

**DYNAMICS OF SHADOW EDUCATION MARKET: A
STUDY OF THE PRIVATE COACHING INDUSTRY IN
KOTA, RAJASTHAN**

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DOCTOR OF PHILOSOPHY

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DECLARATION

I, Nooria Rehman, declare that the thesis titled “Dynamics of Shadow Education Market: A study of the Private Coaching Industry in Kota, Rajasthan”, submitted to Jawaharlal Nehru University in partial fulfillment for the award of the degree of Doctor of Philosophy is my original work and has not been previously submitted for the award of any degree of this or any other university.

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Nooria Rehman

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ABBREVIATIONS

ACT	: American College Testing
AICTE	: All India Council for Technical Education
AIIMS	: All India Institute of Medical Sciences
AIR	: All India Rank
ASSOCHAM	: The Associated Chambers of Commerce and Industry of India
BAMS	: Bachelor of Ayurvedic Medicine and Surgery
BDS	: Bachelor of Dental Surgery
BHMS	: Bachelor of Homeopathic Medicine and Surgery
BPT	: Bachelor of Physiotherapy
BUMS	: Bachelor of Unani Medicine and Surgery
CCP	: Classroom Coaching Programme
CBSE	: Central Board of Secondary Education
DLP	: Distance Learning Programme
DPP	: Daily Practice Papers
ELP	: E-Learning/Online Programme
FTP	: Faculty Training Programme
GATE	: Graduate Aptitude Test in Engineering
GFTI	: Government Funded Technical Institutions
ICSE	: Indian Certificate of Secondary Education
IELTS	: International English Language Testing System
IIEP	: International Institute for Educational Planning
IIST	: Indian Institute of Engineering Science and Technology
IIT	: Indian Institute of Technology
INR	: Indian Rupee
JAB	: Joint Admission Board
JEE	: Joint Entrance Examination
JIPMER	: Jawaharlal Institute of Postgraduate Medical Education and Research
JoSAA	: Joint Seat Allocation Authority
KVPY	: Kishore Vaigyanik Protsahan Yojana
MBBS	: Bachelor of Medicine and Bachelor of Surgery
MCI	: Medical Council of India
MoHFW	: Ministry of Health and Family Welfare
NEET	: National Eligibility Entrance Test

NEP	: National Education Policy
NMC	: National Medical Commission
NIOS	: National Institute of Open Schooling
NIT	: National Institute of Technology
NSSO	: National Sample Survey Office
NTA	: National Testing Agency
NTSE	: National Talent Search Examination
OBC	: Other Backward Class
PGIMER	: Post Graduate Institute of Medical Education and Research
PWD	: Persons with Disabilities
R&D	: Research and Development
RTI	: Right to Information Act
SAT	: Scholastic Assessment Test
SC	: Scheduled Class
SIP	: School Integrated Programme
ST	: Scheduled Tribe
TIMSS	: Third International Mathematics Survey
TOEFL	: Test of English as a Foreign Language
UGC	: University Grants Commission
UNESCO	: United Nations Educational, Scientific and Cultural Organization
Lakh	: 0.1 Million
Crore	: 10 Million
Lakh Crore	: 1 Trillion

Chapter 1: Introduction and Background of the Study

1.1 Background of the Study

Across the world, higher education has undergone a transition from elite to mass to universal education (Trow, 1973). Though education systems have been expanding, the opportunities that education is meant to bring about are far from being universal, and high-value opportunities continue to remain scarce (Marginson, 2016) with the increasing instances of job scarcity (Brown et al., 2021). There is a massive gap in the quality of education imparted across the elite high-quality and non-elite mediocre or low-quality institutes. Elite institutions confer on the students an identifiable social advantage. However, entry to these top-quality institutions is highly competitive. Aspiring students and their parents are aware of this phenomenon. Given the differences in the quality of education imparted by the higher education institutions, students and their parents take recourse to supplementary education (private tutoring, private coaching) to prepare for high-value opportunities (Marginson, 2016).

The objective of such investment in supplementary education is primarily to increase the chances of success in gaining admission to these top-quality institutions. This has led to massive growth in the coaching industry, particularly in engineering and medical education, because there is a massive demand for such professional courses in India. The coaching industry prepares students for high-stake pre-engineering and pre-medical entrance examinations. One of the reasons is that the rate of return to engineering and medical education is higher than the general education. There is a growing aspiration among the new middle-class parents to send their wards for engineering and medical, expecting that it would improve their socio-economic status in the society (Loyalka et al., 2014; Tilak and Choudhury, 2021). It is essential to briefly describe the availability of seats in the respective institutions and the number of applicants to understand the craze for engineering and medical education in the Indian context.

1.2 Entrance Examination and Seat Allocation in Engineering and Medical Institutions in India

1.2.a. Engineering Institutions

There is a wide gap in the quality of engineering institutions in India (Tilak and Choudhury, 2021). The ones on the top are elite and well-funded institutions, followed by the central universities, select state universities, government colleges in engineering and technology and government-aided private colleges. At the bottom of the hierarchy, there are a large number of private colleges and universities (ibid). Thus, India has few institutions of excellence like IITs at the top, which are mainly funded by the Union Government and supplemented by the fees paid by the students. Many private colleges and deemed universities are at the bottom of the hierarchy where fees are fixed at the cost-recovery level. Expectedly, there is a craze among the students to take admission in prestigious institutions because it improves the likelihood of better job opportunities. For instance, campus placements in IITs offer far better salary packages than most private engineering colleges. There is substantial research on the employability of graduates in engineering education (Tilak and Choudhury, 2021). The employability concerns are primarily attributed to the proliferation of private engineering colleges resulting in poor-quality graduates who are often not found to be employable in the labour market (ibid.). In 2019, the private sector accounted for 86 percent of the admissions (Tilak and Choudhury, 2021). Various surveys have also found that one-fourth of the graduates are employable as the rest do not possess the required skills as per the changing labour market needs (ibid.). Therefore, the majority of engineering graduates in India receive low-quality training in non-elite institutions (ibid.)

Pre-Engineering Entrance Examination and Seat Allocation

Pre-engineering examination, also known as Joint Entrance examination (JEE), occurs in two stages: JEE Main and JEE Advanced. JEE Main is conducted by the National Testing Agency (NTA) and JEE Advanced is conducted by one of the seven zonal Indian Institutes of Technology (IITs) under the guidance of the Joint Admission Board (JAB). There are about 110 institutes in which the seat allocation is done by the Joint Seat Allocation Authority (JoSAA), Ministry of Education. The 110 institutes comprise 23 IITs, 31 NITs, IEST Shibpur, 26 IITs, and 29 Other

Government Funded Technical Institutions (Other- GFTIs). Students who qualify for JEE Main are eligible to take admission in NITs, IITs, IEST Shibpur and (Other-GFTIs) depending on their ranks. Students who qualify for JEE Advanced are eligible for admission to the IITs. In 2019, according to the NTA, 9,35,741 students had registered for JEE Main, out of which 2,45,194 (26 percent) were eligible for JEE Advanced. Out of 1,74,432 students registered for JEE Advanced, 38,705 qualified for admission in the IITs. Finally, 13,583 students took admission in IITs in 2019 as per the JEE Advanced Report published by IIT Roorkee, 2019. This implies 1.45 percent of aspirants took admission in IITs. Other than these 110 institutes, there are thousands of private engineering colleges, out of which very few are of decent quality and others are not.

1.2. b. Medical Education

In India, for pursuing a Bachelor of Medicine and Bachelor of Surgery (MBBS) degree, there are 285 government colleges, and 268 private colleges.¹ Privatisation in medical education is not as rampant as that in engineering education because the cost of the setting of the medical college is exorbitantly high; the total cost of establishing one medical college is INR 189 crore (GoI 2020-21). The procedure of setting up the college is also very stringent; for establishing a new medical college, prior permission of the Central government is mandatory [IMC (Amendment) Act, 1993], and the application submitted should be in accordance with the NMC regulations². Some medical colleges which are institutions of national importance are All India Institute of Medical Sciences (AIIMS), New Delhi (NIRF Rank 1), Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh (NIRF Rank 2), Jawaharlal Institute of Postgraduate Medical Education and Research (JIPMER), Puducherry (NIRF Rank 8).

Students who are unable to secure admission in one of the government colleges either take admission in allied fields of medicine (BAMS, BUMS, BHMS) or go abroad for pursuing an undergraduate degree in medicine. Students who belong to high-income strata can afford to take admission in private medical college as the fee charged is very high compared to government medical colleges. Due to the high fees charged by

¹ <https://www.nmc.org.in/information-desk/college-and-course-search/> as accessed on 1/01/2022.

² Erstwhile Medical Council of India (MCI).

the private medical colleges, some students prefer to pursue an MBBS degree in countries like China, Russia, Bangladesh, etc., where the total cost of pursuing a medical education is relatively less. However, for pursuing an MBBS Degree from abroad, students have to take NEET in order to take admission in the medical institutes abroad.

Pre-medical Entrance Examination and Seat Allocation

National Eligibility Entrance Test (NEET) is conducted for the pre-medical entrance examination, which includes admission in Bachelor of Medicine and Bachelor of Surgery (MBBS), Bachelor of Dental Surgery (BDS), Bachelor of Ayurvedic Medicine and Surgery (BAMS), Bachelor of Homeopathic Medicine and Surgery (BHMS), Bachelor of Unani Medicine and Surgery (BUMS) and Bachelor of Physiotherapy (BPT). In 2020, more than 15 lakh students applied for NEET, out of which 7,71,561 candidates were declared eligible to participate in the counselling for admission to Bachelor of Medicine and Bachelor of Surgery (MBBS) and Bachelors of Dental Surgery (BDS) courses, and amongst these 1,55,424 candidates were registered for counselling for admission to MBBS and BDS courses³. Though the majority of applicants prefer to take admission in the MBBS course, which is a highly reputed course in medicine. However, based on the ranks secured by the students, courses (BDS, BAMS, BUMS) are allotted.

Thus, the above discussion provides a brief description of engineering and medical education in India, the number of seats in the institutes, and the number of aspirants.

The reasons for understanding the demand for private coaching are as follows. Given the gap in the number of aspirants and seats available, there is examination anxiety among the students. The nature of the examination is also different from the school examinations; the competitive examinations are objective (multiple-choice questions), and the major part of the school examinations are subjective in nature. For some students, taking private coaching is a sign of high acumen and pride as these are coveted fields of study. Thus, private coaching seems to provide an extra edge to the students in the competitive examination to succeed.

³<https://main.mohfw.gov.in/sites/default/files/Annual%20Report%202020-21%20English.pdf> accessed on 25/06/2021

1.3 Private Coaching Industry: An Overview

Private coaching has become a significant part of the Indian education system. According to a report by ASSOCHAM (2013), the private coaching received in metros by primary and high school children is as high as 87 percent and 95 percent, respectively (Gupta, 2016). The private coaching industry is growing and has become a multi-billion-rupee industry. Coaching is delivered in different modes; classroom coaching and distance coaching are the most important and commonly resorted to. The Indian Classroom Coaching Industry is further segmented into Private Tutorial Industry and Entrance Test Coaching Industry. Classroom coaching is the major segment of the Coaching Industry and is responsible for generating a significant chunk of revenue in this industry. Private Tutorial Industry largely involves students from class 5 to class 12, who supplement their formal education along with coaching classes for various subjects. Entrance Test Coaching Industry, on the other hand, involves coaching for various entrance examinations like Joint Entrance Examination (JEE), National Eligibility cum Entrance Test (NEET) and other competitive examinations for admission in prestigious institutions and for government jobs. The preparation is very process-driven and it involves engaging students with proper study materials and examination skills. Given the various competitive examinations and increasing competition among students, the entrance test preparation industry is expanding and is expected to grow further.

Regardless of its huge size, the private coaching Industry largely operates in an unorganised sector.

- In 2015, a Committee was set up under the chairmanship of Prof. Ashok Misra to examine the JEE system in India. The Committee has deliberated on the merits of one or two examinations for admission to the IITs, NITs and other (GFTIs) in the short and the long run. In addition, the Committee also looked at the merits of the coaching institutes and their effects on school education and the Committee made suggestions for reducing the dependence on coaching in the selection of students for admission. The Committee suggested that a regulatory body should be formed to keep an eye on the coaching sector.
- In 2020, the National Education Policy (NEP) had identified that the ‘coaching culture’ is causing harm, especially at the secondary level which led the NEP to

suggest elimination of the need for coaching for ‘cracking the examination’ (GoI 2020 p.18). In the policy document, the need for coaching for cracking entrance examination is linked to the issue of the current assessment system, i.e. summative. The policy document does not elaborate as to how it will be done. The coaching system mimics the school system and it is supplementary in nature. With any change in the school system, in terms of assessment- formative or summative-, coaching institutes will alter their functioning, timeline of commencement and completion of the course, and their strategies. Students and their families are very proactive in taking admission to the coaching institutes. In many instances, students take admission in coaching institutes before the commencement of the school session. In such a scenario, to state that a change in assessment pattern will eliminate the need for coaching is questionable.

1.4 Introduction to the Study

The present study investigates the market for the private coaching industry, which consists of hundreds of coaching institutes preparing students for pre-engineering entrance and pre-medical entrance examinations. Taking the case study of the Kota coaching industry, the study explores the dynamics and the choice-making between the students and the providers in the market for the private coaching industry. Competition for credentials from prestigious institutions/colleges and the mismatch between the number of aspirants and the number of limited seats available in these institutes has forced students to take recourse to private coaching institutes. The demand for private coaching is such that it has led to the emergence of coaching hubs in various places in the country. Kota in the State of Rajasthan as a field of study has been chosen because every year, over 1.5 lakh students come for the preparation of competitive examinations (IIT-JEE, NEET), and it is designated as the ‘cram school capital’, ‘coaching capital’, ‘Kota factory’⁴ by the scholars (Rao, 2017; Ørberg, 2018). In 2015, more than one-third of students selected in IITs had studied from six major institutes in Kota (Rao, 2017). Thus, given the level of fierce competition, students are faced with the dilemma of choosing the best institute to qualify in the respective entrance examinations. Encashing on the aspiration of the students, there is a rapid

⁴Kota Factory is also a web series on Netflix. Following is the link <https://www.netflix.com/in/title/81249783?source=35>.

growth in the number of coaching institutes. Innovative business practices guide the functioning of the coaching industry.

1.5 Kota Coaching Industry: History and Rationale for choosing the Field of Study

Kota, a city, situated in the northern state of Rajasthan, has been known for its princely culture, Kota stone, Kota *doria* and other manufacturing industries. The city has also now have emerged as a coaching hub of the country. It was initially known as the industrial town of Rajasthan. However, in the early 1980s, a number of factories, including J.K synthetics, were shut down, leaving thousands jobless. Trade union politics and other economic factors gradually started having an impact on the output of the industry, which further led to the closure of the factories. In 1983, 12,000 people were laid off due to the shutdown of J.K synthetics. Further, the economic crisis of the city was deepened due to the closing of rice mills. Further, the traders lost interest in Kota stone due to an irrational revenue policy. This downfall in the economy led to the emergence of India's coaching capital, also known as the Kota coaching industry. The first coaching was started by Mr. Vinod Kumar Bansal, an employee of J.K synthetics. Mr. Bansal was diagnosed with muscular dystrophy, which restricted his movement, and he could not continue to work in the factory.

In fear of losing the job, late Mr. Bansal started giving tuition in mathematics at his home. In 1986, one of his students cracked the IIT joint entrance examination (IIT-JEE). Next year, some 100 students had joined his classes, and by 1998, Mr. Bansal was coaching more than 1,000 students. The word spread and Bansal Classes brought Kota on the national stage. As more and more students started making it to the IITs from Bansal Classes year after year, others took that as a signal and started setting up their coaching institutes. Allen Career Institute, Resonance Eduventures Limited, Career Point Ltd., Vibrant Academy, Motion Education Pvt. Ltd., all have been established after the success of Bansal Classes. The new coaching institutes were mostly opened by the faculty who had taught in the Bansal Classes. The opening of the new coaching institutes also led to the poaching of teachers and students from the Bansal Classes. This phenomenon continues to be prevalent in the coaching industry and will be discussed at length in the subsequent sections. Improvement in the results led to the awareness of the coaching institutes in Kota, thereby making Kota as India's coaching hub. In 30 years, this industry has flourished assuming significance

among the parents and the students who are keen on taking admission in the prestigious engineering and medical colleges in the country.

Kota has now become synonymous with coaching capital preparing students for engineering and medical entrance examinations. The Kota coaching industry has witnessed astounding growth to about 10-12 major and 100 small coaching institutes in the recent decades with an annual turnover of about INR 1500 crore⁵. The sprawling campuses, hi-tech buildings and air-conditioned classrooms of these centres resemble world-class institutions. One of the news websites published an article⁶ on Economics of Kota coaching industry arguing that Kota's coaching industry was worth nearly INR 800 crore in 2017, with the institutes opening branches across the country. Students in Kota, on an average, spend a yearly tuition fee of INR 1 lakh and additional living fees of roughly the same amount. Interestingly, that is not all. The business of coaching institutes is prospering further, and they are expanding campuses. The coaching industry is promoting the business of student hostels, PG accommodations, *dhabas*, tiffin centres, booksellers, PCOs, internet cafes, travel agents and more. Against this backdrop, the proposed study examines the market for the private coaching industry in Kota.

1.6 Background of Shadow Education

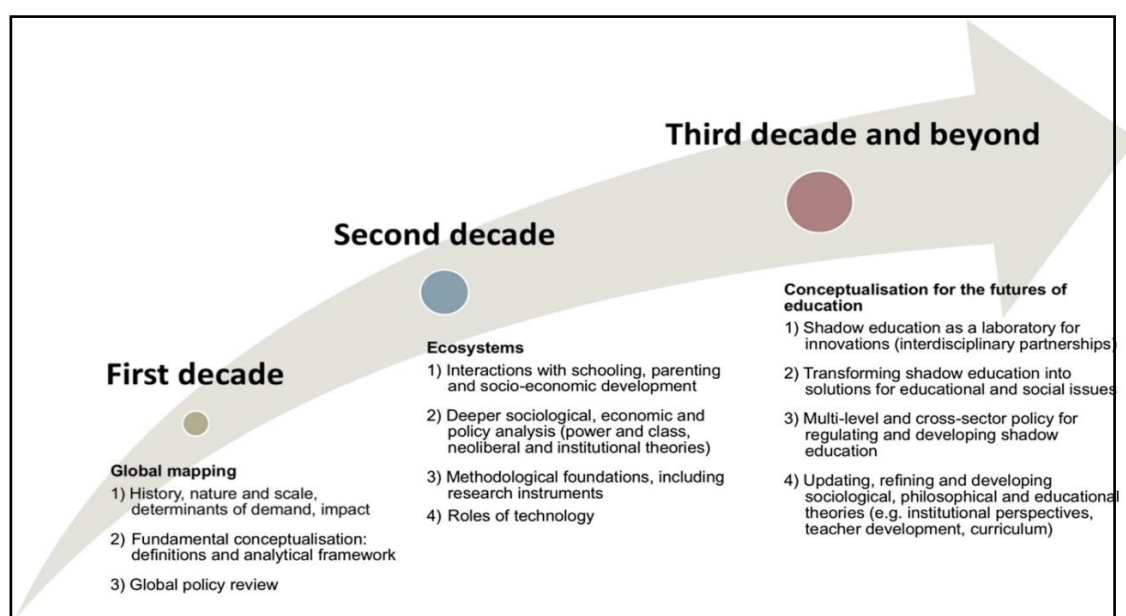
In literature, a supplementary form of education that prepares students from one level of education to the next level of education is known as “shadow education”- it is a fee-based, out-of-school activity utilized by students to better their academic performance (Stevenson and Baker, 1992). Shadow education, as a complex and multi-faceted term, therefore, needs vocabularies and parameters for understanding. The different forms of shadow education are discussed as (a) private tutoring (organized by private companies and individuals) and (b) college preparatory courses (i.e., cram schools) (Bray, 2006). Across the world, the principal focus is placed on formal systems of education ranging from pre-school to the primary, secondary and higher education system. However, every nation in the world has outside-of-school classes and tutors that are used to help students navigate a

⁵ <http://www.hindustantimes.com/education/kota-s-success-in-neet-fuels-boom-in-coaching-institute-business/story-HOzVggBE2vzNjLzUnojHWL.html> as accessed on 17/12/2021.

⁶ <https://www.thequint.com/news/india/economics-of-coaching-industry-in-kota-india#read-more> as accessed on 17/12/2021.

successful passage through school and into adulthood (Baker and Le Tendre, 2005). The nature and the conduct of shadow education varies at the national level, but even in nations where the size of shadow education is relatively small, at least 20 percent of the students report having accessed shadow education throughout their academic career (Baker et al., 2001). This megatrend has garnered the attention of the United Nations Educational, Scientific and Cultural Organization (UNESCO) and other educationists who are concerned that market-driven education will affect mass schooling at the national level in terms of both equity and quality of education and a push towards privatization of education. Prior to 1999, there were sporadic studies on the subject. In 1999, the first global study on the phenomenon of private supplementary tutoring was made by Professor Mark Bray and it was published by the UNESCO's International Institute for Educational Planning (IIEP). In the first two decades, research on shadow education focussed more on depth and awareness of commonalities and differences in the different cultures. Factors affecting the demand for shadow education were identified through sociological and economic prism. In the second decade, the supply side of tutoring came into focus along with the demand side. Over the years, shadow education also has become more visible in the policies of the subnational and national governments and statements of international agencies (Zhang and Bray, 2020).

Figure 1.1: Emphasis on comparative research on shadow education across the decades



Source: Zhang and Bray (2020).

These studies have shown that the use of shadow education is growing and that it takes various forms from informal tutoring to highly institutionalised outside-of-school classes (Aurini and Davies, 2004; Buchmann, 2002; Davies et al., 2002; Hua, 1996; Stevenson and Baker, 1992). To understand the scope and impact of shadow education on an international scale, the UNESCO funded the comparative sociologist Prof. Mark Bray (1999) to describe the various forms, use and impact of shadow education at national levels. Bray's study describes the variations in shadow education between nations. According to Bray (1999), one possible reason for the variations in national use of shadow education is structural. Credentialism drives students' use of extracurricular assistance to pass high stakes examinations, affecting students' life outcomes. Under this logic, researchers argue that there is a 'national enrichment strategy'⁷ associated with shadow education. However, this is not supported in the Third International Mathematics Survey (TIMSS) (1995) data (Baker et al., 2001). Instead, researchers found that national variations are more associated with shadow education being used as a remediation strategy, e.g., students resort to shadow education so as not to fall behind in mathematics. This argument has been corroborated by other national case studies (Ireson, 2004; Aurini and Davies, 2004). Thus, learners everywhere clearly utilize 'outside-of-school' lessons as per their needs.

In India, shadow education is not a new phenomenon: a significant proportion of students at each stage of schooling take private tutoring. The form of private tutoring largely discussed in the Indian context is more concerned with the remedial assistance given to students in academic subjects. However, in recent decades there has been an emergence of another form of assistance given to students in India, which is referred to as private coaching. Coaching here can be understood as when tutors/teachers focus more on study skills than on the subject content and operate over an extended period. The private coaching industry is booming and has led to the emergence of coaching hubs (Kota, Delhi, Mumbai, and Chennai) in the country. The private coaching sector is a huge enterprise estimated to be at INR 2.4 lakh crore (Misra, 2015). It comprises coaching for engineering, medical, law and other competitive examinations. This

⁷This suggests that extensive shadow education exists in systems in which there are intense competitions for future educational opportunities accompanied by "tight linkages" between academic performance and later life opportunities in the labour market.

form of coaching is emerging due to the enrichment strategy practised by the students and their families. With the rise in student enrolments, there is now a greater demand for the most coveted placements in higher education everywhere. According to the NSSO 71st Round Survey of Education in India, almost 26 percent of the total number of students at all levels take recourse to private coaching (GoI, 2014). The incidence of private coaching is more at the secondary and higher secondary levels combined. Most of the studies across the world and India have discussed shadow education in the context of private tutoring. (Bray 1999, 2006; Foondun 2002; Paviot, 2015; Bray & Lykins 2012; Jokić 2013; De Silva 1994; Aslam and Atherton 2012; Chan and Bray, 2014; Sujatha, 2014; Majumdar, 2014, 2017; Azam, 2015; Liu and Bray, 2017). There are a few studies on private coaching (Mishra and Singh, 2017; Ørberg, 2018; Rao, 2017; Punjabi, 2020).

1.7 Scope of Shadow Education

Before proceeding further, it is essential to understand the scope of shadow education. Forms of shadow education include private tutoring, organized after-school cram sessions, and professional tutorial centres to advance academic performance in both achievement and attainment. Shadow education does not include non-academic lessons such as music, art or athletics. Bray (1999), in his work on shadow education, has stated characteristics such as supplementation, privateness, academic subjects, levels, forms and terminology to define the phenomenon of shadow education. In the literature, shadow education is understood differently; countries and communities perceive shadow education in different contexts. In English speaking societies, private tutoring is referred to as private tuition. In Japan, tutoring centres that supplement the school system are known as *juku*. These are different from *yobiko*, which serve students who have left school but take extra assistance to gain higher grades in the entrance examinations of the universities. In the United Kingdom, institutions that train students outside the school are called crammers. In India, there are three different forms of shadow education (a) private tuitions, (b) private coaching for entrance tests, and (c) private coaching for employment. Students who take supplementary assistance with formal school education are said to take private tuitions. This differs from private coaching institutes, where students take extra assistance to prepare themselves for national-level entrance examinations for different courses or employment. Private coaching institutes serve students mainly outside the

school; however, sometimes institutes or centres giving private tuitions in the group are also known as coaching institutes. To this extent, categories overlap.

1.8 Shadow Education Market

After discussing the scope of shadow education, the present section discusses the shadow education market. The number of students who have completed high school and preparing to enter higher education has grown rapidly in the developing countries in the last two decades; as a result, the market for shadow education has also proliferated (Loyalka and Zakharov, 2016; Bray and Lykins, 2012; Buchmann et al., 2010; Silova and Bray, 2006; Bray, 2006). The nature of the shadow education market is unlike other education markets. Institutes train students to pass the mainstream school examinations is different from institutes that help students qualify entrance examinations for prestigious higher education institutions or employment. In both cases, the coaching institutes do not provide certification to students; it only helps students improve their marks and increase the possibility of selection. There is a difference between institutes helping students pass the school examination and institutes assisting students in qualifying for an entrance. After acquiring a threshold mark, all the students are said to pass the school examination irrespective of the number of seats in the former case, whereas it is not so in the latter case. The number of seats for the courses in the prestigious institutes and government jobs are limited, and as a result, students bank on private coaching heavily. In other words, success in the competitive examination is relative and the aspirants take coaching to maximize the chances of success.

Starting a private institute to operate in the shadow education market does not require any affiliation as the coaching institute does not have to give students any certification. This has become a full-time business opportunity for entrepreneurs and career for well-educated investors. Some researchers often refer to the shadow education market as some kind of innovation in the education business. This form of education business is growing and gaining enormous legitimacy among parents and market advocates (Aurini, 2004). Aurini (2004) argues that as a result of education entrepreneurialism, teaching as a "profession" is re-conceptualised into teaching as an "entrepreneurial" activity. In this light, there are various reasons attributed to the proliferation of this market, such as teachers lacking claim to gain professional

authority and proper guidance in school. Thus, the shadow education industry justifies its services mainly based on marketable specializations and its ability to meet consumer demand by providing systematic and result-oriented training. The discussion will further proceed to the overview of the market of the private coaching industry in India, which is the subject matter of the present study.

While exploring the market for the private coaching industry, the study examines the characteristics of students who are the consumers of private coaching. Based on a sample of 264 students, an understanding is sought to be derived about the characteristics of the students coming to Kota. Students taking coaching for pre-engineering entrance examination JEE (Main) and JEE (Advanced) are selected through a random sampling method. The reason for choosing engineering aspirants is that the strategy for JEE and NEET varies; the number of attempts for JEE is limited, whereas there are no limits on the attempts for NEET⁸. The data is collected through structured questionnaires and analysed using statistical methods. In the following segment, providers of the coaching institutes are examined using a semi-structured in-depth interview method. Fifteen teachers have been interviewed, eight non-teaching members of the different coaching institutes in Kota have been interviewed to understand the functioning of the coaching institutes and identify how strategies in one coaching institute differ from another coaching institute. Fifteen individuals from allied fields of the coaching industry were also interviewed in order to derive an overall understanding of the market.

1.9 Statement of the Problem

Competition for educational credentials is becoming more intense, and in fear of being thrown back to the fringes of the ever-competitive labour market, parents are constantly seeking recourses to enhance the ability of their wards. Under such a context, the private coaching industry has come up as one of the most crucial agents towards salvaging and furnishing the students' abilities and affecting vital investment-related decisions of the parents regarding education of their wards. The present research aims to explore the emergence, growth and increasing popularity of the private coaching industry in Kota. This necessitates a systematic analysis of the

⁸For JEE (Advanced) there are 2 attempts and for JEE (Mains) there are 3 attempts and for NEET there is no restriction on the number of the attempts.

students as consumers, providers of the coaching service and the market. To understand the market for the coaching industry, the study probes into the behavioural aspect, strategies and responses of the students and providers. The study also examines the selection mechanism adopted by the students and the providers in this market setting which is distinct from the typical education market. The aim of the research is to study the characteristics of the students as consumers and the selection process adopted by them in choosing a particular institute, to explore the nature of providers of coaching institutes and their strategies; students' selection, teachers' recruitment, advertising and the nature of the education market. There is a need to understand the functioning of the market from an economic perspective as this sector is for business where profit is maximised and students are ready to pay full fees. This is different from a typical education market in India.

1.10 Concluding Remarks

To study the dynamics of the private coaching industry, the study seeks to explore the market for the private coaching industry in Kota, which is also known as the coaching capital of the country. It tries to understand the characteristics of the students studying in the coaching institutes. It attempts to examine the nature of the coaching institutes and strategies adopted by these coaching institutes. It seeks to explore the interaction in the market for the private coaching industry. The next chapter will present a brief review of literature in the area of shadow education and the theoretical framework for the study.

Chapterisation

Chapter 1: Introduction: This chapter introduces the study and sets the context for the following chapter.

Chapter 2: Review of Literature and Theoretical Framework- This chapter will discuss the literature in the area of shadow education, private tutoring, private coaching, etc., as they all form a part of the shadow education system operating outside the mainstream education system. The chapter also elaborates on the theoretical framework informing the study.

Chapter 3: Research Methodology and Methods

This chapter has discussed the research methodology and research methods adopted for the study. This discussion is followed by a detailed description of the characteristics of the students and the providers of the private coaching industry used for analysis in the present study.

Chapter 4: Students as Customers and Choice-Making in the Private Coaching Industry

This chapter explores the characteristics of the students such as self-efficacy (merit) and socio-economics factors: household income, parent's education, location, gender etc., across the various categories of coaching institutes. The chapter has also looked at the factors responsible for availing the scholarship in the coaching institutes.

Chapter 5- Competitive Strategies of the providers in the Private Coaching Industry

This chapter investigates competitive strategies adopted by the coaching institutes to attract students, given the fierce competition in the market. Strategies comprise of a selection of meritorious students, recruiting experienced teachers, advertising of the results and other facilities provided by the coaching institutes

Chapter 6: Nature of Private coaching industry: A Form of Shadow Education Market:

This chapter explores the nature of the market given the structure and segmentation in the market. The chapter highlights the peculiar features pertaining to the private coaching industry.

Chapter 7: Concluding Remarks- This chapter will conclude the findings of the study.

Chapter 2: Review of Literature and Theoretical Framework

2.1 Introduction: Shadow Education System

The metaphor shadow is used to describe the education system, which is supplementary to the mainstream education system. The word ‘shadow’ is primarily used in the context of private supplementary tutoring in the literature (Bray, 1999; 2009, Bray and Lyinks, 2012; Baker and Stevenson, 1999). Some scholars in recent studies have explored private coaching as a form of shadow education (Ørberg, 2017; Rao, 2017; Mishra and Singh, 2017). The word ‘shadow’ connotes to outside school activities that are structured to follow school curricula and utilised by some students in order to better their academic performance (Baker and Stevenson, 1999). Shadow education has different forms such as private tutoring, organized after-school cram sessions, professional tutorial centres, which are used to advance academic performance in terms of both achievement and attainment. Non-academic lessons such as music, art and athletics do not fall under the purview of shadow education.

In the book titled ‘The Shadow Education System: Private Tutoring and its Implications for Planners (1999), Professor Mark Bray has stated definitions and parameters to identify the nature of private tutoring. The author also elaborates on the *characteristics* of private tutoring. While discussing private tutoring, Bray (1999) emphasises the shadow education system and its implications on the mainstream education systems. Definitions and parameters to understand the nature of shadow education are as follows:

- a) **Supplementation:** It is concerned with tutoring in the academic subjects which are already covered in mainstream school. It does not cover tutoring in music, arts, etc.
- b) **Privateness:** It is primarily concerned with the tutoring provided by private entrepreneurs. It does not cover the unpaid workers or the tutoring provided by the family members.
- c) **Academic Subjects:** Focuses on mainstream subjects taught in schools, particularly mathematics, sciences, languages (as per literature in an international context) and other examination subjects.

- d) In terms of **levels**, the prime concern is the subjects learned in secondary schools. According to Bray (1999), in the majority of societies, supplementary tutoring is most evident at the senior secondary level, followed in order of magnitude by junior secondary and upper primary.
- e) The **forms** of private tutoring may be varied. Some tutoring is provided one-to-one in the home. Another tutoring is in small groups, in large classes or even in large lecture theatres with video screens to cater for overflows. Some tutoring is provided entirely by correspondence in the mail or over the internet and some on the telephone.
- f) The **terminology** is used to identify private tutoring in different countries. In some English-speaking societies, people refer to private tuitions more often than to private tutoring. Entrepreneurs who create formal establishments for tutoring commonly call them centres, institutes or academies. In Japan, tutoring centres that supplement the school system are known as *Juku*; these are different from *Yobiko*, which mainly serve pupils who have left school but want extra assistance to study intensively for examinations to gain higher grades for entrance to universities. A similar phenomenon exists in the United Kingdom, where such institutes are called crammers.

Characteristics of shadow education systems are as follows:

- a) **Scale:** The nature of mainstream education, structures of economies and culture are some aspects that underlie the wide variety of the scale of supplementary tutoring in different societies. Tutoring has assumed the form of a large enterprise in several countries in the recent decades: in Mauritius, for instance, almost all senior secondary school students receive tutoring; in Japan, about 70 percent of pupils will have received private tutoring by the time their middle school is completed, and in Malaysia, about 83 percent of pupils will have received tutoring by the time they reach senior secondary school. In Singapore, surveys have shown that from 1982 to 1992, students taking private tutoring at the primary level increased from 27 percent to 49 percent, and that of secondary level increased from 16 percent to 30 percent (George, 1992). In India, almost 26 percent of the total number of students at all levels take private coaching (GoI, 2014).

- b) Cost:** The fees paid to the tutors and their agencies, apart from other substantial costs, show that private tutoring consumes a huge amount of money in several countries. In Japan, tutoring had annual revenues in the mid-1990s equivalent to the US \$14,000 million (Russell, 1997, cited in Bray 1999). In Singapore (having a population of only 3 million compared to 125 million in Japan), households were reported in 1992 spending about US \$200 million on private tutoring (George, 1992, cited in Bray, 1999). The Republic of Korea spent US \$25,000 million on private tutoring during 1996, equivalent to 150 percent of the government's budget (*Asiaweek*, 1997, cited in Bray, 1999). In addition to fees, students also pay for books, stationary, travel, computers and other associated equipment. Private Tutoring also has a huge opportunity cost. For tutors and students, the cost primarily rises from the time spent in lessons and from the time for preparation, administration, and travel. But because tutoring is mostly a shadow activity, much of the revenue received by tutors are out of reach of the government tax collectors (Bray, 1999).
- c) Geographic Spread:** Supplementary tutoring has assumed a massive proportion in Asia, Africa, Eastern Europe and Latin America. Cultural, educational and economic factors are some of the most critical determinants of the scale of tutoring, and thus its geographic spread. The Asian cultures, primarily emphasising effort as a factor for explaining and determining success, and the European and North American cultures stressing the augmentation of the ability to achieve success are the cultures within which supplementary education is found to be widespread.
- d) Intensity:** Statistics primarily indicate that students receive tutoring more intensely at the secondary level rather than at the primary level, demanding more tutoring in the classes which lead up to major examinations. The intensity of private tutoring also differs on the basis of the socio-economic status of the parents, the race of the students in some societies.
- e) Subjects:** As systems of mainstream education vary, systems of shadow education also vary. The subjects in private tutoring which receive the most attention are the ones most needed for educational progress and, in the long

run, socio-economic progress, the subjects being languages, mathematics and sciences.

The above explanation of the characteristics and scale of shadow education shows how shadow education is understood in the literature. This explanation offers a basic idea of the factors which explain the growth of shadow education. Therefore, much of the understanding in the study is derived from private supplementary tutoring or private tuitions. It is understood and described in the scope of the study that private supplementary tutoring and private coaching are two different forms of shadow education systems.

2.2 Reasons associated with the use of Shadow Education by the Students

Diverse explanations have been given by the studies on the form and the reasons associated with the use of shadow education. Baker et al. (2001), while analysing the TIMSS (1995) data, found national variations are more associated with shadow education. They argue that students use shadow education as a remediation strategy, e.g., students use shadow education, so they do not fall behind in mathematics. This has been supported by national case studies (Ireson, 2004; Aurini and Davies, 2004). However, these studies do not look exclusively at mathematics but also include language acquisition, literacy and other educational goals. Southgate (2009) also cites that in most nations, students use shadow education for remedial assistance for enhancing their academic performance.

However, Bray (1999) and Stevenson and Baker (1992) argued that the dominant group of students with good performance and who want to maintain the competitive edge use forms of shadow education. This is corroborated by other national studies where proportions of high-ranking schools taking tutoring were much more significant than proportions in low-ranking schools (Tseng, 1998). A similar observation was made in Germany; students who receive private tutoring are from elite schools. Therefore, looking at the literature, it can be understood that the form of private tutoring received by the students is contextual to countries and societies.

The presumption for investing in private tutoring is that it yields a substantial increase in learning because most students consider tutoring as an investment rather than as consumption. In the literature, it is argued that it is challenging to tease out the returns

to tutoring because it is tough for households to know that their investment will pay off, mainly as any wage returns may be realized only after many years (Dang and Rogers, 2008). According to Bray (1999), a possible reason for investing in private tutoring is that credentialism drives students to use extracurricular assistance to pass high stakes examinations that will affect students' life outcomes. Based on this logic, researchers argue that there is a national enrichment strategy associated with the use of shadow education. Secondly, in many cases, investment in private supplementary tutoring results from the emerging culture of intensive parenting and educational customization- a 'new education consumer environment'. With the rising competition among the students and the increasing expectation level of the parents, parents are 'micromanaging' their kids. As a result, entrepreneurs and businesses in the private education market are increasingly gaining legitimacy and authority on education (Aurini and Quirke, 2011). Thirdly, parents are opting for private supplementary education as they are not satisfied with what is provided by the schools. Lack of quality and inability of the school system to meet the demands of the parents forces them to go for private supplementary education.

With identifying the characteristics of the consumers of private tutoring and why they invest, the following section elaborates on the factors identified in the literature that drive the demand for private tutoring.

2.3 Demand for Private Tutoring

The present section explores micro and macro factors that create the demand for private tutoring; the discussion on these factors necessitates the understanding of equity and productivity effects of the private tutoring sector. Factors at the micro level include the characteristics of individuals, households, schools, and communities. Macro-level factors include the share of public spending allocated to public education, the features of the education system and labour market, and national cultural values. Together these factors determine the level and scope of the tutoring demand for society as a whole. This section presents the evidence from the literature on both sets of explanatory factors.

2.3.a. Micro Factors

Standard economic theory would suggest that certain factors increase household demand for education: household's income, preference for education, and expectations about the returns to education for their children (Dang and Rogers, 2008). Empirical research supports the theoretical prediction about which factors increase demand. Studies of Egypt (Assad and El-Badawy, 2004), Japan (Stevenson and Baker, 1992), Korea (Kim and Lee, 2008), Turkey (Tansel and Bircan, 2006), and Vietnam (Dang, 2007) are highlighted because they draw on a nationally representative data. The private tutoring sector is relatively prominent in these countries, which captures geographic variations of the phenomenon. Buchmann (2002), Davies (2004), and Psacharopoulos and Papakonstantinou (2005) investigate the determinants of private tutoring using smaller data sets.

The variables that most influence the consumption of private tutoring in these studies are household income (household wealth in Egypt, household expenditure in Turkey and Vietnam); parental education; and urban location. Other factors that may matter across countries are grade level and household size. In Egypt, students in diploma-granting grades spend more on private tutoring (Assad and El-Badawy, 2004). The closer students are to the final grade in their current school level in Vietnam, the more they spend on private tutoring (Dang, 2007). In Korea, Turkey, and Vietnam, the number of children in the household is negatively correlated with private tutoring expenditures (Kim and Lee, 2008; Tansel and Bircan, 2006; Dang, 2007). Presumably, the grade-level pattern reflects the use of private tutoring to prepare for school-leaving examinations. The household-size effect hints at the much-studied trade-off between quantity and quality (number of children and average child educational achievement). Other variables that affect spending on private tutoring vary from country to country. This diversity of findings may reflect differences in the models or the variables available in the data sets. It could also reflect country-level differences in tutoring patterns, perhaps due to differences in institutions, cultures, or relative prices. Thus, the core explanatory factors identified in all the studies are; income, parental education, and urban location.

2.3.b. Macro Factors

The present section identifies the factors likely to affect the demand for private supplementary tutoring at the macro level. First, the transition to a market economy substantially increased the amounts of private tutoring (supplied and demanded) in countries where it had not existed, including China, Vietnam, some African countries, and many Eastern European transition economies (Bray, 1999). Second, tight linkages between education and work may result in intense competition and thus private tutoring (Stevenson and Baker, 1992). Private returns in the labour force are generally higher for higher education than secondary education (Psacharopoulos and Patrinos, 2004). The gap appears to be widening in many developing and developed countries (Dang and Rogers, 2008). These high returns can lead to intensely competitive behaviour by students and their parents, including private tutoring to increase chances of university admission. An extreme form of these linkages is “diploma disease” (Dore, 1976), whereby firms and governments rely heavily on a university degree as an initial screening tool for employment, believing that the degree signals skills that contribute to productivity but are hard to measure directly. This phenomenon has arguably fuelled the demand for private tutoring in several countries (Rogers, 1996). Third, parents may resort to private tutoring to compensate for a deficient public education system (Kim and Lee, 2008). Low pay levels and weak monitoring of teachers in the public system can also cause teachers to force tutoring on students (Buchmann, 1999; Silova and Bray, 2006), as formalized in a theoretical model by Biswal (1999). Fourth, cultural values may explain why private tutoring is more prevalent in some countries. Such values may be particularly important in East Asia (Bray, 1999).

Thus, the notion of a student as a consumer reveals the increasing dominance of the market discourse in academia that has also positioned tutors as service providers (Nixon et al., 2010). With the discussion on students as consumers of private supplementary tutoring and factors that affect demand for private tutoring, the subsequent section examines the nature of the providers (entrepreneurs, edupreneurs, tutors and teachers) of supplementary tutoring and how they provide their services.

2.4 Providers in Shadow Education System

Tutors who visit one place to another and teach on a one-to-one basis serve different markets to those who operate in large classes or like entrepreneurs and coaching institutes as enterprises. In the comparative study of the countries, Bray (1999) classifies two types of phenomena:

- The tutors are also the teachers in the mainstream system and receive additional payment for tutoring pupils who are already their students in the mainstream. This situation is prevalent in several countries such as Cyprus, Indonesia, Lebanon, Nigeria, and Russia.
- Where the tutors provide tutoring for students for whom they do not otherwise have any responsibility. This form of tutoring is also divided between one that offers one-to-one tutoring (individual tutors) and one where tutors teach in large classrooms. In some cases, supplementary tutoring operates in a huge enterprise which has led to the dramatic change in conceptualization from teaching as a "profession" to teaching as an "entrepreneurial" activity- Education entrepreneurship (Aurini and Quirke, 2011). Tutors who are not employed in the mainstream system may vary widely in characteristics. Variation does exist in the mainstream also; however, it happens to be more in the case of shadow education (Bray, 1999). Street-side advertisements, publicity of the tutors, especially the 'star' tutors, is very much prevalent in the case of private supplementary tutoring, unlike the mainstream education system. Because the tutor has to respond to the market needs, they usually make an effort for what the student wants and then respond to it.

Private tutoring, as with other forms of private education, is a relatively 'exclusive' activity. Contrary to the spirit behind public education, these services may promote, rather than reduce, inequality, since only the wealthiest parents can tap their advantages (Davies et al., 2002) and customize their children's educational experience (Lareau, 2003). In this way, the market transforms the 'businesses' of teaching from a professional to entrepreneurial activity; that simultaneously de-professionalises (e.g. franchises decrease discretion) and professionalises (e.g. de-unionizes) the art of educating (Aurini and Quirke, 2011). The content and delivery of tutoring franchise services represent the second type of transformation. While shadow educators adhere

to teachers' professional authority by following public schools' curricula, tutoring franchises often develop their curricula and evaluation tools. Based on internally designed diagnostic tests, tutoring franchises place students in a program, irrespective of what they are working on in school. Test preparation and homework support that relies upon school materials are discouraged. Many of the larger tutoring franchises have curriculum departments at their head office that develop programs and various instructional manuals and workbooks for their clientele (ibid.).

Other than market shares and financial gains, other factors too lead an individual to provide tutoring (as a service), as Russell (1996) reported. In the context of Japan, he points out those housewives who are motivated and desire to help others as well as seeking a socially acceptable form of part-time employment opt for this profession. Some tutors and institutions are more popular than others. While some private tutors/individuals hunt for clients, others have long waiting lists. This phenomenon is also applicable to the institutional level. As reported in the context of Japan by Harnisch (1994), *juku* in Japan only accepts 1,868 grade four students, out of 11,000 applicants. Some *juku* set examinations to determine entry, and *juku* even exists to prepare students to enter other *juku*. The phenomenon discussed above caters to the primary level. However, one can witness this in the case of secondary levels and the admissions in tutoring centres for national level examinations preparatory courses. With the discussion on students as consumers and the providers of private supplementary tutoring, the following section explores the nature of the market for private supplementary tutoring.

2.5 Market for Shadow Education

The market, as generally understood, is an institutional arrangement to facilitate transactions between two sets of economic agents with conflicting objectives, the consumers and the provider. In recent years, the education sector has become increasingly informed by market logic. With increasing privatisation and marketisation of education, new forms of education market are emerging that are supplementary to the mainstream education system. It is essential to understand the nature of these markets and their implications on society.

In the literature, characterisation of the market for private supplementary tutoring is not undertaken. In one of the studies, Biswal (1999) examines the issue of private

tutoring in developing countries with special reference to India. He argues that private tutoring is emerging because teachers in developing countries are poorly paid despite their status in society. However, 80 percent of the expenditure on education goes on their salaries. He believes that private tuition is a result of poor teaching, low monitoring at the workplace and conscious effort to create a market for private tutoring. Aurini (2004) looks at the shadow education market through the prism of education entrepreneurship. She argues that entrepreneurship is gaining legitimacy in the market for private supplementary tutoring and is changing the nature of schooling by supporting market solutions to education “problems”. Educational institutions outside the mainstream education system are not simply means of generating additional income; the private tutoring industry offers business opportunities for well-educated investors for various educational and occupational backgrounds (Aurini, 2004). Education entrepreneurship is further reinforced by the emerging culture of ‘intensive parenting’ and ‘educational customization’ (ibid.). Across the world, education entrepreneurship is witnessed in the private education sector in the form of sharp growth of consultants and test prep companies, private preschools, tutoring businesses, private schools, proprietary colleges and corporate training ventures (Aurini and Davies, 2004; Davies and Quirke, 2004; Monahan et al., 1994; Sweet and Gallagher, 1999). Aurini and Quirke (2011) looked at private education entrepreneurs and how they perceive competition and competitive pressures in the market. They have mentioned the strategic action; hiring the best teachers, customer care, product expansion, advertising etc., to capture the responses of the providers. However, their work has not elaborated on these strategic actions. Zhang (2019) discusses the impact of national regulations imposed on the tutoring sector in China in 2018 and the industry response to these regulations. The following section discusses the implications of the market for private supplementary tutoring.

2.6 Implications of Shadow Education

2.6.a. Economic Implications

The use of shadow education is costly as participation requires resources in terms of both finances and time. The economic implications of the shadow education system are looked at through the proportion of expenditure incurred on shadow education by the economy as a whole. There is a national variation in the cost

of shadow education and the national consumption figures. Azam (2015) analyses in the Indian context that, on average, the cost of private tutoring is 3.1 percent of household per capita consumption expenditure; however, it is 16.5 percent of per capita consumption expenditure if only those students who incurred expenses on private coaching are considered. The burden seems much higher for students at the senior secondary level (about 28.5 percent in 2007-08). The burden increases with the stage of schooling. The OECD average private educational expenditure as a percent of GDP was 0.9 percent in 2008 (OECD, 2011). Private educational expenditure includes expenses on private tutoring as well as tuition for private schools. The total private educational expenditure is higher in Turkey than in most countries, estimated to stand at 2.5 percent of the GDP in 2002 (TURKSTAT, 2011). Private tutoring is a big business in Korea, and it reaps heavy income for tutors and related employees; their expenditure has economic ripple effects (Bray, 2009). In Korea, it is seen that household expenditure on private tutoring in 2006 was 2.8 percent of GDP (Kim and Lee, 2007). In Turkey, the estimated cost of tutoring centres in 2004 was US \$2.9 billion, which amounted to 0.96 percent of GNP (Tansel and Bircan, 2007). During the mid-1990s, Japan is reported to have spent the equivalent of US\$ 14,000 million, and Singapore US \$200 million in 1992 (cited in Bray, 1999).

Turning the argument of economic implications to acquisition skills by the students, studies suggest that the acquisition of skills in mathematics and languages may be a valuable form of human capital that can contribute to economic growth (Bray, 2009). Opportunity cost is also one of the arguments; however, it might be relatively low as the students are still in school (varies with the class). Kim and Lee (2007) suggest that tutoring in some cases promotes some inefficiency in allocating resources through its role of selection device (as observed in Korea). Another problematic circumstance is when teachers deliberately reduce commitment in mainstream schools to expand the demand for private tutoring (Sujatha, 2007). Another concern is taxation, as much of the tutoring is carried out informally, beyond the reach of the government tax collection (Bray, 1999).

2.6.b. Social Implications

The social implications of shadow education address three main issues: consequences of pressure on students, impact on social relationships and the

implication of social inequalities. In a study in Malaysia, Marimuthu et al. (1991) concluded that 36 percent agreed that tuition dominates their lives, and only 18 percent disagreed. A study by Wijetunge (1994) in Sri Lanka highlights the negative aspects of private tutoring outweighs the positive aspects. He adds that sporting and leisure activities get crowded out by supplementary tutoring and points out that book learning and examination scores are often achieved at the expense of other types of education, which are of significant importance. De Silva (1994) points out that as children are away from home most of the time, family bonds of affection are inevitably weakened. On the other hand, in Rio de Janeiro, parents send their children to after school tutoring because they do not want the children to be hanging around on streets that are potentially dangerous (Paiva et al., 1997). In the context of Mauritius, Joynathsing et al., (1988) showed that at the primary education level proportion of children receiving tutoring in the highest income group was 7.5 times greater than the proportion of children in the lowest income groups, where the equivalent ratio in class 6 was 1.6:1. Another point is that the number of cases of student depression and even suicides in Japan, Hong Kong, and Taiwan related to schooling problems provides a stark reminder of the impact of extreme pressure on young minds (Zeng and Le Tendre, 1998). Some researchers argue that supplementary tutoring may also provide a healthy framework within which young people can develop and can meet peers (Bray, 1999). Like other forms of private education, supplementary tutoring is also available to the rich than to the poor. Private supplementary tutoring seems to be a mechanism that maintains and perhaps increases social inequalities (ibid.).

2.6.c. Educational Implications

In most circumstances, it is likely to affect the body it imitates. Poisson (2007) highlighted the range of dimensions of educational impact; use of school facilities, instructional time, educational content and pedagogy, teacher performance, student learning and classroom dynamics (see Dang and Rogers, 2008). Tansel and Bircan (2008) have reported that students submit false medical reports, which enable them to be absent from their mainstream classes. Similar patterns have been reported by Kazimzade (2007) (as cited in Bray, 2009) that students commonly skip classes to attend private tutoring lessons during school hours in the last grade of secondary school. In Korea, Kim (2007) reported on tutoring for entrance to special-purpose high schools. The students widely perceive tutoring centres as offering training that is

more relevant. Since the demand of the tutoring centres is heavy, students develop a tendency to fall asleep during the school time. Another problematic situation is where teachers neglect their mainstream classes because they know that pupils will receive tutoring and in many cases they themselves will be involved in the delivery (Hartmann, 2008). Researchers suggest that the most problematic aspects are cases in which private tutoring becomes a substitute for the mainstream (Bray, 2009). Another challenge is that the pedagogy of private tutors differs from that of mainstream teachers. For e.g., students may learn in a tutoring centre to solve a problem in mathematics mechanically, rather than understanding the mathematical principles. Therefore, if not regulated, private tutoring can become a hidden form of privatization that shifts the culture of schooling and could be difficult to reverse (ibid.).

Educational factors (i.e., the nature of education systems) are also important when explaining the use of private tutoring. One of the most widespread assumptions is that extensive private tutoring exists in countries with intense competition for future educational opportunities, usually accompanied by a “tight linkage” between academic performance and later opportunities in higher education and the labour market (Baker and LeTendre, 2005). The argument goes that the students use private tutoring as an enrichment strategy when there are clear, high-stakes decision points within the system based on examination performance. Therefore, in many circumstances, forms of shadow education system undermine or overshadow the mainstream education system.

2.7 International Studies on Shadow Education

Following the discussion on shadow education, it is essential to mention the studies which have looked at shadow education in different forms, levels, and contexts. The nature and the conduct of shadow education varies at the national level; however, in nations where shadow education is least utilised, it is reported that at least 20 percent of the students have accessed shadow education throughout their academic career (Baker et al., 2001). Most of the prior research on shadow education has focused on national level variations, the emergence of shadow education globally has recently been witnessed by the researchers. Scholars have argued that shadow education is growing and is taking various forms, from informal tutoring to highly institutionalised ‘outside-of-school’ classes (Aurini and Davies, 2004; Buchmann,

2002; Hua, 1996; Stevenson and Baker, 1992). Mark Bray (1999) studied various forms, use and impact of shadow education at different levels to understand the scope and impact of shadow education on an international scale. Bray (1999) argues that one of the pertinent reasons for variation in the national use of shadow education is structural; students use extracurricular assistance to pass high-stakes examinations, eventually affecting their life outcomes. Following this, scholars argue that there is a national enrichment strategy associated with the use of shadow education. However, this argument is not supported by Baker et al. (2001), they claim that national variation is more associated with remediation strategy where students use shadow education so that they do not fall behind in any academic subjects. This finding is further validated by other national case studies, where they focus on academic subjects, language acquisitions, literacy and other educational goals. (Ireson, 2004; Aurini and Davies, 2004). Smyth (2009) also cites that the students prefer shadow education for remedial assistance for enhancing academic performance in most nations. However, Bray (1999), Stevenson and Baker (1992) argued that the dominant group of students with good performance and who want to maintain the competitive edge use forms of shadow education. This is corroborated by other national studies where proportions of high-ranking schools taking tutoring were much greater than proportions in low-ranking schools (Tseng, 1998). A similar observation was made in Germany, students who receive private tutoring are from elite schools. In their study, Ireson and Rushforth (2005) provide a systematic description of the nature and extent of supplementary private tuition, examine cultural factors and attitudes influencing participation in the shadow system, and evaluate its impact on learning. Tansel and Bircan (2006) review the private tutoring industry in Turkey, which prepares students for the competitive university entrance examinations. The study examines the determinants of private tutoring expenditure from the household expenditure survey of Turkey (1994). In Turkey, Tansel (2013) analyses the role of private tutoring in the students' preparation for the entrance examinations. The paper deals with the equity implications of private tutoring. The paper also elaborates on the relationship between different national examinations and the development of private tutoring. Dang and Rogers (2008) examine the effects of private tutoring, identify the factors that explain private tutoring growth, and analyse its cost-effectiveness in improving student academic performance. The paper also presents a framework for assessing the efficiency and equity effects of private tutoring. Their study concludes that evidence

regarding the effects of private tutoring is limited and inconsistent. Aurini and Quirke (2011) study the market competition from a sociological perspective among the private education organisations in Toronto. The study explores the micro foundation in the form of strategies that guides the behaviour and decision making of the organisations. In Nepal, Jayachandran (2012) studies teacher incentives, and student achievement in the presence of school provided tutoring. She investigates the policy relevance of private tutoring in a developing country setting where for-profit tutoring is provided to the students in schools. Choi (2012) complements the above study in reference to developed country settings and studies the Korean case where for-profit tutoring in schools is prohibited, and a well-structured private tutoring market exists. After observing all the above studies, it can be concluded that students of all calibre, across countries, at different levels are taking recourse to shadow education.

2.8 Indian Studies on Shadow Education

In India, studies on private tutoring or private tuitions and private coaching are very recent and few. Recently, some scholars have studied the nature of private tutoring and private coaching from the lens of sociology and anthropology (Mishra and Singh, 2017; Rao, 2017; Ørberg, 2017; Ghosh and Bray, 2018, 2020; Bhorkar and Bray, 2018; Punjabi, 2020) and economics (Kumar and Chowdhury, 2021; Choudhury et al. 2021). Kumar and Chowdhury, (2021) examine the trend and the socio-economic determinants of participation in shadow education in India. They used NSS data sets on education and IHDS data for their analysis. They found that there is an increase in the scale of shadow education especially on the secondary and higher secondary levels across the five NSS rounds. A study by Choudhury et al. (2021) examined the determinants of demand and cost of private coaching in India in the context of higher education. They used NSS data on education for the year 2017-18 for their analysis. They found that students from unreserved categories are more likely to attend private coaching vis-à-vis students from reserved categories, especially SCs/STs. The study also suggests that there is pro-male bias in accessing private coaching. Students from the economically better-off background are more likely to take private coaching, particularly from urban India. Punjabi (2020) examines the credentialing strategies of IIT aspirants through Joint Entrance Examination coaching in Delhi and how the pedagogical practices of coaching institutes influence the perceptions and proclivities of aspirants and their families

towards school education. Ghosh and Bray (2020) study focused on relationships between schooling and shadow education. The paper uses the conceptual lens of privatisation-by-default and employs qualitative methods to understand the roles of both government and private schools in promoting tutoring in West Bengal, India. Ghosh and Bray (2018) explore the impact of two boards- CBSE and ICSE on demand for private tutoring in Bengaluru, Karnataka. The demand for private tutoring is being examined at three levels – micro, meso and macro levels among the two groups of students. The authors did not find any significant difference in the demand for tutoring by the students. Competition emanating from credentialism was the major determinant of demand for private tutoring. Bhorakar and Bray (2018) examined when students move from secondary to higher secondary classes, private supplementary tutoring ‘supplants’ rather than ‘supplement’ mainstream schooling. The study looks at the relationship between private supplementary tutoring and mainstream schooling for higher secondary education in Maharashtra. One of the major reasons cited by the authors for the higher demand for private supplementary tutoring at the higher secondary level is the entrance tests for higher education, especially for professional courses. The authors argue that coaching classes facilitate simultaneous preparation for board examinations and entrance tests, thereby providing an edge over mainstream schooling. Rao (2017) examines the restructuring of the Kota city through a shadow education economy. He explains the transformation of the city as a result of the emergence of coaching institutions. The study emphasizes how the urban sprawl and restructuring of space are produced due to the rise of a post-industrial education economy of shadow education. Ørberg (2017) explores the relationship between entrance examination coaching and formal higher education and how these two are ‘co-constitutive’ to each other. The author studies the case of the Kota coaching industry and its relation with IITs. The description of the structure and educational format of the Kota coaching industry is looked at and how this can be situated in the higher education sector. In 2017, Majumdar studied the extent, effectiveness, and equity implications of supplementary private tutoring on the school education sector in West Bengal. Through quantitative data, Sujatha (2014) and Azam (2015) explore the nature and prevalence of private tutoring at the secondary and senior secondary levels. Azam (2015), in his study, observes that a large proportion of students at secondary and senior secondary levels attend private tuitions. Credentialism drives students to take private tuition so that they can improve their performances in public

examinations at the end of secondary school (class 10) and senior secondary school (class 12), thereby increasing their chances to enter desired streams in higher education. He studied the prevalence and cost of private tutoring at different stages of schooling over the last two decades using the nationally representative “Participation and Expenditure in Education surveys” conducted by the National Sample Survey, Government of India. Sujatha (2014) examines the nature and trends of private tuition in India, especially at the secondary school level. Based on her survey for class 9 and 10 in 2005-06 in 49 schools from Thiruvananthapuram, Pune, Nalgonda and Varanasi districts in four states: Kerala, Maharashtra, Andhra Pradesh, and Uttar Pradesh, respectively, she reports that 44.7 percent were seeking private tutoring for one or more subjects at the secondary level. She observes the nature and trends of private tuition in India, especially at the secondary school level. Majumdar (2014) examines the growth, scale, causes and consequences of supplementary private tutoring, keeping an empirical focus on school education in West Bengal. It is an ethnographic study that studies the pedagogic characteristics of private tutoring, studies its effects on school processes and learning outcomes of tutees, and asks whether privately paid education inputs reinforce rather than reduce social inequality. ASER (2014) reports that in 2013, 22.6 percent of children in grade I-V (primary school) in rural India attended private tutoring, while 26.1 percent of children in grade VI-VIII (middle school) in rural India attended private tutoring. The School Tells survey was carried out in the 2007-08 school year in 160 rural primary schools across ten districts of the sample states. Nearly one-fifth of all children surveyed were taking private tuition. *Pratichi* trust (Sen, 2002), in their study on school-level analysis, observed that private tuition at primary schools reinforces the inefficiency of the education system at the primary level. Students from economically and socially disadvantaged backgrounds suffer more than the other students. The study suggests a ban on private tutoring and the need for the well-off people to join government schools to create pressure on schools to perform better (Sen, 2002). Biswal (1999) examines the issue of private tutoring in developing countries with particular reference to India. He argues that private tutoring is emerging as the teachers in developing countries are poorly paid, poor teaching, low monitoring at the workplace, and conscious effort to create a market for private tutoring. The above discussion looked at the studies on shadow education in different contexts. The following section identifies the research gap in the area of the present study.

2.9 Research Gaps

The area of private coaching industry is under-researched in India. The present study investigates the market for the private coaching industry from a micro and meso perspective. The study is micro because it looks at the individual characteristics of the students who are taking the coaching. The study also looks at the institutional strategy of the coaching institutes and is, therefore, meso in nature. Studies have primarily looked at demand for private tutoring through the participation rate and incidence of private tutoring (UNDP, 2007; Silova and Kazimzade, 2006; Nath 2011; Bray 1999; Zhang 2011; Sujatha and Rani 2011; Sen 2010; Toh 2008; Dang 2011; Tansel and Bircan 2006; Liu and Bray, 2017; Zhang and Bray, 2017). Limited researchers have examined the issues concerning the students who are already taking coaching (Mishra and Singh, 2017; Ørberg 2017; Punjabi, 2020). Choice of coaching institutes or similar institutes in shadow education has not been undertaken from both students' and providers' sides. In an unregulated market, strategies adopted by both the students and the provider present a nuanced understanding of the functioning of this unique education market.

The present study investigates the choice mechanisms of the students who are enrolled in private coaching institutes. The study looks at their decision-making processes and what drives the demand for coaching institutes among the students when they have many options to choose from. The choice mechanism is interesting to explore as it is not only the students who are choosing the coaching institutes, but the coaching institutes also select the students. The interface of students and coaching institutes makes the market for the private coaching industry worth exploring. The previous studies have not looked at the competition, delivery and performance among the providers imparting shadow education. Aurini and Quirke (2011) have looked at the private education sector as a whole and how they respond to market competition. The context of their paper is different as they look at the competition among private education entrepreneurs and how they perceive competition and competitive pressures in the market. They have mentioned the strategic action like hiring the best teachers, customer care, product expansion, advertising to capture the responses of the providers. However, their study has not elaborated on these strategic actions. The present study investigates the competitive strategies adopted by the coaching institutes given the prevailing competition in the market. The present study explores the

characteristics of the students, the nature of the providers of the coaching industry and their interplay in the market for the coaching industry in Kota. It is interesting to explore as it is not only the students who are choosing the coaching institutes. The coaching institutes also select the students. To understand the nature of the market, data is collected from various sources to understand the features of the market. The coaching institutes are registered under the Companies Act, 2013, but the data to study these institutes is not readily available.

a) Students as Consumers of the Private Coaching Industry

The study seeks to examine the characteristics of the students who all are taking coaching in the private coaching institutes in Kota for the pre-engineering entrance examination. It attempts to investigate the factors determining the decision to enrol in an institute. Researchers have identified the factors such as income, parental education and urban location affecting the demand for private supplementary tutoring. The identified factors are important, but the decision becomes complex as the institutes operate in the cluster, and students have to choose one institute amongst many institutes. The present study identifies the factors which determine the choice of the coaching institute in the market.

b) Providers of the Coaching Institutions

In literature, types of providers of private supplementary tutoring discussed are: Tutors who visit from one place to another and teach on a one-to-one basis serve different markets compared to those who operate in large classes or like entrepreneurs and coaching institutes as enterprises. Detailed analysis of the providers and the competitive strategies adopted by them in the face of fierce competition has not been adequately addressed in the literature. The present study probes deeper into the nature of coaching institutes as they operate in a market where the objective is profit maximization. Being an education market, coaching institutes cannot maximize profit because results are given by the students who are consumers as well as the inputs and have different bargaining power given their ability. The institutes practise a selection mechanism to select the best of the students and recruit the best of the teachers.

The studies in the literature have focussed on the ‘Education Entrepreneurism’ practised by the providers and have approached the problem through the prism of sociology (Aurini, 2004; Aurini and Quirke, 2011). However, a deeper understanding of the providers in terms of their ownership and organisational structure adopted by them can be understood from the perspective of economics as a discipline, as these institutions run commercially as opposed to the formal system. The specificity of the coaching institutions in the cluster further fosters fierce competition among the providers, making a case for the study.

c) The Market for the Private Coaching Industry

As the market for the coaching industry is mainly unorganised, the interface between students and the institutions converges towards a typical education market, albeit different, as this market is driven by profit-maximizing coaching institutes as compared to an education market where education is not generally considered as business. The emergence of such a typical ‘market’ for the private coaching industry has not been studied from an economic perspective. Thus, economics as a discipline and economics of education both will help in understanding the complexities of this market and the enigma of an expanding private coaching industry. After discussing the studies on shadow education and identifying the research gaps, the following section spells out the research objective and research questions.

2.10 Objectives and Research Questions

1. To study the selection mechanism adopted by the students in choosing a particular coaching institute.

- a) How the choice of a particular coaching institute is made by students?
- b) What are the characteristics of students in terms of socio-economic background, ability/performance (marks), caste, gender, etc., investing in the private coaching industry? How do these factors drive the demand for private coaching in Kota?
- c) What are the factors which play an important role in availing of scholarships in the coaching institutes?

2. To study the competitive strategies adopted by the providers in the shadow education market for the coaching industry.

- a) What is the process of selecting the students, and how are meritorious students identified by the coaching institutes?
- b) What is the process of recruiting the teachers, and what ways do coaching institutes adopt to have the best teachers for their institutes in the face of fierce competition?
- c) How do coaching institutes advertise their results?

3. To study the nature of the shadow education market for the private coaching industry and its implications.

- a) What is the nature of the shadow education market for the coaching industry? How is the market for coaching segmented, given the hierarchy among the coaching institutions?
- b) What are the features for the market of the private coaching industry in Kota?
- c) What are the economic, social and educational implications of the coaching industry?

The search for answers to these research questions has to be guided by a theoretical framework.

2.11 The Theoretical Framework of the Study

The previous section presented a brief review of the literature and the research gaps from which the research objectives and research questions have emerged. This section, in connection with our research problem, proposes a theoretical framework which will be used in the study. The purpose of a theoretical framework is to discern the functioning of a private coaching industry and its internal specificities. The private coaching industry makes a specific case in the education market. Education market is imperfect in nature as the service delivery depends on the quality of the human capital embodied in the teachers and the students. The quality of teaching and learning in the institutes differs due to the wide variation in the quality of the human capital embodied in the students and teachers, the processes involved and the infrastructure facilities provided (Chattopadhyay, 2012). The students choose the coaching institute and coaching institutes select the students as they practise

selection-based efficiency or S-competition (Glennester, 1991). The objective of both the students and the providers is to maximise the chances of success in the engineering entrance examination. The discussion on the theoretical framework is structured around the components of the education market, the students, the providers and their interface in the realm of the market.

A. Choice-making by the Students: The underpinnings of this section is based on the human capital theory (Becker, 1964; 1975). It helps to understand the factors in the decision-making process of the students to join the coaching institute.

B. Selection by the Providers: In investigating the nature of the providers, their strategies and selection mechanism, the study would derive its understanding from the relevance of customer-input technology (Winston, 1999) because, in education institutes, the technology of producing what is sold is unusual; they buy inputs for the production only from the customer who buy their products. Coaching institutes try to get hold of the best of the students and the teachers available in the market through offering scholarships to the students and attractive remuneration to the teachers. This type of competition is termed as selection-based competition or S-competition (Glennester, 1991).

C. The Market for Education: The elucidation of the choice-making and selection strategies renders the discussion of the market for education indispensable. The following section explains the distinct character of the education market and the extent of freedoms enjoyed by the providers and the consumers (students).

2.11.A. Choice-making by the Students

Choice-making by the students can be explained by the human capital theory (Becker, 1964; 1975), where expenditure on education is considered to be an investment by an optimizing student. The novel fact of this theory argues that individuals spend on themselves for future pecuniary and non-pecuniary gains (Blaug, 1976). Time and money spent on education enhance the human capital embodied in an individual. In the long-run, investment in human capital leads to an improvement in the productivity of the individual that tends to increase the future income levels. In Becker's model, the underlying argument of education and growth in earnings is as follows: education and training increase an individual's cognitive capacity, which increases their productivity which in turn increases the earnings of the educated and skilled

individuals, and this becomes a measure of human capital (Becker, 1964; 1975). The underlying assumption of human capital formation is based on the calculative rationality of human beings, and the basic instinct is to maximize their future net income streams. After completing school, i.e., class 12, let us assume students either want to pursue general education or engineering education.⁹ The following discussion is about the students who decided to take the entrance examination (JEE) after completing class 12. Some of them may decide to come to Kota to take coaching, and some of them may not take coaching for the entrance examination. For both groups of students, the expectation from pursuing engineering education is that the expected income from completing the engineering course is much higher compared to a situation where they would have opted for general education. One assumption of the human capital theory is that there is a smooth transition from completing a degree and entry into the job market (Becker, 1964; 1975). After completing the engineering degree, there can be a variation in the income scales, which would be dependent on many factors like the quality of the engineering college; however, it is certain that once the degree is obtained, a job is certain. For both the groups of students who take the coaching and who do not take the coaching, they stand to benefit from higher salaries than what the general college would have ensured (irrespective of the quality of the engineering college).

In the limited purview of human capital theory, we can categorize the students into four categories based on different budgets and abilities (efficacy). For the following discussion, budget is understood as household budget categorized as high budget and low budget, and the students' cognitive ability is classified as high efficacy and low efficacy. High efficacy students are the ones who had secured good marks in class 10 and 12 and those who have performed well in the entrance test conducted by the coaching institutes and low efficacy students are those who did not secure good marks in class 10 and 12 (less than 75 percent) and in the entrance conducted by the coaching institutes. Students do not perceive themselves as having high efficacy and low efficacy, however, classification based on budget and efficacy is undertaken to understand the psyche of the decision-makers given their constraints.

⁹ Students who pursue general education are not considered here. Discussion on choice-making pertains to students who decide to take the competitive examination JEE.

Table 2.1: Categorization of Students based on Efficacy (ability) and Household Budget

Efficacy (ability) of the students			
Household Budget		Low-Efficacy	High-Efficacy
	Low-Budget	LL	LH
	High-Budget	HL	HH

Source: Author's Representation

Choice-making belonging to the following categories of students is as follows:

LL: students who have a low budget and low-efficacy are most likely to not opt for coaching in Kota as they are constrained by both budget and ability. As a result of financial constraint and low- efficacy, the capacity to bear the expected loss resulting from failure in the competitive examination is very high for these students.

LH: amongst the students who are faced with low-budget and high-efficacy, some will take coaching and some will not. For these students, the decision to pursue coaching is dependent on the percentage of scholarship offered by the institute or how much the family is willing to take the risk given the perceived high competence of the student. Those who wish to take coaching despite the low household budget, their families can afford to take the risk because they perceive that their wards have a higher possibility of qualifying in the entrance examination than the capacity to bear the financial loss. This behaviour justifies the argument of the human capital theory that individuals with higher ability have a greater tendency to invest in education if they perceive a higher marginal rate of return, keeping all other personal sources of variations held constant (Becker, 1975). Students who did not opt for coaching in Kota despite having high-efficacy and high rate of return is that they could not resort to sources of finances, as family's ability to bear the expected loss in case of failure drives the decision for many students. There could be non-pecuniary factors also responsible for not opting for coaching in Kota such as, in some instances, parents and family members may not allow their ward to go to Kota for coaching, or in many cases female students are not allowed to leave home and pursue studies in a different city. As a result, these students may take coaching in their respective cities or opt for coaching through online or distance mode. Thus, it is difficult to assume that all those students who opt for Kota have a high expected rate of return.

HL: students with a high budget and low efficacy will take coaching in Kota and will choose the best of the institute because they have the ability to pay, subject to their admission. These students, despite having low efficacy, will choose the reputed institute in order to maximize their chances of success. This is because they do not perceive themselves to be endowed with low efficacy and either overconfident, or they could be making their decisions under social pressure. Despite low efficacy, these students invest in coaching because for them perceived opportunity cost of funding is very low.

HH: high budget and high efficacy students will take coaching as they are not constrained by either budget or ability. They will avail themselves off scholarship if awarded as it lowers the cost of taking the coaching in Kota. Thus, these four categories of students have four types of decision-making choices because they are endowed with different combinations of ability and household budgets.

It is difficult to mention the proportion of students in these categories as some students choose to take coaching in Kota and there are some students who do not choose Kota for coaching.

Apart from budget and efficacy, there are other factors that govern the decision to opt for Kota or not to opt for coaching. For students who appear in the entrance examination (JEE) but do not come to Kota could be due to following reasons: financial constraints or non-pecuniary factors such as gender, anxiety among the students or it could be that the students or parents are not willing. Some students might think that private coaching may not increase their chances of success in the entrance examination. One of the possible factors for students who choose to take coaching in Kota is the formation of expectations (Chattopadhyay, 2012) as decision pertains to the future which has been ignored by Becker (1964; 1975).

Formation of Expectations by the Decision-makers

Decision-makers evaluate ability (efficacy) and household budgets differently. Although household budget and ability are important determinants of choice-making to invest or not in coaching, psychological factors also play a significant role in the decision-making. Based on this assessment, they form expectations whether to incur costs on pursuing private coaching from Kota or not. The concept of subjective probability can be used to understand the phenomenon of

choice-making among the students. In probability theory, an outcome of an experiment is considered to be determined by chance, and it is a random event. In case of choice making, we need to involve the notion of subjective probability as the future cannot be strictly considered as an exhaustive set of events. It is evident that students who wish to take the entrance examination (JEE) search for information about the coaching institutes and the previous results advertised by the respective coaching institutes imparting coaching for the same examination. The number of seats for which the students are competing is fixed, which means that the expected probability can be perceived to be the same for all the students who wish to take the entrance examination with or without coaching. It happens in case of buying tickets for lottery. This cannot be applied for students taking the JEE entrance because students vary in terms of their capacities and preparation. When students and their families choose Kota for coaching, they aim to maximize their chances in the competitive examination. In doing so, they not only assess ability and budget but many times, the decision to pursue coaching is driven by psychological factors which inform their formation of expectations.

Shiller (2015) argues that overconfidence is cited as one of the robust human traits while investing. In the coaching industry, while investing in coaching, there is a tendency among the parents and the students to perceive that they will be successful in qualifying the entrance examination; in some cases, their perception is realistic, and in some, it is not so. This could be due to a number of reasons: the nature of school examination and competitive examination is very different; the former is subjective, and the latter is objective. A number of students secure above 90 percent in school examinations and make a presumption that they will be able to qualify in the competitive examination. However, this is not true because the performance in the competitive examination is relative, and the competition is with lakhs of students, unlike the school examination. This is because people tend to make judgements in uncertain situations by looking for familiar patterns and assuming that future patterns will resemble past ones, often without sufficient considerations of the reasons for the pattern of the probability of repeating itself. This anomaly of human judgement is 'representativeness heuristic' often demonstrated by behavioural economists Kahneman and Tversky (Shiller, 2015). Another reason could be when parents and students take reference of good ranks and success stories of the toppers and form

expectations about their wards. This is because they are making judgements by looking for similarities to other known observations, and they forget that there are many other possible observations with which they could compare (Shiller, 2015). While looking at the choice mechanism, it is assumed that the decision to pursue coaching or not by the students is voluntary. In reality, however, there are instances where students wish to take coaching and are not permitted by the parents. Some students do not prefer to take coaching but are pressurised by parents and elders under *social pressure* (ibid.). The behaviour is also driven by the fact that parents have the *power of authority* (ibid.) over their wards.

Thus, ability, household budget, psychological factors, information, and interpretation of these subjectivities lead to the formation of expectations among the students and their parents regarding investment in coaching. As mentioned above, the probability is calculated for a random event (e.g., head or tail), and the actual outcome is considered to be determined by chance. It is important to reiterate here that a competitive examination is not a random event, and students only by their efforts, sincerity and hard work can maximize their chances of qualifying in the competitive entrance examination. This is a diversion from the use of the basic notion of probability in explaining the formation of the expectation. The next section elaborates on the decision-making of the representative students who opt for coaching in Kota and who do not opt for coaching in Kota through rate of return approach.

Rate of Return Approach

When education is treated as an investment expenditure, students are assumed to be rational in assessing the costs and benefits of the expenditure before deciding to pursue further. Therefore, the rate of return from the investment as compared to the opportunity cost of funds or future benefits exceeding costs becomes the guiding factor in choice-making. Let us consider the students who decide to take the entrance examination (JEE) but may or may not opt for coaching in Kota. The following cases for discussion are presented as follows: a) those who do not opt for coaching in Kota, and b) those who decide to spend extra for coaching in Kota.

a) Students who do not come for coaching in Kota

When a student makes a decision, (s)he always has to measure the willingness to pay in terms of benefits and opportunity costs. The opportunity cost is the wage (W_{12})

which the student would have earned after completion of the 12th class as they could have joined the job market. The student would also incur out of pocket costs for pursuing engineering for four years (C_{eng}). The individual has an expectation from pursuing an engineering degree that once they complete the degree, they will get the job. Students in fact, assume that the engineering degree assures them a guaranteed job. This assumption entails that the benefit from the degree always exceeds the cost. The student expects remuneration to be wages from an engineering degree (W_{eng}). It is the marginal benefit one expects to earn with the degree, post-completion, till retirement age¹⁰. The rate of return in the case of students who do not pursue private coaching from Kota can be expressed as follows:

$$\sum_{t=1}^4 \frac{W_{12} + C_{eng}}{(1+r)^t} < \left(\sum_{t=5}^{38} \frac{(E'(W_{eng}) - W_{12})}{(1+r)^t} \right)$$

Where,

W_{12} = wages expected with higher secondary education (class 12) (Opportunity cost)

$E'(W_{eng})$ = Expected wages after graduation from an engineering college

C_{eng} = Cost of pursuing engineering without private coaching in Kota

r = the rate of discount

The other method is to solve for ' r ' by equating expected costs and present discounted value of expected benefits and compare the computed ' r ', the rate of return with the opportunity cost of fund. In general, $(E'(W_{eng}) - W_{12})$ is expected to grow over time commensurate with the increase in the increase in the experiences and possibly productivity.

Assumptions of the representative student are that the expected rate of return by acquiring the degree from an engineering institute is higher than the rate of interest of the cost of financing engineering education. The inequality is based on the student's assumption that the benefit from obtaining an engineering degree (irrespective of the quality) is higher than the cost.

¹⁰ Retirement age is assumed as 60 years.

b) Students who come to Kota for coaching

The students who come to Kota decide to invest in private coaching with the expectation to increase the chances of qualifying in the entrance examination. The coaching institutes do not offer certificates to the students, and hence their engagement in the coaching institutes is valued only in terms of success in getting admission in the prestigious higher education institutions. In view of this, the students' decision to expend time and money, as expenditure, can be considered as an investment. The investment in coaching increases the chances of qualifying the entrance examination. Becker (1964; 1975), in his estimation of the rate of return, assumes a smooth transition from the colleges to the job market as if every graduate gets a job as per her expectation. In this study, students decide to join a coaching institute to increase the chances of admission to a reputed engineering institute of the country. Students also opt to take coaching in Kota so as to improve their ranking in the entrance examination (JEE Main and Advanced). It is only some students who qualify the entrance examination, secure good rank and take admission to prestigious colleges, for whom the path to better job opportunities opens up. This makes the cost of coaching, the cost of pursuing engineering and expected pay packages interdependent. If the ranking in the entrance examination improves, a student is able to secure admission in a reputed engineering college, thereby justifying the cost of pursuing engineering from IITs, NITs or reputed private colleges which charge high fees. This further opens up opportunities for better campus placement. Placements further improve the possibility of getting a job with a high pay package. The following argument justifies that the rate of return for students opting for Kota is presumably higher than the rate of return for the students who do not opt for coaching in Kota. These interdependencies are generally ignored in the literature and Becker (1964, 1975) also ignored this in his formulation of the human capital theory.

Now, as we consider this case, the underlying considerations of students who decided to come to Kota are based on the fact that the expected rate of return is supposedly low, and it can only be increased if they come to Kota. The cost incurred by these students is the out-of-pocket cost for coaching classes of two years. The expected benefit, which consists of the expected increase in the wages after completing an engineering degree, is higher than W_{12} or wages earned otherwise from general education. $E'(W_{eng})$ rises to $E''(W_{eng})$ as expectations increase with coaching.

Even after the addition of the cost of coaching to the expected cost of studying an engineering subject to qualifying the JEE, the expected benefits continue to be larger.

Hence the set of inequalities that we obtain is as follows:

$$\sum_{t=0}^2 \frac{Cost_{CI}}{(1+r')^t} + E\left\{ \sum_{t=1}^4 \frac{W_{12}+C_{eng}}{(1+r')^t} \right\} < \sum_{t=5}^{38} \frac{E''(W_{eng}) - W_{12}}{(1+r')^t}$$

Where,

$Cost_{CI}$ = Cost of pursuing coaching in Kota

W_{12} = wages expected with higher secondary education (class 12)

$E''(W_{eng})$ = wages expected after graduation from a prestigious engineering college

C_{eng} = Cost of pursuing engineering education from a reputed college

r' = the rate of discount

E = Expectation regarding joining the engineering college

The first term in the equation $(\sum_{t=0}^2 \frac{Cost_{CI}}{(1+r')^t})$ is the cost of coaching incurred by the students in Kota. The second term $(\sum_{t=1}^4 \frac{W_{12}+C_{eng}}{(1+r')^t})$ is also the cost and this cost is inevitable whether student opts to take coaching in Kota or not. The third term $(\sum_{t=5}^{38} \frac{E''(W_{eng}-W_{12})}{(1+r')^t})$ is the expected benefits that will accrue if the student is successful in securing a good rank, followed by admission in prestigious engineering college and good job opportunities. The term $E''(W_{eng})$ signifies a higher expected wage after pursuing an engineering degree. Unlike a normal cost-benefit equation, this equation has two cost terms $(\sum_{t=0}^2 \frac{Cost_{CI}}{(1+r')^t})$ and $(\sum_{t=1}^4 \frac{W_{12}+C_{eng}}{(1+r')^t})$. $(\sum_{t=0}^2 \frac{Cost_{CI}}{(1+r')^t})$ is a new cost term which is attributed as the cost of two years of coaching and can be considered as the opportunity cost of fund which is lower than the expected benefit from pursuing engineering. This is an additional cost incurred by the student to increase the chances of success in the entrance examination. As the opportunity cost of the fund or rate of interest is far lower than the expected value of the rate of return from an engineering degree, this motivates the student to go to Kota for coaching. The assumption of the representative student is that the opportunity cost of the fund or rate

of interest of two years is far lower than the expected benefit $E''(W_{eng})$ and this becomes the decisive rule for a student who decides to go to Kota for coaching.

The rate of return approach has its limitations in explaining choice-making amongst the students, as pointed out by scholars (Majumdar, 1983; Marginson, 2019). It is important to discuss in further detail the two categories mentioned above. The decision to go or not to go to Kota for coaching is complex because families perceive their financial conditions different depending on many factors such as number of earning members, number of dependents, number of children, gender of the student, ability of the student etc. Given the uncertainty involved, families perceive the capabilities of their ward differently given the household budget. Becker (1964; 1975) in human capital theory assumes that all individuals, irrespective of their abilities, are able to manage finances to invest in education. He assumes the capital market for funding education is segmented where some individuals have access to cheaper sources of funds, and some have expensive sources of funds. Cheap sources of funds constitute the one from parents, relatives, subsidies from the government, and expensive sources of funds include commercial loans where the rate of interest is higher. This argument by Becker (1964; 1975) is made in the context where individuals invest in formal education, and after acquiring the degree, there is a smooth transition to the job market. The decision to pursue private coaching is unlike pursuing a formal degree, as an investment in private coaching only increases the chance of qualifying an entrance examination which paves the path for a formal degree. The gestation period between the cost incurred on coaching and expected benefits received is very long. The assumption of the human capital theory that all students are able to manage finances for investing in education is not realistic for many in this context, as not all families who take loans have the capacity to bear the expected loss. Families depending on their capacity to bear the expected loss, take the decision whether to invest or not in private coaching in Kota.

2.11.B Providers of the Coaching Institutes

In investigating the nature of the providers and their strategies and selection mechanism, the study derives its understanding from selection based competition or S-competition (Glennerster, 1991). In the private coaching industry, the objective of the providers is to maximize the number of rank holders, which

become the source of prestige for the institute as it indicates the success rate of an institute. The private coaching industry is a student-centric industry where both the quality and quantity of the students play an important role. The quality of students becomes the source of prestige as they are the ones who have a higher chance of qualifying the entrance examination. The quantity matters because that is the number of students who become the source of revenue as they pay full tuition fees. The understanding is that previous results advertised by the institutes help in attracting the students in the subsequent years. This process of prestige generation also provides revenue to the industry through tuition fees. The coaching institutes make a specific case as being for-profit in nature where owners of the institute target a given surplus from the revenue collected. Unlike other education markets, prestige and profit are closely interlinked. It can be argued that prestige in one year becomes a determinant of profit in the following years. To fulfil the objective of attaining prestige, coaching institutes select high efficacy students and high-quality teachers. Thus, it can be understood that providers are differentiated based on their success rate. The success of an institute is a function of the quality of students and the quality of teachers who are also the decision-makers and are limited in number. Coaching institutes offer scholarships to attract high-efficacy students and pay higher remuneration to high-quality teachers.

An understanding from the concept of education production function is considered to understand the variation in the quality of the coaching institutes. The equation is adapted from Chattopadhyay (2019).

The success rate of the coaching institute = f (quality of the human resources (H); quality of the infrastructure (I) and the availability of financial resources (F)).

(H) is the quality of students and faculty in the institutes, (I) is the quality of the infrastructure and (F) represents the revenue generated from the tuition fees paid by the number of students. It is assumed that low efficacy students pay full tuition fees and high efficacy students receive the scholarship. Scholarship given to high efficacy students becomes part of the cost for the institute.

A hypothetical example of two coaching institutes can help us in understanding the success rate in the coaching industry. Let us take the case of two institutes of different quality A and B, where A is one of the best coaching institutes and B is an average

institute, and this categorization is for developing theoretical understanding in a simplified manner.

$$SR_t^A = f^A (H_t^A, I_t^A, F_t^A)$$

$$SR_t^B = f^B (H_t^B, I_t^B, F_t^B)$$

Let us assume that the success rate of institute A is higher than institute B. As a result of the high selection rate from institute A, it further attracts a higher number of meritorious students in the subsequent years. The difference between the success rate of institutes A and B is mainly because of the quality of the students and the teachers (H). The reasoning follows as the higher the success rate of the institute, the higher is the prestige. Higher prestige attracts a large number of students in the institutes and fetches higher revenue as more and more students join the institute. As a result, institute A with higher revenue is able to attract high efficacy students and high-quality teachers by giving scholarships and high salaries, respectively, which enhances their success rate further. On the other hand, Type B institutes have limited financial resources as a result of which they can only get access to a few high efficacy students, and high-quality teachers and profit levels attained by Type B institutes are also relatively low. Type B institutes target low-profit margins because of the nature of this market where students can go to other institutes.

$$SR_t^A > SR_t^B,$$

$$\text{Because } H_t^A > H_t^B \text{ and } F_t^A > F_t^B$$

Thus, the prestige of an institute leads to the generation of revenue, and higher revenue facilitates the institutes to attract high-efficacy students and high-quality teachers and higher profit. The interdependence of prestige and profit is a peculiar feature of this education market because it combines a feature of a commodity market (profit) with the feature of an education market which is driven by prestige.

With the discussion on choice-making by the students and the selection mechanism by the providers, the next segment will discuss the distinct features of the education market, which can provide a context to market for the coaching industry and the freedoms enjoyed by the students who are the consumers (students) and the providers in the market for education.

2.11.C Market for Education

In the coaching industry, the interaction between the students and the coaching institutes can be thought of as a market for education, given that the market for education is not a typical market for consumption good and it would be appropriate to discuss the specific features of an education market which can provide the framework for the analysis of coaching industry in Kota. The market is commonly understood as an institutional arrangement to facilitate transactions between two sets of economic agents with conflicting objectives, the consumers and the producers (Chattopadhyay, 2012). The market for education is different from a conventional understanding of a market, that is, how different it is from a typical perfectly competitive market. In a perfectly competitive market, socially optimum allocation of resources takes place, i.e., Pareto efficiency conditions are fulfilled. Market failure happens in case of imperfect competition where the Pareto efficiency conditions are not fulfilled. There are different sources of market failure and imperfect competition is one such case. In the following section, sources of market failure of an education market are discussed below.

1. **The Education Market is Imperfect:** The education market does not fulfil the conditions of a perfectly competitive market because it violates the assumptions of homogeneity (Chattopadhyay, 2012). Education institutes provide highly differentiated services due to the uniqueness of human capital embodied, which is not reproducible. The value of the degree differs from the quality of the institution. This means the quality of the institution will determine the quality of the degree, and the difference in the quality is because of the quality of the students and the teachers and other facilities provided by the institutes, such as infrastructure (Chattopadhyay, 2012). Students in an education market are not consumers because they cannot buy their degrees, as they have to earn the degrees from their sincerity and hard work (Chattopadhyay, 2017). Therefore, the market for education is inherently imperfect.
2. **Information Asymmetry:** Information is a vital component for making choices in an education market. Hogan (1999: 126) argues, *“In the educational market, for example, there is a striking variability across different groups in their access to information, in the kind of information they seek, in the nature of the information sources, in their ability to pay the direct and opportunity costs of securing*

information that is available, in their interest in getting information and in their ability to process and use the information that they gather”

It is often the case that students are poorly informed about the content and the quality of the programmes in an education market (Winston, 1999). Even if reliable information is available, the question is whether the information can be accessed or interpreted easily and correctly (Jongbloed, 2003). Thus, given its nature, education is often regarded as an ‘experience good’ as consumers can determine the quality only through consumption (Teixeira et al., 2004; Chattopadhyay, 2012). It is very difficult on the part of the students and their parents to ascertain the quality of education before entering the system. The possible option is that they gather information from the website of the respective institutes, prospectus, senior students or alumni or the rankings of the institutions, which is a case for universities and institutes in higher education. These are all secondary sources of information, but the experience is personal, which one can have only after being in the system. Institutions also have the tendency to mislead the students in terms of quality, and this is dependent on the objective of the institution, nature of the management (Chattopadhyay, 2012). The imperfect information has a tendency to create distortion in the decision making of the students.

3. **Externalities:** Many times, individuals who make decisions on investing in education do not take into account the fact that their education will affect the functioning and well-being of others in a positive way (Jongbloed, 2003). The externalities include improvement in health, reduction in population growth, reduction in poverty, improvement in income distribution, reduction in crime, rapid adoption of new technologies, strengthening of democracy, ensuring of civil liberties etc. In higher education, there is no price mechanism that urges individuals to take these externalities into account. Private investment in higher education is lower than would be in the interest of society as a whole.
4. **Imperfect Capital Market:** Capital market for education loans is inherently imperfect (Hillman, 2003). The imperfections could be due to information asymmetry and adverse selection. Human capital cannot be surrendered to the bank as collateral as human capital is embodied and slavery is long prohibited (Chattopadhyay, 2015). This absence of collateral in terms of human capital creates a problem for the lender, as he does not have the perfect information about

the student ability to pay back the loan, which in turn leads to the problem of adverse selection of students, thereby accentuating the inequalities (Chattopadhyay, 2012).

Freedoms Enjoyed by the Consumers and Providers

In India, consumers and the providers in the education market do not enjoy complete freedoms as they have to adhere to some basic regulations applicable for both public and private institutions. Also, both the consumers and the providers are constrained by the ability to pay and merit and the quality of the students and the teachers, who are crucial inputs in the system, respectively. The present section discusses the freedoms enjoyed by the consumers and the providers, i.e., consumer sovereignty and provider sovereignty. A study by Jongbloed (2003) and Chattopadhyay (2009) is used to specify the eight freedoms of the education market.

A. Freedoms for Consumers

This segment discusses the freedoms enjoyed by the consumers.

(i) Freedom to Choose the Provider

In an education market, students have limited freedom in choosing their provider because it is dependent on ability (merit) and ability to pay which could also be referred to as 'market capacities' (Hogan, 1997:132). Market capacities for the students can take the form of income, wealth, market skills, educational credentials, information and the various elements of social and cultural capital (Hogan, 1997). Students who have access to resources will gain access to any institution of their choice, while some of the students who are deserving but have inadequate resources may not get similar access (Chattopadhyay, 2009).

(ii) Freedom to Choose the Product

In an education market, the product is usually referred to as the course to be studied by the student. Though the student can choose the course that he/she wishes to study, but often the choice of the course is linked to the provider as it depends on the decision whether to choose the course or the institution (Chattopadhyay, 2009). If the student is driven by market logic, he/she may consider the reputation of the institute or the skill which is more demanded in the job market. There is a possibility that a

student first chooses the product that is the course and then chooses the institution or may choose the institution first and then choose the course. In both cases, merit will restrict the choice set available to the student (ibid.). In the case of reputed higher education institutions, choice of the institution is followed by choice of the course. In the case of the professional courses, usually, the choice of the course is made first, followed by the institution (ibid.).

(iii) Adequate Information for Consumers

As discussed earlier, education is an ‘experience good’ (Teixeira *et al.*, 2004), and its quality of delivery is revealed during consumption (Jongbloed, 2003) and depending on the agency of the students in participation of the academic activities. Even if the information about the institution, course and other related information is available, it is important to understand whether the required information is accessed and interpreted by the students.

(iv) Direct and Cost Covering Prices

Consumers pay the price for the service consumed, and that price has some relation to the cost of providing that service (Jongbloed, 2003). In the Indian education system, the price paid in government-aided institutions is generally subsidized other than that of the self-financing courses (Chattopadhyay, 2009). Price (tuition fees) charged is determined mainly by the nature of the institution, its funding and mandate than the cost (ibid) of its provision. In government institutions fees charged are more or less stagnant, and the fees charged do not cover the cost of the education. However, private institutions adopt a cost-recovery model where tuition fees charged recovers the cost in the absence of public subsidy unless the institution is endowed with a good amount of endowment fund.

B. Freedoms of the Providers

Providers in the education market are unlike the ones in the consumption good market because the market for education should not be considered in line with the market for other commodities, and similarly, the educational institutions should not be considered equivalent to a firm. In a typical market, inputs are the raw material used in the production of the output, and the consumer pays the market price for the commodity. In an education market, students are inputs and the consumers, and the

optimizing decision-making agents in the system and students are the output (Chattopadhyay, 2012). This is the reason why technical relation in an education institution is characterized by customer-input technology (Winston, 1999) as mentioned above.

Another feature is that education institutions in this market are considered not-for-profit organizations. In most countries, profit-making is generally not permitted in the education sector (Chattopadhyay, 2012). In an education market, what drives institutes to perform better is their 'objective function'. In higher education, Marginson (2009: 208) analyses the objective function of a university from the perspective of 'status competition'. Marginson (2009) argues that 'non-profit universities are prestige-maximizers, performance-maximizers and revenue maximizers.'

In the following section, freedoms enjoyed by the providers in an education market will be discussed.

(i) Freedom to Entry

In the education market, providers have no restriction on entry; however, there is a possibility that the quality of the educational institutions being set up is compromised. This is because the providers, in the absence of clear specifications about quality and adequate monitoring, have a tendency to circumvent the requirement by the regulatory authority (Chattopadhyay, 2009). The providers, in many instances, 'create an illusion of learning' by distributing degrees and diplomas (Chattopadhyay, 2009). In India, this phenomenon is witnessed with the rise in the number of private engineering institutions, many of which are of mediocre quality. However, in the coaching institute, the students' investors observe the success rate of the institutes before taking the decision to join as in this case there is no provision of any certificate or credential, only learning is the motive to join coaching institutes in order to secure admission into the prestigious IITs.

Entry for new providers could be restricted by the cost of initial investment (Jongbloed, 2003). Usually, in most countries, public funding is allocated to government institutions (ibid.). Providers in the private sector might face financial constraints when no government funding is available to them and will face

competition by the established providers who may use their market power to protect their market share (Jongbloed, 2003).

(ii) Freedom to Specify a Product

In the market for higher education, freedom to offer courses is limited to some extent, unlike the perfectly competitive market where the provider has full freedom to determine what to produce and what to sell. In the Indian higher education system, there is autonomy to offer courses on UGC's approval. In the private sector, there is the freedom to decide the course and content of the subject based on the approval of the concerned regulatory authority, UGC or AICTE (Chattopadhyay, 2009). Private providers have a tendency to offer market-oriented jobs owing to job prospects (Chattopadhyay, 2012). Specifying a product is not always restricted to the content of the course offered. There is diversity in the method of instruction, delivery ranging from classroom to distance learning. Some higher education institution offers part-time courses so as to allow students to combine working and learning (Jongbloed, 2003).

(iii) Freedom to use Available Resources

In India, the concept of profit in education is not tenable. As a result, the freedom of the providers is restricted as the education sector is a not-for-profit industry. If the surplus is generated, then it is required to be reinvested to expand the sector (Chattopadhyay, 2012). In the Indian higher education system, universities/institutes which receive support from the University Grant Commission (UGC) have the freedom to use the resources. However, the freedom is restricted as the release of grants is made under a particular 'head' (Chattopadhyay, 2009).

(iv) Freedom to Determine Prices

In a commodity market, the freedom to determine the price by the provider is an essential element of the market system. In an education market, prices are determined based on the nature of the institutions. In government-funded intuitions where subsidies are allocated, the tuition fee is not the true reflection of the cost of the education (Jongbloed, 2003). In India, government-aided institutions are largely autonomous and therefore have the freedom to determine the fee structure; fee structure is designed such that it recovers 20 percent of its cost (Chattopadhyay,

2009), it was discussed once but was not implemented. Private education institutes have a higher degree of autonomy in charging the fees (ibid.).

Though consumers and providers are bestowed with sovereignty, the construction of the education market is neither always feasible and nor always desirable (Chattopadhyay, 2017). The market for education is described as quasi in nature though elements of typical markets are incorporated into the system such as competition, user charges, freedom of choice (Teixeira et al., 2004) but at the same time government subsidizes education and its provision is regulated (Chattopadhyay, 2012). Fees are not fixed at cost-recovery levels. In the education market, students cannot choose the course of study and the institute as long as they can afford it. Students' ability becomes the determining factor because the merit of the students comes into play for admission in any course or institute, especially the prestigious institutes. Providers of education institutes practise selection-based competition (Glennester, 1991) in selecting good quality students and teachers. As mentioned in the previous discussion quality of an education institute is determined by the quality of the students and the teachers. Providers in the education market are not profit maximisers as the education sector is a not-for-profit sector. Though profit-making is not officially allowed in the education market, it is the objective function of the providers which depicts what it wishes to maximise. Education institutions often practise prestige maximization (Bok, 2003). Thus, the market for education is unlike any consumption good market.

The next chapter will discuss the research methodology adopted to fulfil the objectives of the study and to answer the research questions mentioned above. The discussion will be followed by a detailed description of the data used in the thesis.

Chapter 3- Research Methodology and the Description of the Sample

3.1 Introduction

The previous chapter presented a brief review of the literature and the gaps in the literature from which the research objectives and research questions have emerged. The previous chapter also presented the theoretical framework which would guide the research design of the study. This chapter discusses the methodology adopted in this study to address the research objectives. In the next section, an effort has been made to situate the study among the research paradigms of scientific research. The following section presents a discussion on the method needed for pursuing this research. Research design, tools of data collection and mode of analysis are discussed in the subsequent section. Description of data collected from the field on students, providers and market is presented in the last section.

3.2 Situating the Study among Research Paradigms

Every research comprises of two important components; philosophical assumptions about the social reality as well as methods and procedures adopted (Creswell, 2014). A framework of research involves an interaction of philosophical worldviews, research designs and specific methods (ibid). While designing the study, there is a need to clearly spell out the assumptions related to ontology and human nature, epistemology followed by methodology (Burrell and Morgan, 1979). The four questions concerning the problem are: What ontological and epistemological assumptions have informed the research problem? What are the methodological assumptions that have guided the particular choice of methods and, finally, the methods to understand the research problem? Hitchcock and Hughes (1995:21) suggested that ontological assumptions give rise to epistemological assumptions; these, in turn, give rise to methodological considerations; and these will determine the tools and techniques of data collection. An attempt is made to situate the present study in this framework by explaining the assumptions of ontology, epistemology, methodology and methods. These assumptions which shape the way we view and interpret social realities are referred to as the research paradigms in scientific research.

3.2.1 Ontology

Ontological assumptions are concerned with the nature of reality and its characteristics. This means there is a need to understand the nature of the social phenomenon that is to be studied. There is a debate between the nominalists and realists where nominalists view the social reality as a creation of our minds, and realists believe that social reality is external to the researchers and is objective in nature (Cohen, 2007). In the present study, the realist position is assumed because the social reality exists and is not dependent on the perception of the researcher as the researcher remains aware of this in her conduct of research. In the study, the market for the private coaching industry is investigated where 'market' has a specific meaning as the interaction between students as consumers and providers of coaching can be thought to be as a market. The parameter of success in the competitive examination is given and is evaluated by the Joint Admission Board (JAB) which has an independent existence and is not related to the coaching industry or is not constructed by the stakeholder in the coaching industry.

3.2.2 Epistemology

Epistemological assumptions question the relation between the knower and what would be known or what could be known (Guba and Lincoln, 1994) or how the knowledge is acquired. Epistemological assumptions are constrained by the answer already given to ontological assumptions in the study. The study proceeds with a realist ontology of the social phenomena according to which there exists a mind-independent social reality outside the individuals who participate in it. This position implies that the researcher assumes the role of an observer. In the present study, the researcher assumed the role of an observer and did not participate in the functioning of the coaching institutes. The approach where the social reality is assumed as objective and external to the individual is called nomothetic.

3.2.3 Assumptions About the Human Nature

The reality of the private coaching industry exists and is independent of the researcher. To study the coaching industry, deterministic behaviour is assumed because the students and the coaching institutes have a definite target encapsulated in the form of the objective function which they pursue to optimize in a deterministic

manner. While a significant part of the thesis is focused on analysing the pattern in the coaching industry, open-ended questions were also asked by the respondents, both students and teachers, because not all individuals are the same.

In this study, both types of assumptions are applicable with respect to different research questions. For example, students prefer a coaching institute that is reputed in the market, given their efficacy and household budget. The assumption here is that all students are rational decision-makers whose objective is to maximize their chances of success in the competitive examination. This kind of deterministic behaviour is assumed in the study. On the other hand, the subjectivities of the individuals vary, and as a result, their expectations also vary (as discussed in Chapter 2). Open-ended questions capture the differences in individual behaviour, and this is what is called voluntarism. It is important to reiterate why do individuals vary? In the context of the present study, choice-making by the individuals is governed by the preference level and the competence level or what is called the ability of the individual in the human capital theory. As discussed elaborately in the theoretical framework, as the human capital embodied in the individuals differ, their decision making also differs. Students with high efficacy and low household budget risk investing in coaching because their families believe and perceive a higher possibility of qualifying the entrance examination than the capacity to bear the financial loss if the ward does not qualify the examination. This justifies the argument of the human capital theory that individuals with higher efficacy (ability) have a greater tendency to invest in education.

3.2.4 Methodological Considerations

When an objectivist or positivist approach to the study of social reality is assumed, the investigator treats the social world as being 'hard, real and external' to the individual. In this approach surveys, experiments will be used as the research methods (Burrell and Morgan, 1979). This approach which is characterized by procedures and methods designed to discover general laws is referred to as nomothetic (Cohen et al., 2007) and researcher guided by this approach adopts quantitative research methods. On the other hand, if the researcher stresses on the subjective experience of the social reality s(he) focuses particular cases rather than what is general and universal, it is referred to as idiographic, and researcher employs

qualitative methods (ibid). In Chapter 2, research questions pertaining to the three main research objectives are stated. Some research questions seek answers which attempt to understand the uniqueness of the study, while other research questions attempt to answer in a way where findings can be generalized. For example: in answering the research question where the factors determining the choice of a particular institute by the students is undertaken and can be generalised to some extent because this question is answered using the data of 264 respondents. The second research objective attempts to understand the competitive strategies of the providers in the coaching industry. Coaching institutes adopt different competitive strategies to compete in the market, and these coaching institutes adopt ways of attracting the best of the students and teachers and advertise their results. These competitive strategies are unique and specific to these coaching institutes. Hence, the study adopts a mixed-method approach as one single approach; taking either a quantitative or a qualitative approach alone would be inadequate to address the research questions in a nuanced manner.

3.3 Mixed-Method Approach

Selection of the research method is based on which paradigm one chooses, what are the assumptions considering the nature of social reality (ontology), knowledge of that reality (epistemology) and the particular ways of knowing that reality (methodology) (Guba, 1990). Mixed methods are used in cases where social reality is extremely complex, and the role of the single method may have limited scope in investigating the reality (Clarke and Yaros, 1988). Philosophers have also argued that despite being guided by the positivist framework, one can adopt qualitative methodologies as there is no binary choice or either-or type (Howe, 1992). Philosophically, the mixed-method paradigm is the "third wave" or third research movement, a movement that moves past the paradigm wars by offering a logical and practical alternative. The present thesis uses a mixed-method as a research method so as to get a complete understanding of the reality by doing cross-validation or triangulation of one or more sources of data. The mixed-method entails the use of both quantitative and qualitative research techniques and methods to study a particular research problem. The quantitative approach is based on positivism, where it is assumed that reality is objective to an individual's perception. Qualitative research methods, on the other hand, assume that social reality is constructed by an

individual's own mind and can be interpreted by everyone differently. The study is about a particular case of the Kota coaching industry, and therefore, case study method is used for investigation. Mixed methods are used to analyse the data collected from Kota.

3.4 Case Study Method

A case study is a method of research with distinctive characteristics that makes it ideal for many types of investigations. It can also be used in combination with other methods. Case studies can establish cause and effect where effects can be observed in the real context, recognising that contexts are powerful determinant of cause and effect (Cohen, 2000). Further, contexts are unique and dynamic; hence case studies investigate and report the complex, dynamic and unfolding interactions of events, human relationships and other factors in a unique instance (Nisbet and Watt 1984; Cohen, 2000). The present study unravels the dynamics of a private coaching industry, an education market but is unlike a typical education market where the extent and the mode of public funding influences the functioning of the institutes. The coaching institutes do not give any degrees, diplomas or certificates to the students. The coaching institutes function like for-profit organizations, and coaching institutes are registered under the Companies Act, 2013. There is no intervention by the government in this market. Students, as consumers, and providers of the coaching institutes are two major stakeholders and the selection mechanism practised by both of them makes it an interesting case to explore.

A case study is known as a triangulated research strategy. Snow and Anderson (cited in Feagin, Orum, & Sjoberg, 1991) asserted that triangulation could occur with data, investigators, theories, and even methodologies. Stake (1995) stated that the protocols used to ensure accuracy and alternative explanations are called triangulation. The need for triangulation arises from the ethical need to confirm the validity of the processes. In case studies, this could be done by using multiple sources of data (Yin, 1984). Stake (1995) and Yin (1994) identified at least six sources of evidence in case studies. The following is not an ordered list but reflects the research of both Yin (1994) and Stake (1995): documents, archival facts, interviews, direct observations, participant observations, and physical artefacts. Documents could be letters, memoranda, agendas, administrative documents, newspaper articles, or any document

that is relevant to the investigation. In the interest of triangulation of evidence, the documents serve to corroborate the evidence from other sources. Interviews are one of the most important sources of case study information. Several forms of interviews are possible: open-ended, focused, and structured or survey. In an open-ended interview, key respondents are asked to comment about specific events. They may propose solutions or provide insight into events. They may also corroborate evidence obtained from other sources. The researcher must avoid becoming dependent on a single informant and seek the same data from other sources to verify its authenticity. The focused interview is used in a situation where the respondent is interviewed for a short period, usually answering set questions. This technique is often used to confirm data collected from another source. Direct observation occurs when a field visit is conducted during the case study. It could be as simple as casual data collection activities or formal protocols to measure and record behaviours. This technique is helpful in providing additional information about the topic being studied. It is essential to remember that not all sources are relevant for all case studies (Yin, 1994). This study uses multiple sources to investigate the dynamics of a private coaching industry. Students as respondents were made to fill structured questionnaires with focussed and open-ended questions. Semi-structured interviews were taken of the owners of the coaching institutes, faculty members, and administrative employees. Other stakeholders such as journalists, hostel owners, wardens, stationers were also interviewed to understand the functioning of this distinct education market. Data collected from all the sources has been used to corroborate the findings.

3.5 Research Design and Sampling Framework

As discussed in Chapter 1, the study is located in Kota, which is popularly known as the ‘coaching capital’ of India. The population comprises the students who are taking coaching classes for pre-engineering and pre-medical entrance examinations in private coaching institutes. It is reported that approximately 1 lakh to 1.5 lakh students come to Kota for participating in pre-engineering and pre-medical entrance tests. From the survey, it was reported that nearly 70,000 students (inclusive of class 11, 12 and 12 passed¹¹) are taking coaching for the pre-engineering test. The purposive sampling technique was adopted to select only those students who are

¹¹ The class 12 passed students are the ones who have completed class 12 and are taking a drop year for preparing for the entrance examination.

taking coaching for pre-engineering tests in different coaching institutes and are either enrolled in class 11, 12 or 12 passed. Amongst these students, a sample of 264 students was randomly selected who were taking coaching for pre-engineering test in different coaching institutes. The study aims to explore the dynamics of students' choices amongst various private coaching institutes. While deciding to take coaching for the pre-engineering test in Kota, students are faced with the decision of choosing a coaching institute. The concentration of coaching institutes in clusters and availability of supporting services nearby opens many options for the students. Word of mouth from the family, friends, teachers etc., websites of the coaching institutes, blogs written by previous students, YouTube videos by the coaching institutes play a crucial role in providing information about the coaching institutes before the students take the final decision. Along with the source of information, students also consider their ability, household income before taking the final decision. After evaluating all the options, students select the coaching institutes they would like to study from as per their requirements.

To understand the provider, coaching institutes which have occupied almost 80 percent of the market share have been studied in-depth, whereas information about small coaching institutes has also been gathered. For the analysis, coaching institutes have been bifurcated into three categories based on the previous results in terms of top AIR and the number of selections. Type A category constitutes of two coaching institutes: Resonance Eduventures Limited and Allen Career Institute; both these institutes have approximately 20,000 and above enrolments in JEE courses. Type B Category comprises of Vibrant Academy, where the number of students enrolled in the JEE course is between 5000-10000 students. Type C Category includes Bansal Classes Pvt. Ltd., Motion Education Pvt. Ltd., Career Point Ltd., which have enrolments below 5,000 students for JEE courses. The enrolments figure of the students enrolled were collected during the interviews with the providers of the coaching institutes. The number of students enrolled in these coaching institutes signifies the market share of these coaching institutes. Occupation of the market share results from strategies these coaching institutes have practised over the number of years, the 'word of mouth' being crucial among the students. Therefore, it is the reputation of the coaching institutes among the students which plays an important role. Before making the choice of the coaching institute, the performance of the

coaching institute is evaluated by the students through results produced by the coaching institute, teachers associated with the coaching institutes, scholarships criteria and other supporting facilities. Most of these coaching institutes furnish information about results, scholarships criteria on their websites, brochures and prospectus. Thus, given the information and evaluating their requirements, students take the decision about the coaching institute. The selection of the coaching institute can be guided by the reputation of the coaching institute, fee structure, results produced by the coaching in past years, availability of 'star' teachers, class size, scholarship criteria, infrastructure, etc.

For understanding the providers of the coaching institute and the market of the coaching industry, semi-structured interviews of 40 respondents have been conducted. The purposive and snowball sampling method was used to select these 40 respondents, which comprises 15 teachers who are teaching in different types of coaching institutes. Teachers in some coaching institutes are owners or directors, and in some coaching institutes, they are the employees. This helped in understanding the role of teachers in the coaching industry. Eleven respondents were from the non-teaching department, which helped in understanding the functioning and operation of the coaching institutes. These included people from the administrative team, marketing team, HR etc. Fourteen respondents were from the allied occupations such as journalists, hostel lease owners, members of the hostel associations, psychiatrists, NIOS office representatives, finance person who facilitates loan facilities to students for coaching (Bajaj Finance), school teachers of the schools which are listed with coaching institutes for dummy registration, owners of the stationary shops in the coaching area. All these people were purposefully selected as these people had in-depth knowledge about the coaching industry. The nature of the coaching industry being private, it was difficult to locate the respondents, as they were not very comfortable in sharing their strategies with the researcher. Therefore, snowball sampling helped in building a network of respondents who could provide information about the dynamics of the coaching industry.

3.6 Tools of Data Collection and Mode of Analysis

3.6 A. Primary Sources

The analysis is done on the basis of the primary data collected from the field survey. Data was calculated using purposive sampling, and 264 students who were taking coaching for JEE were selected. These students were enrolled in class 11th and 12th; few among them had passed class 12th. These students were interviewed using a structured questionnaire and the data collected was qualitative as well as quantitative. Data was further analysed using descriptive and inferential statistical tools. Besides, semi-structured interviews were also conducted with students to understand their overall perspective regarding the coaching industry.

Forty respondents were selected through snowballing sampling technique to understand the strategies of the providers and the overall market of the private coaching industry. These 40 respondents include 15 teachers, 11 non-teaching staff, and 14 people from the allied fields but have the knowledge and are associated indirectly with the coaching industry. In-depth semi-structured interviews were conducted with these respondents.

3.6.2 Secondary Sources

For the secondary data, websites of the coaching institutes are looked for necessary information such as previous results, scholarship programmes, history and mission of the coaching institutes, which would be of help in understanding the strategies of the coaching institute. Newspaper articles, guidelines issued by the district administration, information on suicides and other crimes procured through RTI has been used to understand the implications of the private coaching industry.

3.7 Mode of Analysis

The data collected through the structured questionnaires of 264 students across different coaching institutes in the sample have been analysed quantitatively using descriptive and inferential statistical tools. The analysis attempts to understand the first research objective of the study. The approach is guided by the theoretical framework of Human Capital Theory (Becker, 1964; 1975). The data collected through the semi-structured in-depth interviews have been analysed qualitatively. This approach has been used to answer the second and the third questions. Finally, both

quantitative and qualitative results will be used to arrive at an understanding of the dynamics of the private coaching industry. The following table presents the research objectives and the research questions, and the appropriate method for the collection and analysis of data pertaining to each of the research questions.

Table 3.1: Mapping Research Objectives to Method of Collection and Analysis of Data

Research Objectives	Research Questions	Tools used in Data collection	Method of Analysis
R.O. 1 To study the selection mechanism adopted by the students in choosing a particular coaching institute.	R.Q.1 How is the choice of a particular coaching institute made by the students/parents?	Structured Questionnaire (primary survey).	Quantitative method using descriptive and inferential statistical tools.
	R.Q.2 What are the characteristics of students in terms of ability/performance (marks), socio-economic background, caste, gender, etc., investing in the private coaching industry? How do these factors drive the demand for private coaching in 'Kota'?	Structured Questionnaire (primary survey).	Quantitative method using descriptive and inferential statistical tools.
	R.Q.3. What are the factors which play an important role in availing of scholarships in the coaching institutes?	Structured Questionnaire (primary Survey).	Quantitative methods using descriptive statistical tools.
R.O 2 To study the nature of providers in the shadow education market for the coaching industry.	R.Q.1 What is the nature of providers of coaching institutions in terms of ownership, organisational structure?	Financial statements; Balance sheet, and Profit and Loss Account of the institutes have been used, procured from the website of the Ministry of Corporate Affairs, Government of India and Websites of the coaching institutes.	Content Analysis of the financial statements and websites of the coaching institutes.

	<p>R.Q. 2</p> <p>What is the process of selecting the students and how are meritorious students identified by the coaching institutes?</p>	<p>Semi-structured interviews of the teaching and non-teaching staff of the coaching institutes.</p>	<p>Thematic content analysis of the interview is undertaken guided by the customer-input technology (Winston, 1999) and S-competition (Glennerster, 1991).</p>
	<p>R.Q.3</p> <p>What is the process of recruiting the teachers, and what ways do coaching institutes adopt to have the best teachers for their institutes in the face of fierce competition?</p>	<p>Semi-structured interviews of the teaching and non-teaching staff of the coaching institutes.</p>	<p>Thematic content analysis of the interview is undertaken guided by the customer-input technology (Winston, 1999) and S-competition (Glennerster, 1991).</p>
	<p>R.Q.4</p> <p>How do coaching institutes advertise their results?</p>	<p>Advertisement published in newspapers, hoardings across the city and websites of the coaching institute.</p>	<p>Content Analysis of the information especially results in the Advertisements and Previous JEE reports</p>
<p>R.O. 3</p> <p>To study the nature of the shadow education market for the private coaching industry and its implications.</p>	<p>R.Q. 1.</p> <p>What is the nature of the shadow education market for the coaching industry? How is the market for coaching segmented, given the hierarchy among the coaching institutions?</p>		
	<p>R.Q.2</p> <p>What are the features of the market for the private coaching industry in Kota?</p>	<p>Along with respondents from the coaching institutes, 14 respondents were from allied fields such as Journalists, Psychiatrist, government officials, hostel owners and wardens, stationers, Income tax official.</p>	<p>Content analysis of the interviews guided by the 'freedoms' enjoyed by the consumers and the providers (Jongbloed, 2003).</p>

	R.Q. 3 What are the economic, social and educational implications of the coaching industry?	Semi-structured interviews with a school teacher (tie-up with dummy school), NIOS person, tuition classes that operate in the coaching market. A copy of guidelines issued by the district administration to coaching institutes. RTI was filed to procure the details about the crime data.	Content analysis of the interviews and the documents.
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The above section presented the research framework of the study, philosophical worldviews, research designs and specific methods used in the study. The following section will present a description of the sample used in the study.

3.8. Description of the Data

To understand the functioning of the market, it is important to look at both the demand and supply sides. To study the demand side, characteristics of the students taking coaching for pre-engineering is examined and to study the supply side, providers of the coaching institutes are investigated. Sample description is presented in two sections; the first section presents the profile of the sample students (264) and the second section talks about the detailed description of the coaching institutes which are used for the analysis in the study.

3.8.A Description of the Sample of the Students

This section presents an analysis of the sample collected from the students pursuing coaching for the Joint Entrance examination (JEE): JEE Main and JEE Advanced. To understand the decision-making in the coaching industry from the students' (consumers') perspective, 264 students were surveyed who have enrolled in the different institutes in Kota. A brief profile of the students sample is as follows:

- (i) **Gender:** Out of 264 students, 80 percent of students are male, and approximately 20 percent of students are female. Similar is the proportion of male students and female students in the class. The proportion of students in the sample shows that boys outnumber girls. The gender gap can be attributed to the fact that parents may not be very open to the idea of sending their

daughters to study in Kota for a period of two years or more. Also, the above data supports the enrolment pattern of students in the field of engineering, where female students constitute a very small proportion of the total students in general.

- (ii) **Religion:** More than 90 percent of students are Hindus, approximately 7.5 percent of them are Muslims and less than 1 percent; that is, only two students out of 264 students are Christians. These two students belong to the north-eastern part of the country.
- (iii) **Caste:** Out of the total 264 students, 54 percent of students belong to an unreserved category, nearly 40 percent of the students belong to other backward classes (OBC) and around 6 percent of the students belong to scheduled castes (SC) and scheduled tribes (ST). Cross-tabulation of caste and gender shows that 55 percent of total males belong to the general category and 50 percent of total females belong to the general category. Around 39 percent of males and 42 percent of females are from other backward classes. 4 percent of males and nearly 7 percent of females belong to SC/ST category, respectively.
- (iv) **The Native place of students:** Out of the total sample, 20 percent of the students hail from the village, followed by 35 percent who are from town and 44 percent students from the city.
- (v) **Class:** 35 percent of the students are enrolled in class 11, 25 percent of the students are enrolled in class 12 and 40 percent of the students have passed class 12th. This means 60 percent are taking full-time coaching and are enrolled in the school simultaneously. These 60 percent of students have ghost registration in the school.
- (vi) **Course:** Only 10 percent of the students are preparing for JEE Main only, and 90 percent of the students are preparing for JEE Advanced. There are two attempts for JEE Advanced and three attempts for JEE Main. All the students usually prepare for JEE Advanced, and after the attempts are exhausted, they resort to JEE Main.

Cross-tabulation of the Course-enrolled and Class: It shows that 61 percent of the students preparing for JEE Advanced are in class 11 and 12 and approximately 39 percent of the students have passed class 12. On the other hand, 73 percent of the

students preparing for JEE Main are the ones who have passed class 12. This indicates that they might have given attempts of JEE advanced and the attempts are over, or they are not eligible for JEE Advanced (as they must score more than 75 percent in 12 boards); therefore, they are preparing for JEE Main only.

The cross-tabulation of marks obtained by the students and the courses enrolled depicts the pattern as to how percentage secured in class 10 and class 12 govern the choices of the students to pursue engineering. As discussed, students have the choice to enrol in either JEE Main or JEE Advanced. The competition is fierce for JEE Advanced vis-à-vis JEE Main. In such a scenario, marks act as a signal of the ability of the students. Seventy-five percent of the total students who have secured more than 85 percent marks in the 10th class are pursuing coaching for the engineering entrance examination. Approximately 5 percent of the students who have secured less than 74 percent in the 10th class are going for coaching. This shows that marks secured by students in the 10th class play a crucial role in determining their decisions to pursue coaching in Kota and invest a substantial amount, which would increase their chances of making it in the prestigious engineering college/ institutes in the country. This section shows the representation of those students who have passed 12th class and have dropped one year for pursuing coaching and improving their ranks in the entrance examination. Out of a total of 264 students, 114 students, that is, 43 percent of the students have passed 12th class. Out of the total students who have passed 12th class, 83 percent are taking JEE advanced coaching. The eligibility criteria for JEE Advanced is 75 percent marks in the 12th class (65 percent for SC, ST and PWD students). However, from the data, it is observed that there are 11 students who have secured less than 75 percent marks in the 12th board examination. Now, if these 11 students are to appear for JEE Advanced examination, they are supposed to improve their percentage of 12th class through an open examination conducted by The National Institute of Open Schooling (NIOS), and after that, they are eligible for JEE Advanced.

(vii) Residing status of the students: Students were asked where they reside. The options were home, hostel, PG or in rented accommodation with their parents. Nearly 80 percent of the students reside in hostels, around 14 percent of students stay as paying guests (PG) of which most of them are male students. Very few girls live as paying guests (PG). Less than 2 percent of the students

live with their mothers in rented apartments. Approximately 2 percent of the students study from their homes. A majority of the students are from outside the city, and hostels and coaching institutes are located in the vicinity. Therefore, most of the students prefer to live in hostels located near coaching institutes so that they can walk to the coaching institute and they don't have to incur time and money in travelling. The rent of the hostel ranges between INR 7,000 to INR 16,000 per month, depending on the locality and facilities provided to the students. Hostels provide air-conditioned rooms with facilities such as mess services, van services, laundry services, intercom in the room, biometric attendance system, etc. Students who live as PGs are not provided with any of these facilities. They are only given rooms and take food either in a common mess that is opened outside or order packed tiffin. The room rent for students residing as PG is between INR 2,600 - 3,500, in addition to the mess bill which amounts to INR 3,000 on average. These students have to incur on an average INR 300 on travelling as their rooms are located a little far from their institutes. Students who live with their mothers in a rented room, spend approximately INR 8,500 on rent and INR 10,000 on additional expenses, respectively.

(viii) Parental Education and Occupation

Fathers' Education: Twenty-eight percent of the fathers of the aspirants' have attended schooling up to higher secondary, 39 percent of them were graduates, approximately 20 percent of them reported to have done post-graduation and above and nearly 12 percent of them were professionals, and father of one of the student reported to be illiterate.

Mothers' Education: It was reported that nearly 40 percent of the respondents' mothers had done schooling up to higher secondary, 39 percent reported their mothers were graduates, 17 percent reported their mothers had completed post-graduation and above and only 2 percent reported that their mother had some kind of professional degree, and 2 percent of them were reported to be illiterate.

Fathers' Occupation: Twenty-nine percent of the fathers were reported to be professionals, which includes school teachers, lecturers, engineers, lawyers, doctors.

Six Percent (16) of the respondents' fathers are engineers. Twenty-four percent of them were salaried personnel which constitutes banking jobs, administrative jobs, defence services. Business is bifurcated into two categories of big business, where the monthly income is more than INR 50,000 and small business where the monthly income is less than INR 50,000. Fifteen percent of the students reported their fathers as entrepreneurs of big businesses and 24 percent were small entrepreneurs, 6 percent of them were reported to be doing farming which includes agricultural activities.

Cross-tabulation of Fathers' Occupation and their Work Sector

Table 3.2: Profession of Respondents Fathers' and their work sector (in percent)

The profession of Respondents' Fathers'	Government Sector	Private Sector	Self-Employed
Professional	77.63	15.79	6.58
Salaried	66.67	33.33	0
Big Business	0	0	100
Small Business	0	0	100
Farming	0	0	100

Source: calculated from field survey

Mothers' Occupation and work sector: The occupation of mothers is classified under three categories-housewives, teachers and others. The work sector is classified under- government sector, private sector, self-employed and housewife. Mothers of 75 percent of the respondents are housewives, 20 percent of them are teachers, and around 5 percent are clubbed in other professions that constitute professional jobs, and some are self-employed.

(ix) **Household Annual Income:** When details of the family income were investigated, approximately 9 percent of the respondents said that their annual family income is below INR 2.5 Lakh, 27 percent claimed that their annual family income is between INR 2.5 lakh and 5 lakh, 45 percent reported that their annual family income is between INR 5 lakh and 10 lakh and 18 percent reported to have annual family income more than INR10 lakh.

(x) **Source of Educational and Living Expenses:** Respondents in the survey were asked about their source of educational and living expenses in Kota. For 81 percent of the respondents, their fathers were paying for their education and living expenses, less than 2 percent of the respondents' mothers were reported to pay for the educational and living expenses, approximately 10 percent reported that other family members such as grandfather, uncle, brothers were

paying for their expenses, nearly 4 percent reported that their families had taken education loan and less than 2 percent reported about other loan taken by the family to pay for the educational expenses, three students from the sample which comprises of less than 1 percent reported that their family sold assets in order to pay for their coaching fees and living expenses in Kota.

(xi) Decision Making about Pursuing Coaching: Respondents in the survey were asked who played the instrumental role in taking the decision for joining the coaching institute in Kota. Approximately 26 percent of the students reported that they were persuaded by their fathers to go for coaching in Kota, 7 percent of the mothers of the respondents reported to play a crucial role in decision making, 5 percent reported that other family members such as siblings, uncles, grandparents pursued them to go for coaching, and approximately 62 percent students reported that it was their decision to come to Kota for Coaching.

(xii) Students and Coaching Institutes

After discussing the individual and household characteristics, the subsequent section shows the number of students across the coaching institutes.

Table 3.3: Students Enrolled in Respective Coaching Institutes

Coaching Institutes	Number of students	Percentage
Allen Career Institute	73	27.7
Resonance Eduventures Limited	110	41.7
Vibrant Academy	47	17.8
Nucleus Education	13	4.9
Bansal Classes Pvt. Ltd.	8	3.0
Others	13	4.9
Total	264	100

Source: calculated from field survey

(xiii) Scholarships and Fee Waivers

Scholarships and fee waivers influence the choice of institutes. The fee structure of most of the coaching institutes is similar for the similar courses. However, the difference is in the scholarship given to the students by the institutes. There are a lot of factors short-listed by respective coaching institutes based on which they give scholarships to students; some of these factors are exceptionally high marks obtained in 10th or 12th Boards, a position secured in the entrance conducted by the coaching institutes, siblings discount, performance in Olympiads, etc. From the sample, it is

observed that 58 percent of students have availed some kind of scholarship. Hundreds of students appear in the admission cum entrance test across the country; only those whose performance is good and coaching institutes see potential in them are provided with the scholarships. Entrance marks are not disclosed to the students; they are informed about the scholarship bracket only. Under the *Mukhyamantri Nishulk Coaching Yojana*, 127 students were given a 100 percent scholarship to pursue coaching for pre-engineering in one of the topmost coaching institutes, and the coaching institutes were allotted by the Kota collector. Kota Hostel Association allotted one of the best hostels to these students. Students of Rajasthan who have secured more than 80 percent marks in the Rajasthan Board were eligible for this scholarship.

Students also get fee waivers, which is a deduction on the stipulated total fee paid. Approximately 30 percent of the students have received some fee waiver as they have paid their fees in lump sum payment. On lump sum payment of fees, fee waiver of INR 5,000-6,000 is given on JEE Advanced course. Nearly 70 percent of the students have not availed of any fee waiver as they planned to pay the fees in either two or three instalments.

(xiv) Entrance Test of the Coaching Institute: Out of all the respondents, 71 percent of the students took the entrance test conducted by the coaching institutes for their admission, and 29 percent of the students have taken admission without appearing in the scholarship cum admission test.

(xv) Preference about the Coaching Institute: About 88 percent of the students from the sample reported that the coaching institute they were enrolled in was their first preferred choice and 12 percent of the students reported that the coaching institute they were enrolled in was not their first preferred choice.

(xvi) Students Enrolment in School and Coaching: A Nexus

The majority of the students come to Kota after completing class 10 and take coaching for two years. Some students take coaching while being enrolled in class 11 and 12 and some take coaching after passing class 12. From the sample, approximately 57 percent of the total students who are taking coaching are simultaneously enrolled in school: 35 percent in class 11 and 22 percent in class 12. These 57 percent of students have taken admission in school through ghost

registration (commonly known as dummy schools). Coaching institutes are not eligible to conduct school examinations, and admission to IITs requires students to score a certain percentage in their class 12 board examination. Students, therefore, take admission in ‘dummy school’- the system seems to have been preferred by the majority of the respondents in Kota. It is an open secret that there is a nexus between the schools and the coaching institutes. Many coaching institutes recommend the schools in Kota for admission. The school fees are paid by parents. Once admission is taken in these schools, attendance is hardly completed till the annual examination is held. Students go to the schools for practical examinations, and for taking the final examination. The names of schools are mentioned, in some cases, along with details such as “non-attending school” or “dummy school”, indicating that students are aware of the system. In the survey, questions were asked about the class students are enrolled in, the type of schools they are enrolled in Kota or in their hometown. Among the students pursuing class 11 and 12, 78 percent are enrolled in private school and 11 percent in private unaided and 10 percent in the government school. Approximately 83 percent of the students are enrolled in a school affiliated with the CBSE, and 16 percent are enrolled in a school affiliated with the state board. Of the total students enrolled in coaching and school simultaneously, 37 percent of students are enrolled in Kota, and 62 percent of students are enrolled in their hometown. This indicates that the ghost registration in schools is not only witnessed in Kota but is also observed in other cities and states too. In the survey, it was clearly stated by the students that they attend ‘dummy school’- they are registered as students, pay the school fees and only attend school during the examinations. In Kota, during the admission process, coaching institutes provide the students and their parents a list of local schools where they could enrol their child. The staff of coaching institutes reported that they did this as most of their students came from other states and were unaware of schooling facilities in Kota.

The cost of schooling, in addition to the coaching fees, poses a financial burden for the students belonging to poor economic backgrounds. However, these students perceive private coaching to be more important than school. The students also believe that since the number of attempts is limited, they should start preparing for the entrance examination after class 10 so as to maximize their chances of success for qualifying in the entrance examination. Also, if they want to improve their ranks,

there is a scope for taking a gap year. Nearly 42 percent of the students had passed class 12. Most of the students who have passed the 12th class had already appeared once in JEE examination, and their next attempt would be their last attempt. Students taking coaching after the 12th class feel intense pressure to prepare for the engineering entrance examination. They have only one year to prepare for one of the most competitive examinations.

(xvii) Scholarship Criteria Mentioned by the Coaching Institute on their Website: As an example, the following table mentioning the criteria for the availing of the scholarship is presented from one of the coaching institutes in Kota.

Table 3.4: Scholarship Criteria by the Coaching Institute

Scholarship (for XI) on the basis of school performance in class 10th	Fee Scholarship in percentage
Any State Board: Declared / Published Merit List (Only Top-15)	50
Any State Board: Declared / Published District Merit List (Only Top-15)	25
For CBSE / State / ICSE / NIOS / IB \geq 95% (Aggregate) (if not published in merit list)	25
For CBSE / State / ICSE / NIOS / IB \geq 90% & < 95% (Aggregate) (if not published in merit list)	15
For CBSE / State / ICSE / NIOS / IB \geq 85% & < 90% (Aggregate) (if not published in merit list)	10
On the basis of NTSE /Olympiad (For Micro/ Nano Course students)	
NTSE stage 1 qualified (Eligible for Stage 2)	15
NTSE stage 2 qualified (for NTSE Scholar)	40
Pre-RMO Qualified (Eligible for RMO)	20
Olympiads conducted by HBCSE STAGE 1 qualified	30
Olympiads conducted by HBCSE STAGE 2 qualified	75
Medal Winner for Junior Science Olympiad conducted by Homi Bhabha centre	90
Scholarship For XII Passed Students	
KVPY Stage-1 Qualified (Eligible for Stage-2)	25
KVPY Scholar / Stage-2 Qualified	50
Scholarship For XII Passed Students (English Medium)	
Any State Board: Declared / Published Merit List (Only Top-15)	50
Any State Board: Declared / Published District Merit List (Only Top-15)	10

For CBSE / State / ICSE / NIOS / IB \geq 95% (Aggregate)	15
For CBSE / State / ICSE / NIOS / IB \geq 90% & $<$ 95% (Aggregate)	10
JEE Mains Qualified (For JEE Advanced)	See Image 3.1 in Appendix
JEE Advanced Selected	See Image 3.2 in Appendix
Scholarship for XII Passed (Only Hindi Medium) Students based on State Board Performance in Class 12 th	
State Board: Declared / Published Merit List (Only Top-15)	90
State Board: \geq 95% Aggregate	75
State Board: \geq 90% Aggregate & $<$ 95% Aggregate	60
State Board: \geq 85% Aggregate & $<$ 90% Aggregate	50
State Board: \geq 80% Aggregate & $<$ 85% Aggregate	40
Scholarship on the Basis of Past Association	
DLP 2018-19 Students Taking Admission in Classroom Course	5
Alumnus from IIT, JEE/ JEE (M & A) (Real Brother /Sister)	10
Both siblings (Real brother or sister)	Rs15,000 deducted from total fees

Source: Website of Vibrant Academy

(<https://www.vibrantacademy.com/Courses/scholarship>) accessed on 19/11/2021

3.8.B Description of the Provider of the Coaching Institutes

Coaching institutes in the private coaching industry prepare students for entrance examinations for the next level of education, and in this particular case, it is higher education. These are not degree-granting institutions; they only prepare students for the entrance tests and follow the syllabus of the mainstream school system, but they differ from the schools. In short, these institutes are acting as a bridge between secondary and higher education. The success of the institution is measured in terms of the qualified students who have secured marks above the given threshold marks in the national entrance test (above the cut-off marks). In Kota, there are various types of coaching institutes that prepare students for pre-engineering and pre-medical entrance examinations. The coaching institutes under the purview of the present study are very systematic and organised in their structure. The type of coaching institute differs in terms of their registration, but they all operate like business organisations/corporate houses. These coaching institutes also have the following departments like other typical business organisations- research and

development (R&D), marketing, human resource management, accounts and finance, Information Technology, and customer support. Though the study focuses on the pre-engineering entrance examination, the same institutes also offer a range of courses such as pre-medical entrance, Olympiads etc., in different modes. Segmentation of the coaching institutes is undertaken based on the market share occupied by the coaching institutes in the market. The following table gives a brief overview of the coaching institutes.

Table 3.5: Coaching Institutes and Selections in IITs in Previous Years

Name of the Coaching institutes	Year of establishment	Selections in IIT in the respective years		
		2018	2017	2016
Type A				
Resonance Edu-ventures Ltd.	2001	2319	4095	3554
Allen Career Institute	1988, 2001 (IIT-JEE coaching)	Not mentioned*	4383	2857
Type B				
Vibrant Academy Pvt. Ltd.	2009	638 (42.59%)** ¹²	1513 (52.19%)** ¹³	1404 (42.29%)** ¹⁴
Type C				
Motion Education Pvt. Ltd.	2007	709 (34.02)	678 (33.2%)	667 (35%)
Bansal Pvt. Ltd.	1984	33.33%	56.88%	643
Nucleus Education Pvt. Ltd.	2016	Not mentioned	Not mentioned	Not mentioned
Career Point Ltd.	1993	686	1276	956

**Not mentioned - The number of students qualified in IITs are not mentioned. Only top ranks are mentioned on the websites of the respective websites of the coaching institutes.*

***In parenthesis, selection percentage from classroom coaching programme in JEE advanced*

Source: Information has culminated from websites of the respective coaching institutes as on 17th October 2019

The above table mentions the year of establishment of the coaching institutes and total selection in IIT-JEE in 2016, 2017 and 2018. The numbers mentioned are the number of students qualified from the coaching institutes. Some coaching institutes in the Type C category have not bifurcated the students from classroom coaching and distance learning; therefore, numbers can be/are misleading. Vibrant Academy (Type

¹² <https://www.vibrantacademy.com/IIT/iitList18> accessed on 12/09/2021

¹³ <https://www.vibrantacademy.com/IIT/iitList17> accessed on 12/09/2021

¹⁴ <https://www.vibrantacademy.com/IIT/iitList16> accessed on 12/09/2021

B) advertises the top ranks such as: In 2018- AIR 2 (first from Kota) and AIR 6 (First in girls category), In 2017- AIR 5 (First from Kota), In 2016- AIR 14, AIR 133 (First in girls category). Vibrant Coaching Institute only mentions the top ranks secured by the students; they advertise “Best Rank from Kota for 3rd consecutive year” and “All India Girls topper for 3rd time”. The institute on their website mentions the selection percentage from the classroom coaching programme in JEE advanced and the total number of students selected in the respective year. Nucleus Education (Type C), a newly established coaching institute mentions (AIR) secured by the students from their institute, in 2018-AIR 10, 12, 24 37, 42, 66 etc. in 2017 – AIR 20, 27, 61 and first rank in Kanpur zone. These institutes also publish testimonials of the students who have secured top Ranks in the entrance test. Thus, the above discussion presents a glimpse of how coaching institutes advertise their results.

The next discussion is on the approximate number of students enrolled in these coaching institutes for the preparation of JEE and the fee charged from them for JEE Advanced courses for the respective classes. The enrolment figures were asked during the field interview, as none of the coaching institutes disclosed the JEE courses actual enrolments. The fee charged is the highest for JEE advanced course.

Table 3.6: Fee structure of JEE advanced Course and approximate students’ enrolment figures of the coaching institutes, category wise (The academic year 2018-19)

Name of the coaching institutes	Fee Structure of JEE (Advanced) course* (in Rupees)			Students Enrolment in JEE course**
	11 th class	12 th class	12 th passed	
Type A				
Resonance Edu-ventures limited	1,45,000	1,53,000	1,55,000	25,000
Allen Career Institute	1,35,000	1,37,000	1,40,000	20,000
Type B				
Vibrant Academy	1,50,000	1,60,000	1,64,000	5,000
Type C				
Motion Education Pvt. Ltd.	1,32,000	1,43,000	1,45,000	3,500
Bansal Pvt Ltd.	1,43,000	1,46,000	1,52,000	1,500
Nucleus Education	1,38,000	1,45,000	1,51,000	4,000
Career Point Ltd.	1,45,000	1,47,000	1,50,000	2,000

**Websites of the respective coaching institutes as on 17th October 2019*

***approximate figures collected during the interviews with stakeholders in the coaching industry and websites of the coaching institutes*

Nature of the Coaching Institutes

The present section investigates the nature of coaching institutes under which it will look at the components of the financial documents of the coaching institutes and the profile of the coaching institutes. These details will help throw light on the size, scale and operations of the coaching institutes in the private coaching industry.

Finances of the coaching institutes

(i) Type A

a) Allen Career Institute

Allen Career Institute was founded on April 18th 1988. The institute is registered under HUF business, where four brothers are the directors who are the key management personnel. In 2019-2020 the revenue of the organisation was INR 1600 crore¹⁵. The other financial details of the organisation could not be accessed.

b) Resonance Eduventures Limited

The Institute was founded on 11th April 2001 by Mr. R.K Verma, who is the managing director and holds 55 percent shares in the company. It is a company limited by shares. According to the company's financial statement 2017-18, the net worth¹⁶ of the company is INR 271 crore. Total revenue from the sale of operation is INR 352 crore. Employee benefit expenses are INR 163 crore, CSR expenditures are INR 51 lakhs. After-tax payment, the total profit for the year, 2017-18 was INR 46 crore. Resonance Eduventures Limited has invested in subsidiary companies: Accelerating Education and Development Private Limited and BASE Educational Services Private Limited, Resonance Learning Solution Private Limited, Resonance Infra Tech Private Limited.

(ii) Type B

c) Vibrant Academy

This institute is a private limited company, set up by seven directors in 2009. Each of the directors has 14.29 percent of the shares in the company, respectively. In 2018-19, the net worth was INR 90 crore. Profit and loss account as on 31st March 2019 shows the revenue from operation was INR 43 crore. The operations comprise revenue from

¹⁵ <https://www.forbesindia.com/article/family-business/they-built-a-coaching-empire-in-kota-next-a-global-makeover/62681/1>.

¹⁶ Net-worth is calculated as per Companies Act, 2013 is calculated as aggregate value of the share capital and Reserves and surplus mentioned in the Balance Sheet of the company.

coaching and training programmes. Employee benefit expenses were INR 22 crore. Total remuneration paid to the directors was INR 2.1 crore, each of them receiving INR 30 lakhs. The institute spent INR 5.06 crore on advertisement and business promotion in 2018-19. The profit earned after-tax as on 31st March 2019 was INR 31 lakhs.

(iii) Type C: This category constitutes: Bansal Classes, Motion IIT-JEE, Nucleus Education, and Career Point and other small institutes which offer coaching for pre-engineering and pre-medical examinations.

d) Bansal Classes Pvt. Limited

Bansal Classes started in 1984 and is the oldest coaching institute in Kota, which marked the emergence of the coaching industry. All the other coaching institutes began their operations after Bansal Classes was established. The institute has nine directors, all are family members, with unequal shareholding. The highest number of shares are held by Mr. V.K Bansal who started Bansal Classes. From being one of the pioneer institutes to train students for pre-engineering examinations, the institute is witnessing a decline in its reputation in the market. The finances of the institutes also show a very bleak picture. Total revenue from the business and operations of the company as on 31st March 2019 was INR 19.42 crore. Out of the total revenue INR 15.5 crore was collected from educational activities. Total expenses were INR 38 crore. Out of the total expenses, INR 24.2 crore was incurred under employee benefits expense. INR 18.6 crore was the loss incurred by the company before tax, and after deducting tax expenses, the total loss for the year 2018-19 was INR 18.7 crore. The statement of profit and loss shows that the company incurred a loss in 2017-18. Advertising and promotional expenses for 2018-19 were INR 4.24 crore. There are two subsidiary companies.

e) Motion Education Pvt. Limited

Motion Education Private Limited, established in 2007, is a private company limited by shares. The coaching institute prepares students for pre-engineering and pre-medical examinations and is also engaged in the Distance learning Programme and School Integration Programme. Apart from the Managing Director and the Chairperson, there are joint directors and honorary directors in the company; and shareholding is unequal. The Managing Director holds 65.81 percent of the shares, while the Chairperson holds 33.95 percent of the shares. Financial statements of 2018-

19 show INR 28 lakhs is the remuneration paid to the directors. Revenue (Gross) collected from coaching fees from 2018-19 was INR 19.89 crore. Coaching fees constitutes of following subheads: fee received from the classroom coaching programme, School Integration Programme, fee received from consultancy, income from study material, rent received from the hostel and other income. INR 2.43 crore was collected from the sale of brochures and income from the franchise¹⁷. Under expenses, the main component is salaries and wages; in 2018-19 INR 7.5 Crore was spent on salaries and wages. Another important component is selling and marketing expenses which were INR 2.5 crore. Net profit after tax for the year 2018-19 was INR 20 lakhs.

f) Career Point Limited

Career Point Limited, established in 1993, is a public company limited by shares, listed in Bombay Stock Exchange and National Stock Exchange. 62.88 percent of the shareholdings are by the company (Executive directors and non-executive directors), and 23.18 percent by the general public, and the remaining are held by corporate bodies, mutual funds, financial institutions etc. The financial reports of 2018-19 show total income (including other income) was INR 107.1 crore, out of which INR 68.7 crore was reported as income from operations. The net income was INR 24.1 crore. Approximately 95 percent of the turnover of the company is from education and other related Activities (p. 24, Annual Report 2018-19).¹⁸ Mr. Pramod Maheshwari, Chairman, managing director and CEO and other two executive directors, withdrew a salary INR 15 lakhs and INR 18 lakhs under benefits/allowances and perquisites, thereby making a total salary of INR 33 lakh each as on March 2019. Other non-executive directors charge sitting fees of INR 10,000- 20,000. In 2018-19, salaries and bonuses to teaching staff were about INR 27.24 crore, and to non-teaching staff were INR 9.7 crore and total employee benefit expenses accounted for INR 37.9 crore. The annual report of 2018-19 mentions that the revenue from operations grew mainly on account of increased school association. The company has six subsidiaries and one associate, and one joint venture company.

g) Nucleus Education Private Limited

¹⁷GST is deducted of INR 33,77,8154 later from the gross revenue.

¹⁸The information is reported from the annual report (2018-19) of the institute <http://www.cpil.in/downloads/2018-19/Annual-Report-2018-19.pdf> accessed on 26/08/2020.

The institute is registered with the name of Nabhik Nucleus Private Limited, which is a private limited company incorporated in April 2018. The shares of the company are held by its five directors having 20 percent shareholding each. As mentioned in the auditor's report, the company is a small and medium-sized company. The net worth of the company is INR 5.6 lakhs. Being a newly set up institute, there is no mention of revenue from operations and employee benefit expenses in the profit and loss account. Profit after tax (2018-19) was reported as INR 61 thousand in the auditor's report. It has no subsidiary company.

Table 3.7: Profile of the Coaching Institutes

Divisions	Type A		Type B	Type C		
	Allen Career Institute	Resonance Eduventures Ltd.	Vibrant Academy	Bansal Classes Pvt. Ltd.	Motion Education Pvt. Ltd.	Career Point Limited
Pre-Engineering						
JEE Main	Yes	Yes	Yes	Yes	Yes	Yes
JEE Main +Advanced	Yes	Yes	Yes	Yes	Yes	Yes
Pre-Medical						
NEET Undergraduate/AIIMS	Yes	Yes	Yes	No	Yes	Yes
Pre-Nurture and Career Foundation (6 th – 10 th)	Yes	Yes	Yes	Yes	Yes	Yes
Lower Classes (HKG-8 th)	Yes	No	No	No		
School Integrated Programme	Yes	Yes		Yes	Yes	Yes
Others		Yes				
Global Studies	Yes	No				
Modes of Coaching						
Distance Learning Programmes	Yes	Yes	Yes	Yes	Yes	Yes
E-Learning Programme/Online Test Series	Yes	Yes	Yes	Yes	Yes	Yes
Courses						
Study Centres	25	28	5	22	6	
Test Centres	140	33	45	NA	NA	38
Total staff Members	10015	2382	250	NA	470	
Teaching Staff	3658	992	150	NA	50	10
Non-Teaching Staff	6357	1390	100	NA	420	

Source: Institute websites as on 19th November 2020

Type A

(a) Allen Career Institute

The institute currently has 25 study centres, 119 classroom campuses, 140 test centres and more than 1,831 classrooms. Allen has 10,015 staff members with 3,658 faculty, 1,541 administrative staff and 4,816 ground staff. Allen claims to have more than 2 lakh students in classroom courses in the session 2019-20 across all the centres¹⁹. The institute has the following divisions; JEE (Main + Advanced), JEE Main, Pre-medical (NEET Undergraduate), Pre-Nurture & Career Foundation (6th to 10th), INTELLIBRAIN (HKG to 5th class), Global Studies Division (SAT, ACT, TOEFL and IELTS). The institute started with a pre-medical division, and therefore majority of students are enrolled in this programme, followed by pre-engineering; JEE (Main+Advanced) and JEE (Main) and other divisions. The institute also offers a distance learning program and online test series for revision for the students, GATE online test series, Pre-PG online test series (NEET-PG preparation). There are miscellaneous facilities such as doctors are available for medical consultation, counsellors are available for psychological counselling, career guidance counselling, online form filling support is provided to help and assist students in filling the form of various examinations.

(b) Resonance Eduventures Limited

This institute has 28 study centres (one study centre in Dubai), 33 test centres across cities²⁰ and 11 tie-ups with schools across different states- Hyderabad, Guwahati, Thiruvananthapuram, Vishakhapatnam, Warangal etc. It offers coaching in JEE (Main + Advanced), JEE (Main), Pre-medical (NEET), pre-foundation career care programmes, Commerce and Law programmes and Para-schooling programmes. There are 2,382 staff members (academic and non-academic) working in different capacities in resonance as in 2018-19. There are about 992 faculty members across all divisions and study centres working with Resonance Eduventures Limited, as reported in December 2019²¹: 35.99 percent of the faculty members are at the Kota Centre, and 65.01 percent are at the other study Centres. There are about 130 faculty in the

¹⁹ The data obtained from the website <https://www.allen.ac.in/> accessed on 25/08/2020.

²⁰ The Information retrieved from <https://www.resonance.ac.in/form/why-reso.aspx> as on 29/08/2020.

²¹ The figure was updated on the website was on 27/12/2019. This information is retrieved from <https://www.resonance.ac.in/aboutus/why-reso-faculty.aspx> as on 25/08/2020.

physics department, 146 in the chemistry department, 108 in the mathematics department, 40 in the biology department, 22 in the commerce department.²² This includes faculty teaching in all the study centres of resonance. One hundred seventy-seven faculty members are from IITs. 273 (27.52 percent) faculty members have more than ten years of teaching experience, 216 (21.77 percent) have between 5-10 years of teaching experience, 246 (21.77 percent) have between 2-5 years of teaching experience, and 257 (25.91 percent) have teaching experience below two years.²³ Students can avail counselling on academic and non-academic issues. There is a separate girls counselling cell for resolving their academic and non-academic issues and a health counselling cell where medical doctors are available.

c) **Vibrant Academy**

This institute specialises in pre-engineering coaching; they offer classroom coaching in JEE (advanced) and JEE (main) for class 11th, class 12, and 12th passed. It offers coaching in pre- nurture foundation for class 5th to 10th, distance learning programme, live online classes for- full course, subject wise and chapter wise. The fee of online live classes is mentioned on the website of the institute.²⁴ It has more than 150 faculty members and 100 non-academic staff. Class size is between 100-120. There are 5 branch offices of vibrant academy -Jaipur, Udaipur, Dehradun, Agra and Gwalior. There are 45 test centres²⁵. There are facilities such as a library, problem-solving counter, practical labs, computer labs, counsellors and doctors for students, stationary shops and canteen inside the campus.

d) **Bansal Classes Pvt. Limited**

The institute offers coaching for pre-engineering examinations; JEE (Main and Advanced), JEE (Main) and pre-foundation courses for classes 7th to 10th. The institute offers courses in the classroom coaching programme and distance learning programme. Bansal Classes have 22 study centres all across the country apart from Kota. The Institute has tie-ups with the school under School Integrated programmes (SIPs) and Distance Learning Programmes for schools. There is no information

²² The number of faculty is retrieved from the website <https://www.resonance.ac.in/aboutus/reso-team-academic.aspx> as on 25/08/2020. The number of faculty members is subject to change.

²³ This information was retrieved from <https://www.resonance.ac.in/aboutus/why-reso-faculty.aspx> as on 25/08/2020.

²⁴ <https://www.vibrantacademy.com/minerVA/Index>

²⁵ <https://www.vibrantacademy.com/VA/CenterList> accessed on 30/10/2020.

available about the number of teaching faculty. Apart from courses and their mode of delivery, not much information is available on the website of the institute. For admission counselling, students have to fill the form given on the website.

e) Motion Education Pvt. Limited

The institute is offering online coaching classes for pre-engineering and pre-medical coaching and offer coaching from class 5th to 10th. The institute has a day boarding school for students of class 5th to class 10th. It also offers a residential coaching program for pre-engineering and pre-medical coaching. Apart from this institute, the directors have established a kindergarten named Motion Kids. There are 50 faculty members who are employed in Kota and outside centres, 30 of them are in Kota centre, and 20 are posted in study centres outside Kota.²⁶

f) Career Point Limited

Career Point Limited was established in 1993. Career Point Limited is now a public company limited by shares, listed in Bombay Stock Exchange and National Stock Exchange. 62.88 percent of the shareholdings are by the company (executive directors and non-executive directors), and 23.18 percent by the general public and the remaining are held by corporate bodies, mutual funds, financial institutions etc. The Company has diversified and has invested in test-prep institute, e-learning, school, skill development, pre-schools, higher education, and publications. Career Point Limited has four branch centres. Franchisee centres are associated with 20 schools across the country. Career Point has established two Universities, one in Kota (Rajasthan) and in Hamirpur (Himachal Pradesh). There are 15 Global Kids centres as of 2018-19 at different locations. There are 38 test centres²⁷ and 11 study centres in 7 other states²⁸, 8 teaching faculty in Career Point in Kota.²⁹

Career point deals in test prep division and formal education. There is a tutorial service that deals in NEET, JEE, NTSE foundation, school integrated programme, CP publication which publishes book and study materials for competitive examination. They also offer an e-learning service for pre-medical and pre-engineering, an e-classroom, where they provide recorded video lectures with online and offline

²⁶ The information is retrieved from the website of the institute <https://motion.ac.in/> on 26/08/2020.

²⁷ <http://cpstar.careerpoint.ac.in/examination/test-center.php> as on 30/10/2020

²⁸ <http://www.careerpoint.ac.in/ui/studycenter.aspx> as on 30/10/2020

²⁹ <http://careerpoint.ac.in/faculty/cp-faculty.asp> accessed in 30/10/2020

support. Further, they assess and get feedback from students with their CP Live and Online Tests. They also offer formal education with their various affiliated schools. Under formal education division, for school education there are Global Kids, Career Point World School, Career Point Gurukul School. Besides, they have ventured into university education with Career Point University in Kota and Hamirpur and Career Point Institute of Skill Development.

Due to a decline in the number of students in the classroom coaching program and to expand its business, Career Point has started its e-classroom initiative with the help of an Ed-tech company based in Mumbai. The institutes seem to focus and emphasise more on e-classroom coaching where digital content like video lectures, e-books, test series etc., to students on a USB drive and SD card and online streaming technological solutions, are strategized in expanding the business at low cost.

g) Nucleus Education

The institute offers coaching for JEE (Main + Advanced), JEE Main, NEET (UG), pre-foundation course (class 8th to 10th) and distance learning programme from class 6 onwards. The website of the institute mentions the experience of the directors, who are also the HoDs collectively, which sums up to more than five decades.³⁰ Information about the employed teachers is not mentioned on the website. There are no study centres or franchisees of this institute as it is a recent establishment.

h) Nucleon

Nucleon was founded in 2013. The institute is operated by faculty who have passed out from IITs, 5 out of 7 faculty members are from IITs and have many years of experience. The institute, unlike other coaching institutes, focuses on online coaching for pre-engineering and pre-medical entrance tests. It does provide classroom coaching also, but the batch size is approximately 30 students. The institute has designed online sessions and also integrates video sessions into USB drives for easy availability for students. The objective is to provide video lectures for pre-engineering and pre-medical and board examinations, as the focus of the institute is on video lectures. The institute provides sample lectures on the website. This is unlike many coaching institutes in the market. Apart from pre-recorded lectures, Nucleon offers live classes, doubt classes and one-on-one classes online. As this institute focuses on online classes, its doubt removal session is also online where students book an online session, and the session is arranged within 48 hours of booking. Students are allotted a

³⁰The information as on 26/08/2020. This page does not exist now.

slot of 30 minutes, and they can ask their doubts and questions in a live session with the expert faculty. The institute charges INR 300 for 30 minutes of doubt sessions from the students. Students can also opt for one-on-one classes with the faculty at Nucleon, where three classes for one hour per week will be taken. Students can choose the topic they want to study. Periodic tests are taken to evaluate the performance of the students. The fee structure of the pre-recorded lectures of full courses is mentioned on the website, and students can choose from those courses. Teachers and classes are specified with the course such as individual subjects; physics, chemistry, biology for either class 11 or 12 or both 11 plus 12 and complete PCM for either 11 or 12 or both 11 or 12. Along with the course, its product type, hard disk or USB and its validity are mentioned. Usually, two years is mentioned in the validity section. Before purchasing the course, students can look for demo classes on the website.

3.9 Concluding Remarks

This chapter presents an explanation for adopting mixed methods to undertake this study. The sampling framework and the tools of data collection have also been discussed. The chapter also presents a detailed description of the data collected from the field. This data will be analysed keeping in mind the three research objectives of the study. The mode of analysis will be both quantitative and qualitative, as discussed in the earlier sections. The next chapter seeks to understand the factors determining the choice among students in choosing the coaching institutes of the Kota coaching industry.

Chapter 4: Students as Customers and Choice-making in the Private Coaching Industry

4.1 Introduction

After discussing the research methodology in Chapter 3 which has guided the research design of the study, this chapter seeks to answer the first research objective, i.e., to identify the factors determining the choice of coaching institutes among the students enrolled in coaching institutes in Kota. To investigate the market for private coaching industry, it is important to understand the choice-mechanism adopted by the students and their parents. Choice-making by the students who decide to pursue coaching in Kota is discussed in the theoretical framework presented in Chapter 2. Descriptive analysis of the sample of the representative students is presented in detail in Chapter 3. The coaching institutes are segregated into Type A, B and C based on the previous results in the JEE and the number of students enrolled in the respective institutes (Chapter 3). Though the categorization is undertaken for the analysis in the thesis, the parameters on which the categorization is undertaken such as previous results plays a crucial role in informing the decision-making by the students to select the coaching institute they would like to join. This chapter will begin with an identification of the sources of information and the determinants of choice-making for the institute. The next section through cross-tabulations presents the household and individual characteristics of the students who are enrolled in the institutes which is their first preferred choice. The following section examines the factors responsible for availing of the scholarships in the coaching institutes. The identification of the dependent and independent variables and the construction of the model for the analysis of the factors determining the choice of the institute among the students is presented. In the last section, after joining the institute perception of the students about their performance is captured through cross-tabulations. The last section summarises and concludes the discussion.

4.2 Choice of the Coaching Institute among the Students

This section shows the number of students from the sample in the respective category of coaching institutes categorised under Type A, B and C, as mentioned in Chapter 3. The students gathered information from their relatives, friends, school teachers, tuition teachers, newspapers and websites and chose the

institute based on the following factors such as the previous results, quality of the teachers and the fee structure of the respective coaching institutes. To understand choice, it is important to know why does a student prefers a particular institute. The respondents were asked whether the institute they were enrolled in was their first preferred choice or second preferred choice. Out of the 264 students, 232 students took admission in the institute which was their first preferred choice. In Table 4.1, the number of students under different types of institutes is presented.

Table 4.1: Number of students enrolled in the respective category of Coaching Institutes

Category of Coaching Institutes	Percentage of Students	Number of Students
Type A	69.32	183
Type B	17.80	47
Type C	12.88	34
Total	100.00	264

Source: Calculated from field survey data

The respondents were asked about the source of information and the determinants that were important in choosing the institute. One of the important factors in determining the choice is the source of information as it helps in forming an opinion which shaped the choice regarding the coaching institutes.

Table 4.2: Sources of information about the coaching institute

Sources of Information	Number of Students	Percentage of Students
Relatives	98	37.12
Friends/ School teachers/ Tuition teachers	106	40.15
Websites of Coaching Institutes/Newspapers/Pamphlets/Hoardings	49	18.56
Others	11	4.16
Total	264	100

Source: Calculated from field survey data

Table 4.2 reveals that while 40 percent of the students received information about the coaching institutes from their friends, school teachers and tuition teachers, more than 35 percent of the students reported their relatives as their source of information. Nearly 19 percent of the students reported websites of the coaching institutes, advertisements, hoardings as their important sources of information. The information about results and the fee structure are available on the website of the institute. The

information about teacher quality and other services of the institute is crucial for the students and their parents to rely upon for their information.

Table 4.3: Percentage of students who marked these determinants on their importance while choosing the coaching institute

Determinants	Very Important	Moderately Important	Not Important
Fee structure	33	54	13
Results produced by the coaching institutes	73	23	4
Good teachers	92	6	2
Scholarships offered by the coaching institutes	33	47	20
Infrastructure (classroom, building)	28	46	26

Source: Calculated from field survey data

Table 4.3 reveals that 92 percent of the students believed that quality of the teachers is a very important determinant to choose the institute whereas 73 percent students responded that results produced by the coaching institute is a very important factor. Further, 54 percent of the students considered fee structure to be an important determinant. Nearly half of the students reported that scholarships provided by the institute and the infrastructure were also important factors while choosing the coaching institute. Thus, information about the determinants play an important role in selecting the coaching institute.

After discussing the sources of information about the parameters on which the choice of coaching institute was made, it is essential to understand whether the coaching institute was the students' first preferred choice or not. Table 4.4 below provides the distribution of students according to their preference of the coaching institutes.

Table 4.4: Preference and category of coaching institutes

Category of Coaching Institutes	Coaching Institute is first preferred choice	Coaching Institute is not the first preferred choice	Total
Type A	164 (90%)	19 (10%)	183
Type B	47 (100%)	0	47
Type C	21 (62%)	13 (38%)	34
Total	232 (88%)	32 (12%)	264

Note: In parenthesis, percentage values of the cell value to its row total are presented

Source: Calculated from field survey data

Table 4.4 shows that 88 percent, i.e., 232 out of 264 students were enrolled in the institute which was their first preferred choice. For 90 percent of the students enrolled

in Type A, the institute was their first preferred choice, followed by all the students in Type B institute and 62 percent of the students in Type C institutes. In this table, an important observation is made that for all the students in Type B category institute is their first preferred choice. It could possibly imply that students meticulously choose this institute as it projects success ratio and students from this institute had secured top AIR in the previous years (as displayed in Image 5.10 in Chapter 5). Despite being reputed institutes there are 10 percent students for whom Type A institutes was not their first preferred choice. For students for whom Type A institutes was not their first preferred choice, 92 percent of these students had scored more than 90 percent marks in class 10. Though the majority of the students are high efficacy in this group, the possible reason for not preferring Type A institutes could be a large number of students. As many times, students prefer small class size. Because these institutes claim to provide the best of the coaching in the market these students ended up taking admission in Type A institutes.

To understand the factors determining the choice of the coaching institute, it is important to look into the characteristics of the students who are enrolled in their first preferred choice of the institute, i.e., the following analysis will be undertaken for the 232 students.

4.3 Characteristics of the students who are enrolled in the coaching institutes which is their first preferred choice

To understand the choice of the coaching institute, it is imperative to look at the characteristics of the students. Household related factors such as the household income, parental education followed by individual related factors such as ability (efficacy) of the student affects the choice of coaching institute. Siblings who are taking or have taken coaching in Kota also affects the choice as the siblings shared their lived experiences. Course opted by the student: JEE Main or Advanced also affects the choice of the institute as the fee charged varies between both the courses across the institutes. This discussion attempts to understand how these factors impact the decision to choose an institute through cross-tabulations. The sample comprises of the students who were taking coaching in these respective institutes.

(i) Family-Related Factors

The two important family-related factors that govern the choice-making are household income and parental education. In this study, though the family had already taken the decision to send their ward to take coaching in Kota, this discussion attempts to see if household income and parental education affects the choice of coaching institutes in the Kota coaching industry.

(a) **Household Income:** Table 4.5 depicts the distribution of students in respective coaching institutes according to their annual household income. Results reveal that with an increase in the household income proportion of students enrolled in Type A institutes is declining and there is an increase in the proportion of students in Type B and C institutes.

Table 4.5: Percentage of students across Coaching institutes under household income category

Category of Household Income (in INR)	Category of Coaching Institutes		
	Type A	Type B	Type C
Less than 2.5 lakh	81.82	13.64	4.55
2.5 lakh - 5 lakh	80.3	15.15	4.55
5lakh - 10 lakh	65.69	23.53	10.78
Above 10 lakh	61.9	23.81	14.29

Source: Calculated from field survey data

In order to understand the choice-making processes, this section discusses the interplay of factors given the household income of the students across the coaching institutes. Amongst those with low household income enrolled in supposedly reputed Type A and B institutes and students with high income enrolled in Type C institutes, an analysis is undertaken for select students through cross-tabulations.

(i) **Students with less than INR 2.5 lakhs per annum of household income enrolled in Type A institutes (81.82 percent students)**

These are the students with low household income enrolled in Type A institutes. This could possibly be due to the low fee charged by these institutes (as referred to in Table 3.6 in Chapter 3). Since the household income is low, it is important to look at the academic performance of these students whether they had received some scholarship and their source of expenditure. Fifty percent of the students in this category had secured more than 90 percent marks in class 10, while none of the students had secured less than 60 percent marks in class 10. Sixty percent of the students had passed 12th class; nearly 45 percent had secured marks between 75-85

percent in class 12 and 36 percent had secured more than 85 percent in class 12. Eighteen percent students had secured less than 75 percent marks in class 12.³¹ Given the low household income of these students, it is important to look for the source of expenditure as to who pays the fees and other additional expenses of the student. For 47 percent of the students, their father paid for all their expenditure, 37 percent of the students expenditure is borne by other family members- uncle, elder siblings etc. For 11 percent of the students, parents had sold off their assets to pay for coaching fees and additional expenditure. One student received a scholarship from the Government of Rajasthan to pursue coaching for two years which included the hostel rent and school fees. More than half of these students had taken scholarship tests for coaching. Out of these students, 74 percent students mentioned that they had received some scholarship (percentage of scholarship varies for every student). Thus, most of the students with low income but better academic performance in class 10 and 12 and entrance test in the coaching had managed to receive some scholarship, thereby reducing the financial burden on the family. Another observation about these students is that nearly 60 percent of these students are from OBC and 12 percent are from SC and ST categories.³² Students from the reserved categories need low cut-off in the competitive examinations, which could also be one of the driving factors to invest on private coaching, thereby maximizing the chances of success.

(ii) Students with less than INR 2.5 lakh per annum of household income in Type B institute (13.64 percent students)

This segment attempts to understand the characteristics of the students with low household income in Type B institute. It is interesting to know their characteristics because the fee charged by this institute is the highest among all the coaching institutes (as referred to in Table 3.6 in Chapter 3). All the students in this category had secured more than 80 percent marks in class 10 and more than 75 percent marks in class 12. Approximately 67 percent of the students had received some scholarship from the institute. In this category, 67 percent of the students were enrolled in JEE Main course and the remaining students were enrolled in JEE Advanced. Almost the

³¹ The eligibility criteria for appearing in JEE Advanced is 75 percent marks in 12th class. Students who secure less than 75 percent either appear in JEE Mains only or reappear in class 12

³² Only 28 percent of these students are from unreserved category. Sixty percent of these unreserved students had secured more than 90 percent marks in class 10.

same percentage of the students (67 percent) had passed class 12 and were taking coaching in the drop year. One of the reasons could be that these students had exhausted JEE Advanced attempts and were left with one JEE Main attempt.³³ For nearly 67 percent of the students, family members (except parents) had borne the expenditure. Relatively higher proportion of students in this category despite having good academic performance in class 10 and 12 are preparing for JEE Main. The possible reasons could be the low fee charged for JEE Main or the eligibility criteria where the students had exhausted their JEE Advanced attempts.

(iii) Students with INR 10 lakhs and above per annum of household income in Type C institutes (14.29 percent students)

Type C institutes comprise of relatively lower number of enrolments as compared to Type A and B institutes (as referred to in Table 3.6 in Chapter 3). The discussion attempts to address the characteristics of the students with high household income category who were enrolled in Type C institutes which consist of coaching institutes which are newly set up and some old institutes whose performance has deteriorated over the years.³⁴ Among this category, approximately 65 percent of the students had secured more than 80 percent marks in class 10. More than 55 percent of the students had received some scholarship. Cross-tabulation shows that 30 percent of the students were neutral towards the brand of the coaching institute and for 10 percent students brand of the coaching institutes did not matter in choosing the coaching institute³⁵. For 90 percent of these students, good quality teachers were the most important determinant for choosing the coaching institute. The possible reason for preferring Type C institutes could be that these students might have opted for newly established institutes set up by famous teachers in the industry where the number of students are also relatively less than Type A and B institutes.

ANOVA results shows that there is no significant relation between household income and category of coaching institutes (as referred to in Appendix A4.1). After household income, parental education of the students is looked at and an attempt is made to

³³ There are two attempts for JEE Advanced and three attempts for JEE Main.

³⁴ The criteria for categorizing the coaching institutes is number of enrolments and past results. Newly set up institutes and old institutes whose performance has deteriorated both has less number of enrolled students and in recent years they have not produced top AIR.

³⁵ Thirty percent students strongly agreed that brand of institute matters and 30 percent slightly agreed. The responses were taken on the Likert scale from 1-strongly agreed to 5-strongly disagreed.

understand how it affects the choice-making of coaching institutes in Kota coaching industry.

(b) Parental Education

This section takes into consideration the education level of both the father and the mother, and the highest education level of any one of the parent is mentioned in Table 4.6. This section attempts to understand whether parental educational level impacts the choice of coaching institute in Kota coaching industry.

Table 4.6: Parents’ education level and percentage of students across coaching institutes

Parents’ Education Level	Type A	Type B	Type C
Higher secondary	64.7	27.5	7.8
Graduate (general)	70.0	20.0	10.0
PG and above	71.6	22.4	6.0
Professional	78.1	6.3	15.6
Illiterate	100.0	0	0
Total	70.70	20.30	9.0

Source: Calculated from field survey data

Considering that there are the highest number of students enrolled in Type A institutes, it is observed from the cross-tabulations that with an increase in the level of education of the parents from higher secondary to professional, Type A institutes were more preferred by the parents for their wards. Students whose parents had a background in professional education are also higher in Type A institutes. Preference for Type B institute depicts a fluctuating trend with an increase in the education level of the parents. Approximately 6 percent of the parents with professional education prefer Type B institute. The preference for Type C institutes shows a declining trend among the parents with post-graduation and above level of education (general). Approximately 16 percent of the parents with professional education have admitted their wards in Type C institutes. The rationale for mentioning professional education is parents with a background in professional education mostly prefer that their ward should also pursue professional education.

After discussing the household related factors, the next section elaborates on the individual related factors such as ability, course opted by the students which determine the choice of the coaching institutes.

Individual Related Factors

(c) The ability of the students (marks obtained in 10th Class)

Marks obtained in 10th class is taken as the proxy indicator of the ability of the students, as students after completing 10th class are supposed to choose the stream of subjects: science, social science, humanities. Students opting for science either choose medical stream (Zoology, Botany, Chemistry, and Physics) or non-medical stream (Mathematics, Physics, and Chemistry). The majority of the students who choose medical and non-medical streams opt for supplementary education (private tutoring or private coaching) alongside school education. Looking at Table 4.7 given below, as the percentage of marks scored by the student increases in the 10th class, a higher percentage of students are enrolled in Type A institutes. In Type B institute the percentage of students varies between 19-25 percent and in Type C institutes, the proportion of students is declining as the marks of the students are increasing.

Table 4.7: Marks secured in class 10 and enrolment in the respective category of the coaching institutes (in percent)

Marks secured in class 10th (in percent)	Type A	Type B	Type C	Total
60-70	60.0	20.0	20.0	(10) 100
70-80	66.7	25.0	8.3	(24) 100
80-90	73.3	18.6	8.1	(86) 100
Above 90	70.5	20.5	8.9	(112) 100
Total	70.7	20.3	9.1	(232) 100

Note: Number of students in the parenthesis in each category

Source: Calculated from field survey data

There is a need to understand the socio-economic background and other related factors which helps in understanding the choices of these students. The following analysis is undertaken for select students. Students who scored low marks but enrolled in supposedly reputed Type A institutes and students who scored high marks enrolled in Type C through cross-tabulations.

(i) Students with 60-70 percent marks enrolled in Type A institutes (60 percent of the students)

This discussion pertains to students with comparatively low marks who were enrolled in Type A institutes. Though Type A institutes had produced top ranks, these students who had secured low marks were also enrolled in Type A institutes. One of the reasons for this is that Type A institutes have the highest number of enrolled students

(as mentioned in Table 3.6, in Chapter 3). As a result, they have both high-efficacy and low-efficacy students because they cannot have all the high-efficacy students (detailed discussion on this theme in Chapter 5). In this section, an attempt is made to investigate the characteristics of the students who had secured marks between 60-70 percent in the 10th class and were enrolled in Type A institutes. Out of these students, 83 percent have a household income between INR 5-10 lakh per annum. This may indicate that despite reporting low academic performance majority of the students belonging to household income INR 5-10 lakh per annum took admission in Type A institutes. All these students appeared for scholarship-cum-admission tests conducted by the coaching institutes and nearly half of them became eligible for the scholarship. This rate of success in the scholarship-cum-admission tests increases with the increase in the marks obtained in Class 10. Fathers of two-third of the students are in professional jobs which could be a possible reason for them to send their wards for professional education. All the students in this category are enrolled in JEE Advanced course because 33 percent of them are enrolled in class 11 and 67 percent are enrolled in class 12. This implies that they have two attempts for JEE Advanced and therefore they want to prepare for JEE Advanced course. Among these students, 50 percent belonged to the reserved categories (the OBC, SC and ST) and remaining are from the unreserved category. Students with reserved category need fewer marks to qualify in the competitive examination. This somewhere justifies the aspiration of the students to pursue engineering despite securing less marks in class 10.

(ii) Students with more than 90 percent marks enrolled in Type C institutes (9 percent of the students)

In Type C institutes also there were students who had scored high marks in class 10th. In our sample, 9 percent had 90 percent marks. In Table 4.7, almost 9 percent of the students enrolled in Type C institutes have secured more than 90 percent marks in the 10th class. Approximately 60 percent of the students had income between INR 5-10 lakh per annum. Nearly 20 percent had income between INR 2.5-5 lakh per annum and 20 percent have income INR 10 lakh and above. Although these students had secured more than 90 percent marks in the 10th class but only 60 percent of the students had received some scholarship. All these students opted for JEE Advanced course. Fathers of more than one-third of the students are working as professionals. Preference for Type C institutes among the students who performed well in class 10

could be because these students prefer new institutes established by the famous teachers in the market and having a preferably less number of students. As the number of enrolments in Type C institutes is relatively lesser, preference for these institutes could be because of relatively smaller batches.

(iii) Students with more than 90 percent marks enrolled in Type A institutes (70 percent of the students)

As we see in Table 4.7, 70 percent of the students who had secured 90 percent marks in the 10th class were enrolled in Type A institutes. Nearly 12 percent had income less than 2.5 lakh per annum, 33 percent of the students had household income between INR 2.5 -5 lakh per annum and approximately 40 percent had annual income between INR 5-10 lakh and remaining percentage had income INR 10 lakh and above per annum. This depicts that students across different income categories were enrolled in Type A institutes. Nearly 60 percent of the students received some scholarship and remaining did not receive any. Approximately 37 percent did not take the entrance test for the coaching and 63 percent took the entrance test for the coaching institute. More than 90 percent of these students were enrolled in JEE Advanced course. Nearly 46 percent of the students who were taking coaching had completed class 12th and were taking coaching in the drop year. Fathers of one-third of these students have salaried jobs, while 27 percent have professional jobs.

ANOVA results show there is no significance between marks obtained in class 10 (ability) and choice of the coaching institutes (as shown in Appendix Table A4.2).

(d) Sibling who had studied in the Coaching Institutes

Siblings of the aspirants who had studied in Kota or any other coaching institute in Kota is an important source of information as s(he) could share their lived experiences while preparing for the competitive examination. This is reason for looking at the siblings of the students who had studied in coaching institutes in Kota. Among the students who reported that their siblings were studying or had previously taken coaching in Kota, 67 percent of these students were associated with Type A institutes, 27 percent of them were associated with Type B, and only 5 percent of them were associated with Type C institutes. The experience of the sibling(s) must have helped the students in taking the decision about the institute.

Table 4.8: Percentage of the students whose sibling have or is taking coaching in the coaching industry

Category of Coaching Institutes	Percentage of the students whose sibling have or is taking coaching in the coaching industry
Type A	67.5 (27)
Type B	27.5 (11)
Type C	5.0 (2)
Total	100 (40)

Note: In parenthesis, the number of students in each category.

Source: Calculated from field survey data

(e) Course enrolled

As students who were taking coaching for pre-engineering entrance are considered for analysis, the students either take coaching for JEE Main or JEE Advanced. The fees charged for both the courses are substantially different. The fee structure of JEE Advanced is much higher than JEE Main alone because students who take JEE Advanced examination first appear for JEE Main (as mentioned in Chapter 1). The majority of the students aspire to get admission in the Indian Institute of Technology (IITs) and hence, enrol themselves for preparation of JEE Advanced examination. The following observation can be made based on the field survey where 90 percent of the students (out of 232) were enrolled for JEE Advanced course. Table 4.6 below provides the distribution of the students enrolled for JEE Advanced and Main across the Type A, B and C institutes.

Table 4.9: Percentage of students enrolled in different courses across coaching institutes

Course Enrolled	Category of Coaching Institutes			Total
	Type A	Type B	Type C	
JEE Main	59.09	27.27	13.64	100
JEE Advanced	71.91	19.52	8.57	100

Source: Calculated from field survey data

Approximately 60 percent of the students in Type A institutes were taking coaching for JEE Main and nearly 72 percent of the students were preparing for JEE Advanced. On the contrary, the proportion of students preparing for JEE Main is higher as compared to JEE Advanced in Type B and C institutes. To understand the association of the course (JEE Main or JEE Advanced) and the type of institute ANOVA was conducted (as mentioned in Appendix Table A4.3). The results show that there is no significant association between the courses students opt for and the choice of the institute they have enrolled.

The following discussion seeks to understand the characteristics of the students who were taking coaching for JEE Main. The purpose of this discussion is to understand while the majority of the students were preparing for JEE Advanced, what factors influenced them to take the coaching for JEE Main. We present a comparative analysis of the students in terms of class 10 and 12, household income. The rationale for mentioning the class of the students, i.e., 10 or 12 is that there is a requirement for fulfilling the eligibility criteria for appearing in JEE Advanced. Income is mentioned because the fee structure for both the courses is different; the fees charged for JEE Advanced course is almost twice of JEE Main course.

- (i) **Students taking coaching for JEE Main in Type A Institute (59 percent):** A majority of these students (70 percent) had passed class 12 examination and 85 percent of the students did not appear in the entrance test of the coaching institute. Though only 15 percent appeared in the entrance test conducted by the coaching institute, 67 percent of the students received some scholarships based on their class 10 and 12 marks. Nearly 23 percent reported that the annual household income is less than 2.5 lakh, 31 percent has annual income between 2.5 lakh-5lakh, followed by 23 percent students who have annual income between 5-10 lakh and 23 percent have annual income above 10 lakh.
- (ii) **Students taking coaching for JEE Main in Type B institutes (27 percent):** Majority of these students (73 percent students) had passed class 12. More than 80 percent of the students did not appear in the scholarship-cum-admission test. Approximately half of these students had received some scholarship from the institute. Household income of 33 percent of the students was less than INR 2.5 lakh per annum, 17 percent belong to income between INR 2.5-5 lakh and 50 percent students belong to income between INR 5-10 lakh.
- (iii) **Students taking coaching for JEE Main in Type C institutes (14 percent):** All the students in this category had passed class 12. Thirty-three percent of the students received scholarship from their coaching institutes. In this category, 67 percent of the students did not take the scholarship-cum-admission test conducted by the coaching institutes. All the students have a household income above INR 5-10 lakh per annum.

The above discussion throws some light on the characteristics of the students who were preparing for JEE Main in all the coaching institutes. The majority of these students have passed their 12th class, which reveals that they might have prepared for JEE Advanced and could not possibly get through and presumably, they have exhausted their attempts for JEE Advanced. Another observation is that majority of the students enrolled in JEE Main course did not appear in the scholarship-cum-admission test conducted by the coaching institutes, which is quite the opposite to the students who were enrolled for JEE Advanced. This is because the qualifying JEE Advanced is difficult, seats are much lesser as compared to the other engineering institutes and therefore coaching institutes prefer to identify students who have higher chances of qualifying the examination. Students who only take JEE Main are eligible to take admission in NITs, IITs and other Government-funded technical institutions and private engineering colleges. The percentage of students preparing for JEE Main and who had received the scholarship depicts that in Type A institutes, 67 percent received some scholarships, while half of the students in Type B institute and more than one-third of the students in Type C institutes received some scholarship. However, the pattern of scholarship received by the students for JEE Advanced is different across these institutes. A higher percentage of the students (67 percent) enrolled for JEE Advanced received scholarships in Type C institutes as compared to Type A (60 percent) and B (56 percent)-

Discussion

The background characteristics of the students presented through cross-tabulation have yielded a better understanding of their socio-economic background. There are various factors attributed for the choice of the institute. Household income becomes important while choosing the course and the institute. Aspiration to take coaching is also determined by the education level of the parents. Though in the present study, parents had already taken the decision to take private coaching. However, their education level will help them interpret the available information like results and other related information about the coaching institute. Occupation of the parents also plays a role, as parents with professional education especially engineering background, perceive the need for coaching and choice of the institute in a different way. Ability plays an important role as that helps the students in getting the scholarship. Some institutes may offer a relatively higher percentage of scholarships

to attract students and some may not. Apart from these factors, students choose institutes based on the batch size as some prefer to take coaching in small batches vis-a-vis large batches and the usual batch size in big coaching institutes is in the range of 120-150 students. Some of the Type C institutes have smaller batch sizes. All students intrinsically differ not only in terms of their ability but also in their preference for the size of the batches as they could be shy, nervous, sharp and loud. Thus, some students prefer coaching institutes with small batch sizes or on the basis of medium of instruction; English or Hindi. Usually, the medium of instruction in the coaching classes is mixed and there are few batches for exclusively English Medium classes and Hindi Medium classes and only coaching institutes with a large number of students provide this facility. Therefore, for the students, either their ability is the determining factor as high efficacy students have bargaining power and are able to get a scholarship from the coaching institute, and for others, ability to pay and other factors determine the choice of institutes.

The next segment will elaborate on the scholarship criteria and characteristics of students who received and did not receive the scholarship from the coaching institutes.

4.4 Factors responsible for availing of Scholarships in Private Coaching Institutes

The present discussion focuses on the determinants of availing of scholarships in private coaching institutes. Some of the criteria for availing of the scholarship are mentioned in Chapter 3. Scholarship offered by the institutes varies between 10-90 percent and all the coaching institutes mention similar criteria for availing of the scholarship: very high marks in 10th or 12th boards, a position secured in the scholarship test conducted by the coaching, siblings discount and many others (as referred to in Table 3.3 in Chapter 3). However, it is purely at the discretion of the institutes as to how much scholarship is to be given to the students.

Scholarship received by the students within the category of coaching institute

Table 4.10: Scholarship received by the students within the coaching institutes (in Percentage)

Coaching Institutes	Scholarship	
	Received	Not Received
Type A	58.24	41.76
Type B	55.32	44.68
Type C	58.82	41.18
Total	57.79	42.21

Source: Calculated from field survey data

The sample data shows that there is not much difference across coaching institutes in terms of the number of students availing of the scholarship, but the scholarship offered ranges between 10-90 percent. The percentage of scholarships availed across Type A, B and C coaching institutes makes the difference.

(a) Criteria for availing of scholarships in the coaching institutes: Ability of the Students

This section investigates the main criteria on which students are given scholarships in the coaching institute at the time of admission. The ability of the students is one of the most important criteria for availing of the scholarship. Coaching institutes evaluate high-efficacy students (as defined in Chapter 2) through two ways: a) marks secured in class 10 or class 12, or whether a student has qualified any Olympiad, National Talent Search Examination (NTSE) or Kishore Vaigyanik Protsahan Yojana (KVPY), b) by conducting a scholarship-cum-admission test and based on the performance, outstanding students are given scholarships.

Table 4.11: Marks obtained in class 10th by the students and scholarship by the coaching institutes

Marks obtained in class 10 th (in percentage)	Scholarship (Number of students in percentage)	
	Not Received	Received
60-70	53.85	46.15
70-80	45.16	54.84
80-90	43.75	56.25
Above 90	39.02	60.98

Source: Calculated from field survey data

The cross-tabulations show that with an increase in the marks obtained in class 10 (across all the boards), the proportion of students receiving scholarship also increases.

Scholarship received by the students across different coaching institutes based on the marks secured in 10th class.

Table 4.12: Students who received the scholarship in the following category of coaching institutes (in percent)

Marks secured in class 10 (in percentage)	Type A	Type B	Type C
60-70	37.5 (3)	100.0 (2)	33.3 (1)
70-80	55.0 (11)	50.0 (3)	60.0 (3)
80-90	56.9 (37)	50.0 (8)	60.0 (9)
Above 90	61.8 (55)	56.5 (13)	63.6 (7)

Note: In Parenthesis, the number of students in each category is mentioned.

Source: Calculated from field survey data. Row and column will not add up to 100, because students who have received the scholarship are only included in this table.

The following table constitutes the number of students who have received the scholarships, given the marks obtained in class 10. The analysis is based on 152 out of 264 students. As observed in Table 4.11, with an increase in the marks obtained in class 10, there is an increase in the proportionate number of students receiving scholarships. In the Type B category, there are two students who had secured 60-70 percent in 10th class and had still received scholarships which is why it is showing that 100 percent of the students under this category. This is also because the number of students in this category of coaching institute is small. The following discussion entails details of socio-economic factors of the students who had secured low marks (60-70 percent) in class 10 and had received scholarships across Type A, B and C.

i) In Type A institutes, 37.5 percent of students who had secured 60-70 percent marks:

In Type A institutes, three students despite securing low marks (between 60-70 percent) had received scholarships. These students might have secured less marks in class 10, but they had given scholarship test of the coaching institutes and they might have performed well, which is why they received the scholarship or there is a possibility that they either had availed of scholarship on the pretext of sibling discount. On the basis of these factors also students can avail of the scholarships upto 10 percent.

ii) In Type B, 100 percent students had secured scholarships after getting 60-70 marks in class 10

There are two students in this category, both these students had given scholarship test of the coaching institute and both are in class 12. These students might have

performed well in the entrance test of the coaching or have availed sibling discount (as referred to in Table 3.4 in Chapter 3)

iii) In Type C institutes, 33 percent students had received scholarship after securing 60-70 percent in class 10

Only one student was there in this category. This student had not appeared in any scholarship-cum-admission test of the coaching institute. This student had passed class 12 and had secured marks between 75-85 percent in class 12. This could be the reason that this student had received a scholarship from the coaching institute or might have appeared once for JEE Advanced and had performed well enough to avail the scholarship. Students also take coaching for improving their rank in the entrance examination.

(b) Class 12 marks and Scholarship Availed

The following section will analyse 42 percent of the students who had passed class 12. The percentage secured in class 12 acts as an eligibility criterion for students preparing for JEE Advanced.

Table 4.13: Percentage of students who had received scholarships or not within marks obtained in class 12

Marks obtained in class 12 (in percentage)	Scholarship (percentage of students)	
	Not Received	Received
Less than 75	40	60
75-85	31.37	68.63
85 and above	20.93	79.07

Source: Calculated from field survey data

Among all the students, the proportion of students who had passed class 12 had received more scholarships (71 percent) than those who had passed class 10 (58 percent). ANOVA results shows that there is significant association between scholarship received and class of the students. Those who had passed class 12 are more likely to receive scholarship (as shown in Appendix in Table A4.4). The reason is that after passing class 12, marks secured in class 12 act as a proxy for the ability of the students. Many times students appear once in the competitive examination after completing class 12 and the performance in that examination also indicates the efficacy of the students. Thus, performance in class 12 is a better proxy of ability than class 10 examination for offering scholarship.

(c) Scholarship-cum-admission test and scholarship received

Other than merit, another important criterion which determines the scholarship is the scholarship-cum-admission test conducted by the coaching institutes. Out of all the sample students, 70 percent took scholarship test of the respective coaching institutes and 30 percent of the students took direct admission in the coaching institutes.

Table 4.14: Percentage of students who had received a scholarship with or without the scholarship-cum-admission test of the coaching institutes

Scholarship-cum-admission test for the coaching	Scholarship (number of students in percent)	
	Did not receive the scholarship	Received scholarship
Appeared in the scholarship test	45.16	54.84
Did not appeared in the scholarship test	35.06	64.94

Source: calculated from field survey data

Proportion of students who received the scholarship when they did not appear in the entrance is more than the students who appeared in the scholarship test. Sixty-five percent students reported that they did not appear in the scholarship test of the institute and had received the scholarship. Chi-square test also shows that there is no association between scholarship test and scholarship availed of by the students (as shown in Appendix A4.5). This shows that the scholarship test conducted by the coaching institutes in the name of offering scholarship to the students is only a strategy where they are benefitted in two ways; one through the application fees of the scholarship test which is paid by all the students taking the scholarship test, and two, where they can segregate the students as per their abilities in different batches.

Discussion

After analysing the criteria for availing scholarship by the students across coaching institutes, following observations are made. As the marks secured in Class 10 and 12 increase, the proportion of students availing scholarships also increases. Another observation is that the proportion of students who had passed class 12 are more likely to receive scholarships. There is no significant association between scholarship-cum-admission test conducted by the coaching institutes and scholarship availed of by the students.

Having discussed the interplay of factors in determining the choice of coaching institutes, it has become evident that Type A institutes have a higher number of students enrolled. This implies that Type A institutes are more preferred by the

students in Kota coaching industry. Therefore, it necessitates to probe deeper into the factors responsible for choosing Type A institutes. What could be the possible factors that are driving students to enrol in Type A institutes.

4.5 Specification of the Model

In order to analyse the preference for Type A coaching institutes the following are the variables:

Table 4.15: The List of Variables

S.No.	Name of the variable	Label of the variable	Nature of the variable	Type of the Variable
1	Type of the Institute	Type of Coaching Institute	Dependent	Binary (0: other institutes (Type B and C), 1: Type A coaching institutes)
2	10 th Marks	Class 10 th Marks	Independent	Categorical
3	Institute Fee	Fee Structure of coaching Institute	Independent	Binary (0: Not important, 1: Important)
4	Coaching Institute Results	Results of the coaching institute as a parameter	Independent	Binary (0: Not important, 1: Important)
5	Scholarship Received	Scholarship Received	Independent	Binary (0: No, 1: Yes)
6	Brand Matters	Brand of the Coaching Matters	Independent	Binary (0: No, 1: Yes)
7	Scholarship Test	Scholarship test of the Coaching	Independent	Binary (0: No, 1: Yes)
8	Household Income	Household Income	Independent	Categorical
9	Gender	Gender	Independent	Binary (0: Male, 1: Female)
10	Caste	Caste of the Students	Independent	Binary (0: Unreserved, 1: Reserved)
11	Parental Education	Parental Education	Independent	Categorical

Regression Model

Model: Analysis of characteristics of the students across Type A institutes

In this section, an effort has been made to estimate a model, the specification of which is an outcome of an exercise with running regression with various combinations of independent variable in a non-random manner to arrive at the specification which fits the data. The dependent variable is the category of the coaching institutes “type of Institute”, is a binary variable taking to values, 1 for Type A coaching institutes and 0 for Type B and Type C coaching institutes. After observing characteristics of students

across Type A, B and C institutes, an attempt is made to look at the variables which are significant in the case of Type A institutes that occupy the major market share in the Kota coaching industry. A logistic regression model has been estimated. The model is estimated on students who are enrolled in the coaching, which is their first preferred choice: 232 students out of 264.

Table 4.16: Result of Regression Models

Type of Institute (Type A=1, Others=0)	Model 1		Model 2		Model 3		Model 4	
	Odds Ratio	Sig.	Odds Ratio	Sig	Odds Ratio	Sig	Odds Ratio	Sig
10th Marks								
<75%	1		1		1		1	
85-94	1.31 (0.65-2.64)	0.45	1.31 (0.65-2.65)	0.45	1.42 (0.70-2.90)	0.34	1.57 (0.75-3.27)	0.229
> 94%	2.58 (1.06-6.28)	0.04	2.65 (1.05-6.67)	0.04	2.88 (1.15-7.20)	0.02	3.17 (1.25-8.05)	0.01
Institute Fee								
Not Important	1		1		1		1	
Important	0.97 (0.44-2.14)	0.94	0.99 (0.45-2.17)	0.98	1.00 (0.45-2.20)	0.99	1.07 (0.47-2.41)	0.88
Coaching Institute Results								
Not Important	1		1		1		1	
Very Important	1.98 (0.99-3.99)	0.05	1.92 (0.95-3.90)	0.07	1.90 (0.92-3.92)	0.08	1.78 (0.86-3.69)	0.12
Scholarship Received								
No	1		1		1		1	
Yes	0.41 (0.21-0.80)	0.01	0.41 (0.21-0.80)	0.01	0.41 (0.21-0.81)	0.01	0.40 (0.21-0.79)	0.01
Brand Matters								
No	1		1		1		1	
Yes	1.81 (0.96-3.44)	0.07	1.75 (0.92-3.33)	0.09	1.68 (0.87-3.22)	0.122	1.60 (0.83-3.11)	0.16
Scholarship Test								
No	1		1		1		1	
Yes	2.18 (1.15-4.12)	0.02	2.15 (1.13-4.08)	0.02	2.20 (1.14-4.24)	0.02	2.02 (1.02-3.98)	0.04

Household Income							
<5 Lakhs		1		1		1	
5lakh-10lakh		1.18 (0.59-2.36)	0.64	1.21 (0.61-2.43)	0.58	1.42 (0.65-3.09)	0.38
above 10Lakh		0.79 (0.35-1.79)	0.57	0.87 (0.38-2.00)	0.74	1.07 (0.42-2.72)	0.89
Gender							
Male				1		1	
Female				0.84 (0.37-1.93)	0.68	0.92 (0.40-2.12)	0.84
Caste							
Unreserved				1		1	
Reserved				1.44 (0.77-2.70)	0.257	1.45 (0.76-2.80)	0.26
Parental Education							
Up to 12 th						1	
Graduate						1.69 (0.73-3.91)	0.22
PG & above						0.73 (0.30-1.81)	0.50

Interpretation of the results

Marks obtained in class 10: Students who had scored more than 94 percent in class 10th have significant association with Type A institutes. This could be because Type A institutes have a proportionately higher number of students and therefore students with more than 90 percent marks are higher. Another possible reason is that students who have performed well in class 10th examination by securing more than 94 percent want to take coaching in institute which has given good results thereby maximizing their chances of success in the pre-engineering examination.

Coaching institute results: Students who think coaching institute results are more important, they have significant association with Type A institutes. As we move from Model 1 to Model 4, we find that they are 90-98 percent more likely to be enrolled in Type A institutes. Students before taking admission look for the previous year results of the coaching institute. Coaching institutes in Type A category have produced top AIRs and higher number of selections in IITs in the previous years and by deliberating upon the results advertised by the institutes, students approximate the

quality of the institute. The results are significant at 10 percent level of significance from model 1 to model 3.

Scholarship received: Students enrolled in Type A institutes are 60 percent less likely to receive scholarships. The results are significant at 5 percent level of significance in all the four models. The reason could be that Type A institutes have established their reputation in the private coaching industry and they only offer scholarships to students who are exceptionally meritorious and will deliver them results. On the other hand, other institutes have relatively lesser number of students enrolled and they attract students by offering them scholarships.

Brand Matters: Students who believe that the brand of the coaching institute matters has significant association with Type A institutes. As we move from model 1 to model 4, we see that they are 60-80 percent more likely to be enrolled in Type A institutes. Type A institutes delivered better results in the previous years and have established reputation and brand in the market.

Scholarship Test: Students who have appeared in scholarship test and Type A institutes have significant associations in all four models. The reason for this is that the frequency of entrance test conducted by Type A institutes is more than other institutes and as mentioned in Chapter 3, the number of students, in these institutes is also higher. Scholarship test enables the institute to identify the ability of the students. Institutes while inviting the applications for admission add the word ‘scholarship’ to the entrance test, for example, ASAT, VSAT, MOST,³⁶ ‘S’ in all the acronyms stands for scholarship, which serves as strategy to attract the students towards the institute and segregate them according to batches (detailed discussion in Chapter 5).

Household income: The results are not statistically significant in the choice of institutes in the market for the coaching industry. Household income does not play a pertinent role because fees for similar courses across the institute falls in the cluster (as mentioned in Table 3.5 in Chapter 3) and once the decision to enrol in the institute is taken, students and their parents select the best of the institute given their preference.

³⁶ASAT: Allen Scholarship-cum-Admission Test, VSAT: Vibrant Scholarship-cum-Admission Test, MOST: Motion Open Scholarship Test

Gender, caste and parental education does not significantly affect the choice of coaching institutes. In the literature, parental education and socio-economic characteristics influence the attitude towards demand for tutoring or the education of their wards. In the present context, the decision to take private coaching is already taken by the family and these factors do not significantly influence the choice of institutes in the market.

4.6 Perception of the Students

a. Perception of the students on their improvement in the performance after joining the respective coaching institute

The previous section discusses the factors that determined the choice of the respective institutes by the students. This section discusses the perception of the students about their academic performance after joining the coaching institute. Coaching institutes adopt different strategies (discussed in Chapter 5) to attract the students but once the admission is taken by the students, the institutes have a tendency to manipulate the students' thought processes. Thus, an overview of the perception of the students' performance will give an idea about the quality of the coaching and whether students see any difference in their performance or knowledge of the subject after enrolling in the coaching institute. There are two categories: first table includes students who are enrolled in the institute which is their first preferred choice and second table includes students who are enrolled in the institute which is not their first preferred choice. The perception of the students is divided into five categories- Excellent, above average, average, below average, and can't relate. The perception of the students is looked across different categories of coaching institutes.

Table 4.17 a: Improvement in the performance after joining the coaching institute (when coaching institute is the first preferred choice)

Category of the coaching institutes	Excellent	Above average	Average	Below Average	Can't relate
Type A	23.17	46.34	19.51	1.22	9.76
Type B	27.66	63.83	4.26	0	4.26
Type C	23.81	38.1	23.81	0	14.29
Total	24.14	49.14	16.81	0.86	9.05

Source: Calculated from filed survey data

Table 4.17 b: Improvement in the performance after joining the coaching institute (when coaching institute is Not the first preferred choice)

Category of coaching institutes	Excellent	Above average	Average	Below Average	Can't relate
Type A	10.53	57.89	15.79	NA	15.79
Type B	NA	NA	NA	NA	NA
Type C	7.69	61.54	NA	7.69	23.08
Total	9.38	59.38		3.13	18.75

Source: Calculated from filed survey data

Proportion of the students who perceived their performance as excellent is higher for the students for whom the coaching institute was their first preferred choice as compared to students for the institute was not their first preferred choice. The students who cannot relate whether their performance has improved or not is higher amongst students for whom the institute is not their first preferred choice.

b. General Perceptions of the Respondents about the Coaching Industry

This section presents an overview of the perception of the respondents. Views of the respondents were taken on the Likert Scale on the scale of 5: strongly agree, slightly agree, neutral, slightly disagree and strongly disagree.

Table 4.18: Various perceptions of the students with respect to coaching institutes (in percent)

Questions	Strongly Agree	Slightly Agree	Neutral	Slightly Disagree	Strongly Disagree
Private Coaching increases chances of qualifying Engineering Entrance Examination	31	43	10	10	5
Coaching helps in scoring high marks	69	22	5	3	2
Coaching hampers school examination preparation	16	33	33	10	8
Coaching helps in better understanding of concepts	65	22	7	4	2
Coaching helps in examination skills and concepts	72	24	3	1	0
The success rate of Kota institute more than other places	63	27	8	2	0
Brand of the coaching institute matters	21	38	23	9	9
Reputed coaching Institute offers better coaching	17	28	32	14	9
Teachers in schools don't/can't help you prepare for competitive entrance	29	34	15	14	7
The quality of the coaching is satisfactory	64	25	7	2	2

Source: Calculated from filed survey data

4.7 Concluding Remarks

The chapter deliberates on the factors determining the choice of coaching institutes in the market for private coaching industry. These students had already taken the decision to take private coaching. To understand the dynamics of the private coaching industry, the choice of a coaching institute in the market is understood from the students' perspective. This chapter attempted to understand whether household income, the fee structure of the institute, gender, caste, parental education had an impact on the choice of the coaching institute. Cross-tabulations present a discussion about the factors determining the choice of Type A, B and C institutes. The relation between ability on choice, taking class 10 marks as a proxy or the significance of ability on availing scholarship is not so simple. Class 10 marks are only taken as a proxy, there are other factors such as class 12 marks, performance in the scholarship test of the coaching institute which determine the ability of the students. The specific cross-tabulations attempts to understand the background characteristics of the individuals and how that affects their choice.

The regression results show that students who had scored more than 94 percent in class 10 have a significant association with Type A institutes. Other factors determining the choice of institutes are brand of the institute, and the previous results produced by the institute. The reason for these variables being significant is the location of coaching institutes in clusters and location playing an important part in getting information. As mentioned in theory (Nelson, 1970), it becomes easier for students to compare the institutes. Household income, the fee structure of the institute, gender, caste, and parental education does not have an impact on the choice of the institute. Socio-economic status affects the aspirations of the families, however, when it comes to choosing an institute family prefers the best institute as they want to maximize the chances of success of their ward. Literature has identified ability, household income, parental education, occupation, expectations about the returns to education, urban location (Assaad and El-Badawy, 2004; Stevenson and Baker, 1992; Kim and Lee, 2008; Tansel and Bircan, 2006; and Dang, 2007; Buchmann, 2002; Aurini and Davies 2004, and Psacharopoulos and Papakonstantinou, 2005, Liu, 2019) as factors influencing the demand for private tutoring. Punjabi (2020) in the context of Delhi mentioned that the choice of different coaching institutes is primarily

related to the socio-economic status of the families and the educational backgrounds of the parents.

Scholarship offered by the institutes is also looked at while studying the choice of the institute. As mentioned in the above discussion, that fee structure of the institutes is similar and the scholarship offered by the institutes may affect the choice of institutes among the students. The regression results show that students enrolled in Type A institutes are 60 percent less likely to receive scholarships. The reason could be because the proportionate number of students in Type A institutes are very high as compared to other institutes (as referred to in Table 3.6 in Chapter 3) and, therefore, the number of students receiving the scholarship will be proportionately lesser. Another explanation could be that since Type A institutes have established their reputation in the coaching industry and they only offer scholarships to students who are exceptionally meritorious and have higher chances of giving results. On the other hand, other institutes have a relatively fewer number of students and they attract students by offering them scholarships.

Thus, this chapter explored the choice mechanism from students' perspective. The next chapter will take forward the issue of choice in the market for the private coaching industry from the perspective of the providers of the coaching institutes.

Chapter 5- Competitive Strategies of the Providers in the Private Coaching Industry

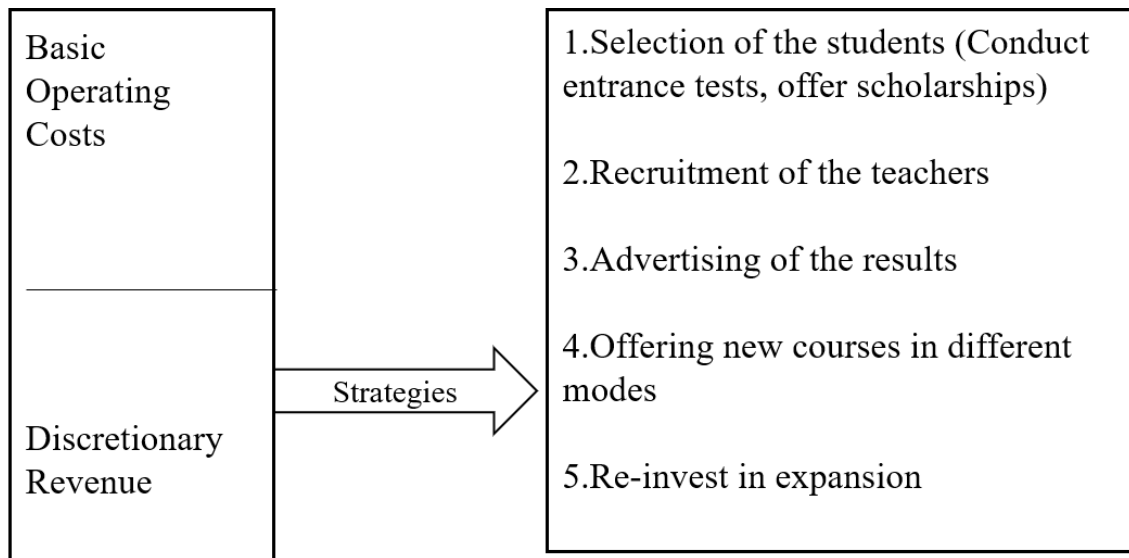
5.1 Introduction

The previous chapter analysed the characteristics of the students which informed their decisions for getting enrolled in the private coaching institutes. This chapter examines the strategies adopted by the providers of the private coaching institutes to attract students and compete with other coaching institutes in the market. Before discussing the strategies, it is important to reiterate that coaching institutes in Kota function like for-profit organizations because they are registered under the Companies Act, 2013. Since they operate in an education market, coaching institutes cannot maximize profit without maximizing the success rate because results are achieved by students who are crucial inputs and are also the decision-making agents. Achieving success in the coaching industry is expensive because quality of both students and teachers is scarce and therefore, they have to be attracted by paying them scholarship and remunerative pay packages in a competitive situation. Coaching institutes practise selection-based efficiency, and its operation is based on an understanding we obtain from the concept of customer-input technology (Winston, 1999; Rothschild and White, 1995; Glennerster, 1991). Students' selection, faculty recruitment are important decisions for the coaching institutes as they are responsible for fulfilling the objective of maximizing the rank holders. For coaching institutes, students' selection becomes the source of prestige; the higher the number of selections of competent students, the higher is the possibility of maximizing prestige. Fee paid by the students is the only source of revenue. Coaching institutes cannot, however, pursue profit maximization independent of prestige maximization as the sustainability of profit is dependent on maximization of prestige. The strategies adopted by the providers to achieve the overarching objective of profit and prestige can be classified under the following sections: 5.2) students' selection, 5.3) teachers' recruitment and management and 5.4) advertisements.

An adaption of the figure by (Brewer et al., 2002) is used to depict how discretionary revenue is utilised to achieve the objective decided by the management of the coaching institute after deducting basic operating costs.

Figure 5.1: The process of strategy making

Total Revenue



Source: Brewer et al., 2002

As mentioned earlier, coaching institutes collect revenue from the fees charged by the students for different courses. To achieve the objective of prestige and profit maximization, coaching institutes spend their discretionary revenue on the process of selecting the students. Coaching institutes conduct the entrance test to identify the high-efficacy students and offer them scholarships.³⁷ Institutes attract the best of the teachers by offering them higher remuneration. Extensive publicity of the results and dissemination of the admission related information is done through advertisements. New courses are offered in different modes in order to target more students and cater to their requirements, some of which help the institute generate more revenue and are cost-effective in nature (distance learning programme, E-learning programme). Coaching institutes also re-invest in expanding their study centres, test centres, and franchise. Coaching institutes, given their prestige, vary in their discretionary revenue because prestige becomes an important determinant of profit for the institutes. With

³⁷ As defined in the theoretical framework, high self-efficacy are the students who have secured good marks in class 10th and 12th and those who have performed well in the entrance test conducted by the coaching institutes.

the variation in the discretionary revenue generated by the institutes, their strategies with respect to students' selection, teachers' recruitment and advertisement also differ. Classification of the coaching institutes as made in previous chapters will be used in this chapter also to understand the variation in the strategies of the providers of Type A, Type B and Type C institutes.

5.2 Student Selection in Private Coaching Institutes

Coaching institutes do not give formal degrees to the students. It only prepares the students for the competitive examinations in which success is dependent on the quality of the students in the institutes. Coaching institutes use 'customer-input technology' (Winston, 1999). In this industry, the output is measurable in terms of the number of students qualified but given the variation in ranks, comparison of quality among the institutes remains problematic. However, in this industry, there is no need for the institutes to comply with any regulatory intervention of the government. To achieve the objective of maximizing the number of rank holders, coaching institutes practise selection-based efficiency or S-competition (Glennester, 1991) (as discussed in Chapter 2) in favour of high efficacy students.

5.2. a) Process of Selecting the Students

Students either take direct admission in the coaching institutes or take scholarship-cum-admission tests conducted by the institutes. Scholarship-cum-admission test is one of the ways to identify high efficacy students. The scale of these scholarship-cum-admission tests varies with the popularity and size of the institute. Type A institutes conduct national level scholarship-cum- admission tests frequently which is more than 3-5 times per year to select the students. The number of tests conducted declines with the size of the institute. Type B and C institutes conduct tests either once or twice a year. Based on the performance in the scholarship-cum-admission tests, students are selected and segregated into different batches. The selection rate in these screening tests conducted by the coaching institutes is approximately 90 percent, as reported by the students in the field survey. Over the years, 'the format and stringency of screening has declined' in the coaching industry. Previously, only 25 percent of students applied would get admission and now more than 90 percent of the students get admission in the institute of their first preference,

as argued by one of the non-teaching staff of one of the Type A institutes. A similar finding was observed in Chapter 4, where 88 percent of the students took admission in the institute, which was their first preferred choice. If a student fails to secure admission in the institute of her first preferred choice, she can opt for another institute where she could get herself enrolled. This implies that students are usually selected by the coaching institute, which is their first preferred choice. However, the purpose of conducting scholarship-cum-admission test is to identify students based on their abilities and segregate them into different batches. In such a situation, the microeconomic theory fails where buyers are anonymous, and sellers do not care which buyers they serve (Winston, 1999).

After selecting the students, coaching institutes conduct periodic tests where the performance of the students is evaluated continuously and based on that performance, they are placed in different batches. Student whose performance has improved drastically is moved to a top batch, and whose performance has deteriorated is shifted to a lower batch³⁸. This exercise helps coaching institutes to identify the high efficacy students and continuously monitor their performance which thereby increases their chance of qualifying the competitive examinations.

As mentioned, batches are segregated based on the quality of the students as perceived by the institutes. Coaching institutes place students with high efficacy in the top batch, followed by low-efficacy students¹ who are placed in lower batches. Treatment of batches also varies as the class size of the top batch is small, and high-quality teachers are assigned to these batches so that students can get individual attention and the best possible coaching. Some coaching institutes keep the high efficacy students in one hostel so that they can get the best of the facilities and personal attention of the teachers anytime they want.

Competition among the institutes is for the high efficacy students who are limited in number, and most of the strategies in students' selection are devised to identify the high efficacy students. Low efficacy students are attracted towards an institute by looking at the previous results. Higher the number of students selected (results) from

³⁸ Low self-efficacy students are those who have not secured good marks in class 10th and 12th (less than 75 percent) and in the entrance conducted by the coaching institute.

an institute, higher is the number of students, high efficacy and low efficacy, who get attracted in the subsequent years.

As discussed above, students take admission-cum-scholarship test which evaluates their ability of while taking admission. Coaching institutes claim that selected students who perform exceptionally well in this test will be offered a scholarship which is a discount on the tuition fees. This leads to a scenario where students pay differential fees. To understand this phenomenon of differential fees, the next section will discuss students' selection along with the fee structure of the coaching institutes.

5.2. b) Fee Structure and Students' Selection

Students in coaching institutes are offered scholarships and tuition waivers. The scholarship is offered to the meritorious students where merit is evaluated by the coaching institutes through different means such as scholarship-cum-admission test, marks obtained in school examination (as mentioned in Table 3.4 in Chapter 3). Higher the merit of the student, higher is the discount offered on the tuition fees. A tuition waiver is given when the fee is paid in lump-sum. In both cases, the net fee paid by the students differ, and this could be understood as a differential fee. Theoretically, this means that the consumer as an input pays the price for education and the same student as a supplier of input to the educational institute is paid the price by the institute in the form of scholarship, leaving a net tuition payment as a difference. This argument means simultaneity of two transactions implicit in the technical relation of education, where the customer as an input pays the price and also receives the scholarship (Rothschild and White, 1995). The scholarship amount ranges widely from 10 to 90 percent. One of the chartered accountants of the coaching institutes remarked, "what is quoted is not charged, net payable fees is less than the quoted price, each student pays the differential price". In Chapter 5, data revealed that 58 percent of the students received some discount in fees as a scholarship from the coaching institute. Though the process of selecting the students is similar among the coaching institutes, the following discussion will elaborate on the difference between Type A, B and C institutes. The composition of students in different programmes will provide an understanding of students' selection in these institutes.

- (i) **Type A:** Institutes cater to the majority of the students in their classroom coaching programme (CCPs). Due to the availability of financial resources and other resources, they expand the physical infrastructure to accommodate as many students (for example, rent a new building in the short-run and construct new buildings in the long-run). These institutes are established brands, and with their increasing popularity, more and more students prefer these institutes every year. Both the institutes in this category conduct scholarship tests and offer scholarships to the students who are perceived to perform and give them results both of them long for. Given their popularity and preference, the difficulty level of the test papers of the admission-cum-scholarship test is such, which helps the institutes in identifying and segregating the students. Students who are meritorious are given some scholarships, and those who are exceptionally well are given scholarships up to 90 percent with accommodation and other facilities. However, not many students are offered scholarships by the institutes in this category as these institutes are already preferred by the students. As a result, without scholarships also students take admission in these institutes. These institutes have a large number of students in classroom coaching programmes (CCPs), and they offer courses like distance learning programmes (DLPs) and e-learning (ELPs) or online learning programme also. Their popularity is due to CCPs.
- (ii) **Type B:** The institute in this category is also good performing in terms of results. This institute offers scholarships to a few students. A group of students who took coaching in this institute mentioned that the difficulty level of questions given in homework (DPP) was very high, and sometimes it is difficult to understand the questions. Due to this reason, some of these students left the institute and joined one of the type C category institutes. This institute also offers DLPs, ELPs and online learning programmes but is famous for CCPs.
- (iii) **Type C:** The number of students in these institutes is relatively less than both A and B. Some have 100 students in a batch with 2-3 batches or a lesser number of batches, and some institutes have 40-50 students. For these

institutes, scholarship is an important strategy to attract students, especially high efficacy who are constrained by the household budget. To attract students, these institutes offer proportionately higher proportion scholarships to average performing students vis-à-vis institutes in type A and B category. Type C institutes have relatively less number of students in CCPs as compared to Type A and B institutes, and therefore they tap students through other modes such as DLPs, ELPs and in association with schools (School Integrated Programme, SIPs). These modes not only give them access to more students but also become the source of revenue. Due to the smaller number of students in CCPs, Type C institutes have come up with new ways of generating revenue at minimum cost. This is inevitable as this market is for education, and institutes cannot have access to all students as they want. Strategies concerning CCPs is the main focus, but coaching institutes offer new programmes such as DLP, ELPs and SIPs in order to attract students and generate revenue.

Since results are produced by the high efficacy students and revenue is generated from low efficacy students, the objective of prestige and profit is directly fulfilled by the students. Therefore, the selection of students becomes crucial for the institutes in order to operate and survive in the market for the coaching industry. The next segment will discuss another important theme, that is, teachers' recruitment. Along with the students, teachers are also crucial inputs in an education market, and they are also constrained by the human capital embodied in them. Like high efficacy students, high-quality teachers are also limited in number for which the competition prevails in the coaching industry.

5.3) Teachers in Private Coaching Institutes

Demand for an institute is dependent crucially on the faculty quality. This section addresses the issues concerning faculty in the coaching industry and the significance of high-quality faculty in attracting the students. For students, one of the determinants while choosing the institutes is good quality teachers, as mentioned in Chapter 4. Coaching institutes, therefore, in order to attract students have to attract good quality teachers and strategize their management and allotment so as to meet the expectations of the students in an optimal way. Demand for teachers in the coaching

institute is dependent on the number of students, quality of the students and the student-teacher ratio (STR). As mentioned above, coaching institutes segregate students in batches based on their perceived ability, and potential teachers are allotted across these batches based on their quality. High-quality teachers are allotted the top batches with high efficacy students and followed by other teachers who are allotted lower batches with declining efficacy of the students. There is an inverse relationship between the class size and the quality of the students and teachers in the coaching institutes. Better the quality of students and teachers, the lower is the class size and vice versa. High-quality teachers or ‘star’ faculty³⁹ who are considered to be the best teachers in the institute and known for their expertise in the coaching industry take classes in the top batches. Apart from the expertise in the subject, these teachers are often famous among the students because of their charismatic style of teaching and the ability to connect with them.

Teachers are also allotted classes based on their style of teaching. Teachers who teach slow are allotted batches that start relatively early (April batches), and teachers who can teach and cover the course relatively fast are allotted batches that start after April or May⁴⁰ because the date of completion of batches is more or less the same (November/December). The allotment of teachers is based on the feedback and subjective judgment of the HODs of the department who assign classes to the teachers. Teachers were asked that ‘is there any difference in the approach of class 11th and 12th, and how are the teachers allotted?’ A teacher who is allotted class 12th is an experienced teacher, confident, responsible and mature because the students have to take the examination next year, and students do not accept a new teacher who is still developing his style of teaching. In class 12, the students also get mentally prepared and therefore, it gets easier for the experienced teacher to teach them. In class 11th, students need teachers who are more student friendly and can help students to get acquainted with the competitiveness of the IIT examination. Psychologically these students need more motivation as most of them were scoring 80-90 percent in their schools, and now they settle for 30-50 percent, which leads to demotivation

³⁹ When the feedback from the students is consistently good for a long time: a teacher becomes a star faculty. In an institute for instance if there are ten faculties for mathematics it is usually the case that three faculties are very good and position of seven faculty members will keep on changing.

⁴⁰ Months indicate course will be completed in how many months so that students have enough time for revision.

among the students as they struggle to reconcile and understand the differences in the two levels. Thus, teachers are allotted classes based on their quality and persona and how well they will be able to deliver and connect with the students. Strategizing the allotment of classes is crucial in this industry because students in this industry act like consumers where they give feedback on the teachers. The management asks for feedback on teachers from the students periodically, and students can also raise their concerns with the management of the institute individually, whenever required. If the students are not satisfied with the teachers taking their classes, it impacts the reputation of the coaching institute in the market for the coaching industry. Allotment of teachers indicates that the coaching institutes seek to maximize their success ratio by paying maximum attention in terms of best possible input, i.e., the best teachers for the students with maximum potential.

The following section will enunciate the strategies adopted by different coaching institutes; Type A, B and C in recruiting, offering pecuniary and non-pecuniary benefits and management of the faculty so as to attract and retain the best of the teachers.

5.3.a) Teacher Recruitment in Coaching Industry

There are two types of teachers available in the coaching industry, fresh entrants and experienced teachers. A common method of recruitment is followed by all the major institutes under Type A, B and C categories.

(i) Recruitment of New Faculty

Recruitment of fresh entrants in the coaching industry is a three-step process: written test, interview and a demo lecture. After the final selection, freshly recruited teachers are sent for the training programme, also known as a faculty training programme (FTP), where 4 to 6 months of training is given to the teachers. For some institutes, it may go up to one year. In the training programme, the 11th and 12th class content is taught to the newly appointed faculty by the experienced faculty of the institute. After the completion of FTP, treatment of the teachers varies with the type of institutes. In Type A and B institutes, newly appointed faculty is not given classes immediately. They are made to sit at the doubt counters to solve the doubts of the students outside the classroom. The duration of these newly appointed teachers on the doubt counters

depends on students' feedback. It may take 6-8 months or may take upto 2 years. One of the newly appointed faculty in one of the Type A institutes said, "It takes a minimum of 2 years of experience for taking the classes". In some of the Type C institutes, after FTP, teachers are assigned classes, however, it depends where they are assigned classes. As mentioned by one of the newly appointed faculty in Type C institutes, after the FTP, he was given classes under the School Integrated Programme (SIP), where the institute has an association with the government school based in Andhra Pradesh. New entrants switch institutes between Type A, B and C as per their requirements after FTP. One of the faculty said, "he joined one of the Type A institutes and took training, but after six months, he switched to one of the newly established Type C institutes." Since this faculty completed his faculty training in the previous institute, only a demo lecture was given to the head of the department, and the salary was negotiated. The reason cited for switching from Type A to Type C institute was that Type A institute is already established, and the career growth in that institute is very slow as rapport building with the management/directors takes time. This is not so in Type C institutes, which are recently established, and faculty who joins the institute in the starting have the scope to grow by building rapport with the directors of the institutes. This shows that different coaching institutes after FTP employ different strategies. Type A and B institutes do not assign classes to freshly recruited teachers, whereas some of the Type C institutes assign classes to the new faculty. This is due to the fact that Type A and B institutes have an adequate number of experienced teachers, which is not the case with some of the Type C institutes as they do not have enough faculty members to share the workload.

(ii) Experienced Faculty in the Coaching Industry

In the Kota coaching industry, experienced teachers do not stick to one institute for long and they usually switch institutes quite often. In some instances, teachers are approached by other institutes with offers of relatively higher salary⁴¹. It is also often the case that a group of teachers decide to leave their institute and establish a new institute. This could be due to some ego clash with the administration or when the teachers seek a faster growth in their careers. The relationship between the teachers switching institutes and the institute should, therefore, be seen in this context. If

⁴¹ In some case salary raise could be up to 50-100 percent.

changing an institute ensures a salary hike, it is financially beneficial for the teacher, and if the teachers establish a new institute for them, it can get relatively difficult in the starting because of the high cost of setting up an institute in a fiercely competitive market which can make the survival of the new institute difficult. The confidence to open a new institute comes from their established reputation which attracts students who also take the risk of leaving their institutes to join this new institute. With the discussion on recruitment strategies of the institutes, it is important to deliberate on the pecuniary and non-pecuniary benefits offered by the coaching institutes to their teachers.

5.3. b) Pecuniary Benefits

There is a good deal of variation in the pay packages offered by the institutes in this unregulated coaching industry even if we control for competence and experiences. Pecuniary benefits for faculties are contingent on their work experiences, students' feedback, teachers' workload, the reputation of the teacher in the industry and the type of the institute as per our classification A, B and C. As argued by Hanushek and Rivkin (2006), experience plays a crucial role in the determination of the salaries of the teachers. Teachers' skills and efforts also add to the variation in the salaries (ibid.). The salary of high-quality teachers is exceptionally high because of their charisma, their teaching abilities and their ability to connect with the students and address their concerns which are often non-academic. All these qualities, comparatively speaking, can be attributed to the skill set of these extraordinary faculty members, due to which they are paid high salaries.

The salary of the new entrant is based on their education and the type of institutes they are teaching. Type A institutes offer minimum salaries on the basis of the qualification of the new recruit and the brand of the institute he/she has graduated from. As mentioned by one of the faculty in Type A institute, salary for anyone who has graduated from IITs is INR 45,000 per month, for NITs it is INR 35,000 per month and for any private or government college it is INR 25,000 per month. Generally, the pay package is applicable for one year, after which an increment in the salary is offered, which is usually between 5-10 percent. On the contrary, one of the Type C freshly recruited faculty mentioned that one of the Type C institutes does not offer any salary or stipend during the training period. Once the teacher is placed on

payroll, she/he is given INR 50,000 as salary and a yearly increment of 5-10 percent. Therefore, salary has an impact on the recruitment of the fresh entrant as well as for the retention of the existing employees as also observed by Hanushek and Rivkin (2006) in a different context. As mentioned above, coaching institutes generate their own revenues through tuition fees for the payment of the costs incurred. Salary to faculty members is one of the major components of the cost. This shows that cost and revenue are interdependent in the coaching industry. Providers strategize their faculty recruitment given their ability to pay for the salaries. Though given the number of students, a minimum number of teachers are generally to be recruited by the institutes who are of varied quality. Coaching institutes in Type A and B category do not have much of a problem in paying high salaries to the teachers. Some institutes in the Type C category might face some challenges in recruiting high-quality teachers as revenue generated by these institutes is relatively less. As a result, such institutes hire fewer number of high-quality teachers and most of those teachers have virtually no or very little experience in the industry.

5.3.c) Non-Pecuniary Benefits

In the coaching industry, it is not only the providers who select the teachers. Teachers, after gaining experience, express their preferences to work with prestigious institutes. Along with salary packages, non-pecuniary benefits, which include working conditions in the institute, play an important role in their decision to continue or switch to other institutes. The most common reason for staying and working in the institute is the satisfaction of the faculty members. Some of the leading institutes in the market are very particular in keeping their faculty members satisfied in different ways- higher salary packages, promotions, leaves and other benefits. One of the teachers from the Type A institute said: “a lot of flexibility is given to a faculty member...salaries are not deducted...which is important”. Some of the facilities provided by Type A institutes include paid medical leave to its faculty members for upto a month, leaves in case of their marriage. “It is like a semi-government job”, due to which many teachers and staff are keen to work with them, as asserted by one of the teachers working in Type A institute. One of the faculty members from JEE (Main) division with 18 years of teaching experience and who is associated with the Type A institute since 10 years said “in the staff, nobody wants to leave this institute,

because of its systematic approach and stability in job and job satisfaction.” Another faculty who has 13 years of teaching experience and working with Type A institute from 6 years in JEE (Main) said, “Work satisfaction, mental peace and monetary satisfaction is very important and the institute gives us that”. A new faculty who recently completed the training and recruited for doubt counters said, “If a teacher wants stability, then this is the best, but growth is very slow in this institute”. One of the faculties in JEE (Main) division said in Type A institute, ‘there is stability in this job, everything is planned and very systematic...and no conflict with the administration’.

These excerpts show the satisfaction level of the faculty members, but there are teachers who have switched institutes as they wanted growth in their careers. One of the co-founders of the Type C institutes, who was the Head of the Department (HoD) in Type A institute, mentioned the reason for leaving the institute and opening a new institute. The teacher said that “all teachers want growth in their career”. This teacher served as a HoD in one of the oldest institutes and also one of the Type A institutes and later he along with other established teachers from the same institute opened a new institute which falls in the category of Type C. One of the faculties with eight years of teaching who earlier taught in one of the Type A institute for 4 years switched to Type B institute in 2016 admitted that he had wanted to work in a new institute. Further, he added that salary hike was not the reason as the increase was not very high. He also mentioned that ‘the institute is known for its results and quality, though all the coaching institutes are known for their results...and never compromise with quality’. One of the stakeholders from the industry while giving the reason for the decline of the pioneer institute, said that how one of the oldest institutes had lost its business, the number of students declined owing to poor management, ego issues among the directors and the faculty members and disrespectful treatment of the teachers’. The incorporation of one of the newly established Type C institute was also a result of an ego clash between teachers and administration in one of the Type A institutes. Seven teachers left the institute and opened a new one. One of the co-founders of Type C institutes who had earlier taught in other institutes established another new institute in 2013. The reason cited was that the job in the previous institutes became mundane, and the teacher wanted to explore something new. The director of one of the Type C institutes who had previously taught in other institutes,

mentioned about politics within institutes, lack of professionalism, no respect for the teachers as a reason for opening his own institute. In short, growth in career, ego clashes with the top administration are cited as the main reason for switching the institute. Stakeholders from the industry mentioned that teachers switch institutes in anticipation of higher salary packages. In many instances, 2-3 times higher salary packages are offered to the teachers by the reputed institute in the industry. Institutes that occupy major market share and are reputed institutes in the industry can have the best of the teachers because they can pay them well given their robust financial condition. As discussed in the theoretical framework in Chapter 2, prestige of an institute leads to the generation of revenue, and higher revenue facilitates the institutes to recruit high-quality teachers and generate higher profit. As a result, the top coaching institutes remain at the top because they have financial resources to pay for benefits given to the faculty members, both pecuniary and non-pecuniary and can attract high-quality teachers. The faculty of the institutes has cited satisfaction or career growth from their experiences. When one looks at their profile and their position in the institute, further observations can be made.

A newly appointed faculty with a teaching experience of less than three years usually moves in anticipation of growth and a higher pay package. These teachers generally leave the institute by giving due notice and do not get involved in ego clashes. When experienced teachers, usually the head of the departments or expert teachers, switch the institute or open a new one, it is usually due to ego issues within the institute. There were teachers who had more than ten years of teaching experience, but they were not so well known in the industry. They aim for stability and wish to work with reputed institutes where job satisfaction was high. Therefore, the behaviour of the teacher varies, given the batch they are teaching in. It was observed from the field interviews that teachers teaching in middle and lower batches were mostly satisfied with the institute in terms of salary, environment and other facilities provided by the institute. Ego issues and other clashes with the institutes seem to arise among the teachers mostly serving at the top position in the institute. This could be understood through the position of the teachers in the institute and their involvement in administration. The senior teachers who had served the institute for long had acquired both experience and financial security to indulge in ego clashes with the owner(s) of the institute and open a new institute. Another reason is that most of the students in

the coaching industry know these senior teachers through word of mouth but sometimes do not get the opportunity to be taught by them as they only teach in a very few top batches. New institutes opened by these faculty members provide the students who long for these reputed teachers with the opportunity as the number of batches are relatively less. This argument is made in reference to when senior teachers move out of one institute and open a new institute of their own. Thus, experience, popularity and financial security among the teachers leads to the emergence of a new coaching institute in the coaching industry.

After discussing the pecuniary and non-pecuniary benefits, the following discussion elaborates on other strategies that institutes adopt to manage the faculty in the institutes.

5.3.d) Management of the Faculty

As teachers attract students, the coaching institutes advertise their best of the teachers. The way the teachers are advertised varies among the institutes. When the institute is performing well and wants to retain its existing faculty, the appointed faculty members are never showcased in the advertisements. Instead, they advertise the directors of the institutes who may or may not be teaching. Image 1 is a representative image of one of the Type A institutes, which shows a picture of 4 directors who are the owners of the institute, but they do not teach. They only administer the functioning of the institute. Image 2 represents a Type B institute where the advertisement is done as follows, “The Most Stable Team of Directors” where the team of seven directors are the owners of the institute and also are the teachers in the institute.

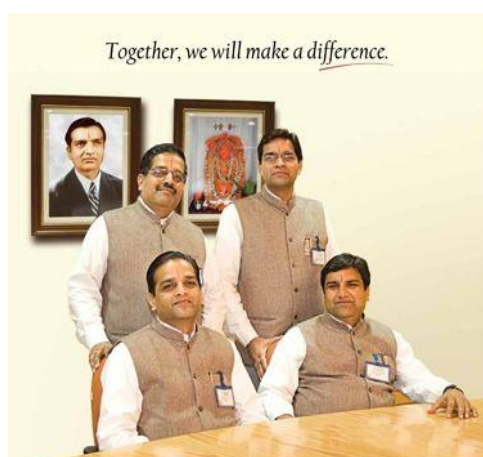


Image 5.1: Type A Institute



Image 5.2: Type B Institute

Both these institutes do not mention the names of the faculty members on the pamphlets, etc.

Image 3 represents one of the Type C institutes. In the image, it is written, “Bansal Classes Welcomes Mega team of Vibrant Academy” this means that Bansal classes have poached the faculty of Vibrant Academy.

BANSAL CLASSES
Welcomes Mega Team of VIBRANT ACADEMY

First time in the history of KOTA
Largest Pool of IIT-JEE
"Talented Faculties for Talented Students"
is again with us under one roof

Sameer Bansal Sir | Bansal Sir

PHYSICS		CHEMISTRY			MATHEMATICS	
ANU GUPTA (IITM SIR) Exp. 11 Yrs M: 9663205661	ANASH GUPTA (IITM SIR) Exp. 11 Yrs M: 7011022502	VINEET KHATRI (IITM SIR) Exp. 9 Yrs M: 9671507982	PIYUSH MAHESHWARI (IITM SIR) Exp. 9 Yrs M: 9663766794	RIJESH JINDAL (IITM SIR) Exp. 9 Yrs M: 9667375678	SANJAY SINGHAL (IITM SIR) Exp. 13 Yrs M: 96114210733	NISHANT GUPTA (IITM SIR) Exp. 12 Yrs M: 96224891076
PAUL MITRA (IITM SIR) Exp. 15 Yrs M: 7062286617	NIRBHAY PANDEY (IITM SIR) Exp. 10 Yrs M: 9609486917	AJAY BAIRAGI (IITM SIR) Exp. 15 Yrs M: 92224367108	SHASHANK GARG (IITM SIR) Exp. 11 Yrs M: 9604903086	LOKESH KUMAR (IITM SIR) Exp. 4 Yrs M: 9681628812	RAVI PRATAP SINGH (IITM SIR) Exp. 13 Yrs M: 9196684886	SONU P AGRAWAL (IITM SIR) Exp. 10 Yrs M: 92224891076
BANSAL BEST 1 st Step for IIT Step for Bansal For Admission - Appeal for "BEST" Have to apply for BEST through the Bansal Class Website The test will be conducted in the afternoon at Bansal Classes Kota Head Office on 25 May 2017. To apply for BEST for admission to IIT, visit the website www.bansalclasses.com		ROHIT SAINI (IITM SIR) Exp. 9 Yrs M: 9731110222 KUNAL SHARMA (IITM SIR) Exp. 9 Yrs M: 9053556443 SAHIL JINDAL (IITM SIR) Exp. 9 Yrs M: 9623465090			Admission Announcement JEE (Main & Advanced) ACME COURSE (For Class 11 Meeting to 12th) - 40 Seats Course Commencement Date 29 May, 2017 19 June, 2017 STERLING COURSE (For Class 12 Post-Entrance) Course Commencement Date 29 May, 2017 19 June, 2017	
OPEN ORIENTATION SESSION For students & parents will be organized at BANSAL CLASSES KOTA Date: 24 May 2017 10:30 am to 12:00 pm 3:00 pm to 6:30 pm		Benefit for meritorious students of Kota For French students upto 50% Scholarship Based on performance in BEST (Bansal Entrance Scholarship Test) FOR MERITORIOUS STUDENTS OF IIT & IIT-JEE Special financial considerations for details visit Bansal Classes Kota center head office.				

BANSAL CLASSES PRIVATE LIMITED
CORPORATE OFFICE: A-10, "Bansal Tower", Road No. 3, IPA, Kota-324005 (Raj.) | Tel. : 0746-2781000
E-mail: admin@bansal.ac.in | Web: www.bansal.ac.in * www.bansalclasses.com

Image 5.3: Type C Institute

The above-shown image from the coaching institute implies the following things: Not only Bansal Classes (Type C institute) but all the institutes time and again poach faculty from other institutes. Generally, it is not observed that any institute mentions the names of the faculty members and welcomes them from another institute. Here we need to understand why they have done so. Bansal Classes is a Type C institute and Vibrant Academy is a Type B institute (in the present study) where Vibrant Academy has produced good results in past years and has established a good name in the market. By advertising in such a manner, Bansal Classes wants to attract more students who want to be taught by these reputed teachers. Thus, this strategy is adopted only when the institute is not performing that well in the market, and they want to attract new students based on the appointment of the new faculty.

Another strategy to manage the faculty members within the institute is that teachers within the institute are not assigned complete subjects to cover in the class but only particular topics from the curriculum to teach in different batches. This is done so that students are not fully dependent on one teacher for one subject. If, due to any reason, that particular teacher leaves, it does not impact the coaching institute negatively. This strategy is adopted as a result of aggressive teacher poaching practised in the coaching industry. There is a tendency when the teacher(s) leave students also leave with them, which impacts the institute adversely in terms of revenue and reputation. Allotting topics to the teachers usually prevail in Type A and B institutes because they have a number of faculty to teach the same subjects, and that enables them to allot topics rather than subjects to the teachers. Teachers leaving the institute in groups impacts the institute very badly as these groups of teachers have a tendency to take a significant proportion of students from the institute. Examples of such institutes are Vibrant Academy, Nucleus Education, where seven teachers left one institute and started a new institute. With them, students from their previous institute also joined the new institute. Due to this reason, only a few trusted old teachers are assigned with the full syllabus to teach in the classes.

Apart from teaching, teachers are also assigned other duties in the institutes. The Head of the Department is responsible for assigning duties. The HoDs, based on the feedback of the teachers and their discretion, assign responsibilities to the teachers such as taking more classes or updating the study material. If the feedback of the teacher is good, he is given more classes, and if the performance of the faculty is average but he has knowledge of the subject and conceptual clarity, he is assigned the duty of updating the study material, which includes adding and dropping of questions based on the previous paper pattern.

The above section elaborated on the issues concerning the teachers in the coaching industry. Teachers' quality is crucial in the coaching industry as it attracts the students, and students are the sources of prestige and profit for the institutes. Thus, teachers indirectly affect the results of the institute. In view of this, coaching institutes adopt strategies to attract the best of the teachers. Though, Type A and B institutes are financially stronger to pay higher salaries to the teachers, Type C also tries to have some high-quality teachers to attract the students. Coaching institutes in order to save, invest in technology and new programmes which are cost-effective such as online

video lectures, recorded lectures of expert faculties in USB, online test series, coaching for one/two/three subjects based on the requirement of the students thereby curtailing on expenditure, especially on salaries. Though online video lectures, recorded lectures are available of all the institutes, Type A and B institutes do not emphasise on these much because they have large number of students in their classroom coaching programme. Some of the Type C institutes do not have many students in their classroom coaching programmes, as a result, they try to focus more on online video lectures, recorded lectures of expert faculties in USB, online test series, coaching for one/two/three subjects so as to save more on general expenses and teachers' salary because they do not require as many teachers as required for taking classroom coaching. Thus, in the face of fierce competition, devising strategies to attract and retain good quality teachers becomes extremely crucial for the coaching institutes. In the next section, advertising by the coaching institutes, which is yet another important strategy to attract students, will be discussed.

5.4 Advertising in Private Coaching Industry

Advertising is vital for the coaching industry as it is one of the ways through which coaching institutes attract students. This discussion attempts to elucidate the advertising strategies that coaching institutes: Type A, B, and C adopt to stand out in the market. The main component of advertisements is the results of the institutes, which is presented in different mediums: print media, websites of the institutes and the purpose of this section is to understand how coaching institutes present their results with the intention to show that their institutes churn out the highest number of selections. The interpretation of these results becomes important because students are preparing for the competitive examinations where the number of seats is less than the number of applicants⁴². Advertisement of results by the coaching institutes in such a scenario needs elaboration. Thus, the following discussion will spell out the advertising strategies of the coaching institutes.

Advertising in recent times has developed into a kind of multimedia-assisted communication. For effective promotion, it is increasingly dependent on multiple modes, thereby using multimodality as one of its features (Pan, 2015). Multimodality in advertising suggests the use of different communicative modes where it combines

⁴² Number of applicants, success rate of JEE and NEET is presented in chapter 1

printed and electronic, textual, and visual information to convey messages (Papadimitriou and Ramírez, 2015; Pauwels, 2012; Stack, 2016). Coaching institutes advertise results, admission-related information and other information such as the introduction of a new course, orientation programmes, awareness programmes, and motivation sessions conducted by the institute through newspapers, hoardings, websites of the institutes, social media handles of the institutes. An advertisement is an important tool that helps in the branding of an institution. Results produced by the institutes act as an instrument that conveys a message about the quality of the institute. This is because results are the most crucial determinant which signifies the quality of an institute for the prospective students. As discussed earlier, coaching institutes prepare students for a competitive examination that has a fixed number of seats and where every student secures a single rank. In this context, the mode of presentation of the results in terms of ranks or the number of total selections becomes worth exploring.

5.4. a) Display of Results in the Coaching Industry

Display of results in newspapers, hoardings, websites, social media, and result celebration, interviews with media, students' testimonials and talk show with toppers are examples of advertising strategies practised by the coaching institutes. Some of the unique practices adopted by the coaching institutes in Kota, such as talk shows by the toppers and advertising of toppers by more than one institute, is discussed in the following section.

(i) Talk show by the Toppers

Coaching institutes organise talk show where All India Rank holders, along with the mentors, discuss examination strategies with the students who will be appearing for the examination next year. Though toppers share their strategies to prepare for the examination, it is actually a publicity event that is organized by the institute which highlights the good points about the teachers and the facilities provided by the coaching institutes. Image 4 mentioned below is one such example.



Image 5.4: Talk show with Toppers

Source: Website of the Allen Career Institute (Type A)

(ii) Topper being advertised by more than one Coaching Institute

Image 5.4 represents a peculiar phenomenon that exists in the coaching industry where after the results are declared every year, students who have secured top ranks are often advertised by more than one or two institutes. This is because every institute which wants to associate itself would like to take credit with the top rank holder and advertise, proving that their coaching, study material, teachers are better than other institutes in the market. The following picture is an excellent example of this phenomenon.



Image 5.5: One student ‘Soyeb Aftab’ AIR-1, NEET, is advertised by six coaching institutes

Explanation of Image 5.5 is as follows: This image shows one student, ‘Soyeb Aftab’, who had secured AIR 1 in NEET examination, 2020. Six coaching institutes have advertised this student showing that he took coaching with them. However, it is not

possible for one student to be enrolled in six coaching institutes at the same time. In such an advertisement, one needs to see where this particular student has taken coaching under Classroom Coaching Programme (CCP) because it is only through CCP one can say that the student was enrolled in the coaching on a regular basis and he was taught by the teachers of that institute and availed off all their services. After visiting the websites of all the respective institutes, the following observations were made: 'Gravity' mentions only the name and the marks of the student. It does not claim anything in which programme this student was enrolled. 'Pathfinder' mentions the name of the institutes and '2 Year NCRP'; this is a CBSE test programme for students who are not enrolled in the institute but take test series for board examination. 'Sri Chaitanya' mentions the rank of the student with his category 'open category'. 'Akash Institute' along with rank and picture mentions 'enrolled in Akash DLP'. 'Etoos' E-learning education in India, mentions the ranks and picture of the student. 'Allen Career Institute' mentions rank, picture and the marks acquired by the students. In another image, Allen Career Institute has mentioned that 'Soyeb Aftab' AIR 1 was their classroom Student for two years. Thus, by advertising 'Soyeb Aftab' AIR 1, all the six institutes are trying to stake their claim and create a niche in the industry. Though he was actually enrolled with Allen Career Institute in their CCP, three other institutes mentioned that he was enrolled in their DLPs, one has mentioned E-Learning and one institute has not mentioned anything. DLP and ELP indicate that the concerned student must have only referred to their study material. Thus, it is important to note that the institute where the student has taken coaching under CCP is given more importance vis-à-vis those institutes which mention distance or e-learning because that only shows the student has referred to the study material which is more or less similar because the course structure followed by the institutes is similar among the coaching institutes.

The following section discusses the two mediums of advertisement: Print media and Websites of the institutes, which are used extensively by the coaching institutes to advertise their results and other information.

a) **Print Media:** news published in the newspapers and hoardings constitutes the print media. News about the results and other information concerning the institute is advertised in the newspapers and hoardings (some of the examples are mentioned in Image 1- 4 in Appendix). After analysing the news in the local

newspapers and hoardings, following observations were made about the coaching institutes:

- (i) **Type A:** Institutes in this category have advertised results across local, regional and national level newspapers, and the majority of the news was published in local Hindi newspapers. Coaching institutes publish results in English newspapers also: The Indian Express, The Hindustan Times, and The Times of India because the coaching institutes have study centres across the country. Both the institutes in the Type A category have number of hoardings installed at prime locations across the city of Kota.
- (ii) **Type B:** This institute has relatively less coverage in the newspapers. Google search about the news of Vibrant Academy redirects to newspaper articles that mentioned about the results of all the institutes.
- (iii) **Type C:** Some of these institutes, Nucleus Education and Career Point Ltd., have shared links on their websites that redirect to news published about these institutes. Following are the observations made after looking at the news published with respect to these institutes: the coverage of the news is very low. Nucleus Education is a newly established institute. As a result, news from 2018-2020 is covered, the content emphasises the results of the Olympiads or some awareness programme in the local Hindi newspaper. Career Point Ltd. is one of the industry's oldest institutes, but its reputation in the coaching business has deteriorated over the years. Their websites show the news advertised in 2016 in a local Hindi newspaper. Other institutes under this category do not have exclusive news advertisements. Their results are published along with other institutes. These institutes have relatively much less hoarding across the city, and some of them are placed near the respective institutes only.

The coverage in the newspapers and hoardings is linked to the advertisement cost incurred by the institutes. Coaching institutes invite print media to cover stories for them, and institutes that have more financial resources to incur on advertisements will have more news covered. Similar is the argument for hoardings as institutes that can afford hoardings at the prime location are the ones spending exorbitantly on advertisements. Advertisement in print media is costlier than digital marketing. As a

result, institutes with higher revenue spend higher on both print media and digital marketing, whereas institutes that are unable to spend much on print media advertising focus more on websites and social media, which are relatively cheaper. The following section will deliberate on websites as a tool of advertising used by the coaching institutes.

b) Websites: In advertising, digital marketing plays a very significant role; websites are the important ones. Websites of the coaching institutes provide all the relevant information to students at any time. Google Analytics, one of the most popular digital analytics software, allows the institutes to analyse the in-depth detail about the visitors on the website, such as: how many people visited the website, how long they stayed on different web pages and demographic details such as region, age-group, etc. Google analytics basically helps the institute in knowing ‘How does it look to the customers’ and what it needs to change to increase the traffic on the website. For the present analysis, the homepage of the websites are used as a tool to understand the way coaching institutes provide information to the students and their parents.

Design of the Website

There is a pattern in which the websites are designed and it is based on the grammar of images. Grammar of images and the use of colour in the websites is central to understanding the visualisation of the websites (Stack, 2016). There is a way in which websites are written. If the website is written in a language that moves from left to right, then as readers, we should expect to see the information that we want to know on the left side (Ibid.). An image in the centre signals that something or somebody is important. The placement, colour, size of the image is significant indicator of importance. Framing of the website is extremely important for the reader as they help in understanding how images and text fit together (Ibid.). Analysing the website of an institute helps us to understand the outlook or approach of the provider of the coaching institute. A website tells us about what is considered important by the provider, how many clicks does it take for the information seeker to get to the information she desires. The information retrieved from Google Analytics is also used to target the desired audience. Through this process, the coaching institute targets and influences the potential students (Ibid). Websites of the major coaching institutes are

found to be user friendly and provides most of the required information such as past performance of the coaching institutes, courses, fee structure, scholarship criteria, dates for scholarship tests, answer keys. The strategy of the coaching institute is most evident on the homepage. The homepage is the main web page of the website and is also known as the start page. The homepage shows how the coaching institutes place themselves in relation to the key parameters, information about their products and services, contact information, navigation button, testimonials from the customers, fees, social media icons and most important is call-to-action icons which give results to the providers. All this information is crucial and makes the website design interesting for customers.

As discussed in the previous chapters, coaching institutes are segmented into three categories: Type A, B and C. One coaching institute from each category will be taken for website analysis.

- (i) **Type A:** There are two coaching institutes in this category: Allen Career Institute and Resonance Eduventures Limited. Websites of both the coaching institutes are elaborate and bright in colour. The first impression of both the websites is that the text moves from left to right, which means the placement of important information is on the left. On the websites of both the coaching institutes, there are slider images showing information that the providers want the consumers to see on the left side. The slider images change with time. When results of the competitive examinations are declared, they are advertised. Any announcement that the coaching institute intends to make, such as admission-cum-scholarship tests, the commencement of test series, information about distance learning programme is also advertised. In Allen Career Institute, there are a number of slider images and a dialogue box pop-up which invites application of admission, giving information necessary for students: dates of admission applications, fee structure, scholarships, photographs of students who have secured AIR in respective examination and the total number of selections in competitive examinations. The images are informative in nature, and they attract the students. In Resonance Eduventures Ltd. Also, slider images cover all sorts of topics such as admission-related information, scholarship, solutions to previous examinations, advertisement for faculty recruitment, selections of the students from the institute in

Olympiads and other examinations. Both the institutes reveal important information to their consumers. However, Allen Career Institute, unlike Resonance Eduventures Ltd., is more assertive in putting up the previous results and achievements in terms of number of students, faculty, and centres. A detailed description of the respective topic is given under that head. Following are the images of how Allen shows its results in slider images.



Image 5.6: Students who have secured AIR-1 in JEE-Advanced and NEET in 2019

Image 5.6 shows that both these students have secured All India Rank 1 in the IIT-JEE advanced and NEET (UG), 2019 examination, and that they both were classroom students of Allen Career Institute.



Image 5.7: JEE Advanced result of 2019, Top ranks and the total number of selections

This image shows a picture of three students in the top 10 from the classroom coaching programme in IIT-JEE 2019. It also mentions 8 in the top 20 AIR, 20 in the top 50 AIR and 38 in the top 100 AIR. These numbers do not mention how many of them are from CCPs and how many of them are from DLPs. Another figure of total students qualified (5312) is disaggregated in CCPs and DLPs. Thus, total students qualified from CCPs and DLPs have to be understood very carefully. The ones from

DLPs have not taken coaching in this institute and have just referred to the study material of the institute. Though the institute has mentioned the relevant information with respect to results, the concern is that how many potential students/parents can interpret these numbers advertised by the institutes in the absence of the understanding of the competitive examination for which these students are taking coaching (interpretation of the results is discussed in the later section).

The right-hand side of the website of Allen Career Institute portrays important notifications such as scholarships, crash courses, EMI facility and latest results. This again shows that the information is put up to attract new students. The over-emphasis on results and selection of students shows that the institute wants to portray itself as the best performing institute. The scholarship is mentioned twice on the homepage, which shows its significance and importance in attracting students. Another interesting mention is of the EMI facility, where students who are unable to pay the fee for the course will be given a loan on zero percent interest with no extra cost. All this forms a part of the strategy, where all the possible information is displayed for the prospective students.

The homepage of Resonance Eduventures Ltd. is informative and provides all the required information. The student can click on the required information. The website is not as assertive as that of Allen Career Institute. Though similar content is given on the websites, their presentation differs.

The following images are from Resonance Eduventures Limited.



Image 5.8: Top ranks along with the total number of selections in all the years

The institute shows the best results in JEE Main, JEE Advanced and NEET and gives the total number of qualified students since 2002, and through this poster, the institutes invite prospective students for scholarship tests. There is a picture of the top

AIR, but there is no mention of the year in which these students have secured the ranks. The total number of qualified students have been mentioned. The significant difference in both the Type A institutes is that both show their results in different manners. Allen Career Institute, in its images, shows results very assertively in different ways, whereas Resonance Eduventures Ltd., along with results, also invites prospective students for scholarship-cum-admission test.

(ii) **Type B:** This category constitutes Vibrant Academy Pvt. Ltd. The website of the institute is informative like other institutes. On the homepage, there are main heads under which respective information is provided. The content on the website is not divided into the left-hand side and right-hand side. The entire screen is occupied with the slider images. Slider images consist of all the information ranging from scholarship-cum-admission tests, results of competitive examinations, information about live classes, the image of the toppers with the directors of the institute, announcement of test series, commencement of pre-medical division and results of Olympiads. Vibrant Academy, unlike institutes in the Type A category, advertises the mentors (directors) of the students who have secured the top ranks. This depicts the structure of the institute, which is run by seven faculty members who are also the directors. Vibrant Academy has other teachers also, but they are not advertised. Advertising mentors (directors) is also one of the ways to attract students.

Following are the images from Vibrant Academy Pvt. Ltd.



Image 5.9: Students who have secured top ranks with the directors of the institute

The above Image 5.9 shows the picture of the seven directors, who are also the owners of the institute, with the toppers. It also shows “All India Girls topper for the 3rd time” and “Best Rank from Kota for 3rd consecutive year”. The year in which these students secured the ranks is not mentioned in the image. This institute has found a new way to advertise itself by advertising the sub-category such as “girls topper” and “best rank from Kota”.



Image 5.10: Top rankers in the sub-category and selection percentage from the Institute

Image 5.10 shows the selection percentage in JEE Advanced in 2019, which is 46.6 percent. It also mentions students who had secured Rank 1 under different categories like “Number 1 from Kota” “Number 1 in Girls category” in the last decade. This institute did not mention any students from the distance programme. All students are from Classroom Coaching Programme under all the categories.

After the slider images, there are links for online payment, scholarship criteria, scholarship test results and other links. The institute has recently started its pre-medical division, information about which is flashes on the website. The institute is primarily known for pre-engineering examinations. Next is the information about the courses offered by the institute, such as for students who are moving from class 10 to 11, class 11 to 12, and for students who have passed class 12. Anyone who needs specific information can click on the particular head under which the detailed information is available. After that, there are testimonials from the students who had secured top All India Ranks. In the last, there are links directed to business enquiry: for the franchise, information centres about the institutes, for recruitment of teaching and non-teaching staff and contact details of the institute.

- (iii) **Type C:** Institutes in this category: Motion IIT-JEE, Bansal Classes, Nucleus Education. The homepage of these institutes is no different. They are also showing their previous year results, scholarships and announcements relating

to admissions. The following image is of the pioneer institute in the Kota coaching industry.



Image 5.11: AIR-1 from past years and their Mentor

Bansal Classes is the oldest coaching institute in Kota, and Bansal Sir was a celebrated teacher in the coaching industry. The popularity of the institute was because of him, but after he stopped teaching and now after his demise, the popularity and reputation of the institute has deteriorated. Recently, there are not many students getting selected in the competitive examinations. The above image is also from the website of Bansal Classes, where All India Rank (AIR-1) of previous years from 2000-2015 is mentioned. This image has a picture of ‘Bansal Sir’ as the mentor of students who secured AIR-1 in IIT-JEE and his picture is still used to attract the students.



Image 5.12: JEE Advanced results of 2019 with AIR and their category

The above image shows the results of IIT-JEE from Bansal classes for the year 2019. The AIR ranks secured by the students has declined as compared to Type A and B institutes. Unlike Type A and B institutes, this institute in Type C mentioned AIR up to 941 in their advertisement with emphasis on ‘Classroom and General Category’.

This institute is the first one to mention the caste category of the students in the advertisement of the results.



Image 5.13: Qualified students with the Directors of the Institute

Nucleus Education is one of the new coaching institutes. The image shows the results of the students from 2012 and 2014. The reason behind this is that these teachers used to teach in one of the Type A institutes and they taught these students who had secured ranks in 2012 and 2014. These teachers have now established a new institute, and they are advertising students whom they had taught previously. The website has a testimonial from a student who had secured AIR-1 in 2014. The institute also mentions the students who had secured ranks from the classroom coaching programme and distance learning programme like other institutes. The following section will interpret the results advertised by the respective coaching institutes.

5.4. c) Interpretation of the Results mentioned by the Coaching Institutes

Presentation of the results by the coaching institutes needs to be interpreted. In order to catch the attention, coaching institutes advertised their results in such a way that made them look like the best performing institutes in the market. All the coaching institutes show the names of the students who have secured All India Ranks from their institutes and the total number of qualified students.

- (i) **Type A:** Allen Career Institute presented their JEE Advanced results of 2019 as 8 in top 20 AIR, 20 in top 50 AIR and 38 in top 100 AIR. A similar pattern was followed in 2018. In 2016 and 2017, the number of students in the top 100, along with the number of total qualified students from the institute, was mentioned. Resonance Eduventures Ltd presents the total selection in respective years from CCPs, DLPs and ELPs. This is an apparent reflection of the results of the institute. If one digs deeper, there is a mention that 8 students

had secured a position in the top 200, 277 Hindi medium students had qualified, and 373 female candidates had qualified for IITs (which they argue to be highest in India from any institute). They also show results of students from different social categories: SC, ST and OBC who had secured top AIR.

Here one needs to understand that both these institutes have more than 15,000 students enrolled in for JEE Advanced course and the total intake of all the IITs is approximately 10,000. Students who have secured ranks in the top 100 will get admission in the IITs, given their preference for the stream they want to pursue in engineering. All the qualified students might not secure admission in IITs, given the ranks they had secured. If a student has secured a rank such as 9800, she is most likely to repeat the examination if she is left with one more attempt, or she will take admission in other engineering colleges such as NITs and GFTIs. Therefore, the number of selections or qualified students from the coaching institutes provides very little information and does not tell us about whether how many have taken admission in IITs, which is subject to counselling in the IITs and engineering colleges.

- (ii) **Type B:** There is one institute in this category, Vibrant Academy. There are approximately 5,000 students enrolled in this institute. The result of this institute is as follows: the institute shows the percentage of students who had qualified from their classroom coaching programme, such as $(942/2045)*100=46.06\%$. The institute provided a detailed list of all the selected students along with their picture, name, roll number, caste, IIT Rank and category rank. For 792 students, the institute has given IIT rank. The last rank mentioned was 24,900.
- (iii) **Type C:** Coaching institutes in this category comprise Bansal classes, Motion IIT- JEE, Nucleus Classes. Bansal classes and Motion Classes are relatively older institutes than Nucleus Classes. All these institutes have less than 5,000 students. The common thing in all the Type C categories is that they present their results where they include students from CCPs, DLPs and ELPs, unlike Type A and Type B institutes. Motion and Bansal Classes being the old ones, present the success ratio of the students, as the number of total students are relatively less than that of Type A and Type B institutes. Therefore, the success ratio seems to be the apt way of declaring the results. Bansal Classes

is showing results of students from classroom programme who have qualified for JEE Advanced, in the top 1,000. They present the success ratio and students who secure top ranks from the distance learning programme. Motion Classes advertise the top AIR under 300 and also presents the success ratio. The success ratio includes all kinds of students from CCPs, DLPs and ELPs. Motion Classes compared its selection ratio with the All-India selection to show their performance, which is intrinsically misleading. They mentioned “100 percent selection from 12th pass (repeater) toppers batch”. Statements like these are very deceptive to the students or their parents who do not fully understand the coaching system and IIT system. These statements are not factually wrong but are misleading, and challenging to process and comprehend information.

Interpretation of Results in the context of the IIT system

There is a need to understand and interpret the results in the light of how admission in IITs occurs. The results presented by the coaching institutes are engineered, and one cannot understand them in isolation to the IITs system for which these students are preparing. In 2018, the total number of qualified students were 31,988, and the total number of seats in the IITs were 11,279 and 800 female supernumerary seats. This shows the qualified students were three times more than the actual seats in the IITs. This implies that coaching institutes advertise all the qualified students (see Type B institute, where they have mentioned the last IIT rank as 24,900), but these students may or may not be getting admission in the IITs. In 2018, some students did not actually accept their allotted seats, and finally, 11,961 students accepted their allotment to the IITs by paying their seat acceptance fee. Through this discussion, it can be understood that all the qualified students do not take admission in the IITs.

Another example of the total number of selections being portrayed by the coaching institutes can be cited: one of the top coaching institutes Allen Career Institute mentioned that 6289 students were selected in the year 2017, which comprises of 4383 from the classroom programme (CCP) and 1906 from the distance learning programme (DLP). Another coaching institute Resonance Eduventures Ltd.,

mentioned in 2017, 4095 students from CCP and 2146 from DLPs were selected in JEE Advanced. As per the above figures of the students selected in IITs, it is depicted that in 2017, 8478 students (only classroom students) were selected from these two coaching institutes only. But the number of total seats in 2017 was 10988. Out of 10,988 seats in IITs, 8478 students cannot be selected from two coaching institutes in Kota. Students' demographic data from IITM (2017) depicts that 50.04 percent of the students admitted to all the IITs reported that their mode of preparation for IIT was coaching, and 46.73 percent of students reported that their mode of preparation was self-study. From the above discussion, one can conclude that it is all about the number game, and students and their parents mostly are unable to interpret these numbers. They get lured by the absolute number of selections presented to them.

In the advertisement of results, there are classroom students, and there are students from distance learning programmes. There have been instances of student poaching where coaching institutes poach students from other institutes. Students from distance programmes are often poached from other institutes, as mentioned by one of the interviewees. This is also known as buying ranks. And these students can be mentioned by two or more institutes as distance students. It is quite often that meritorious students use the study material of two or more coaching institutes.

After discussing the strategies of the providers with respect to students' selection, teachers and advertising strategies, the following section, through economic modelling, tries to understand the objective function of the providers in the coaching industry and how does it attain the objective, given the budget constraints.

5.5) Coaching Institute as an Organization

The coaching industry consists of institutes that prepare students for competitive entrance examinations. The objective of the institute is to maximize the number of rank holders, that is, their respective shares in the total number of seats in the engineering colleges/institutions. The peculiar feature of this market is that it prepares students for competitive entrance examinations where students are competing for a fixed number of seats. The students who take the entrance examination only a very small percentage of like 0.5 percent qualify the examination since it is a national level entrance examination and the competition to maximize the number of selections does not only pertain to coaching institutes in Kota, but also all

the coaching institutes in the country preparing students for pre-engineering and pre-medical entrance examinations do the same. Performance of the institute is measured in relative terms, and all the institutes try to maximize the number of selections respectively, given the seats in the higher education institutions.

As mentioned earlier, in this industry, the number of rank holders/selected students which constitutes the main output of the coaching institute becomes the source of prestige for the coaching institutes. The higher the number of selections, the higher the prestige of the institute. The private coaching institutes do not receive any funding or subsidies from the government agencies, and fees paid by the students remains the main source of revenue. Being in an education market, it cannot generate as much profit as it wants to because it is constrained by the quality of the inputs, which is, the students and the teachers which are essentially non-replaceable inputs. Coaching institutes cannot practise profit maximization independent of prestige maximization as the sustainability of profit maximization depends on the sustainability of prestige maximization. To fulfil the purpose of maximization of profit and prestige, coaching institutes have to select students who are endowed with different abilities. In the study, they are referred to as high efficacy and low efficacy students. This is because high-efficacy students are the ones who are likely to be more successful and therefore contribute to the process of prestige maximization, and low-efficacy students are the ones who pay full tuition fees and therefore contribute to the revenue but they are less successful significantly as compared to high efficacy students. However, in the model, it is assumed that high efficacy students are given full scholarships and are therefore not required to pay tuition fees. In practice, students are given scholarships, which is some percentage of the tuition fees which varies. This strategy of attracting high-efficacy students by offering them scholarships contributes to the selection-based competition which is the defining feature of an education market.

It is important to note that given revenue, cost minimization is inimical to quality as cost and quality are positively correlated. Though this is a common feature of any product, in microeconomics the quality variation is not talked about. In the context of education, variation of quality is intrinsic to the process as it depends primarily on the quality of human capital embodied. To attract good quality students and teachers, the institute has to offer scholarships and lucrative pay packages to the teachers. Similarly, given cost, revenue cannot be maximized without compromising with

quality. One major way of revenue maximization is to increase the number of low efficacy students in the class and by increasing class size. But how do the institutes determine who are the low efficacy students? The following model is inspired by Garvin (1980).

Tuition fees paid by the low-efficacy students is the only source of revenue for the coaching institute. Collection of tuition fees levied on the students is dependent on student number and faculty quality. Better the quality of faculty, higher are the tuition fees charged by the institute. However, if the number of students in the institutes is substantially higher, the institutes can afford to charge lower fees as it gains from economies of scale. Total revenue is represented as follows:

$$TR = (1 - h).stud\#.t(stud\#,facqual) \quad (1.1)$$

Where;

Stud# = the number of students enrolled in the institute

There are '*h*' proportion of students (*stud#*) who are given the scholarship

$(1 - h)$ = proportion of students who pay full tuition fees and contribute to the revenue

The cost incurred by the institutes is divided into the following categories; fixed costs, salary paid to the teachers, scholarship paid to the students and an expected level of own income, which is a proxy of the expected level of profit. Costs are separated into two components; one reflects the cost of hiring the faculty members while the other component is the cost incurred on the students and S^* which is the surplus by the coaching institute. Surplus is extracted by the institutes, which is distributed among the owners. Following is the cost function of the institute. The cost function used in this model is different from the one used by Garvin (1980) in his study as he did not add S^* in the cost function.

$$TC = \sum p^i.facq\#^i.facqual^i + c.stud\# + s.h.stud\# + S^* \quad (1.2)$$

Where $i = 1, 2, 3, 4, \dots, n$, where 1 denotes the best quality and quality declines as the batches increases. Batches are segregated on the basis of quality of the students. Students with high efficacy are placed in the top batches and lower efficacy students

are assigned the lower batches. Coaching institutes practise segregation of batches because they assume that students in top batches have a higher chance of being successful at the examination, aberrations are usually not considered by the institute. In most cases, exceptionally good performance in school examination, in the entrance examination conducted by the coaching and performance in the periodic test conducted by the coaching institute becomes an indicator of the quality of the students. After evaluating the students on these parameters, coaching institutes form their expectations that students have a higher chance to qualify the national level competitive examination.

The cost of a faculty member of unit quality in the i th batch is p^i which captures the variation in the faculty quality teaching in different batches. Given the variation in the quality of the batches, coaching institutes pay differentiated salaries to the faculty based on the batch they are teaching. Better the quality of students in the batch, higher the salary packages of the teachers. This implies with an appointment of high-quality teachers in the top batch ($i = 1$), the cost will increase through the increase in the salary, keeping the number of faculty constant.

These costs are distinguished from c , the per-student cost, which is assumed as constant. Students for coaching institutes are consumers therefore c as a fixed cost is incurred on them. Another component of cost is incurred on scholarship given to high efficacy students who constitute h proportion of the enrolled students, S^* is the surplus extracted by the owners of the coaching institute. Owners will generate a minimum profit which will be shared amongst them. The value of S^* is decided on discretion by the owners of the institutes. This S^* is also dependent on how much the institute intends to incur on faculty salary and scholarships, given the students and the revenue. Faculty salary and scholarships is a component of cost in the model, but it is important to mention that the high salary given to the faculty and scholarship to the high efficacy students will maximize the rank holders, thereby increasing the prestige of the institute. This prestige will further attract a higher number of students, both high-efficacy and low-efficacy. As a consequence of increasing the number of low efficacy students, the institute's revenue will increase. Thus, cost and revenue are interdependent in the coaching industry. This is unlike conventional microeconomics, where revenue and cost function are independent of each other and marginal cost is

purely determined by technology⁴³. In this market, costs are varied with the expectation that cost will add to the revenue.

Balancing $TR = TC$

$$(1 - h).stud\#.t(stud\#, facqual) = \sum p^i.facq\#^i.facqual^i + c.stud\# + s.h.stud\# + S^*$$

$$(-h).stud\#.t(stud\#, facqual) - s.h.stud\# = \sum p^i.facq\#^i.facqual^i + c.stud\# + S^* - stud\#.t(stud\#, facqual)$$

$$(h)(stud\#.t(stud\#, facqual) + s.stud\#) = stud\#.t(stud\#, facqual) - (\sum p^i.facq\#^i.facqual^i + c.stu + S^*)$$

$$h = \frac{stud\#.t(stud\#, facqual) - (\sum p^i.facq\#^i.facqual^i + c.stud\# + S^*)}{(stud\#.t(stud\#, facqual) + s.stud\#)}$$

Tuition fee charged by the institutes across different categories (categorization made in the thesis as Type A, B and C coaching institutes) is similar (as mentioned in Table 3.6 in Chapter 3). Coaching institutes decide teachers' salaries, scholarships offered to high-efficacy students, and the surplus to be extracted based on the competition and reputation of the institute. Coaching institute assess the cost to be incurred under different heads (salary, scholarship) and depending on it, they calculate the number of low-efficacy students who will contribute to the revenue for the institute.

Due to the interdependence of prestige and profit, it is not feasible for the institute to give less scholarships to students so as to earn more profit. If it fails to give adequate scholarships to students, the institute will not be able to attract the required number of meritorious students who have higher chances of being selected. As a consequence, the number of selected students from the institute will decline, and in the subsequent years, the prestige of the institute will also decline, resulting in a lower number of students and lower profits. Thus, prestige in one year becomes the determinant of profit in the following years. The variation in the type of institutes, Type A, B and C, given their budget constraints, will be discussed in the later section.

⁴³ Here single output, successful candidates is being produced but given the variation the ranks, the single output is of quality varying.

As the objective of the coaching institute is to maximize the number of rank holders, coaching institutes derive their utility from student quality and proportion of high efficacy students who have a high probability of attaining success in the competitive examination. Utility is different from prestige, as prestige is only derived from high efficacy students and utility comprises of student quality which is a function of student number and faculty quality and a fraction of high efficacy students.

The Model

While the utility maximization framework is generally used for the analysis of consumer behaviour, Garvin (1980) employs this approach in understanding the organizational behaviour of the universities. This model draws from the work of Garvin (1980) in analysing the decision-making of private coaching institutes. The function of the coaching institutes in this industry is complex as being private in nature, they have to generate their revenue, and since the institute functions in an education market, it cannot generate revenue and maximize profit without attaining the status of being a prestigious institute. Coaching institutes in the private coaching industry in Kota are for-profit institutions operating in an unregulated market without government support, they get themselves registered with the Companies Act, 2013. However, profit maximization is dependent on prestige maximization. This is where the present model is different from Garvin's model (1980) as he assumes the non-profit character of the higher education institutions and emphasizes on prestige. The rationale for using a utility framework is to understand the behaviour of the coaching industry as it captures both the prestige and profit pursued by the provider in the coaching industry. In the following section, the analytical model is presented.

Formalizing the Model

The utility function of the coaching institute is specified in equation (1.3), with the utility being the positive function of the quality of students and the proportion of high-efficacy students whose chance of producing the result is higher and, therefore, they receive scholarships. The reason for taking student quality and proportion of high-efficacy students in the utility function is because students in this industry are the ones who fulfil the objective of the providers of prestige and profit. In Garvin's model, prestige is directly associated with faculty quality and faculty number as they contribute to research in the university. In this industry, coaching institutes are

concerned with student quality. Faculty quality affects the student quality as good teachers are one of the important determinants while choosing an institute⁴⁴ (as mentioned by respondents, Table 4.3). Thus, faculty quality indirectly affects the utility function of the coaching institutes because their role is limited to teaching.

$$U = U(studqual, h. stud\#) \quad (1.3)$$

Where;

U = the utility of the coaching institute

$Studqual$ = quality of the students in the coaching institute

$facqual$ = quality of the faculty in the coaching institute

The function of students' quality is specified in the equation below

$$studqual = q\{Stud\#, facqual\} \quad (1.4)$$

Demand depends on the fees charged and the quality of the faculty. Tuition fees cannot vary much as it is determined by student number and faculty quality. As argued earlier, the better the faculty quality, the higher is the tuition fee charged by the institute. However, if there are a large number of students, then the tuition fee charged is lowered as the institutes gain from economies of scale. The function is specified in equation (1.5)

$$tuit = t(stud\#, facqual) \quad (1.5)$$

The coaching institute faces a constrained optimization problem subject to budget constraint. The Lagrangian takes the following form:

$$L = u(studqual, h. stud\#) - \lambda [TR - TC]$$

Substituting the values from the above equations we get,

$$L = u[q\{stud\#, facqual\}, h. stud\#] - \lambda[(1 - h). stud\#. t(stud\#, facqual) - \sum p^i. facq\#^i. facqual^i - c. stud\# - s. h. stud\# - S^*] \quad (1.6)$$

⁴⁴ In the field survey 92 percent of the respondents in the study reported that good teachers is one of the parameter for choosing the particular institute

Let us assume that the institute maximizes L with respect to two variables $stud\#$, and $facqual$. These two variables are chosen as decision variables because both student number and faculty quality are inputs for the coaching institute, which help in producing results. Taking the first-order conditions with respect to student number ($stud\#$) and faculty quality ($facqual$) yields the following expression:

$$\frac{\partial U}{\partial q} \cdot \frac{\partial q}{\partial stud\#} + h \cdot \frac{\partial U}{\partial stud\#} - \lambda \left[(1-h) \cdot t(stud\#, facqual) + (1-h)stud\# \frac{\partial t}{\partial stud\#} - c - sh \right] = 0 \quad (1.7)$$

$$\frac{\partial U}{\partial q} \cdot \frac{\partial q}{\partial facqual} - \lambda \left[(1-h)stud\# \frac{\partial t}{\partial facqual} - p^i fac\#^i \right] = 0 \quad (1.8)$$

$$\frac{\frac{\partial U}{\partial q} \cdot \frac{\partial q}{\partial stud\#} + h \cdot \frac{\partial U}{\partial stud\#}}{\frac{\partial U}{\partial q} \cdot \frac{\partial q}{\partial facqual}} = \frac{(1-h) \cdot t(stud\#, facqual) + (1-h)stud\# \frac{\partial t}{\partial stud\#} - c - sh}{\left[(1-h)stud\# \frac{\partial t}{\partial facqual} - p^i fac\#^i \right]} \quad (1.9)$$

Equation (1.9) depicts a familiar condition of equating the ratio of marginal utilities to their marginal costs. The numerator of the left-hand side is the marginal utility that results from the increased enrolments in the coaching institute, while the denominator is the marginal utility that results from faculty quality. In the numerator, there are two components. The first term shows student number indirectly affects the utility of the institute through student quality, and the second term shows the increased enrolment of students who get tuition waivers affects the utility function directly. In the denominator, there is one term that entails the marginal utility of the institute for per unit change in faculty quality indirectly through student quality.

The right-hand side represents a ratio of marginal cost with the numerator indicating the marginal cost acquired from student number and faculty quality in the denominator.

The first two terms $(1-h) \cdot t(stud\#, facqual) + (1-h)stud\# \frac{\partial t}{\partial stud\#}$ reflect the increased revenue that results from increased enrolments, while the third term indicates the net increase in the cost through scholarships and unit expenditure on students. The basic expenditure on students as consumers (study material and other expenses) in c and sh denotes the scholarship (s) given to high efficacy students of h proportion. The denominator is divided into two components; the first component is

revenue from faculty quality and the second component denotes $p^i \text{ fac}^{\#i}$ which is the salary paid to the number of faculty in the institute. Faculty quality provides revenue through tuition fees and student numbers. A marginal increase in the faculty quality demands for an increase in the tuition fees directly. It also attracts revenue through student number as students' decision for the institute choice depends on the proportion of good quality teachers (as mentioned in Chapter 5). The minus (-) sign in the equation indicates the trade-off; if coaching institutes increase the proportion of the scholarship given to high efficacy students, it impacts the revenue collected. Similarly, if the coaching institutes increase the faculty quality, it increases the cost for the institute. An increase in the number of high efficacy students and faculty quality increases cost for the coaching institutes but it also increases the utility of the institutes.

Concluding Remarks on the Model

The present model is an adaptive model from Garvin (1980) and it seeks to capture the essence of institutional strategy of the coaching institutes. This model is adopted in the context of the private coaching institutes which function as a for-profit organization, whereas Garvin (1980) in his model, assumes the non-profit character of the higher education institutions. The coaching industry is student-centric, where all the emphasis is laid on the composition of the students, quality and quantity of the students. The first expression in equation (1.9) shows how coaching institutes balance the quantity and quality of students in determining the size and composition of their student bodies. It also illustrates the importance placed on faculty quality and how it affects the student quality in the coaching institute. Faculty quality in the coaching industry affects the utility indirectly as the function of the teachers is to teach the students. In Garvin's model, faculty quality directly affects the prestige of the university as they are involved in research. An important deviation from Garvin's model is that there is no subsidy received for the students in this industry, on the contrary, coaching institutes have to give scholarships (s) to attract high efficacy students. Scholarship given to high efficacy students is a distinct feature of this model because without scholarship, the coaching institutes will not be able to attract high efficacy students who have a higher chance of qualifying the entrance examination. The variation in the faculty quality is captured through the segregation of batches. Batches are segregated based on the quality of students; high efficacy students are

placed in top batches, followed by low efficacy students relatively speaking in lower batches. A high-quality teacher teaches in the top batch and is paid a higher salary. Though high-quality teachers take classes for top batches, they attract a number of students in the coaching institutes due to their goodwill in the market.

The marginal condition derived in the model is the same for all the coaching institutes in the coaching industry, however, the budget constraint will capture the variation in the quality of coaching institutes; Type A, B and C. The following section will discuss the variation in Type A, B and C and institutes due to discrepancies in the budget equation.

Types of Coaching Institutes

The above model captures the functioning of the coaching institutes through an optimization model. Coaching institutes are for-profit organizations, and a minimum profit will always be extracted by the institutes. This profit is contingent on the reputation of the coaching institutes. For any institute, as the budget equation changes, the utility also changes while the marginal condition remains the same. By changing the variables in the cost equation, interesting observations can be made. Total revenue and total cost equations are represented as follows:

$$(1 - h).stud\#.t(stud\#,facqual)=\sum p^i.facq\#^i.facqual^i + c.stud\# + s.h.stud\# + S^*$$

On the left-hand side, there is a source of revenue represented by the $(1 - h).stud\#$ which is tuition fee collected by low efficacy students represented as $(1 - h)$ in the above model. $t(stud\#,facqual)$ shows that the tuition fee charged by the coaching institutes is dependent on the number of students and faculty quality. On the right-hand side, cost of faculty in i th batch. p^i captures the variation in the faculty quality teaching in different batches. c is the fixed cost incurred on all the students, s is the scholarship given to high efficacy students (h) and S^* is the surplus generated by the institutes. S^* is a major distinguishing feature amongst the coaching institutes. Coaching institutes set a target profit (S^*) and accordingly, their bargaining power changes as to how much scholarship is allocated to the students or how much salary is to be given to faculty of different batches. Providers of the institutes will negotiate a trade-off between minimum surplus that they wish to recover, scholarship and faculty

salary. The revenue is dependent on the number of students. In the following discussion total revenue is represented as TR, and expanded expression is avoided for simplicity. Total Cost will be represented in its expanded form.

$$TR = \sum p^i \cdot facq\#^i \cdot facqual^i + c \cdot stud\# + s \cdot h \cdot stud\# + S^*$$

Emphasis is laid on the determination of the minimum profit by the providers of the different institutes, and this is because it is an oligopolistic market structure where students can go to different institutes.

Type A: Let's take the case of Type A institutes. This category of coaching institutes has one of the highest number of students; therefore, given tuition fees, revenue generated by these institutes is very high. These institutes have a higher proportion of high-quality faculty and high efficacy students, and this is because they can pay high salaries to the teachers and offer scholarships to the students. The share of the profit generated by the providers also is relatively higher for these institutes. Type A institutes, because of their prestige can reduce ($s \cdot h \cdot stud\#$) and increase the surplus S^* substantially. These institutes can give proportionately less scholarships to the students because the majority of the students come to Kota to increase their chances to qualify the entrance examination. Getting scholarships for the majority of the students comes secondary. These institutes have best of the faculty because they provide both pecuniary and non-pecuniary benefits to them. As a result, a large number of students choose these institutes because of good quality faculty which is one of the determining factors while choosing the institute.

Type B and C: This category includes coaching institutes other than Type A institutes, that is Type B and C (as categorized in the study). Due to the peculiar feature of this market that students can go to other institutes; this category of institutes will target a lower level of profit (S^*) as compared to Type A institutes, who are more interested in increasing their market shares. To attract high-efficacy students and high-quality teachers, these institutes have to offer proportionately higher scholarships and higher salary to the faculty as a result of which their surplus declines. Revenue generated by these institutes is much lower than Type A institutes as the number of students is fewer than Type A institutes, given tuition fees.

Thus, the prestige of the institutes will determine the profit of the institutes, the higher the prestige, the higher is the profit and vice versa because a minimum surplus will always be recovered by the providers given the nature of the coaching industry.

5.6 Concluding Remarks

This chapter elaborated on the strategies used by the providers of the institutes in the Kota coaching industry. The success rate of the coaching institutes in the coaching industry differs because of the difference in the quality of students and the teachers. Good quality students and good quality teachers are limited in number because of the human capital embodied in them. To attract these students and teachers, coaching institutes employ strategies which is the subject matter of this chapter. The strategies adopted by the providers are divided into three main sections: student selection, issues concerning the recruitment and management of teachers and advertising strategies.

(i) Students' Selection

To achieve the objective of profit and prestige, institutes select high efficacy students and by looking at the results given by the high efficacy students, low efficacy follows, thereby generating revenue. Due to the dependence on prestige and profit, Type A institutes are able to attract the highest number of high efficacy students followed by Type B category because they have given good results in the previous years. Type C, on the other hand, does not have enough high efficacy students in CCPs. As a result, they diversify their programmes- DLPs, ELPs, SIPs, and try to attract the students in these categories. Though all the institutes offer courses in these modes, it is the focus of the institute that matters.

Another point is that Type C institutes offer scholarship as a way of attracting high efficacy students. Though all Type A, B and C institutes give scholarships to the students, some students who do not get the scholarships in Type A or B may avail themselves scholarships in Type C because it is an education market. All the institutes cannot have access to all the students. While due to the high prestige, Type A institutes followed by Type B institutes, manage to get the best of the students, Type C institutes, on the other hand, also try to attract students who will be selected in the competitive examination, although it is possible that they may secure lower ranks.

(ii) **Teachers' Selection and Management**

Like students, teachers are also crucial for the coaching institutes. Teacher quality indirectly affects the utility of the coaching institute (as discussed in the model in section 5.5). This is because teacher quality attracts the students as it is one of the determinants for choosing the institute by the students. To achieve the desired objective coaching institute segregates the batches and places high-efficacy students with high-quality teachers and low-efficacy students with low-quality teachers.

Due to the fierce competition for high-quality teachers coaching institutes devise strategies to retain the best of the teachers. One of the ways is to offer pecuniary benefits such as salaries and non-pecuniary benefits: job satisfaction, growth in career. The treatment of the faculty members in the coaching institute varies with their education, experience, students' feedback etc. The value of the faculty based on these parameters is not limited to the institute but also applies to the industry because of the mouth publicity by the students and the location of the institute in the cluster.

Management of the teachers is another crucial feature of this industry. The HoDs and the top management of the institutes very carefully assign the teaching duties to the faculties. Given the competition in the market, intrinsic qualities and trust factors, teachers are allotted the batches, subjects, or topics in the institute. Type A due to the higher prestige and revenue, have access to high-quality teachers followed by other institutes. However, due to ego clashes and growth in career, teachers leave jobs in Type A and B institutes and establish new institutes that become Type C institutes because the number of students is less. They are unable to produce results immediately because they have to compete with already established institutes.

(iii) **Advertising in Coaching Industry**

In the coaching industry, the main component of advertisement is results given by the institutes and is a means to attract students. Institutes use different mediums such as print media: newspapers, hoardings and digital marketing such as websites to show results in the form of a total number of selections, ranks secured by the toppers, toppers in sub-categories: gender, region and how many students are from classroom coaching programme and distance learning programme. To catch the attention of the potential students and publicise the results of the institute interesting ways are used by

the coaching institutes such as organising the talk shows by the toppers. One of the peculiar phenomena in the coaching industry is the advertisement of the topper by more than one institutes which leads to confusion for the prospective decision-makers as to from which institute a student has taken coaching. In this scenario, it is important to understand how these institutes offer the same course in different mediums: CCPs, DLPs, ELPs, and SIPs and target the potential students accordingly. It is only under CCPs that the student is enrolled with the institute, attends classes and avails of all the facilities, and in other programmes, DLP, ELP, the student only uses the study material and video lectures.

The extent of news coverage in the print media, hoardings, digital marketing can be linked to the advertisement cost incurred by the coaching institutes. Coaching institutes with higher revenue, such as Type A spend more on advertisements as compared to other institutes Type B and C. Higher the cost incurred on an advertisement, higher is the publicity of the institutes, which helps in attracting the students as more students within and across cities have information about the institute. Along with results, all the related information concerning the students is put up on the websites of the respective institutes, such as details of the course, fee structure, date of commencement, scholarship criteria.

The presentation of results in terms of top ranks, number of selections under CCP, DLPs by the coaching institutes in their advertisement is to be interpreted in the context of the number of seats in IITs and other engineering colleges. Most of the students taking coaching target JEE Advanced, which is for getting admission in IITs. However, not all the qualified students are eligible. This is because the number of qualified students in JEE Advanced examination is approximately three times more than the number of seats in all the IITs. This depicts that all the students who qualify the JEE Advanced do not get admission in IITs. It is contingent on the rank secured by the students, and usually, the ones at the top are able to secure admission in IITs in the stream of their choice.

(iv) **The Model**

The last segment of the chapter presents an optimization model which captures the functioning of the coaching industry, which is complicated as being private in nature, they have to generate their revenue and being an education market, it cannot generate

revenue and maximize profit without attaining prestige. The adaptation of Garvin's model (1980) is used to capture the behaviour through the utility framework. Unlike Garvin's model, the model adopted in the study captures both profit and prestige practised by the providers in the coaching industry.

After the discussion on choice-making by the students in the previous chapter and the strategies and selection-mechanism implemented by the providers in the present chapter, the next chapter will elaborate on the features of the market for the private coaching industry and how they are different from the education market.

Chapter 6: Nature of Private Coaching Industry: A form of Shadow Education Market

6.1 Introduction

After analysing the choice-making by the students and the selection mechanism adopted by the providers, this chapter examines the specific features of the market that characterise the private coaching industry in Kota. The previous chapters elaborated on the strategies of the students and the providers. This chapter seeks to examine the structure and distinct features of the private coaching industry in terms of an education market. The interaction between the students (consumers) and the providers (coaching institutes) in the coaching industry can be thought of as a market. The market for the coaching industry is also a market which is imperfect in nature because the assumption of homogeneity is not fulfilled (as discussed in the theoretical framework in Chapter 2) which is akin to a typical education market. However, the market is different because it is a supplementary form of a market that prepares students to transit from one level of education to the next. It does not give any formal degree or certificate or any form of credentials to the students. The objective of the providers is to maximize the chances of success for its students (consumers) in competitive examinations. The success in the competitive examination is evaluated in relative terms, as the number of seats is fixed, and all the aspirants are competing for those fixed seats (as discussed in Chapter 1). This implies that the output in this market is binary in nature for the students, where only a small proportion of aspirants succeed, and the rest do not. Some students who qualify for the entrance examination become the source of prestige for the institutes, and the higher the number of selections, the higher is the prestige of the institute. The interdependence of prestige and profit is also a peculiar feature of this market (as discussed in Chapter 6). Mostly, in an education market, profit-making is not permitted because what drives education institutions to perform better is their 'objective function' (as discussed in Chapter 2). In the market for the coaching industry, along with prestige, profit is also the objective of the institutes. This chapter, therefore, starts with a discussion on the structure and functioning of the market for the coaching industry and its features. The next section discusses the freedom enjoyed by the students who are considered as consumers and providers of the coaching

institutes. The last section elaborates on the implications of the private coaching industry in Kota.

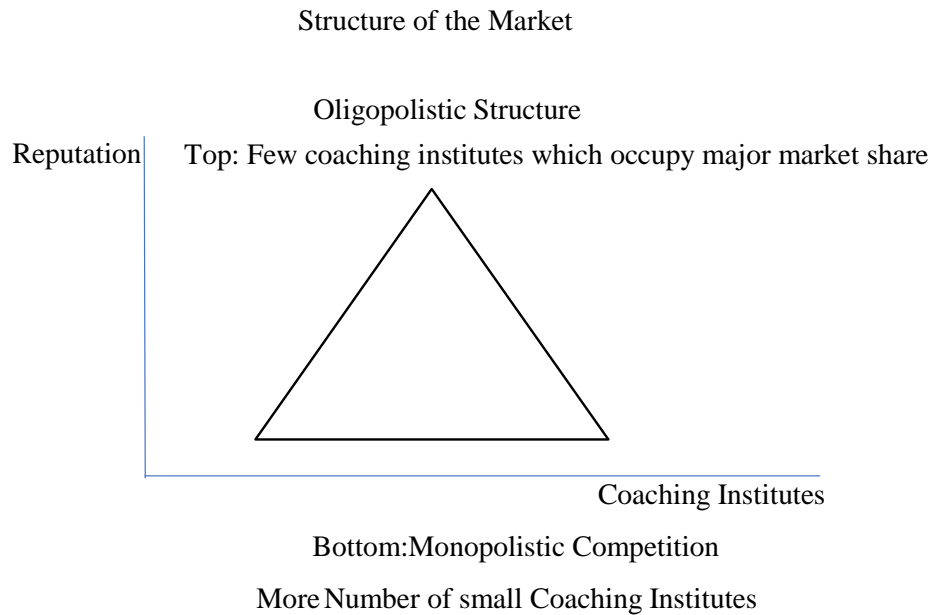
6.2 Features of the Market for the Private Coaching Industry in Kota

This section briefly discusses that the structure of the private coaching industry is significantly determined by the conduct and the behaviour of the providers. The market for education has some unique characteristics (as discussed in Chapter 2), which leads to some sources of market failure generally not encountered in the case of a typical consumption goods market. The sources of such market failure are discussed in the following segment.

6.2.1 Structure of the Private Coaching Industry and its Functioning

There are around ten major, twenty medium-sized and about a hundred small coaching institutes in the Kota coaching industry. The coaching institutes are closely set up in the proximity of another along with the ancillaries, such as hostels and paying guest accommodations, hotels, tiffin services, food delivery, auto-rickshaws and taxi services, stationary and photocopy services, cyber cafes, and others. The reputed coaching institutes have campuses not only in Kota but across different cities (detailed discussion in Chapter 3). The expansion of the coaching institutes can help reap the benefits of economies of scale. To expand, institutes either offer new programmes such as coaching for Olympiads, coaching for 1st to 6th class or open new test centres or increase student intake in the pre-medical and pre-engineering classroom programme. Like any education market, in this market also, the courses offered (coaching for pre-engineering or pre-medical) are differentiated by their quality depending on the quality of the students, teachers and brand value of the coaching institute. At the top, there are a few highly reputed coaching institutes which are preferred by the students because of their ability to give results: top AIR and a higher number of qualified students. At the bottom, there are a large number of small players.

Figure 6.1: Structure of the Market



At first sight, the market for the coaching industry resembles monopolistic competition, but the market for the coaching industry is segmented where few interdependent sellers who occupy a major market share are faced with oligopolistic competition and other providers face monopolistic competition. Oligopolistic competition prevails in the market for the coaching industry because large and the best coaching institutions cannot expand and occupy the whole market, as they are constrained by the quality of the input- teachers and students. Also, the number of students cannot exceed after a point, as large number of students will hamper the quality of instruction delivered by the teachers. Monopolistic competition in the form of small players continues to prevail as these institutes charge lower fees and offer relatively more fee-waivers and scholarships.

a) Identification of Input and Output in the Coaching Industry

In the private coaching industry, providers maximise the chances of success of students in the national level entrance examinations. The success in this industry is dependent on the quality of the students because this market also employs ‘customer input technology’ (Winston, 1999) (as discussed in Chapter 5), and the input that is the students are not reproducible, due to which there is a tough

competition among the providers to attract high-efficacy students to maximize the AIR holders. For this industry, students constitute the input, because the output is also precisely measured by the success of the students. For a typical higher education market, the higher education institutes are called multi-product firms as other than teaching, research and outreach activities are also the output. If the quality of human capital embodied in the student can be reproduced, then the inputs get multiplied, and that is not possible in an education market. Thus, quality is dependent on the quality of inputs which indicates that good students are in short supply. Private coaching facilitates the students to develop an understanding of the concerned subjects that helps them qualify for the entrance test.

In the coaching industry, there are two inputs, the students and the teachers but output is only one, the success rate. It is not a multi-product firm therefore, the success rate is entirely dependent on the students and the link is very clear between the input and the output. The success rate is the same for all the students who attain success in this market, essentially the high-efficacy students who qualify for the competitive examination and secure admission in the engineering colleges and institutions. The output of this market in terms of the qualified students becomes the input for the next level of education.

The hierarchy among the coaching institutes is because of the selection-based efficiency practised by the institutes which explain why there is fierce competition for high-efficacy students and students are the only inputs. This makes the selection-based competition intense and more focused in this market. The absence of regulation and public funding makes the selection-based competition even more intense and fierce. This is the reason why there is a hierarchy among the coaching institutes such as Type A, B and C⁴⁵. The hierarchy among the institutes in the industry is relatively stable. However, there are occasions where teacher poaching happens and often a mass exodus of teachers destabilises the market. This makes the market for the coaching industry oligopolistic in nature and because it is an oligopolistic market there is interdependence among the coaching institutes.

⁴⁵ The categorisation is based on the reputation of the institute as type has given good results in terms of top AIR and good number of selections.

b) **Information Asymmetry**

The reputation of the coaching institutes is indicated by the number of selections in the previous year by the institute. Coaching institutes extensively advertise their results on their websites, newspapers, and hoardings. The presentation of results in the form of a number of selected students under CCPs, DLPs, ELPs, in the absence of adequate understanding of the IIT system, makes it challenging to comprehend. Type A institutes advertise the total number of selected students, whereas Type B and some Type C institutes present success rates in the competitive examinations (as discussed in detail in Chapter 5). The presentation of results by the respective institutes depends on the total number of enrolled students in that institute. Both the total number of selections from the institutes and the success rate of the students in the examination provide incomplete information. Type A institutes do not present the total number of enrolled students in the particular program because that will depict their failure rate, which is supposedly high. On the contrary, Type B institute advertises success rate and ranks under sub-category and Type C institutes also advertise success rate because the number of enrolments in these institutes are less as compared to Type A institutes. In the absence of knowledge on seat allocation in the IITs and other prestigious engineering institutes, the interpretation of advertised results becomes somewhat confusing for the students. Though the information is available, it is often not easy to process the information by the students or the parents because there is a cost involved in searching the information, such as internet facilities and time in gathering the information. Apart from information resources, social capital, cultural capital, and financial capital are equally important in order to make an informed choice.

After analysing the reputation of the institute, one chooses the coaching institute. However, the students do not know which batch will be allotted to them within the institute and which teachers will teach them. This is because students are segregated into different batches based on their abilities. Students, while choosing an institute, do not take their ability into consideration (high-efficacy and low-efficacy), but providers are very particular about the abilities of the students in relative terms. This makes the experience of every student different from each other.

c) Quasi-market for the Coaching Industry

An education market that is subsidised and the provision of which is regulated can be identified as a ‘quasi-market’ (Teixeira et al., 2004). Unlike the mainstream education market (features of which are discussed in Chapter 2), the providers in this market charge fees which is based on the cost-recovery model and the objective of the providers is profit maximization which is contingent on prestige maximization (as discussed in Section 5.5 in Chapter 5). Like an education market, where the quality of students and teachers determine the prestige of an institute, in the coaching industry also, student quality and teacher quality boost the prestige of the institute. Providers offer scholarships to high-efficacy students which signify competition among the providers for students and teachers. This makes the market for the private coaching industry also a ‘quasi-market’. However, the extent of ‘quasiness’ is much lower because only a few students who are likely to contribute to the success of the coaching will be given scholarships. Scholarship offered to the students are contingent on their performance in the school examinations, in scholarship-cum-admission test of the coaching institute and other criteria as mentioned in Table 3.3 (in Chapter 3). Profit maximization being the objective of the providers, it reduces the extent of quasiness of this form of market. Given its features, the market for the coaching industry may look as if it is converging towards a commodity market, but the inherent characteristics of education, the embodiment of human capital in the inputs and the variation in these inputs (students) and their treatment makes it a ‘quasi-market’.

d) Loan facility in Coaching Industry

In the market for the coaching industry, the Non-Banking Finance Company offers unsecured loans to the students for paying the fees. Coaching institutes have collaborations with financial institutions which provide unsecured loans to the students for payment of the fees at zero percent interest. One such financial institution is Bajaj Finserv Ltd., which has set up counters inside the premises of coaching institutes and extends loans for paying the fees. Almost all the major coaching institutes have tie-ups with Bajaj Finserv Ltd. One salesperson of Bajaj Finserv Ltd. reported that in a month, approximately ten thousand people take loans to pay the fee of their wards during the admission period. He also said the

facility of paying fees in six instalments by the family of the ward, unlike two instalments which are offered by the coaching institute, gives them an opportunity to manage other expenses better. On payment of a lump sum fee, INR 5,000-6,000 is given as a fee waiver (as mentioned in Chapter 3). Bajaj Finserv Ltd. transfers the lump sum fee directly to the institute in the name of the student and gets a fee waiver of INR 5,000-6,000, whereas the parents or family members pay full fees to Bajaj Finserv Ltd. in six instalments. Thus, the tuition waiver of INR 5,000-6,000 contributes to profit making for the financial institution.

In short, the market for the coaching industry is hierarchical in nature where some institutes are at the top and others are at the bottom. This is due to the selection-based mechanism practised by the institute in favour of the high efficacy students who are limited in number. The mechanism to attract high efficacy students is by offering them scholarships. The coaching industry is based on a cost-recovery model where students, apart from the exceptionally meritorious students who are offered scholarships, pay full fees. Scholarships offered to meritorious students make the market quasi in nature though the extent of quasiness is much lower than the mainstream education market in absence of public funding support.

6.2.2 The Objective Function of Private Coaching Institutes

The market for the coaching industry in Kota is a for-profit sector where providers generate surplus for the owners and profits. The coaching institutes do not have to comply with any regulatory intervention of the government, and the institutes have got their registration under the Companies Act, 2013. In the absence of any regulation, the extent of generation of profit by the providers is constrained by the quality of the students and the teachers in this market as these crucial inputs are not reproducible. Coaching institutes cannot practise profit maximization independent of prestige maximization as the sustainability of profit is dependent on prestige maximization. The objective function of the coaching institutes makes a huge difference in the functioning of the market such as selection of the students, recruitment of the faculty and advertisements.

6.3 Freedoms Enjoyed by the Consumers and the Providers

Features of the market could be characterised in terms of the freedom enjoyed by the two broad sets of agents, i.e., consumers (students) and providers

(coaching institutes). There are no regulations imposed on the private coaching institutes except the guidelines issued by the district administration of Kota on stress management among the students. In the absence of government regulations, financial constraints, efficacy (ability) of the students and reputation of the institutes and other subjectivities keep a check on the freedoms enjoyed by both the students and providers.

Following Jongbloed (2003), this section presents the freedom for consumers (students) and providers (private coaching institutes). Though Jongbloed (2003) specified the eight freedoms in the context of the higher education sector, we study these freedoms in the context of the market for the private coaching industry to understand the specific characteristics of the profit-driven education market. These freedoms enhance consumer sovereignty and provider sovereignty, thereby facilitating the consumers and providers to decide rationally.

6.3 a) Freedom for Consumers

(i) Freedom to Choose the Provider

Freedom to choose the provider is relatively more in the market for the coaching industry. Across the institutes, students can choose because the output of all the coaching institutes is the same, that is, the success rate. As students can choose the institutes, the institutes also choose the students, but given that the institutes offer admission and the institutes take the final call on who all are to be admitted. Coaching institutes also select the students to achieve success. Customer input technology is very profound because students are the source of revenue as well as the source of success. For the institutes to achieve success, they need meritorious students and to attract meritorious students, institutes have to offer scholarships and that, in turn, affects the revenue. Thus, there is always a trade-off between revenue maximization and maximization of success rate in the coaching industry.

The coaching institutes adopt a differentiated fee structure to increase their discretionary power in the admission process. Students with high efficacy who are likely to contribute more to the realization of success rate maximization are offered scholarships and other students are charged full fees. Because of the differentiated fee structure, high-efficacy students have more bargaining power and based on their potentials, they are offered a varying percentage of scholarships (scholarships offered

range between 10-90 percent) in terms of tuition fees. This is generally practised only to a very limited extent in mainly the private education sector.

Sometimes students with a low household budget and high efficacy are constrained because coaching institutes may or may not offer them required scholarships to bear their expenses, as scholarships are offered only on the perceived ability (efficacy) of the students by the coaching institutes (scholarship criteria as mentioned in Table 3.3 in Chapter 3). As a result, these students may opt for institutes that are not so reputed but offer them enough scholarships to defray their basic expenses. Students with low efficacy and high household budget can afford to take admission in any institute of their choice but their chances of qualifying for the competitive examination with high ranks are very low because they are likely to remain constrained by merit. Based on the perceived learning gain also, students choose coaching institutes. For all the enrolled students in Type B institute as their first preferred choice who took admission whereas 90 percent of the students chose Type A as their first preferred choice (as mentioned in Table 4.4 in Chapter 4). For all the students enrolled in type B institutes, it is their first preferred choice. While those in type A institutes, 90 percent prefer it as their first choice (as mentioned in Table 4.4 in Chapter 4).

Though individual subjectivities affect the decision to choose the institute (as discussed in Chapter 2), the reputation of the institute plays a significant role in the choice of the institute by the students. Due to a decline in the stringency in admission to coaching institutes, the majority of the students get admission in their first preferred choice. However, if due to any reason, some students fail to get admission, they opt for an institute which is their second preference (as discussed in Chapter 4).

In the coaching industry students have the freedom to leave the institute during the course of their study if they are not satisfied with the quality. This is because these students do not offer any credentials and the output is the same for all, which is the success rate and the students value teaching-learning to maximize chances of success. This is usually not the case in the mainstream education market.

(ii) Freedom to Choose the Product

In the coaching industry, courses (which are often understood as products in mainstream education) are predetermined as students choose the course (pre-engineering, pre-medical examination or Olympiads) in line with their career goals

prior to choosing the coaching institute. However, delivery for a course in a coaching institute can vary by the institutional strategy of maximising the success rate. It is the batches within the courses that differ in quality and processes. Therefore, this discussion emphasises on how coaching institutes assume different batches as different products. Interestingly, these are the products for the fee-paying students but only the successful students are actually the products of the institution for the purpose of prestige maximization and reputation. Students do not have the freedom to choose the batch as the batch allotment is the prerogative of the management based on their assessment of the students' potential and merit of the student. Usually, courses offered by the provider are often seen in relation to the reputation of the institutions. This phenomenon is prevalent in the higher education market but this is not the case in the coaching industry. In this industry, the same institute can offer different products, which are the batches within the institutes. Different batches are treated differently within the institutes. Students of different potential and quality as assessed are segregated into different batches and accordingly, teachers are allocated to the batches to ensure that the best teachers teach the best students. For instance, high-quality teachers are allotted top batches which has high-quality students. Batches within the institutes affect the decision making of the students because of the perceived differences in the quality of teaching. If the students are not satisfied with the quality of the teaching in their respective batch they tend to switch the institute as the primary purpose is to learn well and qualify in the entrance examination. In the formal education market, segregation of classes based on ability is generally not practised in order to uphold the principles of diversity and equality.

(iii) Adequate Information on Price and Quality

The students usually get information about the fee structure (price), but it is hard to process all the information about the quality. In the coaching industry, the fee (price) charged for the course and scholarship criteria are mentioned on the website of the respective institutes. However, students differ in their cognitive abilities and based on their perceived efficacy by the coaching institutes they are offered scholarships making the net fee payable differential. The percentage of scholarship offered also varies with the quality of coaching institutes. It was found in the analysis of Chapters 4 and 5 that coaching institutes in Type C category offer a higher proportion of scholarships to attract students as compared to Type A and B.

The quality of an institute in this market can be assessed through the results. The higher is the number of selections in the competitive examination from the institute, the better is the quality of the institute as perceived by the stakeholders. However, segmentation within the institute poses other challenges as different batches are treated differently by the institute. Students can enquire and gauge the overall quality of the coaching institute, but the batch allocated to the students is not known to the students before admission, which is a matter of concern for the students as high-quality teachers teach in top batches and as the quality of batches declines the quality of the teacher also declines in the coaching industry.

Private providers in the informal market set-up often hide information and mislead students while offering information. The number of successful students with ranks and qualified with good prospects of admission as advertised by the institutes are also misleading: absolute number or selection ratio (as discussed in Chapter 5). It is difficult to process the numbers advertised by the institutes in the absence of information about the total number of students in the coaching institutes or about the seats in the engineering institutions. Though students are manipulated through the presentation of results however they do not remain manipulated for long due to the location of institutes which enhances the ease of getting the required information.

Thus, information asymmetry in this market is relatively less because the institutes are located in a cluster and students gather information about the quality of the teachers and other determinants from different sources such as relatives, friends, school teachers or tuition teachers (as mentioned in Table 4.2 and 4.3 in Chapter 4). This is usually not practised in the mainstream education market. The reputation of the teachers is very crucial because students gather information about the quality of the teacher(s) in the institutes and choose institutes. If the students are not satisfied with the quality of the teaching in the institute they switch the institutes. If the high-quality teacher(s) switch institutes many a time, students also switch institutes. This almost free exit and entry is not observed in the formal education market.

(iv) Direct and Cost Covering Prices

To increase consumer sovereignty, consumers pay the price for the services consumed, and that price has some relation to the cost of providing that service (Jongbloed, 2003). In the absence of government funding, coaching institutes

charge fees on the cost recovery model. The fee structure of all the major institutes (under Type A, B and C category as mentioned in Chapter 3) falls under the same bracket. One of the main reasons for this is the location of the institutes. If an institute charges very low fees, it sends a signal about its low quality (either declining performance overtime or a low number of selections in the previous year). This is a reason why the fee structure across Type A, B and C is almost the same. The differentiation is practised in offering the scholarship to the students (as mentioned in Chapters 4 and 5). Scholarships offered to students is one of the components of cost (as discussed in Section 5.5 in Chapter 5) incurred as it helps in attracting high efficacy students.

6.3. b) Freedom for Providers

The following section will discuss the four freedoms for the providers.

(i) Freedom of Entry

All the coaching institutes which are under the purview of the study are registered under the Companies Act, 2013, and there is no restriction in setting up an institute if the necessary conditions are fulfilled as prescribed under the Companies Act. However, an institute is offering an education service, and the entry into the market is constrained by the number of students and students' quality. If a newly established institute fails to attract students, it will be difficult for the institute to survive. The competition for high-efficacy students can further intensify the competition because the already established institutes will use their collective power to attract the best of the students and the faculty. In the Kota coaching industry, mostly all the institutes in the past 30 years are a result of a split from one institute or the other. The most common reason for these splits is the conflict between the teachers and the administration, which therefore triggers the group of teachers to leave and open a new institute. This way, some students who were being taught by these teachers in the previous institute also leave and get enrolled in the new institute. After the split, tough competition prevails among the coaching institutes, and they go to the extent of poaching teachers and students. In short, there is freedom of entry in the market for the coaching industry. However, the competition and inadequacy of quality input makes it difficult for the institute to survive in the market. As a result of this, some institutes have not been able to survive in the market. It is very difficult to

set up a completely new institute with new teachers as it gets very difficult for the new students to trust the new institute. Meritorious students do not take the risk to get enrolled in the newly set up institutes. This makes getting good results tricky and uncertain. Coaching institutes exit the market, and the institute which is registered as the company follows the procedure under the Company Law for closing the coaching institute.

(ii) Freedom to Specify the Type of Programmes/Courses

Providers in the coaching industry have the freedom to determine the courses and the medium of instruction of the courses offered. The diversity of courses is directly proportional to the size of the coaching institute. As the scale of activities increases, coaching institutes introduce new courses, which are products for them to expand their business. Coaching institutes offer courses for pre-engineering, pre-medical, Olympiads, NTSE, KVPY and other competitive examinations. In the pre-engineering course, they offer coaching for JEE Main and JEE Advanced. Coaching institutes offer courses from class 6 onwards. These institutes also practise diversity in the mode of instruction such as CCPs, DLPs, ELPs, and SIPs. Coaching institutes have full discretion in offering courses and the mode of learning.

(iii) Freedom to use Available Resources

Coaching institutes generate their own revenue and therefore have full discretion over it. The interdependence of cost and revenue, sustainability of profit on prestige (as discussed in Chapter 5) and location of coaching institutes in clusters makes the scenario complicated. As mentioned in Chapter 5, scholarships offered to high-efficacy students and teacher salaries are components of the cost. Without offering scholarships and high salaries, institutes will not be able to have high efficacy students. Due to this, coaching institutes, given their reputation (Type A, B and C institutes) in the market, adjust their surplus. Due to high prestige, Type A institutes have a higher surplus and institutes in the Type C category because of low prestige have a lower surplus which is distributed among the owners in the coaching industry.

(iv) Freedom to Determine Prices

Being situated in a highly concentrated location, the fees charged by the coaching institutes falls within the cluster of prices (fee structure). The price leader in the coaching industry is Allen Career Institute which belongs to the Type A category

occupying more than 40 percent of the market share, and the fees charged are lowest, followed by other institutes in the market (as mentioned in Table 3.5 in Chapter 3). All the coaching institutes are bound to design their fee structure keeping in view what the other institutes in the market charge as there are a good number of substitutes. The coaching institutes are differentiated because of the quality of students, teachers, and the process involved. If the institute charges very high fees, students will not prefer that institute, and if the fee charged is too low, it will give the signal of poor quality. Thus, the fee structure of all the coaching institutes falls within the cluster of fees charged by other competing institutes. Coaching institutes actually exercise their freedom in giving scholarships which sometimes goes up to 80-90 percent of the total fees. The criterion mentioned for giving scholarship is similar among the institutes, but the prestige of the institute captures the variation in the scholarships offered by Type A, B and C institutes. For example, Allen Career Institute charges INR 1,35,000 for JEE Advanced course for Class 11 and Bansal Classes charges INR 1,43,000 for the same course (as mentioned in Table 3.5 in Chapter 3). However, it could be so that Allen Career Institute offers 10-20 percent or no scholarship to a student, whereas Bansal Classes offers 60-70 percent. Thus, the net payable fees are dependent on the scholarship offered by the institute in the industry. Type C category of institutes offers a higher proportion of scholarships to attract students whereas Type A institutes that are supposedly reputed and occupy a major market share do not have to offer scholarships to attract students. They are preferred based on the previous results that they have produced over the years.

The inherent features of the education market where the inputs are students and teachers are different mainly because of (i) absence of regulation (ii) no public funding is involved and (iii) more so the location of the institutes in the cluster does not let the providers completely enjoy their freedoms. The next segment will discuss the implications of the private coaching industry.

6.4 Implications of Private Coaching Industry

6.4. a) Economic Implications

Private coaching is a costly affair, both in terms of money and time. Economic implications in the coaching industry could be understood through the money students spend on coaching, fees, and living expenses. The fees mentioned by

the institutes and the actual fees paid by the students varies in some instances. Though the fee charged is between INR 1,30,000-1,50,000 for pre-engineering coaching (IIT-JEE Advanced) per year, sometimes, students manage to get some discount from the institutes in the form of scholarships or fee waivers. Following are the observations from the sample of 264 students. The average fee paid by the students in the sample (264 students) is INR 1,07,000 per year (including scholarships). Nearly 7-8 students from the sample received more than 60 percent scholarship, and each of them had paid approximately INR 57,000. One of the students received 90 percent scholarship and he paid INR 12,000. The total course fee includes registration fee (INR 500-1,000), admission fee, study material fee, tuition fee, caution money, and GST of 18 percent on admission fee plus study material fee plus tuition fee. The average living expenses of all the students in the sample is INR 1,43,383 per year. Living expenses include room rent, travelling, books and stationary and other expenses. Therefore, on an average a student spends INR 2,50,383 per year on coaching and living expenses. Some students stated they had taken admission in more than one institute, which leads to further escalation of the financial burden for the families. In most cases, students take coaching for more than one year in Kota. In case the student is not satisfied with the coaching and intends to leave the institute, there is a provision of an 'easy exit' policy (as recommended by the district administration). However, there have been complaints about fees not being refunded on time.

Apart from money, students' time is also crucial. Many students start taking coaching for competitive examinations after class 10, and some even start from class 9 onwards. Since there are limited attempts for pre-engineering examination and students aim to maximize their chances of success, they begin taking coaching as early as class 9 and sometimes after class 10. In such a scenario, they skip school and take admission in the coaching institutes. These students take ghost registration in schools and attend full-time coaching. Students who are taking coaching and are enrolled in school spend nearly INR 35,000-40,000 yearly on school fees if the school is private and approximately INR 10,000-15,000 in case of government-aided schools or government schools (tuition fee and other school-related expenditure) (Field survey). Students taking private coaching not only spend a lot on school fees and coaching fees and living expenses, but they also miss school education which imparts all-around development of the child and not just training in science. Therefore, missing school

impacts the overall development of the students, which they do not realize in the competitive rush.

6.4 b) Social Implications

Social implications of the private coaching industry address the issue of the consequences of pressure on the students. Being one of the most competitive examinations, the students go through immense stress during preparation. Some students take coaching willingly. Some students, on the other hand, take coaching under family and social pressure, which causes a lot of stress which sometimes results in a situation like students committing suicides, getting involved in bad company or committing crimes. As mentioned earlier, there are no regulations for the coaching institutes other than the guidelines issued by the district administration of the city on stress management among the students taking coaching in Kota. This was done in the wake of suicides committed by the students studying in the coaching institutes. The guidelines were based on the results of the report submitted to the district administration (TISS, 2017).⁴⁶ The report suggested that almost half of the students experienced moderate stress levels, and an almost equal number experienced mild stress. A small number of students experienced low stress and high stress. Students mentioned multiple reasons for stress, academic pressure being the dominant one. Students with different cognitive abilities find it difficult to cope up with the vastness and the difficulty level of the syllabus. The hyper-competitive environment in the coaching institutes would only serve to increase the amount of academic stress, especially among the students of class 12, as they also have to prepare for board examinations along with entrance tests. Considering that all students were given admission, irrespective of their ability, it made it difficult for the students to keep pace with what was going on in the class. Another reason for stress was homesickness among the students as they had to be away from home for the first time. Students also get stressed because of parental pressure. Issues related to the romantic relationship were also one of the reasons for stress among the students. Lack of routine and disturbed sleep cycle added to stress among the students.

⁴⁶ Draft Report Submitted to the Office of the District Collector, Kota by Sujata Sriram, Chetna Duggal, Nikhar Ranawat, Rajshree Faria (Tata Institute of Social Sciences, Mumbai in June, 2017).

As a result of high stress due to different reasons, there has been a spate of suicides among the students from the coaching institutes in Kota. From 2014 till March 2019, there have been 68 suicides, according to the police records⁴⁷. There are a number of students who attempted suicide, information of which was not mentioned in the police records. The rationale for issuing guidelines by the district administration was the rise in suicide among the students. The reasons stated for suicides were primarily academic stress or relationship issues.

There were students who got involved in committing crimes. As per the data disclosed in response to the RTI filed, the crimes committed by the coaching students included mainly offences relating to the human body and property. An analysis shows that the most common offence is that of extorting property like mobile phones, cash by means of wrongfully restraining the victim or by causing hurt or grievous hurt with *lathis or dandas*. In most situations, a group of people were involved in the crime (gangs namely: Bihar Tigers and others) to persuade their common intention of causing harm and extorting property. In severe cases, the accused have been tried to cause the death of a person, thereby attracting sections 307, or 308, as the case may be, read with section 34 or 149 of the Indian Penal Code, 1860.

This industry, therefore, is causing high social costs to some students and their families because of the aforementioned reasons.

6.4 c) Educational Implications

Being a form of shadow education, it affects the body (school education system) it imitates. Private coaching institutes have educational implications in the following way: many students who start taking coaching from class 6 onwards or class 10 skip school and join full-time coaching. This is because the eligibility criteria for qualifying for admission in IITs and other examination requires the students to secure a certain percentage in 12 board examinations. Due to the limited attempts of the examination and maximizing the chances of success, the students start preparing early. The format of the competitive examination is completely different from the school examination. As a result, the coaching prepares students for the entrance examination, which is objective in nature with negative marking. Apart from the understanding of the subjects, the skill required to mark the answers is very different

⁴⁷ An RTI was filed and the answer received is incorporated herein.

from the school examination, which is subjective in nature. The majority of the aspirants prepare for coaching and school examination simultaneously because passing the school examination with the given percentage is a necessary condition for appearing in the competitive examination. Students who enrol in full-time coaching programs take ghost registration in school and attend school only when necessary, such as science practical and annual examinations. Most of the respondents who were taking coaching while being enrolled in class 11 or 12 mentioned about dummy schools in Kota. This shows that there is an open connivance between the school and the coaching centres. In many instances, coaching institutes recommend these schools for admission.

Unlike the school system, coaching institutes are hyper-competitive in their approach to survive and grow in a highly competitive sphere largely unregulated and with no public support, where students are constantly taught to compete with each other in order to prepare for the competitive examination. The eco-system of the coaching does not teach students about group activities, cooperation and peer support. The schedule of the classes in coaching is such that there is hardly any time left for co-curricular activities. None of the aspects of high school education in school: small class size, time for sports and personality development, inter-personal relation of teachers and students were observed to be of any importance in coaching institutes. The providers mentioned about conducting co-curricular activities for students, but its scale is not comparable to the school system. These coaching institutes are propagating the one-dimensional approach to success and the future and has succeeded in subverting the education system, making the schools redundant.

6.5 Concluding Remarks

This chapter discusses the specific features of the market for the private coaching industry in Kota as compared to the typical education market. In the market for the coaching industry, a few institutes that occupy the major market share are at the top and other small institutes are at the bottom.

In this industry, students constitute the input and success attained by the student is considered as the output. There are two inputs (students and teachers) and one output (success rate) in the coaching industry. There is a fierce competition for high-efficacy

students who are limited in number. Success is dependent on the quality of students and this makes the link between input and output sound and transparent.

The hierarchy among the coaching institutes is because coaching institutes practise selection-based efficiency in favour of the high efficacy students. The absence of public funding and regulation makes the selection-based competition even more intense. The hierarchy among the institutes (Type A, B and C) is more or less stable. However, there are instances when teacher poaching happens and a mass exodus of teachers destabilises the market.

In the absence of government regulation, students are treated as consumers where consumer satisfaction and feedback is kept in mind, but at the same time, strategies are employed in such a manner that manipulates the students before taking the admission as well as after taking the admission. For example, before taking admission, students are manipulated through advertisements of results in different ways. The emphasis is on presenting the number of selected students in such a way that gives an impression of being the best institute in the industry (as discussed in Chapter 5). After taking admission, students do not immediately realise the segmentation of batches and how institutes treat different batches as different products. On this front, students are manipulated, and by the time they realise, fees have been paid by them, and for many students, it becomes a challenge to switch to a new institute due to the financial constraints. However, the prevalence of information asymmetry is relatively less and students do not remain manipulated for long because the coaching institutes are located in a cluster. Students can gather information about the teacher quality, treatment of batches and other determinants through different sources such as relatives, friends etc.

The market for the private coaching industry is a 'quasi-market'. However, in the absence of public funding, the extent of 'quasiness' is much lower because only a few students who maximize the chances of success are offered scholarships. Profit maximization is one of the objectives of the coaching institutes which also reduces the extent of quasiness of this form of market.

Based on the framework suggested by Jongbloed (2003) freedoms enjoyed by the consumers (students) and the providers (coaching institutes) are discussed. Freedom to choose the provider is relatively more in the market for the coaching industry.

Students can choose any institute because the output is the same for all the institutes. The relevance of customer-input technology is very profound because students are the sources of both revenue and success. High-efficacy students who are in general the source of success, are offered scholarships and they have bargaining power in the market. In the coaching industry students have the freedom to leave the institute if they are not satisfied with the quality. This is because there are no credentials and output is the same for all the institutes, which is the success rate. This is unlike the mainstream education market. Unlike courses, batches are treated as different products because the treatment and process of different batches vary. Students do not have the freedom to choose the batch because allotment is restricted by the merit of the student. If the students are not satisfied with the quality of the batch they are admitted to, they tend to switch the institute because the output is the same for the institutes and there are no credentials involved. Coaching institutes charge fees on the cost-recovery model and adopt a differentiated fee structure for students with different merit (high-efficacy and low-efficacy). Because this is unregulated, it is difficult to comprehend how much profit these coaching institutes make.

The entry of new providers in the coaching industry is restricted by the cost of initial investment as institutes are registered under the Companies Act, 2013. New private providers face competition from established providers who may use their collective market power to protect their market share. In short, there is freedom of entry in the market for the coaching industry; however, the competition and inadequacy of high-efficacy students makes it difficult for the institute to survive in the market. Coaching institutes generate their own revenue and therefore have full discretion over it. However, the interdependence of cost and revenue, sustainability of profit and prestige and location of the institutes in a cluster makes the scenario complicated.

Merit restricts the freedom enjoyed by the students because success in the examination is contingent on merit. The sustainability of profit on prestige restricts the freedom of the provider in this market. Given all the challenges of the private coaching market, the competition for the national entrance examination is becoming very fierce among the students and their families. As a result, coaching hubs like Kota are gaining more and more legitimacy among the students and their families to increase their chances of success in the national level examination which is a sure entry to a successful career path. At the same time, this industry is also causing stress

amongst many students due to the aspirations of the family and fear of failing in the entrance examination, putting the financial burden on the families and subverting the school system.

Chapter 7: Summary and Conclusions

7.1 Introduction

Alongside formal education, shadow education has become a global phenomenon. The term ‘shadow’ education is a complex and multi-faceted term that has different manifestations in different contexts. Commonly studies have referred to private supplementary tutoring as shadow education (Bray, 1999; 2009, Bray and Lyinks, 2012; Baker and Stevenson, 1999) and some have used it in the context of private coaching (Ørberg, 2017; Rao, 2017; Punjabi, 2020; Choudhury et al. 2021). One of the major reasons attributed to the emergence of shadow education is that education systems have become universal but the opportunities⁴⁸ that education is meant to bring are not universal, there is a scarcity of high-value opportunities. There is a huge gap in the quality of education imparted across the elite and non-elite institutes. Elite institutions confer identifiable social advantages, however, entry to these institutions is very difficult. Given the difference in the quality of education imparted by higher education institutes, students and their parents take recourse to supplementary form of education to prepare for high-value opportunities. In most cases, supplementary education prepares students from one level of education to the next level of education or job. Shadow education aims at increasing the chances of success among the students. In India, there are three different forms of shadow education: a) private tuitions; b) private coaching for entrance tests; and c) private coaching for employment. The present thesis investigates the market for the private coaching industry which prepares students for the national competitive examination, i.e., pre-engineering examination and pre-medical examination. In India, engineering and medical are some of the most coveted fields, however, there is huge variation in the quality of the institutes. For pursuing engineering, India has few institutions of excellence like IITs at the top and a large number of private colleges and deemed universities at the bottom of the hierarchy. For pursuing medical education (MBBS) there are 285 government colleges, and 268 private colleges.⁴⁹ Students who are unable to secure admission in one of the government colleges either take admission in allied fields of medicine (BAMS, BUMS, BHMS) or go abroad for pursuing an

⁴⁸See Marginson (2016).

⁴⁹ <https://www.nmc.org.in/information-desk/college-and-course-search/> as accessed on 1/01/2022.

undergraduate degree in medicine. Students aim to take admission in these prestigious institutes because it further improves the likelihood of better job opportunities. However, due to mismatch between the large number of aspirants and fixed number of seats in a few elite engineering and medical colleges students are forced to take recourse to private coaching.

These entrance examinations are taken by the students after completing higher secondary schooling, i.e., class 12. For the pre-engineering examination, the number of attempts is limited to two for JEE Advanced and three for JEE Mains respectively. For taking pre-medical entrance, there are no limits on the number of attempts. Though the present thesis is about the market for the private coaching industry and coaching institutes offer both pre-engineering and pre-medical coaching the focus is on the students taking coaching for the pre-engineering examination. This is because the strategy for both examinations differs due to the number of attempts.

While investigating the shadow education market it is important to understand its implications on the formal education system. Shadow education is a supplementary form of education that is utilized by the students to better their academic performance. Since the focus of the present study is on the competitive examination for admission in prestigious engineering colleges/institutes the implications can be understood in the following way. In order to maximize the chances of success students take full time coaching for 1-2 years, in some cases the students start their coaching from class 9 onwards. As a result, students take ghost registration in school and enrol themselves in full-time coaching. School does not prepare them for competitive examination because the role of the school is completely different from that of coaching institutes. In the school education system, all the subjects; science, social science, language along with co-curricular activities are given equal importance and the holistic development of a child is kept in consideration. Coaching institutes, on the other hand, focus on one subject, in this particular case, science with math for pre-engineering and science with biology for pre-medical. The format of school examination is mostly subjective whereas that of competitive examination is objective with negative marking for the wrong answer. The assessment in both systems also differs; in school, any student who has secured above the pass percentage is said to be passed whereas in competitive examination the performance is evaluated in relative terms and success is attained by only some students who qualify the examination.

Thus, despite teaching the same curriculum the approach of both school and coaching institutes varies because the purpose of both systems is different. It is observed that many students start preparing early for the competitive examination and school education is not given due importance. It could be due to the impression that is created that coaching helps students pass the competitive examination which the school is unable to prepare for. As a result, preference for coaching is gaining legitimacy among the students/ parents, thereby giving rise to the coaching culture.

There are different factors associated with the demand and supply of private tutoring mentioned in the literature. Studies have primarily looked at demand for private tutoring, have looked at the participation rate and incidence of private tutoring (UNDP, 2007; Silova and Kazimzade, 2006; Nath 2011; Bray 1999; Zhang 2011; Sujatha and Rani 2011; Sen 2010; Toh 2008; Dang 2011; Tansel and Bircan 2006; Liu and Bray, 2017; Zhang and Bray, 2017). Limited researches have studied the students who are already taking coaching (Mishra and Singh, 2017; Ørberg 2017; Punjabi, 2020). Studies that have looked at the demand side of private tutoring and have identified the following factors affecting the demand for tutoring are household income, preference for education, parental education, expectations about the returns to education, urban location (Assad and El-Badawy, 2004; Stevenson and Baker, 1992; Kim and Lee, 2008; Tansel and Bircan, 2006; Dang, 2007; Buchmann, 2002; Davies, 2004; Psacharopoulos and Papakonstantinou, 2005; Liu, 2019; Kumar and Chowdhury, 2021; Choudhury et al. 2021). Limited studies have explored the providers in different contexts; growth of consultants and test prep companies, private preschools, tutoring businesses, private schools, proprietary colleges and corporate training ventures (Aurini and Davies, 2004; Davies and Quirke, 2004; Monahan et al., 1994; Sweet and Gallagher, 1999). In particular, there are few studies that have studied Kota coaching Industry (Mishra and Singh, 2017; Rao, 2017; Ørberg 2017).

This study ‘Dynamics of shadow education market: A study of the private coaching industry in Kota, Rajasthan’ seeks to understand the functioning of the private coaching industry and how consumers (students) and providers strategize in this form of market to achieve the objective. The rationale for choosing Kota as a field of study is because every year around 1.5 lakh students come to Kota from all over the country for the preparation of the competitive examination and it is designated as the ‘coaching capital’ of the country. The selection rate of the students qualifying the

entrance is also phenomenal; in 2015, more than one-third of the students selected in IITs took coaching in six major institutes in Kota (Rao, 2017). Thus, the preference among the students for coaching institutes in Kota and the ability of the institutes to deliver the results makes it a case for deeper investigation. The thesis tries to analyse the demand side by exploring the factors determining the choice of coaching institute among the students and their parents (decision-makers). It also seeks to explore the strategies adopted by the providers such as students' selection, teachers' recruitment such that it maximises the number of selections in the competitive examination. The last objective is to understand the structure of the market for the private coaching industry and the features of this market. This study has adopted a very conventional approach to understand the market for the coaching industry where it has looked at the students (consumers) and their decision making and providers and their strategies. Being guided by the positivist paradigm, the study uses mixed methods to answer the research objectives. A sample of 264 students was selected through a random sampling method. The data was collected through structured questionnaires. Providers of the coaching institutes were examined using a semi-structured in-depth interviews method. Fifteen teachers, eight non-teaching members of the different coaching institutes in Kota were interviewed to understand the functioning of the coaching institutes and identify how strategies in one coaching differ from another coaching institute. Fourteen people from allied fields of the coaching industry were also interviewed in order to derive an overall understanding of the market. Data was collected and analysed using quantitative and qualitative methods followed by observation and findings which gave a comprehensive understanding of the research problem.

7.2 Theoretical Framework: A Reflection

In the literature of Economics of Education, the market for education is unlike a typical commodity market and it tends to be imperfect. This is because it violates the assumption of homogeneity⁵⁰. Stakeholders participating in the education market are also the inputs; students and teachers are differentiated because of the human capital embodied in them. As a result, providers practise selection-based competition⁵¹ in selecting the best of the students and teachers and employ customer

⁵⁰ See Chattopadhyay (2012).

⁵¹ See Glennerster (1991)

input technology⁵². While providers select the students, students also choose the coaching institutes. The understanding of choice-mechanism is derived from the human capital theory⁵³ where expenditure on education is treated as an investment. In the coaching industry, students invest because they aim at maximizing the chances of success in the competitive examination. When education is treated as an investment expenditure it is rational that students assess the costs and benefits pertaining to the expenditure before they actually decide to pursue further. Thus, rate of return becomes the guiding factor in choice-making. Students who decide to go to Kota for coaching assume that the coaching increases their chances of success and after qualifying for the examination the entry into the prestigious institute ensures a smooth transition to better job opportunities. However, the rate of return approach has its limitations in explaining the choice-making amongst the students. The decision to pursue coaching or not is an intricate one because families perceive their financial condition which is dependent on many factors such as number of earning members, number of dependents, number of children, gender of the student, ability of the student etc. Given the uncertainty involved families perceive the capabilities of their ward differently given the household budget. Becker (1964) in human capital theory assumes all individuals irrespective of their ability are able to manage finances to invest in education. The assumption of the human capital theory that all students are able to manage finances for investing in education is not realistic for many because families depending on their capacity to bear the expected loss take the decision. Students and their parents form their expectations regarding investing in coaching based on ability, household budget, psychological factors such as social pressure⁵⁴ and information and interpretation of these subjectivities.

The market is unregulated and coaching institutes function like for-profit organizations however being an education market it utilizes customer-input technology (Winston, 1999). Selection based competition or S-competition (Glennerster, 1991) found strong evidence in the thesis. It is observed that high self-efficacy students select coaching institutes that have produced good results in the previous years and reputed coaching institutes try to attract high self-efficacy students by offering scholarships and high-quality teacher by offering them higher

⁵² See Winston (1999)

⁵³ See Becker (1964)

⁵⁴ See Shiller (2015).

remuneration. This study finds interdependence of prestige and profit in this market where coaching institutes with high profits and prestige are able to attract the best of the students (high self-efficacy students) and high-quality teachers and are more likely to perform better and give results than other coaching institutes. The market for the coaching industry is segmented where the few interdependent sellers who occupy a major market share are faced with oligopolistic competition and others who are at the bottom of the hierarchy are faced with monopolistic competition. Analytical framework to understand choice-mechanism, selection-mechanism and features of the education market are elaborated in Chapter 2.

7.3. A Brief Summary of the Findings

The main findings of the analysis undertaken in the study in order to address the main research objectives are summarized below. For the analysis, coaching institutes are categorized into Type A, B and C categories. The categorization is based on the reputation of the institute which is captured through the previous year results and fee structure of the institutes for the same course.

(1) Selection mechanism adopted by the students in choosing the coaching institutes

The chapter deliberates on the factors determining the choice of coaching institutes in the market for the private coaching industry. Preference for the institutes is formed based on the information gathered about the results, quality of teachers, and fee structure of the coaching institutes from friends, family, school teachers, and websites. Nearly 88 percent of the students from the sample reported that they are enrolled in the institutes which is the first preferred choice. The chapter seeks to understand the impact of ability and other socio-economic factors on the choice of an institute. The specific cross-tabulation about the factors determining the choice of Type A, B and C institutes attempts to understand the characteristics of the individuals in particular and how that affects their choice.

Regression results show students who have scored more than 94 percent in 10th class have a significant association with Type A institutes. Other factors determining the choice of institutes are the brand of the institute, previous results produced by the institute. The reason for these variables being significant is the location of coaching

institutes in clusters and location⁵⁵ plays an important part in getting information and it becomes easier for students to compare the institutes. Socio-economic status affects the aspirations of the families however when it comes to choosing an institute family prefers the best institute as they want to maximize the chances of success of their ward. Also, before taking the decision to pursue coaching the students have anticipated the expenditure on coaching. This is a reason why household income, fee structure of the institute, gender, caste, and parental education does not have a significant impact in the choice of the institute. This chapter also seeks to explain factor determining scholarship availed of by the students. It was found from the analysis that there is no association between the scholarship test conducted by the institute and the scholarship availed of by the students. On the contrary, students who did not appear in the scholarship got the scholarships. This shows that the scholarship test conducted by the coaching institutes in the name of offering a scholarship to the students is only a strategy where they are benefitted in two ways; one through the application fees of the scholarship test which is paid by all the students taking the scholarship test and second where they can segregate the students as per their abilities in different batches. Another finding is that there is a strong association between the class of the students and the scholarship received. Those who had passed class 12 are more likely to receive scholarships. The reason is that after passing class 12th, marks secured in class 12th acts as a proxy of the ability of the students. Many a time students might have already appeared once in the competitive examination and the performance in that examination also indicates the ability of the student.

(ii) Providers in the coaching industry

To understand the supply side of the coaching industry providers of the coaching institutes are studied. A deeper investigation of strategies of the providers through the perspective of economics as a discipline is not undertaken by earlier studies. This chapter seeks to understand the functioning of the coaching institutes when they are faced with fierce competition from other institutes located in a cluster. The success rate of the coaching institutes in the coaching industry differs because of the difference in the quality of students and the teachers. In this industry, the number of selections becomes the source of prestige for the institutes. Fee paid by the students

⁵⁵ See Nelson (1970).

is the only source of revenue. Though coaching institutes can use their revenue as per discretion but being an education market, it cannot generate as much profit as it wants because it is constrained by the quality of students and teachers. To fulfil the objective of prestige and profit, coaching institutes attract high-efficacy students (who are likely to give results) by offering them scholarships which add to the cost of the institute. By looking at the previous results of the institutes both high-efficacy and low-efficacy students are attracted towards the institute. Because high-efficacy students give results, they become the source of prestige and low-efficacy students become the source of revenue. This shows that cost and revenue in this market are interdependent as revenue collected (fees) are used in offering scholarships (a component of cost). Also, the sustainability of prestige is dependent on profit in this market. Thus, coaching institutes with higher prestige earn higher profits and vice versa. Due to the interdependence of prestige and profit, Type A constitute the highest proportion of high-efficacy students and high-quality teachers which help them in giving top ranks and the highest number of selections. Extensive advertisement of results on newspapers, hoardings, websites further help in attracting prospective students. Type B and Type C also have high-efficacy students but these institutes give lower ranks and the number of selections is also relatively less because they do not have many high-efficacy students as compared to Type A institutes. This explains that if the highest number of selections is from Type A institutes the number of selections from Type B and C will be relatively less which implies that performance in this examination is relative and only a fixed number of students qualify for the examination.

Coaching institutes attract high-quality teachers by paying them higher remuneration and other benefits such as job satisfaction, growth in career. Type A institutes because of their resources and reputation are able to attract the best of the teachers. Coaching institutes not only attract teachers, recruit and retain them but also manage them. Institutes very carefully assign the teaching duties such as batches, subjects, or topics in the institute to the faculties based on the competition in the market, intrinsic qualities of the faculty and trust factor.

Coaching institutes devise new ways to present the results as it further helps in attracting more students. Type A institutes extensively advertise the top ranks on different platforms; newspapers, hoardings, talk show by the toppers, websites etc.

This is because Type A institutes have higher revenue and as a result, they spend a lot on advertising the results and top rankers as compared to Type B and C. Higher the cost incurred on advertisement higher is the publicity of the institutes which helps in attracting the students as more students within and across cities have information about the institute. The presentation of the results should be understood in the context of the available seats in IITs and other engineering colleges that the students aim to take admission. It was found in the analysis that qualified students in JEE Advanced examination are approximately three times more than the number of seats in all the IITs. This depicts that all the students who qualify for JEE advanced do not get admission in IITs, it is contingent on the rank secured by the students and usually, the ones at the top are able to secure admission in IITs in the stream of their choice. Thus, the quantity and quality of the students affect the utility because students fulfil the objective of both profit and prestige in this industry.

(iii) Market for Private coaching industry

The market for the private coaching industry is segmented with an oligopolistic structure at the top and a monopolistic structure at the bottom. The segmentation is attributed to the quality of input which is limited and cannot be reproduced. As a result, all the coaching institutes compete for high-quality inputs, that is, students and teachers. There is a hierarchy among the coaching institutes and it is because coaching institutes practise selection-based efficiency in favour of the high-efficacy students. The absence of public funding and regulation makes the selection-based competition even more intense. The hierarchy among the institutes (Type A, B and C) is more or less stable. However, there are instances when teacher poaching destabilises the market. Information asymmetry prevails, however, the prevalence is relatively less as students in this market do not remain manipulated for long because coaching institutes are located in a cluster. In this industry, the extent of quasiness is much lower because only a few students who maximize the chances of success are offered scholarships. Profit maximization being one of the objectives also reduces the extent of quasiness.

Based on the framework suggested by Jongbloed (2003) freedoms enjoyed by the consumers (students) and the providers (coaching institutes) are discussed. Freedom to choose the provider is relatively more in the market for the coaching industry.

Students can choose any institute because the output is the same for all the institutes. The relevance of customer-input technology is very profound because students are the source of both revenue and success. In the coaching industry, students have the freedom to leave the institute if they are not satisfied with the quality. This is because there are no credentials and output is the same for all the institutes. Unlike courses, batches are treated as different products because the treatment and process of different batches varies. There is a freedom of entry in the market for the coaching industry; however, the competition and inadequacy of high-efficacy students makes it difficult for the institute to survive in the market.

Merit restricts the freedom enjoyed by the students because success in the examination is contingent on merit. The inherent features of the education market where the inputs are students and teachers are different mainly because in the absence of regulation, no public funding is involved and more so the location of the institutes in the cluster does not let the providers completely enjoy their freedoms.

The preparation of this competitive examination has economic, social and educational implications. It poses extra financial burden on the families of the students, causes stress due to aspiration and expectation of the family in a way contributing in subverting the school system. Given all the challenges and manipulations of the coaching industry, the competition for the national entrance examination is becoming so fierce among the students and their families due to which coaching hubs like Kota are gaining more and more legitimacy among the students and their families to maximize the chances of success.

7.4 Limitation of the Study

Understanding selection-mechanism in the private coaching industry where both students and providers have the freedom to choose each other is complex. The coaching industry is unregulated and private in nature which made the collection of data very difficult as the stakeholders at the providers' side were not comfortable in disclosing the information with the researcher. Data on some of the themes were collected from multiple sources in order to verify and understand the issue. The dynamics of the market is so complex that quantitative analysis may not be giving a true picture of the complexities involved in choosing the institute. However, attempts have been made to show a pattern and the how the variables are determining the

choice of an institute. The focus of this study was only on the coaching provided by the institutes and the performance of the institute in that domain. Coaching institutes, along with coaching services for competitive examination, also invest in other services; some have schools, universities, residential coaching and other business. Therefore, their profit is dependent on all the services and businesses. The study is guided by economics and economics of education and has therefore tried to understand the peculiarities of this market in a certain way from a disciplinary lens. This may have limited the scope of capturing the social reality to some extent.

7.5. Concluding Remarks

The market for private coaching industry in Kota emerges as a unique case for investigation mainly because of its for-profit nature⁵⁶ and absence of any regulations and public funding from the government. The interdependence of prestige and profit has emerged to be crucial because it determines the way coaching institutes function and deliver their services and quality of results (ranks) they produce. The study makes an attempt to understand the market for coaching industry in Kota which is segmented and variation in the quality of the coaching institutes is attributed to the difference in the quality of the inputs; students and teachers. Success of the institutes depends on the selection of the high-efficacy students and high-quality teachers which is dependent on the financial resources with the institute. Achieving success in the coaching industry is expensive because high-efficacy students and high-quality teachers are scarce and to attract them the institutes has to offer scholarships and higher remuneration respectively. Financial resources not only facilitate selection of students and teachers it also facilitates the institutes to extensively advertise their results at different platforms. This implies institutes with higher revenue have the capacity to incur higher cost on scholarships, salaries and advertisement cost. This depicts a unique feature of this coaching industry where revenue is dependent on cost. Institutes in Type A category are largely preferred by the majority of the students because they have given top ranks and the large number of selections in the previous year, which is due to the resources they have i.e., access to meritorious students and high-quality teachers. This creates an illusion of the quality among all the students, both high-efficacy and low-efficacy. Students are differentiated based on their ability

⁵⁶ Coaching institutes are registered under Companies Act, 2013.

by the providers because they can compare the performance of all the students, but the students, on the other hand, do not assess themselves as high efficacious or low efficacious. They form their expectation based on their school performance or looking at the results of the qualified students which is sometimes realistic and sometimes not. Thus, it may look like that all those who have the ability to pay can secure admission in the institute of their choice but success in any education market (formal or shadow) is earned only through cognitive ability, sincerity and hard work. Another feature of this market is that since the beginning of the coaching performance (merit) of the students within the institute is seen in relative terms among hundreds of students enrolled in the institute. This is to prepare students for the level of competition that is similar to the competitive examination.

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APPENDIX

Chapter 3

Image 3.1

GOOGOL SCHOLARSHIP AS PER JEE MAIN PERCENTILE SCORE 2021

✕

CML	GEN-EWS	OBC-NCL	SC	ST	SCHOLARSHIP	QUALIFIED FOR ADVANCED
87.8992241 & Above	66.2214845 & Above	68.0234447 & Above	46.8825338 & Above	34.6728999 & Above	40%	Yes
82.0000000 -	63.0000000 -	65.0000000 -	43.0000000 -	32.0000000 -	30%	No
87.8992240	66.2214844	68.0234446	46.8825337	34.6728998		
77.0000000 -	60.0000000 -	62.0000000 -	40.0000000 -	29.0000000 -	20%	No
81.9999999	62.9999999	64.9999999	42.9999999	31.9999999		
72.0000000 -	57.0000000 -	59.0000000 -	37.0000000 -	26.0000000 -	10%	No
70.0000000	50.0000000	61.0000000	30.0000000	20.0000000		

Image 3.2

y.com/Courses/scholarship

GOOGOL SCHOLARSHIP (JEE ADVANCED 2021)

✕

CATEGORY	RANK	SCHOLARSHIP
CRL (GEN)	upto 5000	90%
CRL (GEN)	5001 to 7500	80%
CRL (GEN)	7501 to 10000	70%
CRL (GEN)	10001 to 12500	60%
CRL (GEN)	12501 to 15000	50%
CRL (GEN)	150001 & Above	45%
OTHER CATEGORIES	ALL CATEGORY RANK	45%

Chapter 4

Table A4.1

```
. anova hh_inc_C cinst_1stchoice
```

	Number of obs =	232	R-squared =	0.0103	
	Root MSE =	37589.5	Adj R-squared =	0.0016	
Source	Partial SS	df	MS	F	Prob>F
Model	3.364e+09	2	1.682e+09	1.19	0.3059
cinst_1st~e	3.364e+09	2	1.682e+09	1.19	0.3059
Residual	3.236e+11	229	1.413e+09		
Total	3.269e+11	231	1.415e+09		

Table A4.2

```
. anova marksobtained_continuous cinst_1stchoice
```

	Number of obs =	232	R-squared =	0.0001	
	Root MSE =	7.6561	Adj R-squared =	-0.0087	
Source	Partial SS	df	MS	F	Prob>F
Model	.75436427	2	.37718214	0.01	0.9936
cinst_1st~e	.75436427	2	.37718214	0.01	0.9936
Residual	13423.035	229	58.615873		
Total	13423.789	231	58.111642		

Table A4.3

```
. anova course_enrolled cinst_1stchoice
```

	Number of obs =	232	R-squared =	0.0070	
	Root MSE =	.29386	Adj R-squared =	-0.0017	
Source	Partial SS	df	MS	F	Prob>F
Model	.13880978	2	.06940489	0.80	0.4489
cinst_1st~e	.13880978	2	.06940489	0.80	0.4489
Residual	19.774983	229	.08635364		
Total	19.913793	231	.0862069		

Table A4.4

. anova scholarship class

Number of obs = 263 R-squared = 0.1182
 Root MSE = .466438 Adj R-squared = 0.1115

Source	Partial SS	df	MS	F	Prob>F
Model	7.5852441	2	3.7926221	17.43	0.0000
class	7.5852441	2	3.7926221	17.43	0.0000
Residual	56.566847	260	.2175648		
Total	64.152091	262	.24485531		

. tabulate grade, summarize (scholarship)

grade	Summary of cinst_scholarship		
	Mean	Std. Dev.	Freq.
11th grade	.59574468	.49337872	94
12th grade	.27586207	.45085118	58
12th passed	.72072072	.45067971	111
Total	.57794677	.49482857	263

Table A4.5

. tabulate cinst_entexam scholarship, chi2

cinst_entexam	cinst_scholarship		Total
	0	1	
1	84	102	186
2	27	50	77
Total	111	152	263

Pearson chi2(1) = 2.2757 Pr = 0.131

Table A4 .6

Model 1

```
. logistic coaching_institute i.th_marks i.cinst_fee i.cinst_result i.Scholarship_Received i.PC_Br
> and_Matters i.cinst_entexam, vce (robust)
```

```
Logistic regression                Number of obs    =      231
                                   Wald chi2(7)       =      26.07
                                   Prob > chi2         =      0.0005
Log pseudolikelihood = -126.11279   Pseudo R2       =      0.0991
```

coaching_institute	Odds Ratio	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
th_marks						
85-94	1.312008	.4672889	0.76	0.446	.6527848	2.636958
more than 94	2.581156	1.170257	2.09	0.036	1.061432	6.276769
2.cinst_fee	.9703309	.3906317	-0.07	0.940	.4408053	2.135959
cinst_result						
Very Important	1.984171	.7082481	1.92	0.055	.9856973	3.994062
Scholarship_Received						
Yes	.4091969	.1400901	-2.61	0.009	.2091801	.8004685
1.PC_Brand_Matters	1.813974	.5935142	1.82	0.069	.9552704	3.444576
cinst_entexam						
Yes	2.17567	.7082124	2.39	0.017	1.149514	4.11786
_cons	.7624516	.3672529	-0.56	0.573	.2966271	1.959809

Model 2

```
. logistic coaching_institute i.th_marks i.cinst_fee i.cinst_result i.Scholarship_Received i.PC_Br
> and_Matters i.cinst_entexam i.category_hh_pa, vce (robust)
```

```
Logistic regression                Number of obs    =      231
                                   Wald chi2(9)       =      26.19
                                   Prob > chi2        =      0.0019
Log pseudolikelihood = -125.67718   Pseudo R2       =      0.1022
```

coaching_institute	Odds Ratio	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
th_marks						
85-94	1.309541	.4702059	0.75	0.453	.647866	2.646994
more than 94	2.649302	1.247607	2.07	0.039	1.052651	6.667739
2.cinst_fee	.9886705	.3976066	-0.03	0.977	.4495002	2.174569
cinst_result						
Very Important	1.921488	.6938947	1.81	0.071	.9467796	3.899659
Scholarship_Received						
Yes	.4082319	.1408768	-2.60	0.009	.2075705	.8028756
1.PC_Brand_Matters	1.751839	.5735428	1.71	0.087	.9221793	3.327922
cinst_entexam						
Yes	2.146778	.7046043	2.33	0.020	1.128263	4.084737
category_hh_pa						
5lakh-10lakh	1.181555	.4177708	0.47	0.637	.5908658	2.362759
above 10Lakh	.7894	.3293951	-0.57	0.571	.3484287	1.788465
_cons	.7794936	.3878499	-0.50	0.617	.2939566	2.067007

Model 3

```
. logistic coaching_institute i.th_marks i.cinst_fee i.cinst_result i.Scholarship_Received i.PC_Br
> and_Matters i.cinst_entexam i.category_hh_pa i.gender i.caste, vce (robust)
```

```
Logistic regression                               Number of obs   =       231
                                                    Wald chi2(11)   =       27.98
                                                    Prob > chi2     =       0.0033
Log pseudolikelihood = -124.9738                 Pseudo R2      =       0.1073
```

coaching_institute	Odds Ratio	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
th_marks						
85-94	1.419797	.5172425	0.96	0.336	.6952278	2.899514
more than 94	2.878971	1.346266	2.26	0.024	1.151325	7.199075
2.cinst_fee	.9984814	.4033862	-0.00	0.997	.4523293	2.204069
cinst_result						
Very Important	1.897005	.7036299	1.73	0.084	.9169468	3.924578
Scholarship_Received						
Yes	.4095588	.1419168	-2.58	0.010	.2076659	.8077322
1.PC_Brand_Matters	1.676379	.5595217	1.55	0.122	.8715018	3.224602
cinst_entexam						
Yes	2.201504	.7369099	2.36	0.018	1.142344	4.242701
category_hh_pa						
5lakh-10lakh	1.214081	.4303437	0.55	0.584	.6060805	2.432007
above 10Lakh	.8693211	.3705366	-0.33	0.742	.3770222	2.004442
gender						
Female	.8417248	.3562681	-0.41	0.684	.3671901	1.92952
caste						
Reserved	1.438489	.4611949	1.13	0.257	.7673657	2.696565
_cons	.6335676	.3320101	-0.87	0.384	.2268483	1.769499

Model 4

```
. logistic coaching_institute i.th_marks i.cinst_fee i.cinst_result i.Scholarship_Received i.PC_Br
> and_Matters i.cinst_entexam i.category_hh_pa i.gender i.caste i.Parental_edu , vce (robust)
```

```
Logistic regression                Number of obs    =      231
                                   Wald chi2(13)     =      32.26
                                   Prob > chi2        =      0.0022
Log pseudolikelihood = -122.71108   Pseudo R2       =      0.1234
```

coaching_institute	Odds Ratio	Robust Std. Err.	z	P> z	[95% Conf. Interval]	
th_marks						
85-94	1.568886	.5872998	1.20	0.229	.7532701	3.267622
more than 94	3.167779	1.506418	2.42	0.015	1.247301	8.045233
2.cinst_fee	1.066195	.4430426	0.15	0.877	.4722065	2.407364
cinst_result						
Very Important	1.779564	.6609407	1.55	0.121	.8593546	3.685148
Scholarship_Received						
Yes	.4032454	.1386814	-2.64	0.008	.2055086	.7912412
1.PC_Brand_Matters	1.604116	.5422301	1.40	0.162	.8270067	3.111448
cinst_entexam						
Yes	2.015397	.6990636	2.02	0.043	1.021202	3.977495
category_hh_pa						
5lakh-10lakh	1.420497	.5632166	0.89	0.376	.6530483	3.089836
above 10Lakh	1.069395	.5089717	0.14	0.888	.4207406	2.718079
gender						
Female	.9181224	.3916104	-0.20	0.841	.3979553	2.1182
caste						
Reserved	1.454661	.4850728	1.12	0.261	.7566922	2.796433
Parental_edu						
Graduate	1.69399	.7219126	1.24	0.216	.7347877	3.905349
PG & above	.7324541	.3381407	-0.67	0.500	.2963599	1.810262
_cons	.5729915	.3387166	-0.94	0.346	.1798752	1.825261

Chapter 5

Image 5.1



VIBRANT ACADEMY
 Believe in Excellence | JEE (M+A) Division

Vibrant in NEWS

September 24, 2021 (Thursday) | Issue: 2

News About: JEE (Main) 2021 Result

कोटा, जेई मैन में इस बार फिर व्हाइट एकेडमी संस्था के विद्यार्थियों ने अपना परचम लहराया। संस्था के मुख्य कार्यकारी अधिकारी मनोज शर्मा ने बताया कि छात्र **चौहक मिश्र** पराग ने ऑल इण्डिया रैंक 70 प्राप्त कर टॉप 100 में जगह बनाई है। संस्था के 17 विद्यार्थियों ने एनटीए स्कोर 99.90, 67 ने एनटीए स्कोर 99.50, 124 ने एनटीए स्कोर 99,

164 ने एनटीए स्कोर 98.50, 211 ने एनटीए स्कोर 98 व 37 विद्यार्थियों ने एनटीए स्कोर 95 से अधिक अंक प्राप्त कर योग्य बने। संस्था के मुख्य प्रबंधक राकेश शर्मा ने बताया कि जेई मैन परीषद में विद्यार्थियों में से व्हाइट एकेडमी के 64.50 प्रतिशत यानि 845 विद्यार्थी जेई एग्जाम के लिए कालिकाग्रह हुए हैं।

Rajasthan Patrika
 Thursday, 16th Sept., 2021
 Kota City Edition

hindustan

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JEE MAIN RESULTS

Eight Kota students among

Aashar H Qazi
ashar.qazi@ht.com

KOTA: The coaching hub Kota once again proved its mettle in the JEE Main 2021 results declared by the National Testing Agency (NTA) on Monday night. Eight students of Kota coaching institutes have found place among the top 20 rank holders. Of them, seven are from Allen Career, while one is from Resonance.

Sharing All India Rank (AIR) of the students, Allen Career director Brajesh Mishra said that Kevin Martin secured AIR 4, Jayesh Singla secured AIR 4, Nishant Abhangsi secured AIR 6, Sambit Behera secured AIR 11, Ankit Kumar Misra secured AIR 13, Kartikey Gupta secured AIR 18 and Samiksha Das secured AIR 20.

He said all the students are from the classroom programme of Allen Career. "Out of the 24 students who got 100 percentile in the JEE Main 2021 examination in the country, 7 students

3 JAIPUR STUDENTS IN

JAIPUR: Three students from Jaipur made it to the top 100 rank in IIT JEE (Main) examination declared late night on Monday. 18-year-old Aditya Sharma bagged 47th rank, securing first position in the city. Sharma is followed by Gaurav Krishna Gupta who came 64th, while the third position went to Akshat Sharma, who secured 84th position. Nearly 9,35,741 students appeared for IIT JEE

Toppers managem hard work cess. Aditya S topper said tough choi sciences a however, I JEE (Main he is better neering. "I used t nearly 4-5 tially and came near

रेजोनेंस से जेईई-मेन में 20,239 सफल

कोटा | रेजोनेंस को जेईई-मेन के परिणामों में उल्लेखनीय सफलता मिली है। अब तक प्राप्त सूचना के अनुसार इस परीक्षा में रेजोनेंस



के कुल 20,239 विद्यार्थी सफल हुए और 11,246 ने जेईई एडवांस के लिए क्वालीफाई किया। रेजोनेंस के संस्थापक और प्रबंध निदेशक

आरके वर्मा के अनुसार रैंकर्स की बात करें तो टॉप टेन में एक, टॉप 50 में चार, टॉप 100 में सात, टॉप 200 में 19, टॉप 500 में 44 और टॉप 1000 में 91 विद्यार्थी रेजोनेंस के हैं। कोटा अध्ययन केंद्र से 5485, जयपुर से 440, उदयपुर से 209 और जोधपुर केंद्र से 121 विद्यार्थियों ने जेईई एडवांस के लिए क्वालीफाई किया है।