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## **Rankings of Indian Business Schools: A Statistical Analysis**

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### **Introduction**

Over the past several years, B-school rankings have provided greater visibility for many business schools in India. The rankings have especial significance, thanks to the explosive growth of business schools. It has also been argued that to a large extent, these rankings have introduced a kind of democracy to the management education development industry. As mentioned by Bickerstaffe and Ridgers (2007), rankings of business schools have had some positive effects: they have brought transparency and filled information gaps.<sup>1</sup> Presently, there are about 1,600 business schools in India, comprising broadly three categories: Indian Institutes of Management, universities with business/management departments, and other autonomous business schools.

Given the afore-mentioned context, the present paper: (i) explores the inter-relationships between the individual factors (like infrastructure, intellectual capital, placement, return on investment, and international exposure) that contribute to the overall B-school score; and (ii) investigates the relative strengths of the components in order to comment on those which are more important and hence need focus and attention by all concerned.

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<sup>1</sup> Students will often share with the media what they are reluctant to say directly to the deans or faculty of B-schools. As a result, the rankings provide the type of insights that business schools are unable to generate themselves.

## Ranking Methodology

The study looks at India's Best Business Schools rankings brought out by *Businessworld* (BW) magazine; specifically the issue dated 19–25 May 2009. The overall ranks are based on aggregating the scores on the following parameters: Living Experience (LI), Learning Experience (LE), Placement Experience (PE), Return on Investment (RI) and International Exposure (IE).<sup>2</sup> On each of them, there is a cap on the possible score. The maxima are 130, 270, 280, 200, and 90 for LI, LE, PE, RI and IE, respectively. Tables 1, 2 and 3 provide the sub-components for the first three aspects.

Table 1: **Living Experience** (Maximum Score 130)

<i>Sub-parameter</i>	<i>Score</i>
Location of institute	40
Type of accommodation	20
Student-to-room ratio	10
Dining facility	10
Medical facility	10
Recreational facility	40

Table 2: **Learning Experience** (Maximum Score 270)

<i>Sub-parameter</i>	<i>Score</i>
Faculty-student ratio	30
Faculty academic qualifications	20
Faculty industry experience	10
Pedagogy	10
Guest faculty	15
Faculty training programmes	10
Faculty training hours	5
International seminars	10
National seminars	30
Papers published	5

<sup>2</sup> Under this B-schools survey of 2009, about 200 All India Council for Technical Education (AICTE)-approved B-schools (since one-year MBA courses are not AICTE-approved, they have been excluded) were contacted; and 94 B-schools who responded within the stipulated deadline were ranked. The rankings were based on scores calculated using the information they provided.

Average classroom teaching hours	10
Average consulting hours	10
Number of research projects undertaken	10
Number of MDPs+MDP hours	20
Frequency of curriculum review	15
Books in the library	20
Library Internet-enabled	10
Hostel LAN-enabled	5
Laptops to students	10

Table 3: **Placement Experience** (Maximum Score 280)

<i>Sub-parameter</i>	<i>Score</i>
Time taken to complete	15
Salary bracket (Indian)	10
Highest salary	25
Lowest salary	20
Median salary	30
Salary bracket (International)	10
Percentage of international jobs	15
Highest salary	25
Lowest salary	20
Median salary	30
No. of offers/student (Freshers' placement)	5
Highest salary	10
Lowest salary	5
Median salary	15
No. of offers/student (Lateral placement)	5
Highest salary	10
Lowest salary	5
Median salary	15
Online access	5
Association strengths	5

The fourth aspect, return on investment (maximum score is 200) is arrived at as,

$$RI = \frac{\textit{Tuition fees charged}}{\textit{Sum of the average domestic and international salaries} \times \textit{Number of placements}}$$

International Exposure (maximum score is 90) is obtained by sub-parameters like the institute's tie-ups with foreign schools and exchange programmes. One would naturally ask: How are the sub-component scores? For instance, under Living Experience, what is the rationale for assigning a high 40 each for location and recreation, while type of accommodation gets 20, etc? Similar queries can be raised with regard to the scores on the other aspects. The individual component scores and the percentages they bear to the total are provided in Table 4 for ready reference. It is evident that close to 60 per cent of the total score is assigned to Learning Experience and Placement Experience. This is perhaps as it should be, as the information given in Annex 1 shows.

Table 4: **Weightage to Each Parameter**

<i>Parameter</i>	<i>Weightage</i>
Living Experience	
Campus infrastructure	13.4
Learning Experience	28.7
Qualification and experience of faculty	
Placement Experience	28.9
Placement performance and salaries	
Return on Investment	20.6
Salaries on placement in comparison with the cost of the programme	
International Exposure	9.3
Tie-ups with foreign campuses and exchange programmes	

### **Ranking Components: Inter-correlations**

As stated earlier, both Placement Experience and Learning Experience, which have relatively heavy weights in the total score, also bear a higher correlation with the total score (TS). Thus, the correlation between PE and TS is very high at 0.83; while between LE and TS, it is 0.77.

Table 5: **Correlation Matrix**

<i>Variable</i>	<i>LI</i>	<i>LE</i>	<i>PE</i>	<i>RI</i>	<i>IE</i>
Living Experience	1				
Learning Experience	0.529**	1			
Placement Experience	0.478**	0.510**	1		
Return on Investment	0.465**	0.281	0.281	1	
International Exposure	0.329	0.510**	0.435**	0.193	1
Observations	88	88	88	88	88

\*\* Correlation is significant at the 0.01 level (2-tailed).

Table 6: **Inter-correlations**

<i>Parameter</i>	<i>LI</i>	<i>PE</i>	<i>IE</i>
<b>LE</b>	0.53	0.51	0.51

Considering a level of 0.5 and above, we find the inter-correlations in that range in Table 6. It is evident that though IE has a lower relative score (less than 10 per cent), the variability in the data on IE follows the variability in LI/PE. It is clear that institutions with IE seem to do better on LE/PE.

### **Re-working the Scores**

As commented upon in the section on Ranking Methodology, there is little or no basis for differential weights to components and sub-components. It can be argued that each sub-component is equally important. On this premise, this section reports on the re-worked results. Each sub-parameter has been assigned 50 marks. The scores to the sub-parameters were given randomly, and the component scores workout as follows: Living Experience (300), Learning Experience (950), Placement Experience (1000), Return on Investment (150) and International Exposure (100). The correlations between the two rankings (*BW* and author's) are reported in Table 7.

Table 7: **Re-worked Correlations**

	<i>BW Score</i>	<i>Author's Score</i>
<i>BW score</i>	1	
<i>Author's score</i>	0.988**	1

\*\* Correlation is significant at the 0.01 level.

The results of the analyses suggest that the *BW* rankings are fundamentally flawless. The correlations reported on the re-worked scores (ranging from 0.67 to 0.88) are relatively similar to those of the *BW* scores (ranging from 0.61 to 0.72). The results indicate that the above comparison of the rankings is appropriate. Thus, the author believes that the rankings by *BW* are perfect.

7.1: *Businessworld* Correlations

<i>Parameter</i>	<i>TS</i>	<i>LI</i>	<i>LE</i>	<i>PE</i>	<i>RI</i>	<i>IE</i>
Living Experience	0.719**	1				
Learning Experience	0.767**	0.529**	1			
Placement Experience	0.833**	0.478**	0.510**	1		
Return on Investment	0.607**	0.465**	0.281	0.281	1	
International Exposure	0.638**	0.329	0.510**	.435**	0.193	1
Observations		88	88	88	88	88

\*\* Correlation is significant at the 0.01 level (2-tailed).

7.2: *Author's Re-worked* Correlations

<i>Parameter</i>	<i>TS</i>	<i>LI</i>	<i>LE</i>	<i>PE</i>	<i>RI</i>	<i>IE</i>
Living Experience	0.882**	1				
Learning Experience	0.974**	0.840**	1			
Placement Experience	0.973**	0.811**	0.915**	1		
Return on Investment	0.631**	0.616**	0.614**	0.540**	1	
International Exposure	0.668**	0.594**	0.625**	0.618**	0.195	1
Observations	88	88	88	88	88	88

\*\* Correlation is significant at the 0.01 level (2-tailed).

### Concluding Observations

Although the ranking of B-schools in India is its initial stages, the exercise is definitely here to stay. It is evident that such ranking allows for transparency and provides information to parents and students in selecting the best possible B-schools. To manage the rankings and their impact, B-schools must have a better understanding of three important factors: how the rankings work, what they measure, and what business schools can do to exert their own influence. To understand the first two factors, business schools can speak to the editors of the rankings agencies, who freely share their methods. In the present paper, however, the focus is on the last issue: what each business school can do individually and what they can do as a group to change the way the rankings work. This will help calm the storm that the rankings have created.

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### Annexure 1

With the growing interest in management education, ranking agencies are putting considerable amount of efforts in ranking business schools. Business school rankings have been largely based on criteria related to industry interface, placements, student satisfaction, and the like (Liebowitz, 2003). Fee et al. (2005) also averr that B-school rankings aggregate subjective and objective assessments of a school’s inputs (quality of in-coming students), outputs (quality of graduating students), and the process of turning inputs into outputs (the faculty and school’s experience and expertise). Several researchers and academics have studied business school rankings. Researchers like Tracy and Waldfogel (1997) point out that B-school rankings are heavily influenced by both the quality of in-coming students and the placement experience. Trieschmann et al. (2000) conclude that the school’s research performance has no role to play in its ranking. But, Liebowitz (2003) claims that research plays a vital role in the rankings of B-schools.

#### The Rankings Breakdown

<i>Publication</i>	<i>Business Week</i>	<i>Financial Times</i>	<i>US News &amp; World Report</i>	<i>The Wall Street Journal's College Journal</i>	<i>Forbes</i>	<i>Economist Intelligence Unit</i>
<i>Factors most weighted</i>	Survey of students and recruiters regarding their satisfaction with the school (45 per cent).	Average salary for alumni during the three years after graduation (20 per cent); percentage increase in salary from start of MBA to three years after graduation (20 per cent); research (10 per cent).	Survey of other business school deans and directors (25 per cent) and corporate recruiters (15 per cent).	Corporate recruiter ratings. Ratings measure their reported perception of a school, the current year mass appeal of the school, and the likelihood of recruiters returning to that school in the next two years. Each factor weighs one-third of the total.	Return on investment— salary alumni earn over five years as compared to cost of the MBA programme (100 per cent).	Survey of students regarding their educational experience and career opportunities during and after graduation (70 per cent).
<i>Factors that contribute most to a rise or fall in rank</i>	If there is a significant decline in the quality of the faculty, or if excellent professors are not available to teach, student satisfaction tends to decline in other areas as well.	If schools select the right students and teach them well, those students will go on to get lucrative jobs with good salaries; and if schools invest in research, they will do well in that area.	The variable that is most volatile is how a school’s placement office does in a particular year versus the next.	Communication skills are the most important attributes that recruiters look at.	Schools that send their graduates into high paying industries, such as investment banking and consulting, will probably do better in this paper’s ranking than those who send students into marketing or other disciplines.	What matters most is the enthusiasm students have for the school. That enthusiasm often stems from areas such as career services.

Source: Modified from Policano (2005).



In 1988, *BusinessWeek* started a trend in publishing the rankings of schools, in which the placement/salaries prominently occupied the position of a key component in determining the business school's success. Similarly, *US News & World Report* (1990) and *The Financial Times* (1997) launched rankings, where placement success was regarded as the determining factor for school's success (Peters, 2007).

The present analysis shows that important variables like placement experience, research performance of academics, quality of the in-coming students, return on investment in education, etc., have a significant effect on the overall score while determining the success of the business schools.

### Annexure 2

<i>Institute</i>	<i>Businessworld Score</i>	<i>Author's Score</i>
Indian Institute of Management, Ahmedabad	893.0	2466.7
Indian Institute of Management, Kolkata	862.0	2422.5
Xavier Labour Relations Institute, Jamshedpur	854.0	2434.4
National Institute of Industrial Engineering, Mumbai	815.0	2374.2
Indian Institute of Management, Indore	806.0	2406.9
Faculty of Management Studies, University of Delhi	788.0	2376.1
S. P. Jain Institute of Management & Research, Mumbai	786.0	2358.1
Jamnalal Bajaj Institute of Management Studies, Mumbai	782.0	2330.6
Narsee Monjee Institute of Management Studies, Mumbai	780.0	2381.7
Management Development Institute, Gurgaon	779.0	2230.7
Indian Institute of Foreign Trade, Delhi	773.0	2224.4
Xavier Institute of Management, Bhubaneswar	757.0	2289.7
Shailesh J. Mehta School of Management, IIT Bombay	753.0	2316.1
International Management Institute, Delhi	749.0	2106.5
K. J. Somaiya Institute of Management Studies & Research, Mumbai	740.0	2126.1
Symbiosis Centre for Management & HRD, Pune	739.0	2165.0
Institute of Management Technology, Ghaziabad	737.0	2108.2

<i>Institute</i>	<i>Businessworld Score</i>	<i>Author's Score</i>
Department of Management Studies, IIT Delhi	726.0	1993.6
Alliance Business Academy, Bangalore	711.0	1962.5
Welingkar Institute of Management Development & Research, Mumbai	682.0	1965.1
Loyola Institute of Business Administration, Chennai	664.0	2008.5
Symbiosis Institute of Management Studies, Pune	655.0	1946.0
Institute of Rural Management, Anand	655.0	1881.1
Institute for Financial Management & Research, Chennai	653.0	1955.7
Nirma Institute of Management, Ahmedabad	650.0	1954.2
Sydenham Institute of Management Studies & Research, Mumbai	645.0	1950.3
Indian Institute of Social Welfare & Business Management, Kolkata	645.0	1876.9
Regional College of Management, Bhubaneswar	643.0	1804.4
P. S. G. Institute of Management, Coimbatore	643.0	1824.2
Acharya Institute of Management & Sciences, Bangalore	642.0	1855.7
Institute of Management Studies, Ghaziabad	641.0	1824.7
Indian Institute of Forest Management, Bhopal	640.0	1839.4
Bharathidasan Institute of Management, Trichy	638.0	1787.2
National Institute of Technology, Trichy	632.0	1785.6
Birla Institute of Technology, Mesra	630.0	1817.2
Prestige Institute of Management & Research, Indore	620.0	1811.1
Goa Institute of Management, Goa	603.0	1835.1
Department of Business Management, Calcutta University, Kolkata	603.0	1693.3
Department of Management Studies, ISM University, Dhanbad	600.0	1716.1
Institute of Management Studies, Indore	582.0	1666.3

<i>Institute</i>	<i>Businessworld Score</i>	<i>Author's Score</i>
Integrated Academy of Management and Technology, Ghaziabad	582.0	1623.9
K. S. R. Business School, Tiruchengode	581.0	1755.6
Army Institute of Management, Kolkata	580.0	1593.3
P. E. S. Institute of Technology, Bangalore	577.0	1703.1
Jagan Institute of Management Studies, New Delhi	577.0	1632.9
School of Communication & Management Studies, Cochin	575.0	1677.6
D. M. Institute for Management Development, Mysore	572.0	1648.6
Institute for Technology & Management, Chennai	559.0	1636.7
National Institute of Agricultural Marketing, Jaipur	558.0	1579.3
B. K. School of Business Management, Ahmedabad	555.0	1688.2
B. L. S. Institute of Management, Ghaziabad	551.0	1503.9
Integral Institute for Advanced Management, Visakhapatnam	550.0	1674.6
Gian Jyoti Institute of Management & Technology, Mohali	548.0	1622.1
Suryadatta Institute of Management, Pune	540.0	1655.4
M. S. Patel Institute of Management Studies, Baroda	529.0	1548.3
Jaipuria Institute of Management, Lucknow	525.0	1526.0
Neville Wadia Institute of Management Studies & Research, Pune	525.0	1505.1
Graduate School of Business & Administration, Greater Noida	521.0	1427.6
Skyline Business School, Delhi	520.0	1540.3
Karunya School of Management, Coimbatore	520.0	1527.4
Rajagri School of Management, Cochin	519.0	1470.8
Maharaja Agrasen Institute of Management Studies & Research, Haryana	518.0	1547.4
Institute of Technology & Management, Mumbai	517.0	1458.1
Institute of Management Studies, Noida	513.0	1472.9

<i>Institute</i>	<i>Businessworld Score</i>	<i>Author's Score</i>
Institute of Public Enterprise, Hyderabad	490.0	1312.2
Christ College Institute of Management, Bangalore	488.0	1376.4
Institute of Science & Management, Ranchi	484.0	1473.5
Balaji Institute of Modern Management, Pune	482.0	1427.2
Balaji Institute of Management & Human Resource Development, Pune	482.0	1414.6
Balaji Institute of Telecom & Management, Pune	474.0	1359.6
NIILM Centre for Management Studies, New Delhi	474.0	1297.8
Delhi School of Professional Studies & Research, Delhi	474.0	1383.3
Eastern Institute of Management, Kolkata	465.0	1370.8
Maharishi Arvind Institute of Science & Management, Jaipur	451.0	1262.5
Eastern Institute for Integrated Learning in Management, Kolkata	450.0	1293.8
Allana Institute of Management Sciences, Pune	445.0	1307.2
Institute of Technology & Science, Ghaziabad	441.0	1240.6
School of Management Studies, Pondicherry University, Pondicherry	434.0	1120.6
Sona School of Management, Salem	432.0	1119.6
Siva Sivani Institute of Management, Secunderabad	417.0	1127.6
Institute of Rural Management, Jaipur	413.0	1208.5
Institute of Finance & International Management, Bangalore	411.0	1148.9
Ambedkar Institute of Management Studies, Visakhapatnam	409.0	1320.4
M. O. P. Vaishnav College for Women, Chennai	372.0	1093.3
Institute of Productivity & Management, Ghaziabad	306.0	907.9
Institute of Business Management & Technology, Bangalore	302.0	932.9
Vignana Jyothi Institute of Management, Hyderabad	259.0	818.3
Bhavan Institute of Management Science, Kolkata	253.0	758.3