—— **Original Article** ——

University entrepreneurship model based on public service motivation

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Abstract

Background: Entrepreneurship is vital in today's modern societies. The purpose of this study was to develop a university entrepreneurship model based on public service motivation.

Methods: The statistical population of this study in qualitative phase was 27 experts. The opinions of 315 employees were used to measure the variables in the studied Azad Universities of District 6. The present study was a descriptive-correlational research conducted by a survey method. It was also a developmental-applied research in terms of aim. Data collection method was a combination of library and field studies. Data collection tool was a questionnaire. Data analysis was performed using SPSS software version 25 and AMOS version 25. To examine the research questions, statistical methods of one-sample t-test and structural equations were used.

Results: Also, there is a direct relationship between university entrepreneurship and its components including organizational competencies, continuous interaction, university goals and policies, culture and entrepreneurial marketing and good character and temper of administrators. The results also showed that there is a direct relationship between good character and temper of administrators and its components, including courage, patience, honesty, humility, optimism, responsibility of administrators and public service motivation.

Conclusion: Given the importance and positive impact of university entrepreneurship on regional development and the new nature of international competition of universities in the economic development of countries, the results of the present study can be used by administrators and planners.

Introduction

Public service motivation is one of the influential issues in the public sector; there were scattered efforts on the concept of public service motivation until the mid-nineties (1). Mid-nineties onwards, this concept was formally introduced in two academic studies (2).

The literature on public service motivation confirms its importance in the effectiveness of public organizations (3). Public service motivation has been mainly defined as the motivation of employees to do works optimally for others to contribute to the welfare of society (4). Public service motivation is an individual willingness to realize motivations that are unique to public institutions and organizations (5). Studies have shown that

it can improve the individual performance of employees (6) and if it is spread among the employees of the organization, the organizational achievements and productive values of the organization will be revealed to the stakeholders (2). Considering the importance of developing the moral characteristics of university administrators and leaders, the higher education system as the most obvious example and manifestation of workforce investment has a decisive role in the economic, social, cultural and political dimensions of society and human resources are considered effective factors (7).

One of the important roles of universities is the entrepreneurial role. The response to new expectations of higher education institutions have giddied them towards internal developments and interaction with the social and economic environment and the emergence of a new generation of universities that play a major role in the expansion and development of entrepreneurship (8). Due to the difficulties in transferring science and various economic networks, the use of new knowledge based on scientific principles can be an important factor in regional superiority. Hence, entrepreneurship in universities has a positive impact on regional development. The new nature of international competition changes the role of universities in the economic development of countries. If universities are not transformed into entrepreneurial universities, they will fail in national and regional development and competition (9).

Studies show that, a comprehensive model in the field of university entrepreneurship has not been considered. Due to the importance of the subject, this study aims to present and design a university entrepreneurship model based on public service motivation and based on public service motivation with regard to the mediating role of managers' personalities.

Methods

The present study was a correlational-descriptive in terms of method and developmental-applied in terms of aim. It was also a field research in terms of data collection method. The statistical population of this research in the model development process was experts who were aware of the research subject. The experts of the present study were university professors and specialists in the field of management and organizational behavior who participated in the development of the model through Delphi technique. Non-random, selective and purposeful method was used to determine the sample size of experts and a total of 27 people were selected as the sample.

The statistical population in the quantitative data collection section was the deputies and administrators, employees, and faculty members of "Islamic Azad Universities" of District 6 that 315 of them were selected as a sample using stratified random sampling method. Questionnaire was the main tool for data collection in this study. First, a special type of questionnaire (open-ended and closed) was designed and implemented for surveying experts with the aim of finalizing the list of components of university entrepreneurship and public service motivation. Then, a questionnaire consisting of 23 questions was used to assess university entrepreneurship. It measures the components of organizational competencies, continuous interaction, university goals and policies, entrepreneurial culture and marketing. To measure the public service motivation, 14 questions and components were used, including commitment to public interest, self-sacrifice, compassion and professional identity. Since the Likert scale was used to measure the appropriateness of the introduced indicators, to confirm the indicators, the number 3.00 which indicates the average level of the measurement was used and the mean opinions of experts participating in the Delphi method on

effective indicators were compared with the theoretical value of 3.00 by t-test. If the score of the considered index is more than the theoretical value of 3.00, the proposed indicator will remain in the model. In this section, using the structural equation modeling approach, the proposed research model was examined.

Before examining the proposed research model, the assumptions of structural equations were fully examined and confirmed as follows:

A-Data screening: questionnaires that have unanswered cases can be excluded from the sample and univariate outliers can be identified by measuring the standard score (z scores). Mahalanobis statistic was used to examine multivariate outliers. In the proposed model, the assumption of multivariate outliers was examined using the mentioned statistic and there was no data for deletion.

B- Lack of multicollinearity: In data analysis, when the predictor variables are correlated with each other, it is stated that there is multicollinearity between them. Multicollinearity occurs when two or more predictor variables have a high correlation with each other. Correlation here means a linear relationship between predictor variables. In statistics, the variance inflation factor examines the multicollinearity of linear intensities in the least squares' regression analysis. If the research variables have a variance inflation factor of less than 10, the assumption of lack of collinearity between the variables has been fulfilled. In the proposed model,

To examine the research questions, one-sample t-test, confirmatory factor analysis and structural equation modeling were used at a significant level of 0.05. To identify the dimensions of university entrepreneurship, Exploratory Factor Analysis (EFA) using maximum likelihood and varimax rotation method was used. To ensure the validity of the data and to check the sampling accuracy before factor analysis, KMO criteria were used. To identify dimensions of good character, exploratory factor analysis using the maximum likelihood and varimax rotation methods was used. Exploratory factor analysis using maximum likelihood and varimax rotation method was to identify the dimensions of public service motivation. Cronbach's alpha was used to assess the internal reliability in a pilot study on 27 samples of individuals. According to the results, confirmatory factor analysis was performed for the reliability of each of the research variables. The conceptual model of the research is shown in Figure 1.
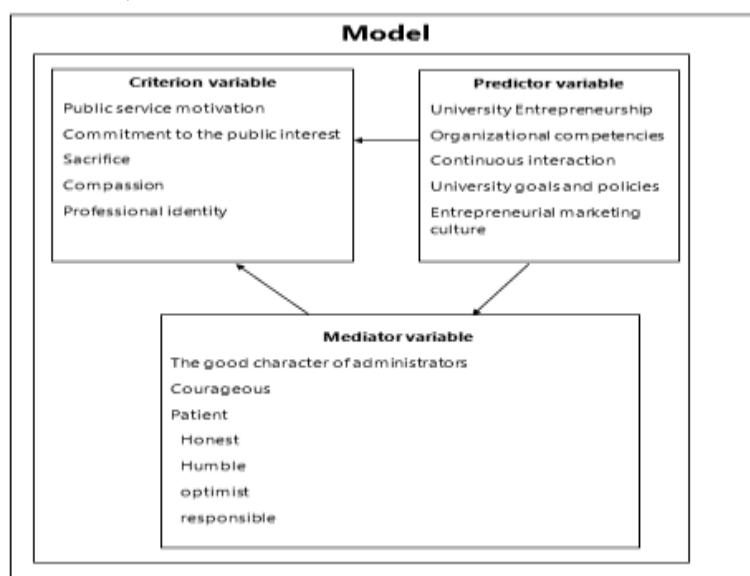

Figure 1. The conceptual model of the research

Results

According to the values obtained in Table 1, it can be stated that there is no multicollinearity between the research variables.

Table 1. Examining collinearity among research variables

variable	Inflation variance factor
University Entrepreneurship	4.597
Organizational competencies	5.662
Continuous interaction	3.400
University goals and policies	4.749
Culture	4.711
Entrepreneurial marketing	4.137
Public service motivation	4.177
Commitment to the public interest	5.097
Sacrifice	3.124
Compassion	4.126
Professional identity	5.377

C- Normality of data: As seen in Table 2, most of the obtained coefficients are in the interval of -2.58 - 2.58. In this section, in addition to examining the normality of univariate data, the normality of multivariate data was examined and according to Table 2, this assumption is observed for univariate data and the data of the present study are normal.

The results of fitting the model of university entrepreneurship questionnaire are shown in Figure 2 and according to the indices presented in Table 3, it can be stated that the university entrepreneurship model has a good fit.

The results of fitting the model of university entrepreneurship questionnaire are shown in Figure 2 and according to the indices presented in Table 3, it can be stated that the university entrepreneurship model has a good fit.

P value (>=0.05) = .537
Relative Chi-Sq (<=5) = 3.024
NFI (>=0.9) = .916
RFI (>=0.9) = .924
GFI (>=0.9) = .931
CFI (>=0.9) = .918
IFI (>=0.9) = .939
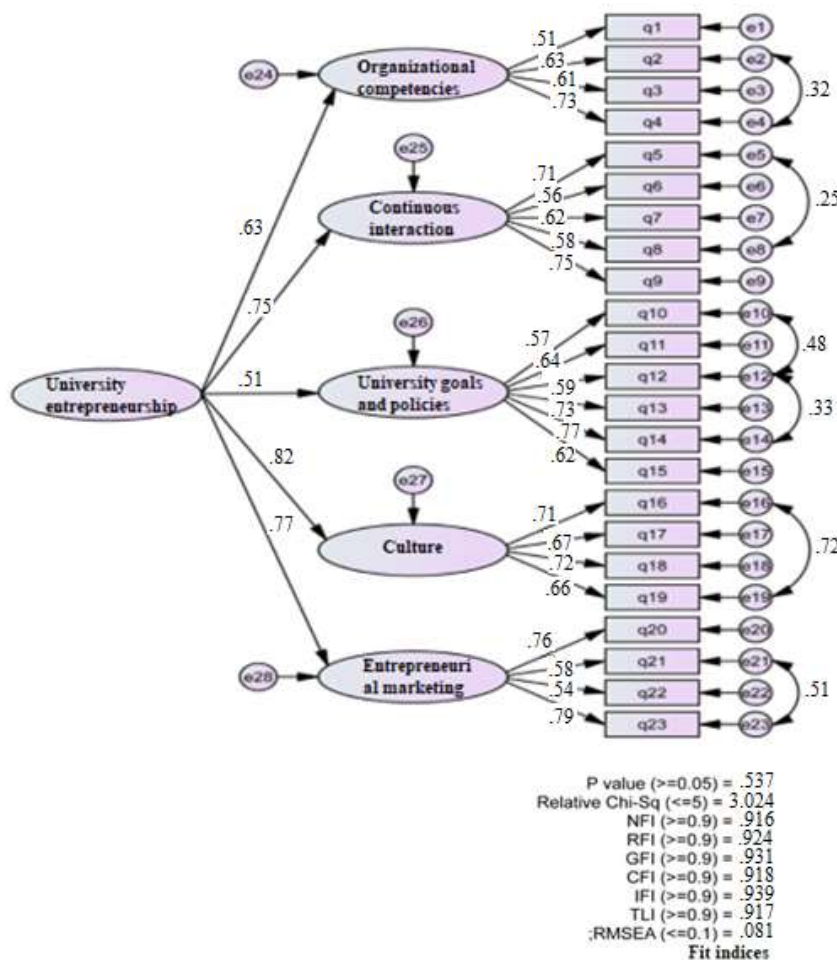TLI (>=0.9) = .917
;RMSEA (<=0.1) = .081
Fit indices

Figure 2. Results of confirmatory factor analysis of university entrepreneurship (standardized factor load)

Table 2. Checking the normality of research variables

| variable	Kurtosis	Critical ratio	Kurtosis	Critical ratio
University Entrepreneurship	-0.363	-0.40	-0.379	0.67
Organizational competencies	-0.211	-1.90	-1.156	1.05
Continuous interaction	-0.326	-2.62	-0.861	0.83
University goals and policies	-0.014	-2.54	-1.268	1.24
Culture	0.306	-2.22	-1.589	1.53
Entrepreneurial marketing	-0.030	-2.70	-0.927	0.56
Good character	-0.268	-2.14	-0.459	-0.24
Courageous	-0.844	-0.79	0.632	0.15
Patient	0.234	2.54	-1.529	2.54
Honest	0.023	2.06	-0.949	-0.39
Humble	0.373	2.84	-1.177	-0.01
optimist	0.168	2.54	-1.249	0.84
responsible	-0.005	1.83	-0.967	1.47
Public service motivation	-0.408	1.75	-0.426	2.34
Commitment to the public interest	-0.063	1.95	1.064	2.04
Sacrifice	-0.533	1.49	0.663	2.11
Compassion	0.117	1.51	-0.834	2.73
Professional identity	-0.363	1.90	-1.113	2.09
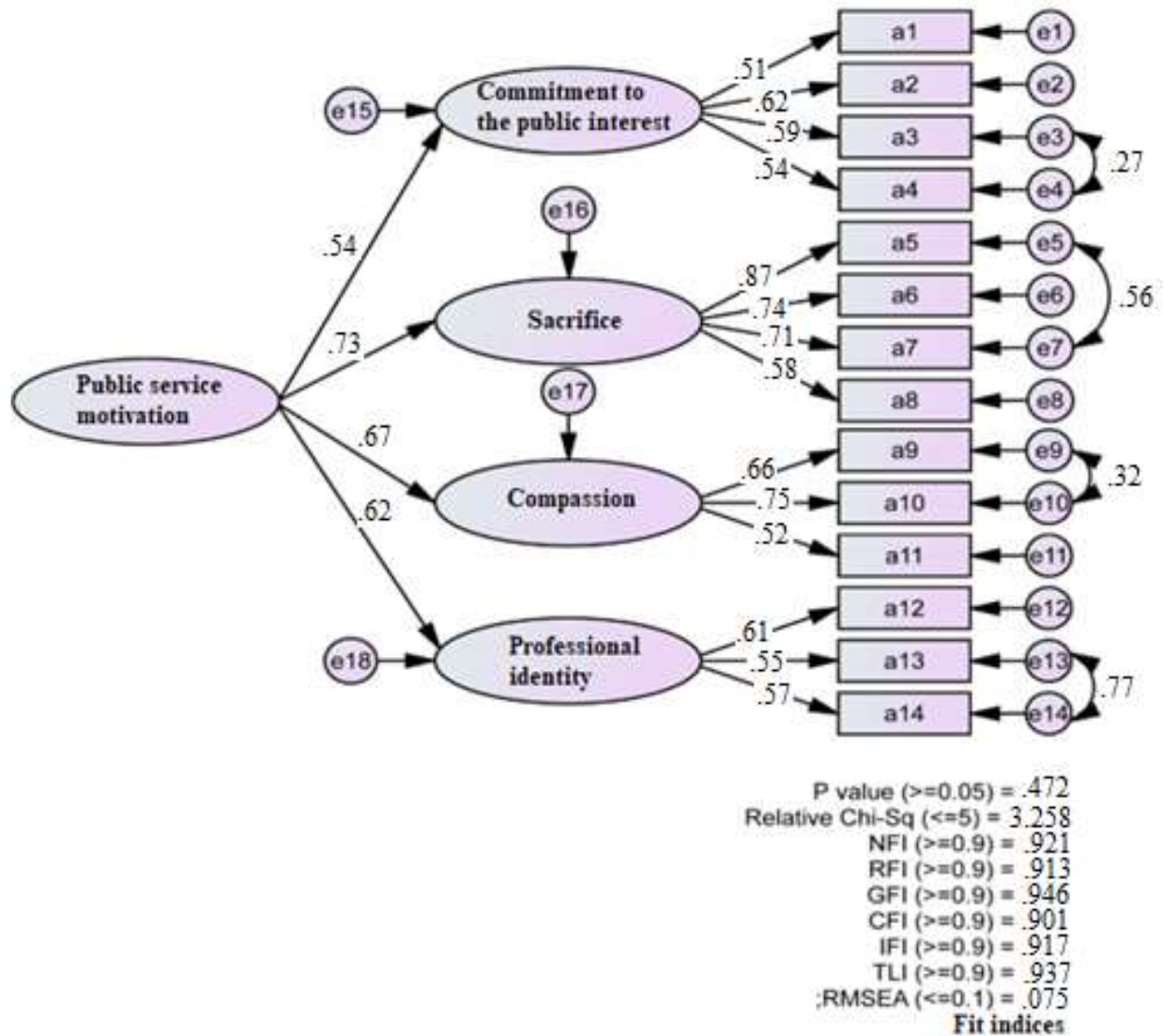
Figure 3. Results of confirmatory factor analysis of public service motivation (standardized factor load)

Table 3. University entrepreneurship model fit indices

Index	Acceptable value	Reported value
MDFD/FD (Minimum Discrepancy Function by Degrees of Freedom Divided)	Equal or smaller than 3	3.024
GFI (Goodness of Fit Index)	Equal or larger than 0.9	0.931
AGFI (Adjiusted Goodness of Fit Index)	Equal or larger than 0.9	0.861
NFI (Normed Fit Index)	Equal or larger than 0.9	0.916
IFI (Incremental Fit Index)	Equal or larger than 0.9	0.931
TLI (Tucker-Lewis Index)	Equal or larger than 0.9	0.917
CFI (comparative Fit Index)	Equal or larger than 0.9	0.918
RMSEA (Root Mean Square Error of Approximation)	Equal or smaller than 0.08	0.081

The results of fitting the model of public service motivation questionnaire are shown in Figure 3 and according to the indices presented in Table 4, it can be stated that the model for measuring public service motivation has a good fit.

F) Research variables have an interval measurement scale: The software output indicates the appropriateness of the proposed research model, so that the value of RMSEA is 0.081, the value of MDFD/FD is 2.957, and the value of GFI is 0.925 Table 5.

The presented results showed a significant relationship between university entrepreneurship and public service motivation in the studied Azad universities of District 6 (p = 0.001, β = 0.64). Given the positive path coefficient, this relationship is incremental (direct). To examine the secondary questions, the assumptions of structural equations are first examined and confirmed.

The presented results showed a significant relationship between competence and public service motivation in studied Azad universities of District 6 (p = 0.001, β = 0.62). Given the positive path coefficient, this relationship is incremental (direct).

The presented results showed a significant relationship between continuous interaction and public service motivation in the studied Azad universities of District 6 (p = 0.001, β = 0.58). Given the positive path coefficient, this relationship is incremental (direct).

The presented results showed a significant relationship between goals and policies and public service motivation in the studied Azad universities of District 6 (p = 0.001, β = 0.51). Given the positive path coefficient, this relationship is incremental (direct).

The presented results showed a significant relationship between culture and public service motivation in the studied Azad universities of District 6 (p = 0.001, β = 0.83). Given the positive path coefficient, this relationship is incremental (direct).

Table 4. Public service motivation model fit indices

Index	Acceptable value	Reported value
MDFD/FD (Minimum Discrepancy Function by Degrees of Freedom Divided)	Equal to or smaller than 3	3.285
GFI (Goodness of Fit Index)	Equal to or larger than 0.9	0.946
AGFI (Adjiusted Goodness of Fit Index)	Equal to or larger than 0.9	0.861
NFI (Normed Fit Index)	Equal to or larger than 0.9	0.921
IFI (Incremental Fit Index)	Equal to or larger than 0.9	0.917
TLI (Tucker-Lewis Index)	Equal to or larger than 0.9	0.937
CFI (comparative Fit Index)	Equal to or larger than 0.9	0.901
RMSEA (Root Mean Square Error of Approximation)	Equal to or smaller than 0.08	0.075

Table 5. Fit indices of the proposed model of research questions

Index	Acceptable value	Reported value
MDFD/FD (Minimum Discrepancy Function by Degrees of Freedom Divided)	Equal to or smaller than 3	2.957
GFI (Goodness of Fit Index)	Equal to or larger than 0.9	0.925
AGFI (Adjiusted Goodness of Fit Index)	Equal to or larger than 0.9	0.864
NFI (Normed Fit Index)	Equal to or larger than 0.9	0.943
IFI (Incremental Fit Index)	Equal to or larger than 0.9	0.902
TLI (Tucker-Lewis Index)	Equal to or larger than 0.9	0.923
CFI (comparative Fit Index)	Equal to or larger than 0.9	0.914
RMSEA (Root Mean Square Error of Approximation)	Equal to or smaller than 0.08	0.081

The presented results showed a significant relationship between entrepreneurial marketing and public service motivation in the studied Azad universities of District 6 (p = 0.001, β = 0.65). Given the positive path coefficient, this relationship is incremental (direct).

As showed in table6, the software output indicates the appropriateness of the proposed research model, has been acceptable Table 6 and the results of structural equations to examine the fifth secondary question of the research showed in Figure 4, indicates the appropriateness of the fitting pattern of the proposed model.
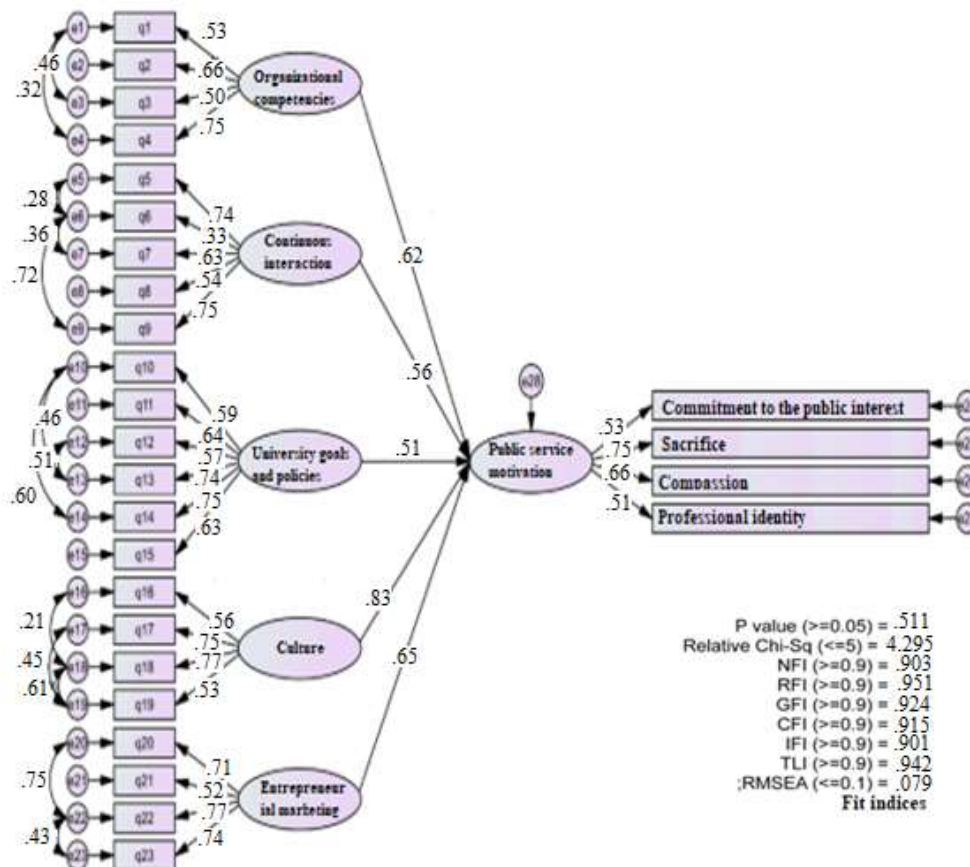

Figure 4. The results of structural equations to examine the fifth secondary question of the research

Table 6. Fit indices of the proposed model of the 5 secondary questions of the research

Index	Acceptable value	Reported value
MDFD/FD (Minimum Discrepancy Function by Degrees of Freedom Divided)	Equal to or smaller than 3	4.298
GFI (Goodness of Fit Index)	Equal to or larger than 0.9	0.924
AGFI (Adjiusted Goodness of Fit Index)	Equal to or larger than 0.9	0.776
NFI (Normed Fit Index)	Equal to or larger than 0.9	0.903
IFI (Incremental Fit Index)	Equal to or larger than 0.9	0.901
TLI (Tucker-Lewis Index)	Equal to or larger than 0.9	0.942
CFI (comparative Fit Index)	Equal to or larger than 0.9	0.924
RMSEA (Root Mean Square Error of Approximation)	Equal to or smaller than 0.08	0.079

Discussion

Based on the results of the present study, between university entrepreneurship and its components (organizational competencies, continuous interaction, university goals and policies, entrepreneurial culture and marketing) and good manners and good personality of managers (courage, patience, honesty, humility, optimism, responsibility) Managers) there is a direct relationship.). The results also showed the importance of public service motivation and the impact of university entrepreneurship on regional development and the new nature of international competition among universities in the fundamental economic development of countries. The results of this study are consistent with the results of studies conducted by Astebro et al. (10), Audretsch (11), Fini et al., (12), Iacobucci et al., (13), found that there was a significant positive relationship between university entrepreneurship and public service motivation.

Audretsch also confirmed the relationship between university entrepreneurship and public service motivation and found that university entrepreneurship increases public service motivation (11). Fini et al., also confirmed the results of study and found that there is a positive, significant and increasing relationship between university entrepreneurship and public service motivation (12). Iacobucci et al., found a positive and significant relationship between university entrepreneurship and public service motivation, so that university entrepreneurship increased public service motivation (13).

Results also revealed that there is a direct relationship between organizational competencies and public service motivation in the Studied Azad Universities of District 6, In this regard, Kim & Kim, found a positive and significant correlation between organizational competencies and public service motivation (14). Results also revealed a direct relationship between continuous interaction and the public service motivation in the studied Azad universities of District 6, Davis & Stazyk, have shown a direct and significant relationship between communication and interaction between people and public service motivation (15).

The results also revealed a direct relationship between the university goals and policies and the public service motivation in the studied Azad Universities of District 6, Holt found that determined goals and policies increase public service motivation (16). A direct relationship was found between the culture and public service motivation in the studied Azad universities of District 6, The results of this study are consistent with the results of a study conducted by Andersen & Serritzlew (17). Andersen & Serritzlew, found that there was a positive and significant relationship between culture and public service motivation. Organizational beliefs and customs constitute organizational culture (17).

There is a direct relationship between entrepreneurial marketing and public service motivation in the studied Azad universities in District 6, Homberg & Costello, confirmed the results of this study and found a positive and significant correlation between entrepreneurial marketing and public service motivation (18).Based on Zeng, Accordingly, public service motivation, as altruistic motivation, has a positive impact on the performance of individuals and is a kind of individual behavior that ultimately leads to service delivery to society and individuals (19).A strong orientation in public services has a positive impact on the performance of individuals (20).

According to the results of a study conducted by Camilleri (21), the public service motivation of individuals is mainly due to their organizational conditions and environment (22). In line with the process of local, regional and international economic development, universities and higher education systems change their traditional role, which is simply the production of knowledge, and move towards entrepreneurial universities that in addition to producing knowledge and creating ideas turn them into action (2). Therefore, rapid environmental changes have created new conditions for higher education. The result of these conditions is the necessity to develop entrepreneurial capabilities in the country to create new businesses, use unused capacities, develop existing capacities and solve social problems. In response to these challenges, the new mission of universities is to create entrepreneurial capabilities among university graduates (24).

Goudarzi et al., states that universities should play a key role in development activities in the modern economy. The idea of university entrepreneurship has been defined in different ways over time and has been studied based on different views, which is nowadays known as university entrepreneurship (25).In general, it can be stated that university entrepreneurship is a comprehensive and broad term that refers to the actions and efforts that universities and sectors related to university make to commercialize the outputs and results of their academic and theological research. The main hypothesis regarding the university entrepreneurship is that a wide range of university research is conducted within universities, and some research results may be used commercially to generate revenue for university, industry, and society. University entrepreneurship acts as an organizing factor for entrepreneurial activities and one of the revenue-generating factors (26).

Studies suggest that entrepreneurship is critical to the success of today's complex modern societies, not only for their survival but also for their sustainability. In addition to its many benefits to organizations, is considered an important phenomenon for many studies (27). The mission of universities in line with global developments and transformations and the goal of responding to the contingent needs of societies has changed and it is moving towards participation in the entrepreneurial paradigm (28). In other words, organizations are increasingly dependent on entrepreneurial actions and measures in situations that tend toward entrepreneurial activity, since organizations are increasingly operating in a dynamic and complex environment with rapid, fundamental, and discontinuous characteristics that indicate willingness of its members for entrepreneurial measures (29).

Recommendations

Despite a high emphasis on public issues and public service motivation, public sector organizations are not designed based on religious values, so it is recommended to design a model of public service motivation based on religious principles. It is also recommended to examine research variables in similar organizations, and if possible, introduce more indicators to

measure these variables and review this research in the non-public organizations that have more interaction with such issues and their activities affect public service motivation and good character. It is also recommended to present a qualitative and non-questionnaire model to measure university entrepreneurship that has an external manifestation and identify and prioritize the factors affecting university entrepreneurship. It is also recommended to present a good character model using the grounded data theory.

Conclusion

According to the present study and designing a university entrepreneurship model based on public service motivation, the mediating role of good manners of managers (case study of free universities in region 6) and identifying the components and indicators required for this model, entrepreneurship components, motivation and personality Public Services No Managers Through exploratory studies and surveys of experts, the results are expected to be used by managers and planners to improve the current situation.

Author's contribution
Saeeid Hossein Abadi and Alireza Manzari Tavakoli developed the study concept and design. Samaneh Mehdizadeh acquired the data. Mahdi Mohammad Bagheri and Saeeid Hossein Abadi analyzed and interpreted the data, and wrote the first draft of the manuscript. All authors contributed to the intellectual content, manuscript editing and read and approved the final manuscript.

Informed consent: Questionnaires were filled with the participants' satisfaction and written consent was obtained from the participants.

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References

1. Weibel A, Rost K, Osterloh M. Pay for Performance in the Public Sector—Benefits and (Hidden) Costs. Journal of Public Administration Research and Theory. 2010;20(2):387-412. https://doi.org/10.1093/jopart/mup009

2. Nemati S, Khaef Elahi AA, Danaeifard H, Azar A. Designing a public service incentive system in the Iranian public sector with an expert-centered interpretive approach. Public Management Research. 2015;32(9):5-24.

3. Perry JL, Hondeghem A. Motivation in Public Management: The Call of Public Service. Oxford University Press, New York, NY;2008. https://www.amazon.com/Motivation-Public-Management-Call-Service/dp/0199234035

4. Perry JL, Hondeghem A, Wise LR. Revisiting the motivational bases of public service: Twenty years of research and an agenda for the future. Public Administration Review. 2010;70(5):681-690. https://doi.org/10.1111/j.1540-6210.2010.02196.x

5. Warren DC, Chen L. The relationship between public service motivation and performance. In Ringquist, E. J. (Ed.), Meta-analysis for public management and policy. San Francisco, CA: Jossey-Bass;2013.

6. Andersen LB, Pallesen T, Holm Pedersen L. Does Ownership Matter? Public Service Motivation Among Physiotherapists in the Private and Public Sectors in Denmark. Review of Public Personnel Administration. 2011;31(1):10-27. doi:10.1177/0734371X10394402

7. Ardalan M, Soltanzadeh V, Beheshtirad R. (2017). Relationship between Ethical Characters of Managers with Human Capital Development. ethics in science & technology. 2017;12(2):85-94. https://www.sid.ir/en/journal/ViewPaper.aspx?id=734734.

8. Hosseini S, Badizadeh A, Hosseini S, Ghahremani A. Identifying and Explaining the Dimensions of the Entrepreneurial University Affecting Students' Entrepreneurial Behaviour - A Case Study of Alborz Comprehensive University of Applied Sciences. Karafan Quarterly Scientific Journal. 2021;17(1):123-144. doi: 10.48301/kssa.2021.128455

9. Aghaei T, Teymornjad K, Akhavanhezaveh F. A Study of University Entrepreneurship from the Perspectives of Faculty Members of Shahid Beheshti University. Social Development & Welfare Planning. 2013;14(5):183-208. doi: 10.22054/qjsd.2013.3306

10. Astebro T, Bazzazian N, Braguinsky S, Startups by recent university graduates and their faculty: Implications for university entrepreneurship policy,

Research Policy. 2012;41(4):663-677. https://doi.org/10.1016/j.respol.2012.01.004

11. Audretsch DB. From the entrepreneurial university to the university for the entrepreneurial society. Journal of Technology Transfer. 2014;39(1):313-321. https://doi.org/10.1007/s10961-012-9288-1

12. Fini R, Grimaldi R, Santoni S, Sobrero M. Complements or substitutes? The role of universities and local context in supporting the creation of academic spin-offs. Research Policy. 2011;40(8):1113-1127. https://doi.org/10.1016/j.respol.2011.05.013

13. Iacobucci D, Micozzi A, Iacobucci D, Micozzi A. How to evaluate the impact of academic spin-offs on local development: an empirical analysis of the Italian case. Journal of technology transfer. 2015;40(1):434-452. https://doi.org/10.1007/s10961-014-9357-8

14. Kim YJ, Kim ES. Exploring the interrelationship between public service motivation and corruption theories. Evidence-based HRM: A Global Forum for Empirical Scholarship. Emerald Group Publishing. 2016;4(2):181-186. https://doi.org/10.1108/EBHRM-12-2015-0047

15. Davis RS, Stazyk EC. Developing and Testing a New Goal Taxonomy: Accounting for the Complexity of Ambiguity and Political Support. Journal of Public Administration Research and Theory. 2015;25(3):751-775. https://doi.org/10.1093/jopart/muu015

16. Holt SB. For Those Who Care: The Effect of Public Service Motivation on Sector Selection. Public Administration Review. 2018;78(3):457-471. https://doi.org/10.1111/puar.12906

17. Andersen LB, Serritzlew AM. Public Service Motivation, User Orientation, and Job Satisfaction: A Question of Employment Sector?. International Public Management Journal. 2013;16(2):252-274. https://doi.org/10.1080/10967494.2013.817253

18. Homberg F, Costello J. Zooming in on Public Service Motivation II: Construct Measurement. In: Public Service Motivation and Civic Engagement. Palgrave Pivot, Cham;2019. https://doi.org/10.1007/978-3-030-02453-6_3

19. Zeng FQ. An Empirical Study on the Influencing Factors of University Students' Entrepreneurial Intention-A Research Based on the Chinese Nascent Social Entrepreneur. Journal of Asia Entrepreneurship and Sustainability. 2013;11(1):89-95.

20. Carpenter J, Doverspike D, Miguel RM. Public Service Motivation as a Predictor of Attraction to the Public Sector. Journal of Vocational Behavior. 2012;80(2):509-523. https://doi.org/10.1016/j.jvb.2011.08.004

21. Camilleri E. Organizational Commitment, Public Service Motivation, and Performance Within the Public Sector. Public Performance & Management Review. 2007;31(2):271-274. https://www.tandfonline.com/doi/abs/10.2753/PMR1530-9576310205

22. Hamidizadeh A, Danaeifard H, Tahmasebi R, Homayi Latif M. Investigating the antecedents of public service motivation in Iranian government organizations. Public Policy Quarterly. 2017;4(3):123-139.

23. Kordaeich A. Designing the organizational structure of entrepreneurship centers and schools in the country. Quarterly Journal of Humanities Teacher. 2005;43(1):12-25.

24. Sharif M, Jamshidian A, Rahimi H, Naderi N. Analysis of the status of entrepreneurship education in higher education in Iran. Journal of Entrepreneurship Development. 2011;11(1):87-106.

25. Goudarzi R, Hosseini S, Tabaian S. Academic Entrepreneurship Development Framework in the Humanities in Iran. Journal of Entrepreneurship Development. 2019;11(4):661-679. https://www.sid.ir/en/journal/ViewPaper.aspx?id=689739.

26. Dehghanan H, Sehat S, Sadatian SI. Comparative study of components affecting the motivation to serve the community in private and public hospitals. Journal of Management Studies. 2015;79(24):145-172.

27. Yurtkorua ES, Acarb P, Teramanc BS. Willingness to Take Risk and Entrepreneurial Intention of University Students: An Empirical Study Comparing Private and State Universities. Procedia - Social and Behavioral Sciences. 2014;150(1):834-840. https://doi.org/10.1016/j.sbspro.2014.09.092

28. Safarian Navekhi M, Zahed Babalan A, Moeini Kia M, Rezaei Sharif A. Qualitative study: Identifying the Components of Entrepreneurial University. Jundishapur Education Development Quarterly. 2019;10(2):19-30.

29. Hadadian A, Sadeghi F, Salar Babakani N. Investigating the moderating role of readiness to serve in the efficacy of innovativeness, risk taking and proactiveness on the performance in Governmental banks in Mashhad. Journal of Business Administration Researches. 2018;19(10):277-306. http://bar.yazd.ac.ir/article_1188.html?lang=en