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# DETERMINATION AND VALIDATION OF THE CONTRIBUTING FACTORS TOWARDS THE SELECTION OF A B-SCHOOL - AN INDIAN PERSPECTIVE

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**Abstract:** This study has tried to see what factors do play a significant role in the B-School selection process of an aspirant. The study also would like to see the constituent elements of the factors which come to the mind of the prospective takers, herein, the prospective students. The study pursued here has significant relevance in its purpose as it is one of its kind in this country, and that the rising market demands a study which would be helpful to the pursuant as well as the service providers. The existing management institutions in the country are challenged for their survival. This study intends to make their work easier by identifying the most important factors which the 'prospective candidates' look for while selecting their B-School. For this purpose, we have conducted an Exploratory Factor Analysis (EFA) on the responses obtained from a sample of 594 respondents through questionnaire based survey and interviews. Further, in order to ascertain the results, we have done the Confirmatory Factor Analysis (CFA) using Structural Equation Modeling (SEM) approach of the first order type. The result of SEM conforms to that of EFA.

**Keywords:** Management Education, B-School selection, Exploratory Factor Analysis (EFA), Structural Equation Modeling (SEM)

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#### 1. Introduction

Higher Education in the management discipline has become very popular in India in the last twenty - five years or so. While, there were 9 (nine) management institutions in India in the year 1958, the number grew to 2450 in the year 2012. A closer look in this respect will show, that, in the year 1988 India had only 87 management institutions. In the year 1998, that is, just over ten years the number rose to 682, a growth of about 783 percent in a single decade. In the next decade the number went to 1523 (223 percent), and in 2018, the number of AICTE approved management institutions stand at 3233, and the total intake strength of all these institutions presently happens to be 3,94,843, (AICTE official site, 2017-18). As reported in the same source (AICTE), the present number of management pursuant in this country as of 2018 is 2,37,889 which accounts for a total 1,55,154 number of seats (i.e., 39.47 percent of the total permissible enrolment) remain not filled up because of no potential takers. The figure reflects that there is huge competition in the management vertical of higher education in India. Number of seats being more than the number of aspirants, management institutions are perceived to be faced with a very difficult situation and really needs to fight it out in the market to convince the aspirants to choose their particular institute over others. The authors (Melewar & Akel, 2005) suggests that, in an environment where soon-to-be prospective students are being considered as the 'potential target market' for being the 'ultimate consumer' of the service in the offing (PG management education), higher education institutions very well need to employ articulated and definitive strategies to maintain and intensify their competitive strength in the marketplace. Therefore, as a consequence higher education institutions are now relentlessly focusing on wooing higher and better quality students (Simões & Soares, 2010). It can well be perceived that the same must be the case applicable for the majority of the management institutions (other than the reputed IIM's and the big league ones) in India, engaged in post-graduate management education, especially, when the numbers of seats offered are more than the number of 'takers'. The evolved scenario thus makes it clear that 'sustainability' of a PG management institute in India is a big challengewith 30 management institutions closing down in the year 2017-18 primarily because of dearth of students (AICTE official site, 2017-18). Earlier literatures in the context of higher education institutions (HEI's) not specific to management education suggest that, various universities based stalwarts have conveyed their anguish with regard to the sedate pace of attaining sustainability of the HEI's (Boyle, 1999; Leal Filho, 2000; Roome, 1998). Velazquez et al. (2005) reports that for attaining sustainability, HEI's world over strategically resort to focusing on education, research, outreach and partnership and sustainability.

In the given context, it is all but clear that management education in the post graduation level has turned into a 'product' in the marketplace like all products. The prospective studentwho in the actual practice happens to be the consumer of the service does reserve a huge power of choosing his/her B-school. Goff et al. (2004) suggests, it is understood that advertisements, promotions and other marketing activities are very likely to increase in the higher education sector. In this regards it is felt that, a proper evaluation agenda needs to be taken up to ascertain which choice factors students contemplate while making a decision on which institution they intend to attend (Wiese et al., 2009). Considering the issue of choice factors involved concerning HEI's, it has been found that a stream of investigations has focused on the common student – choice models, e.g. Punj & Staelin (1978) and Vrontis et al. (2007). It is primarily felt that the end consumer who also happens to

be the ultimate decision maker needs to be informed about the efficacies of a particular offering, as, the consumer can only arrive at a self-satisfying decision when he/she can process a host of information in a meaningful and wholesome way (Bhattacharjee & Bandyopadhyay, 2017). It may so happen that many of the aspiring students have the potential to get selected in multiple institutions at the time of admission. In such situations it is very important for them to know which institution would give them the highest value, which is still not explored by researchers (Debnath & Shankar, 2009).

With this preamble, in this study, we have made an attempt to understand what factors do influence the students while they select their B-School. Further, we also put an effort to analyze the constituent elements those make up the factor(s). The rest of the paper proceeds as follows. Section 2 summerizes related work while in section 3, we have elaborated upon the methodology. Section 4 highlights the results and includes discussions on the findings, where, section 5 puts forth some implications for industries. Section 6 finally concludes the paper including some of the limitations and future scope of the study.

#### 2. Related Work

Institutions of higher education strategically play a pivotal role in the economic upliftment of a country (Yong et al., 2009). Evaluating the performance of education is tough to ascertain, it is being a 'service', and governed by all the service attributes of intangibility, inseparability, heterogeneity and perishability (Lupo, 2013). It is already an established fact that prospective students do take cognizance of their selected choice factors while they contemplate about enrolling in an HEI (Espinoza et al., 2002; Hoyt & Brown, 2003; Gray & Daugherty, 2004; Punnarach, 2004). In addition to this, previous literatures also propose that certain choice factors appear to be of higher importance than the others (Sevier, 1993; Martin, 1994; Geraghty, 1997; Davis, 1998; Freeman, 1999; Bers & Galowich, 2002; Price et al., 2003; Shin & Milton, 2006). Wan Endut et al. (2000) have worked on the subject ofbenchmarking of the institutions engaged in higher education. In the introductory part it has already been discussed that we have failed to identify any work on this very subject concerning the determination of factors which influence a prospective PG management aspirant to choose his/her B-School. In this relation it needs to be mentioned that Debnath & Shankar (2009) has worked on the subject of ranking of B-Schools based on tangible and intangible parameters. Studies related to the ranking of PG programs of management have been the subject of the works of Kedia & Harveston (1998), Acito et al. (2008) and Köksalan et al. (2010). Evidences show that 'Teaching' is also an important parameter in the ranking of B-Schools (Ar et al., 2013).

The choice factors which are being considered for the purpose of this study have been majorly taken from the existing literatures on HEI's. For example, the researchers (Beerli Palacio et al., 2002; Arpan et al., 2003; Pabich, 2003) probed the usefulness of 'image of the Institute' in winning over students to select a particular brand of HEI over its competitors. Word-of-mouth mostly propagated by the alumni(earmarked here as past students' feedback), plays a significant role in influencing prospective students (Espinoza et al., 2002; Arpan et al., 2003; Seymour, 2002). A campus visit is one of the most important information sources for a prospective student which has a big say in the final decision making process (Seymour, 2002). Faculty research (Mathew, 2014), international links (Wiese et al.,

2009), corporate reputation, earmarked here as brand recognition (Coetzee & Liebenberg, 2004), employment prospects (here, placement-opportunity), academic reputation or track record, entry requirements, affordable fees, location or near to home (Wiese et al., 2009) are some of the other dominant factors that affect selection of a B-School. 20 such choice factors could be found (Absher & Crawford, 1996; Jonas & Popovics, 1990)though the studies were from different fields of higher education and none of PG management stream.

Our whole-hearted efforts could not find anything worth mentioning in regard to the area of our work. As already mentioned 'choice factors' have been the subject of earlier researchers (though, not in the Indian context). Major part of the research fraternity has considered the HEI's and not specifically 'Management Studies' as investigations reveal. Furthermore, none have pondered the issue of 'likely factors which influence (purchase) decision making when it comes with a B-School selection by the (consumers) young aspirants. Given this as a pretext, the following is understood to be the gap which this study would address in due course: Identify what factors the young aspirants of 'Business Education' are considered the most in their selection process of a B-School.

## 3. Research Methodology

A standard questionnaire was developed for the purpose of primary data collection from the existing 1st year PG management pursuant. The 'choice elements' considered has been mostly taken from the existing literatures on HEI's, which resulted in 21 such elements to be examined. A pilot study was conducted among 100 1st year (1st semester) students. The Cronbach's Alpha statistic stood at 0.628, which is satisfactory but not good. Therefore, the 'Reliability analysis' indicated some of the elements were not seriously considered by the respondents while answering. Exploratory Factor Analysis (EFA) was then carried out taking all the 21 elements into consideration. 7 different Factors resulted in with a KMO score of 0.783, but the irony of the fact, four of them comprised of single elements and thus had to be excluded as conceptually a factor should comprise of more than one element. It is empirically accepted that the elements which comprise a particular factor has strong intra-correlation among themselves. The pilot study strongly indicated the reliability and validity of 13 elements, hence, we had to drop the rest of the element initially considered. To carry out the study we have approached 1000 prospective students of MBA 1st year. Out of this 594 students agreed to take part as a respondent hence the response rate was 59.4 percent. The respondents happen to be 1st year MBA students of different B-Schools of eastern India. The profile of the respondents families is given in the table 1. The responses of the respondents constituting the sample under study were captured during the period of July to December 2017. The final sample considered for this study was 594 where the Cronbach's Alpha statistic went up remarkably with 13 elements and was recorded as 0.857 which is good and indicates 'high reliability'. The KMO score stood at 0.797 (considerably higher than earlier) and the Bafrtlett's test of Sphericity was significant at 0.000 Exploratory Factor Analysis (EFA) has been used to derive the number of factors as the authors (Bornstedt, 1977; Rattray & Jones, 2007) were of the view that the construct validity of a research questionnaire can be verified and validated using factor analysis.

<b>Table 1.</b> Profile distribution of the families (respondents
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Income Group (Rs.	per annum)
Below 3 Lakhs	1.2 percent (7)
3 to < 5 Lakhs	10.9 percent (65)
5 to < 7 Lakhs	32.5 percent (193)
7 to 10 Lakhs	38.7 percent (230)
Above	16.7 percent (99)
Occupation (Principal s	source of income)
Service	68.9 percent (409)
Business	25.8 percent (153)
Professional/ Self-employed	5.4 percent (32)

CFA is carried out to ascertain the factor structure derived from a set of observed variables through PCA. Essentially, it verifies the hypothesis which examines the relationship between observed variables and their underlying latent structure (Anderson & Gerbing, 1984; Curran, et al., 1996; Marsh, et al., 1988; Brown, 2014), hence, CFA was employed. In order to understand the structural relationship between observed variables and the concerned latent constructs, Structural Equational Modelling (SEM) is carried out (Schreiber et al., 2006). For understanding the applicability of carrying out the CFA first a 'Pattern matrix' is derived. The coefficients of the pattern matrix are understood to be the distinctive or unique loads of the resultant factor into variables. As the sample being considered is a quite big interpretation would be relatively accurate. The model thus derived has been further subject to validation test using SEM (Structural Equation Modeling). SEM has been used to validate the results derived through the application of AMOS or other techniques (Mardani et al., 2017). The contention of the study is a twofold one. Firstly, the study would like to see if all the factors are equally important to the would-be management aspirants in their decision making process towards selecting their B-School of choice and secondly, if all the factors are represented by the same number of constituent elements? Based on the above arguments the hypotheses to be tested are as follows:

 $H_{0a}$ : All the factors are not equally important to the management aspirants while selecting their B-School of choice.

H<sub>0b</sub>: All the factors do not comprise of the same number of constituent elements.

#### 4. Findings and Discussion

Table 2 represents the result of EFA. In this case we have followed the Principle Component Method (PCA) for extraction. The Eigenvalues derived from the EFA stands at 4.592 towards "Institute Reputation (F1)", 2.291 towards "Global engagement and Stability (F2)" and 1.214 towards "Affordability" (F3). At the same time it is evident that 'Institute Reputation' constitutes 7 elements, that is, when somebody considers 'Institute Reputation' actually the individual in a known or unknown way is considering all these seven elements. In the same light we can find that 'Global engagement and Stability' consists of 3 elements while 'Affordability' consists of 2 elements. The EFA results indicate that 3 factors have been created in accordance with the relationship being shared among the elements or variables in this case. Therefore, the results indicate that the null hypotheses considered, have been supported in both the cases. In order to proceed further, we have checked the

results from the pattern matrix as given below (Table 3). In this case we have adopted the maximum likelihood method.

**Table 2.** EFA Component Matrix

	Components		
Items	Institutes'	Global Engagement	Affordability
	Reputation	& Stability	
2d_Faculty_Qualification	0.820		
2n_Easy_of_entry	0.816		
2t_Brand_Recognition	0.758		
2e_Placement	0.740		
2k_Past_Stu_Feed	0.683		
2g_Average_Salary	0.634		
2h_Corporate_Visit	0.590		
2j_Hostel_Facility			
2s_Foreign_tours		0.810	
2f_Foreign_Placement		0.776	
2c_Faculty_Engagement		0.687	
2q_Affordable_Fee_Structure			0.768
2o_Edu_Loan			0.765

 Table 3. Pattern Matrix

		Factors	
Items	Institutes' Reputation	Global Engagement & Stability	Affordability
2d_Faculty_Qualification	0.834		
2n_Easy_of_entry	0.789		
2t_Brand_Recognition	0.735		
2e_Placement	0.733		
2k_Past_Stu_Feed	0.638		
2g_Average_Salary	0.556		
2h_Corporate_Visit	0.52		
2j_Hostel_Facility			
2s_Foreign_tours		0.803	
2f_Foreign_Placement		0.666	
2c_Faculty_Engagement		0.578	
2o_Edu_Loan			0.873
2q_Affordable_Fee_Structure			0.674

The Eigenvalues derived from the EFA stand at 4.552 towards "Institute Reputation (F1)", 2.280 towards "Global engagement and Stability (F2)" and 1.209 towards "Affordability" (F3). At the same time it is evident that 'Institute Reputation' constitutes 7 elements, that is, when somebody considers 'Institute Reputation' actually the individual in a known or unknown way is considering all these seven elements. In the same light we can find that 'Global engagement and Stability' consists of 3 elements while 'Affordability' consists of 2 elements. The EFA results indicate that 3 factors have been created in accordance with the relationship being shared among the elements or variables in this case. Thus, the result of CFA perfectly corroborates the results of the EFA and EFA also indicates strong support towards both the null hypothesesconsidered. For further validation of the model SEM has been taken help of.

Table 4 represents the individual Cornbach's alpha results factor-wise. Institute Reputation (F1) does bear a alpha score of 0.857, Global engagement and stability (F2) 0.662, and Affordability (F3) 0.636. This clearly signifies that all the factors derived are all either good or in their acceptable level, thus, proving the reliability of them. Table 5 indicates that the model is fit taking all the Indices into consideration. The Chi-square value of 1.348 is well below the recommended level. P-Value of .085, Goodness of Fit index (GFI) value of 0.988, Adjusted Goodness of Fit Index (AGFI) value of 0.969, Comparitive Fit Index (CFI) value of 0.996, Tucker Lewis Index (TLI) value of 0.991 are well above the recommended level. Root Mean Square of Approximation (RMSEA) value of 0.024 is found to be well below the recommended level of <0.10. The Hoelter level of significance value stood at 629 at 5 percent significance level and 726 at 1 percent significance level. All the figures indicate towards the validity of the model thus created.

The SEM result perfectly matches with that of the EFA and CFA. The elements constituting the Factors (F1, F2 and F3 represented in the diagram as F1, F3 and F4) are found to be the same in all the methods. This might be indicative of the robustness of the model and the accuracy of the methods taken help of. Elements like Faculty qualification, Brand recognition, and past students' feedback, does have a positive bearing on Placements. On the other hand placement (campus) does have a positive bearing on the affordable fee structure. In the same light average salary (students) does have a close bearing on 'ease of entry'. Brand recognition of an institute has a close connection with the number of corporate visiting the campus (in a given period for placement), hostel facility offered, the number of foreign placements and number of foreign tours arranged for the students. Affordable fee structure does have a positive bearing on foreign tours. Brand recognition, and past students' feedback do have a direct bearing on faculty engagement (faculty retention). That is, when an aspiring candidate considers the issue of placement (campus), automatically intrinsic issues like affordable fee structure, brand recognition, past students' feedback as well as faculty qualification are also the elements of his consideration.

Interestingly, elements like brand recognition, past students' feedback, placement, and faculty qualification being members of the same factor share a huge intra-group correlation, while, affordable fee structure share a high inter-group correlation among themselves. In the same light it can also be suggested that the average salary (students) shares a high intra-group correlation with ease of entry, while, a high inter-group correlation with foreign tours. Many more intra-group correlations as well as inter-group correlations has also come up from the study which suggests that all the three factors have unique intrinsic properties (elements)

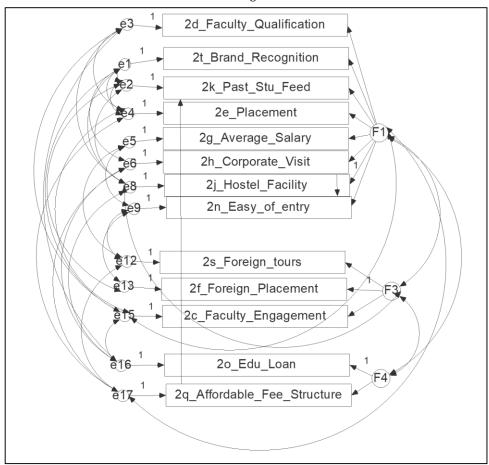
in them which has enabled them to share inter-group relationships. That is, though it can be empirically established that, Institute reputation (F1) is the dominant factor out of the three and therefore the most important one which young management aspirants consider, the rest are also within the evoked set of the young aspirant during their decision making process.

Table 4. Factor wise Reliability and Factor Analysis

	Reli	ability analysis	Factor analysis
Items	Cornbach's		Factor
	alpha (α)	α if item deleted	Loading
	> 0.6	less than factor α	≥ 0.50
2d_Faculty_Qualification		0.824	0.82
2t_Brand_Recognition		0.839	0.758
2k_Past_Stu_Feed		0.84	0.74
2e_Placement	0.857	0.837	0.683
2g_Average_Salary	0.037	0.844	0.634
2h_Corporate_Visit		0.847	0.59
2n_Easy_of_entry		0.818	0.816
2j_Hostel_Facility		0.86	0.49
2s_Foreign_tours		0.37	0.81
2f_Foreign_Placement	0.662	0.446	0.776
2c_Faculty_Engagement		0.736	0.687
2o_Edu_Loan	0.636	NA	0.765
2q_Affordable_Fee_Structure	0.030	NA	0.768

**Table 5.** Model Fit Summary

Model fit Indices	Recommended Value	Obtained Value
Chi-square/df	<3.00	1.348
P-Value	>0.05	0.085
GFI	>0.90	0.988
AGFI	>0.90	0.969
CFI	>0.80	0.996
TLI	>0.95	0.991
RMSEA	<0.10	0.024
Hoelter > Sample si	> Sample size (504)	629 at (0.05) & 726 at
	> Sample Size (394)	(0.01)



**Figure 1**. Structural Model

# 5. Industry Implications

In the course of the study the most important learning's are enumerated below:

The elements (essentially choice factors) considered for the study are not equally important to the ultimate consumer (aspiring PG management student) while they go for deciding their B-School.

Choice factors single-handedly don't make a factor, rather, more than one choice factors make a factor and as a consequence of that, when a would-be consumer (aspiring management students in this case) considers one or more factors, in the actual practice there is a high probability that the individual may be silently and subconsciously considering all the different elements (here, choice factors) of the concerned factor.

The elements of a given factor are deemed to be highly correlated among each other. But, at the same time it has been understood that inter-correlations among different subjects (choice factors here) do exist making the process complex.

The B-Schools (service providers) which are fighting intensely among themselves to convince the ultimate takers of their product would be extremely benefitted when they are armed with the findings of this study.

The service providers must give due diligence to all the three factors derived with a higher emphasis on F1 as it happens to be the dominant factor of the three. At the same time they need to give importance to the elements of the other two factors which are having a high bearing on F1.

#### 6. Conclusion

In this study, our main focus has been on the choice of factors while selecting a B-School from the perspectives of the users. We administered a questionnaire survey on 594 respondents and then subsequently performed EFA for understanding dominating factors. We then performed a CFA in order to confirm our results and to understand the basic structural model behind the same. Our results show conformity. However, this study being confined to the city of Kolkata only is riddled with area (geographical) limitation. In addition to that the study has tried to identify the most important factor(s) which influences the consumer to go for his choice of institution. In the process the demographic factors have not been given due importance, though, in all probabilities, factors like family income if considered might present a very different picture. We would like to go for a detailed investigation in the future taking all the limitations into consideration.

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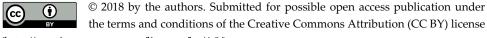
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