

On the other hand, the ethnic identity has a direct and positive impact (0.189) on bonding social capital. Ethnic social identity mostly shows ethnical tendencies in people. This ethnic identity is very strong in the city Kerman and thus it has had a positive and direct impact on bonding social capital.

One of the surprising results of the research is the reductive relationship between religious identity and bonding social capital. Religious identity refers to people doing religious practices and their beliefs; believing that doing religious commands can be implemented in all of the life issues and issues as such.

Since religious identity honors the difference between people by drawing a red line between religious people and others, we expect that this type of identity has a positive impact on bonding social capital; but this impact has been reported to be negative and reductive. In order to find the respond, the results provided in terms of description of theories of the respondents in association with the presented statistics shall be considered. The descriptive results are indicative of the weakness of religious identity among users.

But alongside the direct and one-sided relationships of variables on bonding social capital, the indirect impact of these variables through model of using entertainment and fun on bonding social capital is crucially important.

The impact of model of using entertainment and fun on social capital has been an increasing impact about 0.130. This shows that those people who are seeking games and entertainment, film, photos and things as such have strong bonding capital. Of course, selecting this model by the users is affected by their ethnic and group identities. Another result which is obtained from the model is that although group identity has a negative impact on bonding social capital, but the impact that this identity has on type of capital

through entertainment information based model is increasing and positive. So it is possible that those who have strong group identity also have strong entertainment information based model. It can be claimed that these three religious, ethnic and group identities influence the type model used by the users with the role and impact that they have on users.

**Table 4: estimation of standard and nonstandard of research variables on each other**

		Nonstandard regression weight	S/E/	C/R/	P	Standard regression weight
identity1	<--- identity2	/189	/087	2/179	/029	/108
identity3	<--- identity2	/236	/067	3/500	***	/171
identity3	<--- identity1	/114	/039	2/939	/003	/144
use2	<--- identity1	/094	/049	1/936	/053	/093
use2	<--- identity3	/140	/062	2/243	/025	/109
use2	<--- identity2	/276	/088	3/151	/002	/156
bonding	<--- use2	/468	/180	2/595	/009	/130
bonding	<--- news3	/398	/177	2/241	/025	/111
bonding	<--- identity1	-/575	/176	-3/260	/001	-/157
bonding	<--- identity3	-/605	/226	-2/679	/007	-/131
bonding	<--- identity2	1/206	/314	3/840	***	/189

**Table 5: Covariance between research variables**

	Estimate	S/E/	C/R/	P	Label
identity2 <--> news3	1/035	/287	3/602	***	par_9
e3 <--> news3	2/351	/492	4/778	***	par_10

**Table 6: correlation coefficient between research variables**

	Estimate
identity2 <--> news3	/183
e3 <--> news3	/242

## Conclusion

In this research, we are seeking to review the relationship between models of using internet and bonding social capital. In the first section of this article, we referred to this issue that in some of the done researches, the impact of using internet on social capital has been positive and in others, it has been negative. We tried to find the cause of such contrast in this research. The first cause of it lies in division of social capital. In this division, bonding social capital has been evaluated as a negative capital. The second cause of this contrast is the root in social conditions of that society and type of sovereignties that govern that society. The research results indicate that the type of models of using internet is formed under the influence of citizens' unfulfilled needs. They show a special kind of model of using internet based on their needs. The more a society prevents the fulfillment of a series of citizens' needs and creates limitations for them, the more people show models in the respect of satisfying those needs. On the other hand, the type of models shown by a person while using the internet is affected by the social identity of the person himself.

The filtering system in Iran is the reason for which the most visitations of users is associated with newspapers, journals and forbidden and filtered sites in news information based model. Forbidden news sites such as BBC, VOA and etc. have had the highest rates of users. After that, unbalanced economic conditions are the reason for which large group of the users visit economic sites associated with the price of gold, coin, currency, automobiles and etc. when they go to internet. On the other hand, identity models in Iran's society have been expressed in a way that users' religious identity is severely weakening and also alongside this weakening, the weakness of national identity can also be seen; whereas ethnic identity has been reinforced. Identity components, alongside with models which are based on news information and models which are based on entertainment, have led to the reinforcement of bonding social capital among internet users in Iran.

## references

1. Al-Kandari, Ali, et al(2012) The impact of the Internet on political attitudes in Kuwait and Egypt, *Telematics and Informatics* 29 , 245–253, available on [www.sciencedirect.com](http://www.sciencedirect.com).
2. Breton, Philip (2003), *Custom of internet, a threat for social bonding*, translated by Ali Asghar Sahadi and N. Jamshidi, Tehran, Amir Kabir
3. Cheng, Fei, Chen, Tong , Chen, Qiao(2019) Matching donations based on social capital in Internet crowdfunding can promote cooperation, *Physica A: Statistical Mechanics and its Applications*, Volume 531, 1 October .
4. *Communication in Cybersociety*. London: Sage.
5. Dearnly, James and John Feder (2005), *Network world, introduction on theory and practice in the field of information society*, translated by Amin Dehghani and Mehdi Shojaei, Tehran, Chapar

6. Dyczewski, Błażej(2020) Models of using the Internet by young Poles and their social capital, Children and Youth Services Review, Volume 119, December .
7. Fernback, J. (1997) 'The Individual within the Collective: Virtual ideology and the
8. Fernback, Jan(2007) Beyond the diluted community concept: a symbolic interactionist perspective on online social relations, <http://sspa.boisestate.edu/communication/files/2010/05/Fernback-Selling-Ourselves.pdf>
9. Ganji, Ahmad, 2006, reviewing the model of internet users and effective factors on it: teenagers and adults of the city Tehran, Master's thesis of the field social sciences research
10. Hampton, K., Wellman, B., 2003. Neighboring in netville: how the Internet supports community and social capital in a wired suburb. *City & Community* 2 (4), 277–311.
11. Hashemi, Shahnaz, Didar Farkoosh, Firooz, Ahmadi, Leyla (2011), conceptual model of using internet by the audiences, media studies, 6<sup>th</sup> year, 13<sup>th</sup> issue, summer
12. Iman, Mohammad Taghi, Kizghan, Tahereh (2003), reviewing effective factors on women's social identity, scientific and research quarterly of humanistic sciences of Al-Zahra University, 12<sup>th</sup> and 13<sup>th</sup> year, issues 44 and 45, winter
13. Katz, James E, Rice, Ronald E(2002) Social Consequences of Internet Use: Access, Involvement, and Interaction, Publisher: Cambridge, MA: MIT Press.
14. New Media Society 2007; 9; 49
15. Pashayi, Fatemeh; Nikbakht Nasrabadi, Alireza (2008), adults experience of life with internet: qualitative study, Journal of behavioral sciences, 2<sup>nd</sup> period, 4<sup>th</sup> issue, winter
16. Realization of Collective Principles', in S. Jones (ed.) *Virtual Culture: Identity and*
17. Rheingold, H. (2000) The Virtual Community: Homesteading on the Electronic Frontier (2<sup>nd</sup> Edition). Cambridge, Massachusetts: MIT Press. ISBN 0-262-68121-8
18. Shah, D. V., Cho, J., Eveland, W. P. Jr., & Kwak, N. (2005). Information and expression in a digital age: Modeling Internet effects on civic participation. *Communication Research*, 32 (5), 531-565.
19. Shah, D. V., Kwak N., & Holbert, R. L. (2001). "Connecting" and "disconnecting" with civic life: Patterns of Internet use and the production of social capital. *Political Communication*, 18 (2), 141-162.
20. Shah, D. V., McLeod, J. M., & Yoon, S. H. (2001). Communication, context, and community: An exploration of print, broadcast and Internet influences. *Communication Research*, 28 (4), 464-506.
21. Sproull, Lee and Kiesler, Sara(1991) CONNECTIONS: New Ways of Working in the Networked Organization, MIT Press.
22. Taylor, Wal J(2003) Socio-Economic Factors Affecting Home Internet Usage Patterns in Central Queensland, Informing Science Journal Volume 6, available on [www.scindirect.com](http://www.scindirect.com).

23. Williams, Emyr(2011/1/1), Measuring religious social capital: the scale properties of the Williams Religious Social Capital Index (WRSCI) among cathedral congregations, University of Warwick institutional repository: <http://go.warwick.ac.uk/wrap>.
24. Zheng, Fengjiao, Abbas Khan, Naseer, Hussain, Sabir(2020) The COVID 19 pandemic and digital higher education: Exploring the impact of proactive personality on social capital through internet self-efficacy and online interaction quality, Children and Youth Services Review, Volume 119, December .
- 25.