GREEN TECHNOLOGIES ACCEPTANCE MODEL IN IRAN: DETERMINING EFFECTIVE FACTORS IN DIFFUSION AND SUCCESS OF GREEN TECHNOLOGIES IN IRANIAN SOCIETY

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Abstract

Successful technology transfer is affected by the diffusivity of the technology in the target society and the general willingness of the society towards accepting that technology. Paying attention to the factors that have an impact on acceptance and diffusion of a technology firstly, can help to learn the reasons for unsuccessful experiences in the transfer of some technologies and influence of different aspects on that and secondly, it will help technology providers to increase the chance of successful technology transfer by determining the controllable factors. Technology acceptance models have been deployed and investigated in different contexts of information technologies. Also, this notion has been used for investigating the acceptance of some green technologies such as renewable energies. However, there has not been any model developed for studying the acceptance and diffusion of green technologies and the important factors affecting their acceptance in Iranian Society. The present research aims at developing a hypothetical model based on related literature of technology acceptance and diffusion models, investigating the effective factors on the success of green technologies, and deploying semi-structured interviews with experts for the collection and determination of research model hypotheses (qualitative research) and then quantitative analysis of the hypothesis using statistical data (quantitative research) for their acceptance or rejection.

Keywords: Technology Acceptance Model, Green Technology, Effective Factors, Green Technologies Success.

INTRODUCTION

The creation or transfer of technologies requires spending expenditures and, from an economic perspective, the propeller of creation and transfer of any technology is to ensure that technology's successfulness, meaning its acceptance among the users. The technology diffusion means the customers' excessive use of that technology and public willingness toward that (Yuryevich, O. M. et. al., 2020; Leonid, K., et. al., 2020; Kryukova, E. M., et. al., 2021). (1,2,3). From the investment perspective, the more this willingness, the less the risk imposed on the investor would be in the development and creation of that technology.

On the other side, it should be noticed that the growth of last century's technologies and lifestyles resulting from that especially in industrial and developed countries is responsible for a major part of pollutions on the earth. Accordingly, the need for green technologies which generally means the technologies that improve the environment quality is felt more than ever. Development of technologies that reduce energy consumption, greenhouse gas production and emissions, and environmental pollution are of the main requirements of the world especially the developing countries such as Iran, dealing with different environmental problems. However, it is necessary to recognize the effective factors on the green technology's success in Iran to

increase the chance of success and public willingness towards this technology.

The study of technologies acceptance has led to the development of technology acceptance models. Generally, the actual use of technology especially by the customers is the dependent variable of these models that relies on the mediator variable of customer's intention to use. The Intention to Use also depends on other independent variables explained in different models. These independent variables are basically related to technology-related features such as Ease of Use or customer-related features such as Perceived Usefulness, features such as customers' age and gender, or environmental features such as Social Norms. Users' acceptance of technology is one of the highly-investigated fields in the domain of information systems, and research on this domain has developed many theoretical models rooted in specialized knowledge of information systems, psychology, and sociology (4, 5, &6).

The previous studies have investigated the effective factors and manner of their effectiveness on individuals' acceptance of informational technologies. These studies include different branches. One of these research branches has focused on the individual acceptance and role of attitude to use or amount of use as the dependent variables and factors affecting them (4). The other group of studies has investigated the successful system deployment, appropriateness of technology, and organizational level work type (7, 8).

Most related researchers have surveyed different proposed models. Although these studies were effective in the development of technology acceptance models in individuals, some questions have been raised. Venkatesh (2003) (9) in research proposing the Unified Theory of Acceptance and Use of Technology (UTAUT) model, studies all the models existing in the domain of informational technologies acceptance and compares the key factors. Despite the matter that the models have more common features, no model comprises all the main factors. On the other hand, some caution should be exercised when using the mentioned models and studying them in different cultural fields since not much

research has been conducted on investigating the role of culture in studies related to information technology acceptance (Vatanparast and Qadim, 2009) (10). These cases indicate that grounded studies should be done to investigate the big organizations' employees' behavior towards information technology acceptance in the Iranian cultural context. It is obvious that if the results of these studies are similar considering the proposed models in other cultures, the models can be generalized regardless of cultural context. Of course, in the case of presenting a new model, it should be experimentally tested and its applicability should be proved in real conditions. Although relatively much qualitative and quantitative research has been done about the technology acceptance models, most of these studies were conducted in the field of technologies related to the mobile phone, the internet, and software. Further, it cannot be ensured if the influence of these factors on using a technology confirmed in some quantitative research by statistical data is generalizable to green technologies diffusion and usage. Therefore, it is necessary to provide the technology acceptance models for green technologies use by applying the qualitative methods and then investigating them, using statistical data. The other important point is that the technology acceptance models are a set of hypotheses about the correlation between dependent and independent variables that should be studied in different communities' contexts. In their research on factors affecting the mobile internet use by Nokia corporation customers in three countries of Russia, China, and America, Vatanparast and Qadim (2009) (10) found out that not all the correlative relations between the independent variables and the dependent one (amount of use) has not been equally confirmed in all the communities and some of these hypotheses were not confirmed in some investigated countries regarding the statistical data. Accordingly, to further investigate these factors, this research firstly determines the independent variables effective on green technologies acceptance are determined by review of related literature on diffusion models of technology use as well as green technologies. By using this information, the semi-structured interview is deployed to gather the experts' opinions in this context.

This is done to correspond the related studies' findings (that were generally accomplished regardless of local and regional features and properties especially in Iran) to the domestic facts, features, and needs. The semi-structured interviews that are done by coding the interviews, classifying the codes, and extracting the relations between the variables, lead to the creation of a hypothetical model for green technologies acceptance in Iran. Next, the proposed model is investigated using statistical data to determine the accuracy of hypothetical relations. The results of this research, in addition to its significance at the global level, adding to green technology diffusion models, as well as testing the hypotheses that might be common with developed models in other qualitative research, can be of special importance from the macro-planning perspective for green technologies development in the country by using the statistical data in Iran and their acceptance or rejection. These research findings can help the green technologies planners to recognize the contexts of these technologies' success in Iran and consider their fulfillment as the prerequisite for the creation or transfer of these technologies. Moreover, the green technologies investors can recognize the low-risk investment options from among different options and invest in these technologies by investigating the effective factors on green technologies success. The major questions of this research are as follow:

- What are the effective factors on the users' acceptance of green technologies in Iran?
- How much is the public willing and use green technologies in Iran?
- What is the relationship between the factors (independent variables) and the amount of usage (dependent variable)?

METHODOLOGY
The methods applied in this research include two phases of qualitative research to prepare the hypothetical model, and then the quantitative research to test the proposed model:

1. Review of related literature and semi-structured interview (qualitative method- preparation of hypothetical model): the independent variables affecting the green technologies acceptance are determined by a review of related literature on diffusion models of technology use as well as green technologies. By using this information, the semi-structured interview is deployed to gather the experts' opinions in this context. These interviews that are done by coding the interviews, classifying the codes, and extracting the relations between the variables, lead to the creation of a hypothetical model for green technologies acceptance in Iran. Next, the proposed model is investigated using statistical data to determine the accuracy of hypothetical relations.

2. Testing hypothetical model by statistical data (quantitative method): in the next stage, by using statistical data, the information related to the solar panels as a sample of green technologies is collected in a statistical population including dependent and independent variables the measurement method of which has been specified in the previous stage. The correlation between the dependent and independent variables as well as the accuracy of related variables measurement methods are tested, using the collected statistical data and SPSS software and the accuracy of the relations is revealed.

To design the questionnaire of the present research, the 5-point Likert scale was employed which is considered as one of the most common measurement scales. Further, the information required in the theoretical foundations section was collected using the library and documentary methods and the information of the field studies section has been gathered by the use of questionnaire, interview, and relevant information accumulation.

FINDINGS
Review of related literature; technology acceptance models
The technology acceptance models have been proposed since the early 1980s and thereafter different technologies have been developed in

different technologies and were tested by the researchers in different technological, cultural, and geographical contexts.

The first technology diffusion model was the multi-attribute model proposed for the first time by Fischbein and Ajzen in 1975 and then developed in 1979 (12). It represents a complex model of relationship existing between the customer's belief, attitude, intention, and behavior. According to this model, the individual's attitude towards the service s/he receives is based on the individual's evaluation of the same service. Fischbein's proposition for this model is the behavioral learning theory that says the attitude toward a technology takes place nearly automatically (13). According to this model, when an individual learns about new technology, that learning affects his/her internal beliefs about the features of that technology. In other words, if the individual

expects a positive conclusion of a technology, s/he would have an optimal attitude toward that and vice versa (14). Based on this model, the attitude toward technologies may be changed regarding the evaluation of technologies features.

Theory of Reasoned Action (TRA) is the modified version of the Multi-attitude model that is, in fact, a tool to deeply perceive the relationship between the attitudes and beliefs with the individual intention for the reception of presented services. This model manifests the relationship between the attitude and the behavior and predicts the consumer's behavior based on that. The theory of Reasoned Action (TRA) is one of the most powerful theories that explain a wide range of human behaviors. According to this theory, behavioral intention is the most important determining factor for user actual behavior.
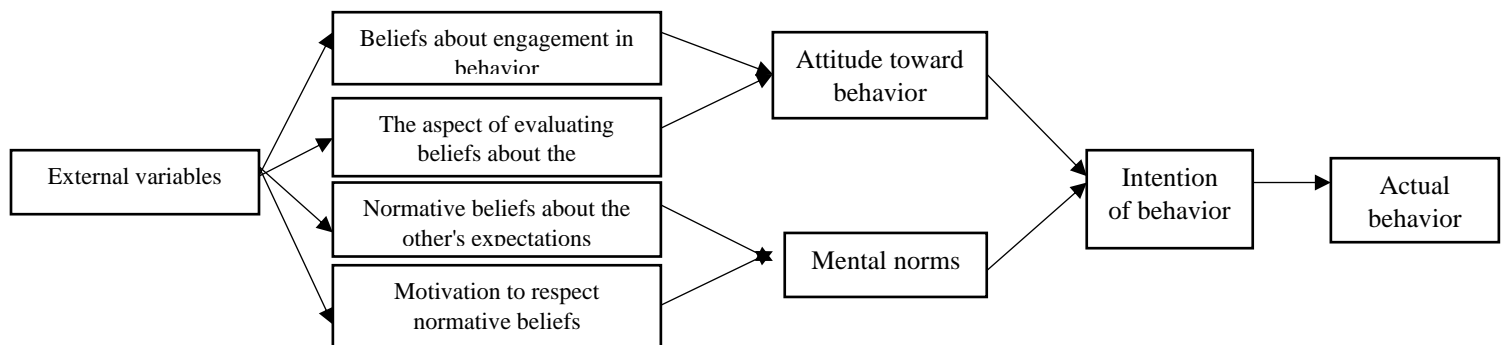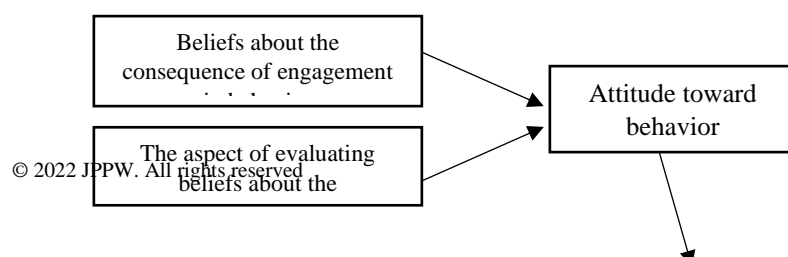

Figure 1- Most Important Determining factor for User Actual Behavior

Ajzen (1991) (5) modified the Theory of Reasoned Action (TRA) and proposed the Theory of Planned Behavior that involves the manner of the effectiveness of condition in which the individual cannot control his behavior completely on the technology acceptance (5). Inclusion of the third factor, i.e., behavioral intention or perceived behavioral control, is the main difference between the Theory of Planned Behavior and the Theory of Reasoned Action. In the case of technology usage, the perceived

behavioral control indicates the degree to which the individual believes in controlling the personal or external factors that can facilitate or restrict the system usage (18). Further, the type of attitude towards behavior is indicative of an individual's desirable or undesirable evaluation of technology usage, and the mental norm means the social pressure to use or not to use the technology. Ajzen (1991) (15) also considers the behavioral control equivalent to the concept of "ease or difficulty of performing a behavior".
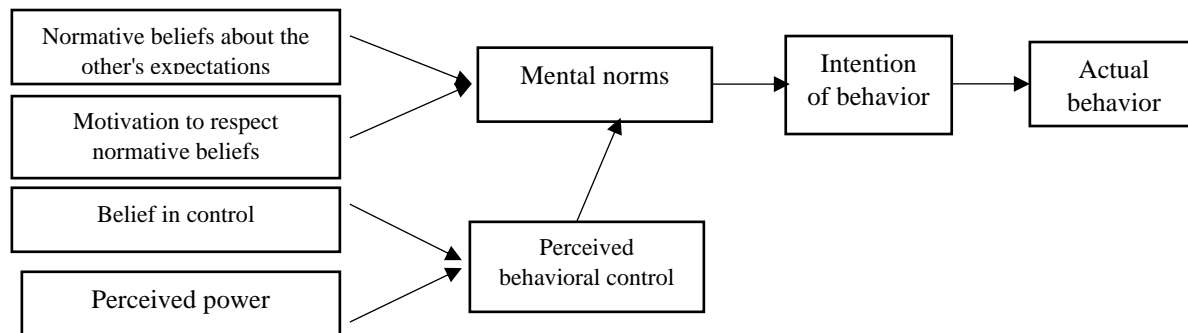
Figure 2- Theory of Planned Behavior

Although both two theories of reasoned action and planned behavior presented good foundations, the Technology Acceptance Model (TAM) (4) was especially proposed to predict the information technology acceptance by a user and amount of its usage and, today, it is considered one of the appropriate, strong, and most useful models for the prediction of users' acceptance (17). According to the technology acceptance model, the intention to use a system is determined by two variables: the level at which the individual believes s/he improves his/her performance by using a specific technology, and the level at which the individual believes that the use of specific technology would be possible involving minimal effort and maximum easiness.

Usefulness and ease of use resulting from the user's attitude towards technology lead to motivation for using technology (acceptance prediction). The useful technologies with easy usage will have a positive effect on the user's motivation and attitude toward using the technology in the future that, consequently, increases the technology usage, too (5).
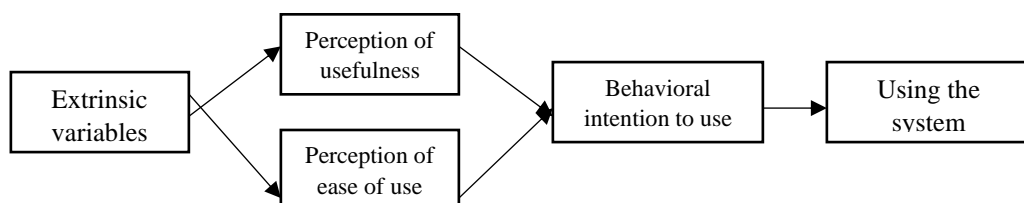

Figure 3- User's Attitude toward Using Technology

Afterward, Nysveen et al. (2005) (18) attempted to integrate different models for better prediction of mobile technologies acceptance and to propose various methods in order to explain the technology users' motivation. They argued that the technology acceptance model is not sufficient for the technologies used in daily life and the model must be developed in the theory of planned behavior based on the concept of perceived control since there are other intrinsic or extrinsic limitations in the human beings' behavior that are ignored in technology acceptance model. Other studies also confirmed this matter. For instance, Teo and Pok (2003) (19) revealed that the mental norms should be considered as a component of the acceptance model for using mobile technologies. Nysveen et al. proposed an integrated model for the adoption of information systems technologies that explains the intention to use mobile technologies. This is of utmost importance since it can be perceived that it is possible to deploy different models for various technologies that every one of them investigates the effect of diffusion of a specific technology. According to Nysveen et al. (2015) (18), Perceived Expressiveness refers to the degree to which users of technology perceive that as enjoyable, useful, and easy to use and a positive attitude toward technology that is considered determinant factors in using the mobile phone

services. Further, the mental norms and behavioral control factors also are effective on customers' intention to use mobile phone services.
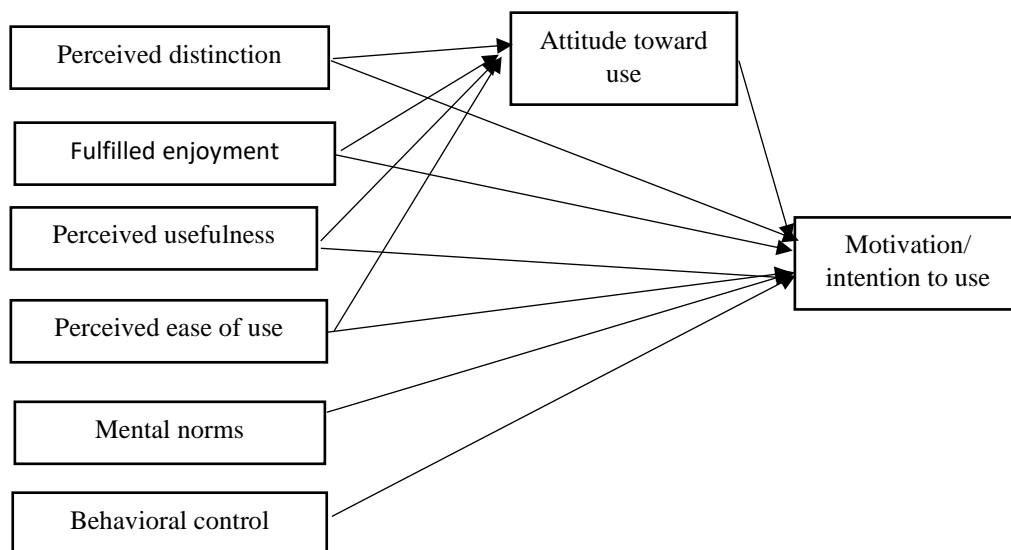

Figure 4- Technology Acceptance Model for Mobile Phones

Innovation Diffusion Theory (IDT) is another theory that surveys the individual's acceptance and intention to use technology. Rogers (1995) (20) defines this theory as a "process in which an innovation is communicated through certain channels over time among members of a 'social system". Six main elements of Innovation Diffusion Theory are innovation characteristics, user's characteristics, and acceptance distribution over time, dissemination networks, degree of innovation, and acceptance process for an individual. Rogers (1995) (20) argues that five characteristics of innovation including relative advantage, compatibility, complexity, trialability, and result observability affect the acceptance of the innovation.
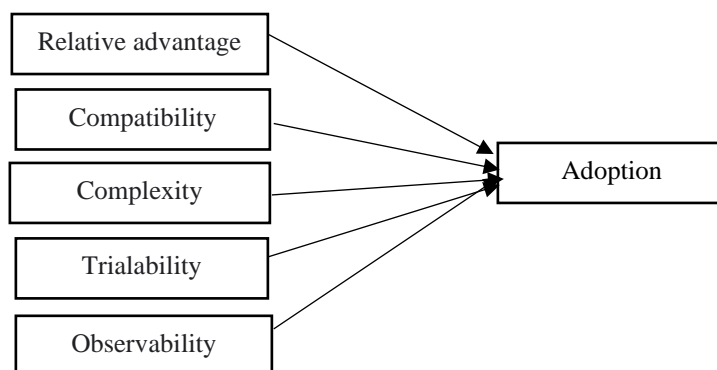

Figure 5- Innovation Diffusion Theory

Unified Theory of Acceptance and Use of Technology (UTAUT) developed by Venkatesh, Morris, and Davis (2003) (20) was prepared based on Davis's primary model of technology acceptance (1989) (4), as well as the experimental comparison, testing, and integration of other known models of information technology acceptance.

In the Unified Theory of Acceptance and Use of Technology (UTAUT) model, four determining factors of user acceptance and behavior are performance expectancy, effort expectancy, facilitating conditions, and social influence that is

based on two presumptions of social psychology, that is, the attitudes from the behaviors and the social factors form our behavior. On the other side, three other factors in Unified Theory of Acceptance and Use of Technology (UTAUT), namely, gender, age, and experience basically act based on the third presumption of social psychology, that is, "behavioral order".

''ease of use'' is one of the most important criteria for evaluating the new technology success (21). This factor can improve users' motivation to use the new systems. It also is

used in training and marketing the new technology.

Unified Theory of Acceptance and Use of Technology (UTAUT) aims to explain the user's intention to use technology and introduces the four key constructs (performance expectancy, effort expectancy, facilitating conditions, and social influence) as the determining factors of result and user's behavior. Further, gender, age, experience, and voluntariness moderate the impact of these key factors, meaning that the impact of these factors may not be the same in people of different genders and age groups.
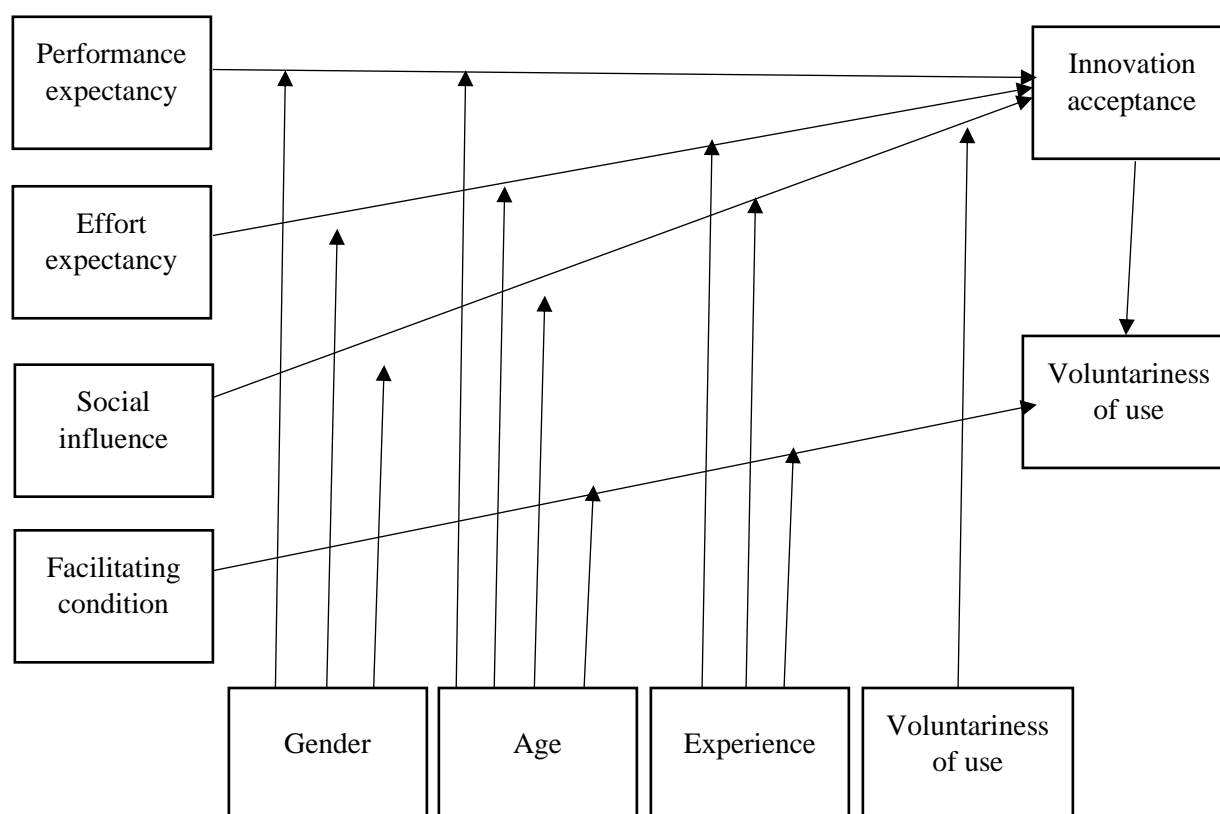

Figure 6- Unified Theory of Acceptance and Use of Technology

Although the models of technology diffusion study have basically developed for investigating the manner and the extent to which the informational technologies diffuse the users, use of them for studying the other technologies especially the green technologies has been taken into consideration. For instance, Foroozanfar, Sepasgozar, and Arbabi (2016) (22) proposed in their research a new hypothetical model and

then tested that by using quantitative data. They found out that the previous models focused more on the concept of technology and did not regard sustainable development and its role in technology acceptance. Further, they revealed that factors such as awareness of technology can be a key element in the adoption of technologies based on sustainable development.

Atif Ali Gill et al. (2021) (23) also developed a hypothetical model for green technologies

acceptance based on the theory of reasoned action that the knowledge of green technology plays a moderating role in the formation of belief in green technology as well as the creation of attitude toward the use of green technology, and can be regarded as a key factor in green technology diffusion.

In another study, De Xia et al. (2021) (21) investigated the role of regulation in the environmental context and green technologies acceptance by the enterprises and moderating role of state ownership in this relationship. They found out that all three models of command-and-control regulation, economic intensives, and voluntary agreement have a positive effect on the technologies acceptance while being state-owned of the enterprises only has a positive influence on the command-and-control regulation and affects the other two factors negatively.

By studying different technology acceptance models, it can be perceived that despite this matter that the models have a more common feature; no model comprises all the main factors. On the other hand, some caution should be exercised when using the mentioned models and studying them in different cultural fields since not much research has been conducted on investigating the role of culture in studies related to information technology acceptance (Vatanparast and Qadim, 2009). Further, this model has not been applied in the field of green technologies for a long time. Therefore, some purposeful studies should be accomplished to survey the individuals' behavior toward green technologies adoption in the context of Iranian culture. It is obvious that if the results of these studies are similar considering the proposed models in other cultures, the models can be generalized regardless of cultural context. Of course, in the case of presenting a new model, it should be experimentally tested and its applicability should be proved in real conditions.

Qualitative model compilation

To continue, semi-structured interviews were done in the domain of the model of green technology acceptance in Iran concentrating on the recognition of factors effective on the green technologies diffusion and success in Iranian society. Some questions were asked during the interviews. The obtained results first were implemented and surveyed line-by-line. Next,

they were conceptualized and categorized. Then, they were classified into major and minor themes regarding similarity, conceptual relation, and common features. When analyzing the data, the concepts were directly created regarding the participants' interview transcripts or their common use cases. The interview transcripts were regularly surveyed to specify the major and minor themes. First, the interviewees' answers were decomposed into smaller units after surveying the transcripts at sentence or paragraph level. Then, the concepts were placed in the framework of larger categories, and then the components were classified into larger conceptual categories. Considering the results of interviews with experts, it can be said that 63 factors affect the green technologies success and diffusion in the Iranian society that are classified into individual, cultural, economic, social, environmental, and institutional factors. To continue, the Delphi technique was used to extract the components based on the components extracted through the interviews. In the first round of the Delphi technique, a list of components, subcomponents, and concepts was submitted to the experts to comment on them and confirm or reject the list. Further, they were asked to add their opinions and suggestion to modify the model. In the second round, the listed factors along with the results of the first stage were submitted to the second group of experts to specify the significance of every one of the components, subcomponents, and concepts. In every stage, the researcher applied the reformative recommendations on them. Finally, after the second round, the components, subcomponents, and concepts that received a higher mean from the experts' viewpoint were selected.

Regarding this matter that hybrid approach has been applied in this research, the interviewees' opinions are considered the final criteria for data collection and analysis. Considering the coding results, it can be said that the present research considers six major components affecting the green technologies success and diffusion in Iranian society that were resulted in the interviews through coding. These components include:

- Environmental factors
- Economic factors
- Cultural factors
- Individual factors
- Institutional factors
- Social factors

Therefore, regarding the results of the interviews, the research model is presented as follow:

Figure 7- the qualitative model of green technologies adoption in Iran

The research hypotheses are stated as follow:
- The environmental factors have a positive and significant influence on the green technologies' success and diffusion in Iranian society.
- The economic factors have a significant influence on green technologies' success and diffusion in Iranian society.
- The individual factors have a significant influence on the green technologies' success and diffusion in Iranian society.
- The cultural factors have a significant influence on green technologies' success and diffusion in Iranian society.
- The social factors have a significant influence on green technologies' success and diffusion in Iranian society.
- The institutional factors have a significant influence on the green technologies' success and diffusion in Iranian society.

Results of the quantitative study of model

To apply the survey method, the questionnaire items were formulated based on accomplished studies. The questionnaire was completed and finalized after being reviewed by the professors.

After the questionnaire was validated, the sample size was calculated using the related methods. Then, the questionnaire was distributed among the statistical population by the random sampling method. After the completed questionnaires were collected, they were scored. After scoring the items, SPSS software and appropriate statistical tests were applied for analyzing the data.

In this research, the Kolmogorov-Smirnov test was used to test the normal distribution of the main variables. In the single-sample state, this test compares in a variable the observed cumulative distribution function with the expected cumulative distribution function at the interval measurement level. To interpret test results, if the value of observed error is greater than 0.05, then the observed distribution would be the same as the theoretical distribution and there is no difference between them. It means that the obtained distribution is normal. However, if the significance value is less than 0.05, then the observed distribution would be different from the expected distribution and the distribution will not be normal.

Table 1- Normality Test of Variables

Variable	Type of applied distribution	Significance level	Error value	Hypothesis confirmation	Result
Environmental factors	Normal	0.082	0.05	H_0	Normal
Economic factors	Normal	0.106	0.05	H_0	Normal

Cultural factors	Normal	0.083	0.05	H_0	Normal
Institutional factors	Normal	0.200	0.05	H_0	Normal
Individual factors	Normal	0.110	0.05	H_0	Normal
Social factors	Normal	0.088	0.05	H_0	Normal
Green technologies success and diffusion in Iranian society	Normal	0.115	0.05	H_0	Normal

Regarding the results of the Kolmogorov-Smirnov test represented in Table 1, it can be concluded that there is no difference between the expected distribution with the observed distribution in all the variables. Therefore, the distribution of these variables is normal.

Table 2- Results of statistical analysis of correlation coefficient between the dependent and independent variables

Hypothesis	Explanation	Correlation coefficient	Coefficient of determination	Adjusted R-squared	Standard error determination
First	Influence of environmental factors on green technologies success in Iranian society	0.856**	0.734	0.730	0.23717
Second	Influence of economic factors on green technologies success in Iranian society	0.509**	0.259	0.250	0.39548
Third	Influence of cultural factors on green technologies success in Iranian society	0.480**	0.231	0.221	0.40299
Fourth	Influence of institutional factors on	0.551**	0.304	0.295	0.38340

	green technologies success in Iranian society				
Fifth	Influence of individual factors on green technologies success in Iranian society	0.499**	0.249	0.240	0.39808
Sixth	Influence of social factors on green technologies success in Iranian society	0.350**	0.123	0.112	0.43035

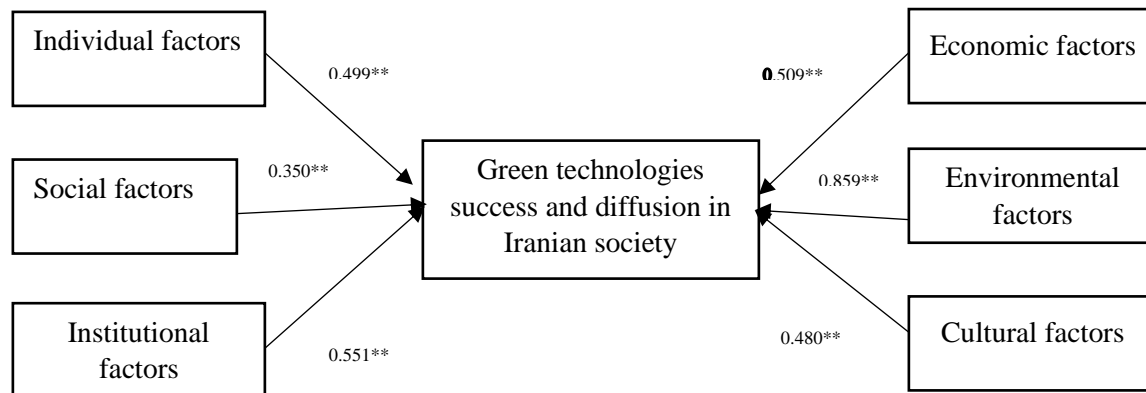**the significance level value less than 0.05 is at 0.01 level.

Figure 8- Results of Statistical testing of the Research Hypothetical Model

DISCUSSION AND CONCLUSION

Regarding the statistical testing of the model, it can be perceived that the factors recognized in related literature and experts' surveys based on statistical calculations have a significant relationship with the green technologies success in Iranian society. The public awareness, rules formulation, and incentives in the environmental context can have the highest level of impact with a high degree of determination on the green technologies'

success. These results confirm the significant role of government and logical institutions in the formulation of rules, strategies, and executive programs to increase the incentives and awareness of environmental standards. Further, the other factors including the economic, cultural, institutional, individual, and social factors are of special importance in this context and can be effective in the green technologies diffusion.

Considering the role of economic factors, it can be perceived that low energy prices and government

subsidies cause green technologies to be inappropriate from an economic perspective. Therefore, nowadays, being cheap of fossil fuels is one of the barriers to the diffusion of green technologies in Iranian society that eliminates the economic feasibility of using green technologies.

Moreover, the significance of cultural and institutional factors highlights the role of non-governmental organizations and their activity in the domain of increasing awareness, as well as contextualization for further use of these technologies. It should be noticed that despite the Iranians' cultural background in glorification of nature, the heterogeneous modernization of Iranian society over the past century, has made the lifestyle of Iranian society less based on considering the environmental factors. Therefore, the support and encouragement of civil institutions to create cultural change and to improve the Institutional contexts can be of utmost importance. The positive influence of individual factors on the use and acceptance of green technologies has been increased by the growth of public awareness and therefore more success can be expected.

As one of the findings of this research, it should be noticed that although the social factors still are one of the important factors in the domain of acceptance of these technologies, contrary to expectations, the social factors have a smaller share of influence on the green technologies adoption, regarding the diffusion of informational and communicational technologies in Iran. The study of reasons for this difference and perception of the cause of difference between the effectiveness of social factors in the context of green technologies with the other informational technologies in the Iranian society can be of implications of this study for further research.

Although the present research attempted to create an appropriate structure for qualitative model formulation by accurate selection of experts for the interviews, as well as to consider all the key factors recognized in the context of the success of green technologies and other technologies by studying the related literature, detailed explanation of each of the recognized factors and determination of the factors affecting them can be an important topic for future researches. More precisely, determining the components of each of these factors, and the

manner of their improvement or change to change attitudes and increase people's intention to select and use green technologies requires more detained surveys in future studies.

In addition, identifying the reasons of difference between the effectiveness of social factors on the acceptance of these technologies in comparison to the communicational technologies (e.g. mobile phones) can provide researchers with a deeper understanding of Iranian society, which in turn can play important role in determining the key factors affecting the technologies success and manner of their improvement.

Further, considering the social and cultural variety of Iranian society, as well as being restricted of data collection domain to metropolises, this study results and model can be investigated in smaller communities such as smaller cities as well as rural communities. This model also can be used as a pattern for non-Iranian researchers to investigate the key factors affecting the technologies adoption in other countries.

REFERENCE

1. Yuryevich, O. M., Borisovich, T.N., (2020) Collective Intelligence, Science, Journal of Organizational Behavior Research and Technology, 5(2), 129-134
2. Leonid, K., Anna, D., Sergey, T., Natalya, T., Dina, P., Irina, M., & Victoria, E. (2020). Production of Herbal Protein Isolates with the Enzymatic Hydrolysis Technology. International Journal of Pharmaceutical Research & Allied Sciences, 9(3), 10-15.
3. Kryukova, E. M., Khetagurova, V. S., Ilyin, V. A., Chizhikova, V. V., & Kosoplechev, A. V. (2021). Forming students' environmental culture: modern educational approaches and technologies. Journal of Advanced Pharmacy Education and Research, 11(2),113-118
4. Davis, F. A. 1989. Perceived usefulness perceived ease of use and user acceptance of information technology, MIS Quarterly, 8, 318-339.
5. Taylor, S., & Todd, P. A. 1995. Understanding information technology usage: A test of competing models. Information Systems Research, 6(2), 144
6. Venkatesh V. & Davis F. 2000. A theoretical extension of the technology acceptance model: four longitudinal field

studies. Management Science, 46(2), 186-204.

7. Leonard-Barton, D.; and Deschamps, I. 1988. Managerial influence in the implementation of new technology. Management Science, Volume 34, 1988, pp. 1252-1265.

8. Goodhue, D. L., & Thompson, R. L. 1995. Task technology fit and individual performance. MIS Quarterly, 19(2), 213-236.

9. Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. 2003. User acceptance of information technology: Toward a unified view. MIS Quarterly, 27(3), 425-478.

10. Vatanparast, R., Qadim, H. 2009. A Comparative Study Of Consumers' Intention To Use Mobile Internet In USA, Russia And China, The 9th International Conference on Electronic Business, Macau, November 30 - December 4, 2009

11. Fishbein M., Ajzen, I. 1975. Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research, Addison-Wesley, Reading, MA.

12. Ajzen, I., and Fishbein, M. 1980. Understanding Attitudes and Predicting Social Behavior, Prentice-Hall, Englewood Cliffs, NJ, 1980.

13. Gatignon, H. and Robertson. T. 1991. A Propositional Inventory for New Diffusion Research. in Harold H. Kassarjian and Thomas S. Robertson (eds.) Perspectives in Consumer Behavior, Fourth Edition

14. Harrison, A.W. and Rainer, R.K. Jr. 1992. The influence of individual differences on skill in end-user computing", Journal of Management Information Systems, 9:1,1992, 93-111.

15. Ajzen, I. 1991. The Theory of Planned Behavior. Organizational Behavior & Human Decision Processes (50), 1991, pp. 179-211.

16. Venkatesh, V., & Davis, F. D., 2000. A theoretical extension of the technology acceptance model: Four longitudinal field studies. Management Science, 46(2), 2000, 186-204

17. Ma, Q., and Liu, L., 2004. The technology acceptance model: A meta-analysis of empirical findings. Journal of Organizational and End User Computing, 16(1), 2004, 59- 72.

18. Nysveen, H., Pedersen, P.E., and Thorbjornsen, H. 2005. Explaining Intention to Use Mobile Chat Services: Moderating Effects of Gender", Journal of Consumer Marketing, 22 (5), 2005, 247-256.

19. Teo, H., Pok, S. 2003. Adoption of the Internet and WAP-enabled phones in Singapore. Behavior & Information Technology, July–August 2003, VOL. 22, NO. 4, 281–289

20. Rogers, E. M. 1995. Diffusion of Innovation. " New York: Free Press, 1995.

21. Venkatesh, V., Morris, M., Davis, G., and Davis, F. 2003. User acceptance of Information Technology: Toward a unified view. MIS Quarterly, Vol. 27, No. 3, 2003, 425-478

22. Foroozanfar, M., Sepasgozar, E., Arbabi, H. 2017. Modelling Green Technology Adoption Based on Sustainable Construction Practices, EPiC Series in Education Science Volume 1, 2017, Pages 305–315

23. Gill, A., Ansari, R., and Tufail, M.W. 2021. Going Green: Theory of Reasoned Action Application to Examine the Consumer Intention Through Mediating Role of Green Technology Beliefs, Review of Applied Management and Social Sciences (RAMSS) Vol. 4, (1) 2021, 63-77

24. Xia, D., Chen, W., Gao, Q., Zhang, R. and Zhang, Y. 2021. Research on Enterprises' Intention to Adopt Green Technology Imposed by Environmental Regulations with Perspective of State Ownership, Sustainability 2021, 13, 1368