

The Relationship between Financial Incentives and Perceptions of Student Choice At Private Universities in Egypt

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ABSTRACT

The purpose of the study was to investigate the role of financial incentives in the student choice of an undergraduate degree granting higher education institution in selected private universities in Egypt. Simple random sampling was used to choose the universities for the study.

These Five universities were chosen randomly for the study from total 24 universities: German University, French University, Russian University, British University and Miser University of Science and Technology. The sample consisted of 390 students conveniently selected from the total number of students in those selected institutions. A survey was the main method of data collection. The results of the study reached there is a significant relationship between Financial Incentives and Perceptions of Student Choice.

Keywords: Financial Incentives, Perceptions of Student Choice, Private Universities in Egypt.

1- Introduction

Financial incentives are often used to increase the number of graduates in selected fields. For example, in the United States, the National Science and Mathematics Access to Retain Talent (SMART) program was introduced between the 2006–07 and 2010–11 academic years.10 this program provides \$4,000 in both the third and the fourth years of baccalaureate education to low-income undergraduate students who study one of a few selected majors (Ding & Lehrer, 2018).

The financial incentives have several effects on students' selection process and their choice of an undergraduate degree. Consequently, some researches prefer to test the factors that effect on the perception of students in the process of selection higher education institution in Egypt.

Much of today's higher education institutions and universities reforms trend to enhance the financial considerations such as the financial incentives, the cost of education and the procedures of payment through upgrading the tuition and payment system as a result of the fact that the financial considerations are considered to be an important reform for the higher education system (Usher & Savino, 2006).

Therefore, in Egypt there is a great concern about developing the education system as one of the Egyptian agenda of development. So, there are many studies have been concerned with the impact of the financial considerations on students' selection process for their choice of an undergraduate degree granting higher education institution.

2- Research Problem and Questions

This study examines the role of financial incentives in students' matriculation choices in selected private Egypt universities. Egypt's higher education system has been described as "not serving the country's current needs well" (OECD & World Bank, 2010). This is probably one of the least sensational descriptions of the system. Describing the woes of the higher education sector in Egypt is a tradition, not only in academic circles but also among most Egyptians, particularly from the educated. With limited funding and a politically constrained institutional environment, the country's higher education system has been unable to cope with a growing demand for higher education and an ever-largest youth population.

The outcome is an oversupply of university graduates, mismatch of skills, and weak research and institutional capacity. One of the main approaches to reforming the higher education system has been to diversity higher education options and support cost sharing by encouraging private higher education (World Bank, 2008). This is part of a global trend, where most of the growth in higher education worldwide over the past decades has been in private higher education (Altbach et al., 2009). Some 30% of global higher education enrollment is actually provided by private institutions (ibid.). Egypt's experience of a growing role of private higher education is better understood by relating it to the global experience of expanding the role of this sector.

Accordingly, the research questions are raised as follows:

1. What is the relationship between student demographic characteristics and perceptions of student choice of higher education institutions among students at selected private Egypt universities?
2. Which financial incentives (student loans, tuition and fees, scholarships, financial aid, and grants) are the best predictors of perceptions of student choice of higher education institutions among students at selected private Egypt universities?

3- Literature Review

Many students mention financial considerations as a key concern when applying to and selecting a higher education institution. Not surprisingly, a student's financial investment in postsecondary education is directly linked to the amount of time it takes them to complete their

degree. However, the Center for College Affordability and Productivity (CCAP) notes that many students are not graduating from four-year degree programs on time, constituting a “major problem” in higher education today. In 1952, there were only three national universities in Egypt – Cairo University, Alexandria University, and Ain Shams. In addition, two religiously affiliated private universities were operating – Al-Azhar University and the American University in Cairo. After the national revolution in 1952, the Nasser regime instituted a number of higher education reforms, in line with revolution’s goals of social justice and equity (Arabsheibani, 1988).

This goes back to Egypt’s development project and socialist policies of the 1950s and 1960s as higher education was declared a free right to all Egyptians in 1962. This has been the case, despite the fact that the first modern university in Egypt, Cairo University, was established as a private university in 1908. Until the 1990s, Egyptian universities were almost exclusively public. A key exception was the American University of Cairo, which was founded in 1919 as private non-profit American institution. A significant development to the structure of the higher education system in Egypt has been in 1992, when Law 101 was passed to authorize and regulate the establishment of private universities.

Following the promulgation of the law, four new universities opened their doors in 1996, followed by five institutions in 2000 and six universities in 2006 (OECD & World Bank, 2010). Private higher education institutions provide education to about 23% of tertiary education in Egypt (CAPMAS, 2013).

Students consider a range of issues when making choosing a college and university; this includes, for example, price and cost, course or programmed, location, quality of facilities, social life and academic reputation (Bergerson, 2010). Increasing participation rates, higher tuition costs and value-for-money concerns have helped transform decision-making into a more complex process for students. At the same time, the rises of the internet and new forms of communication have revolutionized access to information, stimulating growth in publications marketed under the generic title of university guide. College guides emerged to meet the growing demand for information (Hunter, 1995).

(Cornwell, Lee, & Mustard, 2005) find that the Georgia HOPE scholarship—which had grade incentives but not credit incentives—reduced the likelihood that students registered for a full credit load, and increased the likelihood that students withdrew from courses presumably to increase the probability they would meet the minimum GPA benchmark. (Stinebrickner & Stinebrickner, 2008), who use an instrumental variables strategy and find that increased time spent studying has a positive and statistically significant impact on student grades. (Fryer, 2011) reports suggestive evidence that rewarding elementary and secondary school students for effort focused on education inputs (such as reading books) may increase test score achievement, but rewarding them for education outcomes (such as grades and test scores) does not. (Barrow & Rouse, 2018) find that financial incentives induced students to devote more time and effort to educational activities and allocate less time to other activities. Hagood, L. P. (2019) this article explores the impact of performance funding on state appropriations and investigates the heterogeneous treatment effects across institution types and find that

performance funding consistently benefits high-resource institutions and imposes financial burdens on low-resource institutions.

4- Research hypotheses

H₀: There is no significant relationship between Financial Incentives and Perceptions of Student Choice of higher education institutions among students at selected private Egypt universities.

H₁: There is a significant relationship between Financial Incentives and Perceptions of Student Choice of higher education institutions among students at selected private Egypt universities.

5- Research Variables

These variables constitute the two main components of the student choice model, which are the dependent and the independent variables.

5-1 Dependent Variable

For this study, perceptions of expected student choice refer to the anticipated or expected financial incentives that would cause a student to choose an institution.

5-2 Independent Variable

The independent variable in this study financial incentive influencing the perceptions of expected and actual student choice in selected private Egypt universities. Financial incentives: The following are the financial incentives used in this study; the first financial incentive examined was student loans. Student loans refer to money lent to students by a lending institution or agency to pay as tuition or fees and repaid back to the lender with interest in an agreed time. Another financial incentive was tuition and fees. Tuition and fees include the price students have to pay for enrollment in a particular program in a given higher learning institution whereby the tuition and fees relate to the cost of instruction. Financial aid is one the financial incentives and refers to any scholarship or financial aid given to a student as part of tuition and fees for education at a higher learning institution. The last financial incentive involved grants. In this study, grants are any financial assistance offered to students by various sources such as federal and state agencies which do not need to be repaid.

6- Research Methodology

6-1 Population and Sample

The participants were students in selected private universities in Egypt; the reason for choosing private universities is due to the fact that most studies were conducted in public universities (Vossentlyssn, 2005; Fitch, 2009 & Mullins, 2010).

Table (1) shows the study population is 24 universities, five universities were chosen randomly for the study, the selected institutions were: German University, French University, Russian

University, British University and Miser University of Science and Technology. Specifically, convenience sampling was used to select the participants of the study.

In a convenience sample, the researcher simply uses as participants those individuals who are easy to get; thus, respondents are selected on the basis of their availability and willingness to respond (Gravetter & Forzano, 2012). However, due to the fact that British University did not provide an Internal Board Review approval for the researcher to conduct this study at their institution, the study was conducted in four institutions which were: German University, French University, Russian University and Miser University of Science and Technology.

The sample was generated from the total number of students in those selected institutions. The total enrollment for the four private selected institutions was approximately 14,120 students (Features, 2014). A sampling formula was applied to determine the sample of the study. In this instance the Yamane (1967) sampling formula was used to calculate the sample size of the study (Wilson, 2010). Table (3) shows Study Participants:

Where:

$$n = N/[1+Ne^2]$$

ations

E = significant error

$$n = 14,120 / [1+14,120(0.05^2)]$$

$$n = 388.98 \text{ (approximately 389 students)}$$

According to (Beri, 2007), stratification ensures that the sampling fraction is proportionate to the population in each stratum. The stratified sampling formula has been adopted from (Srivastava et al.,1989).

$$n = (N1/N2) N3$$

Where:

n = stratified sample size

$N1$ = Institutional population

$N2$ = Total population of all institutions

$N3$ = Sample size

The number of surveys administered to participants was doubled to 780 students (200%) to ensure an adequate sample size for estimating population parameters pertinent to the statistical analysis, supported by (Agresti et al., 2017) the number of questionnaires administered should exceed the desired sample size by at least 20% to allow for various contingencies like low retrieval rate of questionnaires distributed to respondents.

6-2 Data Analysis

The data gathered was analyzed using the Statistical Package for the Social Sciences (SPSS), Version 25.0 for Windows.

6-2-1 Descriptive Analysis

Table (3) shows the Mean and Standard Deviation for Research variables. As it could be observed that the answers lay between Neutral and Agreement zone, and the mean values for the research variables; Financial Incentives and Students Choice are 3.1797 and 3.6714.

6-2-2 Testing Research hypothesis

In this section, the hypotheses under study are tested using SEM. Table (4) shows the SEM analysis of the impact of Research variables; Financial Incentives on Students Choice. It could be observed that there is a positive significant impact of Financial Incentives on Students Choice, as the estimate is 0.194, as well as p-values are less than 0.05. On the other hand, the R square is 0.193, which means that the model explains 19.3% of the variation in Students Choice.

Therefore, H₁: "There is a significant relationship between Financial Incentives and Perceptions of Student Choice" is accepted. Table (5) shows the model fit indices; CMIN/DF = 1.576, GFI = 0.967, CFI = 0.988, AGFI = 0.950, and RMSEA = 0.037 are all within their acceptable levels.

7- Discussion

H₀: "There is no significant relationship between Financial Incentives and Perceptions of Student Choice, it could be observed that the null hypothesis was rejected and the alternative hypothesis

H₁: "There is a significant relationship between Financial Incentives and Perceptions of Student Choice is accepted, as it was found that there is a significant positive effect of Financial Incentives on Student Choice as the p-value less than 0.05, and the estimate coefficient is 0.194.

However, the findings were consistent with what was claimed by (Starter, 2009) which examined the variables and stated that the Financial Incentives have a significant positive effect on Student Choice. Also, the results are supported by (Bergerson, 2010) as it was found that it can be said the Financial Incentives appear to be statistically important and they affect the Perceptions of Student Choice. Furthermore, (Canton & Blom, 2004); (Boatman & Long, 2016) have been claimed that there is a significant link between Financial Incentives and Perceptions of Student Choice which is matching with what researcher has found.

8- Conclusion & Recommendations

The reason for this study was to investigate the role that financial incentives play in students' selection process for their choice of an undergraduate degree granting higher education institution.

Based on the research findings of this study as supported by empirical data, the following conclusion was suggested concerning the role of student economic status in the perceptions of student choices in selected education institutions. There is a significant relationship between Financial Incentives and Perceptions of Student Choice.

The following summarizes a few recommendations derived from the results:

1. **For Practitioner:** Institutions should offer financial incentives, because these represent the one best and proven way to attract prospective students. Because family income, percentage parents and students pay were important determinants for the perceptions of student choice in selected private education institutions, higher education institutions should devote more resources to assist students from different socioeconomic backgrounds.
2. **For Future Research:** More research is required regarding how tuition and fees of private universities can be offset or restricted so as to be affordable for students from lower socioeconomic families, In addition to Further studies should be conducted in related areas to solidify and substantiate the findings of this research.

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Appendix

Table (1): Private Universities in Egypt

No	University Name
1	Miser University for Science and Technology
2	6th October University
3	October University of Science and Technology
4	German University
5	French University
6	Al-Ahram Canadian University, more here
7	British university
8	University of Sinai
9	Egypt International University
10	Modern University of Technology and Information
11	University of Renaissance
12	Pharos University
13	Future university
14	Egyptian-Russian University
15	Derayah University
16	Horus University
17	University of Heliopolis
18	Arabic Open University
19	Delta University
20	Badr University
21	New Giza University
22	Egyptian University of E – Learning
23	The Nile University "Private University"
24	Chinese University

Source: Researcher Preparation Based on www.scu.eun.eg

Table (2): Study Participants

Institution	Computation $n = (N1/N2) N3$	Research Participants
German University	$(3,589/14,120)389 = 98.87$	99 students
French University	$(700/14,120)389 = 19.28$	19 students
Russian University	$(4,231/14,120)389 = 116.56$	117 students
Miser University of Science Technology	$(5,600/14,120)389 = 154.27$	154 students
Total		389 Students

Table (3): Descriptive Analysis for the Research Variables

	N	Mean	Std. Deviation	Frequencies				
				1	2	3	4	5
Financial Incentives	423	3.1797	.64644	1	54	236	132	0
Students Choice	423	3.6714	.64087	0	14	137	246	26

Table (4): SEM Analysis of Research variables on Student Choice

Dependent variable		Independent variable	Estimate	P	R-square
Students Choice	<---	Financial Incentives	.194	***	.193

Table (5): The Model Fit Indices for the effect of Research variables on Student Choice

CMIN/DF	GFI	AGFI	CFI	RMSEA
1.576	.967	.950	.988	.037