

**AN ANALYSIS OF DEMAND FOR SOCIAL SCIENCES: A CASE STUDY  
OF FINAL YEAR UNDERGRADUATE STUDENTS OF THE UNIVERSITY  
OF DELHI**

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**MASTER OF PHILOSOPHY**

**AAKRITI SAINI**



**ZAKIR HUSAIN CENTRE FOR EDUCATIONAL STUDIES**

**SCHOOL OF SOCIAL SCIENCES**

**JAWAHARLAL NEHRU UNIVERSITY**

**NEW DELHI – 110067**

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ZAKIR HUSAIN CENTRE FOR EDUCATIONAL STUDIES  
UGC-CENTRE FOR ADVANCED STUDY (CAS)  
SCHOOL OF SOCIAL SCIENCES  
JAWAHARLAL NEHRU UNIVERSITY  
NEW DELHI-110067

DATE: 19-07-2018

DECLARATION

I hereby declare that the dissertation titled “An Analysis of Demand for Social Sciences: A Case Study of Final Year Undergraduate Students of the University of Delhi” submitted by me in the fulfilment of the requirement of the degree of Master of Philosophy of Jawaharlal Nehru University is my original work and has not been previously submitted, in part or full, for the award of any degree of this university or any other University.

  
Aakriti Saini

CERTIFICATE

We recommend that this dissertation be placed before the examiners for evaluation.

  
Prof. Saumen Chattopadhyay

(SUPERVISOR)



PROFESSOR  
Zakir Husain Centre for  
Educational Studies,  
School of Social Sciences  
Jawaharlal Nehru University  
New Delhi - 110067

  
Prof. Saumen Chattopadhyay

(CHAIRPERSON)



Prof. Saumen Chattopadhyay  
Chairperson  
Zakir Husain Centre for Educational Studies  
School of Social Sciences  
Jawaharlal Nehru University  
New Delhi - 110067

*Dedicated to my loving Grandparents. May your love keep on shining over me.*

*Miss you.*

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## Abbreviations

BA	Bachelor of Arts
B.Tech	Bachelor of Technology
BSc.	Bachelor of Science
DU	Delhi University
MA	Master of Arts
MBA	Master of Business Administration
MPhil	Master of Philosophy
MSc.	Master of Science
NGO	Non-Government Organisation
PG	Post-graduation
Ph.D.	Doctorate of Philosophy
UG	Under-graduation
UPSC	Union Public Service Commission

## Chapter 1

### Introduction

#### 1.1 Background for the Study

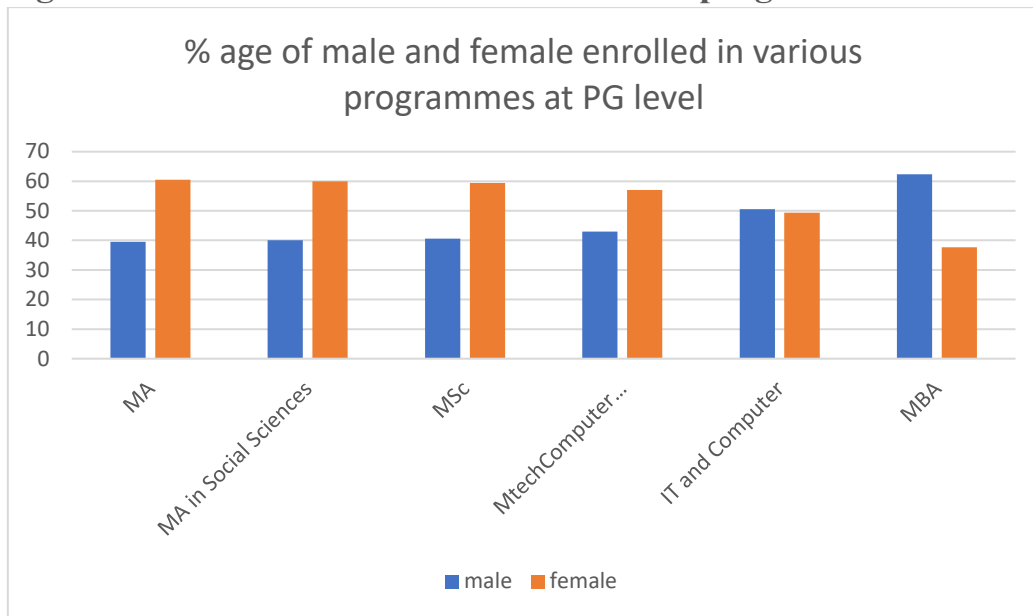
Higher education serves as a tool for empowerment and specialisation. Adam Smith remarked that every man lives by exchanging, humans gain knowledge through education so that they can exchange it for money. Individuals exchange their labour for money as his/her own labour cannot supply the necessities and comfort of human life. They purchase other commodities by selling their labour. Labour is an abstract notion and it is different from commodities which are visible objects. It is difficult to compare labour with commodity (Smith, 1776). This study seeks to look into the microeconomic aspect of higher education by focusing on the demand for higher education. The study will explore the factors which influence an individual students' decision to invest in higher education.

Services sector of the labour market demands highly skilled and educated people There is a nexus between education and labour markets (Harvey, 2000). Specialisation in higher education enhances social mobility and improves the skills and thinking of students. “*Gross Enrolment Ratio in higher education for India is increasing rapidly, it was 24.5 in 2015-16 and it reached 25.2 in 2016-17*” (MHRD Report, 2016-17). The study will look into the students who after entering the system of higher education at the undergraduate level, choose to pursue post-graduation for two more years. Overall there is a huge enrolment in post-graduation at the national level. The chart below depicts the enrolment based on gender in various programmes and disciplines at the post-graduate (PG) level.

At Postgraduate (PG) level, lakh (60.5 % of 15.3 lakh) females are enrolled in MA and lakh females are enrolled in MSc (59.4 % of 6.3 lakh). In Engineering and technology, only Computer Engineering has more than 53 % of females enrolled at PG level. In figure 1.1, as we move in the right-hand direction, subjects get more technical and professional (IT and Computer, MBA) and at the same time female representation in terms of enrolment declines (AISHE 2015-16).

**Figure 1.1**

**% age of male and female enrolled in various programmes at PG level**



(Source: AISHE 2015-16)

It is visible in the graph that more females are specialising in both hard (natural) sciences which include subjects like Physics, Chemistry, Mathematics, Biology as well as social sciences which include subjects like sociology, history, political science, anthropology, and economics. Females choose to remain a part of the higher education system for an additional two years rather than entering the labour market. The study focuses on social science discipline because of its peculiar nature compared to hard sciences. Hard or natural sciences are more objective and are built around the physical world whereas social sciences are subjective and are built around humans relations with society. Both fields seek to achieve scientific truths but the tools and experiments used to reach the truth are different. Hard sciences use concepts which are comparatively more applied in nature; experiments can be conducted in a laboratory using a fixed set of formulas and the results can be generalised. Social Sciences, on the other hand, are dynamic and social and cultural context define the formulation of truth and results cannot be generalised.

Social science is a discipline which contributes to the making of an individual. It improves the cognitive capacity of students by developing their critical thinking. Productivity in social sciences is enhanced in the form of creativity and services sector, where most of the social scientists are employed, value this creativity more than anything else. Another reason for choosing social science as the field of study is the huge enrolment in the stream at PG level

compared to natural sciences. Master of Arts (M.A.) has 15.3 lakh a total number of students enrolled with 60.5% of female students compared to Master of Science (MSc.) which has 6.3 lakh students enrolled with 59.4% female students in India. *“Out of the 15.3 lakh, 6.83 lakh students enrolled in Social Science stream at the Post-Graduation level. History, Political Science, Sociology and Economics have 1,31,343; 1,24,440; 1,20,547 and 91,571 students respectively”* (AISHE, 2015-16)<sup>1</sup>. Political science and Economics have higher male representation in comparison to Sociology and History. At the post-graduation level, a maximum number of students out-turn was observed in Social Sciences (2.29 lakh) in the year 2015-16. This study makes an attempt to explore the factors responsible for this growing demand for social sciences at the post-graduation level.

One reason could be that a degree only serves as a first necessary requirement in the process of getting employment, it does not guarantee a job. Harvey (1999) argue that graduate skills are more important than the subject for which degree has been awarded. Subject knowledge does not determine the probability of getting employment (except for Engineering and Medical students).

Most of the literature which seeks to explain the demand for higher education focus on economic gain and return from acquiring high levels of education. *“In higher education across the world, there is an overwhelming emphasis on the economic benefits of higher education. The emphasis on these expected economic benefits of higher education has increased even though education does not deliver those benefits for some”* (Marginson, 2016). This study seeks to understand the preferences, expectations and aspirations that help an individual to make a decision and pursue a Masters in Arts (MA), thereby creating demand for social sciences. Perna (2004) has pointed out that there are expected benefits associated with enrolment in an advanced degree program: these include short-term benefits as *“enjoyment of the learning experience and enhanced social status and long-term benefits as higher lifetime earnings, enhanced occupational status, better working conditions, and lower probability of unemployment”* (Perna, 2004: 489). Is Higher education a luxury or a necessity, in other words, do students invest in higher education for better returns because without this initial expenditure they would not be able to secure employment, or do they consume it because they gain utility by attending lectures and learn in college through peers and faculty. Valuation of utility or returns will help to determine the blend of investment and consumption aspect of higher

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<sup>1</sup> All India Survey for Higher Education (AISHE), 2015-16.

education. In order to understand the demand for higher education, it is important to capture individual choices and decisions as the valuations will be reflected in their decision.

There is a growing consensus on the nature of higher education. It has properties of both private and public good, it is considered as a “quasi-public good” (Marginson (2011), Chattopadhyay (2012)) and where market failure<sup>2</sup> is inevitable if the government does not intervene. This government intervention in the form of provision, financing and regulation bear an impact on the overall supply of higher education. Though government intervention does not necessarily solve all the problems. Individual demand for higher education is affected by the overall supply and state provision of higher education. Demand is not determined independently of supply. Government provision of higher education makes it more accessible to the general population. Financing of higher education by the state also makes higher education a product/service which can be consumed by the poor and marginalised section of the society who have the desire to learn but do not have the ability to pay for higher levels of learning. Mass public subsidisation of higher education makes the social sciences an easy and less expensive discipline (Chanana, 2012). Reservation policy used as a positive tool for improving access and equality in opportunities (Deshpande, 2006). This study will also highlight the role of the supply side factors in influencing the demand for higher education.

According to the Human Capital Theory (Becker, 1962), expenditure on higher education is an investment decision, people choose to spend additional resources and forgo their earnings in anticipation of earning more in the future. Decision theories in economics which have tried to explain the optimal amount of investment in future which is full of risk and uncertainty like Expected utility theory and Prospect Theory, give much importance to the expectations and without informing much about the formation of these expectations. Bounded rationality, on the other hand, highlights the problem associated with these theories and expectations. It argues that humans have a limited capacity to evaluate all the alternatives and information available to form their expectations (Simon, 1959). Role of information is vital in the formation of expectation and perceptions are formed based on the information available (Stigler, 1961).

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<sup>2</sup> Market failure can occur if provision of a public good is left completely in the hands of the market. there will be under provision of that good. This happens because market fail to consider the social (external) benefits of higher education while estimating the supply of good.

The human capital theory which is located under the neo-classical framework is inadequate to explain the decision of student in higher education. The peculiar nature of higher education is lost in the basic assumption made by Becker in human capital theory<sup>3</sup>. Signalling theory questions the link between productivity and earnings. it does not comply with the transformational aspect of education as postulated by Becker in the Human Capital Theory. Thus, in order to understand the growing demand for social sciences at post-graduation level, we first look at the factors which affect the choice of students and influence their decision of moving from one level (graduation) to another (post-graduation) level of higher education.

## **1.2 Scope of the study**

The aim of this study is to gain a deeper understanding of the factors influencing students' choices of subjects in non-vocational formal higher education and what happens after students make their choices. The study is narrowed down to understand students' perception about the subject and the factors influencing their choice of studying social sciences. The study focuses on social science undergraduates and the decision-making process of these individuals under the larger social context. IT Engineering and professional graduates have a higher return in the labour market, but the same is not true for Arts and Social Science graduates. The rate of return studies in India which uses NSSO data is not adequate to explain the optimal decision of individuals and the role of society in that decision. According to All India Survey of Higher Education (AISHE), highest enrolment in post-graduation is in the social science stream yet hardly any study focuses on it.

International Institute for Educational Planning (IIEP) conducted a case study of 3 states of India under the research project on "Higher education and employment" in 1987, the study showed that graduates from the arts faculty had the highest unemployment rate. Graduates in education, engineering, law, medicine were better placed in the labour market since they had more specific training. The human capital theory seems to be justified in the latter scenario and but not in the former case of Arts graduate. Increasing share of knowledge is devoted to technical and vocational education but few studies focus on non-vocational general higher education. (IIEP Report, 1987)<sup>4</sup>

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<sup>3</sup> Chapter 2 discusses in detail the problem associated

<sup>4</sup> IIEP study 1987

In order to explore the individual demand for higher education, both “*vertical (level of education) and horizontal (a type of education) dimension*” have to be taken into account (Sanyal, 1987: 33). This study has both vertical (post-graduation) and horizontal (social science) dimension. Most of the international studies concentrate on understanding the demand for a college education or undergraduate courses, but with the increase in competitiveness, low quality and expansion of education in India the Bachelors’ degree in social sciences may not be as appealing as a Masters’ degree. Social Science courses do not have much of the vocational and professional component which drives the economy (Sobel, 1982). There is a need to study the relevance of these courses in the lives of the people pursuing Bachelors’ and Masters’ in these subjects.

This study seeks to understand the social phenomenon of demand for social sciences in a city like Delhi. In Delhi University, the choice of subject is dependent entirely on the marks scored in XII standard. When a student enters higher education system, he/she is confronted with a host of belief systems; The belief even today for social sciences and humanities is that the student must not be bright if the choice is humanities. Training in specialised fields (Engineering, Medicine, Law, Agriculture) is relevant in the labour market while for social sciences it is not (Sanyal, 1987).

The study focuses on final year undergraduates who are at their important junctures of life. They can either continue education for another two years or they can leave education altogether and start working full time. It would be interesting to see who are pursuing post-graduation and who are dropping out? To explore the possible factors responsible for continuing higher education even when the expected benefits are not high because of the limited job prospects in the labour market for social science and humanities students (Sanyal,1987).

### **1.3 Objective of the study**

This study seeks to explore the growing demand for social sciences at post-graduation level by examining the factors that affect the decision of pursuing post-graduation among social science students. Expectations regarding future earning according to the human capital theory are the main determinant which influences the decision of investing in higher education. The study will explore the formation of expectations and factors which influence expectations about future salary.



#### **1.4 Field of Study**

The study focuses on the University of Delhi because of its unique character. Delhi University is a place which attracts students from all over the country. It is an educational hub which is located in the capital city of Delhi. It has got the best of the institutes in the social sciences. It is surrounded by four universities which offer Masters' programme. It has a regionally diversified student population. Admissions are based on the marks secured in XII (State, ISC, CBSE) Board exams. It is a quantitative case study undertaken to analyse the factors determining the demand for post-graduation among social science undergraduates of two of the top ranking colleges. The cut-off of top colleges for social science courses vary from 98% to 95%. Students from different socio-economic backgrounds due to the policy of reservation are enrolled in these colleges, this will help us in capturing the economically diversified groups studying in these colleges. Best of the students choose to come here and study social sciences. Students who had choices to study other courses still they choose to study social sciences. The study focuses on the top two colleges of Delhi University because the students who study there face lesser constraints and lesser the constraints better will be the study of decision-making.

It is a quantitative study which conducts a primary survey where final year students pursuing history, sociology and political science of two colleges were randomly selected and were asked to fill out the questionnaire. The questionnaire was designed to serve four objectives: to gather insights about social science as a discipline from the students, to explore the expectations of social science students after BA and MA and to conduct an experiment in order to examine the theory which guides the decision making process of the students.

The study focuses on only two colleges and three subjects of social sciences because it seeks to gather insights into social science discipline by focusing on the limited area of research. The ultimate goal of this study is to provide a logically sound explanation of factors affecting the demand for post-graduation in social science based on empirical observation. Regression models will be used to estimate and explain the relationship between various factors and the decision to pursue Masters' and expectations about the future. Since it is a case study so we cannot generalise the results for the entire society.

The underlying framework of Human Capital theory and Signalling theory are used to understand the decision-making process of students. It is a quantitative study undertaken to analyse the factors determining the demand for post-graduation among social science undergraduates. The study will follow a positivist approach to understand the reality that exists.

### **1.5 Limitations of the Study**

The study focuses on only two colleges of one university offering social sciences. It is a case study and thus, the results cannot be generalised for the entire population of social science students in India. It is a quantitative study which focuses on getting a group perspective of 90 students studying social sciences from the top public institutes. In order to control for the quality of education, the study focused only on two colleges but this may also lead us to capture an incomplete picture.

### **1.6 Scheme of Chapterisation**

The current chapter briefly outlines the background and scope of the study. It states the objective of the study. The chapter highlights the research gap between formal general higher education and professional, technical and vocational education. It further explains the need for the kind of study which focuses on social science as a discipline.

The second chapter will discuss various decision-making theories in economics and focus on human capital theory and signalling theory. It will discuss the theoretical framework of the study. This chapter also critically analyses the neo-classical framework and assumptions of the human capital theory using the concepts of behavioural economics like bounded rationality.

The third chapter will focus on the demand for higher education in general and how various socio-economic factors play an important role in affecting this demand. It will further discuss the expectations and aspirations of individual pursuing higher education. This chapter focuses on empirical literature in the field of Economics of Education which looks into the decisions and demand for higher education among college students.

The fourth chapter presents the research questions and methodology of the study. The sample characteristics of the primary survey conducted are explained in this chapter. This chapter discusses the descriptive statistics of the data collected. It tries to explain the relationship between perception and decision of students.

The fifth chapter deals with the two major research questions. It also develops two quantitative models based on regression and logistic regression to understand the formation of expectation and the decision of pursuing post-graduation in social sciences. Inferential Statistics are used to analyse and make inferences about the data collected.

The last chapter presents a summary of the findings and the conclusion. It discusses the implication that can be drawn from the study while focusing on the limitations of the study.

## **Chapter 2**

### **Decision-making Theories in Economics**

In this chapter, we discuss economic models and theories of decision making that can be used to understand and explain the choices and decisions of students. The unit of analysis for this study is the individual agent (final year social science undergraduate students) and the objective is to analyse the decisions and choices they make in higher education. The descriptive microeconomic analysis is used to understand the behaviour of individuals and how do people make choices? Normative microeconomics is preferred in classical and neo-classical economics as it deals with how individuals should behave assuming they are rational agents who are driven by self-interest and utility maximization (Simon, 1959). This chapter focuses on these normative theories and critically analyse them and their use in understanding the behaviour and decision-making process of students. This chapter first discusses human capital theory which explains investment decisions in education. These theories apply the basic concepts of rationality, utility, probability and expectations in explaining the decisions of economic agents.

In the last section, the critique of neo-classical theories is presented with a special focus on the problem with the assumptions of the human capital theory. It is highlighted how the theories fail to highlight the peculiar nature of education by considering it analogous to any other form of capital and thus fail to explain the real decisions of students.

#### **2.1 Decision making theories in Economics of Education**

The neo-classical theories discussed in the next section were not formulated to explain the choices and decisions of agents in the education sector. Using the neo-classical framework, the Human capital theory is solely dedicated to explaining the decisions related to education and investment in human capital. The assumptions made in human capital theory to some extent are similar to the assumptions of the neo-classical theories.

##### **2.1.1 Human Capital Theory**

The theory rests on the basic assumption of human rationality. Economic agents who are investing in education are considered to be rational human beings who seek to maximise their return and gain. The primary notion of utility and return maximisation which occurs when marginal benefit equals marginal cost is applied in human capital theory.

The implicit assumption of the human capital theory is that students have complete information about the future prospects and current alternatives. Another assumption of human capital being homogenous is made to simplify the model. Qualitative differences in education, training and skills are not considered to bear any significant difference in the earnings of the investors (Becker, 1964). Assumptions about the availability of free and complete information, full employment, free entry and exist, a homogeneous product which are the characteristics of a perfectly competitive market are made in the human capital theory. This means that the theory assumes that there exists a perfectly competitive market for higher education.

Investment in human capital is considered synonymous with investment in physical capital. The theory draws a parallel between physical and human capital by employing the traditional rate of return approach to which is applied in understanding the investment in physical capital, Becker draws a parallel between physical and human capital. Investors in human capital are considered to be similar to investors in the capital market. (Chattopadhyay, 2012)

**Becker postulated a model to predict the optimal level of investment in human capital.**

In the context of education, net present value is defined as  $NPV = \sum (B_t - C_t)/(1 + r)^t$

Cost of investing in human capital includes direct cost as well as the indirect cost of forgone earnings. Direct costs are incurred on tuition fees, stationery and accommodation. When a person chooses to invest additional years in education, s/he incurs an implicit cost by not entering the labour market and forgoing the earnings for those years. Costs to be incurred for an additional two years of education (in the case of post-graduation) are to be discounted to the present time before making a decision to invest for two years.

Present Discounted Value (PDV) of the cost is defined as

$$\sum_{t=1}^{t=2} \{ \text{Direct Cost (MA)} + \text{wages (after BA)} \} (1 + r)^{-t}$$

Education generates consumption and investment benefits (Tilak, 1981) in the form of higher lifetime earnings and better working conditions. The benefit is defined as an expectation about future earnings after the completion of additional education. The pay package with a higher level of degree which can be earned in the future. Marginal benefit (MB) of additional education is defined as the difference between the wages (salaries)

$$MB = \text{Wages (after MA)} - \text{Wages (after BA)}$$

$$\text{PDV of benefit is defined as } \sum_{t=2}^{t=n} (MB) (1 + r)^{-t}$$

The rate of return is the guiding the decisions of investors, it describes the cost and benefit of investing in education by equating the net benefits to zero. The internal rate of return is estimated by equating the present value of benefits with the present value of costs. Present discounted value of benefits and costs are equated to calculate the internal rate of return. if this rate of return is greater than the rate of discount ( $r$ ), the investment decision is rational and justified. The internal rate of return defines the relation between costs and returns. It is a rate of discount which equates the present value of returns to the present value of costs. Estimation of cost includes direct costs like tuition fees, books, supplies, transportation, living expenses and indirect cost like foregone earnings.

Private rate of return is used to “explain the behaviour of individuals in seeking different levels and type of education” (Psacharopoulous and Patrinos, 2004: 3)<sup>5</sup> Private rates of return help in estimating the individual demand for education and “*are useful in determining the incentives for enrolling at different levels of education*” Psacharopoulous and Patrinos, 2004: 5). They also argued that as one climbs the educational ladder, education becomes more specialised so it is important to estimate the costs and benefits of higher education.

Psacharopoulos (1994) conducted studies to estimate the returns from investment in education, it was found that private returns from higher education are higher than social returns. Spillover the effect of higher education on the overall society is less compared to elementary education (Psacharopoulos and Patrinos, 2004). The marginal rate of return depends on the marginal benefit and cost of investment. The total amount invested in education by an individual investor differs due to the differences in the demand and supply conditions. Using the demand and supply curve Becker (1964) also highlighted the role of differences in abilities, subsidies and wealth and tastes in determining the investment in human capital and the distribution of earnings. Opportunities are measured by the supply curve and capacities are measured by the demand curve (Chattopadhyay, 2012).

Elite Approach explains the inequality in income distribution by taking into account the differences in intrinsic ability and capacity of individuals. Individual cognitive ability and differences in the capacity of individuals to benefit from investment in human capital determine the amount of investment and benefits from that investment. Individuals have different earnings because they invest in education according to their abilities, students with high cognitive ability

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<sup>5</sup> Psacharopoulos and Patrinos on Human Capital and Rate of Return (Chapter 1) in the International Handbook on the Economics of Education, 2004.

invest more in education and thereby earn higher levels of income and students with lower cognitive ability do not invest in education because their marginal cost of investing in education is higher. Differences in the level of education acquired to serve as a tool to explain the differences in the distribution of personal income.

Egalitarian Approach explains the inequality through differences in earnings. Ability to gain from investing in human capital is the same for all individuals but the differences occur due to the unequal opportunities. Cost of financing education which is depicted in the supply curve is higher for individuals who do not have resources to finance their education. Both the approaches move only one of the curves but in reality both the curves move differences in abilities and government subsidisation of education shift both the demand and supply curves simultaneously.

Wage differentials are accrued to differences in the investment in human capital. it is emphasised to explain the differences in earnings over time. Human Capital theory links *earnings, ability and incentive to invest in human capital* (education) (Becker, 1964: 83) to explain the investment decision. More able persons invest more in education because their marginal cost of investing is less compared to the students who are less able.

It can be argued that Becker's theory holds some truth about the professional (technical) courses, but can the same be true for all courses across all disciplines? Economists believe that an incentive to invest in any physical or human resources depends on the rate of return expected. Becker assumed the effect of education on earnings to calculate the return on investment in human capital. Education, according to the Human Capital Theory, creates a positive impact on earnings due to the increase in productivity and skills. Becker assumed that workers can also improve their productivity by learning new skills and training while on the job. Becker in his book differentiates between specific and general training, similarly, we can extend the idea to differentiate between General and specific higher education. General education helps us to acquire skills that are not specifically tied to a single firm or job and people can transfer from one (job) employment to another without any significant loss of value.

College education affects both future earnings and consumption. Professional courses (like MBA, Law, Engineering, Medicine) may have more effect on earnings compared to consumption whereas courses in liberal arts and humanities may relatively have more effect on consumption than income. Becker assumed that all kinds of education "*improve the physical and mental abilities of the people and thereby raise the real income prospects*" (Becker, 1962:

9). Education has an investment aspect because of its linkage to the labour market. In addition to investment in college education, investment in information about employment opportunities, health, on the job training and morale can also raise the earnings.

### 2.1.2 Signalling theory

An alternative theory was postulated by Spence in 1973 for explaining the rationale for investing in higher education. The theory departs from the human capital theory assumption of complete information. Spence (1973) highlighted the problem of information asymmetry between the students and employers in the labour market. Employers do not have complete information about the ability and productivity of students. Students invest in order to “*convince the employer that they are in the high-productivity group*” (Spence, 1973: 372). Signalling theory does not focus on the causal chain of transformation emphasised by Human Capital Theory.



**Figure 2.1 Human Capital Theory (Transmission process)**

The two theories differ in explaining the role of education. Under Signalling or screening theory education serves as a signal to eliminate the information asymmetry. Screening hypothesis seeks to predict the institutional behaviour of employers in the labour market and how individuals acquire education to influence the decision of an employer by signalling their productivity (ability) which cannot be measured easily by the employers. Stiglitz (1975) uses the screening hypothesis to explain the effect of education on earnings and distribution of income. More able students have information about their abilities and they gain by acquiring more education and reflecting their productivity to employers.

Both the theories attempt to explain the causal relationship between education and earnings, but it is difficult to test which theory is actually at work when it comes to an individual who is making a decision about investing in higher education. Riley (1976); Psacharopoulos and Layard (2004) have tried to test the two theories and it was highlighted by Riley (1976) that earnings functions approach developed by Mincer (1974) is not appropriate for testing the screening hypothesis as both theories depict a positive relationship between higher levels of

education and earnings. Human capital theory model assumes that “*employers are aware of the individual’s marginal product*” and information costs are negligible as assumed in the human capital theory. (Riley, 1976: 254). According to Screening hypothesis of the Signalling Theory, employers use credentials and educational achievements to assess the productivity level of potential employees. Information about the productivity of students is transmitted through their credentials and degree.

## **2.2 Neo-Classical Theories**

It is necessary to understand that education has an intrinsic value which is derived from the consumption of education. The knowledge and experience gained in college cannot be discounted for and measure in economic terms. Education can be treated as both consumer and investment good. Education is considered as a consumer good because it yields utility to the students who go through the college experience and gain knowledge through learning in the classroom (Chattopadhyay, 2012). If education is considered as a consumption, then the decision about its consumption can be understood in terms of the classical theory of utility maximisation.

### **2.2.1 Theory of Utility Maximisation**

Utility maximisation theory has been used to predict and explain the behaviour of consumers and firms since the beginning of economics as a discipline. We can begin to understand the behaviour of students (individual agents) using the most basic and foundational theory in the literature of choice and decision making. In classical economics, theories depict how an economic rational agent ought to behave and not how they do behave (Simon, 1959). Every individual seeks to maximise his/her utility from the consumption of a good or service subject to certain constraints. Given the ability, family income and supply of educational institutions, individuals will spend on education to earn the maximum benefit and utility from it. The rational economic decision-maker would maximise the benefit relative to costs. Choices are affected by scarce resources (time and money) and the individual decides to allocate these scarce resources in a way that maximises his/her utility (satisfaction from the consumption).

If the student spends on higher education in anticipation of better-earning opportunities, then they consider education as an investment which has uncertain future gain associated with it. They then seek to maximise the return from their investment, the concept of return maximisation where marginal benefit equals marginal cost is similar to utility maximisation



discussed above. This shows that Human capital theory is built using the concept of Normative theories of Economics.

### **2.2.2 Decision making under risk and uncertainty**

In the classical theory of consumers discussed above, the outcome is known for certain. Even before a consumer pays for a product he/she knows what they will end up consuming. There is an element of certainty with no risk, the same is not true for other markets in the economy (financial market, firms, labour market, education market, asset market, etc.). Expectations and probability rule the game when it comes to decision making related to investment in capital, financial market, labour market and education. There is a cost involved in period  $t$  whose benefits will be seen in future  $t+3$  or so. There is an element of risk involved because the price is paid upfront in advance while the output undergoes a process before it is realised in the future.

Von Neumann and Morgenstern in 1944 developed a formal theory about decision making in risky situations. There is an element of risk when an individual decides to pursue higher education for better employment opportunities and higher income prospects. One does not know with certainty, if he/she will get a job and how much the job will pay. The growing evidence of graduate unemployment further suggests that there is a possibility that an individual might not even get a job after completing Bachelors'. Before entering the higher education, individuals have some expectations about the future earnings, but these expectations might not get realized if he/she remains unemployed.

According to Neo-Classical Economists, expected utility theory is a useful guide to rational choice and it defines the right way to make decisions when the outcome is risky and uncertain. In the expected utility function, a rational agent is assumed to have preferences (exogenously given) which are complete, transitive, consistent and independent. The assumption of independence of preferences, in classical economics, is unrealistic because, for everyday issues, preferences are not independent as shown in Allais paradox. This means that the assumption of rational behaviour made in expected utility theory is inconsistent with the reality and this could also be the reason that these normative theories fail to predict and explain the way people actually behave. The next section will focus more on these assumptions about preferences and how they are formed.

This is an empirical study of the decision-making process of students who want to pursue post-graduation in social sciences. In a real-world situation, people do not pay attention to all the

potentially relevant information. In Neo-Classical theory, *“the process of collecting and processing information is simply postulated (in terms of rationality assumptions) and never subjected to any direct test”* (Simon, 1987: 222)<sup>6</sup> Aggregate National level data like NSSO, are too aggregated and noisy to reveal much about the decision making process of the economic actors.

Economists make use of subjective expectations to predict choice behaviour under uncertainty Manski (2004). The theory of Subjective Expected Utility postulates that choices are made from a given fixed set of alternatives and the probability of each outcome is known subjectively. All the choices are made to maximise the expected value of a given utility function. A utility function assumes a consistency of human choice which is not always true in reality. Under uncertain circumstances, people assign subjective probabilities to the unobservable states. Unlike expected utility theory, where the probability is objectively given, subjective probabilities are revealed by choices under subjective expected utility, it is assumed that subjective beliefs are revealed through the choices made. (Camerer, 1998)

Research in economics which seeks to study the schooling behaviour generally assume that “all youth condition their beliefs on the same variables and process information in the same way” (Manski, 2004: 1332). When students choose to invest in education, there is an element of uncertainty about the future outcome. The probability of getting a job and realisation of the expectations about the salary is uncertain and this makes the return from schooling or higher education uncertain.

In the survey conducted for the study, one question adhered to understand the choices of students when it involved payoffs with risks. The theory suggests that if the expected value is the same for all the cases, then the case with perfect certainty should be preferred over the risky. But the results contradicted this prediction. The majority of the sample went on to take the risk in anticipation that they will be awarded the higher payoff but at the same time choose to neglect the risk of not getting anything. They focus more on the benefit and not pay heed to the risk. Classical and Neo-classical theories fail to explain this anomaly in the choice.

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<sup>6</sup> Simon on rationality in the New Palgrave: A Dictionary of Economics, 1987

## 2.3 Critique of Neo-classical theories

There are several Neo-classical assumptions made in the human capital theory whose tenability is questionable. First, the broad assumptions of neo-classical theories are discussed and in this section, a basic critique of Neo-classical economic theories, which subsumes Human Capital Theory, is discussed.

### 2.3.1 Assumption of Rationality

All neo-classical economic theories assume that the economic agent is an abstract individual who is rational, consistent, self-interest driven and utility maximising. Simon (1955) argued that the specific assumptions made about the human behaviour in neo-classical theories are in contrast with the normal human behaviour. Rational Choice Theory which seeks to explain the consumer behaviour and Human capital theory which seek to explain the behaviour of investors assume the agents are rational and are driven by self-interest.

Behavioural or descriptive theories of choice highlight the differences between bounded and perfect rationality (assumed in normative theories) that arise due to constraints. These constraints are the psychological limitation of processing and evaluating the information available to make an optimal choice March (1978).

The term ‘bounded rationality’ is used to designate rational choice that takes into account the cognitive limitation of both human knowledge, information and computational capacity. *“Bounded Rationality seeks to identify procedures that can account for the observed inconsistencies in human behaviour and choice”* (Simon, 1987: 267)<sup>7</sup>. These three factors prevent economic actors in the real world from behaving in ways that approximate the predictions of classical and neo-classical theory (Simon, 1955). Bounded rationality seeks to identify procedures that can account for the observed inconsistency in the human choice pattern. Constraint optimisation is not equivalent to bounded rationality, it is a form of unbounded rationality assumed to explain the decisions and choices of an individual with limited resources (Gegerenzer, 2002).

In neo-classical economics, it is assumed that all the information exists and is freely available for processing by all the decision makers. Individuals can make use of this information to predict future outcome accurately. Stigler (1961) has highlighted the importance of information

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<sup>7</sup> Simon on Bounded rationality in the New Palgrave: A Dictionary of Economics, 1987

by arguing that the understanding of the economic world will be incomplete if we do not take account of the information which is guiding every decision of economic agents in real life.

When the assumption of complete processing of information available by individuals is questioned under the theory of bounded rationality, the entire neo-classical framework which rests on the assumption of rationality breaks down. If the information is not available, first it needs to be collected within a limited time frame with the help of resources (time, money) which are also limited. When the information is collected then it needs to be processed to make a decision by assessing all the alternatives and selecting the one which gives maximum utility or returns.

### **2.3.2 The Assumption that preferences are given and are exogenous**

Neo-classical theories assume that preferences are exogenous to the market and it is assumed that choice is a function of preferences which are given and consistent. Preferences serve the way of processing choice and decisions under uncertainty. Future preferences are known with adequate precision is the basic assumption of decision making theories (which includes human capital theory). In addition, March (1978) has argued that individual preferences are inconsistent and change over time as they are contingent upon the actions taken. Anticipating future preference is confusing and there is an element of ambiguity in the theories of rational choice. When future goals are undefined (vague), unstable and ambiguous, the decision making quality is not at optimum level. March (1978) has highlighted the fact that like limited rationality, goal ambiguity is also a form of human intelligence and a common behaviour pattern among individuals. Thus it should not be ignored while assessing the choices and decisions of humans

The choices made are strategic in nature and past experiences and social environment define these choices. Hogan (1997) has also pointed out that neoclassical theory assumes that consumer preferences are independent of prices and income and as such, the consumer preferences are exogenous to the market. The neoclassical assumption that preferences are exogenously given deters us from understanding the reality of the world. Every economic man lives in a social world and has to adhere to certain social norms and practices. Individual preferences are affected by the functioning of market and family income. Preferences are socially constructed. *“Social structures and institutions shape the individual understandings, preferences, aspirations and expectations and these, in turn, affect the particular choices individuals make from among the ensemble of choices they face”* (Hogan, 1997: 128) therefore,

market processes and social structures affect and shape the choices and preferences of an individual. Preferences bear a direct influence on the choices and decisions of individual students.

The goals and ambitions affect the performance and utility derived from the decisions. Aspiration level is itself subject to change and adjustment. “*Level of personal ambition is not a decision variable in most of the choice theories*” (March, 1978: 602). Marks scored in XII standard would motivate students to pursue higher education from best of the colleges but at the same time marks scored in college further enhance or diminish the aspiration level. Level of aspiration and ambition is not static in nature; it is a continuous dynamic process which is revised at every step of life. Attitude and optimism can also govern the choices of an individual student.

### **2.3.3 The assumption that the probabilities are known for an uncertain event**

Keynes rejected the classical theory of probability, he was sceptical about using statistical inference and inductive logic for establishing the social truth. The fundamental understanding as postulated by Keynes in “*Treatise on probability*” is that probability is relative in nature, it is different for different people. For example,  $p$  defines the probability of getting a job after MA and  $q$  define the probability of not getting a job. A belief in  $p$  implies an equal belief in  $q$  but the survey shows that students have more confidence in  $p$  than  $q$ . It is highly probable for some to get a job after MA and highly improbable for others. Students might assign different probabilities, probabilities assigned by each student at the same time for the same set of events can be different. Instead of using 50-50, they might assign 80-20 or 40-60. Neither of the two probabilities is more correct than the other.

According to Keynes, all probabilities comprise a certain amount of truth and falsehood. The essential relativity of probability is absolutely fundamental and expected utility theory and other theories have failed to grasp it (Broad, 1922). Neo-Classical theories are normative but people do not use them in everyday decision-making. (Camerer, 1998). Neo-classical theories assume preference relation exists. Preferences are ordered and consistent, but there is ambiguity in these preferences. In the next chapter, the study will focus on the problem associated with this assumption of preferences.

Keynes theory of probability is one of the first formal statement on non-probabilistic beliefs. He argued that assigning probabilities to pair of events of which no comparison is possible is a futile exercise which will not yield any result. There exists some pair of events where one is

more probable than the other. Giving an exact numerical measurement is possible only for a limited class of events, generally, these are the events which are backed by evidence like tossing a coin, rolling a dice, deck of cards to name a few. In these cases, all the possible outcomes are known and are backed by evidence. There is no room for ambiguity unlike the event “*is it going to rain today*” for which no alternative holds. (Machina and Siniscalchi, 2014: 733)<sup>8</sup> Willingness to take risk differs among individuals because they value loss and gain differently.

Perception of an individual determines  $p_1$  the probability of getting a job. The value of  $p$  cannot be determined exogenously; it is different for every individual. It is highly probable for a student with the good family background, good communication skills, good school and college with higher marks to land a job than a student who is a first-generation college-goers with poor communication skills and schooling and low marks. Keynes argued that many probabilities are not even measurable. “*Probabilities are only-measurable in the comparatively rare cases where we have a field of possibilities which can be split up disjunctively into exhaustive, exclusive, and equiprobable alternatives*” (Broad, 1922 :74), like game of cards, dice etc. but this does not happen in real life since we do not know all the possible exhaustive cases. Simplifying a problem does not always lead to a correct conclusion, it is difficult to measure probabilities for some cases.

Probabilities are subjective in nature and are based on the perceptions of the individual. Nature is complex and probability seem to solve the problems of nature assuming uniformity in nature. Drawing statistical inferences for complex reality on the assumption of uniformity will not help us in predicting it. Keynes had some pretty good insights into human behaviour even though most of his work was in the field of macroeconomics, we can learn something from his chapter on financial markets. He talked about “animal spirits” and how these emotions play an important role in individual decision making and investment decisions. Investment in human capital does not depend just on the going interest rate and marginal benefits. Expectations about the job, salary and status also play an important role. It also involves changes in consumer and investor attitudes. Investment decisions are guided by the expectations; these expectations take the form of probabilities in Expected Utility theory or Marginal efficiency of capital in Keynes Investment theory.

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<sup>8</sup> Mark J. machine and Marciano Siniscalchi on Ambiguity (Chapter 13) in handbook of the Economics of Risk and Uncertainty, Vol.1, 2014.

It can also be argued that individuals do not have enough information in the first place to examine all alternatives, and then rank and assign probabilities to each outcome. Valuation of outcome can be different for every individual. Some may value status, prestige and location over money while others may value only the money or economic benefit. It is difficult to rank and compare components (status, money, happiness, aspiration) that do not have a common denominator. (Simon, 1955) preferences differ from individual to individual and choices also depend on the aspiration level of a human being. Therefore, assigning a standard value to the aspirations is a difficult task.

## **2.4 Problem with the Assumptions of Human Capital Theory**

The focus is on the assumptions made in human capital theory to explain the investment in education. This section will critique the assumptions made in Human capital theory and how the rate of return approach does not incorporate the specific nature of education. The peculiar nature of the market for higher education where students and college interact for a good which is not homogeneous is not considered in the human capital theory. These assumptions fail to capture the reality by considering human capital analogous to any other form of capital. The assumptions deviate us from understanding the decisions about education which has a complex and dynamic nature.

### **2.4.1 The Assumption that there is a perfectly competitive market for education.**

Human capital theory follows a neo-classical framework so by extension the critique of neo-classical theories is valid for human capital theory also. Market principles advocated under the neo-classical theories are infused in the higher education sector. Neo-classical theorists propose that market ensures competition and efficiency. This efficiency condition can only be satisfied only in a perfectly competitive market Chattopadhyay (2012). Since the initial distribution of resources plays an important role in satisfying this assumption of efficiency, equity takes a back seat when it comes to market and thus market institutions instead of promoting equal opportunities, perpetuate inequality. Every student or parent does not have equal opportunity to participate in the education market because of limited resources.

Complete and free information is available in the market is the main characteristic of a competitive market. But in the higher education market, information about the product, supplier and quality is not readily available for students. Before a student enters the market, s/he has to collect information about the prices of the courses offered in different colleges. Stigler (1961) highlighted the role of searching for information in understanding the decisions of a consumer.

Consumers constantly search for information about the seller and the price of the product they wish to consume or invest in.

If a student is investing in higher education with a motive of earning higher returns, then knowledge about the prices and quality of the good is necessary to detect the returns from the investment. They search for information about the quality of education and they rely on the ranking of universities as "*Reputation*" is a word which denotes the persistence of quality, (Stigler, 1961:224) and providers of higher education have an upper hand as they can control the flow of information market but at the same time ranking makes the search easier for students (Chattopadhyay, 2012).

In order to select the most profitable field, they have to acquire information about the work area also where they can work to extract those profits. Information is collected not just for the prices and quality but also for the links with labour Market facilitates exchange by bringing together two different sets of economic agents (buyer and seller). This assumes that students and parents are consumers whereas government institutes are a supplier (producer) of education. (Jongbloed, 2004) argues that for higher education market to be categorised as a freely competitive market, freedom is a desirable trait. Students and parents should have the freedom to choose the provider and product. Freedom to choose provider has to be backed by merit as higher education is a '*positional good*' (Marginson, 2004). Choice in higher education is not one-sided in India, colleges set up a selection criterion (cut-off, entrance exam) and students who meet these requirements and clear the selection process are enrolled in the college. There is a duality of choice, a student chooses the college by applying to that college and then the college chooses the student through the selection process. when both college and student choices are met then the final outcome is realised. Unlike the consumer market where an individual pay for the product or service and consumes it readily, the higher education market has a process of selection where benefit from the paid services come at a later stage. The choice is constrained because qualification and abilities are required to enter the education sector. In this sense, education is not a consumption good where education can be consumed readily by paying for the services. Students have to prove their ability and then college selects.

The market for higher education is different from any other market constructed for goods and services. Students have to assess themselves as their ability and merit will help in the realisation of demand for higher education whereas, in financial and capital markets, investors can apply the rate of return approach to determine the optimal amount of investment. Investors in the



capital market have to access the economy and have concrete information available outside their belief system and self-perception.

The market for higher education “*tends to be always imperfect*” (Chattopadhyay, 2012: 189) since the goods and services provided are not homogeneous. Quality of education depends on the inputs like students, teachers and other resources<sup>9</sup>. The market for higher education is highly competitive but the competition takes place in a “strikingly uneven playing field” (Winston, 1999: 18). Best of the students are attracted to the best of the institutes, this fosters competition among students. Best of the colleges attract the best of the students in order to maintain their position and status. The hierarchy among institutions and students from these institutions is established which is difficult to break.

#### **2.4.2 The Assumption that Expectations about future earnings can be determined.**

Uncertainty means the future outcome is unknown, people form expectations on the basis of the information available about the future which best suits their perception and reality. Education is a peculiar form of investment; it is a process where the input is the output also. Before this process begins no one has a clear foresight to deduce the end result. None of the input is the same, therefore the output will also differ tremendously. Growing literature in behavioural economics (Simon (1955, 1959), Gigerenzer (2002), Thaler (2015)) argues that expectations are constrained by limited information. Students have to make the decision to undergo the process without having complete information about the process itself. This is the reason why experiences and perception conveyed by the seniors and peers form the basis of the expectations which is guiding the decision of pursuing higher education.

Individuals do not have complete information about the labour market as well as educational institutions. There is a transaction cost involved in getting all the information, even if it is available in the market. On the basis of the ability and confidence in their ability, students face the competition in the market. Some of their expectations are realised while some remain unrealised. Education is a process and not a “homogenous product”, where the students serve as an input as well as an output. Students do not have the cognitive skills to analyse the information and process ex-ante. They tend to make decisions based on limited information, and it is generally believed that they make a right decision using heuristics (rule of thumb). Individuals cannot make correct assumptions about the probability of getting a job and the

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<sup>9</sup> By other resources it is meant that infrastructural facilities, governance and grants which foster the smooth functioning of the institute.

amount of income they will earn. Expectations, as Keynes has argued are subjective and volatile in nature. *“people with prior beliefs interpret the information in the way that is consistent with their belief”* (Camerer, 1998: 172). Individual expectations and probability may not be in perfect alignment with the expectations of the job market. This is the main cause for over education and graduate unemployment.

The student is the decision maker who has to make do with the limited information available and taking into account his/her cognitive limitation. They cannot decipher the total amount they are going to spend on education and what benefits they will reap. They do not undergo complex computation of estimating internal rate of return as postulated in the human capital theory. The labour market is imperfect and highly segregated therefore the information about earnings is distorted. While making a decision to invest in higher education, individuals ex-ante do not ponder much, they just go with their gut feeling that they will get a job and earn more than they will earn if they do not pursue it. The labour market is not perfect and is highly segregated and the information about earnings is distorted. While making a decision to invest in higher education, individuals ex-ante do not ponder much, they just go with their gut feeling that they will get a job and earn more than they will earn if they do not pursue it. Social and cultural norms influence their decision.

Their own belief about the benefit from education is subject to the environment. Students do not have complete information about their own ability. The survey conducted for the top two colleges suggests that students themselves are undermining the use of marks as a measure or proxy for ability. Self-assessment, confidence in an individual's capacity will positively affect the expectations from education. (Krueger and Dickson, 1994) conducted a study on managers, it was found that self-attribution or individual's belief in one's success leads to an upward movement in the expectations about income. These behavioural biases may lead to irrational behaviour. In the experiment, students are willing to take a risk believing that they will get the job after MA. This over-confidence makes them choose an uncertain outcome over a certain one.

It has been discussed in the previous section that tastes and preferences are not stable and are subject to change. With new information and experience of others, individuals change their perception and preferences. This may seem inconsistent with the assumptions of rational choice theory but it is natural to the human beings making decisions in real life. Individuals keep on processing new information and adjust their expectations accordingly.

Expectations and perception are formed on the basis of information available to an individual which is gathered through the above-mentioned mediums. People acquire information from their environment and what is known to them. As Simon (1959) has argued human beings are always learning, estimating, searching and processing the information. It is an ongoing process as new information comes into the picture, the perception changes and new expectations are formed. (Simon, 1959) argued that gathering information has its own cost. According to price theory, information should be collected as long as the incremental cost of obtaining information is less than or equal to the additional benefit of obtaining such information. Correct and complete information is not as freely available as it is assumed in classical economics. It is distorted and comes with a cost.

Even when information is available, there is a notion of subjectivity involved. Individuals choose to omit and distort the information available in order to suit their perceptions and already formed expectations. Individuals have goals and values associated with every decision, and they filter information accordingly to suit these goals. The environment is also subjective in nature, inferences drawn from them may seem valid. Institutional environment influences the expectation.

In the survey conducted, when students were asked about their expectation for income, job after completion of higher education, many of them answered that “they have no expectations” (source: Data) When pressed further they did provide a rough estimate about their future expectations. This clearly shows that most individuals (students in this case) make important economic decisions without making an effort to learn about relevant economic variables which bear direct consequences on the decisions. Schiller (1987) has argued that ‘the information on which most people base their expectation is fragmentary. Students have limited information about the future earnings and they do not base their decisions on these expectations. The study seeks to explore what all factors, other than expectations about the future, affect the decision-making process of students.

Perception and belief about the labour market help in the formation of expectations. Expectations are subjective in nature. Expectations about future earnings depend on the possibility of getting a job after the completion of education. Labour market conditions help in the formation of expectations. Social network improves the probability of getting a job thereby improving the expectations of students. According to Dequech (1999), future expectations are determined by confidence and creativity. The same concept can be employed in the realm of

the education sector. Self-assessment by the students and their social network also positively influence the future expectations.

### **2.4.3 The assumption about the factors affecting investment in education**

Under the rate of return approach only costs and expected future benefits are considered to explain the optimal level of investment in education. The human capital theory postulates that individuals correctly forecast the benefits they would acquire by pursuing higher levels of education. One ought to remember that individuals neither have perfect and complete information about the outcome of the education process they are about to enter nor about the kind of occupation they are going to end up with. *“There are very few high school and college students whose choices reflect a careful analysis of the factors mentioned in the human capital theory like time and money to invest in which kind of education and skills. Students tend to study the subject they enjoy most without thinking much about the life that it will create”* (Thaler, 2015: 27). Economists focus on choice more and have little to say about the process of choosing or decision making. There is a need to study how the choices are made by individuals and to explore the factors that affect these choices and the decision-making process. These choices are dynamic and preferences are revealed through the choices made subjected to various constraints. Perception, confusion and the dynamics of preference, level of aspiration and attitude formation are of central importance in understanding the decision-making process.

All economic decisions are made through the lens of opportunity costs, alternative uses of time and money also affect the cost of higher education (Thaler, 2015). Classical theory assumes that these alternatives are fixed and known. (Simon, 1959) students apply intuition and not axioms to solve the problems related to higher education. They are used to the uncertainty they face at every level. Monetary gain or expected return is not the only guiding force, social beliefs and attitude govern the choices or decisions. It is a social phenomenon which is determined conventionally and not through rational calculations. Hence, it can be concluded that decisions related to education and choice of courses are a complex and dynamic process which a simplified model based on the assumption of rationality and optimality, cannot explain.

Students undergo the process of education with a lot of expectations and views. They either seek to learn and enhance their knowledge, gain exposure and experience life or they go with a belief that it might provide them with a competitive edge in the labour market and help them contribute to the society. Love for the subject, interest and status of the college (brand) also influence the decision of students. The next chapter will focus on the factors that affect the

demand for higher education. Factors other than the price of education and expected earnings will be discussed

## **2.5 Concluding remarks**

The first section gave a brief account of classical and neo-classical theories of decision making theories in the economics of education. The second section gives a brief summary of neo-classical economic theories that explain the decision-making process of consumers in risky situations. These theories helped us to develop an understanding and to see how far decision-making theories can explain the complexity of decisions related to higher education.

These theories are then critically examined using the concept of expectations and bounded rationality. The concept of bounded rationality is also discussed in this chapter to introduce the new field of behavioural economics developing in the discipline of Economics. In the last section, the theoretical framework for the study is discussed which seeks to apply human capital and signalling theory to understand the decisions and choices of social science students. The last section highlighted the problem with the assumption of human capital theory when it comes to explaining the reality of the higher education market.

## Chapter 3

### Factors Affecting the Demand for Higher Education

In the last chapter, it was highlighted that the higher education system is more diverse and economic theories cannot help us to explain the decision of students in this system. Human capital formation depends on quantity and quality of education. There are three levels of higher education: Bachelors', Masters' and MPhil/ PhD. The decision to invest in these levels has an element of sequencing. One cannot pursue Masters' without completing Bachelors' and similarly one cannot pursue Ph.D. without first investing at the Bachelors' and Masters' level. These decisions are sequential in nature with an element of uncertainty, one has to commit to each level of education in order to move up the ladder.

Neo-classical theories assume that individual choices are not affected by their socio-cultural factors. It is assumed that individuals face no limitation in terms of ability, perception while making a decision about an uncertain future variable. The decision about pursuing higher education is not a rational process which can be made doing a complex cost-benefit analysis as suggested by Becker (1964). The rate of return approach helps in predicting the optimal level of education for an individual but this study is interested in knowing the actual level of education a person wishes to pursue and what factors do he/she consider while making such decisions. Human capital theory and Signalling theories give more weight to factors like expected earning, expected cost, ability and family resources in explaining the investment decision of students.

This chapter focuses on the empirical literature in the field of economics of education which has highlighted the factors that affect the demand for higher education and decisions of the student. A brief review of the empirical literature is presented which will help us in developing the hypothesis to test the effect of socio-economic factors on the decision of students. Interaction and interdependence of various socio-economic factors and their role in defining the decisions and expectations of students will be explored in this chapter.

An individual decision to participate in higher education is affected by two main components, economic and social. The literature is divided accordingly, first, the empirical literature which has focused on economic factors in determining the demand for higher education is discussed. These studies adhere to the human capital framework of Becker which highlighted the importance of economic cost and benefits. The study with the help of the survey of empirical

literature will highlight the peculiar factors which can affect the decision of students studying social sciences in India.

### **3.1 Economic Incentives**

The demand for education can be explained by building on the direct relationship between education and earning. This Psacharopoulos (1994) is the main proponent of the human capital theory, he has estimated the rate of return to education for countries. Psacharopoulos (1979, 1984, 1994, 2004) has used rate of return approach to explaining the demand for higher education and the logic of investing in education. Other empirical studies discussed in this chapter have used the discrete choice model to study the influence of various socio-economic and individual factors on the decision of pursuing higher education (Albert, 2000).

Empirical studies conducted by Psacharopoulos (1994, 2004), are purely built on the human capital framework where future returns and benefit are considered to be the guiding force in explaining the investment in education. Screening hypothesis suggests students (who will become a prospective employee in the future) acquire higher education to pass the screening test of employers who do not have complete information about the ability and productivity of these students. Fredriksson, (1997) conducted a study using the actual university enrolment data to show the positive effect of wage premium on the demand for higher education. It can be concluded that economic incentive in the form of a higher salary is the main driving force which determines the decision of students pursuing higher education.

### **3.2 Individual Ability**

Becker using the Elite Approach seeks to explain the heterogeneity in the accumulation of higher education and income distribution through abilities which are intrinsic to an individual. Grades or marks scored and Intelligent Quotient (IQs) are taken as a proxy for ability. Several empirical studies (Stafford et al, 1984; Mullen et al, 2003 and Bedard and Herman (2008) have tried to show that educational achievements (marks or grades) bear a direct influence on the participation of students in higher education. Bedard and Herman (2008) focused on science graduates shows that students with high GPA (Grade Point Average) tend to enrol in advanced degree courses. Stafford et al (1984) also argued that higher the levels of educational achievements, the more likely a student is to pursue further studies.

Human capital theory and signalling theory stress on the role of ability in determining economic success through education. When the ability is measured through grades (marks

scored) in school and colleges, it is implicitly assumed that a person who is more able in one thing (scoring good marks) is necessarily more able in everything else. Signalling model rests on this unidimensional view of ability where education (credentials and degree) serves as a signal of ability. Universities, Employers in the labour market screen individual on the basis of the marks and credentials.

Human Capital theory predicts that students with higher ability would invest in higher levels of education since their marginal cost is significantly lower compared to the students who are less able. Becker (1964) discusses the elitist approach where the difference in talent or ability explains the difference in earnings and investment in education. The Elite Approach discusses the equilibrium level of investment in human capital resulting from the difference in abilities.

The theory implies that students who score higher marks in college are more likely to pursue post-graduation. the concept of innate ability assumes that ability is intrinsic in nature and cannot be affected by socio-economic factors. Ability is formed over a period of time and has a component of learning dynamics. Educational achievements of students are positively correlated with the family income, parental education and the status of the family. Early investment in education improves the ability of the student. The difference in abilities will always be there and thus inequities will remain in the society. People with different abilities will invest differently in education, according to the elite approach, and this will eventually lead to differences in earnings and an unequal distribution of income.

Human Capital formation does not start in higher education; it begins with early childhood investment done by parents. The ability of an individual is assumed to have a direct effect on his/her productivity which is enhanced through education. Thus it is important to note that family resources help in providing access to the internet, coaching, better schools which lead to the social and cognitive development of children. Presence of educated parents, siblings improves the learning atmosphere at home, which gets reflected in higher grades and ability.

There is a dichotomy associated with the ability of students and demand for social sciences. Students with higher grades tend to enrol in best colleges with Arts courses whereas students with low grades also tend to pursue social sciences from other colleges since it is comparatively easier for them and probably the only option remaining which will help them to acquire a Bachelors' degree. Thus students with high as well as low ability are studying social sciences. In the next section, we will see how abilities and academic achievements are themselves dependent on the social environment and family background.



### **3.3 Family Background**

Family background plays an important role in influencing the decision-making of students. Various empirical studies (discussed below) have been conducted to explore the effect of family background on the decision of students and their academic achievement. Students ability and educational attainment are related to the family environment, parental education, occupation and income which also affect the future expectation and earnings (Leibowitz, 1977) Family background include various socio-economic factors like family income and parental education. Due to imperfect capital market and lack of access to the capital market for education loan, parents have to invest in the education of children.

Leibowitz (1974) tried to explore how parental attributes change or influence the economic outcomes. He argued that family income and parental education affect the quality and quantity of goods and time spent on children which are considered as “home investment” (Leibowitz, 1974: 113), this home investment influences the stock of human capital. Becker and Tomes (1994) developed a model to capture the effect of parental income on the earnings of their children. Parents invest in their children and these children accumulate human capital which in future lead to higher earnings for them. Family income serves as a socio-economic factor which influences the decision of students. Stafford et al (1984) tried to establish a link between family income and participation in higher education. The ability to pay for higher education serves as a positive factor in influencing the decision of students.

Parents always try to provide best of the schooling, comfort to their children. But this desire is constrained by the resources (money) they have. Parents’ willingness to pay for education is constrained by the number of resources they have for the family. High-income families have resources at their disposal, they invest in the best of the schools and give best of the resources to facilitate the education and learning of their children. Here, willingness to pay is complemented by the ability to pay. Parents have resources to spend on education and they want their children to have the best of the education. Low-income families, on the hand, have the desire of investing in education but are constrained because they do not have resources to support this desire.

Investment in education is not a one-time investment, money needs to be spent on stationery, travelling, accommodation and other miscellaneous things. Expenditure on health, learning, schooling and skills is incurred by parents which improve the ability of children. Family income determines these expenditures which influence the adult earnings and future career,

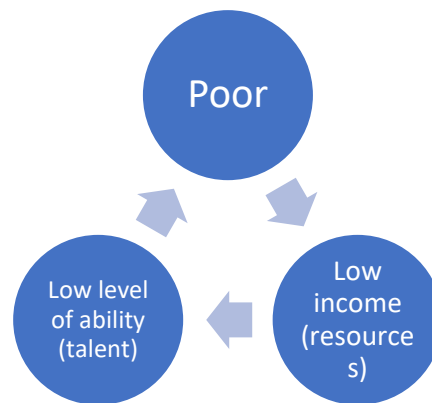
*“These expenditures are determined not only by the abilities of children but also by the incomes, preferences, and fertility of parents, public expenditure on education”* (Becker and Tomes, 1986: 55). Students need resources to invest in higher education. In India where there are imperfect capital markets, financing of higher education through education loan is not the mode of financing higher education. Most of the students rely on their parents to fund their higher education and provide for them until they get a job.

Teachman (1987) used the data from a national longitudinal study of high school students to test the impact of educational resources on educational attainment. Educational resources are created by parents who have higher levels of education and income because they probably have more ability and motivation. The study revealed that the effect of these resources on grades is greater for men while for women, the impact is higher on educational aspirations. Teachman (1987) argued that at higher levels of education, student selectivity increases as only the students who are most motivated and academically oriented continue to study.

It is important to note that there is a positive correlation between family income and parental education as parents who are highly educated tend to get better high paying jobs and thus are able to provide their children with all material goods and better schooling. Various empirical studies (Leibowitz, 1977; Kodde and Ritzen, 1988; Albert, 2000) consider maternal education as an important factor which influences the academic achievement of students and their human capital formation. Educated mothers are more productive in developing the abilities of their children (Leibowitz, 1977). Educated mothers, if they belong to high-income families, prefer to stay at home and spend more time with their children. If they are not in the labour market as a family is financially well off, then they can devote more time towards the development of the skills of their children.

The study conducted by Leibowitz (1977) focused on examining the role of parents in the development of verbal abilities of children. The study revealed that more time input from parents improved the verbal skills of their children. This does not mean that children of mothers who are working do not have verbal development. This shows the abilities and achievements of students are directly influenced by the parental education and amount of time parents spend with their children. Albert (2000) used a discrete choice model under the human capital theory framework. he studied the influence of family characteristics on demand for higher education in Spain. Mother’s education has a positive impact on the demand.

Becker and Tomes (1994) focused on inequalities among families and how across generations these differences fall or rise. They used family endowments to explain the differences among families and explored the indirect effect of parental income on the income of children through the transfer of endowments (assets). Poor remain poor due to low talent or low resources available to them Cheechi (2005). Low-income families are poor and poor children face disadvantage as they inherit lower endowments from their parents.



**Fig 3.1 Cycle of Inequality (where poor tends to remain poor)**

Parents who do not have high levels of education end up with low paying jobs and this leads to low family income. If the family income low, it means that fewer resources are available for investing in the formation of human capital. low level of schooling will give rise to low abilities among children of the poor. these low abilities with a low level of education will again inhibit their income from rising as they end up with low paying jobs. It is difficult to break this cycle of inequality (see figure 3.1) where poor remains poor and rich under the same cyclic process keep on acquiring wealth using the assets and talent available to them.

Like human capital, cultural and social capital can also play an important role in determining the demand for higher education and enhancement of productivity. Cultural capital refers to the parental factors which form the status of an individual in the society (Bourdieu & Passeron, 1977) and social capital refers to social networks and the ways in which social networks and connections are sustained. Social capital differs from the material and human capital, it is the “*resource mobilised from the network of relationships among human actors*” (Bian, 2008: 82)<sup>10</sup> Social standing, the power to influence other people, wealth and status can be used as an indicator of social capital. We need investment in economic and cultural capital in order to acquire social capital. When an individual participates in social groups he/she is bound to get

<sup>10</sup> Yanjie Bian on Formation of Social Capital (Chapter 5) in Social Capital, 2008

benefit from this process of socialisation. Time and money need to be invested in order to construct social networks and build social capital.

Social capital may not bear a direct influence on the demand for education but in the field of social sciences which is considered to have limited job prospects (compared to the technical and professional disciplines) social contacts can help students to get jobs which otherwise are difficult to secure. Bourdieu has argued that possession of social and cultural capital can be converted to economic capital and monetary possession. This means that if students have the confidence that the parents and social network will help them in getting a job, they would not give much importance to the expected salary which they might earn if they enter the labour market. They pursue higher education when they know that a social network of parents can be used as a medium to convert their human capital into economic capital.

Liu and Morgan (2015) have used Bourdieu's concept of *habitus* to understand students' choice of subject and institution for post-graduation in China. They used both quantitative and qualitative tools to estimate the influence of parents and their status on the decision and choices of students. It was found that parents with high cultural capital guide their children better and Parents' education has a direct relationship with their occupation and income. The study will consider parental education as a socio-cultural factor which has an influence on the economic factors discussed above. Education is assumed to be a part of the culture. Understanding of culture requires understanding education and vice versa. The culture of a family can be understood by examining the level of education parents have acquired. It is not always true that family characteristics and parental education have a positive influence on the educational attainment of children, especially after graduation. Mullen et al. (2003) found that at the post-graduate level, parental education has no effect on the decision of students entering masters' programme.

### **3.4 Gender**

There is a dichotomy among disciplines, science and engineering are more male-centric whereas humanities and social sciences are more female-centric, based on the quality of the subjects they are labelled as feminine (soft) or masculine (hard). Females tend to get concentrated in the feminine disciplines and subjects whereas male tends to dominate in masculine disciplines (Chanana, 2000). Females from all the sections of the society tend to get concentrated in the discipline of social sciences. Education can be perceived more as a consumption by the females. They consider learning for interest more important than getting a

high paying job. Males, on the other hand, are more interested in the salary and job prospects associated with the discipline they choose to study. Social expectations here play an important role in determining the choice of subjects. Males are expected to earn and take responsibility for the family so they are more concerned about the job prospects and returns from higher education. Females are not expected to earn and provide for their family, therefore with no additional responsibilities they choose to study subjects which are not professionally suitable for higher income and employment.

The dichotomy is prevalent even within social sciences where more females tend to enrol in sociology and more males enrol in disciplines like Economics and Political Science. Cultural norms are perpetuated even in the education system, in co-educational college, political science is male-dominated and Sociology is a female-dominated discipline. Majority of females are confined to arts. The proportion of female in social sciences is significantly higher than females in engineering or other professional education. One reason could be social sciences are less expensive compared to the professional education. Parents with low or middle income might prefer to spend fewer resources on their daughters as they do not wish to survive on the income of their daughters. They are more concerned about her marriage and getting a bachelors' or masters' degree improves the marriage prospects of females more than their job prospects. (Chanana, 2000)

There can be many reasons why social sciences and humanities are a female-dominated field, (Chanana, 1999) argues that social expectations where parents usually do not use daughters' money, also affect the choice of discipline. When parents do not expect to live off their daughters' money, they are not interested in the education will have a significant impact on the earnings of their daughter. This leads to clustering of women in general education which does not lead to professional occupations. (Chanana, 2000) Self-expectation affects the aspiration, females tend to believe that Science and Mathematics are difficult subjects and this belief is further strengthened when they do not score high marks in these subjects. They tend to shift towards easy (soft) subjects which are comparatively less difficult.

Parents do not invest in specialised (professional) education of their daughters as females are not anticipated to work after marriage. Their responsibilities tend to shift after marriage and they move out of the labour force. Becker (1985) looked at the labour force participation of married woman which is comparatively less than married men. Females have more

responsibility after marriage the shift towards household activities and. These responsibilities affect the earning and occupational differences among men and women.

Bedard and Herman (2008) found that most common major for women is social science followed by life science. They found that females are less responsive to the labour market conditions and business cycles compared to males. Differential preferences and labour market entry wages could be some of the reasons that explain the above difference in responsiveness. Females may focus more on education accumulation than on higher wages. the opportunity cost for male and female also differ (Bedard and Herman, 2008). Men are expected to earn higher wages so they are under more pressure to prove themselves in the labour market and therefore they are more interested in improving their earning path. Females, on the other hand, bear an additional pressure of marriage. They are not expected to work in the labour market for a longer period of time, therefore opportunity cost and present discounted value of future returns is lowered in the case of females. Bairagya (2018) explored the phenomenon of educated unemployment in India, using NSSO data, he highlighted the fact that educated females are less exposed to the labour (job) market and men are considered as the principal wage earner in the family.

Simon argues that it serves as a tool to segregate the labour market. More females tend to specialise and pursue Masters' because then they can teach in schools and colleges or work in Non-government organisations. These professions are termed as female-centric professions in the labour market. Segregation on the basis of gender in higher education is visible for social science students. Simon (2016) points out that most of the females who enter the higher education system tend to concentrate in certain disciplines which in future have concentrated job opportunities. "*Graduates of female-dominated fields are disproportionately employed in public and non-profit organisations which offer low monetary rewards*" (Simon, 2016: 172). Majority of females who pursue Masters' in social science aspire to work in either NGOs or join the teaching profession.

### **3.5 Caste**

In India, the ancient system of caste inequality though it has been modified with modern times still persists and the lives and opportunities for lower caste citizens are still constricted due to this system of exclusion (Thorat and Attewell, 2007). The caste system in India which exercises social exclusion inhibits the full development of the human capital in the society (Thorat and Newman, 2007). The difference in the society is not due to the differences in ability.

Meritocracy favours the privileged and by default upper class who has access to elite education. It leads to the reproduction of inequality and social stratification. Students from upper castes are represented in all disciplines of higher education whereas students belonging to other lower backward castes are represented at a very small scale. Participation in higher education is unequal due to the income inequality (Gosh, 2006) thus, economic inequality gives rise to social and educational inequality.

Class and caste are deeply interwoven in Indian society. Caste inequality gives rise to class inequality because family which belong to low caste are usually working in low-income occupations and thereby form a part of the lower economic class. Reay et al. (2001) did a qualitative study in London (Britain) to explore the degree of freedom working class and minority students enjoy while making a choice in higher education. They found that a shift from elite to mass higher education does not help in eroding the class differentials.

Higher education is biased against socially disadvantaged because these individuals do not have the resources to compete with the upper class. They do not have adequate resources and endowments that are required to access and succeed in higher education (Deshpande, 2006). Economic factors are dominant in the selection of schools and schooling is of low quality because parents from low-income family did not have resources to give good quality of schooling their children. They suffer a disadvantage from the start and these are highlighted when one looks at the participation of students belonging to different lower castes in higher education (technical and professional higher education).

SC and ST students are very marginally present in professional courses such as engineering/technology (Chanana, 2000), as these courses are expensive and students from marginalised section do not have the resources to pursue such courses. Their participation is insignificant in medicine and engineering (Chanana, 1993) and highest in Arts and humanities. They are thus limited to general education since it is highly subsidised and most of the students receive scholarships if they pursue higher education. To some extent, reservation policy also affects the mobility of these students. Higher education supports their aspiration for mobility as it serves as an avenue for social mobility by improving the level of skills and education of category (SC/ST) students which are essential to get employment in the labour market.

Providing access to students through reservation is not enough to solve the problem of inequality. Higher education serves as the building block in the formation of human capital but the investment is realised when a student is able to use his/her education to earn and improve

their economic and social status. There seems to be a disjoint in this realisation due to caste discrimination in the labour market. The public sector provides reservation but the private sector does not adhere to any reservation policy, the decision to recruit lies solely with them.

Thorat and Newman (2007), Deshpande and Newman (2007) came up with studies that explored the level of caste discrimination in the private sector of urban areas. The results conclude that caste discrimination is prevalent not only in rural areas but also in urban areas where reserved category students who have completed their education from same elite institutions as the general category students are discriminated in the labour market (private sector). The education and wage gap among category students.

Category students especially Dalit students, even after studying in elite institutions are not able to compete with their counterparts from the general category in the labour market. Deshpande and Newman (2007) highlighted that Dalit students from three central universities in Delhi after completing their Masters' prefer government job whereas general category students are more willing to work in the private sector. It was a qualitative study which traced the different pathways of Dalit and non-Dalit students after completion of education from elite institutes. It was concluded that when it comes to the private sector labour market, Dalit students face discrimination and thus prefer government jobs where reservation policy helps them in securing good jobs. In the private sector, during the hiring process, "*social and cultural capital (the overlapping of caste, class, family background and networks) matter a great deal*" because it demands highly skilled labour force with high merit (Deshpande and Newman, 2007: 4140). The study highlighted the discriminatory nature of the private sector labour market. If students believe that they will face discrimination in the job market because of their low quality of prior education and low ability (marks scored are lower compared to the general category students) then they will not apply for the job. They tend to get concentrated in the public sector labour market where discrimination is comparatively lesser. They participate in higher education in anticipation of getting employment in the public sector.

### **3.6 Public Policies**

In the previous section, we focused on social and family background and their influence on the achievement and decision-making process of students. Sociological studies which use the theoretical framework of cultural and social capital in explaining the accumulation and investment in human capital highlight the fact that family endowments play an important role in explaining the differences in society and individual abilities. This eventually leads to



reproduction of an “elite class” which has economic power and social status in the society on one hand, and a “run of the mill class” which is devoid of any social and economic privilege, on the other end (Becker, 1964). Social factors like gender and caste also segregate the society among the privileged and non-privileged. In order to break this cycle of social stratification and perpetual inequality, government intervenes by implementing public welfare policies which promote the role of education in improving social mobility. Higher education is a “not for profit” enterprise and government is a preferred supplier as it increases the confidence of buyers (parents and students) (Winston, 1999).

Friedman (1955) and Becker (1964) highlighted the role of government in education, he stressed on the subsidisation of higher education as there is huge underinvestment in human capital due to imperfect capital markets. Friedman (1955) presented a case for public subsidisation of both general as well as professional (Vocational) education as the external benefits which accrue to the society are not considered by an individual when they decide to invest in education.

### **3.6.1 Subsidisation of Public Higher Education**

Becker also presents a case for mass subsidisation of higher education. The egalitarian approach introduced by Becker in 1964 focus on the differences in opportunities and how government by providing equal opportunities can shift the supply curve. Egalitarian Approach provides a rationale for subsidies and it stresses on the role of the state in funding education.

Public financing of education is possible through administering the education system (Friedman, 1955). The state pays a part of the cost of higher education on behalf of parents and students and by doing so it serves the role of a provider. Central and State public universities in India are an example where the state provides, finances and regulates the higher education. These universities are established by the government to provide less expensive higher education to a large section of the society.

Financial aid in the form of subsidies improves access to higher education. Government through subsidies finances the higher education on behalf of the parents and serves as a facilitator and thereby improving access to higher education. Females and students from the marginalised section of the society (SC and STs) are able to enrol in these universities because of low cost. In addition to innate ability and academic achievement, ability to pay also play an important role in the realisation of the demand. Financial resources help in fulfilling the payment criteria necessary for the procurement of the seat in college. Publicly subsidised

institutes help in diverting resources towards low-income students who are willing to study but do not have the ability to pay the full cost of higher education (Winston, 1999). Subsidies affect the demand for higher education by reducing the cost (price) of education. The supply curve of education becomes flatter as the marginal cost of acquiring is lowered due to subsidies.

The decision to invest in higher levels of education (BA, MA, MBA) does not depend entirely on the individuals and their family resources. Supply of education will also help in the final realisation of the decision made by an individual to pursue higher education. There is inequality within higher education and gender and class inequalities are represented in higher education where females and students belonging to lower caste are concentrated in the general higher education which is less expensive and elite section of society continue to dominate in the professional education. The same insight is presented by Reay et al (2001) who highlighted the fact that mass higher education does not make everyone a professional, that privilege still remains with the elite class. The choice of working class and minority students is constrained compared to their white privileged counterparts.

Skewed nature of enrolment in social sciences is possible only due to the skewed nature of the provision. Mass provision of general higher education by state leads to huge enrolment in these areas of education as they are less expensive. The government provides general higher education at a large scale because the cost of imparting education in Arts and Humanities is less compared to engineering and medical education. This massification of general higher education is increasing the delinking of the education market from the labour market. Another disadvantage of huge subsidies is that it distorts the price and hampers the efficient allocation of resources. When students do not pay the actual price of the education received in the distorted market, their real preferences are not revealed.

### **3.6.2 Reservation Policy**

It has already been a highlight in the previous section, which focused on caste, that social exclusion and discrimination based on caste is still prevalent in Indian society. The government seeks to alleviate caste inequality by introducing and implementing affirmative action like reservation policy. Under reservation policy, around 49 per cent seats are reserved in higher education institutions, public sector employment for SC, ST and OBC candidates (Madheaswaran and Attewell, 2007). Reservation Policy seeks to address the caste-based discrimination as students from certain castes and social background are not represented significantly in the higher education (Chanana, 1993).

In India, the state facilitates the equal provision of higher education by implementing the policy of reservation. Caste based reservation is imposed by state and it is implemented in all state-funded public institutes/universities. Reservation policy in central and state universities provide support to students who are from low socio-economic background during the admission process. It promotes social mobility by allowing students who are from backward and scheduled class to participate in higher education and study with the bright and elite students of the society. It seeks to create a level playing field at the level of higher education.

A wider social group is able to get access to public higher education and reap the benefits of public investment in human capital. It has helped in facilitating entry to highly prestigious institutes, students from the reserved category are participating in higher education. Public policy on reservation lowers the supply curve by improving the opportunities but ability (marks scored by these students) is also captured in the demand curve. Both go hand in hand. There is an improvement in access but performance and outcome still need to catch-up. These students once enrolled tend to underachieve in college and in the labour market there seems to be a mismatch. Deshpande and Newman (2007), Thorat and Newman (2007) conducted studies which highlight caste-based discrimination in the labour market especially private sector where there is no provision of reservation.

It can be concluded that affirmative government actions in the form of mass subsidies and reservation help in improving the access to higher education and these policies are indirectly influenced by the economic and social environment. Subsidisation of college fees makes it possible for students who do not have financial resources (parents have low income) to finance their education without relying on financial markets for loans. Effect of family income on the decision to invest in the higher education of a student is minimised. Public policies influence the market structure of higher education, by shifting from elitist to mass higher education, it provides opportunities to the deprived section of the societies. Participation of students from low economic background improves due to these policies.

### **3.7 Labour market**

Both Human capital and signalling theory establish a relationship between education and earnings. this transformation of education (human capital) to employment and higher earnings (economic capital) is possible only in the labour market. The labour market is the avenue where expectations formed before pursuing education are realised. Empirical studies (Albert (2000); Fredricksson (1997)) have been conducted to showcase the effect of outcome in the labour

market and overall market conditions on the demand for higher education. Employment prospects for post-graduate students are better than graduate students. Labour market signals influence the demand for higher education (Albert, 2000), it was found that unemployment increases uncertainty about the labour market as expectations are not realised. Students, therefore, prefer to study for another two years instead of going out in the labour market where job assurance is missing,

### **3.7.1 Role of Public Sector Labour Market**

There are different sectors in the labour market which absorb educated labour. Colleges, Research Organisations and Think Tanks are skill-intensive work areas where knowledge about the subject will be used. The basic assumption in economic theories is that humans are motivated by self-interest. It is assumed that self-interest is at the root of the human behaviour. Perry and Wise (1990) have argued that the government institutions recognise this and they design a monetary incentive system to take advantage of such motivation. Public sector incorrectly matches incentives to motives. They use monetary incentives (higher salary, other allowances and perks) to stimulate motivation among civil servants.

The guiding norm in public employment is to “*serve the public interest.*” Expectations about the rewards of public services draw an individual to the public organisations (Perry and Wise, 1990). There is no way to predict whether these expectations are realised or remain unfulfilled. The job is supposed to be more secure and it comes with various perks and allowances. Non-wage benefits are greater in public sector jobs. Some of these amenities are difficult to measure and quantify.

Public sector labour market which constitutes employment under central, state and local government is different from the private sector. The institutional arrangement and goals are different and individuals who have a preference for non-risky employment prefer to work in the public sector labour market (Ehrenberg and Shwarz, 1983). Government pay higher wages to attract and retain the employee since there is intensive training involved once a person is recruited. Specific on-the-job training is imparted to government employee and employer (government) will lose out. There is lesser gender and caste discrimination in public sector which employs the principle of “*one pay for all*” and “*equal pay for equal work*”, this makes public sector job more lucrative relative to the private sector (Ehrenberg and Shwarz, 1983).

Students are willing to accept unemployment for some years and make an effort to obtain a government job. This behaviour is called rent seeking. For windfall gain and higher expected

returns, students indulge in rent-seeking where resources are deviated to compete for rent (Krueger, 1974). Rent seeking is competitive and credentials are required to enter. Higher education is a pre-requisite for successful rent-seeking (UPSC exam). Resources are needed for successful rent-seeking, sometimes rich can afford to be rent seekers while poor cannot. *“Rent seeking behaviour can give rise to a wasteful diversion of resources into the public sector over and above derived demand for resources”* (Gelb, Knight and Sabot, 1991: 1196). Gelb et al (1991) argue that the public sector helps to clear the labour market by absorbing the surplus labour. Public services are the prime locus of employment among graduates in India. Public sector helps in mitigating the urban graduate unemployment. Unemployment rate tends to increase with higher levels of education (Bairagya, 2018) one reason for this phenomenon is that graduate students become selective about the kind of job they want and they prefer to wait and remain unemployed to working informal sector or other low paying jobs.

Fiscal resources are needed to facilitate this employment sector. Gelb et al (1991) have developed a model which predicted that public sector employment leads to accumulation of labour force in an *“unproductive sink”* this deviates the economy from achieving overall dynamic development as only those who are able to obtain rent-yielding jobs are going to improve their standard of living.

Rent-yielding jobs have a component of high wage, status and job security. There is a huge attraction for such jobs among social science graduates in India as they can use their subject knowledge to crack the UPSC exam (a national level exam which recruits civil servants and bureaucrats conducted by Union Public Service Commission) there is intense competition to enter the grade A job. Top-notch students who are best in their field are recruited, even though this subject knowledge is not used in the work area. In the model developed by Gelb et al (1991) government or public sector serves as the employer of last resort but in India is shining lacklustre.

Civil services pay are not used to estimate the social rate of return as they do not represent marginal productivity. The pay of civil servants is used to calculate the private return to education, as it reflects what people actually receive as income, irrespective of their productivity. (Pascharopoulous and Patrinos, 2004). This implies that the productivity link between education and earning postulated in the Human Capital Theory is missing for government officers (civil servants) who are paid an institutionalised salary and not according to their marginal productivity.

### 3.8 Perception

To explore the growing demand for social sciences at post-graduation level we need to understand the perspective, aspirations of students studying social sciences at the graduation level. The factors which cannot be measured easily are their perceptions about the labour market, their own ability and future aspirations. These are all subjective in nature. The aspiration of students, their goals and objective and state of expectations are the main determinants of decision making (Dequech, 1999). In order to understand the perspective of students regarding their future in the labour market which bears a direct effect on their decisions and expectations, the study gives more importance to the factors that reflect the perception of students and to highlight the aspects of human capital theory and signalling theory in these perceptions and belief of students.

Tomlinson (2008) did a qualitative study with 53 final-year undergraduate students to understand the role of their educational credentials in shaping their future employability. The study highlighted that human capital framework is not suitable for understanding the relationship between educational credentials and labour market outcomes. Human capital theory suggests that higher levels of education will improve the earnings of a student by improving their productivity and skills. But the study revealed that students believe that along with the credentials and knowledge, their position vis a vis other graduates (with a similar profile) will determine the future in the labour market. Social credentials and soft skills also determine their future earning, just acquiring a degree (credentials) from a reputed college is not enough.

Marginson (2016) has also questioned the human capital approach which assumes a linear progression between higher education and employment. In the real world, the linear progression and the match between learning/qualification and work/occupation are not always clear-cut, especially for graduates with generic degrees” (Marginson, 2016: 173) Graduates may demand education for studying subjects they enjoy and are good at. It is not always about employment, and for the majority, the workplace does not even have a close relationship with their field of study.

Aspirations about the future, it was discussed in public sector labour market that social science students are more inclined towards civil services and public sector employment. The aspiration to become a government officer affect the decision of pursuing social sciences (see data). Students who wish to teach in college and work in research organisations also have to

specialise. Without this specialisation, they would not get lucrative jobs. Therefore, post-graduation becomes a necessity more than an expensive investment.

Motivation plays an important role in affecting the demand for higher education. Economists argue that motivation indirectly depends on future earnings. Higher earnings affect morale and aspirations (Becker, 1962), if students believe that post-graduation is going to improve their job prospects and help them in earning more, then they will be more interested and motivated to pursue higher education.

The study cannot infer the degree of belief of students in likely realisation of events from his/her choices (UPSC/MA/Job). Quantifying these beliefs by probabilities is a difficult task because every individual employs a different degree of belief to the future events related to their career. It is not necessary that students who assign a higher probability to the favourable event will at the end cause that outcome to occur. There is uncertainty and as Keynes' argued that without complete information about the events under investigation, one cannot correctly assign probabilities to such events if they are not comparable.

### **3.9 Theoretical Framework**

In reality, both human capital and signalling theory are valid in explaining the decisions regarding investment in education, but the blend depends on the nature of the job. Engineering, Medical and other professional courses are more skill oriented compared to the general non-vocational courses. Signalling theory questions the link between productivity and earnings. it does not comply with the transformational aspect of education as postulated by Becker in Human capital theory. Labour market structure and information asymmetry are not taken into account in the human capital theory (Sobel, 1982). Signalling theory predicts that students choose to invest in higher levels of education in order to influence the decision of employers.

Blaug (1975) argues that signalling theory or screening hypothesis does not displace human capital theory but rather subsume it. The theoretical framework for this study will also consider both theories in explaining the decisions of students and demand for higher education. Higher Education institutions sort out individuals based on some characteristics which serve as a proof of greater productivity and reflect the personal attributes like motivation, willingness to learn and confidence which they are valued in the labour market (Sobel, 1982).

Pure human capital theory framework would suggest that the study looks into the causal impact of education on expected wages and increase in marginal benefit due to additional years of education. This is a narrow way of exploring the demand for social sciences which as Arrow (1973) had remarked have low productivity compared to technical disciplines like law, medicine and engineering but a higher level of consumption. There is also a weak linkage between education and wages due to the limited job market for social scientists in India as explored by Sanyal (1987). Social sciences have a higher component of consumption aspect as students choose to study this field due to inherent interest in the subject. The interest in the subject further builds on the investment in a higher level of education. Consumption guides the investment in the social science discipline.

Individual demand for higher education depends on the attitude and expectations of students which depend on their belief which in turn depend on the socio-economic status, level of parental education, family income and individual ability (Sanyal, 1987). All the factors discussed above lay the foundation for this intrinsic factor of perception which affects the decision of students.

Students form their expectations about the labour market on the basis of their belief and information available to them. Students pursuing general higher education do not have much information about their work-related abilities. They do not have an expectation about their wages in the labour market because they do not know how much of their education will help them in the labour market. Post-graduation can therefore also serve as a tool to cope with the uncertainty of the labour market. Biases in the belief of students and choices they make cannot be explained by economic theories which assume people are rational agents.

Opinion about the labour market, courses are taken to influence the decisions about further education. Existing opportunities in the labour market shape the educational aspirations of students. Change in opinions will change the decisions about the future. Confidence is an important basis of expectations. As Sanyal (1987) discussed experiences of every individual are a different subject to their natural environment, family background and tastes. The space they work in influence and form the opinions of individuals. Parents expectation also play an important role in affecting the expectations. Hogan (1997) argues that social environment and market capacities determine the preferences of students. The decision about investing in higher education is affected by the resources and capacities. Hogan's concept of capacities will also serve as the conceptual framework for the study.



### **3.10 Conclusion**

This chapter presented a brief review of empirical literature in the field of higher education. Various models which have tried to explain the demand for higher education using economic and social factors have been discussed in this chapter. Based on the review of the literature, eight socio-economic and individual factors have been discussed which can have an impact on the decision of students pursuing post-graduation. It is found that gender, caste is predominantly explaining the concentration of females and reserved category students in the general higher education (social sciences) (Chanana, 1997; 2000). State public policies have an overall impact in improving the access and opportunities for higher education. The peculiar role of the state in higher education is explored. It serves to meet both the demand and supply of higher education by providing educational opportunities through various public policies and serving as the biggest employer who employs most of the graduates in the public sector.

The theoretical framework for the study is presented in the last section. Human Capital Theory along with Signalling theory will serve as the foundation for the study, but at the same time, more importance will be given to the perception and formation of expectations due to the limitation of Neo-classical theories in explaining the decisions related to the education market. The theory of Bounded Rationality will be used to explore the limited information and how students form their expectations and belief with the limited information available to them about the labour market.

## Chapter 4

### Methodology and the Sample

In this chapter, we will briefly discuss the methodology and research design of the study. This chapter will focus on describing the sample and its basic characteristics. Various socio-economic factors, which according to the literature affect the decision of investing in education will be explored in this chapter. The perspective of social science students about their subject and its linkage with the labour market is discussed in detail. Four special cases have been discussed to highlight the role of family background in the achievements and decisions of students.

#### 4.1 Research Objective and Questions

In the first chapter, we had briefly outlined the objective of the study. Based on the review of the decision making theories and empirical literature we outline the research questions under the two main objectives of this study. The study focuses on understanding the decisions and choices students make related to their higher education.

1. To explore the factors affecting the demand for post-graduation among social science undergraduates.
  - How do castes, gender, family background affect the decision of pursuing post-graduation in social sciences?
  - What role do perceptions and beliefs about the labour market and the discipline play in affecting the choice of students?
  - Which economic theory students adhere to while making decisions about higher education?
2. To understand the formation of expectations about earning in the labour market.
  - How are expectations formed?
  - What are the factors responsible for affecting these expectations?
  - What role does expectation about earnings play in the decision-making process?

## **4.2 Methodology**

It has been discussed earlier that the focus of the study is social sciences and growing enrolment at the post-graduate level in the social science discipline. The study surveys final year undergraduate social science students to describe their experiences, expectations, perceptions and future aspirations.

The study is carried out within a positivist framework as it tries to represent the reality of a social phenomenon as it is. The study uses the quantitative methodology to explore the factors that affect the decision of pursuing Masters among social science students. Perspective in its purest form and experiences of students are sought to be captured without any influence from the researcher. The study not only seeks to present a passive reflection of the reality but also to produce active knowledge and fill the research gap<sup>11</sup> in the literature.

The study will explore the reality of social science students using empirical evidence (primary survey conducted) and it will also help us in identifying the problems related to predicting the demand and choices using socio-economic factors only. Let us briefly discuss the assumptions which guide the selection of framework and research methods used in the study.

### **4.2.1 Assumptions**

This section will discuss the assumptions which have informed the collection of data and its analysis for the study. Each of these assumptions demands different research methods and help in the formation of the methodology to be used in the study. These assumptions help us in arriving at the methodology of the research which guides the selection of research methods and tools.

#### **Ontological Assumption**

The ontological assumption is concerned with the very nature of the social phenomenon which is studied. The growing demand for post-graduation for social sciences in India is the social reality which is out there. The study makes an assumption of “realism” which means that reality (many students choose to pursue Masters’ in social sciences) exists independent of the researcher. It is believed that this study tries to examine the factors and decision making processes that influence this choice and decision. This assumption of realism implies that

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<sup>11</sup> Research Gap in the literature highlighted in the first chapter suggest that there is no research conducted specific to the discipline of social science. More focus is put on understanding the demand for technical and professional education as they are assumed to provide better returns compared to the general higher education.

independent of the concern of the researcher and failure of the study to describe the factors that influence the demand, the fact remains that there is a growing demand for social sciences at post-graduation.

### **Epistemological Assumption**

This assumption is about the very base of knowledge. It tries to explain the nature and form of the knowledge and the medium of acquiring that knowledge to communicate it to others. This study prescribes to a positivist epistemology which assumes that knowledge is objective and a reflection of reality. The researcher is an unbiased observer, who in no way can influence the information collected to gather knowledge about the reality (Cohen et al, 2006). The researcher will just record and present the knowledge as collected from the field. The perception and subjectivity of the researcher does not influence the study and its result.

### **The assumption about the Human Nature**

These set of assumptions are concerned with the relationship between human beings and their environment. Deterministic approach believes that human behaviour depends on the circumstances in which a person is located, they respond mechanically and are puppets in the hands of the environment. Determinism assumes that human behaviour is a product of environment, external surroundings of an individual shape the behaviour and decisions made by him. The study assumes that humans are passive and the labour market and higher education system influence their perspective and behaviour. This is true for all individuals irrespective of their class, gender, caste and creed. At the same time, this study does not rule out individual specific characters like: ability, concern for the society etc., to determine the choices and decisions.

The study makes an implicit assumption about human behaviour, it is assumed that individuals who go for post-graduation are willing to take a risk by not earning today in order to gain more in the future. The decision about the future which is full of uncertainty, one decides to take the risk for the prospect of higher earnings in the uncertain future.

### **Methodological Assumption**

This is the most important assumption as it defines the research methods for the study. The three set of assumptions discussed above determine the base for the methodological assumption. The nomothetic approach is characterised by the procedures and methods used to discover general laws. It is more interested in objective, absolute and external reality. This kind

of research is predominantly quantitative as facts speak for themselves. The study will use a nomothetic or positivist framework which makes the assumption of determinism, empiricism and generality.

The empirical research and rationalism are the two building blocks of positivist methodology. Positivism relies on observation and reason as means of understanding behaviour. Empiricism believes that reliable knowledge can only be derived from experiences. This approach gives a very “synthetic” version of truth (Cohen et al, 2007).

Methodology under objectivist, positivist and nomothetic framework employ econometric models and quantitative analysis to analyse the reality. In order to have a firm basis, a hypothesis needs evidence to verify and solidify a theory. The study is based on empirical evidence which focuses on analysing the behaviour of individuals. The study follows a positivist methodology where hypotheses are tested based on the empirical evidence collected. Hypotheses are constructed to test the theories and help us to verify the theories for social science discipline. All the data used in this study comes from a primary source i.e. the sample survey.

It is important to note that some factors (other than social and economic factors) which influence the decisions and expectations of students are not quantifiable and cannot be measured easily. This problem becomes more peculiar when the researcher relies solely on economic indicators to understand the reality of a social phenomenon. Individual decisions are influenced first and foremost by the perception of that individual, then the social environment and lastly by the financial resources. Therefore, qualitative questions are asked to understand the perception of individuals. The next section will explain the selection of sample for the study by giving a brief outline of the research design of the study.

### **4.3 Research Design**

The study has two points of inquiry, one is the demand for post-graduation in the social sciences and the other is a factor affecting the decision of pursuing post-graduation. Considering the dual nature of economics and education in the field of inquiry. The study has combined the research methods which are used in the field of education and economics to give this study an interdisciplinary lens. Since this is a first of its kind study, we cannot rely entirely on using the quantitative methodology as suggested by the positivist/nomothetic framework, we also need to rely on a descriptive case study to get richer insights about the social science students.

It was discussed in the first chapter that no study in the literature has focused on social sciences exclusively, this study takes the first step of dedicating the research entirely focused on social science discipline. But before we make predictions which can be generalised for all the social science students as suggested under the nomothetic framework, we should at least try to get a contextual picture of social science students.

It is a case study whose goal is to describe and analyse the decision-making process of social science students. Students were randomly chosen and were asked to fill up the questionnaire. Due to limited time and scope, only three subjects of social sciences were chosen. The next few sub-section will justify the choice of subject, college and sample made in the research design.

#### **4.3.1 Rationale for choosing History, Sociology and Political Science**

Social Science means scientific study of the social phenomenon. It is a vast area which includes various discipline like Economics, Psychology, Anthropology, Applied education studies Development Studies, Social Work, Health, Sociology, History, Geography and Political Science. This study focuses only on three disciplines viz. Sociology, History and Political Science. At the Masters' level, the highest number of students are enrolled in these three disciplines followed by Economics (AISHE, 2015-16).

Political Science is one of the highly sought after subjects among the students who aspire to pursue under-graduation in social science. It is a preferred subject among students who want to make a career in academics or government sector by pursuing civil services exam. History is offered in almost every college of Delhi University. This subject is a dominant field because students wish to study history for interest, to make a career in academics or archaeology and even for pursuing civil services or other government examination.

Sociology is offered only in 9 colleges, out of which seven are all girls college. Majority of the female are studying the subject of sociology and they usually wish to contribute to the society by working in NGOs and making a difference.

#### **4.3.2 Rationale for choosing the top two Arts College of Delhi University**

Delhi University has a varied range of college of different stature and holding. The study focuses on the top two Arts college of Delhi University. The study is about choice and decision of pursuing Masters' students in top colleges who have the choice to move freely whereas students who have secured lesser marks and are studying in other colleges are actually not

making a choice as their choices are restricted and sometimes made for them. They do not have the option of moving around as freely as the top gainers. All students who apply for Masters' will not be accepted but students with better grades and college credentials have a higher probability of getting selected.

It is a case study which seeks to understand the decision and perception of students studying in elite colleges. These students have more choices and exposure compared to their fellow students in other colleges. Focus on the top two colleges will help us in the grouping of students and this case study is about gaining knowledge about the group perspective. Though this might lead to an elite bias in the research.

All the theories assume homogeneous service of education but there is heterogeneity in the teaching and quality of education and to contain the element of heterogeneity we focus on two colleges of the same stature. Best of the students meet with the best of the faculty and college deliver the results which are far better than the output produced by their counterparts. Human Capital theory assumes human capital is a homogenous product but in reality, there is heterogeneity in the quality of education imparted and students who graduate from top-ranking college compared to the students from low ranking college. To control for the quality of education, the study focuses on high ranking Arts college.

#### **4.3.3 Rationale for choosing final year undergraduate students**

The study seeks to explain the social reality of the growing demand for post-graduation by focusing on the decision-making process of students. Final year students have had an experience of studying social sciences for almost three years. They are about to make an important decision in their life regarding their careers. The study focuses on final year students in order to understand the decision-making process and the formation of expectations. Planning for future begins in the last semester of graduation, applications are filled during the last two months of the semester. Final year students look forward to the future which is full of uncertainty. It is this uncertainty, this study seeks to incorporate in the decision making process and formation of expectation about the future.

These students can shed light in retrospection on their decision to pursue a Bachelors' in Social Sciences. Rich insights into social science students whose demand for post-graduation is not yet realised but the decision is made to pursue post-graduation. Focus on top colleges assumes that these students have a better prospect of realising their demand compared to the students who are studying in medium or low-quality colleges.

#### **4.4 Method of Data Collection**

Demand for post-graduation in social sciences mostly arises from among the students who are pursuing graduation in social sciences. Students who are studying in good colleges have a better chance of getting admission in post-graduation programmes of good universities. We employ the assumption of Human Capital Theory that students with higher ability have more incentive to invest in higher education. Therefore, to provide a vivid and rich description of demand for post-graduation, the study uses a case study of two colleges of one central university which are famous for the social science courses offered by them. It helps us to understand the perception of individuals who are studying in best of the colleges.

The study conducts a small scale survey which involves a detailed study of the background, perspectives and decisions of 90 social science students studying in two prestigious institutes and are in the final year of graduation. It is a descriptive survey which collects information about various socio-economic and individual factors and it also helps us to gather data which can be used for statistical analysis and to test the theories. The primary objective of the survey is to gather information about the background, perception and belief of social science students.

#### **4.5 Questionnaire**

The questionnaire is used as a tool to collect data through a survey. One standard questionnaire is used to gather standardised information from all the respondents. This makes the task of analysing data relatively less complex. There are two major subjects of inquiry in the study, the decision of pursuing Masters' in social sciences and expectations about the future income (salary). Questions are based on the analysis of literature and human capital and signalling theory are used as the framework. The objectives of the questionnaire (as discussed in chapter 1) are to gather insights about social science as a discipline and its linkage with the labour market from the students' perspective, to explore the expectations of social science students after BA and MA and to conduct an experiment in order to examine the theory which guides the decision making the process of students.

Section 1 of the questionnaire gathers basic information about the students' academic and family background. An experiment is conducted to understand the risk behaviour of students. marks scored in college serves as a measure of ability. Social factors like gender, caste, location and region according to the empirical literature also influence the decision and demand for higher education. Human capital variables of ability measured through school and college



marks are asked in section 1 which collects information on the academic background of students. It also asks further questions about their schooling, choice of subject and college.

Information about the family background is also collected in the second part of section 1. It was established in the review of empirical literature that family resources play an important role in affecting the decision and expectations of students. so this part collected information about the number of dependents, family income, parental education and their occupation. All these questions were open-ended. Students had the freedom to fill in the information. Family income serves as a measure of economic capital whereas parental education is used as a measure of cultural capital which can be measured easily. The empirical literature suggests that parental education plays an important role in influencing the decision of students and their demand for higher education. The third part of section 1 contains five questions which focus on the choice of subject, college and Delhi and the experience of students. These questions are used to understand the aspirations of students when they came to study social sciences three years ago and explore the reason for the decisions and how they feel about it.

Section 2 collected information on the variables which try to evaluate the belief and perception of social science students about their subject and its linkage with the labour market. In order to avoid the element of indifference and ambiguity, questions were mostly dichotomous in nature. Section 2 seeks to understand the perception of students about their subjects and social sciences as a whole. Due to asymmetrical information about the labour market, students have different expectations and perception about the labour market. Information was collected on variables which focus on perception and belief of students. The relationship between education and the labour market is explored through these questions (see Appendix 3). Signalling theory variable is captured through the question which asks students if they believe that MA will give them a competitive edge in the labour market. One question is asked to measure the consumption and investment component in the expenditure of education.

In the second part, information is collected about the work area students aspire to work after completing their education and their expectations of salary are asked. An experiment is conducted where students are given hypothetical situations. This experiment seeks to explore the risk behaviour of students and to check if rational expectations and expected utility theory guide their decision-making process.

Section 3 was filled only by those students who have decided to pursue Masters' (MA) in social sciences. Information about the human capital variable of marginal benefit is collected by asking students about their expectations about salary after completion of Bachelors' and Masters'. It gathers information about the expectations and aspirations of students who choose to pursue post-graduation in social sciences.

The first two sections will help us to collect information about the factors which can influence the decision-making process and the expectations of students. These two sections gather data which is helpful in doing statistical analysis and developing econometric models. The third section will help us to describe the expectations and perception of students who are pursuing Masters' in social sciences. One of the limitations of collecting data through questionnaire is that the data collected has a limited scope and the responses are limited since it uses multiple choice questions to gather too little information on a broad set of factors.

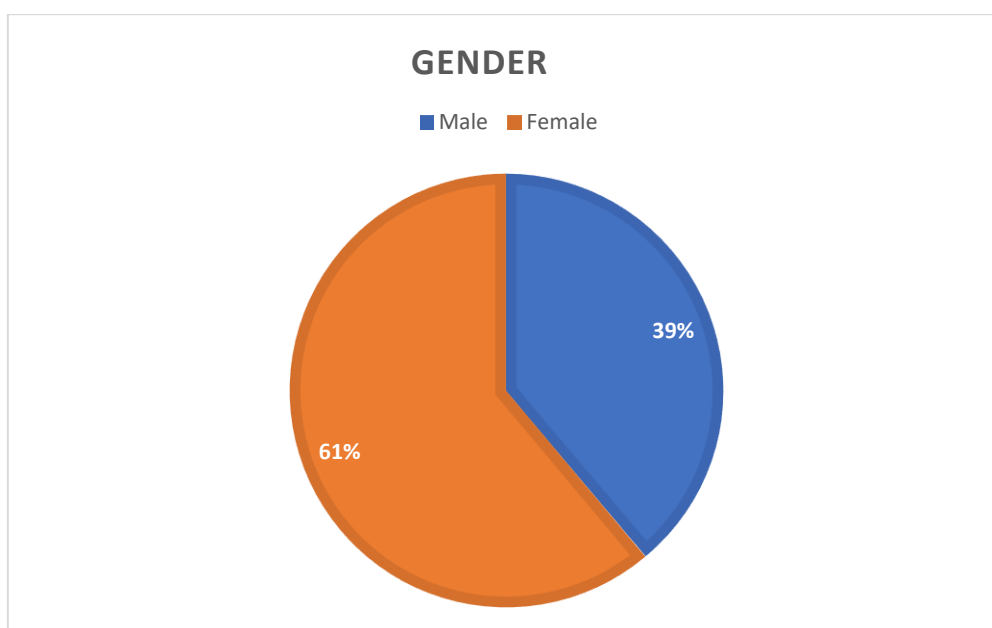
#### **4.6 The Sample**

The study collected a sample of 90 students from 2 colleges of Delhi University. The survey was conducted in the top two colleges of Delhi University. From here on, the sample represents 90 students from two colleges in the final year studying political science, history and sociology. The next few subsections briefly describe the sample and its characteristics.

##### **4.6.1 Gender distribution**

Among the 90 students, 55 are female while 35 are male. The sex ratio is similar to the national level enrolment ratio in social sciences. At the national level, girls constitute approximately 53 per cent of the students enrolled in social science courses. The sample highlights the fact that more girls are enrolled in the social sciences. The same is not true for professional and engineering courses as 72 per cent of the students enrolled in engineering education are male. (AISHE, 2016-17).

**Figure 4.1 Gender Distribution**



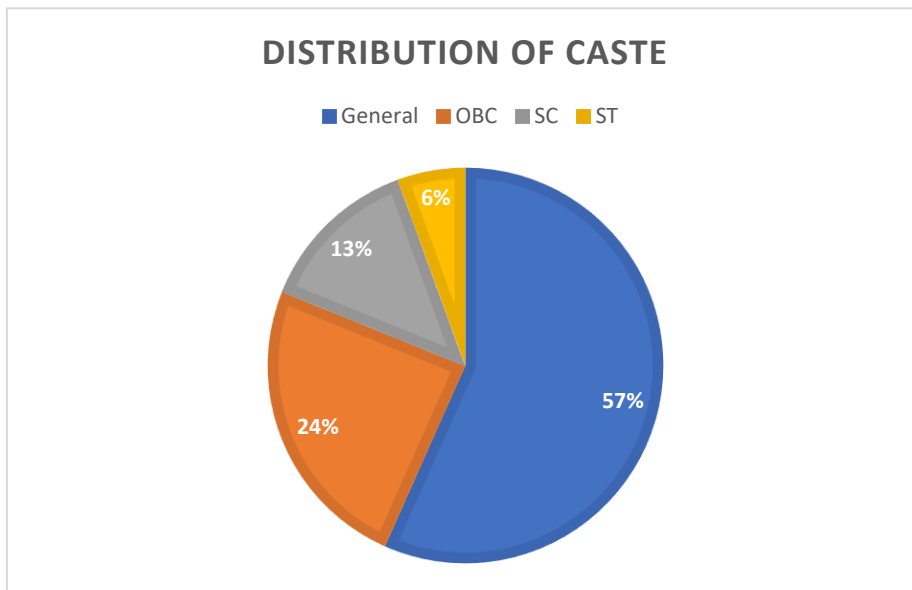
Source: Sample Survey

Since the study focused on one all girl's college and one co-educational college, more females are represented in the sample. The sample shows that there is a gender bias in courses of social sciences which is visible at the national level also.

#### **4.6.2 Caste Distribution**

A major part of the sample belongs to general category, 56 per cent of the sample belongs to the general category. Among the students belonging to the reserved category, 22 students belong to OBC (Other Backward Class), 12 students belong to the SC category and only 5 students are from ST category.

**Figure 4.2 Distribution of Category of Students**



Source: Sample Survey

More males from the reserved category are studying social sciences, this shows the social disparity in higher education (Chanana, 1993, 2000) in the domain of gender and caste, where general category males are more concentrated in the professional higher education and

	Male (35)	Female (55)
General (51)	13	38
OBC/SC/ST (39)	22	17

Table 4.1 Cross-tabulation of gender and category

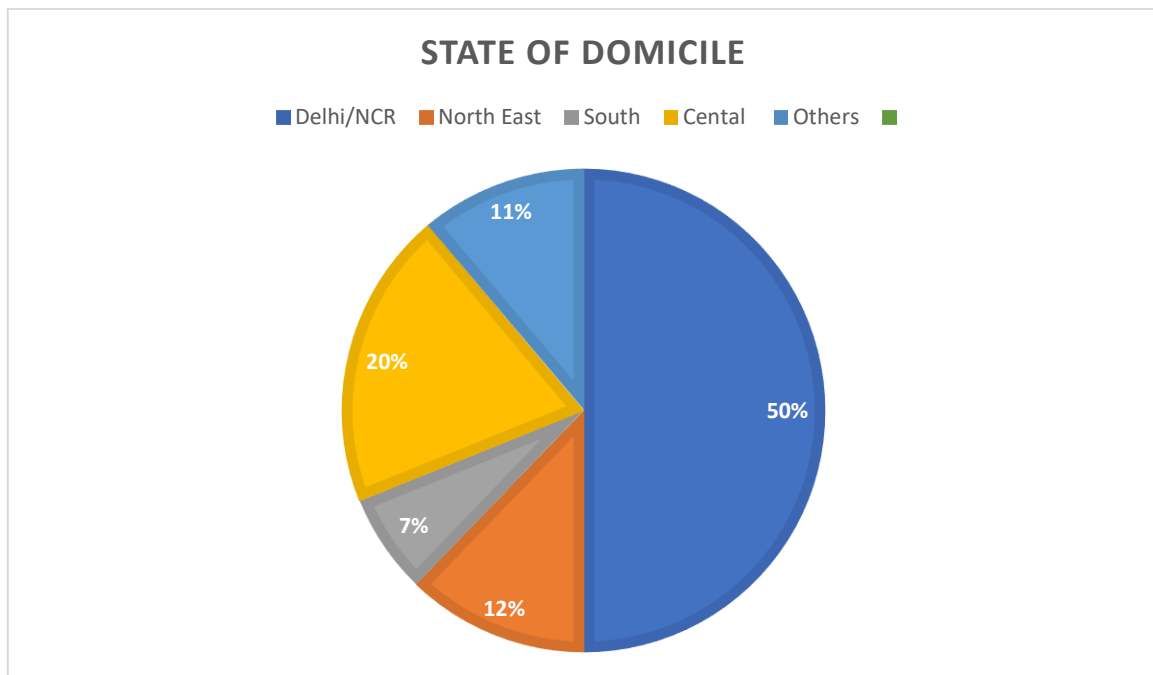
More females from general category and affluent family background are enrolled in top colleges for studying social sciences. Out of the 17 females in OBC/SC/ST category, 11 are studying in an all-girls college. On the other hand, more males belonging to the reserved category are enrolled in social sciences. This could be due to resource constraint in the family because if families have the resources and ability to pay they will usually prefer to give professional or technical education to their sons.

#### **4.6.3 Distribution of States of domicile**

Students from Delhi/NCR constituted half of the sample size (45). Most of these students travel daily from Ghaziabad, Noida, Gurugram, and Faridabad. 18 students are from Central India and states which are at a lower level of development like UP, Bihar, Rajasthan, MP, Haryana and Chattisgarh. 11 students are from North East, most of the students are from Assam,

Manipur and Mizoram. 6 students are from South India which constitutes Kerala, Andhra Pradesh, Karnataka and Tamil Nadu. 10 students are from the Other States which include West Bengal, Uttarakhand, Himachal Pradesh and Odisha. Most of the states are represented in the sample.

**Figure 4.3 Distribution of States**



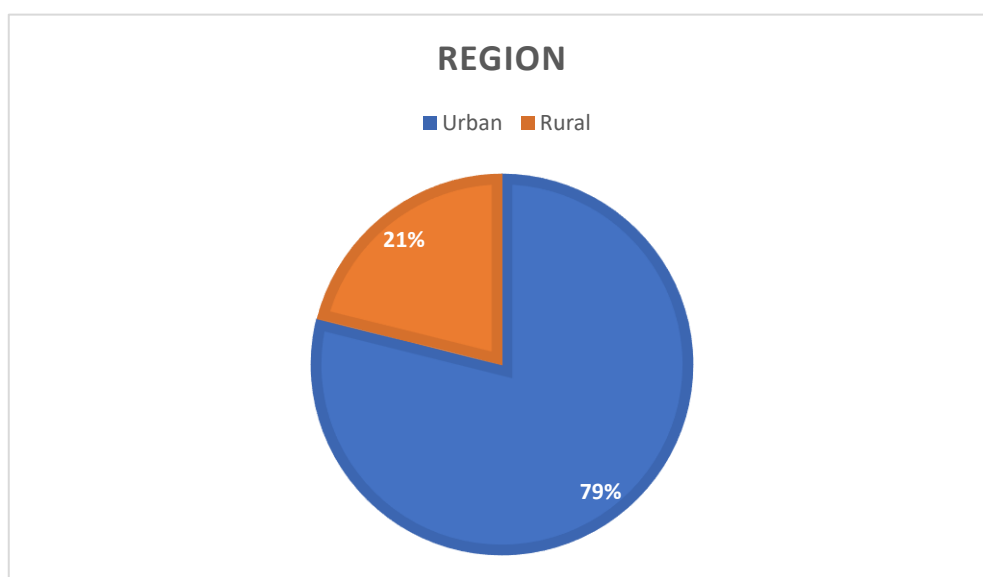
Source: Sample Survey

Students from all over the country with the exception of two western states (Maharashtra, Gujarat) and some union territories are represented in the sample. This highlights the fact that Delhi is an educational hub which attracts students from all over the country. Delhi serves as a platform for further opportunities in their career. Even though it costs more to migrate from one state to another for education, still parents and students are willing to invest a huge amount for a better future and return in the long run.

#### **4.6.4 Distribution of Region**

The sample has 71 students who are living in Urban areas whereas only 19 are coming from rural regions of the country. Most of the students live in an urban city and this shows the bias in Indian Higher education where people from urban areas have better access and opportunities due to awareness and exposure.

**Figure 4.4 Distribution of Region**



Source: Sample Survey

Majority of the sample belongs to an urban area, 21 per cent of the sample belongs to a rural area.

	Urban (71)	Rural (19)
General (51)	47	4
OBC/SC/ST (39)	24	15

Table 4. 2 Cross-tabulations of caste and region

Students who come from a rural region mostly belong to the reserved category. Here it can be argued that reservation in higher education is serving as a tool for students from backward rural regions to come to the centre of the nation and pursue further education. Education serves the purpose of promoting physical and social mobility. Affirmative policy action in the form of reservation is serving the purpose of improving access but still, Indian Higher Education system is dominated by the urban middle and rich<sup>12</sup> class as it is visible in the sample.

#### **Case for migration**

	Urban (71)	Rural (19)
Delhi/NCR (46)	43	3
Outside Delhi (44)	28	16

Table 4.3 Cross-tabulation of state and region

<sup>12</sup> Middle and Rich income families, more is discussed in section 4.5.7 which focuses on the family background of the sample.

## Rural migration

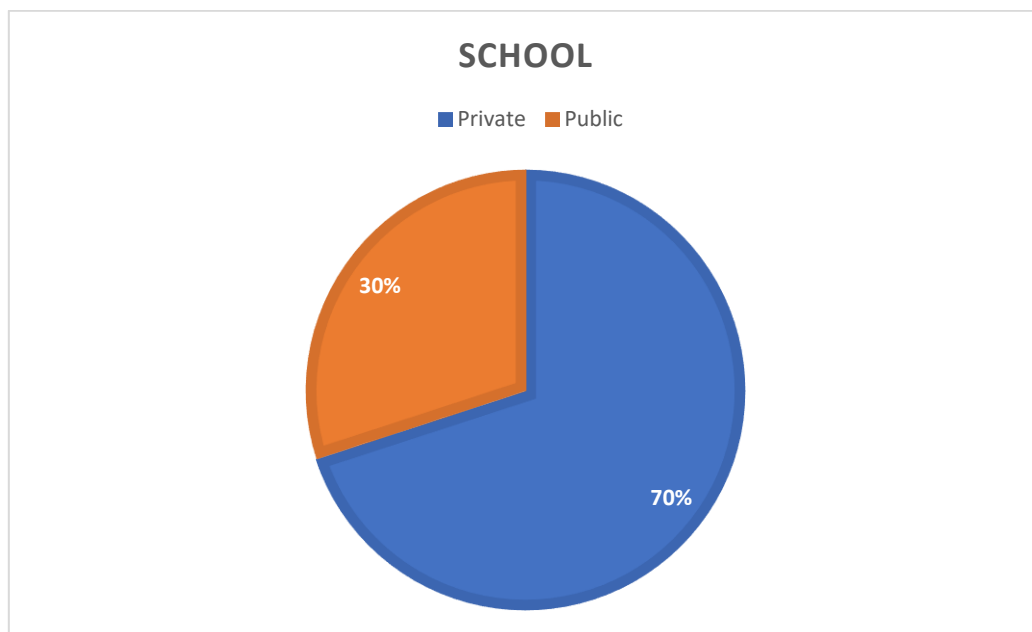
Out of these 16, an equal number (8) of male and females are migrating from rural areas of states outside Delhi. North-eastern states like Assam, Manipur and Mizoram and backward states like Bihar and UP constitute a major part of this rural migration. Most of these rural students do not come from affluent families and belong to the reserved category. This highlights the fact that reservation is providing opportunities to students who otherwise would not have been able to access higher education.

## Urban Migration

17 females are migrating from urban parts of other states, out of which 13 are studying in an all-girls college only 4 are studying in co-ed college. This highlight the peculiar nature of female migration, parents usually prefer or choose to send their daughters to another state for higher education if it is a girls' college and has hostel accommodation. These two factors give them a sense of security where their daughters' are concerned. 11 males are migrating from urban parts of other states. Most of these males are from UP, Bihar and Rajasthan where higher education institutes are not as premier as Delhi University.

### 4.6.5 Distribution of Schools

**Figure 4.5 Distribution of type of School**

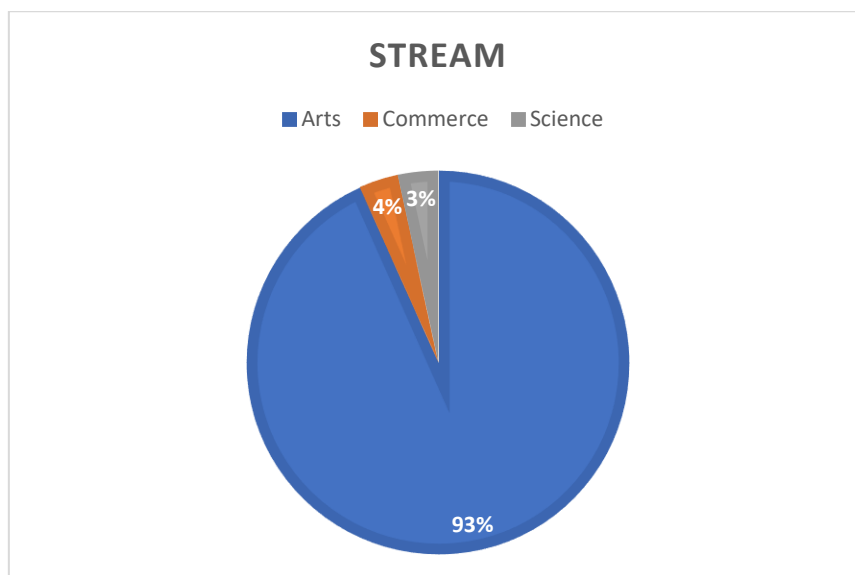


Source: Sample Data

There is growing demand for private school education among middle class and elite families. This is visible in the sample also as 70 per cent of students surveyed studied in private schools and only 30 per cent studied in public schools. Out of the 27 students who studied in public schools, 12 belong to general category and the family in order to be on the safer side enrolled their children in public schools because they did not want to hamper the studies of their children due to any sudden transfer. as their fathers are serving in defence or government service and 15 belonged to the reserved category whose parents did not have resources to afford private education or father are in defence services.

#### 4.6.6 Distribution of Stream in Schools

**Figure 4.6 Distribution of Stream in School**



Source: Sample Survey

The sample contains 84 students who chose Arts stream in school. The decision to pursue social science or humanities was made at the school level for most of the students. This could either be because they had no interest in mathematics and science or they were not allowed to pursue Science or Commerce in school because of their marks in X standard. The choices of students are constrained at every level of education. Students who were pursuing arts for the last two years of their schooling and for them choosing social sciences in higher education was not a choice but more like an only option to make a career from education. They do not have the freedom to move freely across the disciplines, unlike the students who pursued Commerce or Science with Mathematics in schools.



#### 4.6.7 Family Background

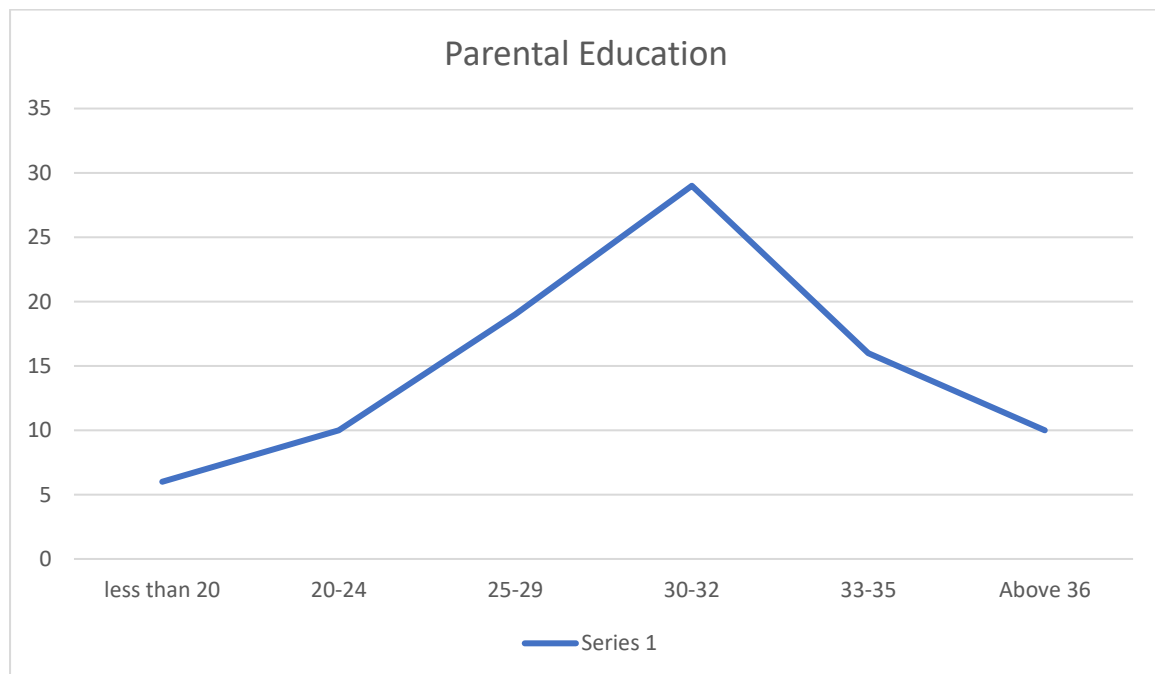
##### Parental education

Level of parents' education is calculated by combining the years of education of both parents. If a parent is a graduate then he/she has acquired 15 years of education, if they have done post-graduation then 17 years of education. If both parents have done post-graduation, then the level of parental education will be  $34 = (17 + 17)$ , similarly, if both parents have done graduation in Engineering (B.Tech), then the combined level of education will be  $32 = (16 + 16)$  years.

The mean years of parental education are 30 with a standard deviation of 5.410. Data suggests that on average both parents are graduate. The level of education ranges from 12 to 40, with the data has two extremes of the population with both parents have completed only schooling on one end to both having a doctorate degree on the other end.

16 students have parents who have not attended any form of college. They are the first generation college-goers. Half of them belong to a reserved category and are from rural areas of India. For the reserved category students, usually, the fathers have completed higher education while their mothers have attended the only school.

Figure 4.7 Parental Education



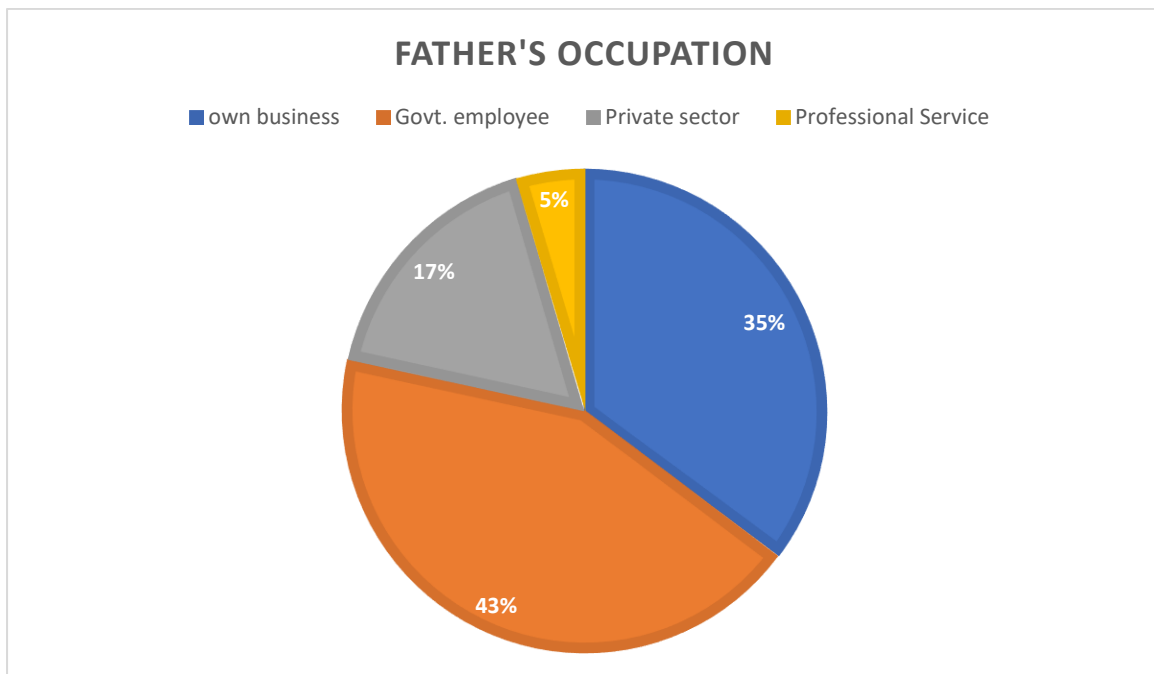
Source: Sample Survey

Around 30 students in the sample have parents who are both graduates. Usually, it is a three year or a four-year degree programme. There is a close relationship<sup>13</sup> between parental education and family income. Parents who are highly educated are well placed professionally and earning more than others, whereas parents who have not completed formal higher education end up starting their own small business which does not earn much profit. Mothers' of 20 students have pursued graduation in social sciences. Only five male students have Mothers' who had pursued social sciences.

Mothers of the students belonging to the reserved category have a mean of 12 years of education which means that on average the mothers of students from reserved category have completed schooling. There are six students from the reserved category whose mothers' have completed post-graduation<sup>14</sup> but an interesting fact is that none of them is working professionally. They are all housewives.

A major part of the sample has fathers' who are working as a government employee or have their own business. Students who belong to a reserved category, hardly have fathers' who are working in the professional service sector.

**Figure 4.8 Father's Occupation**



Source: Sample Survey

<sup>13</sup> There is a positive correlation between parental education and family income. 50% of variation in family income is related to parental education.

<sup>14</sup> Post-graduation was in Arts and social science namely Education, Hindi, English, Sociology and Economics

Majority of the mothers 70 per cent (63) do not work and are housewives. The most important occupation is a teacher and 12% are teachers and only 10 % (9) are working as a professional in the services sector. (College Professor, Entrepreneur, Government Officer). This is a peculiar finding that mother's even after attaining the very high level of education is not working. What role does education play in the occupation structure of females because the majority of educated females stop working after they get married or have a child. Their participation in the labour force is for a very limited time. Even high levels of education are not capable of removing these ceilings and social constraints. Out of the 63 mothers who are housewives, 43 are from the families whose monthly income is more than 50,000. This could also mean that if the household is economically sound then females prefer to stay at home. But even for low-income families, females are housewives only but this could be attributed to the fact that they are not very highly educated.

### **Family Income**

Students from all economic background are captured in the study and this is visible as the family income ranges from ₹10,000 to ₹2,00,000. On average, family income is ₹80,000. This suggests an elite bias among the students who are pursuing social sciences from top colleges of Delhi University. It is due to the policy of reservation that students from low-income families are able to get admission in these colleges. There is a positive correlation between family income and caste, students who are from a low-income family usually belong to the reserved category. 8 students who have a family income below ₹20,000 and all of them belong to the reserved category. Out of the 24 students who have a family income below ₹50,000, 17 belong to the reserved category. Family income and caste are positively correlated (0.57).

In the sample, there are 23 females who are from families whose monthly family income is above one lakh whereas only 8 males have family income above one lakh. Out of these 8, 5 are pursuing political science and have planned to pursue Law after graduation. This suggests that if a family has resources to afford professional education, they prefer to do so for males. More females from the affluent and elite background are pursuing social sciences while the same is not true for males. More males from low-income families (below ₹20,000) are studying social sciences, this could be because parents did not have resources to afford technical and professional education for them.

## **Dependents and Siblings**

4 students from low-income families have two dependents whereas high-income families have one dependent. There seems to be a negative relationship between the number of dependents and income of the family. As the family income increases, the number of dependent tends to fall. A lot of factors can be responsible for this negative relationship. If parents do not have proper financial standing, they seek to improve the financial status by increasing the number of working hands. Another reason could be parental education, parents belonging to low socio-economic background do not have higher levels of education and do not have the awareness.

56 students do not have any dependents but have elder siblings. Out of the 50 students who have elder siblings, 40 have a professional course degree (Commerce, Finance, MBA, BTech., Mass Communication etc.) and only 10 students have siblings who are studying social science<sup>15</sup> (mostly Economics). 6 females have an elder sibling in social sciences.

40 students in the sample have an elder sibling who is doing a professional course which is expensive in comparison to the social sciences. If the elder sibling is a male, then they have done Engineering (B.Tech..) or MBA. If the elder sibling is a female, then she is also doing a course which is expensive in comparison to the social sciences. This suggests the underlying the division of resources among the children. Elder ones have access to more resources and make decisions which yield better returns in the future.

If parents spend more on the elder siblings, as it is visible in the sample, choice of courses for the younger child is restrained. Younger sibling has lesser access to the resources and is constrained by the choices made by the elder one. If the elder one is doing an expensive course, then parents prefer that the next one should pursue a course which is less expensive in nature.

### **4.6.8 Academic Achievement**

#### **School marks**

13 Students belonging to the reserved category have marks between 85 and 90 per cent whereas 39 students have marks scored between the range of 90 and 95 per cent. 38 students from General category have scored above 95 per cent. In the 90 – 95 per cent range, lower range (90-93) have students belonging to the reserved category whereas the upper range (94-95) have general category students. the process of selection in top colleges of Delhi University is merit-

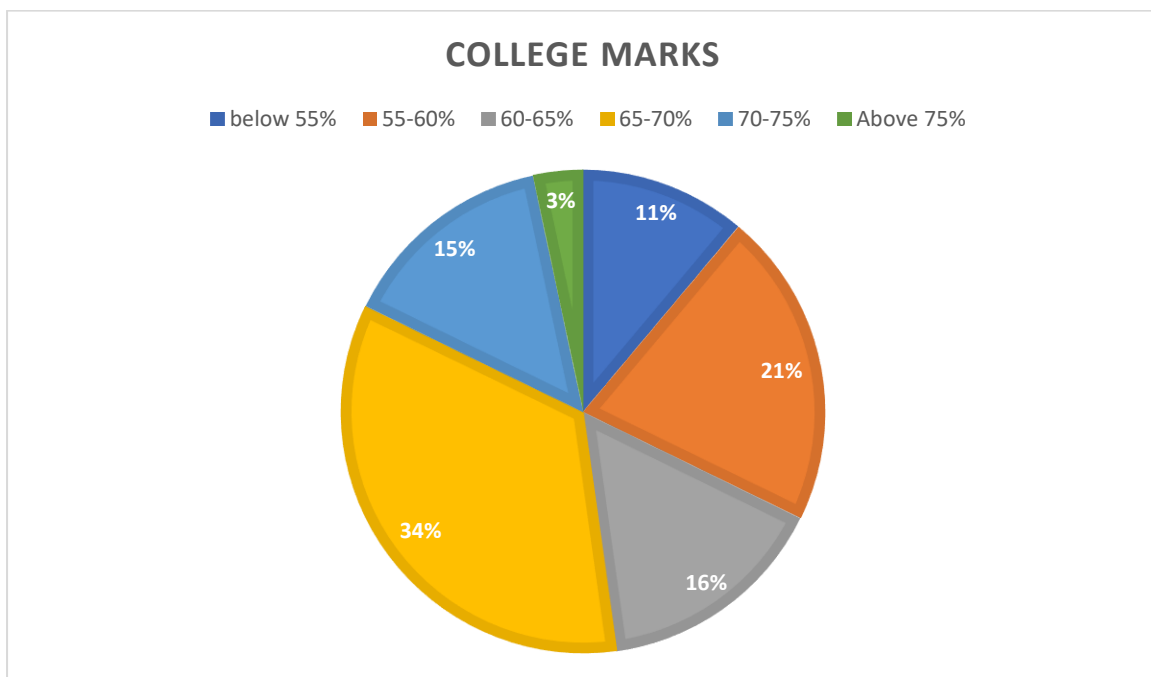
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<sup>15</sup> Mostly they are studying economics, which again has a better job prospect and professionally is more income-oriented, unlike other social science subjects.

based. Students are accessed and granted admission based on the marks scored in school in the XII standard. Students who score close to 96 per cent are able to study social sciences in these prestigious institutes. Reservation provides access to students who scored comparatively lower marks. If the student has scored low marks in school then he/she can get admission only if they have a reservation. Therefore, caste and school marks are highly correlated (0.6).

### College marks

**Figure 4.9 Distribution of College Marks**



Source: Sample Survey

School marks and college marks are also highly correlated. This shows the consistent performance of high scoring students who continue to perform well in the college also. There is a positive correlation between college marks and school marks (0.49)

If we regress college marks on school marks, the p-value is significant at 0.01 per cent level of significance. This means that around 50 per cent of the variation in the college marks can be explained by the school marks.

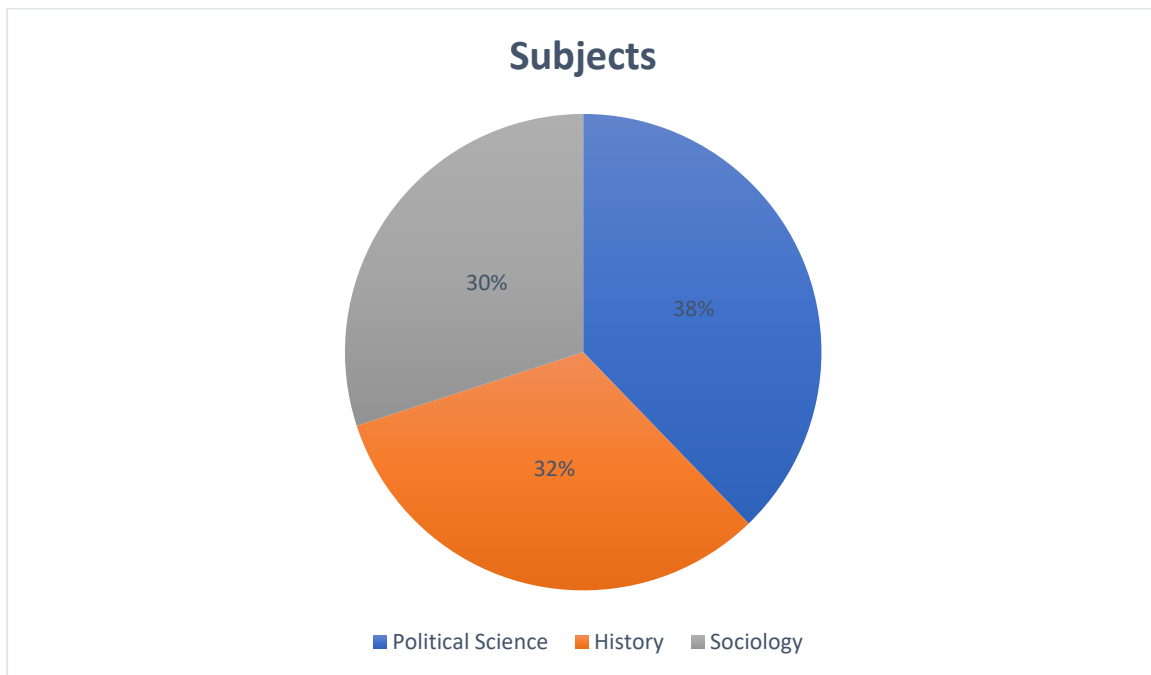
	Obs	Mean	Std. Dev.	Min	Max
Colg_marks	90	64.0333	6.84244	53	76
Colg_marks (OBC/SC/ST)	39	60.3333	6.93706	47	71

Table 4.4 Descriptive Statistics of College marks

Students who belong to the reserved category have the minimum marks scored by reserved category student is 47 whereas it is 53 per cent for the general category student. It means that all the students who have scored marks between 47 and 53 belong to the reserved category. The highest marks scored in the sample is 76 per cent and this is also scored by a general category student. Caste and marks scored in college also show a negative relationship. There is a concentration of students at both ends of the marks, on the lower end reserved category students tend to concentrate whereas, on the upper end, general category students tend to dominate. If we regress college marks on caste, the p-value is again significant at .01 per cent level of significance.

#### 4.6.9 Distribution of Subjects

**Figure 4.10 Distribution of Subject**



Source: Sample Survey

Political Science department is a bigger department relative to history and Sociology in terms of student intake in both the colleges. Therefore, political science is over-represented in the sample. There is more demand for political science as a subject among social science students because it has better prospects in UPSC exams and knowledge and course content helps the student to land a government job. They study the working of government and politics behind it.

History is the knowledge about the past. This subject makes the student familiar with the past events and civilisations and how they have framed the reality of today's world. It is an interesting subject with further avenues in academics and it also serves as a tool for clearing the UPSC exam. Students can use their subject knowledge to crack the exam and make a career as a government officer.

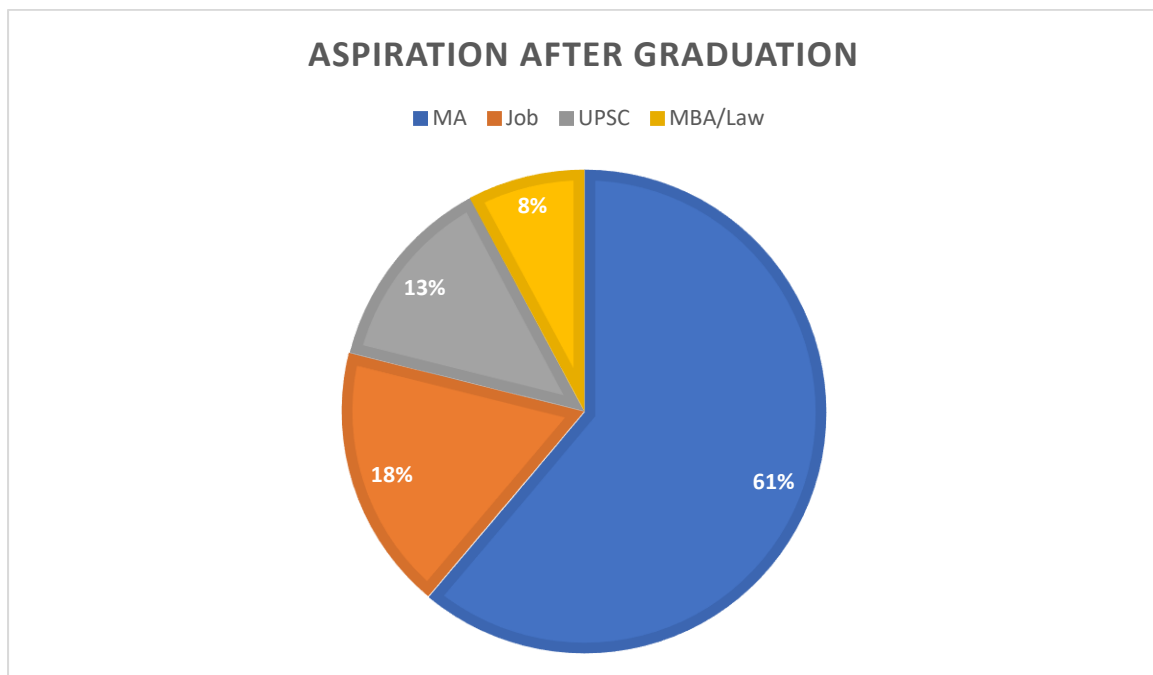
Sociology students learn about the society, norms and theories which govern the working of our society. It is an insightful subject which makes student sensitive to the working of the society and they learn how culture and traditions have evolved over a period of time and framed the structure of our society. Most of the students chose to study their subject because they already had an interest in it. Sociology students want to contribute to the society and that is why they choose sociology as their subject.

Sociology has been made a female discipline and this is a fact because only 9 colleges of Delhi University offer Sociology and 7 are All Girls college. The division is already made in the institution and it perpetuated in every form as more females are enrolled in the sociology department even in the co-ed college. More females are enrolled in Sociology relative to males. The gender stereotype is prevalent among subjects within social sciences where sociology to some extent has been labelled as a soft and feminine. Out of 27 students studying sociology, only 6 students are male and 5 of them belong to the reserved category.

Out of these three subjects, the highest cut-off goes for Political Science followed by History and then Sociology. There is an element of hierarchy within the discipline and since marks are used to measure the ability, more able students tend to concentrate in the political science department compared to Sociology.

#### 4.6.10 Aspirations after Graduation

Figure 4.11 Aspiration after Graduation

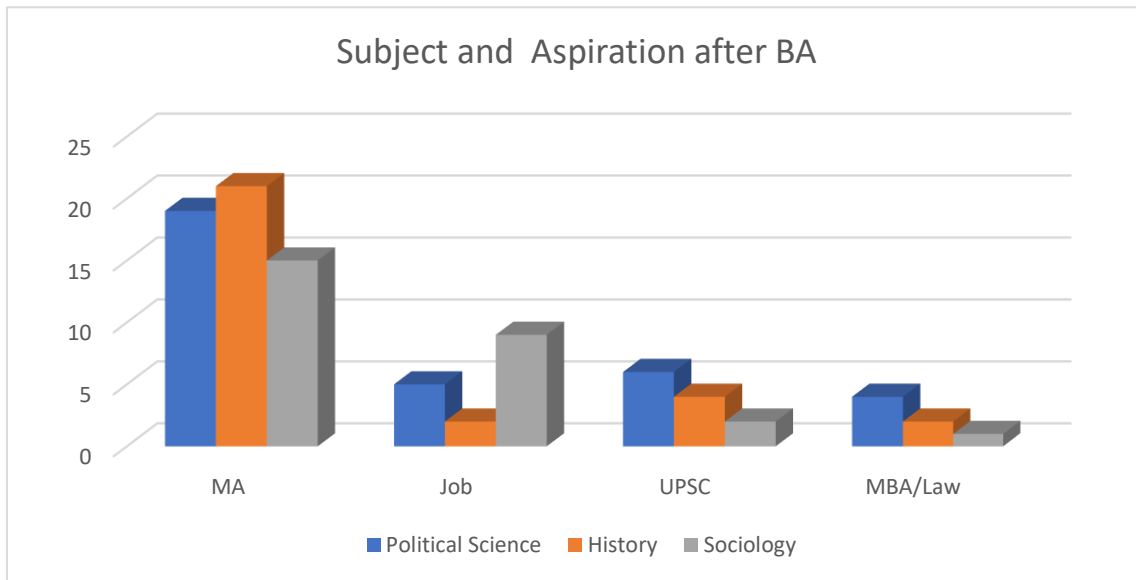


Source: Sample Survey

The sample has a total of 90 students out of which 55 (61 per cent) students wish to pursue Masters' in social sciences or another related subject. 18% want to apply for a job and 13% wish to prepare for UPSC and only 8 % choose to shift from social sciences towards more professional courses like MBA or Law.



Figure 4.12 Subject and Aspiration after BA



Source: Sample Survey

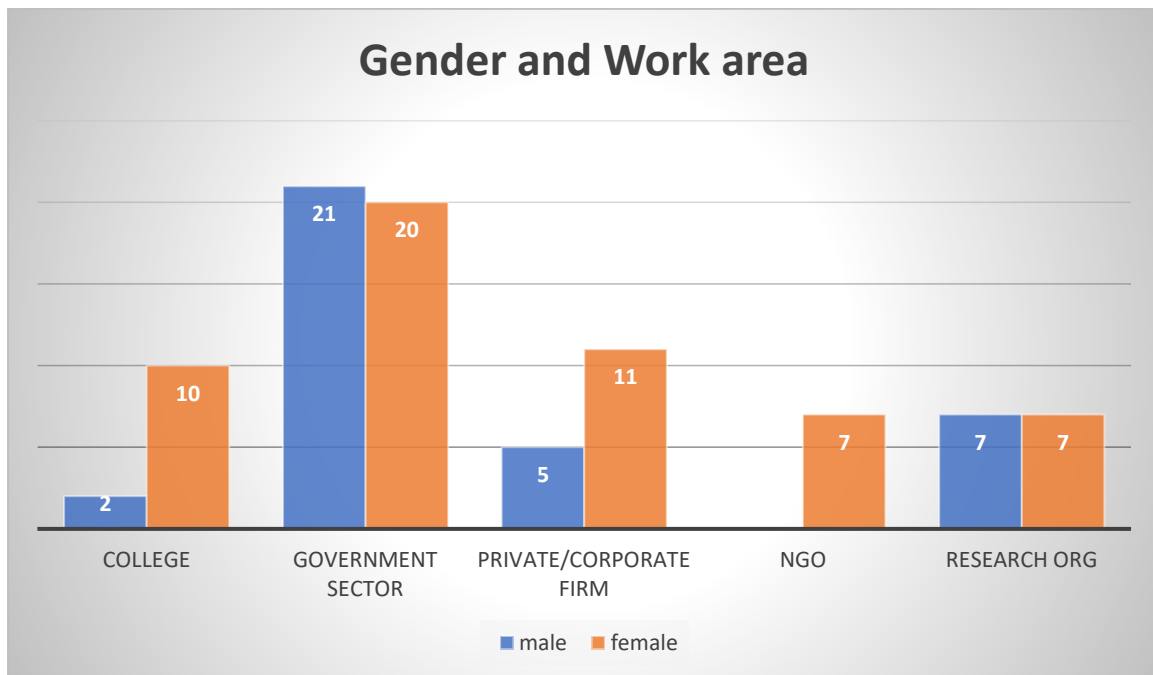
There is an overall preference to pursue Masters across all the three subjects. After controlling for Masters' as an aspiration after graduation, Political Science students prefer to go for UPSC or Law. Majority of history students prefer to pursue UPSC after Masters' in history. Sociology students are more interested in getting a job. Sociology students prefer to go for a job in the NGOs as they believe their education can be used to contribute to the society and make an impact. Four political science students want to pursue Law, two history students and only one student of sociology want to change the field and pursue professional education which has higher returns.

#### 4.6.11 Distribution of Preferred Work Area in the Labour Market

Students were asked about their preferred work area in the labour market. For Social Science students the most exciting areas for work are research organisations and think tanks. If they seek to work in the government sector, they will have to clear some kind of exam. The private sector has also started demanding social scientists in their consultancy and Corporate Social Responsibility (CSR) wing. Some students wish to make an impact and work at the ground level, for them, Non-Government Organisations (NGO) serve as a great opportunity. Social

science students generally start working as an intern (unpaid) or enter the job market with the low-level entry jobs. There is a brief discussion of the preference of the work area in the labour market and the role of gender, caste, family income, subject in influencing these choices or preferences.

Figure 4.13 Gender and Work Area



Source: Sample Survey

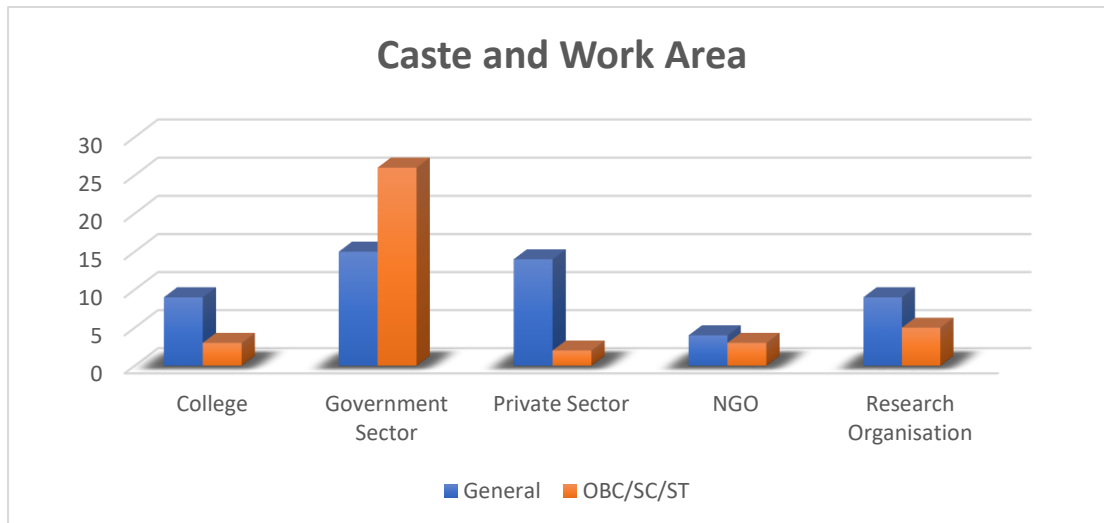
There are 5 males and 11 females (9 from Lady Shri Ram College) who prefer to work in the private corporate sector. Male students are highly centric towards getting a government job. An equal number of male and females are interested in working in the research organisations and think tanks.

More females (10) prefer to teach in schools and colleges, this again highlights the gender stereotype associated with the teaching profession. Females prefer to teach whereas males consider this as a “female” profession. Teaching has always been associated with females, social sciences (especially Sociology and History) are taught by females in the majority of the institutions.

None of the male student is interested in working in an NGO. The fact that only females are interested in working in an NGO tells us about the preference of both genders, NGOs do not pay high wages as they survive on donations and funds. Females are more interested in making an impact on the lives of people whereas males decision are more aligned with the monetary

gain and better job prospects. Gender stereotypes are visible in a subtle way where females are preferring to work in an NGO or teach in school/colleges.

Figure 4.14 Caste and work area



Source: Sample Survey

Reserved category students (66 per cent) are more interested in working in the government sector. This preference could be due to the policy of reservation in government jobs. Only 2 students are interested in working in the private sector. There is a tendency for discrimination against reserved category students in the private sector. The environment and working conditions are quite different in the corporate world compared to the government sector.

#### Subject and work area

There is an almost equal division of disciplines across all the avenues of the labour market. In a relative sense, political science students are more interested in working in the government sector whereas sociology students are more interested in teaching or working in an NGO.

#### 4.7 Perception of the Social Science students

In chapter 2, we have already discussed the importance of perspective and belief of students in shaping their aspirations and decisions. Section 2 of the questionnaire asked questions related to the Belief about the labour market and the link between education and employment. This section focuses on the perspective of students about social sciences as a subject, about the labour market and the link between the two. The study will also try to find the basis for this perception of the socio-cultural factors like gender, caste, parental education and family income. This section briefly describes the explanatory variables that will be used for inferential statistics in the next chapter.

#### **4.7.1 Perception about their subject and social sciences as a whole**

Students were asked if Social Sciences was their first choice. 77 out of 90 (around 85 per cent) students answered that social science was indeed their first choice. 13 students who did not have social sciences as their choice, 11 already had Arts in XII standard. The choice was restricted. 9 males from reserved category did not want to study social sciences but their choices were limited because of the marks scored in X standard.

There are 5 students who migrated from North East and South India to study social sciences even when social science was not their first choice. This depicts the attraction towards Delhi university, students choose to come and study here even they do not have an interest in the subject.

#### **Female dominant discipline in academics**

Students were asked if they believe that social science is a female-dominated discipline and more females are enrolled in the subject. 48 students believe that females are not dominating in the academics. More females who are studying in a girl's college believe that social science is a discipline dominated by the females whereas in Co-ed college students believed that females are not dominant even in academics. More females are enrolled in social sciences yet students believe that their representation in academics is limited. This perception could be due to the fact that males believe that females are not dominant in the academics.

Other than Sociology, males are dominating in the field of academics and this is highlighted in the data also as sociology students believe that females are dominant in academics. History and Political Science students believe that females are dominating the social science discipline neither in the academics nor in terms of enrolment.

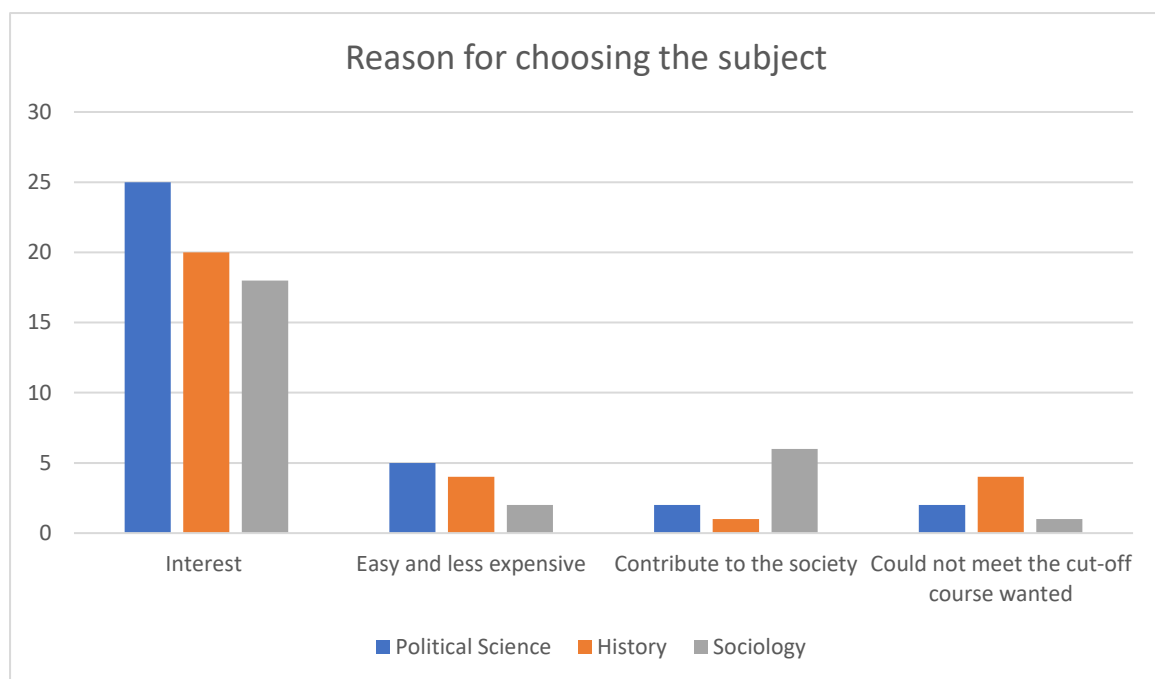
#### **Interest in the subject**

Students were asked about their reason for choosing to study social sciences and their subject in general. Around 70 per cent of the students answered that they choose to study their subject because they had an interest in it. The motivating force which guides their decision of pursuing higher education in social sciences is not the monetary gain associated with it but the innate interest students have to learn about the society, historical events and political system. This

desire to learn develops an interest in the subject which motivates students to pursue higher education in the same subject.

The level of interest in the subject is not dependent on factors like gender, caste and family background. It is difficult to find the basis for the interest in the subject in social factors. One reason could be that they developed an interest in the subject because they had Arts streams in school. They were exposed to the social sciences for last two years of their schooling and this might have helped in developing their interest, other than this fact the evidence does not show any other factor which could significantly explain the variation in interest.

Figure 4.15 Reason for Choosing the Subject



Source: Sample Survey

### Why do they spend money on education?

There can be broadly two reasons for spending money on education, one because it is an investment and second if it is a consumption. The students were asked a question to identify their expenditure on education as either an investment or a consumption. Around 55 per cent of the students believed in the instrumental role of education as they spend money on education with the prospect of having better job opportunities and earnings. An equal number of females believe in the consumption and investment role of education whereas around 63 per cent of the male student believe that they spend on education because it will reap them higher returns in the future. Males focus more on the investment role of education.

Expenditure on education is incurred by 66 per cent of the general category students because they consider education as an investment whereas 40 per cent reserved category students believe in the consumption aspect of education. Around 60 per cent of students from the reserved category believes that they spend on education because it gives them knowledge and exposure. They are not that concerned about the monetary gain from education. 11 students who are migrating from rural areas believe that education is an investment. Students who wish to work in the private sector and research organisations believe that education is an investment whereas students who wish to teach in colleges and work with NGOs believe that education is a consumption.

#### **4.7.2 Perception about the labour market**

##### **Job prospects**

This variable is used to categorise the perspective of students regarding the job prospects in the labour market. Jobs for social science students are limited and these jobs also require a high level of specialisation. This question was asked to ascertain the perspective of students regarding their job prospects in the social science sector. Around per cent of the students believe that job prospects are very limited. 67 students agree that Social Sciences have limited job prospects in India. Students believe that they cannot land a good job with only a Bachelors' degree.

Students are more inclined towards the view that job prospects are limited. 82 per cent of male students and 69 per cent of female students believe that job prospects for social science students are limited. More females in comparison to males believe that job prospects are not limited. 76 per cent of general category students and 71 per cent of students belonging to the reserved category believe that social sciences have limited job prospects in India. History students are more optimistic regarding the job prospects compared to the Political Science and Sociology students. Relatively students who wish to prepare for UPSC exam and want to work in the government sector believe that job prospects are good for them compared to the students who wish to work in private sector or research organisations.

##### **Female-dominated Sector in the labour market**

Majority of the sample (around 70 per cent) believe that females are not dominating in the labour market. Reasons for this could be many, one being female do not remain a part of the labour force for a long period of time. They work until they get married or have children. Though more females are trained in social sciences, they do not form a major part of the

workforce in the labour market. Most of the females are concentrated at the low-level entry jobs which may or may not utilise their subject knowledge.

### **MA gives the Competitive edge in the labour market**

Most of the students believe that post-graduation helps in improving their credentials and this helps them in gaining an edge over their peers who do not have a Masters' degree. Around 70 per cent of the students believe that MA gives them a competitive edge in the labour market. They believe in the signalling role of higher education. There is a general agreement over the belief that students who pursue MA are better placed in the labour market compared to their peers who do not pursue MA.

This categorical variable is used to identify the signalling effect of post-graduation in the labour market. 71 per cent of male students and 69 per cent of female students believe that MA will give them a competitive edge in the labour market. 72 per cent of the students belonging to the general category and 66 per cent of students belonging to the reserved category believe that MA will provide them a competitive edge. 73 per cent of the students who are from rural region believe that MA gives them a competitive edge.

Students irrespective of the marks scored and family background, in general, believe that pursuing post-graduation will improve their credentials in the labour market. Their degree will serve as a sorting device for the employers and their probability of getting selected for a job improves if they have a Masters' degree.

### **Ability (Marks/skills) Vs Credentials (Degree and Social Network)**

A question was asked to determine whether students believe that Human Capital theory is at work in the labour market. 64 out of 90 students believe that skills and ability play an important role in determining whether a person will get a job or not. The majority believe that skills are important and these skills are not limited to just subject knowledge. They prescribe to the human Capital theory and believe that ability and skills reflect their productivity to the employer and helps them to earn relatively more.

The remaining 26 students believe in the other role of the labour market where the social capital (embedded in the social relationships, contacts and network) is used to convert human capital (education) to economic capital (earnings). 21 females believe that degree and social network will help them more in getting a job while a majority of males believe that skills and ability will help them in landing a job. Sociology students believe that social contacts are more helpful

in getting a job. There is an interesting insight, 5 males who believe that degree and social contacts will help them in getting a job to belong to the low-income families whereas 21 females who believe the same are from high middle-income families. This highlights the fact that females from affluent background choose to study social science because they believe that their parent's social network and contacts will serve as a facilitator for improving their job opportunities. 33 out of 39 students belonging to the reserved category believe that marks and skills will help a person in getting a job. They believe in their capabilities and the fair labour market, but it is important to note that most of them want to work in the government sector where job allocation is somewhat fair and just compared to the private sector.

#### **4.7.3 The perspective of students on the link between the education and labour market It is a general subject which does not provide enough training**

Students were asked if they thought that social science is a general subject which does not provide enough training to perform well in the labour market. Around 66 per cent of the sample believed that their subject does not provide enough training. 74 per cent of the male students believe that social science is a general subject which does not provide enough training to perform well in the labour market and 60 per cent of the females also believe the same. 68 per cent of the general category students believe that the subject does not have a linkage with the labour market and 61 per cent of the reserved category students also believe the same.

Students who perform well in college do not believe in the linkage, 76 per cent of the students who have scored above 70 per cent in their graduation believe that the social science subjects do not train students in performing better in the job market and 63 per cent of students who have scored below 55 per cent also believe the same. There is an overall consensus that there is a missing link between what is taught in colleges and what is required to perform well in the labour market.

On the basis of subject, it was found that 70 per cent of the Political Science students and 62 per cent of students pursuing history and sociology believe that their subject does not provide enough training to perform well in the job market. There is more scope of learning when students pursuing social sciences get a job because, unlike students who are in technical professional education, they are not provided training and internship in college.



### **Course Content helps in earning more**

This question was asked to see if students believe in the use of knowledge gained through their subject in the college in the larger realm of the labour market. Students were asked if they perceive the course content of their subject as being important and if it helps them in earning more in the labour market. Around 69 per cent of the sample believes that the course content helps them to earn more. This variable captures the essence of human capital theory which lays more emphasis on the role of education in increasing the productivity and earnings of the individual.

Male students compared to the female students are more optimistic about the role their subject knowledge and its content play in improving their earning capacity. 77 per cent of the male students and 63 per cent of the female students believe that the course content helps them in earning more. In the sample, 68 per cent of general category students and 69 per cent of reserved category students believe that course content helps them in earning more. Caste, marks and family background does not explain the persistence of the belief that the course content will help in earning more, among the students.

The disjoint between these two beliefs which relate to the linkage between education and labour market suggest that college education only provides the knowledge and not training. Social science students rely more on learning from on the job training since they believe they were not trained properly while studying the subject. Once they get hold of a job and learn, they believe that their subject knowledge will be utilised and help them in earning a better income.

#### **4.7.4 Factors influencing the decision-making process**

Students were asked to rank all the factors they consider before making a decision. It is found that while making a decision about higher education, an equal number of students give importance to the course content and monetary gain from education. 38 per cent of students gives more importance to the course content while making a decision. They believe that education is about gaining knowledge and it not just for improving the earning capacity of students. the goal is to gather more knowledge and get better insights into the subject they want to study. 36 per cent of student value money more while making a decision about higher education. They consider education more of an investment where every additional amount is invested with the prospect of earning more. 40 per cent of female students give more importance to the monetary issue before making a decision about higher education (the cost (price) as well as the benefit (salary))

Only 9 per cent of students first and foremost consider the expectations of their parents while making a decision. Around 17 per cent of students give priority to the status and brand name of the college when they make a decision of pursuing higher education. Lesser importance is given to parental expectations of parents and the college name. This suggests that the students who are studying in top colleges of India do not give importance to the name and status of the college/university before making a decision about their future. They do not give utmost priority to this factor. Students who belong to the reserved category give more importance to parents' expectation compared to the general category students.

Female students who belong to affluent families give priority to the status and name of the college while making a decision related to their higher education. In the sample, 45 per cent of general category female students value the brand and status of the college. Females are more considerate about the expectations of their parents and all the three male students who value parents' expectation before making a decision are from reserved category. They belong to low-income families and thus are more considerate of their parents and their expectations.

	Money/Job (33)	College name (Status) (15)	Course Content (34)	Parents' expectations (8)
Male	11	6	17	3
Female	22	9	17	5
General	20	11	18	2
OBC/SC/ST	13	4	16	6

Table 4.5 Most important factor which influences the decision

#### **4.8 Decision to pursue Masters' in Social Sciences.**

Out of 90 students, 55 students wish to pursue Masters' in social science. There is no clear explanation as to why students decide to study for two more years. Human Capital Theory suggests they gain deeper understanding whereas Signalling theory suggests that they invest for two more years in order to improve their job prospects. An equal number of students have cited either of the two reasons. It is bimodal and even the factors like gender, caste and family income cannot serve as an explanation for the reason cited by students for pursuing MA.

Out of these 55, 17 wish to change their major or field of specialization but they all lie under the social science discipline. They mostly want to pursue Masters' in development studies, international relation, and public policy. Sociology students wish to specialize in sub-discipline

like gender studies, development studies etc. which use the basic knowledge of sociology but takes the understanding related to a specific issue to a deeper level. The two major reason cited by the students for changing their major are: first, they are interested in getting a deeper understanding of these subjects and secondly, they are not interested in their current subject.

#### **4.8.1 Choice of Institution for studying Masters' in Social Sciences**

Students choose to spend two more years of their life in the education system because the direct cost borne by the individual is low in a highly subsidised system. Reduction of cost serves as a facilitator for students to make a decision. 46 out of 55 (83 per cent) students wish to pursue Masters' from a central university wish is located in Delhi (Delhi University, Jawaharlal Nehru University are the top preferences of these students). Half of the students (mostly reserved category student) expect to spend around ₹80,000 in total on their post-graduation. Students who come from affluent families are willing to spend around 3 lakhs on the same education from the same institutes. Expenditure incurred by students and parents differ across the lines of caste and family income. It is difficult to make an estimate about the expected cost since these expectations are a function of family income, caste.

7 students wish to pursue Masters' from a foreign university. All of these seven students belong to the reserved category and their family income (monthly) is above ₹80,000. 2 students who have a family income below ₹40,000 are interested in pursuing Masters' from Open University like (IGNOU) and work part-time because of the financial status of their family. Though these two numbers are small to make a comparison and draw conclusions, still it is important to highlight the difference in the choices and constraints which reflect the deep inequalities of our society. Students coming from elite families have the luxury of making a choice to study abroad (as their parents are able and willing to pay for it) whereas students who are coming from the lower strata of the society.

#### **4.8.2 Expectation After MA**

Students on average expect to earn between 50,000 to 70,000 monthly after their completion of Masters'. A student who has secured 47 per cent in graduation and the one who has scored 76, both expect that they will earn less than 40,000 even after completing their Masters'. This peculiar insight makes it difficult to unravel the formation of expectations as an expectation about salary cannot be explained through differences in ability which is measured through marks. There is more to this task of expectation than just academic achievement.

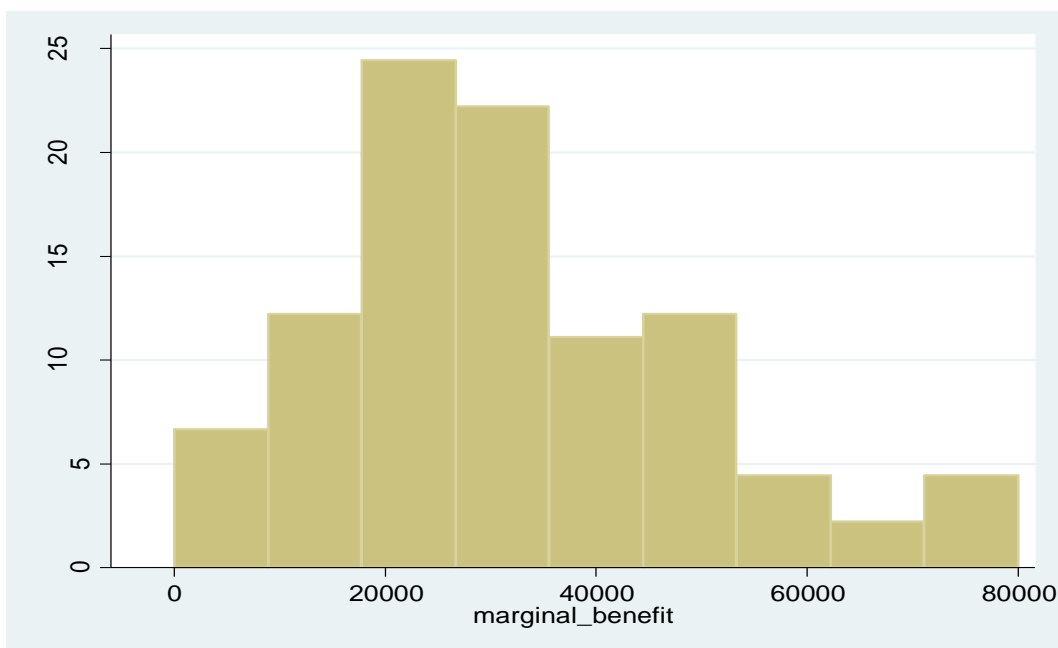
Students who aspire to work in the private corporate sector or research organisations expect a lower salary than the students who wish to work in the government sector. Low entry level jobs for social scientists in these sectors. In research organisations and think tanks, students usually have to work as an intern in order to gain some experience. Specialisation in the subject improves their job prospects and help them to enter into the areas where their subject knowledge and skills are demanded.

### 4.8.3 Expected Marginal benefit

Both Human Capital theory, as well as, the Signalling theory predict that more education leads to higher earnings. This means that students should have more expectations about salary after their completion of Masters’ degree compared to the. The student will decide to invest his/her resources (time, money and effort) for two more years only when they expect higher returns in the form of increased earnings.

Students do on average believe that Masters’ degree will help them in earning more. Students who have decided to pursue Masters’ in social sciences expect a marginal benefit of 30,000 on average. Some students also believe that there will not be much difference even after the completion of Masters’ degree as the job market is limited and supply of social science post-graduates is already above the absorption level of the labour market. The histogram suggests that the degree of spread is 80,000

Figure 4.16 Distribution of Expected Marginal Benefit



Source: Sample Survey

Majority of students expect an additional gain of ₹20,000 to ₹30,000 after completion of Masters’ degree. Students who are aspiring for UPSC, believe that there is no difference in the expected earnings after MA. Irrespective of the degree, they will earn the same amount which they expected to earn before. Students who have decided to pursue a professional course, expect better returns after completion of their degree compared to the students who are aspiring to do Masters’ social sciences. This reflects the better job opportunities for students who undertake professional education.

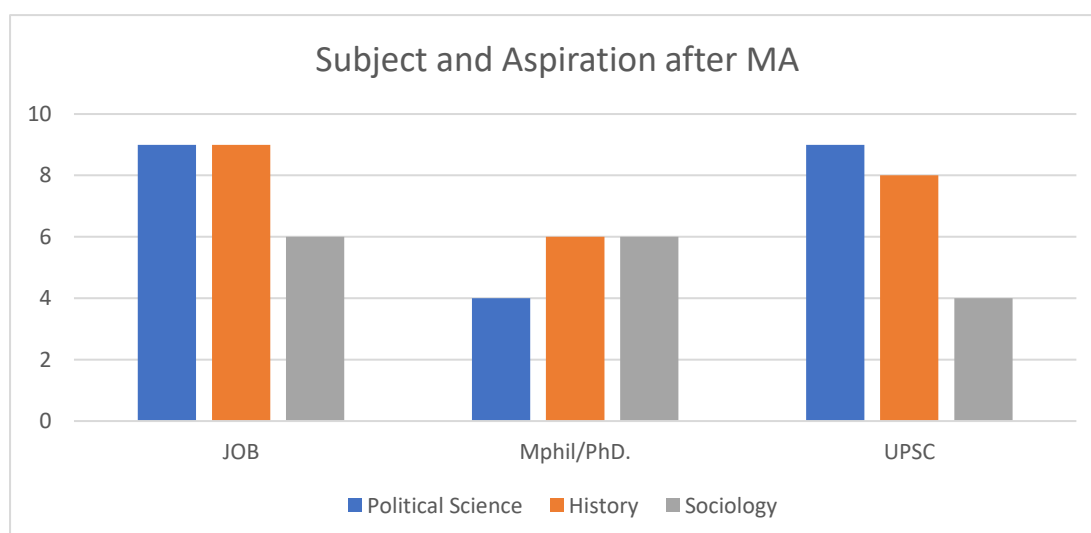
#### 4.8.4 Aspiration after MA

	Job (24)	MPhil/PhD (16)	UPSC (21)
Female (35)	18	11	8
Male (20)	6	5	13
General	17	10	8
OBC/SC/ST	7	6	13

**Table 4.6 Distribution of Aspiration after MA across gender and category of students**

In comparison to females, more males pursuing Masters are interested in giving UPSC exam, whereas females are more interested in getting a job or doing further research. Students belonging to the reserved category are more interested in cracking the UPSC exam.

Figure 4. 17 Subject wise Aspirations after MA



Source: Sample Survey

There is no clear division in aspirations on the basis of the subject studied. But in a relative sense, Political Science students followed by History students are more interested in Civil Services Exam. Sociology students are either interested in pursuing further education in the

research area or getting a job. Political science students are not interested in making a career in the academics. The data is sufficient to make a statement about the differences in aspiration based on the subject studied in social sciences, but we have discussed the relative preference of students based on their subject knowledge and credentials.

#### **4.9 Special Cases**

In this section, some 4 special cases will be discussed from the sample of 90 students. These cases are picked and discussed for throwing light on some fundamental issues and key findings which will be lost in the quantitative (data) analysis. The life history of 4 students surveyed has highlighted the role of family background in framing the belief and decisions of students.

##### **4.9.1 Male Blind Student studying Political Science**

He did his schooling from Amity International School (private schooling) and scored 92 per cent in XII standard. His father has done his graduation in engineering and is now an Inspector in Delhi Police Department. Mother has done Masters' in Psychology and is now a housewife. He has one elder sister who is an Architect. Family income (monthly) is above ₹1,00,000. His expectations from the labour market are not affected by the fact that he is blind. This could be possible because he wants to work in the government sector which is inclusive and provides facilities and equal opportunities for such students unlike, the private sector.

He wanted to study political science because he aspires to become a civil servant. He wants to work in the government sector. He spends on education because it is consumption. The knowledge and exposure gained through college education are far more important to him than the family has resources to afford his pursuit of being a civil servant. The job is not a priority for him and he can indulge in rent seeking.

His perception about the labour market and social sciences is similar to the majority. He believes that MA gives a competitive edge in the labour market. He does not believe that course content is not helpful in getting a job and earning more. He believes that marks and skills (ability) are the determining factors in the labour market. When asked about what affects his decision, he argued that neither parents nor monetary issues affect his decision. This suggests that students who are already from affluent background do not believe that social and economic factors have any role in influencing their decision, but the fact remains that today they are in a position to argue about this because of the better social and economic factors they were

endowed with in the first place. Not many blind students from low or middle income will have the privilege of saying that social and economic factors do not affect their decisions.

#### **4.9.2 Physically Handicapped female student studying Sociology**

She did her schooling from Shri Ram School and has no siblings. Her father has a doctorate in Science is now a professor in Indian Institute of Technology (IIT) Delhi and her mother has done post-graduation in Philosophy, she worked as a lecturer in Hindu College and is now retired. The family income is above ₹1,00,000.

She wanted to study Sociology because she aspires to become a professor and teach sociology. She wants to teach in a central university (government funded institutions) she spends on education because of the consumption aspect. She likes to learn and gain exposure the college education provides. Employment opportunities and better returns from education come secondary to her. Education here serves as a consumption good. For her also marks and ability matter more in the labour market and she believes that MA gives a competitive edge in the labour market.

She stressed on the role her mother played in influencing her decisions. Parents expectation seem to affect her decision-making process. This suggests that unlike her male counterpart, she believes that parents do have a positive influence on her aspirations and decision. This difference could be accrued to the fact that girls listen to their parents and let them influence their decisions whereas boys tend to neglect the advice of their parents and give more importance to what they think is good. This inherent gender difference in the relationship with parents is prevalent in Indian Society but we cannot make a generalised statement based on these two cases. Further investigation needs to be done to explore the dominance of parents in the decisions made by females and male students.

#### **4.9.3 Male student from SC category studying History**

He scored 86 per cent was able to get admission in one of the top Arts college of India due to the policy of reservation. His father is a graduate who works in the government sector as a clerk and earns ₹45,000 monthly. His mother has a Masters' degree in Political Science and is a housewife. He has one younger sibling (dependent) who is currently studying in class VIII. There is only one bread earner in the family. He wishes to prepare for UPSC even when the family's financial condition is not conducive for rent seeking. The reason is that reservation in

government jobs serve as a facilitator for students belonging to the lower socio-economic background. The job is not a priority, security in the job is far more important for him.

He considers expenditure incurred on education an investment. He believes that history is a general subject which does not provide enough training to perform well in the labour market and in addition, the course content is also not helpful in improving their earning capacity. He does not want to pursue Masters' but would instead prepare for UPSC exam.

Parents expect him to become a government officer, he acknowledges the role her mother has played in influencing his decision. She influenced his decision of selecting Arts stream in XI standard. His mother advised him to study Arts if he wants to crack UPSC exam. Experience of the mother since she has a Masters' degree in Political Science has helped her in giving sound advice to her child. The son also takes the advice seriously and his decisions are influenced due to the prior knowledge of mother in the field of social science.

#### **4.9.4 Male student from OBC category studying Political Science**

He scored 90 per cent in XII standard and got admission due to the reservation policy. He has studied in a private school. His father is a graduate who works as a clerk in the government sector and his mother is a school graduate who is now a housewife. The family income is ₹20,000. He has one elder brother who is doing MBA. Parents invested more in the elder child even when the financial condition of the family is not sound. Parents invest in the education of their children in the hope that the returns will be higher and the child will help the family financially in the long run.

He aspires to pursue an MA in Political Science and then crack UPSC exam. Social science was not his first choice, he wanted to study Commerce in school but school did not allow him because of the marks scored in class X. choices are constrained, it can be assumed that most of the students who are enrolled in social sciences do not study the subject because they have an interest in it but because they did not have many options to choose from. Students who are not good at Maths or did not score well in class X are not allowed to choose Science and Commerce as their area of expertise. Students are then restrained in choosing the subject of their choice and these constraints are not limited to choice of subject. they bear an impact on the future decisions and choices of the students.



The family income does not hinder the student from pursuing Masters' and to indulge in rent seeking. The reason could be that subsidised higher education and policy of reservation which helps to overcome the negative effect of family income and background on the choices and aspirations of getting a high paying government job.

#### **4.9.5 Implications drawn from the four special cases**

The family works in different ways in the lives of an individual. We cannot determine one single relationship between family resources and background and how they influence the decisions and aspirations of an individual student. The four cases discussed above can be broadly categorised into two very different cases. One case looking into the physically handicapped students where the family background is playing a significant role in influencing the decisions and aspirations of students. The second case is looking into the students who belong to the reserved category, where family background is not acting as a constraint and limiting the aspirations of students. Public policies are being implemented in the colleges used as a unit of analysis in the study. Subsidisation and Reservation policy help in controlling the effect of low socio-economic factors on the decisions and aspirations of students belonging to low-income families.

Both the physically handicapped students come from affluent families, their fathers' are working in the elite services sector (Inspector, Professor in IIT). This shows an elite bias even among the physically handicapped students pursuing social sciences. Parents who are highly educated and have strong financial standing are interested. they are provided with more opportunities compared to the other physically handicapped students who are never able to pursue higher education. Here family background serves as the facilitator, without their support these two students would not have achieved this level of exposure and knowledge. In these two case, family has resources to provide them better schooling which makes them capable enough to make their choices and they are motivated to not let their weakness dictate their aspirations and belief.

For the two physically challenged students, gender explains a lot of differences. Choice of subject, the role of parents and aspiration highlight the gender differences. Female are more interested in studying Sociology and teaching in the future, whereas the male student is willing to take the risk and give UPSC a priority over job and education. The willingness to take the risk can also be facilitated by the family background.

Family background and socio-economic factors have influenced their schooling positively. Both students have had the privilege of studying in top private schools. Both students are local and from Delhi only. Both are from affluent families and have highly educated parents. Both value education for its consumption side and not the investment. Students who are from high-income families do not consider pursuing social sciences as an investment in higher education. They enjoy the learning component more than the earning one.

Both the students who come from reserved category prefer to work in the government sector. This could be due to an affirmative policy of reservation which provides them with an opportunity to Both the students who belong to the reserved category have the long-term goal of being a civil servant and they aspire to clear the UPSC exam. This preference for government job suggests that students prefer job security and they are willing to spend resources even when there is uncertainty that they might not clear the exam.

They both had private schooling but these schools were in no way near the top-notch schools in which the other two students from affluent families studied. This reflects the growing privatisation of schools at the secondary level of education. They belong to low-income families but still studied in private schools, this suggests that parents prefer private schooling for their children.

Both the reserved category students believe that education is an investment. Due to the limited financial resources, these students realise the importance of spending the additional amount on education and they do this with the belief that each additional level of education will improve their earning ability in the labour market. Even after the public policy which subsidises general higher education subsidises the tuition fees, most of the indirect cost is borne by the parents. For parents with low income, every penny acts an investment for a better future.

#### **4.10 Concluding Remarks**

The first two section discussed the methodology and research design of the study. The study follows a positivist framework which seeks to capture the reality through quantitative analysis and econometric models. It is a micro-study of individuals who decide to pursue Masters' which will be used to shed light on the national level phenomenon of growing demand for social sciences at the post-graduation level. It is a case study of two colleges which surveys 90 final year social science undergraduate students studying political science, history and sociology. The third section discusses the method and tools used for data collection.

In the main section, the basic characteristics of the sample were explained. The composition of the sample was discussed. Basic descriptive statistics have been employed to describe and present the data collected. It has been seen that the sample mainly consists of students from upper middle and high-income families.

The seventh section focused on the perspective and belief of social science students regarding their subject, the labour market and the link between the two. The study tried to locate the basis for these perceptions in factors like gender, caste and family background. But there is no definite relationship to understand the formation of beliefs of students. It is the way the majority thinks and these beliefs are perpetuated in the minds of students irrespective of their background, caste, gender and ability.

In the last section, four special cases were discussed which helps us in drawing implications and understanding the perception of students who are in the social sciences. A close detailed study of these four cases help us to locate certain factors which may not be true for the entire sample collected in the case study but nevertheless are important factors if one wants to get a holistic picture of the choices and aspirations of students.

## **Chapter 5**

### **Data Analysis**

This chapter will develop two econometric models to answer the two research questions. The two fundamental questions for which the study is undertaken are: what factors have an impact on the decision of students who wish to pursue MA. The first few sections will briefly try to examine the role of gender, caste, family background, expectations and academic achievement and to understand their influence (if any) on the decision of pursuing post-graduation in social sciences.

The second half of the chapter deals with the second research question which seeks to examine the expectations of social science students about the salary and the role of gender, caste in the formation of these expectations. A regression model is developed to examine the relationship between the perception (belief) of students which guide them to form these expectations.

#### **5.1 Analysis of Data**

There are two ways of analysing any quantitative data. In the previous chapter, we used descriptive statistics to present the data but made no inferences and predictions. It simply reports what has been found in the data. In this chapter, the method of cross-tabulation will be used to explore the relationship among various factors like gender, caste, family income and the decision of pursuing Masters'. A similar method will be employed to look into the role of these factors on the expectations of students in the second half of the chapter which deals with the second research question.

Graphical representation of data helps in better understanding and representation of the data. Data is presented in the form of frequency and percentage tables and bar charts are used to present categorical (nominal data). Line graphs are used to show trends in the continuous variable like pedu, fam\_inc, colg\_marks. Expectation about salary is a continuous variable and it is presented using a histogram.

Along with the method of cross-tabulation, inferential statistics will be used to predict the behaviour of students. There are two econometric models in this chapter, each focusing on the research questions of the study. The hypothesis will be tested in multiple regression and logistic regression analysis to explore the relationship between socio-economic factors, perception and decision of pursuing MA and expectations formed.

## **5.2 Decision of pursuing Post-graduation (M.A.) in Social Sciences.**

In the last chapter, we discussed the students who have decided to pursue Masters' in social sciences. Their reason and expectations were described in the last chapter. This section will focus on exploring the factors which affect or influence the decision of pursuing post-graduation in the first place. The analysis will help us to understand the decision made by students and role played by the factors in facilitating this decision.

The next few sections will examine the role of various socio-cultural and economic factors and their impact on the decision of pursuing Masters' followed by a logistic regression model which is developed to understand the relationship between the various factors and the decision of pursuing MA.

### **5.2.1 Gender and Decision to pursue MA**

Out of 90 students, 55 choose to study MA and out of these 55, 35 (63 per cent of females) wish to pursue Masters' in social science and out of 35 males, 20 (57 per cent of males) wish to pursue Masters'. Since females are over-represented in the sample, the impact of gender in influencing the decision of pursuing MA cannot be ascertained. The decision of pursuing MA based on gender remains inconclusive.

### **5.2.2 Caste and Decision to pursue MA**

In terms of social category, 61 per cent (24 out of 39) of students belonging to reserved category wish to pursue MA whereas 60 per cent (31 out of 51) of general category students wish to pursue MA in social sciences. More or less equal percentage of general and reserved category students have the aspiration of pursuing MA. There is no significant influence of caste on the decision of pursuing MA.

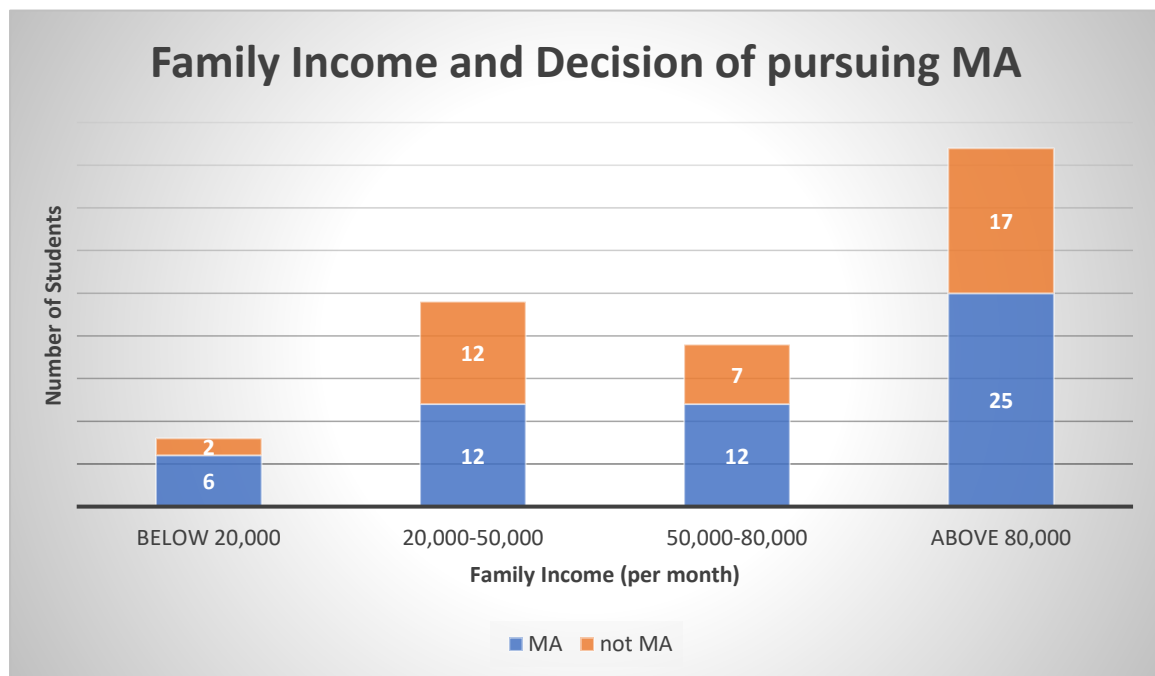
### **5.2.3 Family income and Decision to pursue MA**

The literature reviewed in chapter 3, suggest that family resources and income influences the decision of students. As students who belong to rich families have more resources available compared to the students who belong to poor or low-income families (whose monthly income is below 20,000). The sample suggests that around 75 per cent of students who belong to low-income families are interested in pursuing further education after BA. This finding is against the evidence given in the literature which shows that there is a positive relationship between family income and investment in higher education. Despite having low financial backing,

students are interested in studying further. This could be because they believe that Masters’ degree will improve their job prospect and help them in earning more. Another reason that the evidence does not hold true to the literature because the literature does not incorporate the positive impact of reservation policy and subsidised higher education on the decision of pursuing post-graduation.

Students who belong to middle-income families (families which have a monthly of around ₹20,000 - ₹50,000) have mixed aspirations. 50 per cent of students from middle-income families are interested in pursuing MA while the other half is interested in getting a job or pursuing UPSC. 63 per cent of students from high-income families (monthly income around ₹50,000 - ₹80,000) and 60 per cent of students from very high income (monthly income above ₹80,000) are interested in pursuing MA. Close to 60 per cent of students of high-income families are interested in pursuing MA in social sciences. These families do not have a resource constraint and thus children can choose to study further without any worry. The remaining 40 per cent are mostly interested in cracking UPSC exam or pursuing other professional courses since their family can afford it.

**Figure 5.1 Decision to pursue MA and Family Income (monthly)**



Source: Sample Survey

### 5.2.4 Parental Education and Decision of pursuing MA

Empirical literature suggests that parental education has a direct or indirect influence on the demand of students for higher education. This might be true for a college education but when it comes to post-graduation and advanced courses, the impact of parental education on the decision of students is minimised as it is visible in the sample.

Table 5.1 Parental Education and Decision to pursue MA

Pedu	Total (90)	Dec_MA (55)	% age of total
Less than 25	16	10	62
25-29	19	13	68
30-33	35	21	60
34-40	20	11	55

Source: Sample Survey

There is a reverse pattern (negative relationship) visible i.e. if parents are highly educated then their children do not prefer to pursue post-graduation compared to the students belonging to the reserved category whose only one parent is a college graduate. This could be because these students understand the importance of MA degree or lowly educated parents expects their child to study and make a career with the help of the degree.

It is an intriguing finding that as the years of the parental education increase relatively lesser number of students wish to study. This defeats the literature which suggests that the level of parent's education is directly influencing the level of their children's education. If parents have Ph.Ds then it is not necessary that their children will also study to attain a PhD. Highly educated parents give freedom to their children and do not influence their decisions whereas parents who are not highly educated wish or expect their child to pursue higher education and attain the highest level of credentials because they did not have the luxury of doing so.

The evidence is not sufficient to make a conclusion. There is no definite and significant relationship between the students who have decided to pursue MA and the education level of their parents.

### 5.2.5 College and Decision of pursuing MA

From Lady Shri Ram College, 22 out of 37 (59 per cent) females have decided to pursue MA whereas, from Hindu college, 33 out of 53 (62 per cent) have decided to pursue MA in social sciences. Since more students are included from Hindu College in the sample. It is not significant between the two colleges and we can neglect the difference in college.

### 5.2.6 Subject and Decision of pursuing MA

	Political Science (39)	History (29)	Sociology (27)
MA (55)	19	21	15
%age of total	55%	72%	55%

Table 5.2 Subject and Decision to pursue MA (*Source: Sample Data*)

Majority of history students wish to pursue MA whereas around 55 per cent of students currently pursuing graduation in political science and sociology have decided to pursue MA. There is no single explanation for history students pursuing MA in huge number, it could be they prefer to specialize in the field before getting a job or cracking UPSC exam.

### 5.2.7 College marks and the decision of pursuing MA

Marks (till V semester)	Dec_MA (55)	% age of total
Below 55 % (10)	6	60
55-60% (19)	9	47
xs60-65% (14)	7	50
65-70% (31)	23	74
Above 70% (16)	10	62

Table 5.3 College Marks and Decision to pursue MA (*Source: Sample Data*)

There is no definite relationship between marks scored and the decision of pursuing MA. Out of 10 students who have scored low (below 55 per cent), nine are from reserved category and 6 of them wish to pursue MA, whereas students who have scored high (above 70 per cent) are from general category and they are also interested in pursuing MA.

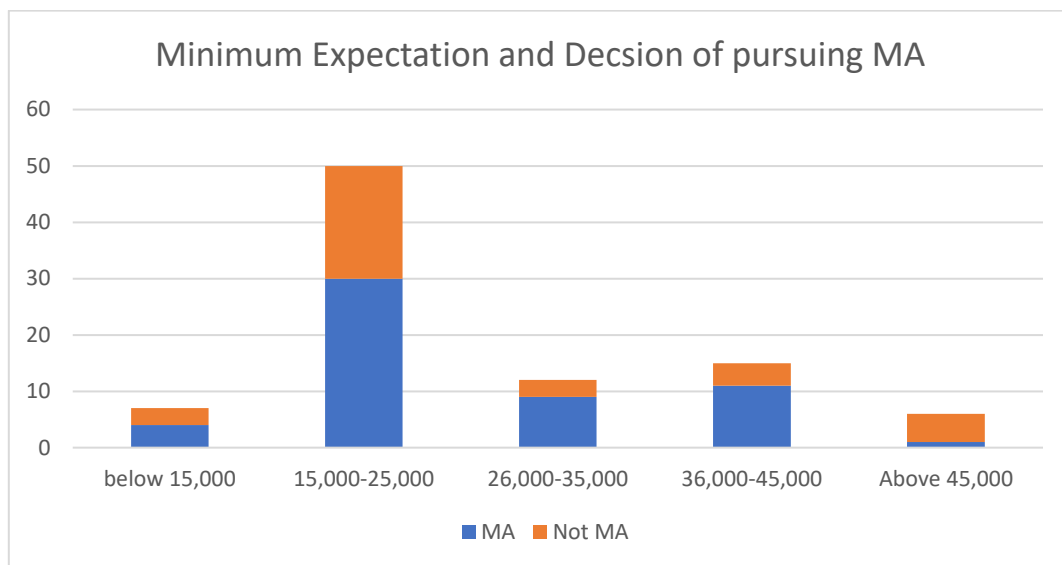
Due to affirmative policy action like reservation in higher education, students belonging to low socio-economic strata have the benefit of aspiring and getting admission in Masters programme. Thus marks scored in college do not serve as a deterrent for the students.



### 5.2.8 Expectations from the labour market and the decision of pursuing MA

There was an ambiguity about the expectations among the students. Most of the students believe that it is very difficult to get a high paying job right after graduation in social science. In order to have better income prospects they either should specialise or do an internship in their related field to gain some experience. When students were asked to provide an estimate for minimum expectation, students reluctantly gave some estimate.

**Figure 5.2 Minimum Expectation and Decision of pursuing MA**



Source: Sample Survey

Students on an average expect to earn a minimum of 28,000 monthly after their graduation. The minimum expectation is 5000 while the maximum expectation is around 1 lakh. Students who are pursuing UPSC have a minimum expectation of around 1 lakh. Students who have higher expectations about salary are the ones who are not pursuing post-graduation in social sciences. They either prefer to pursue professional courses like Law/MBA or prepare for civil services (UPSC) exam. Students who do not want to pursue any form of higher education and wish to enter the labour market right after graduation on an average have a minimum expectation of earning 25 thousand per month.

Students with a minimum expectation of ₹5,000 to ₹50,000 have decided to pursue Masters' in social sciences. Sociology students have an expectation around ₹20,000 to ₹30,000. Two History students have expectations above ₹45,000. Four Political science students have expectations greater than or equal to ₹45,000.

### **5.3 Contradiction between the Empirical literature and Evidence collected through the Sample**

The descriptive analysis of the sample data suggests that socioeconomic factors like gender, caste, family income, parental education do not have a significant influence on the decision of students pursuing an M.A. in social sciences.

Variables like college marks and expected marginal benefit after MA, according to Becker's model should have a positive impact on the decision of students who are interested in investing their time and money for additional two years. Socio-economic factors which focus on the family background and social identity (caste and gender). Based on the literature review, one model can be constructed which include core variables like ability, family income and marginal benefit.

$$\text{dec\_MA} = f(\text{colg\_marks}, \text{caste}, \text{fam\_income}, \text{mar\_benefit}, \text{pedu})$$

For the reasons discussed in the previous section, the logit model which uses the variable college marks, family income, caste and marginal benefit to explain their impact on the probability of making a decision to pursue MA is not a significant model (see Appendix 1). Contrary to what the literature suggests these factors do not have a definite significant impact on the decision and choices of the students in the sample. There is a close association or correlation between variables like fam\_inc, pedu, colg\_marks and caste.<sup>16</sup> But none of them has a significant influence on the decision-making process of students. Socio-economic factors are not able to explain the variation in the decisions made by the students.

### **5.4 The Logistic Regression Model**

In this section, an econometric model has been developed to model the decision of pursuing post-graduation in social sciences. The respondent either wants to pursue MA ( $Y = 1$ ) or do not want to pursue MA ( $Y=0$ ) in the period in which survey was taken. The next three sections give a brief description of the variables used in the model, followed by the results and interpretation of the model.

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<sup>16</sup> Caste and family income are negatively correlated and parental education and family income are positively correlated. Correlation Coefficient for caste and family income and parental education and family Income is - 0.48 and 0.55 respectively.

### 5.4.1 Variables used in the model

The dependent variable is ‘decision to pursue MA’ and the explanatory variables are gender, category, parental education, family income, marks scored in under-graduation till the fifth semester, interest in the subject, expectations regarding the course content and labour market. For the logistic regression model, the dependent variable (Y) is a decision to pursue MA (dec\_ma) and the following table mentions the explanatory variables used in the model. The dependent variable is a categorical variable which takes the value 0 or 1.

**Table 5.4 Definition of Variables used in the Model**

Name of the variable	Nature of the variable	Description of the variable	Values
Dependents	Quantitative	Number of dependents in the family	0,1,2
colg_marks	Quantitative	Marks scored in college (5 semesters)	47 -76%
interest	Categorical	Interest in the subject	0 (no interest) 1 (high interest)
ma_edge	Categorical	MA gives a competitive edge in the labour market	0 (no) 1 (yes)
Course_content	Categorical	The subject knowledge and course content helps in the labour market	0 (No) 1 (Yes)
course_imp	Categorical	Importance of course content in the decision-making process of students	0 (not imp) 1 (imp)
work_area	Categorical	Area students prefer to work after completing their education	0 (Private sector, NGO, Government sector) 1 (College, Research Organisations)

All the variables except college marks and dependents are binary variables which can take only two values. Interest in the subject can be either ‘low’ or ‘high’. The belief that MA gives the edge in the labour market can be categorized as ‘Yes’ and ‘No’. Importance of course content for the student while making a decision can be high or low. The belief that the course content helps in the job and labour market can be categorized as either ‘Yes’ or ‘No’. The work area is categorized as an area which requires specialization like college and research organization and areas where little expertise is required like Private sector, NGO. The variable ‘dependents’ is

a discrete quantitative variable with values 0, 1 and 2. Family income and College marks are in numeric form. Parental education is the total number of years of education of parents.

#### **5.4.2 Logistic Regression Models**

As discussed in the previous section, socio-economic factors and marks scored by students in college do not affect the decision of students (see Appendix 1 for the results of the logistic model). In this section, we will explore other factors which can influence the decision of students. Four different models have been developed to understand the significance of some variables in explaining the decision and demand for higher education.

Model 1 tries to capture the impact of the aspirations of the students about the area they want to work in the labour market after the completion of their education. For the first two models, work\_area is a significant variable but it loses its significance as more variables are added to the model. Model 2 included social factor like dependents to explain the decision of pursuing MA. It is found that students who have two dependents are more likely to pursue MA. The results are discussed in the table below. Results of model 1 and 3 are displayed in Appendix 1.

**Model 1**  $dec\_ma = f(\text{work\_area}, \text{colg\_marks})$

**Model 2**  $dec\_ma = f(\text{work\_area}, \text{dependents})$

**Model 3**  $dec\_ma = f(\text{work\_area}, \text{ma\_edge}, \text{interest}, \text{dependents})$

**Model 4**  $dec\_ma = f(\text{interest}, \text{ma\_edge}, \text{course\_imp}, \text{dependents}, \text{colg\_marks}, \text{course\_content}, \text{work\_area})$

These four logistic regressions were run in STATA 12 and the results stated in Table 5.5 R1, R2, R3 corresponding to Model 1, 2, 3, 4 respectively. Comparing the results of the four model it is clear that ma\_edge and interest are highly significant whereas college marks are not at all having a significant effect on the decision of pursuing MA. The empirical literature and Human Capital theory postulate that academic achievement and college marks influence the choices and decisions of students. But for the sample collected in the study, marks do not serve as a guiding principle. It is rather the variable which measures interest in the subject which is influencing the decision of pursuing MA among the students.

According to model 1, the work area is highly significant, this means that students who wish to teach in college or work in research organisations are 5 times more likely to pursue MA compared to the students who wish to work in private or government sector.

**Table 5.5 Results of the four Logistic Regression Models**

**Dependent variable: dec\_ma, N = 90 (Odds ratio and z value are reported)**

S.no	Explanatory Variable	R1	R2	R3	R4
1	work_area	5.41 (2.81)**	5.76 (2.87)**	3.068 (1.68)	2.80 (1.43)
2	Dependents		2.6 (2.15)*	2.153 (1.53)	3.26 (2.08)*
3	ma_edge			5.16 (2.80)**	5.47 (2.68)**
4	Interest			4.85 (2.85)**	4.12 (2.38)**
5	course_content				4.94 (2.27)*
6	course_imp				4.67 (2.32)*
7	colg_marks	1.01 (0.39)			1.03 (0.87)

**\*\* means p-value<0.01 and \* means p-value < 0.05**

In model 3, the initial variables are becoming less significant, this suggests that work\_area and dependents do not influence the decision of students much, whereas variables which capture the interest in the subject and the belief of students in signalling effect of Masters' have a significant impact on the decision of students pursuing MA. Interest has displaced ability as a measure of the human capital variable in the model. The consumption aspect of education captured through the interest in the subject is guiding the investment decision of students

Academic achievement measured through college marks is not a significant variable in the model, it does not influence the decision of pursuing post-graduation. family background measured through dependents is a significant variable in model 2. In model 3, 'dependents' is not a significant variable and work area is losing its significance as more variables are added to the model.in the final model 4, it does not come out as a significant variable at all. Model 4 is discussed in detail as it contains most of the significant variables and explains more than 30 per cent of the variation and the model is significant.

#### Model 4

**dec\_ma = f (interest, ma\_edge, course\_imp, dependents, colg\_marks, course\_content, work\_area)**

Logistic regression

Number of obs = 90

LR chi2 (7) = 41.19

Prob > chi2 = 0.0000

Log likelihood = -39.546596

Pseudo R2 = 0.3425

<b>dec_ma</b>	<b>Odds Ratio</b>	<b>Std. Err.</b>	<b>z</b>	<b>P&gt; z </b>	<b>[95% Conf. Interval]</b>	
interest	4.129412	2.45735	2.38	0.017	1.286326	13.25639
ma_edge	5.474877	3.466886	2.68	0.007	1.582572	18.94024
course_imp	4.676964	3.113437	2.32	0.020	1.268594	17.24271
dependents	3.263545	1.852061	2.08	0.037	1.073082	9.925361
colg_marks	1.038542	.0451263	0.87	0.384	.9537574	1.1308
course_content	4.941707	3.471573	2.27	0.023	1.247107	19.58169
work_area	2.808222	2.031943	1.43	0.154	.6800305	11.5967

#### 5.4.3 Interpretation of the Result

The log likelihood of the model is -39.54659. The logit model is based on the method of Maximum Likelihood. A null hypothesis which states that no significant relationship exists between the variables and the decision of pursuing post-graduation would mean that all slope coefficients are zero, the equivalent of F test in the linear regression model is LR (Likelihood Ratio) statistic. The LR statistic follows the chi-square distribution with degrees of freedom equal to the number of explanatory variables which is 7 in this case. The LR statistic is 41.19, the critical value for the LR statistic is calculated from the chi-squared distribution with 7 degrees of freedom is 11.07, so the joint hypothesis that the coefficients on interest, ma\_edge, course\_imp, course\_content, colg\_marks, work\_area, dependents are all zero is rejected. In this case, the model is statistically significant because the Prob > chi<sup>2</sup> is less than .000. Prob > chi<sup>2</sup> = 0.0000 is the probability of obtaining the LR statistic given that the null hypothesis is true. It is the probability of obtaining LR statistic (41.19) if there is no effect of the independent variables on the dependent variable.

The pseudo-R-squared is equal to 0.3425. this value does not hold much significance. We should not give much importance to the goodness of fit when the dependent variable is qualitative in nature. A peculiar thing happened 'dependents' variable which was not significant in model 3 becomes highly significant in this model and work\_area is not significant at all, it does not influence the decision of students pursuing MA in Model 4.

### **Odds Ratio and its significance**

- The odds ratio corresponding to 'interest' suggests that a student who has high interest in the subject, is 4.1 times more likely to pursue MA in the same subject, other things remaining the same. Interest more than ability and marks are influencing the decision of students who wish to pursue MA.
- The odds ratio corresponding to 'ma\_edge' suggests that if a student expects that MA will give a competitive edge in labour market, he or she is 5.4 times more likely to pursue MA, other things remaining the same. This variable measures the belief of students in the signalling effect of higher education (post-graduation) in the labour market.
- The odds ratio corresponding to 'course\_imp' suggests that if course content is important for a student while making a decision about education then he or she is 4.6 times more likely to pursue MA, other things remaining the same.
- The odds ratio corresponding to 'dependents' suggests that if the number of dependents increases by 1 unit, then the student is 3.2 times more likely to pursue MA, other things remaining the same. This variable captures the effect of family background on the decisions of the student. If an individual is an elder sibling, then they have more pressure to earn and help their family financially so they prefer to study at higher levels of education in order to improve their earning prospect in the future.
- The odds ratio corresponding to 'colg\_marks' suggests that if a student marks increase by 1%, the student is 1.03 times more likely to pursue MA, other things remaining the same. This variable is derived from the human capital theory to explain the investment in education but the results of the model do not predict a significant difference in the decision of students pursuing MA due to marks scored in college.
- The odds ratio corresponding to 'course\_content' suggests that if a student expects that the course content will help him or her in the labour market then he or she is 4.94 times more likely to pursue MA, other things remaining the same. Students who believe that their course and subject knowledge will help them in earning more in the labour market

prescribe to the human capital theory. The variable `course_content` serves as a human capital variable because it seeks to capture the importance of subject knowledge on the earning capacity of individual students.

- The odds ratio corresponding to `work_area` suggests that a student who wishes to work college or research organizations is 2.8 times more likely to pursue MA compared to the students who wish to work in the private sector or an NGO, other things remaining the same.

As we can see, all the variables have a positive effect on the logit. The regressors i.e. `interest`, `course_content`, `course_imp`, `dependents` have an effect on the logit which is significant at 95 per cent level of confidence and the impact of `ma_edge` is statistically significant at 99 per cent level of confidence. Impact of the variables `colg_marks` and `work_area` is not statistically significant. Since the p-value of the chi-squared statistic (model) is 0.000, the null hypothesis that none of the explanatory variables has no significant effect on the dependent variable is rejected. This means together all the regressors have a significant effect and the model is significant.

#### **5.4.4 Implication of the Results**

The above model shows that marks scored in college or academic achievement does not have a significant impact in shaping the decision of students. Students do not consider marks as the basis for their decision. If they have an interest in the subject, they will pursue post-graduation to gather more knowledge and specialise in the subject.

The signalling effect of post-graduation was captured through the variable `ma_edge`, the result suggests that students prescribe to the theory of signalling when they make a decision about higher education. The human capital effect of specialisation is captured through the variable `course_content`, students who believe that their course content is relevant in the labour market and will help them earning more are more likely to pursue Masters'. These students prescribe to the human capital theory where education help in improving the productivity which is reflected in the form of higher earnings in the labour market. It is interesting that students adhere to both signalling and human capital theory while making a decision about higher education.

It is a common assumption that students who wish to make a career as an academician or a researcher are more likely to pursue MA. But the final model does not predict a significant relationship between the work area and the decision of pursuing post-graduation. this could be



because social students have a high on the job training component in the labour market. They are flexible regarding their work area and can easily shift to one sector from another without much loss of value. Students who wish to work in the government sector prefer to study till graduation and after that, they wish to prepare for government exams.

Social science students who value the course content and subject taught are more likely to pursue post-graduation. The importance given to course content reflects that social science students consider the importance of learning. They do not pursue post-graduation just for the sake of getting a Masters; degree, rather they seek to learn and improve their subject knowledge. This variable has an element of consumption associated with the higher education, where the course content and subject knowledge is valued more than future earnings prospect and returns from education.

It is important to note that social factors like caste, gender and family income do not influence the decision of pursuing a Masters' in social sciences. When all the empirical literature provides evidence in favour of family income and parental education, then why is it not true for the students studying in central universities. This anomaly could be attributed to the fact that policy actions like reservation policy and public subsidisation of general higher education have successfully limited the effect of economic and social conditions in the decision-making process of the students studying in the colleges surveyed. It is not true that none of the social factors is influencing the decision of students, students who have two dependents in the family prefer to pursue Masters' so that they can improve their financial standing and earn for their family.

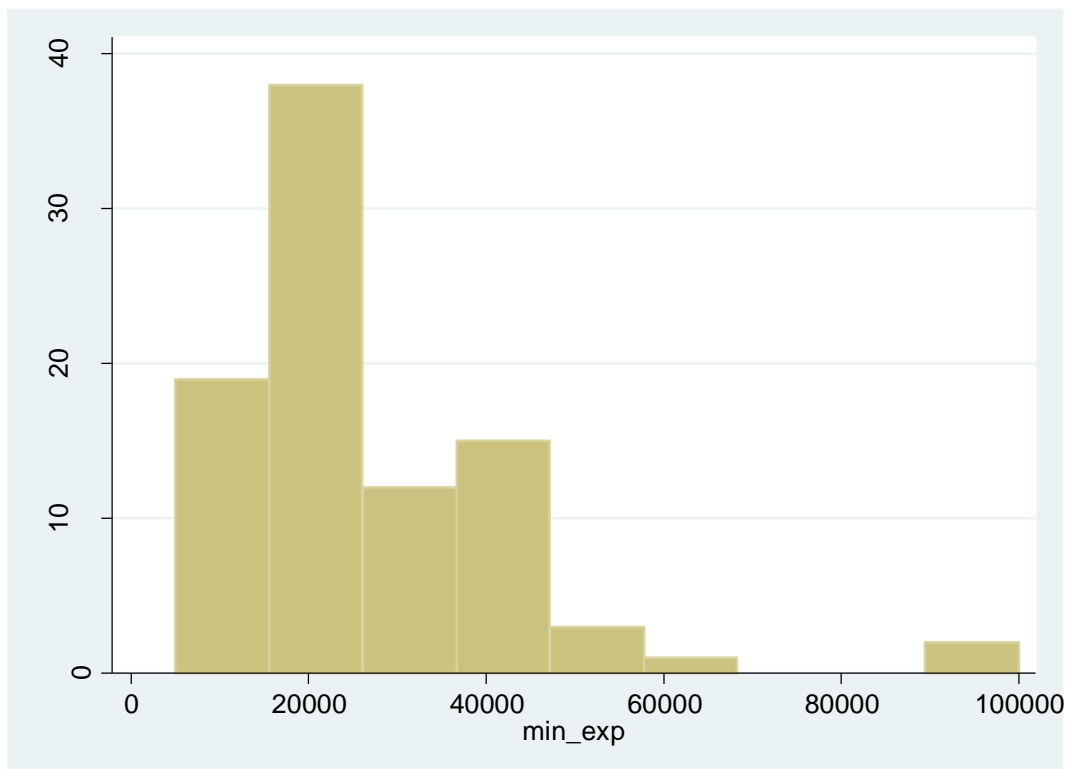
The results imply that we cannot discard the human capital theory and signalling theory as they shape the perception and belief of students. Students are giving importance to the course content while making a decision this shows that human capital theory is at work but the consumption aspect is giving rise to the investment in education. The 'course\_content' variable which signifies the human capital component of the linkage between education and earning through the skills acquired while learning. The belief that course content helps them in earning more highlights this linkage between work and education through the course and subject knowledge. Hence it can be concluded that there is a blend of signalling and human capital theory visible in the decision-making process of the students. There is an association between the consumption and investment aspect of higher education.

## 5.5 Minimum Expectations

The second research question focuses on the formation of expectations and examining the role of social factors like gender, caste and individual factors in the formation of these expectations. In the second chapter, it was discussed that choices and decisions are all based on the expectations. These expectations influence every choice an individual makes about the uncertain future. In this section, we will describe the expectations of students about their salary and explore the factors which help in the formation of these expectations.

Students were asked how much would they expect (minimum) to earn if they enter the labour market after graduation. there was ambiguity in the responses of students. Students who are pursuing Masters argued that they do not expect to earn much after graduation. this was a hypothetical question to access the expectations of social science students about the labour market and the salary they would earn. This question collects information about expectations, figure 5.3 depicts a histogram which represents the minimum expectation of students.

**Figure 5.3 Minimum Expectation about salary (monthly)**



*Source: Sample Data*

The skewed distribution with the mean being ₹27,000 and a standard deviation of ₹15,000. Majority of the students in the sample expect to earn around ₹20,000 on an average but the mean is higher because of the outlier case of ₹1 lakh.

Variable	Obs	Mean	Std. Dev	Min	Max
Min_exp	90	27277.78	15689.42	5000	100000
Min_exp (caste)	39	25384.62	10661.33	10000	50000

**Table 5.6 Descriptive Statistics of Minimum Expectations about future salary (monthly)**

**Source: Sample Data**

The next few sections will explore the factors which could influence the expectations. In other words, how expectations are related or influenced by factors like college marks, subject, work area, caste, gender, region and parental education.

### 5.5.1 Gender and minimum expectation

Males are considered to be bread earner in the family, they are expected to work after completing their education and earn their living and support the family as well. Out of 35 males, 24 expect to earn between ₹15,000 to ₹20,000 per month. An interesting insight is that none of the males is expecting less than ₹15,000 whereas 7 females expect to earn less than ₹15,000. But at the same time, out of the six students who expect to earn more than ₹45,000 five are females. This highlights the two extreme level of expectations among the female students. It is difficult to explain the differences in minimum expectation based on gender because the same gender is dominating at the two extreme ends. Female students have both high and low expectations as shown in the table.

	Below ₹15,000 (7)	₹15,000- ₹25,000 (50)	₹26,000-₹35000 (12)	₹36,000- ₹45,000 (15)	Above ₹45,000 (6)
Male	0	24	6	4	1
Female	7	26	6	11	5
General	6	24	8	9	4
OBC/SC/ST	1	26	4	6	2

**Table 5.7 Gender and Minimum Expectation**

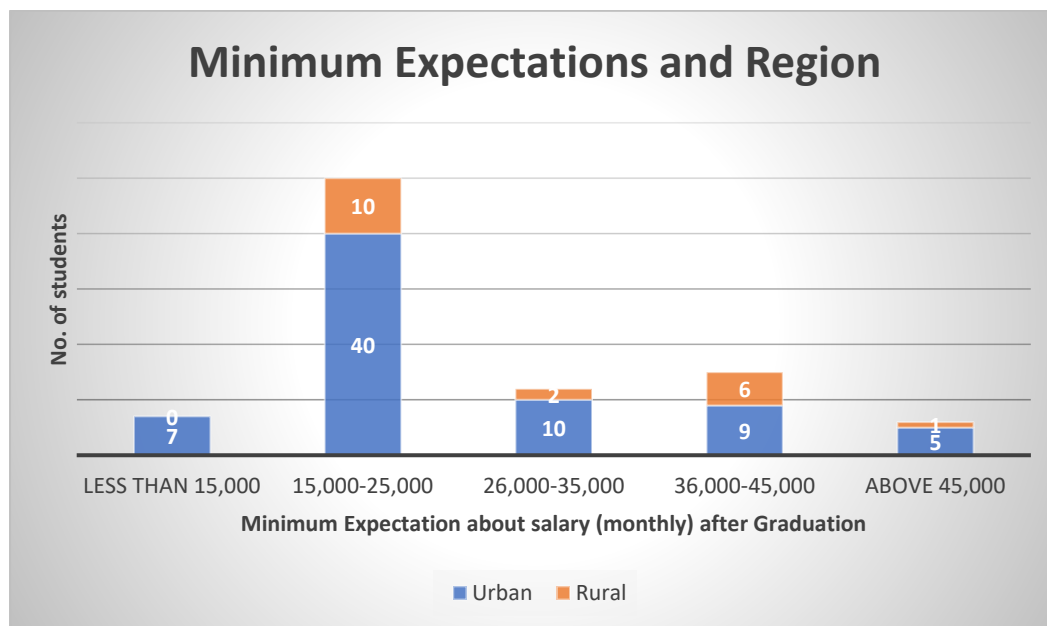
### 5.5.2 Minimum Expectations and Caste

Most of the students from the reserved category expect to earn ₹15000 to 20,000. Only 1 female student from reserved category expects to earn less than ₹15,000. This is a peculiar finding which suggests that general category students have lower expectations compared to the reserved category students. It could be because general category students are more sceptical regarding the jobs and salary provided to fresh graduates who have no work experience in the labour market.

6 students from the reserved category expect to earn around ₹40,000 monthly on average. 2 reserved category students who wish to appear for the Civil services exam have an expectation of earning more than ₹50,000. There is no significant relationship between caste and expectations of the student. Students from the reserved category expect to earn across the range. The data is dispersed and spread over the entire range of expectations.

### 5.5.3 Minimum Expectations and Region

Figure 5.4 Minimum Expectations and Region



Majority of the students in the sample belong to urban areas. 56 per cent of urban students and 52 per cent of students who belong to rural region expect to earn ₹15,000 to ₹25,000 per month after completing their graduation. 12 per cent of students belonging to urban areas expect to earn on average around ₹30,000 whereas 31 per cent of students who have migrated from rural areas expect to earn around on average ₹40,000.

There is a visible difference in the expectations based on the area a student is migrating from. An interesting insight is that none of the students who are migrating from the rural region expects to earn less than ₹15,000. This optimism in the expectation could be attributed to the level of investment these students have to make in order to study in a city like Delhi. They, therefore expect to earn at least a minimum of ₹15,000 in order to survive in a city. These students usually belong to low-income families so they cannot rely on their family for long to support them. Distress situation is affecting the expectations, the relationship between these two will be established by using the region as a dependent variable to explain the variation in the expectations (dependent variable).

A similar pattern is visible if we look at the level of expectations and state a person is migrating. Students who are from Delhi/NCR have lower expectations compared to the students who are from other states of India and have migrated to Delhi for higher education. Migration is influencing the expectations positively especially migration from rural areas of other states. These students do not usually go back after completing their higher education. Some either pursue further education while others prefer to take a job in Delhi only. Migration is not only for education but also for better employment opportunities. This dual benefit of migration positively influences the expectations of the students. The number is sufficiently small to make a generalised statement for all the students who are migrating from rural areas to study in Delhi based on the evidence collected from two colleges where it is under-represented.

#### 5.5.4 Minimum Expectation and Subject

	<b>Below ₹15,000</b>	<b>₹15,000- ₹25,000</b>	<b>₹26,000- ₹35000</b>	<b>₹36,000- ₹45,000</b>	<b>Above ₹45,000</b>
<b>Political Science (34)</b>	2	19	6	3	4
<b>History (29)</b>	2	14	3	8	2
<b>Sociology (27)</b>	3	17	3	4	0

Table 5.8 Minimum Expectation and Subject

We can make assumptions about the hierarchy of subjects that is prevalent in the labour market by looking at the expectations of students. Hierarchy of the labour market is being reflected through the differences in the expectations of the students studying different subjects. 56 per cent of political science students, 48 per cent of history and 62 per cent of sociology student on average expect to earn around ₹20,000 per month after completing their graduation. 4 political science students and 2 history students whereas none of the Sociology students expect

to earn above ₹45,000. Sociology students have lower expectations compared to the political science and history students. 27 per cent of history students and 14 per cent of sociology student expect to earn around ₹40,000 monthly (on average).

The table suggests that relatively political science students are more optimistic and have higher expectations compared to the history and sociology students. In order to test whether the relationship between the two is significant, we will use the subject as an explanatory variable to capture the effect of political science (subject) on the expectations of students. We can make inferences about the labour market from the difference visible in the expectations of sociology and political science students. students form their expectation about salary based on the condition of the labour market. Students' view of the labour market and job prospects get reflected in the expectations they form about their salary which they will earn when they enter the labour market.

#### 5.5.5 Minimum Expectation and College marks

	Below ₹15,000 (7)	₹15-25,000 (50)	₹26-35000 (12)	₹36-45000 (15)	Above ₹45000 (6)
47-53% (7)	1	5	0	1	0
54-60% (22)	1	13	5	3	0
61-67% (27)	0	15	6	3	3
Above 68% (34)	5	17	1	8	3

Table 5.9 Minimum Expectation and College marks

The table suggests that irrespective of the marks scored by the students, most of them expect to earn between ₹15,000 to ₹20,000 per month when they enter the labour market. 5 students who are scoring above 68 per cent are the ones who have least of the expectations on one hand and on the other hand, six students who are scoring more than 60 per cent expect their salary to be more than ₹45,000. Therefore, with limited evidence to suggest that there exists any type of relationship (positive or a negative) between the variables marks scored in the college and expectations about the salary in the labour market.

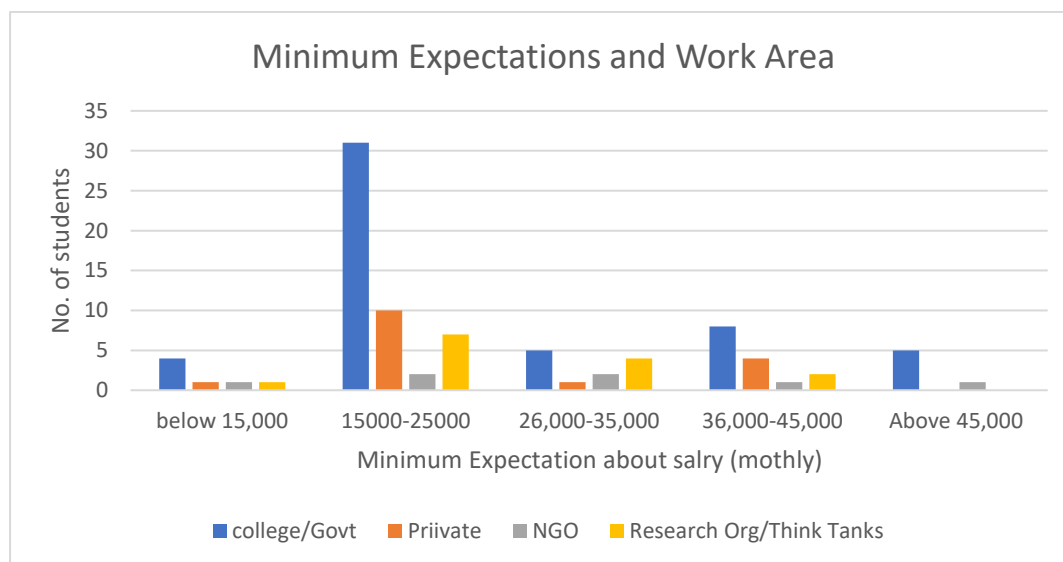
It is difficult to establish a significant relationship between college marks and minimum expected salary because at the higher end there is a correlation between higher marks and higher expectations but on the lower end, there is a negative relationship between marks scored

and expected salary. Academic Achievement or Marks scored in college give motivation to students and builds the confidence in students. Self-perception improves if they score well in college, this higher confidence in one’s own ability should be reflected in the higher expectations when the same person goes in the labour market, but data suggests that college marks do not affect the expectations of students significantly.

According to human capital theory, students with the higher ability (marks) invest more in education because their marginal cost of acquiring an additional education is low and by extension, this means they should have higher expectations about future benefits and earnings. Out of the 34 students who have scored high marks in college, 5 expect to earn very low wages whereas 6 students expect to earn very high wages. this difference could be resolved if we examine the data for these students more closely. Out of the 5 students who have lower expectations, 3 are females who want to work in NGOs. Out of the six students who have very high expectations, 4 have planned to either pursue UPSC or a professional course. These differences cannot be generalised for the entire population.

### 5.5.6 Minimum Expectation and Work Area

**Figure 5.5 Minimum Expectations and Work Area**



Source: Sample Survey

There is no definite relationship between the work area and expectations about salary. Students who have low expectations wish to work in the government sector along with the students who have medium and high expectations. Majority wishes to work in the government sector but their expectations are not concentrated at one level, it ranges across the board.

Students who wish to work in the private sector, expect to earn around ₹20,000 on average per month. This again suggests that private sector has low entry level jobs for social science students, this could be due to the fact that their subject knowledge does not meet the demand of corporate sector which prefer to employ Economics and Commerce graduates.

### 5.5.7 Minimum Expectations and Number of Dependents

	0 dependents (56)	1 dependent (29)	2 dependents (5)
Less than ₹15000	6	1	0
₹15000 - ₹25000	35	12	3
₹26000 - ₹35000	4	7	1
₹36000 - ₹45000	7	7	1
Above 45000	4	2	0

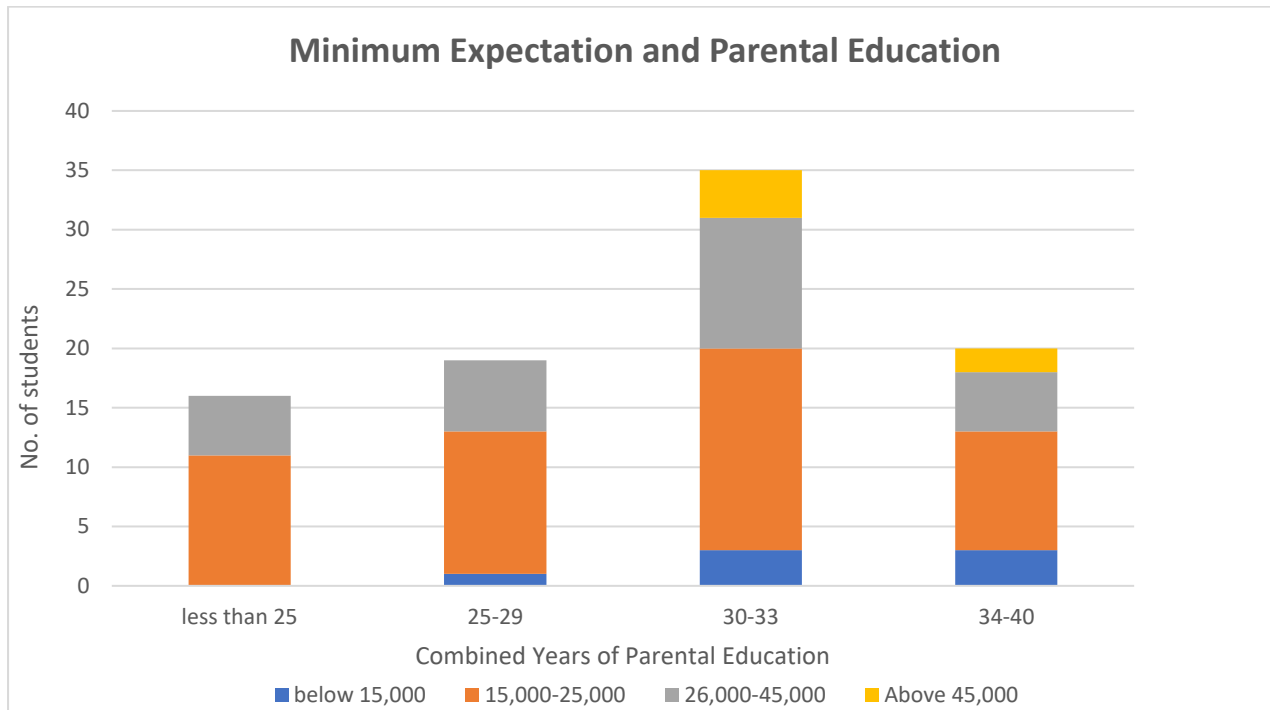
**Table 5.10 Minimum Expectation and Number of dependents**

Irrespective of the number of the dependents, the majority has expectations between ₹15,000 to ₹25,000. 27 per cent of students who have no dependent, 55 per cent of students who have one dependent and 40 per cent of students who have 2 dependents expect to earn above ₹25,000. Relatively students who have two dependents have lower expectations compared to the students who have one dependent.

The degree of spread is least for students who have two dependents. The minimum value for expectations is ₹20,000 which is much higher compared to the minimum value of ₹5000 as the expectation of students who have one or no dependent. There is a duality in the expectations of students who have two dependents. They neither expect to earn above ₹45,000 nor they expect to work for anything less than ₹15,000. There is not enough evidence to establish a significant relationship between the number of dependents and the expectations about salary if they join the workforce.



**Figure 5.6 Minimum Expectations and Parental Education**



Source: Sample Survey

### 5.5.8 Minimum Expectation and Parental Education

There are two peculiar things reflected in the figure 5.6. The presence of highest and lowest level of expectations only on the extreme right side of the bar graph. This implies a dual effect of parental education on the expectations of their children. Across all the levels of parental education, the majority expect to earn ₹20,000 on an average. Students who expect to earn above ₹45,000 belong to the families where both parents are graduate or post-graduate.

There are 20 students whose parents have attained 34 to 40 years of education combined. This means that 20 students have parents who are both at least post-graduates. Out of these 20, 10 students expect to earn around ₹20,000 on average. 3 students expect to earn below ₹15,000 monthly if they enter the labour market after their graduation on one hand and 2 students who expect to earn above ₹45,000 on the other hand.

Another interesting insight is that 16 students who have parents with a very low level of education do not expect to earn less than ₹15,000. It was discussed in the last chapter that parental education and family income are highly correlated which suggests that students who have parents with a low level of education also belong to the low-income family. They face economic constraint in the family and if they choose to participate in the labour market, they

would expect to earn at least ₹15,000 so that can help support themselves and help their families.

From one side, there is a negative relationship between parental education and expectations about the salary whereas on the other side there is a positive relationship between the two. It is difficult to conclude that what is the definite relationship between these two variables. therefore, in order to clear a picture, there is a need to examine the relationship between parental education and the level of expectations in more detail.

Using the method of cross-tabulation it can be concluded that social and individual factors like caste, gender and marks scored do not have a significant relationship with the expectations of students about the salary. Some factors which seem to have an influence on the expectations like region, subject and parental education will be used as the dependent variable in the regression model to examine their significant impact on the level of expectations.

#### 5.5.9 Minimum Expectation and Interest

	High interest and love for the subject (51)	No interest in the subject (39)
Less than ₹15000	7	0
₹15000 - ₹25000	27	23
₹26000 - ₹35000	8	4
₹36000 - ₹45000	8	7
Above 45000	1	5

**Table 5.11 Minimum Expectation and Interest in the subject**

Consumption aspect of education is captured through the variable interest. This factor overrides the marks in influencing the choices and decision of students pursuing MA. Students who expect to earn above Rupees ₹45,000 (monthly) have no interest in the subject and all the students who expect to earn below ₹15,000 have a high level of interest in their subject. There is a negative relationship between the level of interest and expectations about salary after graduation. Students who have a high level of interest in the subject wish to pursue Masters' and it could be because these students expect lower income after graduation, therefore they prefer to pursue post-graduation and improve their expectations about future salary.

## 5.6 The Multiple Regression Model

The previous section using cross tabulation tried to find a relationship among the key factors which could have influenced the formation of expectations. The evidence is not strong enough to establish a significant relationship between the factors like caste, gender, college marks and work area. A multiple Regression Model is developed to understand the factors affecting the expectations about salary among social science students. A regression model which contains both quantitative and qualitative variables is called the ANCOVA (Analysis of Co-Variance) model.

### 5.6.1 Variables used in the model

For the Regression model, the dependent variable is minimum expectations about salary per month (min\_exp), it is a quantitative variable whose value ranges from ₹5000 to ₹1,00,000. Six explanatory or independent variables used to explain the variation in these expectations (dependent variables) are mentioned below in the following table:

**Table 5.12 Definition of the variables used in the Regression Model**

Name of the variable	Nature of the variable	Description of the variable	Values
Pedu	Quantitative	Total number of years of education of both parents	12 - 40 years
Region	Categorical	Students belong to the urban or rural area	0 (urban) 1 (rural)
Subject	Categorical	Social science subject	0 (political Science) 1 (history or sociology)
Interest	Categorical	Interest in the subject	0 (no interest) 1 (high interest)
job_pros	Categorical	Social Science students have better job prospects	0 (limited) 1 (better job prospects)
gen_sub	Categorical	It is a general subject which does not provide enough training to perform well in the labour market	0 (yes) 1 (no)

The variable 'pedu' is an explanatory (quantitative) variable which indicates the years of parental education, ranges from 12 to 40 years. The variable will examine how the social factor like parental education influence the expectations of students. In the ANCOVA models, a quantitative variable like 'pedu' is known as a covariate.

'region' is a dummy variable which seeks to understand the impact of geographical location of students on the expectations about salary. for students who belong to urban cities is a reference, the variable takes the value 0 and 1 for students who belong to the rural areas of India. The reference category is students who are born and brought up in urban cities.

'interest' is a dummy variable which takes the value 1 for students who have a high level of interest in their subject. The reference category is students who do not have an interest in the subject. this variable will capture the impact of individual interest level (personal factor) on the expectations. 'job\_pros' is also a dummy variable which takes the value 1 for students who believe that social sciences have better job prospects in India. The reference category (where the variable takes the value 0) is limited job prospects.

The subject is a categorical variable which takes the value 1 for students studying sociology and history and 0 for political science students. this variable seeks to examine the difference in expectations that are due to subject variation. The variable will explain the relationship of expectations vis a vis sociology and history students. The reference category is political science students.

Gen\_sub is a dummy variable which takes the value 1 for students who believe that social sciences is a general subject and does not provide enough training to perform well in the labour market. This variable seeks to understand how the perception of students about their discipline and its linkage with the labour market influence the expectations about salary when they enter the labour market. The reference category is students who believe that there is no definite link between the subject and the labour market as the subject knowledge does not help them in performing well in the labour market. The variables like 'gen\_sub' and 'job\_pros' will explore the role of perception about the labour market in the formation of expectations.

### 5.6.2 The Model

**min\_exp = f (region, subject, pedu, interest, job\_pros, gen\_sub)**

Source	SS	df	MS	Number of Obs =	90
-----+-----				F (6, 83) =	5.06
Model	5.8689e+09	6	978147265	Prob > F =	0.0001
Residual	1.6039e+10	83	193243036	R-squared =	0.2726
-----+-----				Adj R-squared =	0.2212
Total	2.1908e+10	89	246157928	Root MSE =	13901

<b>min_exp</b>	<b>Coef.</b>	<b>Std. Err.</b>	<b>t</b>	<b>P&gt; t </b>	<b>[95% Conf. Interval]</b>	
<b>region</b>	8442.773	3948.164	2.14	0.035	588.6175	16296.93
<b>subject</b>	-3193.555	1828.481	-1.75	0.084	-6830.986	443.8759
<b>pedu</b>	717.5872	295.1325	2.43	0.017	130.4746	1304.7
<b>interest</b>	-8656.612	3000.037	-2.89	0.005	-14624.64	-2688.583
<b>job_pros</b>	10489.59	3574.396	2.93	0.004	3378.979	17600.2
<b>gen_sub</b>	4991.688	3248.677	1.54	0.128	-1470.966	11454.34
<b>_cons</b>	5863.72	9540.104	0.61	0.540	-13114.59	24842.02

### 5.6.3 Interpretation of the results

**The regression equation derived from the result is as follows:**

$$\text{Min\_exp} = 717.58 \text{ pedu} + 10489 \text{ job\_pros} + 8442 \text{ region} - 8656 \text{ interest}$$

$$\text{se}^{17} = (295.13) \quad (3574.39) \quad (3948.16) \quad (3000)$$

$$t = (2.43)^* \quad (2.93)^{**} \quad (2.14)^* \quad (-2.89)^{**}$$

where \*\* indicates p value less than 1 per cent and \* indicates p-value less than 5 per cent.

<sup>17</sup> Standard Error is the standard deviation of the sampling distribution of the estimators.

This equation shows that expectation about monthly salary is positively related to parental education, better job prospects, region and negatively related to the interest in the subject.

$R^2$  is the coefficient of determination for multiple regression which is used for judging the goodness of fit<sup>18</sup>. Value of  $R^2$  in this model is 0.27, this implies that 27 per cent of the total variation in the expectations can be explained by the six variables used in the model.  $R^2$  does not fall when variables are added to the model so there is a built-in tendency to overfit the model. In order to avoid the overfitting of the model, we calculate adjusted  $R^2$ . Adjusted  $R^2$  penalises the loss of degrees of freedom that occurs when a model is expanded by adding new variables to it. The adjusted  $R^2$  is considered a better measure for assessing the fit of the predicting model (Greene, 2003).

The regression model has significant variables with low  $R^2$  values, this means that the independent variables are explaining the trend in minimum expectations, but at the same, there is high variability in data which means that actual data points and regression fitted line. The goodness of fit is low (27% of the variation in minimum expectations is explained by the independent variables used in the model. We should not reject the model because it has lower  $R^2$  because the model has only one quantitative variable as a regressor, rest all variables are dichotomous categorical variables.

The F-test<sup>19</sup> is used for testing the hypothesis that the regression coefficients of all explanatory variables (excluding the constant) are zero. The null hypothesis states that there is no effect of explanatory variables on the dependent variable. The regression coefficients are all zero. The overall regression model is significant since the Prob > F = 0.0001. This means that the F value (5.06) is larger than the 0.1 per cent F value with 6 and 83 degrees of freedom<sup>20</sup>. The value of F is significant and the null hypothesis is rejected.

The results suggest that *ceteris paribus*, as parental education increases by one year, on an average, the minimum expectation of monthly salary goes up by about ₹717. The differential effect of believing in better prospects is ₹10,489 and ₹8442 is the differential effect of belonging to the rural region. The coefficients will be discussed in more detail in the next section.

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<sup>18</sup> Goodness of fit is the term used to see how well the sample regression line fits the data.

<sup>19</sup> F = Mean Square due to Regression (MSR)/ Mean Square due to Error(MSE)

<sup>20</sup> For F distribution, the degrees of freedom is n-p-1 (90-6-1) = 83

6 variables are used to explain the variation in minimum expectations about salary among the social science students. The impact of regressors<sup>21</sup> i.e. 'interest' and 'job\_pros' have effects on the min\_exp which are significant at 99 per cent level of confidence and impact of the variables 'pedu' and 'region' is significant at 95 per cent level of confidence. Impact of variables 'gen\_sub' and 'sub' are not statistically significant. Even though the t values are not significant for two variables yet the F test is significant at 0.1 per cent, this means that although these variables do not have significant explanatory power, yet the entire set of variables taken together explain a significant part of the variation in the dependent variable (minimum expectations)

#### 5.6.4 Interpretation of Regression Coefficients

- pedu

The level of parental education measured through the variable 'pedu' is the only quantitative variable used in the model to explain the variation in minimum expectations. The coefficient of 'pedu' suggests that each additional year of parental education adds ₹717.58 to minimum expectations, holding the value of another variable as fixed. All other variables are dummy (qualitative) variables. Parental education is positively related to the family income (see Appendix 2). As parental education indirectly influences the income of the family.

- Interest

The coefficient of the 'interest' which is a dummy variable is estimated to be -8656. This means that students who have a high level of interest in their subject on average experience a fall in minimum expectation of around ₹8656 on an average, other variables remaining constant. The value of coefficient suggests that students who have high interest have lower expectations about the salary they might earn after graduation compared to the students who have low interest in the subject.

- Better job prospects

The coefficient of the better job prospect variable is estimated to be ₹10,489. This amount can be interpreted as the increase in minimum expectations on an average for the students who believe that there are better job prospects for social science students in India, other variables remaining constant. The coefficient of job prospect suggests that those students who believe

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<sup>21</sup> job\_pros and interest are two variables whose t value are significant at 1 per cent level of significance. pedu and region has t value significant at 5 per cent level of significance and variable 'subject' has t value significant at 10 per cent level

that social science in India has better job prospects in the labour market on an average have higher expectations about salary than those students who believe that there are limited job prospects.

- Region

The coefficient of the region variable is ₹8442. This suggests that those students who are migrating from the rural villages region on average have higher expectations about salary than the students who are from urban cities. The minimum expectation on an average increase for the students who belong to the rural areas by ₹8442. This is an important finding which suggests that students who are migrating bear an additional cost of migration and this cost is reflected in their higher expectations in the future. The decision of migrating to acquire higher education is built on the assumption they will earn more in cities because Migration is also a form of human capital (Schultz, 1961), students invest at two levels and incur expenditure which they expect to get compensated for in the form of higher earnings after completion of their education.

- Subject

The coefficient of the subject variable is -3193. Students who are studying history or sociology have lower expectations compared to political science students. Minimum expectations for students who are studying history and sociology on average falls by ₹3193 compared to the students studying political science, other things remaining same.

### **5.6.5 Implication of these results**

The results of the regression model show that factors like interest, better job prospects, migration from rural areas and parental education have a significant impact on the expectations of students about salary. Parental education and family income are positively correlated<sup>22</sup>. There is a close relationship between both caste and family income and parental education and family income. To avoid the problem of collinearity, these variables like caste and family income were not included. It can be assumed that family income also has a positive relationship with the expectations students have about their salary. Socio-economic factors like parental education and family income help in understanding the positive expectations of students about their future. They are more optimistic than the students who do not the strong family background.

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<sup>22</sup> Coefficient of correlation for parental education and family income is 0.5 (approximately)



Family background (parents' education level and family income) play an important role in the formation of expectation. Students who are from affluent families expect to earn more compared to the students who belong to the families which have low levels of education and income. This suggests that the status of parents play an important role in positively affecting the expectations of their children. These students have higher expectations compared to the students whose parents do not have a high level of education. The finding could also correspond to the theory of social capital where students believe that their highly educated parents' social network and connections will help them in gaining a better job and thus have higher expectations about their earnings.

Instead of ability as suggested in Human capital theory, interest in the subject is guiding the decision of students and their future expectations. Ability is measured through college marks is not considered as an adequate measure of human capital. students themselves do not consider marks as a proxy for their ability. There is a negative relationship between interest in the subject and minimum expectations.

In the logit model, it was predicted that students who have a high interest in the subject are more likely to pursue Masters. In this model, it is suggested that students who have a high interest in their subject have lower expectations compared to the students who do not have an interest in the subject. One reason for this contradiction could be that students choose to pursue masters because they have lower expectations about the salary. They believe that MA will improve their earning capacity. Uncertainty in the job market leads to the formation of lower expectations and in order to improve these earning prospects, students are deciding to pursue Masters'. This result corresponds with the empirical studies discussed in chapter 3 where labour Market signals and condition affect the demand for further education which is reflected in the form of higher expectations. Students who believe that there are fewer job prospects for them after graduation prefer to study higher as their expectations after graduation are low compared to their counterparts who expect to earn more after graduation because they expect that they have better job prospects in the labour market.

Students who are from the rural region have higher expectations than the students who are from urban cities. Majority of students who are from the rural region are also migrating from other states so we can also assume that students who are migrating to rural areas have higher expectations than the students who are from urban areas. These students had to make two major investment decision, one being the decision of pursuing higher education which every student

in the sample made but the second decision was to leave their home and move to another city. Accommodation and cost of living are higher for students who migrate. Students from rural regions expect to realise higher benefits as they have incurred a cost at two levels of human capital (higher education and migration). According to human capital theory, higher expected future benefits guide the investment, therefore investment is high because they expect to earn more. Higher expectations about salary are guiding the decision of investing in education and migration.

The result suggests that history and sociology students have lower expectations about salary than the Political Science students. One reason could be that Political science students have higher expectations because most of them aspire to become civil servants and work in the government sector. History and Sociology students, on the other hand, believe that they have lesser opportunities in the labour market if they do not specialise in their subject.

All subjects of social sciences cannot be regarded as the same. There is a hierarchy in the labour market for social science students. Higher on the ladder are the Economics and Psychology graduates who are well placed due to the higher component of mathematics and statistics in their course. Psychology and Economics are more application-based subjects and thus have better job opportunities in the labour market. They will also have higher expectations of salary. After these two subjects, there is Political Science which is included in the study. Though the difference is not significant at 5 per cent level of significance it is significant at 10 per cent level of significance. Out of the three subjects examined in the study, political science has better job opportunities so naturally, students have higher expectations relative to the sociology and history students.

General Subject variable does not have a significant impact on influencing the expectations of the students. because 59 students (65 per cent of the sample) believe that their subject does not train them in performing better in the job prospect. The missing link between the education and labour market is generally perceived in a social science discipline and it is not surprising that the students studying history, sociology and political science believe that their training in college and subject knowledge will not help them in performing well in labour market. What is interesting is that even after the perceived missing link between education and employment, students do not change their expectations about the salary they will receive when they enter the labour market. The results suggest that belief that the subject does provide enough training does not influence the expectations about salary. The t value is not significant (p-value is

greater than 0.1) therefore we do not reject the null hypothesis which means that students do not form their expectations based on their perception about the linkage between subject knowledge and performance in the labour market.

Logically for the students who believe that there is no link, should have lower expectations compared to the students who believe that the subject has provided them with enough training, but the results suggest otherwise. This could mean that there is a high component of on the job training for social science students. students know that their training in college is not sufficient and they believe that labour market will help them in utilising their subject knowledge and therefore, expectations are not related to the missing link between the education and labour market. Students aspire to do an internship to gain experience because they will learn to apply the knowledge to solve real issues.

### **5.7 Concluding Remarks**

This chapter based on the evidence collected tried to answer the two research questions of the study. The chapter tried to explain the impact of various socio-economic factors on the decision of students who are interested in pursuing MA. The findings of the survey (study) are in contradiction with the evidence suggested in the literature. It was found that family background and social factors like gender and caste do not play an important role in influencing the decision of pursuing post-graduation. Academic achievement (college marks) does not influence the decision of students who choose to pursue Masters.

This could be due to the fact that the literature did not bring into account the peculiar nature of social sciences which is the focus of this study. In addition, subsidization and reservation policy also dampen the effect of the economic and social factors, this could also be the reason that gender, caste, family income, college marks and parental education do not have a significant relationship with the students' decision of pursuing post-graduation.

A logit model was developed to explain the relationship between the decision of pursuing post-graduation in social sciences and dependents, college marks, interest in the subject, signalling effect of education, education and earning link suggested in the Human Capital theory. The results of the logistic regression suggest that social factor like number of dependents, individual factors like interest in the subject and factors which highlight the role of higher education like signalling effect of higher education and the Human Capital theory link between earning and education have a significant impact on the decision of students compared to the socio-economic factors like gender, caste, location, parental education and family income.

A regression model was developed to explain the formation of expectations about salary among the social science students, the results implied that college marks, gender, caste and work area do not influence the expectations much compared to the factors like parental education, perception about job prospects in the labour market, interest in the subject and migration from rural region.

## Chapter 6

### Conclusion

In this chapter, a summary of the entire study is presented. The objective of the study was to explore the factors which affect the decision of pursuing post-graduation in the social sciences. The role of expectations and the formation of expectations was the second main subject of inquiry in the study. Exploring the factors which influence the formation of expectations about future salary was also one of the objectives of the study.

The first three chapters presented an overview of the literature and empirical evidence present in the field of economics which deals with a decision made in higher education. Most of the literature focused on the demand for college graduation (Bachelors' degree) and not post-graduation, so it is difficult to draw insights from the literature to explain the reality. The survey of empirical literature dealt with analysing the factors which affect the choices and decisions of the students in higher education in general and was not specific to the field of social sciences. But nevertheless, the empirical literature was situated to explore the factors that could affect the decision of students pursuing post-graduation. The last two chapters' dealt with the sample collected specifically to understand the demand for social sciences and the perspective and expectations of social science students.

#### **6.1 Establishing a link between the decision making theories and reality of Higher Education**

In the second chapter, it was established by the critical analysis of the assumption of Neo-classical theories that economic theories are inadequate in explaining the decisions made by the students in the education sector. The peculiar nature of the higher education market has been discussed in detail while discussing the assumptions made in human capital theory. The Human Capital theory, following the Neo-classical framework, makes the assumption of rationality and exogenous preferences which are not applicable to real-world situations. The conventional rate of return approach draws an analogy between human capital and physical capital and this hides the peculiar nature of higher education.

The concept of perfectly competitive education market which supplies homogenous product is not valid in reality. The concept of a market in higher education cannot explain the purpose of education as an “*experience good*” or “*positional good*” (Marginson, 2004). Valuation of

expectations and opportunity cost are subjective in nature. Every individual has a different valuation for the income forgone and expected benefits. It is very difficult to evaluate such differences but exploring the decision and expectation of student takes us one step further in understanding this complex process. The notion of subjectivity was developed by Keynes (1921) and was further explored by Behavioural Economists like Simon (1955, 1959) and Thaler (2015).

Expectations at the individual level are subjectively formed but with limited information at the macro level, individuals grapple with uncertainty about the realisation of their expectations. Majumdar (1983) also highlights the problem of the realisation of expectations through the micro-macro argument. The expectations formed today may not realise in the future, but human capital theory assumes that individual investors have the perfect foresight to form expectations regarding their future and also that these will be realised in the future. The entire theory rests on the strong linkage between the education and the labour market. Marginson (2017) argues that there is a complex and dynamic relationship between education and work which cannot be explained using the Human Capital theory.

One cannot explain the demand for social sciences by focusing on the monetary benefits expected by the students in the future. The rate of return approach gives utter importance to these expected monetary benefits in explaining the demand and decision of attaining the additional level of education. Social science also helps in contributing to the society as it has “*neighbourhood effects*” (Friedman, 1955) which are missing in professional or vocational education. Thus relying only on human capital theory to explain the huge enrolment in social sciences at the PG level is not a conducive way of understanding this social phenomenon.

The relationship between family background and level of education attained by students is established using the empirical literature. Social environment along with the education affect the expectations about the earnings of an individual. College attended and social skills also help in the successful realisation of the expectations about the salary. Sociological studies have explored the role of family resources and parental education in affecting the decision of students.

The Human Capital Theory provides a rationale for the government to fund higher education (Marginson, 2017). There are two different set of agents in the decision-making process of investment in education. An individual investor cannot demand or spend on higher education unless the institutions are supplying the kind of education an individual desire (Majumdar,

1983). Public policies like subsidisation and reservation policy, positively influence the participation of female and the reserved category students in higher levels of education.

Access to higher education does not necessarily mean access to the labour market. The empirical studies reveal that caste discrimination is very prevalent in the private sector of the Indian labour market. This could be one of the reasons that most of the reserved category students prefer to work in the government sector where there is less discrimination and affirmative policy action like reservation policy provides them with a better opportunity of getting employed. Rent seeking behaviour among graduates is also highlighted using various empirical studies. The job of a civil servant does not improve the productivity of an individual but it provides him/her a better working condition and stable employment with various perks and allowances. Social Sciences is considered as a pre-requisite for cracking the UPSC exam which allows entry in the public sector as a civil servant.

The theoretical framework of the study is based on human capital and signalling theory which focuses on the relationship between education and employment. The theory of Bounded Rationality highlights the fact that due to limited information, it is important to see how students perceive and form their expectations which affect their decision and overall demand for higher education.

Through the survey of the empirical literature, it was established in chapter 3 that the decision to pursue higher education is influenced by three type of factors- economic factors, social factors and personal beliefs and attributes. The study has tried to analyse the factors behind the rising demand for social sciences at the post-graduation level. The study tried to describe the phenomenon by conducting a case study of best of the colleges which attract the best of the students. the students who have choices the rationale for doing a case study of two colleges which are at the top is it helps us to gather a group perspective

Students studying at lower level colleges, do not have much of choice regarding their choice of subject and college. The choice is constrained by the grades achieved by students (Reay et al, 2001). If the study had included all the representative colleges of the Delhi University, the study would have been able to highlight this component but since only top ranking colleges were included in the study so we cannot generalise the fact that marks do not affect the demand for post-graduation.

For the majority of the population pursuing post-graduation in social sciences, the driving force is better job opportunities or use of subject knowledge in successfully cracking UPSC exam. The study wanted to get a rich detail from the students who chose to study social sciences when they could have easily moved to other courses or would have started working right after graduation instead of pursuing Masters'. The inadequacy of economic theories and empirical literature to explain the demand for social sciences was highlighted in the first three chapters. The primary survey highlighted the fact that one cannot rely on theories to determine the demand for social sciences at the post-graduation level. In the next section, a brief summary of the result of the primary survey is presented.

## **6.2 Summary and Findings of the Study**

The study looks into the factors that affect the decision of pursuing post-graduation in social sciences through a case study of undergraduate social science students of top two Arts College of the University of Delhi. This study has tried to capture the dynamics of the decision-making process of students and formations of the expectations. Marginal benefit after pursuing MA is a core human capital variable but it does not influence the decision of students in the study.

### **Summary of the Study**

The empirical study shows that basic socio-economic factors are like gender, caste and family background are not effective in explaining the differences in the decision of pursuing post-graduation. Variables which captured the perception and belief of students about the linkage between education and labour market are indirectly influenced by the human capital theory and signalling theory. They seem to have a significant impact on the decision of students, this shows that there more focus needs to be put on individual values, attitude and perception to get an effective result about education participation in higher education.

Logistic regression models were used to examine the likelihood of a student pursuing Masters' using the variables which signify the component of human capital theory and signalling theory. The theory of 'bounded rationality' helps in explaining the formation of a belief system and perception of students using the little information available to them. Family background measure through variables like number of dependents and parental education also influence the decision regarding higher education and future salary expectations of the students respectively.

The perspective of students about the social sciences and its linkage with the labour market has been crucial for this study. The survey has revealed that the student's decision is not influenced



by their academic performance (grades) and family background (family income and parental education). This finding does not complement the empirical literature and human capital theory. Core variables suggested by the human capital theory and other empirical studies reviewed in chapter 3 do not seem to have a significant impact on the decision of pursuing MA.

If a student believes that the course content is helpful in earning more in the labour market, his/her chance of pursuing MA increases by 5 times. This variable signifies the students who believe in a human capital component of their subject are more likely to pursue MA. Students are prescribing to both human capital and signalling theory while making a decision about their education as the majority of students who decide to pursue Masters' also believe in the signalling effect of higher education. It is the perception of students that a Masters' degree will give them a competitive edge in the labour market that increases their likelihood of pursuing MA. Students choose to pursue MA because they believe that they would not have job prospects after graduation in the labour market. It becomes a necessity for some who have more dependents in the family to pursue post-graduation.

A regression model was used to examine the relationship between various socio-economic factors and expectations about the salary. Hogan's concept of market capacities and formation of endogenous preferences serve as the conceptual framework in explaining the expectations of students about their future salary. Overall both the models are significant and are useful in explaining some of the differences or variation in the decision and expectations of the social science students.

### **Interesting Findings**

Human Capital Theory gives huge importance to ability and signalling theory also consider that marks scored and credentials reflect or signal the attribute of dedication, creativity and hard-working among the students which are desirable to the employers. In the study, we used college marks as a measure for ability but it was found that marks scored in college neither bear any significant impact on the decision of students pursuing MA nor does it positively affect the expectations about salary.

Interest in the subject which is considered as a consumption variable of education seem to have a significant effect on the decision and expectations of the students. Interest has a positive influence on the decision of pursuing post-graduation but a negative relationship with future expectations about the salary. It can be presumed that students who have a high interest in the subject wish to pursue MA because of the uncertainty in the labour market they are not

confident about the salary they might receive just after graduation. Ability measured through academic achievement did not serve as a determining factor, instead, interest plays an important role in explaining the differences in the decisions and expectations of the student.

Migration to Delhi for higher education from rural areas and other states is a widespread phenomenon which is captured in the study. Students who are from states that do not have high-quality institutions prefer to migrate to cities like Delhi and study social sciences because this improves their productivity far more than the studying professional course from a low-quality institution. Students migrate in order to improve their future employment prospects. Cities serve as the educational hub and provide better job opportunities compared to their hometown or village. Central Universities teach social sciences with a lot of vigour. In addition, higher education is subsidised, students here have to pay low tuition fees. This attracts students from rural areas who cannot afford to pursue expensive technical and professional higher education.

Lastly, students' perception of the labour market and its linkage with their subject serves as an important factor in understanding their choices and the formation of expectations. Through the perception, it was established that students associate with both human capital and signalling theory. The role of subject and course content cannot be discounted for social science students as students believe that their subject knowledge does help them in earning more.

### **6.3 Limitations of the Study**

The sample is collected only from two colleges in India, thus it is not adequate to make a generalised statement for all students studying social sciences in India. The study collected data using a standard questionnaire to collect information from the students. A lot of important information is not collected due to this tool. There is a problem of recollection also, students were having trouble remembering their school and college marks and even family income.

A mix of both qualitative and quantitative method would have given a better and clear picture about the decision making the process of students. Perception and belief system seem to explain a lot of variation in the model but the study was not able to explore the factors which influence the formation of this belief system and how socio-economic factors and individual factors form the basis of this perception. The basis for this perception and beliefs need to be highlighted in order to understand the decision-making process.

It is a quantitative study which focuses on getting a group perspective of 90 students studying social sciences from the top public institutes. In order to control for the quality of education, the study focused only on two colleges but this also leads us to capture an incomplete picture. Another reason that basic socio-economic factors like gender, caste and family income do not influence the decision and expectations of the sample because the sample studied is small in size and elite in nature of the institution. There is a scope for further research as the sample is not representative of the general population of India studying social sciences. It focuses only on two top Arts college of the one central university of India. Due to high variability in the data we are not able to establish a significant relationship with some of the core variables suggested under the human capital theory and other empirical studies. There is a need to do further research as most of the socio-economic factors did not seem to explain the differences in expectations of the students as well as their decision of pursuing post-graduation.

#### **6.4 Conclusion of the study**

The study instead of using core variables of Human capital theory like (college marks and future expectations, marginal benefit, family income) used peripheral variables like (interest in the subject, belief of students about the signalling effect of MA, dependents and importance of course content in the labour market) in explaining the decision of students who choose to pursue MA in the social sciences.

The study captured the influence of migration and interest on the expectations of the student. Perception about the labour market and parental education also influence the expectation of the students. The ability or academic achievement does not influence the expectations about the future. Social factors like gender and caste are also not able to explain the significant difference in the expectations of the students. this, however, does not mean that we can discard these variables in explaining the variation in the expectations. A large number of sample is needed to get an authentic picture of the expectations of students, there is a scope for further research.

Sociological theories give more importance to the family background in explaining the differences in higher education, it is found that in some sense that socio-cultural variables like dependents and parental education do play an important role in influencing the decision and expectations of the student. Students while making their decision about higher education do not discard the human capital theory or signalling theory. Both theories frame their beliefs and perception about the linkage between the labour and education market.

This study though has some limitations but it does help in filling some of the research gaps highlighted in Chapter 1. Perception and belief seem to explain a lot of variations in the decision and expectations of the student. Both Human capital and signalling theory are important in understanding the decision-making process of undergraduate students. The importance given by students to the course content in the decision making process highlight the consumption aspect of education and at the same time the belief that the subject knowledge will help them in earning more establishes the strong link between education and earning as postulated under the human capital theory.

Human capital theory estimates the optimal level of accumulation for the individual investing in education. But when education is subsidised (cost covered by state), job opportunities are limited and competition is extreme (so many students applying for one job), individuals tend to over-invest in higher education. By looking at the demand side we get only half of the picture but nevertheless, it gives us insights about the students who are going to become a part of the educated labour force of India. Their decisions also have policy implications in the long run, because when this micro level decision is considered at a national level, it tends to explain the cause for graduate unemployment, over-education and underemployment. These chronic macro problems have their roots in the growing demand for education and incapability of the labour market in absorbing this additional labour supply.

The microeconomic descriptive study can be used as a foundation to look into these chronic macro problems, as today's educated youth studying in college will enter the labour market tomorrow. In order to solve the macro problems, we need to look into the interdependence between the two markets and there is a need for a more integrative approach (Stafford et al, 1984) to study the decision-making process of students as they bear a direct influence on higher education policy formation and implementation.

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## Appendix 1

### **Insignificant Logistic Regression Model**

logistic dec_ma colgmarks pedu marginal_benefit caste						
Logistic regression			Number of obs = 90			
			LR chi2(4) = 2.83			
			Prob > chi2 = 0.5859			
Log likelihood = -58.725223			Pseudo R2 = 0.0236			
dec_ma	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
colg_marks	1.038656	.0361534	1.09	0.276	.9701598	1.111989
pedu	.9606131	.0439432	-0.88	0.380	.8782341	1.050719
mar_ben	1.000015	.0000129	1.15	0.249	.9999896	1.00004
caste	1.047942	.5357059	0.09	0.927	.384773	2.854104
_cons	.2832456	.7635724	-0.47	0.640	.0014371	55.82504

This model tries to explain the likelihood of pursuing post-graduation using human capital variables (college marks and marginal benefit) and social factor like parental education. The variables are based on the empirical literature but are not coming out to be significant.

### **Logistic Regression Model 1**

logistic dec_ma work_area colg_marks						
Logistic regression			Number of obs = 90			
			LR chi2(2) = 10.47			
			Prob > chi2 = 0.0053			
Log likelihood = -54.909501			Pseudo R2 = 0.0870			
dec_ma	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
work_area	5.410626	3.25542	2.81	0.005	1.66381	17.59508
colg_marks	1.013276	.0340845	0.39	0.695	.9486266	1.082332
_cons	.4478489	.9604403	-0.37	0.708	.0066939	29.96311

This model uses labour market and academic achievement to understand the decision of students. The core human capital variable (colg\_marks) is not significant while the preferred work area in the labour market

### Model 3

logistic dec_ma work_area dependents ma_edge interest						
Logistic regression			Number of obs = 90			
			LR chi2(4) = 30.95			
			Prob > chi2 = 0.0000			
Log likelihood = -44.66867			Pseudo R2 = 0.2573			
dec_ma	Odds Ratio	Std. Err.	z	P> z	[95% Conf. Interval]	
work_area	3.06827	2.053166	1.68	0.094	.826614	11.38897
dependents	2.153238	1.080669	1.53	0.126	.8051743	5.758296
ma_edge	5.167458	3.030178	2.80	0.005	1.637327	16.30866
interest	4.855284	2.693313	2.85	0.004	1.63696	14.40096
_cons	.1325941	.0796245	-3.36	0.001	.0408664	.4302111

This model is highly significant (Prob > chi<sup>2</sup> = 0.000) and interest and ma\_edge are highly significant in explaining the likelihood of pursuing Masters'. Peripheral variables like dependents serves as a social factor which is dependent on the family income and parental education. In this model, 'dependents' does not serve as a significant variable in explaining the decision of pursuing MA.



### Appendix 3

#### Questionnaire

Respondent code:

All information will remain confidential and will be used strictly for academic research only.

#### Section 1

1. Gender: Female/Male
2. Category: General/OBC/SC/ST
3. Religion: .....
4. Discipline (major in college): Sociology / History / Political Science
5. College: .....
6. Stream in school: Arts/Commerce/Science
7. Marks scored in XII board exams .....
8. Name of the school last attended ..... (Private / Public)
9. State of domicile: ..... 10. District: .....
11. Region: Rural/Urban
12. Marks (%age) scored in BA till now or (5 semesters CGPA) .....
13. Family Background

Relation	Education (X, XII, BA, BTech, MA, PhD, Law, CA, MBA, MBBS) Mention the subject also	Occupation/Profession (mention the sector also)	Income ( <b>monthly</b> ) 20,000, 50,000, 1,00,000 Above 2 lakh
Father			
Mother			
Brother(s)			
Sister(s)			

Please tick the correct option

14. What do you want to do right after graduation?	MA MBA LAW	JOB (Full time) / Part time Job	Prepare for UPSC/ Other govt. exams
15. How much do you expect to earn (monthly) after completing Bachelors?		16. How much do you expect to earn (monthly) after completing Masters?	
17. Why did you choose to study in Delhi?	It is local and close to my parents	It is an educational hub	It served as a reason to move out from my village/hometown

		and offers more opportunities	
18. Why did you choose this college?	I met the cut off	It is a brand and for social prestige (status)	Faculty, crowd and societies are good
19. How do you feel about your decision of pursuing BA in this subject from this college?	Good	Indifferent	Regretful

20. Why did you choose to study this subject? (Please rank if you choose more than one option)

Interest in the subject		Could not meet the cut off for the course I wanted	
To contribute to the society		It is easy and Less expensive	

## Section 2

21. Please tick only one option for the following questions related to your field in social sciences.

Was BA in social science your first choice?	Yes	No
It is a general subject which <b>does not</b> provide enough training to perform well in the job market. Do you agree?	Yes	No
More females are enrolled in the social sciences academically	Yes	No
It has limited job prospects in India	Yes	No
More females are working in the social science sector of the labour market	Yes	No
The course content of your subject helps in getting a job and earning more	Yes	No
To gather information regarding future prospects, (Job/MA), you rely more on?	Internet (technology)	Peers/Seniors (social network)
What/who affects your choices and decisions more?	Parents / Peers	Money
What will help you more in getting a job?	Ability (skills and marks)	Degree and social contacts
Do you believe that MA in social science gives a competitive edge and better employment opportunities?	Yes	No
You have and may continue to spend money on higher education because it is an .....?	Investment (better returns in future and higher income)	Consumption (knowledge and exposure gained in the college)

22. For making a decision regarding (BA, MA) what matters more? (1 being the most important, 2 important, 3 less important and 4 least important)

College name	Parents' Expectation	Subject(course content)	Job/Money
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23. Where do you want to work after completing your education? Tick your option

School/ College	Research organisation/ Think tanks	Private/Corporate sector/MNCs	Government sector	NGO
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24. Let us assume the following circumstances, which case would you prefer to choose? Tick just one option (Read carefully)

Case 1: You get a job offer for 40,000 rupees (monthly) after BA. You decide to take the job and not pursue MA.

Case 2: You decide to pursue MA when there is a 50% chance of earning 50,000 after MA and 50% chance of earning 30,000 after MA

Case 3: There is a 50% chance of **getting no job after MA** and 50% chance of **earning 80,000** after MA. You still decide to pursue MA

Case 4: Job is not a priority; I would like to crack UPSC or other govt. exams.

### Section-3

**(Please answer the following questions if you have decided to pursue masters')**

Why do you want to pursue Masters?	Better job prospects and higher income	To get a deeper understanding	To be an academician/researcher
Do you wish to change your major (subject) in MA	Yes	No	Mention Subject .....
Why do you want to change your major (subject)?	It does not have better job prospects	Not interested in the subject	Others (specify) .....
From where do you want to pursue Masters'?	DU, JNU, Jamia, other central universities	Abroad	Open
What would you like to do after MA?	Job	MPhil/PhD	UPSC
How much do you expect to <b>spend</b> on Masters'?' (maximum limit)	Less than 1 lakh	1 lakh – 5 lakh	More than 10 lakh