



The Role of Social Factors in Students' Entry to Open and Distance Universities of Iran

Abbas Shayestehfar^{1,*}, Mehran Farajollahi¹ and Bahman Saiedipour¹

¹Payam e Noor University, Tehran, Iran

*Corresponding author: Humanities, Payame Noor University, P.O. Box: 19395 4697, Tehran, Iran. Tel: +98-9171973770, Email: alaghary320@gmail.com

Received 2018 December 17; Revised 2019 February 25; Accepted 2019 February 26.

Abstract

Background: Higher education has a great influence on the growth and development of societies. Several social factors depend on public demand for higher education.

Objectives: The purpose of this research is to identify the most important social factors affecting the registration of students at Payam-e-Noor University (PNU).

Methods: Two methods were used in order to achieve the research goal. In the first part, an analytical documentary method was used to extract the indicators. In the second part, the least squares regression model, was used for data Undergraduate students were studied at PNU in 2001 - 2014.

Results: The results of the research showed that the total population of the country (0.146; $P = 0.048$) and the high education budget (0.294, $P = 0.075$) had a positive and significant effect on enrollment at PNU. Total state budget (-0.016, $P = 0.582$) and the number of secondary school students (-4.241, $P = 0.329$) had a negative impact on student entrance to PNU.

Conclusions: Total state population and higher education budget had a considerable impact on the student population in PNU.

Keywords: Social Factors, PNU, Open and Distance Education.

1. Background

Education has universally been regarded as an important contributing factor in the creation of higher education enrollment. In the present competitive economy, higher education plays a vital role and contributes to the socio-economic development by endowing individuals with the opportunity to improve their knowledge, skills, and capability of productive work (1). Based on the theory of human capital, the benefits of investing in higher education include both future income and the reasonable cost of income in other cases. There is also the risk of investment and the tendency of the community to invest in higher education. Therefore, those who predict the market, especially in education, will succeed in this area (2).

Increasing interest in higher education, which plays a major role in boosting demand for the competitive labor market, leads to an increase in the net enrollment rate in higher education among the population aged from 15 to over (3). Entering higher education is influenced by a wide range of demographic, cultural, and economic factors that may limit or increase student access to higher education (4).

A potential demand determinant includes several so-

cial variables. Most studies agree with the view that the parents' educational success in entering higher education as well as income levels can have an impact on the children's choice to pursue higher education (5).

Enrollment in higher education requires a number of social and individual priorities to create an interest in investing in higher education, and sufficient resources to support these priorities should be available. Increasing participation rates in higher education are dependent on government policies in relevant areas. Participation and educational success in secondary school are also very effective in persuading students to enter higher education (6).

The strategic development of universities for distance learning provides students with educational services. Some people are of the opinion that the benefits of distance education will expose them to widespread and new markets in the production and revenue cycle. Trainers evaluate the market's stretch to open and distance education (7).

PNU in Iran is one of the open and distant universities that has based e-learning on its work. The methods of teaching at this university are semi-presence courses, in which the presence of students in the classroom is re-

duced by the use of training technology. The university has four branches of human sciences, basic sciences, engineering, and agriculture. Student enrollment growth has led to the rapid development of universities, the establishment of new institutions and the recruitment of new training staff by 2012. But in 2013 at PNU, the decline in the number of students began and is expected to continue in the future. For this reason, researchers have been keen to study the social determinants of student enrollment at this university.

Many studies were conducted on the factors affecting registration in higher education. Vuth and Dash (1) revealed that the number of secondary school students and the gross national income in costs have a positive and significant effect on enrollment of students at higher education levels. Amy (8) showed that the political and economic conditions affect the budget cuts in higher education. High unemployment rates may also affect budget cuts in higher education. Ghavidel and Jahani (2) stated that literacy and urbanization rates had a positive impact on enrollment in higher education. The unemployment rate between the ages of 15 and 24 had a negative impact on enrollment in higher education at the men undergraduate level. Oliveira et al. (6) claimed that the unemployment rate had a low relationship with higher education demand. Governments spend part of the revenues from GDP on compulsory education.

Vieira et al. (5) suggested that a number of live birth (18-20 years) and students with secondary school diploma had a positive effect on demand for higher education but the unemployment rates had a negative effect. Sojkin et al. (3) stated that there are no significant differences between the place of living prior to studies (village or city) and higher education choice and student satisfaction. Unlike other research findings, this study showed that social conditions are one of the most important factors affecting student satisfaction from high education and student life.

Sarpkaya (9) showed that students whose families live in the village will then have more support than the family living in the city to enter the university. Students whose families live in the city consider the employment sector to enter the university than those whose families live in the countryside. The large geographic and demographic size of the family has a lesser impact on the individual's demand for education both in the supporting sector and in the employment sector. According to Saiti and Prokopiadou (10) rise in the unemployment rate, increases enrollments in higher education institutions.

2. Objectives

In this research, we are looking at the issue of which social factors affect the registration of students at PNU.

3. Methods

Research method consisted of two parts. In the first part, for collecting information and data, an analytical documentary method has been used. In order to obtain the indices, we first compiled the factors influencing entry into higher education using the Delphi method and reviewing the literature. Then in order to confirm these indices, the variables were presented to a number of higher education faculty members to submit their own opinions. The data were collected from the Center for Statistics of Iran, the Ministry of Cooperatives, Labor and Social Welfare, the Ministry of Science, Research and Technology and the Center for Statistics of PNU. Data from 2001 to 2014 were reviewed. Thirty-one indicators have been analyzed, along with a regression model under its keywords:

$$DLNS1 = C + LBT + LYK + LU + DLNT + DLCPI + DLYF + DLN2 + DLBA$$

Where;

DLNS1 refers to the number of enrollees in BA course of PNU; C refers to intercept; LBT refers to total state budget; LYK refers to average income of manufacturing laborers; LU refers to the unemployment rate of youth of age 15-24; DLNT refers to the total state population; DLCPI refers to the total consumer price index; DLYF refers to income per MA degree; DLN2 refers to workforce graduated of high school; and DLBA refers to the higher education budget.

$$DLNS2 = C + DLSE + LSEE + DLCT + LGDP + LGNP + DLNEE + LYA + DLYD$$

Where;

DLSE refers to total employed portion in industry; LSEE is ratio of educated employees to total employees; DLCT refers to education and student loan; LGDP refers to gross domestic production; LGNP refers to gross national production; DLNEE refers to total workforce; LYA refers to average annual household income; DLYD refers to income per diploma degree.

$$DLNS3 = C + LB1 + LS3 + LCA + LYL + LNE + DLN3$$

Where;

LB1 refers to urban household dimension; LS3 refers to the population of the primary student; LCA refers to average household cost; LYL refers to BA degree income; LNE refers to the number of employed people in industrial workshops; DLN3 refers to the academic graduated workforce.

$$LNS4 = C + LB2 + DLS2 + LS1 + LSK + DLSA + DLSAE + DLN1 + LYE + LSF$$

Where;

LB2 refers to rural household dimension; DLS2 refers to the number of secondary school students; LS1 refers to the number of high school students; LSK refers to agriculture department tuition; DLSA refers to basic science tuition;

DLSAE refers to human science tuition; DLN1 refers to educating or graduated population in labor market; LYE refers to national income; LSF refers to technical and engineering department tuition.

In the second part, the ordinary least squares regression model was used in order to analyze the data. The use of unsteady time series techniques in econometrics may lead to false regression. In order to ensure this method for evaluating variables, the Extended Dickey-Fuller test should be used. In this test, the statistics associated with the Dickey-Fuller test are evaluated with a critical value of the McKinnon table. If the resulting number is higher than the numerical value of the McKinnon test, then the null hypothesis will not be accepted for the root of the unit. MICROFIT and MIPLE software have been used to evaluate the variables. The value of the above variables is effective in increasing the coefficient of determination. The reason for using the time series method is the impact of independent variables, the number of students. Considering that in order to evaluate the variables and to examine their impact on each other, all variables should be evaluated in combination with each other to get their values. Therefore, in these analyses, not only economic factors or cultural and social factors are not affected, but also a combination of these factors must be evaluated. The data and indicators in this section have been adapted from Farajollahi and colleagues (11).

4. Results

The social factors affecting entry into higher education are comprised of a variety of variables, including the rapid growth in demand for higher education, the proportion of women participating in higher education, parenting learning success, nature, nutrition, income, and academic success at secondary school. Table 1 evaluates the variables in this research. Here we present the mean, median, and standard deviation of each of the variables.

Accordingly, the average, mean, and standard deviation of the registered undergraduates are 662863, 75637805, and 287264, respectively (Table 1). Other variables are specified in the same way.

The question that was evaluated in this research is: What are the social factors affecting enrollment at PNU?

Table 2 shows that the total state population (DLNT) (0.146, $P = 0.048$) and higher education budget (DLBA) (0.294, $P = 0.075$) had a positive and significant impact on the number of enrollments. Also, the total state budget (LBT) (-0.016, $P = 0.582$) and the number of secondary school students (DLS2) (-4.241, $P = 0.329$) had a negative effect on the number of enrollments.

5. Discussion

Open and distance universities are greatly influenced by population growth and excellent education budgets, which is reflected in our research findings on enrollment in open and distance education. The PNU in all provinces is dependent on the population growth rate. As the population in each province increases, the number of students enrolled in PNU also increases. Consequently, by increased funding at higher education and at PNU, the amount of equipment and facilities will be increased at the PNU and the universities can register more population.

The results show that the total state population and higher education budget have a positive and significant impact. The results of this research are consistent with the results of the research by Farajollahi et al. (11), Kirby (4) and Vieira et al. (5), which have obtained the same results on the total state population. Studies of Oliveira et al. (6) and Amy (8) were consistent with the results of the study on the higher education budget. When the government allocates more funding for higher education, universities can succeed in achieving their goals and provide more student access.

Total state budget and the number of secondary students had negative effects on the number of students. The results of this section are opposed to the results of the research by Vuth and Dash (1) and Oliveira et al. (6) on the number of secondary students. Probably many students who have completed a diploma will prefer to enter traditional universities and are not willing to attend distance education universities because of lack of knowledge or lack of computer literacy. Therefore, planners and policymakers of PNU, as one of the open and distance universities in Iran, should consider these factors in their future planning.

Acknowledgments

We thank Ms. Sabbaghi, an expert on the Ministry of Welfare, Social Cooperation, and Social Affairs, and Ms. Shadfar, an expert at PNU, provided data on the variables considered in the research.

Footnotes

Authors' Contribution: Mehran Farajollahi and Bahman Saiedipour devised the study concept, designed the study, and critically revised the manuscript. Abbas Shayestehfar collected data, performed the analyses, and revised the manuscript.

Conflict of Interests: The authors declare that they have no conflict of interests.

Table 1. Descriptive Statistics of Variables

Variable	Mean \pm Standard Deviation	Median
Number of enrollees in bachelor course (DNLS), people	662863 \pm 287264	75637805
Total state budget (LBT), billion Rials	176268613.5 \pm 263787418.1	36847035
Unemployment rate of youth of age 15 - 24 (LU), people	25.77 \pm 2.99	24.7
Total state population (DLNT), people	70776741.67 \pm 3373635.5	70931100
Higher education budget (DLBA), billion Rials	15857946.4 \pm 14774489.3	9806497
Urban household dimension (LB1), people	3.96 \pm 0.322	3.87
Population of primary students (LS3), people	6262073.1 \pm 638099.74	6006553
Rural household dimension (LB2), people	4.47 \pm 0.4429	4.49
Number of secondary school students (DLS2), people	3520389.15 \pm 314374.18	3569839
Number of high school students (LS1), people	3699187.92 \pm 894948.92	3708270

Table 2. Social Factor Coefficients

Variable	Coefficients	S.E	T	Prob
LBT	-0.016	0.026	-0.598	0.582
LU	-0.766	0.487	-1.573	0.191
DLNT	0.146	0.051	2.820	0.048
DLBA	0.294	0.123	2.387	0.075
LB1	0.412	1.149	0.359	0.730
LS3	0.111	1.045	0.106	0.918
LB2	5.211	3.270	1.593	0.186
DLS2	-4.241	3.818	-1.110	0.329
LS1	0.853	0.957	0.891	0.423

Ethical Considerations: It is noted that we did not deal with human subjects and interfering in our research, we only obtained some data through the statistical centers of Payame Noor University, the Ministry of Welfare, Cooperatives and Social Affairs and the Statistics Center of Iran. Finally, we analyzed the software in the econometric model. Therefore, it is recalled that we did not deal with humans and interfere with the subjects. So we did not get the code of ethics.

Funding/Support: No funding was provided for this work.

References

- Vuth D, Dash TR. Growth of higher education and its determining factors in Cambodia. *Adv Soc Sci Res J*. 2017;**4**(1):41-9. doi: [10.14738/as-srj.41.2568](https://doi.org/10.14738/as-srj.41.2568).
- Ghavidel S, Jahani T. Higher education demand estimation and prediction by 2025 in Iran. *J Appl Res High Educ*. 2015;**7**(2):194-210. doi: [10.1108/jarhe-04-2013-0021](https://doi.org/10.1108/jarhe-04-2013-0021).
- Sojkin B, Bartkowiak P, Skuza A. Determinants of higher education choices and student satisfaction: The case of Poland. *Higher Education*. 2011;**63**(5):565-81. doi: [10.1007/s10734-011-9459-2](https://doi.org/10.1007/s10734-011-9459-2).
- Kirby D. Strategies for widening access in a quasi-market higher education environment: Recent developments in Canada. *High Educ*. 2010;**62**(3):267-78. doi: [10.1007/s10734-010-9386-7](https://doi.org/10.1007/s10734-010-9386-7).
- Vieira C, Vieira I. What drives university applications? An attempt to explain aggregate demand for higher education. *J High Educ Policy Manag*. 2014;**36**(6):616-31. doi: [10.1080/1360080x.2014.957894](https://doi.org/10.1080/1360080x.2014.957894).
- Oliveira M, Vieira C, Vieira I. Modelling demand for higher education: A partial least-squares analysis of Portugal. *Eur J High Educ*. 2015;**5**(4):388-406. doi: [10.1080/21568235.2015.1084589](https://doi.org/10.1080/21568235.2015.1084589).
- Gerlich RN, Pearson T, Lewer J. Predicting student demand for online courses in the college of business. *J Internet Commerce*. 2005;**4**(4):59-66. doi: [10.1300/J179v04n04_04](https://doi.org/10.1300/J179v04n04_04).
- Amy YL. Dramatic declines in higher education appropriations: State conditions for budget punctuations. *Res High Educ*. 2016;**58**(4):395-429. doi: [10.1007/s11162-016-9432-0](https://doi.org/10.1007/s11162-016-9432-0).
- Sarpkaya R. Factors affecting individual education demand at the entrance to university: Adnan Menderes University sample. *Educ Sci Theor Prac*. 2010;**10**(1):475-88.
- Saiti A, Prokopiadou G. The demand for higher education in Greece. *J Further High Educ*. 2008;**32**(3):285-96. doi: [10.1080/03098770802221080](https://doi.org/10.1080/03098770802221080).
- Farajollahi M, Shayestehfar A, Saidipour B, Taleebi S. The role of economic factors in the growth and development of human resources in open and distance universities of Iran. *Interdiscip J Virtual Learn Med Sci*. 2018;**9**(2).