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Economics of Education: Critical Perspectives from India and reflections on the National Education Policy 2020

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Saumen Chattopadhyay has been a professor at the Zakir Husain Centre for Educational Studies (ZHCES), Jawaharlal Nehru University (JNU) since 2010. Earlier, he worked at the National Institute of Public Finance and Policy (NIPFP) during 1995-2004. His research areas include Economics of Education focusing on policy making in higher education, financing and regulation of higher education, and macroeconomics of the black economy in the context of India. His books include *Education* and *Economics: Disciplinary Evolution and Policy Discourse (2012,* Oxford University Press), *Macroeconomics of the Black Economy (2018,* Orient BlackSwan), *Changing Higher Education in India* co-edited with Prof Simon Marginson and Prof N. V. Varghese (2021, Bloomsbury, London).

Abstract

Higher Education is a complex reality embedded in the diverse and layered social structure constituted by the interplay among the economy, society, culture, polity and geography at a particular historical juncture. This Working Paper seeks to understand the salience of human capital in the functioning of a Higher Education Institution and the economic rationale behind higher education policy making. The theoretical perspective adopted is located within the sub-discipline of Economics, referred to as Economics of Education. This paper consists of three parts. In Part A, the paper seeks to analyse critically the concept of human capital and human capital theory and traces out the implications for the higher education sector. In part B, the paper seeks to examine critically the economic rationale that informs higher education reform by focusing on two concepts of efficiency, technical at the institutional and allocational or

exchange at the system level. We argue that the concept of human capital remains useful to explain why public and private funded institutions have failed to deliver quality education in the context of India. In Part C, we make an attempt to unravel the rationale behind Indian higher education reform as mooted in the National Education Policy 2020 (NEP). This paper argues why the ongoing higher education reform in India based on the NEP may not yield the desired results as the ground reality that exists in Indian higher education defies the underlying assumptions of the policy makers. This Paper argues that while Economic principles can explain some interesting aspects of the reality we encounter in the higher education sector, one has to be, however, careful while applying the Economic principles in reforming the sector more so in the context of a developing country like India. Though the human capital theory stands much discredited today because of the weakening link between the two domains, education and employment, the concept of human capital, however, remains useful for the policymakers to focus on to create a sound foundation for a meaningful higher education reform.

Keywords: Human Capital, Human Capital Theory, Education Production Function, Technical Efficiency, Allocational Efficiency, Quality of Education, Market failure, Government failure, Higher Education Reform, National Education Policy 2020

Introduction

Higher education as a field of study is a layered system with high level of complexities. Though the university system has been one of the oldest in the history of institutions in the world, the system has been undergoing transformation as an outcome of interactions among the various stakeholders within the system, policy interventions to regulate and to enable the system to respond to the emerging challenges, at the national and global level. The higher education institutions (HEIs) nevertheless continue to perform the same good old activities, mainly teaching and doing research to generate knowledge and award of credentials for the purpose of screening in addition to outreach activity. This is not to deny the salience of campus experiences in the formation of students' preferences and reproduction of ethos and culture. The higher education system is witnessing a rapid transformation in the wake of increasing reliance on information and communication technology and policies informed by economic principles. However, there are marked differences we observe in the higher education sector across the world.

Decisions are made regarding use of resources at all the three levels of the higher education sector, micro, meso and macro, i.e., at the individual level, the institutional level and at the national level respectively with interface among the levels with the individuals constituting the base of the education pyramid. Optimum resource allocation is the goal at all the levels but what is optimum remains vague and indeterminate. How to mobilise resources and their mode of deployment to address their respective purposes remain the objectives at all the three levels. The purview of Mainstream Economics is one of achieving optimum resource allocation and hence, Economics as a social science discipline assumes importance to study the functioning of this sector, and to understand the rationale behind decision making of the stakeholders and policy makers. It is imperative therefore to deal with the question of economic impact on the very purpose of education and on the individuals. However, this is possible only up to a limit as Economics alone cannot do justice to understand and unravel the complexity of the higher education system embedded in the complex society. A multi-disciplinary approach with focus on the interfaces among the disciplines is required to develop a comprehensive understanding of the system.

In this Working Paper, we would like to examine the applicability of Mainstream Neoclassical Economics to study and analyse the various aspects of the higher education sector from a critical perspective. This objective of the Paper is to examine the main propositions that follow from the use of the notion of human capital as a central concept in Economics of Education to understand and examine the issues related to access and quality of higher education and to reflect critically on the rationale behind policy making in higher education in the context of a developing country like India. India is hugely diverse country, multi-ethnic and multi-cultural with acute disparities in income, low per capita income and low ranking in terms of human development indicators[1]. Though India has the third largest higher education system in the world but in terms of overall quality of education, India has not delivered barring a few pockets of excellence in both public and private sectors. However, India has launched the implementation of the National Education Policy 2020 (GoI 2020) to usher in a major transformation in the higher education sector to address the emerging challenges of quality, access and contribute to the economy and the society. The purpose of this Paper is to examine the undergoing transformation of the sector from the insights gained from Economics of Education.

In the first part of this paper, Part A, we discuss the basic tenets of Human Capital Theory (HCT) which constitutes a major component of Economics of Education and the implications that follow for the students, the teachers and the higher education institutions (HEIs). In the second part, Part B, we discuss Economics of higher education reform followed by a discussion on why Economics of education and the concept of an education market provide important insights to explain some interesting and apparently puzzling aspects of the reality we often encounter in the higher education sector particularly in a developing country context. In Part C, We examine the approach to higher education reform proposed by the National Education Policy 2020 in the context of India from the perspective of Economics of Education focussing particularly on the relevance of the concept of human capital and why its formation is crucial for an effective and meaningful higher education reform.

[1] India's rank in HDI is 134 in 2024. In terms of the total GDP, India is at present fifth in the world. But with a population of 1.43 billion, per capita income is around USD 2730 (with a global rank of 136) as per the latest IMF estimate.

Part A : The Concept of Human Capital and Human Capital Theory

Centrality of the Concept of Human Capital in Economics of Education

The economic principles of mainstream Economic theory or what is called Neoclassical Economics are invoked to understand and explain the various aspects of the functioning of the education sector in the specialised branch of Economics, generally referred to as the Economics of Education. The birth of Economics of Education can be traced to the writings of Schultz (1960; 1961; 1971), Denison (1962), Becker (1964/1993) and Mincer (1958; 1970; 1974). The conceptualisation of human capital (HC) as an intangible form of capital embodied in human beings as an outcome of learning leading to an enhancement of cognitive capacity and therefore, it is different from the tangible physical capital. This important dimension remained unrecognised for long despite major developments in Economic theory and rising demand for education. In fact the concept of HC can be traced to Sir William Petty, Adam Smith (1776) and Alfred Marshall (Blandy 1967; Vaizey *et al* 1972)[2]. Even for the existence of pedagogical activity in education, Gasset (1946) provides an interesting explanation from an Economic perspective[3]. The justification for the introduction of the human capital theory in Economics discourse by Schultz (1960; 1961; 1971) and Becker (1964/1993) are, however, different. Schultz (*ibid*.) argued for the introduction of the concept of human capital in the Economics discourse on economic growth by pointing out the deficiencies in the explanatory power of the standard aggregate production function to explain and account for growth as it did not account for the increasing importance of education and training and a range of research activities which boost

[2] Adam Smith indicated that investment in in education increases the productive capacity of society. Alfred Marshall argued that investment in business and investment in children's education would earn similar rates of return at least in theory. In reality, the equality between the rates of return would not be obtained owing to socio-economic factors which restrict investment in education (Vaizey 1972; 21-22). Brown *et al* (2020) quote Blandy (1967) to argue that Alfred Marshall defined 'personal capital', recognized the salience of skills in improving job quality but omitted this in his Principles of Economics.

[3] He says, it is scarcity which is the basis of economic activity. He states, "Man is occupied and preoccupied with education for a reason which is simple, bald, and devoid of glamour: in order to live with assurance and freedom and efficiency, it is necessary to know an enormous number of things, and the child or youth has an extremely limited capacity for learning. That is the reason." (p. 53).

productivity based on empirical evidences. In view of the significant changes in the field of education and training, it was felt that the labour and capital could no longer be treated as homogenous as they were used to be in the aggregate production function to measure the possible contributions of labour and capital to economic growth[4]. Becker (*ibid.*) focused on the factors that inform decision making by the students in pursuit of education mainly and to provide possible explanation of income distribution. Mincer (*ibid.*) explained differential earnings with education attained as a proxy for human capital in addition to experiences gained in working. The concept of HC later featured prominently in the Endogenous Growth theory (Mankiw, Romer and Weil 1992; Lucas 1988; Romer 1990) which dealt with the contribution of human capital towards economic growth mediated mainly by the production of knowledge and advancement of technology[5]. Sen's (1985; 2000) contribution to development of capability theory in his broader conceptualisation of economic development and the central role education plays in building capability, which in a way critiqued the narrow understanding as encapsulated in the Human Capital Theory (HCT)[6]. After the emergence of Economics of Education as a field of economics during the 1960s and 1970s, there was a decline in research activity in this area despite significant development in economic theories which could deal with education. However, there has been a resurgence since 1990s (Dearden *et al* 2011). Becker states in the Foreword of the Oxford Handbook of Human Capital "The twenty-first century is clearly placing much greater emphasis than ever before on the importance of knowledge and information to the development of both countries and individuals" (2011, p. xv). Marginson (1997a) puts the status of Economics of Education in right perspective. He says, "As a system of power-knowledge, the economics of education wears two faces. It is one of the modes of government in education programs. At the same time it is a body of knowledge, a sub-discipline of the academic discipline known as neo-classical economics." (p. 215). Neave (2004) states that Economics possesses "..the most powerful concepts that sway governments and thus shape higher education". He says

[4] E.F. Denison's empirical analysis (1962) to assess the contributions of the sources of economic growth and his comparison across the countries between growth rates of outputs and inputs is argued to set the stage for the development of the theory of human capital at least implicitly (Vaizey 1972).

[5] Gary Becker and Theodore Schultz were awarded for their contributions to the concept of human capital and its explanatory power in the domains of economic and non-economic with Nobel Prize in Economic Sciences in 1992 and 1979 respectively.

[6] Amartya Sen was also awarded with Nobel Prize in Economic Sciences 1998.

"Economics constitutes an overarching framework within which public analysis of the multiple aspects that make up the institution of higher learning …are explained, priorities set and action laid out". Teixeira (2007; p. 18) points out that the classical political economists emphasized the role of education on human reason and problem solving, on education as intellectually rewarding and on the socialising effect on labour and poor classes. The economic value of education remained relegated in the economics discourse for almost two hundred years despite development in economic theory and empirical research methods. The Oxford Handbook of Human Capital (2011) seeks to expand the scope of the use of the concept of HC. The editors Burton-Jones and Spender (2011) claim that their Handbook highlights the salience of human capital for "..contemporary organizations: how it contributes to theories of the firm, how it affects organizational performance, and its role in the future economy" (p. 1).

Notwithstanding the importance of education in nation building and the understanding we gain from the perspective of Economics, offering Economics of Education as a course in the graduate programme has faced resistance in major parts of the world particularly from the Education departments or Schools of Education based on presumably suspicion that this branch of Economics deals with education as a commodity and it ends up justifying commoditisation of education while at the same time, the policy makers rely increasingly on Economic principles to make policies[7]. The neoliberal approach to education reform is primarily informed by a school of thought located within the mainstream neoclassical Economics. Blaug (1968) compiled a good collection of articles on Economics of Education to set the stage for treating it as a sub-discipline of Economics for teaching and research. Blaug (1989) expressed his mixed feelings or rather scepticism about the contributions made by Economics of Education. In the recent years, the HCT has come under attack from Marginson (2016a; 2019), and Brown *et al* (2020) among many others for the narrowness of the theory typically true for neo-classical economics to understand the field of education and the non-tenability of the underlying assumption in view of lack of empirical support. Further, the assumption of a steady transition from the domain of

[7] In the Economics Department of most of the universities, Economics of Education is hardly offered. This is not however the case with Health Economics. This is not to deny that economists avoid education as a field of research. School education is a well-researched area compared to higher education.

education to the domain of employment offering a good return on the investment in education has been questioned in view of lack of empirical support (Brown *et al* 2020).

Basic tenets of Human Capital Theory

The application of Economic theory in the field of education provides us with explanations and insights into various aspects of decision making directly and indirectly linked to the issue of resource allocation in different realms of education at three different levels, individual, institutional and national, micro, meso and macro respectively. However, it is debatable whether we can at all know what is indeed optimum and whether it can be precisely ascertained, and therefore, should we at all try to attain optimal allocation of resources in education. In the process, there arise crucial trade-offs among the three major objectives, to ensure efficiency in use of resources, to address equity concerns and to deliver quality education. However, definitive answers remain elusive in an inter-temporal framework imbued with values and politics which exposes the limitations of Economics of Education as a social science discipline.

Human capital was conceptualised as the augmentation of cognitive capacity of the student as an outcome of investment in learning which enhances labour productivity ensuring higher income growth to the student investor. Expenditure on education is an act of investment as it entails costs incurred in the present and promises higher returns in the future in the form of higher stream of earnings. Decision making in education and the associated concept of HC formation could explain several phenomena in the domain of wage determination, distribution of income, and even impulsive nature of students in choice making (Becker 1964/1993).

Drawing parallels between education and other domains of investment

The HCT imputes economic motives in the students' decisions to pursue higher studies ostensibly to chart out their future life trajectories. The underlying assumptions are that the students behave as *Homo economicus* and the system works out on the basis of coordinated market mechanisms (Brown *et al* 2020). This entire process starting with choice making to eventually landing up with a job is actually based on a

series of assumptions. The demand-supply model of Becker (1964/1993) focuses on two very important sets of factors which determine how much investment a student would like to make in education. One factor is the student's self-assessment of her ability or capacities, mental and physical to help the student realise how much she stands to gain in monetary terms from making investment in education[8]. This is of undeniable importance as whether in sports or in education and research, individuals do have a certain assessment of what they can achieve in a particular field of activity or a stream of study which depends on our inherent capacities, inborn and/or acquired through investment in learning[9]. This is captured in the demand curve faced by the student while the supply curve seeks to reflect the costs of pursuing education. Students with different abilities are faced with different demand curves. If financing becomes easier, the supply curve becomes relatively flat[10]. Becker considers both physical and mental capacity (*ibid*.) as constituents of ability or capacity[11].

We now critically examine the attempt to draw parallels between Mainstream Economics and EoE in terms of two types of economic agents, students and the

[8] The demand function can be written as $D_{\$} = f(r, A, FB, SQ)$ where r = marginal rate of return for each additional dollar invested, A= ability which can be measured by test scores or grades; FB = family back ground such as parents' education, income and occupation; and SQ = school quality measured by school resources, student-teacher ratio, and teacher quality). The supply function can be written as $S_{\$} = g(i, Y, G, L)$ where i = marginal interest cost of each additional dollar invested, Y = disposable income of the students' family, G = grants including scholarship and L = loans (Paulsen and Toutkoushian 2008).

[9] In the theory of education as a screening device (Spence 1973; Stiglitz 1975), the student is assumed to have an assessment of cost of pursuing studies which can be high or low. These costs include the efforts to be put in by the students. This also reminds us that acquiring education is not akin to consumption good where the buyer is assumed to have only purchasing power to savour tastes of the good she intends to buy with no reference to any specific intrinsic ability required for deriving satisfaction from consumption. Since learning is involved in education, the individual specific feature comes into the picture. The examination system erected in every country acts as a screening mechanism to filter out students and offer admission based on criteria which includes merit or capacity of the students. This theory treats credentials awarded to the students to act as signals of their employability in the job market without any formation of human capital. This is tantamount to a wastage of resources as resources are spent to generate signals and screen without any commensurate improvement in the productivity. Chattopadhyay and Mukhopadhyay (2013) argued the prevalence of this phenomenon in the Indian case to argue about poor quality of higher education as the HEIs are complicit in the process which render the credentials devoid of any value.

[10] In sharp contrast with the usual demand-supply mechanism, a higher demand curve which are negatively sloped reflecting higher ability can shift the flatter upward rising supply curve rightward or flatten it as the talented gets scholarship. These two curves are faced by the students rather than arising out of two different sets of decision makers, the demanders and the suppliers as in the name of commodity production where equilibrium price and quantity are determined.

[11] There are five forms of HC capital theory which includes migration health skill formation, etc.

teachers, and the institution based on Majumdar (1983) which can be succinctly put as follows:

(i) to treat a student as an investor in human capital and to view the student as no different from that of an investor in a capital market;

(ii) the alternative opportunities available to an investor in the capital market are no different from what a student faces in her pursuit of education;

(iii) the student is guided by the same principle of return maximisation similar to the one that guides an investor in a capital market;

(iv) the functioning of an institution can be understood and compared to that of a business firm in pursuit of profit maximisation. This implies acceptance of Input-output modelling or the existence of an education production function.

The HCT sets the foundation of Economics of Education (EoE) which became an important component of EoE with the new developments of other approaches to study education in all its dimensions and research methods (Dearden *et al* 2011) to do research in the field of education in all its complications.

Critical reflections on the basic tenets of Human Capital Theory

In this section we reflect critically on three aspects derived from the parallels drawn between education and other domains of investment. The issues are: whether a student is an investor, whether expenditure on education can be treated as an investment, and, whether education as a sector is different from other sectors. We begin with the discussion of the aspects of students' decision making and then we will engage with an examination of the education production function (EPF) as alluded to in (iv) above.

Student as an investor

The students in the HCT are assumed to be *Homo economicus* as assumed in the neoclassical theory of consumer choice. Hogan (1997; p. 319) succinctly summarises what the concept of choice making by an economic man entails as follows:

"..choices are instrumental in character, institutionally isomorphic, and made by maximising and self-interested actors with full information and exogenously produced and consistent preferences utilising exogenously given factor endowments in a world in which there are no strategic and social interdependencies."

To clarify further, preferences can be ordered, comparable, consistent, transitive, continuous and monotonic and decisions are taken based on an assessment of costs and benefits arising out of choices made. The portrayal of the student as theorised does not conform to the developing country context where socio-cultural factors influence decision making, quality of education is generally of substandard quality and there is prevalence of high unemployment among the graduates. Kaul (2008) in her argument focuses on identity differences in discussion making and conceptualisation of human capital. This conceptualisation of student is silent on the identity of the student, place, gender and social category that the student belongs to[12]. Social processes broadly speaking and culture contribute to the preference formation of the students and therefore, choice making is, in fact, endogenous (Hogan 1997) and as the student climbs up the ladder of education, it is more like an adaptive preference function[13] which can explain the pathways better. Preference formation is imbued with aspirations which may vary across individuals and across regions marked by cultural differences and the availability of good quality HEIs. Students from different regions have shown a tendency to prefer certain streams[14]. In fact the socio-cultural and

[12] Social categories is an important dimension in India in the context of education in particular. The public funded HEIs provide for reservations for some categories and in public sector jobs. Education is also viewed as a liberation from the discrimination the social categories face in various spheres of life.

[13] In mainstream economic theory, preferences are assumed to be exogenous and choice is made when the cost function is juxtaposed with the exogenous preferences in the form a tangency between the budget line (cost) and the highest attainable indifference curve (preferences for two goods yielding same level of satisfaction at the margin per unit of money spent).

[14] The students from South India seem to prefer Engineering and Medical whereas the students from the North Indian states like Uttar Pradesh and Bihar prefer to join civil services. In the Western part of India, business oriented courses attract more students.

psychological characteristics of the student would determine whether the student would behave as *Homo economicus* and optimising decision making agents being guided by the principle of maximisation of rate of return. Gender aspect is no less important in the Indian scenario as freedom to take up jobs post-marriage vary widely across individuals and regions depending on a variety of factors, economic and non-economic.

Taking the right decision entails an examination of the extent of information that the students can gather and process. Further we need to negotiate with the crucial issue of expectations formation regarding future monetary benefits given the uncertainty in the job market.

Investment in education suffers from information asymmetry

The issue is whether the students suffer from information asymmetry more in case of education as compared to investment in other sectors. Since education is an 'experience good' and the learning outcome is jointly determined by the students and the teachers, no matter how much information does one student gather, no matter how much information the institutions decide to disseminate, the problem of information asymmetry would remain unsurmountable. While one can gain access to an education institution, the degree has to be earned by dint of effort and dedication and quality as indicated in terms of the ranking parameters, national and international, or accreditation scores do not therefore necessarily reveal the quality of teaching-learning processes the students will experience. Further, there are inherent problems with these ranking indicators and even accreditation scores to reveal the quality of education that a HEI delivers[15]. Even if the students gather information from teachers, senior students, relatives and friends, students get influenced and persuaded by the parents in the Indian context to pursue certain streams like Engineering and Medical. Processing huge amount of information is another difficult task for the student. Assessment of opportunity costs as proxied by the existing wage is individual specific and it depends on how the students perceive the existing job opportunities. With low opportunity cost coupled with aspiration and affordable fees particularly in public

[15] With focus on research performances, the university ranking indicators can not truly capture the quality of education including campus experiences the students seeking admission would be interested in.

funding HEIs, students prefer to pursue higher studies even when the rate of return is perceived to be low[16]. Since the benefit calculation involves expected wage rate, it is assumed that the quality of education to be imparted by the institution would be as per expectation with virtually no possibility of any failure and getting a job offer as expected. However, Becker (1964/1993) does not refer to expectations while estimating the expected future wage rate necessary for the rate of return calculation (Chattopadhyay 2012).

The formation of expectation about the pay package is subjective and future wage in any case is unpredictable. In reality, some students are confident and optimists about future job offers, some are not. It all depends on how one assesses herself and sees the job prospect in the future given the overall uncertainty in the macro-economy that prevails given rapidly changing demand for skill due to technological advancement. Therefore, expectations are formed subjectively and socio-psychological characteristics of the student assume importance[17].

Students as optimizing decision making agents

Students need not be viewed always as optimizing agents. Herbert Simon proposed a different conception of an individual behaviour where the individual selects the option that yields results which can be construed as good enough and therefore acceptable which he calls 'satisficing behaviour' (Simon 1959) as compared to optimizing behaviour which entails going for the best possible outcome given resources. I would like to argue that the students who are pursuing studies for the sake of certificate, where certificates act as signals for the employers are likely to be satisficing rather

[16] Admission in the PhD programmes in major public universities in humanities and social sciences (HASS) could be classified like this. The scholarship is higher than the job one would get after completion of UG and PG. Even if scholarships are not there, the student buys time and looks for better jobs or prepare for Union level competitive exams.

[17] In a competitive test to get admission in engineering, medical and management, many students to the famous coaching center Kota, Rajasthan every year which involve costs of boarding and food for more than one year in major cases. Only 20 percent of those who take coaching in Kota, Rajasthan, India get qualifying marks. The high ranks prefer to study in public funded institutions mainly and the rest of the qualified students settle for high fees low ranking engineering colleges. Those who fail with low marks, they also had high expectations which may be explained as unfounded and baseless. But optimism and social aspirations for social mobility lead many families to take the plunge. The distortions in decision making as the unqualified move to other fields exasperated and frustrated is presumably very high. Conceptualization of expectations is difficult because of subjectivities are involved in forming expectations.

than optimising as it is the certificate which matters more than the grades awarded. In HCT, the enhancement of cognitive capacity is linked with productivity and hence earning. This makes the assumption of optimization legitimate and sensible for HCT. This implies a transition from considering an individual as *Homo economicus* to that of belonging to a category *Homo sapiens* as the concept of bounded rationality in Economics discourse assume prominence. 'Satisficing behaviour' as a possible alternative to the optimising behaviour as standardly assumed in Neo-classical economic theories would entail a revolution rather than a reform (Davis 2011). This can be construed as a pragmatic solution to understand student's behaviour in a majority of cases where the quality of education is poor, students feel demotivated and they treat credentials as signalling for students' potential talent as valued in the job market rather than actual learning outcome embodied as human capital. Further, Fitzsimons and Peters (1994) argued that individuals do act irrationally or in pursuit of goals other than maximisation of utility in the context of investment in education.

Barnett (2011) argues that if students act as customers rather than consumers there is a purpose to remain involved with a long term goal and take active interest and exercise agency to improve the teaching-learning process. Students also develop a tendency to behave as consumers as if the degrees are for sale and they are entitled to it because they have paid for it. Maringe (2011) argues that there are overlaps among the three concepts, customer, consumer and client in case of students. It is argued focussing on student at the heart of decision making in HE can improve experience, more accountability and improved quality. Invoking the consumer metaphor in HE is rather unacceptable because the customer is not always right and customer satisfaction should not be the only goal of HE either.

Expenditure on education is an act of investment

Is rate of return the only motive behind investment in education? This is linked to the question of investment-consumption divide in educational expenses or to put it differently whether consumption or satisfaction from studying is also one motive of considerable significance for undertaking investment expenditure. This consumption benefit can contribute to two very important aspects of our well-being broadly defined and overall level of development of a country. McMahon (1982) in his

conceptualisation of humane growth emphasized on non-market, non-monetary returns to education which can contribute to improvement in quality of life.

To pursue education in a physical face to face mode has its own charms arising out of participation in discussion and deliberations both inside and outside the classroom and participation in the campus co-curricular activities and socialisation with peers and teachers. In a country with bewildering diversity and disparities in various socio-economic indicators, students in their campus life get sensitised in the process of socialisation, develop tolerance and understanding which are necessary for their self-formation and eventual maintenance of social order and democratic functioning of the institutions when they move out of the campus after completion of their studies. The extent of this development depends on courses studied and their contents. Various university policy initiatives are taken including provisioning of various campus facilities including common space. Even the fees paid can affect the students, their conduct and expectations from pursuing a programme[18]. All this can be assumed to be contributing to the generation of consumption benefits as opposed to pecuniary returns from investment. This aspect of consumption unlike consumption of chocolates changes preferences of the students with far reaching tangible benefits for the country in fostering sociability which are broadly categorized as publicness of higher education or positive externalities. In the emerging age of digital university and increasing reliance on online education, teacher-student relationship is likely to get weaker over time as the sole motive for picking up a course online is to acquire skill or even just to fulfil credit requirements as mandated for becoming eligible for a degree. Becker quite interestingly add to the benefits the monetary equivalent of psychic value (Becker 1964/1993). This recognises the fact that students can have motives other than pure economic ones but in the overall analysis their motives remain relegated.

Distinctiveness of education as a sector and a venture

Choice making in education is a constrained one unlike that of in case of consumption good where only ability to buy matters and not capacities to learn. Once choices are

[18] Though it is argued paying high fees make students behave more like purchasers of degrees rather than investing in learning, it is observed the willingness to learn depends primarily on the students' interests and capacities (or human capital) embodied to make learning enjoyable and meaningful. Students even in high fee paying colleges show lack of dedication and willingness.

made, decisions are irreversible or they can be reversed at a high time and money cost. Becker (1964/1993) argues that the students often act impulsively while making choices in education because a delay in investment reduces the rate of return due to shortening of the period for earning. Any particular choice of course/subject charts out a life trajectory in a direction which is most likely determined by the demand for the subject. If an investor wants to discard an asset she has invested in, the asset can be sold and a new asset can be bought. Investment in education entails learning in an area which is embodied in the person and therefore, changing the course and opting for a new poses challenge because of embodiment of learning in the form of HC and time required for HC formation.

As evident from the main propositions of the HCT, education is accorded no special role by the student investor as the decision to pursue higher studies is based on the rate of return arising out of higher stream of earnings compared to what would have been possible if the last stage of education was not pursued. This rate of return from education is compared to rates of returns from other pursuits/financial sectors under consideration of the student for possible career choices or investment options and the student is supposed to choose the career/investment option which promises the highest rate of return. Kleiman and Teles (2006) wonder why some of the democratic countries seek to incentivise enrolment in higher education to gross enrolment rate (GER) as costs exceed benefits arising out of it. They argue that if the subsidy is given to the students in the form of vouchers instead of giving it to the HEIs and allowing them to use the subsidy for investment in sectors or ventures like start-ups or small business as per their wish, it would be optimal for the country as costs of remaining unemployed can be minimised as some students would remain employed or unemployed. This is tantamount to degradation of pursuit of education to any other profit making venture in complete denial of the role of education in the form of self-formation and a passport to a dignified living and fulfilling life.[19] Education is empowering and expands life choices by giving freedom to the students to choose the life path they have reason to value as Amartya Sen (1985; 2000) would like to argue.

[19] In a similar vein, they argue that if pursuit of education is only for credential purposes as in the theory of signaling, it involves costs which may exceed benefits, as in the absence of an improvement in productivity, there will be no income growth.

Investment in education is distinct from other sectors as we need to look at the different complementary domains of investment in education, the individual and the society consisting of the private and the state and their interactions and collaborations. This is what is called domain-distinction argument (Majumdar 1983). The second distinguishing feature is micro-macro argument as discussed earlier (*ibid*.). Majumdar (1983) has provided a stern critique of the HCT from the perspective of the social choice approach to education.

The extent of public funding for education should be ideally determined by a comparison of social rates of return of all the sectors the state extends support. In practice for a particular year, this is, however, determined by the state and state's vision about the role education plays in a given historical context as computation of social rates of returns of all the sectors is a daunting exercise as it is heavily dependent on the assumptions one makes in absence of market valuation of positive externalities[20].

Though the main propositions of HCT are untenable given the complexity of a society and distinctiveness of education, the crucial features of HC as a concept are noteworthy. In the next Section, we discuss some important dimensions of HC.

Distinctive Characteristics of Human Capital

The concept of HC as distinct from other forms of capital is an important concept because it gives us useful insights to explain several important aspects of the higher education sector.

a. Since human capital is embedded, the embodiments of human capital in the forms of students and teachers are unique and non-replicable.

b. Human capital is different from other forms of capital as the translation to value is not guaranteed. For students, it depends on getting a job whereas for

[20] In India, the White Paper on Subsidies in India (1997) recommended that subsidies for higher education may be curtailed as higher education was classified as a Merit II good in contrast to school education as a Merit I good based on the argument that Merit I good generates more positive externalities than the Merit II good (Chattopadhyay 2009). This was in line with the policy shift we witnessed at the global where social rate of return was not given importance as estimation of it remained a challenge (Marginson 1997) and it was undermined in state's political rationality too.

teachers, they need to act, engage in teaching and research. It is an illiquid asset. Mere possession of human capital means very little[21]. Further, human capital with use, appreciates in value rather than depreciation.

c. Students and the teachers in the formal educational setup are the active agents who contribute to the formation of human capital.

d. The most crucial input required for formation of human capital is time spent by the students and teachers (Becker 1964/1993)[22]. This is not to deny the usefulness of other factors, say, physical infrastructure and books as their contributions are realised only when students and teachers spend time in pursuit of learning and doing research.

Assuming that the teachers and the students are optimising decision making agents, the issue is whether they spend optimum amount of time as desired which entails optimum allocation of time among various activities (like searching and downloading articles from the internet vis a vis dedicating more time in reading the collected articles for an in-depth understanding[23]. How much freedom do they have to decide optimum allocation of time. If the capacities are lacking or quality of human capital embodied in the teachers and the students are not up to the desired standard, the possibility of deviation between what they are expected to do in their respective domains and what they end up doing goes up[24]. The quality of teaching and research depends on the quality of HC embodied in teachers (and it is true students too in studying) given their levels of motivation. The students often are found to lack interest in studies in

[21] Brown *et al* (2020; p. 141) refers to this in case of students looking for jobs which will translate their capabilities to pecuniary gains. Majumdar (1983) and Brown *et al* (2002) rightly argue that human capital embodied appreciates with experiences and acquisition of knowledge.

[22] In his derivation of the demand curve, Becker (1993) rightly points out why time in contrast to all other inputs and infrastructure is a prerequisite for learning and human capital formation. This obvious but crucial realization provides a critique to the role of inputs and input substitutability as envisaged in the notion of educational production function.

[23] The amount of time to be spent in teaching and research guidance is often regulated. To develop an understanding of the existing knowledge and contribute to it, it entails dedication of sustained effort with passion and dedication.

[24] It is widely observed that the students and teachers who find it difficult to live up to the standard desired of them are the ones who lack passion and dedication and lacking a capacity to learn and enjoy is one possible reason. The lower Demand curve in the Demand-Supply model of Becker as discussed earlier, leads to lower expected return given the Supply curve.

graduation if the students are weak as their learning in school level was inadequate and teachers with low competence tend to shirk.

Human capital and public good

Though the concepts of HC and public good are two different concepts, the question is whether they are related in some ways. The public good character of higher education which is in practice a quasi-public good depends largely on the specific features of human capital embodied, its nature and quality.

a. Human capital is privately owned and but what it produces in the form of 'ideas' is essentially in the nature of a public good (Romer 1990). There are two major public goods that a university produces, idea or knowledge and transformed students through the process of self-formation.

b. Once 'idea' or knowledge is incorporated in the aggregate production function, the production exhibits increasing returns to scale (Romer 1990). This is at the basis of the Endogenous growth theory which is considered to be a major departure from the Solow's growth theory where the production function exhibits decreasing returns to scale.

c. Publicness of public goods produced varies: The public good character of knowledge produced depend on university policy regarding patenting, funding of research and mandate of research. The positive externalities generated depend essentially on the transformation of the teachers and students, the extent and the nature of self-formation which in turn depend on the content on the courses and curriculum, campus experiences, and public-private divide that gets reflected in the ways the students are treated and their roles in university governance. The university admission policy which determines the inclusive character of a university is again determined by quantum of funding and mode of funding.

Contextualising the Interactions among 'human capital embodied'

With the onset of online education, teaching as a service can now be converted to a digital product if the lectures delivered are recorded and stored. Teaching and

attending the sessions can now be asynchronous which is being practised in many universities. The classrooms can be potentially a global classroom if students are allowed to join online as it happens in case of blended teaching. The concepts of time and space associated with teaching and other academic exchanges have undergone transformation in the emerging context of ICT revolution higher education in particular in the Post-Covid era (Antonietti *et al* 2022).

In continuation of the argument, we would now extend our analysis to the higher education system to understand how is the distribution of human capital embodied, the students and teachers determined in the system and interactions among them across the HEIs.

a. Higher education system can be analysed as a higher education market essentially because the providers, the HEIs deliver and the intended beneficiaries, i.e., the students and the takers of knowledge produced. Though the market for higher education is invoked in the discourse on higher education reform, the typical market like characteristics are absent (Marginson 2016a in his chapter on 'Limits on capitalist markets in higher education' and others). The HEIs are considered to be multi-product firms (Stiglitz 1975) which also questions the conceptualisation of market for HE.

b. Public-private divide in higher education provisioning matters for access and potentially for quality because of the unique features of education and functioning of public *vis a vis* private HEI. The differences in financing of public and private HEIs get reflected in the costs of education and admission policy which determine the distribution of students in terms of their merit and money across the HEIs, public and private given that both the categories are heterogeneous.

In this section, we wanted to highlight the importance of the concept of human capital and its nature and quality in understanding the higher education market and interactions among the HEIs as the type of the HEIs determine the kind of HC they possess. This perspective from human capital adds another way of examining the HE system.

Is an educational institution akin to a factory?

In this section we examine the proposition of HCT that an educational institution can be understood as a manufacturing unit and its functioning can be analysed in terms of an input-output relationship. We begin with the two inputs, two types of human capital embodied, the students and the teachers followed by a discussion on the applicability of educational production function in the case of a HEI.

Students as investors and consumers as well as inputs and outputs

The students are the primary intended beneficiaries of higher education and their role in the sector is of crucial importance and this extends beyond the boundaries of the universities. In the context of discussing HCT, we discussed students as investors who also derive consumption benefits from pursuing education. It is, however, a different matter whether the students behave as consumers in their interface with the institutions. In they do, students may develop a tendency to treat education as a purchasable consumption good and therefore they can buy degrees. Though it is argued that students are increasingly showing a tendency to behave as consumers with the increase in fees, in practice they cannot be so as they are required to earn their degrees and not purchase it over the counter as it is for a consumption good if the HEIs are seriously engaged in the delivery of quality education. This consumerist attitude may depend on the fee structure and the courses they pursue. For the HEIs, the students are the inputs and students are the output too when they graduate as teaching is one of the major mandates of the university. The admission criteria are designed so that all three factors, merit (of the students), money (or ability to pay the tuition fees) and margin (the socio-economic background of the students who are from the margin of the society) are taken into account given the funding and mandate of the HEI.

Is a teacher merely a service provider?

In higher education reform, the teacher is central to the functioning of what all a university does. How the teaching community is regulated, assessed, monitored and rewarded is central to the higher education reform. In an input-based funding of university system of conventional type, the teacher is expected to be trust-worthy and

to remain intrinsically motivated in all engagements which would require minimal regulation. The teacher should have the competence, should exhibit scholarly diligence, and be morally responsible with a moral sense of duty (Miller 2010). The higher education reform has been one of shifting the accountability mechanism from one of conscience to the regulatory compliance requirements imposed by the state and the market (Berdahl 1990; Codd 1999; Olssen, Codd and O'Neill 2004). The shift in policy is merely therefore indicative of a transition from a high trust regime, high autonomy to a low trust regime with low autonomy. The transition to the New Public Management (NPM) (Marshall and Peters 1999) type governance reform where the performance of a teacher is assessed, audited and accounted for and rewarded in accordance with her performance is explicable in terms of a gradual erosion of teachers' trustworthiness as perceived by the policy makers and installing new accountability mechanisms to reorient the teachers and the HEIs to serve the economic needs as perceived to be important by the state (Trow 1996; Marshall and Peters 1999; Marginson 2008). The economic rationale behind regulation of teachers is to achieve efficiency by extracting the best out of the teachers in terms of utilisation of time and ensure 'value for money', as the society is sensitised to what a teacher and a HEI does in terms of their potential. The scope for teacher autonomy gets circumscribed depending on the approach of the political regime towards university community, their pursuit for knowledge generation and democratic functioning of the institutions because the freedom of inquiry which is essential for knowledge generation is an outcome of disinterested pursuit of truth. However, monitoring and surveillance diminish intrinsic motivation and creates mistrust (Frey 1999) as it crowds out intrinsic motivation which has implications for exercise of autonomy and creativity.

The tenability of educational production function

A HEI in general is not a profit maximising entity like a business firm as portrayed in Mainstream Economic theory (Garvin 1980; Berdahl 1990; Massy 2016). A typical firm achieves efficiency in use of factor inputs, labour and capital in the production of goods and services in pursuit of maximisation of profit. A production function which is an embodiment of a well-defined technology implies that the inputs are converted to output in a stable and well defined manner which implies that this process of conversion of inputs to output is technically efficient or what is referred to as production

efficiency. Economic efficiency is achieved by the firm when the costs of factor inputs are taken into account in pursuit of either output maximisation given cost or cost minimisation given output. Economic efficiency requires realisation of technical efficiency as well as price efficiency (McMahon 2004). This approach, despite many empirical studies (Hanushek 1979) is difficult to accept particularly for understanding the functioning of a HEI. Let us see how the education production is different from that of a typical text-book type production function.

The substitutability among the factor inputs is highly limited with predominance of time as an input over other inputs as stressed by Becker (1964/1993) in his Demand-Supply model which has already been discussed earlier. A university is a multi-product firm as a university engages in many activities, teaching, research, outreach activities, reproduction of culture and ethos, conferment of credentials and awarding of grades which is in fact the screening mechanism performed by the HEIs. Since there does not exist any stable relationship between time spent and output which is compounded by lack of effort in absence of motivation, wastage of resources a part of which is inevitable and a part of it is non-measurable, the attainment of technical efficiency is not guaranteed. Since maximum output given resources is not guaranteed in case of education, the education production function cannot be conceived in absence of a well-defined technology (Gilead 2018: Monk 1992). The teachers and administration may in fact be exhibiting ‘satisficing’ behaviour as proposed by Simon (1959) as pointed out by Dill and Soo (2004) and Gilead 2018. The arguments given for a school by Hanushek (1979) are valid for a HEI that teachers, administrators and the principals are not output maximisers as the incentive structure and market competition are of limited relevance for an educational institute. Apparently when time is being perceived to be wasted by the students and the teachers by the authority of a HEI, it may well of the case, that time wasted is setting the stage for creating something new as pondering over an issue or discussing issues unrelated to the areas of research may open up new vistas in research. In fact, strict compliance with the accountability mechanisms set in terms of papers published may interfere with deeper thinking and creative thinking.

Getting the right prices of the factor inputs is just not possible to ensure optimal allocation of inputs. Further, due to limited substitutability among the factor inputs, the

isoquants are not smooth and may exist only in a limited sense. In absence of proper valuation of time spent by the teachers and the students, price line or the budget line is not identifiable either[25]. It is not that these inputs are not priced, but their prices do not necessarily reflect scarcity and therefore they hold no significance to reach the optimum point which designates optimum usage of factor inputs.

The other important issue is that the factor inputs, students and the teachers are not passive but they are decision making agents. The institute is assumed to be maximising a value function (as in Massy 2004; 2016) which is essentially the mission of the university. Do the students and teachers optimise their efforts in terms of time utilisation in their academic engagements as alluded to above?[26] The Principal-Agent (P-A) model is used to explain the functioning of a university (Lane and Kivisto 2008) where the objective function of the teachers, the agents who can be self-interest driven may not coincide with that of the institutions, the principals resulting in government failure. The P-A model ignores that the agents should have autonomy and they need not act on behalf of the principals all the time. The principals stand to gain if agents exercise autonomy which is essential for them to be creative and innovative. Passing judgements what is abuse of autonomy by the teachers as perceived by the Principals is rather difficult as what is shirking is actually necessary for creative and out of box thinking. While some wastage of time and resources is, in fact, endemic and inevitable in academic activities, some wastage is necessary too as academic activities, teaching and research, are essentially creative endeavours. It is a little more complicated when we realise that the objective function of the teachers and the students do not necessarily coincide with the mission of the university. There are strong complementarities in the university functioning across different levels like Under-graduate (UG) and Post-graduate (PG) and among the activities like teaching and research. To add to the complications, educational processes are complex, layered and varied marked by formal and informal spheres of decision making and exercise of

[25] McMahon draws the price line with costs of students' time and teachers' time. Valuation of students' time meaningfully speaking is just not possible.

[26] Massy (2004; 2016) argues that when a university seeks to maximise institutional value function subject budget constraint, the equilibrium condition is: incremental value + incremental revenue = incremental cost' for any activity. Since quantification of value is an arduous task, then this condition remains a guiding principle rather than fulfilment with close approximations. Since incremental revenue cannot be equated with incremental cost for all activities, cross-subsidisation becomes necessary. The revenue from a professional course can subsidise loss from a HASS programme.

power. As pointed out by Marginson (1992), "..what is produced is the process of production itself". For example, teaching is coterminous with learning (p. 129). Academic corruption makes the entire process fuzzy which obfuscates the academic processes and make them less credible to the people. This aggravates the intrinsic problem of information asymmetry as both output and the credentials become less credible from the perspective of the society. Realisation of economic efficiency in the realm of university remains elusive.

The educational institute produce multiple outputs with inter-linkages among them. One input can also feature in multiple production lines. This flexibility and inter-connections among the inputs and the various academic activities make the education production function very difficult to specify and empirically validate it (Massy 2016).

Though profit maximisation is not the objective, the institute mostly if it is privately funded, is engaged in either cost cutting and/or output maximisation. Both of which are inimical to quality education because to attract good quality human capital it requires to offer attractive pay packages to the teachers and scholarships to the meritorious students. To probe this issue a bit deeper, even if classes are held and the teachers teach, and therefore it may look like efficient utilisation of the resources at the disposal of the HEI, there is no assurance for the delivery of quality education if the teachers are not prepared for the lectures and curriculum is not updated. Efficiency therefore does not always lead to quality improvement (Massy 2004; Chattopadhyay 2012). The quality of outcome, the teaching-learning outcome depends not only on what is delivered but how both the students and the teachers collaborate with passion in the classrooms and in the laboratories to achieve learning-outcomes.

It is difficult both to measure time spent by the students and the teachers as well as its quality followed difficulties involved in measuring output and assessing its quality. Therefore the education production function does not exist in the strictest possible sense as there is no well-defined technology as educational processes remain flexible and difficult to conceptualise and quantify each and every aspect of a process (Chattopadhyay 2012). This questions the very existence of the education production function.

The motivation of the students and the teachers depend on the university governance and leadership negotiating exercise of autonomy at the horizontal and vertical leadership and their respective capacities other than their capacities and objectives[27]. The mandate and funding play important roles in this. This makes regulatory interventions, public-private divide important to comprehend the functioning of the HEIs.

The Economists' views on education, learning and human capital

In this section we would like to deal with two issues: to reflect on HCT as an extension of Mainstream Economics to explain the social reality of education and two, to reflect on HC to conceptualise development and explain the transformation of the socio-economic reality.

HCT as an extension of Mainstream Economics

How the social reality of education is sought to be explained by the Mainstream Economists particularly with reference to the HCT. The HCT can not capture the complexity involved in decision making in the society, the understanding of which requires multiple theoretical lens from a multi-disciplinary perspectives (Marginson 2016a; 2019). Often the justification of a theoretical framework is easily achieved by collecting the data as required by the framework while ignoring other templates based on other theoretical frameworks applicable for the same reality. The social reality of education is highly complex and layered, and it is a non-linear system, open and heterogeneous (ibid.). Brown *et al* (2020) have argued that we need a different approach to view the HCT in view of the changing nature of the job market and increasing disassociation of education from the imperatives of the changing job market. Normatively speaking, an emphasis on the HCT diverts attention away from the crucial role education plays in self-formation as future monetary returns draw the

[27] In Becker's demand and supply model, the demand curves reflect the human capital embodied in the students. Higher the demand curve which is two reflective of the stock of human capital embodied, higher the expected returns from investment in education. This explains why the students with well-endowed capacities are keen to learn. This is true for sports and entertainment industry too where quality of human capital is the most critical determinant of quality.

maximum attention from the students and the policymakers. Students pursue studies out of interest in the streams without much calculation about the future in general streams which makes the HCT more relevant in professional and market oriented courses. Fitzsimons and Peters (1994) critiqued the basic approach of neo-classical economics in the context of discussing the HCT in New Zealand that the economy is not separable analytically from the society as politics and culture shape the realm of the economy.

Crespo (2013) argues that the HCT as economic imperialism where Economic theory is used outside the domain of economics as exchange. While there is a critique of HCT based on weakening linkage between the two domains, the concept of HC is also gaining traction in the age where the demand for certain types of skill is soaring because of an increasing use of generative AI and a rapid advancement in deep tech sectors while in the aggregate sense, there is 'job scarcity' as pointed out by Brown et al (2020).

While the criticisms being levelled against the HCT are tenable, it is also important to note that Becker's approach is mainly a microeconomic one as it deals with a student representative agent to explain decision making by the students aspiring to pursue higher studies and in identification of the variables which deserve attention as noted in the demand-supply model. The preferences which are endogenously formed will affect the explanatory power of the identified variables without necessarily diminishing their importance. The student may not be acting as optimising agents if her pursuit is for acquiring credentials rather than skill. Students borrow to spend on education which is treated to be an investment. This has been noted that economic factors alone cannot explain choice making behaviour of the students. The linking up of the two domains became necessary for Becker to derive the rate of returns as the guiding principle for the determination of investment decision in education. But this connection between marginal productivity and earnings breaks down because job market is a positional market characterised by positional competition where all education are not equally valued when combined with other values and earnings are all relative (Marginson 1997b) other than the fact that earnings are determined at the labour market based on demand and supply of labour at the macro level (Majumdar 1983). Any investment, whether in buying machines or in pursuing studies, is fraught with

uncertainty and therefore the future remains unpredictable and expectations formed are essentially subjective. The challenge lies in conceptualising expectations which are subjective in nature and identify the factors involved.

The concept of HC and Economic transformation

In this section, we look at three different strands to look at the usefulness of the concept of HC to explain development, broadly defined. The endogenous growth theory provided a critique of the Solow model to explain economic growth. In the following analysis, we discuss contributions of North (2005) who situates learning in a much broader context, its influence on human conduct and institutional functioning to explain transformation in the socio-economic landscape. Sen (1965/2000) argues for the enabling and empowering role of education in his proposed concept of development. Som (2014) argues for incorporating social capital and institutional capital along with human capital to broadly conceptualise capitals in explaining economic growth.

North (2005)[28] has contributed to the field of New Institutional Economics and the role institutions play in understanding the process of economic change. In his framework, learning and knowledge feature prominently. He has identified three factors to explain economic change; (i) Quantity and quality of human beings or demographic; (ii) Stock of knowledge articulated, in particular, in human command over nature, and (iii) Institutional framework that determines the incentive structure of the society. The change we witness over time, he argues, has to be explained primarily in terms of human endeavour, the source of human intentionality and how humans deal with uncertainty in a non-ergodic world informed by our theories, beliefs and ideologies. It is here the nature of human learning and belief systems and their implications for consciousness and human intentionality assume importance. Because of his emphasis on developing a broader understanding of human agency, he is critical of the rationality assumption the mainstream economists make. He points out that rationality assumption cannot explain the reality as it forecloses a deeper understanding of the factors involved and their interplay in the decision making

[28] Douglas C. North was awarded with Nobel Memorial Prize in Economic Sciences in 1993 along with Robert Fogel primarily for developing a conceptual framework to explain economic history of the nations.

processes. He suggests a broader framework to explain the factors involved in understanding the role of learning and knowledge to unravel the processes involved in transformation of the society. North's analysis goes beyond merely human capital and looks at how learning is informed by a multitude of factors which include genetic disposition, belief system, perception about reality and human consciousness, prejudices and ideologies.

Sen (2000) provides a critique of the narrow vision of HCT from his proposed theoretical framework of capability approach. He distinguishes human capital from his proposed concept of human capability. The human capital focuses on the agency of human beings in raising production possibilities whereas "..human capability focuses,.. on the ability- the substantive freedom of people to lead lives they have reason to value and to enhance the real choices they have." (p. 293). The yardstick to assess achievements therefore vary though both the approaches focus on human beings and their achievements. The typical way human capital is defined in terms of an increase in production and associated rise in income, ignoring the direct benefits in terms of acquiring the ability to do (or to be) certain things she has reason to value, human capital gets accommodated within the more inclusive approach adopted by the human capability which includes both direct and indirect consequences of human abilities. The central role of education is for capability building which is a prerequisite for freedom, an essential component of development which he advocates as 'development as freedom'.

Brown *et al* (2020; p. 145) reject Sen's distinction between human capital and human capabilities while agreeing to his argument that people should not be treated merely as capital and people pursue which have 'reasons to value' even if it does not lead to monetary gains. Brown et al argue for 'humans as capitalizing' rather than 'humans as capitals' where education has a broader purpose than what the typical notion of human capital connotes. They argue that the distinction between education as investment and education as consumption should not be made and see the connection between human capital and human capabilities. Given job scarcity, they argue that the students or youths should seek to capitalize on a range of capabilities for monetary gains as well as non-monetary gains for a fulfilling life as McMahon's (1992) concept of humane

growth implies. This is a new of conceptualisation of human capital in the wake job scarcity.

Som (2014) suggests that to explain economic evolution of the nations in terms of three intangible capitals, human, social and institutional and not only in terms of economic factors encapsulated in the concept of HC. She argues that though incorporation of intangible human capital in the growth model developed by Solow (1956) marked a major departure from the then existing explanations offered to understand growth, however, it fell short of advancing a comprehensive understanding of the processes involved in economic evolution. She argues for incorporating two other forms of intangible capitals, social and institutional, along with human capital and their interplay to develop a more comprehensive understanding. Knowledge, its generation and dissemination, formal and informal determine the social interactions and consequently, the shaping of social capital and its interactions within an institutional set up. The demographic factor as alluded to by North is essentially contributed to the formation of HC. What Som calls social capital, North talks about formal and informal constraints, belief systems and interaction in the society which create conditions for knowledge generation and its dissemination. She argues that the HCT did not give importance to social relations towards human capital formation which is evident in the very conceptualisation of the individual.

Part B Economics of Higher Education Policy Making

Economics of higher education reform

Higher education reform world over, albeit in different degrees, is based on neoliberal framework which is essentially based on economic principles, particularly, neoliberal theories of institutional restructuring such as Public Choice Theory, Agency Theory and Transaction Cost Economics (Olssen *et al* 2004) and construction of a regulated market to coordinate the activities and guide the social order. Market construction entails widening the spectrum of choice making to foster competition to achieve efficiency and deliver quality. In this section, we will try to unravel the rationale behind economic logic involved in framing the neoliberal policy framework for higher education essentially to examine the applicability of neoliberal policy framework in a developing country context like India.

Adam Smith (1776) in his The Wealth of Nations argued that the students should pay fees to defray the full costs of remunerating the teachers and the teachers should compete to get the best out of the students to make the teachers and the universities deliver to satisfy what the students desire. James Buchanan and Devletoglou in Academia in Anarchy (1970) argued for market construction to address poor functioning of the university system. They pointed out three main problems associated with the university functioning which are: (i) the students have no say in the way the HEIs function; (ii) the teachers are not accountable in absence of a market; (iii) the society does not have any say in the mandate and functioning of the universities as the HEIs remain ivory towers for the large section of the population.

However, there is a world of difference between education and a typical commodity as generally discussed in Economics and functioning of an educational institute (or a university) from that of a typical business firm as discussed earlier. Despite these differences, which are inherent and profound for what education is and what a university seeks to achieve, the neoliberal approach to higher education reform dominates the domain of policy making for higher education world over.

The objective is to achieve efficiency in resource use which on the face of it, is non-disputable. But the crucial distinctiveness of what truly education is and what truly a

university should stand for, assume critical importance when we observe the outcomes of neoliberal reform in terms of access and quality. Further, the policymakers think that the universities should not remain ivory towers and in fact they should serve the economy by supplying skilled labour and by producing knowledge as desired and demanded by the industry and the state. This questions the traditional view of a university as a site for knowledge generation and to speak truth to the power. But the Universities have responded to the rising social demand which has continued to support the ongoing massification (Trow 1996).

Ontological assumption individual preferences

The neoliberal approach to education reform invokes Arrow's theory Social Welfare Function which showed that there does not exist any consistent social welfare function which aggregates the choices of the individuals. This led them to argue that the role of the state should remain restricted (Olssen *et al* 2004; Marginson 2016b). The Neoliberals deny the existence of merit goods and the welfare model of the state and therefore the role of state to design policies to correct deficiencies in our preferences. The economic agents are assumed to be self-interest driven and they are 'manipulatable' (Olssen *et al* 2004). In a Principal-agent framework (Lane and Kivisto 2008; Marshall and Peters 1999) the neoliberals advocate that there is a need to introduce corporate principles of management in the restructuring of the public sector. If the university authority (i.e. the principal) suffers from information asymmetry regarding what the teachers (i.e. the agents) do because of the very nature what they do in academic activities along with their propensity to shirk, (Dougherty and Natow 2019) the principals find it difficult to realise the university objective and attain the best utilisation of resources particularly in terms of teachers' time. The principals must therefore understand the interests of the teachers, the kind of incentives that would be necessary to motivate them, monitor their work and keep them under surveillance. The rules of the game in a university has to be suitably and appropriately designed based on what is referred to as New Public Management (NPM) which inform public sector restructuring. The NPM based university governance is desired to resolve the conflict between the principal and the agents as the objectives pursued by the agents do not necessarily coincide with that of the principals and therefore to attain technical efficiency in absence of profit maximisation objective in case of a university.

In view of the Social Choice theory, Buchanan argued for upholding the unanimity principle that each one's individual's interest is so paramount that policy change should not affect anybody. The majoritarianism is therefore to be best avoided. The unanimity principle means that *status quo* has to be maintained. Buchanan denies the existence of merit good and even public good. Merit good is a kind of private good with positive externalities, the rationale for which is based on boundedness of rationality like information asymmetry and myopia commonly observed among the people (Musgrave and Musgrave 1989). The role of the public policy is to address the deficiencies in our preference formations by manipulating individuals' behaviour and construction of market where it does not exist. This conceptualisation of the role of the state is broader than arguing that the role of the government should be reduced to the maintenance of the law and order. While the teachers may indeed exhibit a tendency to shirk as observed in case of Indian higher education (Chandra 2017; Chattopadhyay and Nandi 2022; GoI 2020a), but the ubiquity of bounded rationality which supports the provisioning of merit good is undeniable. Similarly existence of public good is undeniable. But the neoliberals would support private sector delivery of public good through the formation of public-private partnerships (PPPs) or market based delivery of public good as in the case of education vouchers as suggested by Friedman (1962).

Achieving efficiency in pursuit of higher education reform: technical and allocational

The higher education reform is generally designed based on a neoliberal template which consists of achieving technical efficiency at the institutional level and allocational or exchange efficiency at the level of the higher education (Chattopadhyay and Sharma, 2019). We discuss both the concepts and discuss possible relationship between them.

Achieving Technical Efficiency

The neoliberals believe that the public sector functions at suboptimal level what is called 'government failure' because of the inherent deficiencies like absence of profit maximisation as the optimising principle and self-interest driven individuals. This entails restructuring or reforming governance structure for achieving efficiency in

resource use at the institutional level, what is called technical or production efficiency. The problems associated with the neoliberal approach to higher education reform can be analysed with respect to three issues: definitional, regarding educational processes and validity and tenability of the underlying assumptions regarding the context. Technical efficiency is sought to be achieved in absence of a well-defined education production function (for reasons discussed earlier) by ensuring that the teachers' time is judiciously and optimally spent which is a prerequisite for the delivery of teaching and conduct of research. This requires setting of targets, installation of accountability mechanisms and conduct of auditing. This is sought to be achieved through the application of NPM based on the justification that the agents are slothful and indolent as they are self-interest driven disinterested in the realising institutional goals.

The educational processes involved in achieving efficiency are complex and are prone subversion. A university is generally not in the business of profit maximisation. Output maximisation subject to cost constraint or cost minimisation subject to output constraint can be both inimical to quality delivery. A significant part of the reality does not support the assumption that the teachers are indeed trust-worthy and intrinsically motivated. In fact, self-interest driven behaviour has become more common in every sphere of society whether in politics or in social sectors like education and health. However, it is not true that all public-funded universities perform sub-optimally. Some of the top ranking universities do delivery quality education subject to many constraints that they are faced with. It can be argued that these universities are engaged in the pursuit of mission or value maximisation (Massy 2016) and the teachers are concerned with their self-esteem and they feel motivated driven by prestige maximisation (Garvin 1980).

It is not true that all teachers can be categorised as self-interest driven individuals. The working conditions in the majority of the HEIs in terms of infrastructure deficiencies, resource constraint, unwarranted political interferences coupled with their capacity constraints all combined together could possibly explain why the HEIs have failed to function at their optimal best. These challenges could possibly be overcome by scrupulous engagement in academic matters, high level of morality and high valuation of scholarship. The result is the attainment of technical efficiency assessed in terms of research papers produced but at the expense of true scholarship and

teaching performed often on paper and without much contribution to learning outcomes.

Achieving Allocational efficiency

Achieving efficiency at the system level, called allocational efficiency in ensuring synchrony between supply and demand is argued to be in the best interests of the students and the society (McMahon 1982)[29]. This entails construction of a market-like situation or quasi-market to ensure that the human capital embodied, i.e., the students are allocated efficiently among the various streams and the institutions. This is apparently non-contestable. In continuation of this, McMahon (ibid., p. 10) argues that a wide variation in the monetary rates of return to education in different occupation is indicative of exchange or allocative inefficiency. This is somewhat problematic as admission to a programme in an institution is regulated as merit is considered an essential qualification rather than the ability to pay for the fees. If the fees in the best of the Universities were deregulated and money power were allowed to reign, the quality of these reputed universities would have suffered erosion in no time. Higher education market is a quasi-market with limited scope for exercising students' freedom in choice of courses and institutions on one hand and producers' freedom in fixing tuition fees and use of university budgetary resources on the part of the HEIs. Unlike consumption goods market where price equilibrates, in higher education, the merit of the students and inclusivity and diversity in the classroom are of crucial importance.

Achieving exchange efficiency requires construction of a regulated market for higher education where sources of funding define public-private divide. Given the inevitable quasi-ness of the market for higher education, there exist many sources of failure, called market failure. The first question is whether a market exists and if so, can a market be constructed to address the sources of market failures?

[29] There is one more concept of efficiency called dynamic efficiency which is also referred to in the context of higher education market. An increase in dynamic efficiency means that the system generates more incentives for fostering innovation in processes and products (Jongbloed 2004).

Achieving allocation efficiency to tackle technical inefficiency

The production efficiency and exchange efficiency constitute the pursuit of efficiency in the neoliberal approach to higher education reform. As the market generates competition, the university governance reform seeks to achieve technical efficiency through the deployment of NPM which consists of accounting of teachers' performances and auditing. This shifts the accountability mechanism from conscience to the state and to the market (Trow 1996) as a university transits from high trust, high autonomy and bottom up approach to the determination university output to low trust, low autonomy and top down approach which circumscribes teachers' autonomy (Olssen et al (2004) based on Codd (1999)). The emphasis on market construction and governance reform to reorient the universities to respond to the market and operate optimally is tantamount to saying that tackling market failure is also a policy to address government failure.

The neoliberals believe in the inevitability of government failure in case of public funded HEIs institutions because of their belief that individuals are essentially self-interest driven. They advocate for construction of a well-regulated education market to widen the opportunities to the market participants, the students and the institutions to exercise their freedom in choice making in their respective domains and to foster competition. The neoliberals believe that the sources of market failures can be addressed effectively and addressing government failure requires changing the traditional way of functioning the government. The political factor involved in this advocacy cannot be overlooked as the state seeks to create more space for the private sector and reduce fiscal burden in the name of achieving efficiency and delivering quality.

Sources of failure in the market for higher education

The market for higher education has to be conceptualised very differently because the HEIs in general are not engaged in profit maximisation as they are for not-for-profit[30]. All components of university output are not valued in monetary terms because markets

[30] In fact, profit maximisation by a university is neither possible nor sustainable because charging high fees and/or cost cutting lead to a compromise with quality.

do not exist in the proper sense and even if they exist, valuation cannot simply be done. The choice making by the students remains restricted as admission is granted by the institution and tuition fees are not flexible enough and it is not desirable too to move towards equilibrium. The HEI is however required to balance revenue with cost with the latter getting adjusted to the revenue mobilised as pointed out by Bowen (1980). The educational processes can be variously organised to comply with cost constraint at the detriment of quality. Compromising with teachers' salaries is one good example found in not only private funded HEIs, but in public-funded too and even evident in poor and inadequate infrastructure facilities.

To identify the sources of market failure, we need to discuss with reference to the two main activities, teaching and research. In mainstream economics, sources of market failures are identified by benchmarking with respect to a perfectly competitive market. A higher education market is an imperfectly competitive market as by its nature, as uniqueness and non-reproducability of human capital embodied in the students and teachers make the teaching and research programme highly diverse. However, rather than a source of market failure, this can be construed to be a much desired virtue of higher education (Chattopadhyay 2012). As discussed above, because of the very intrinsic nature of teaching-learning, the students suffer from information asymmetry which is identified as a source of market failure. The externalities generated by the supposedly transformed students who are public-spirited and socially responsible (McMahon 2004; Marginson 2014) cause a wide deviation between market demand and social demand as in the case of a mixed or quasi-public good (Musgrave and Musgrave 1989)[31]. This under-provisioning of education in the sense of unattainability of social optimum can be addressed by extending subsidies or public funding to the HEIs to help them respond to social demand. Despite interaction between the students and the HEIs, the students are not typical consumers unless they like to become so with illegitimate and unscrupulous assistance from the HEIs. This market is not a typical market as students cannot buy their degrees as they are required to earn their degrees as learning outcomes and research output are jointly produced. Strictly

[31] However, it may be perceived to be low by the society where education is mostly viewed for credentials conferred and for employability. It has been argued by Kumar (2013) that Indian society does not value new ideas and scholarship and therefore the role universities other than professional degrees.

speaking, lack of access to HEIs does not constitute a source of market failure as those who don't gain access to HEIs lie outside the domain of the market. But given that education is not a typical consumption good but it is an essential good for dignified living, lack of access can be also construed to be a source of market failure (Olssen 1996).[32] Dill and Soo (2004) alludes to a source of market failure which is typical of the way a university function because of the prevalent incentive structure. The teachers give more importance to doing research over teaching because research contributes to reputation and recognition mainly because of the weightage given by the ranking parameters and as a consequence the teachers choose to 'satisfice' teaching quality as referred to by Massy (2003). The students however pay a higher price for education of a given quality not necessarily realising what could have the quality if the teachers paid attention to teaching what it deserves[33].

The adverse implications for applying neoliberal approach to higher education policy making for equity and quality have been widely discussed in the literature (Olssen 1997; Marginson 1997; Marshall and Peters 1999; Marginson 2016b). Though it is a daunting task to do justice to the literature, in this section we make an attempt to understand and examine the rationale behind the neoliberal approach which is informed by Economic principles in a developing country context like that of India.

Can market construction address market failures

Appropriate designing of funding mechanism and regulatory interventions with emphasis on transparency in what an institution claims to deliver, a market for higher education can be constructed to gain from efficiency induced by market competition only up to a point as full-fledged market construction is neither possible nor desirable.

[32] Kleiman and Teles (2006) state that "..there is no *a priori* reason to expect private choice to generate an optimal level of investment in higher education or of other goods and services with signalling value". (p. 631). The confusion created here needs to be dispelled. First of all education is not only for signalling values which is in fact an undesirable objective for pursuing higher education but it is prevalent in the given reality. They argue that if the students are involved in the race for credentials where private benefits tend to be larger than social benefit, the government should restrict access to higher education. This is untenable as their argument is premised on the assumption that self-formation is limited in case of signalling which need not be true.

[33] Of course, it all depends on the teachers, the universities, the synergy between teaching and research the teachers perceive in their teaching. In India, teachers are often to be shirking their teaching responsibilities because they teach at coaching centres, and/or they are simply not keen to teach. It is also the case that students are not keen to attend their classes either.

With variation in funding and regulation, the quasi-ness of the constructed higher education exhibits contextual variation[34].

Mode of funding and the quantum of funding determine the nature of a higher education market. Rather than funding HEIs based on their input costs and maintenance costs, the funding can instead be channelled through in the form of education vouchers which is based on rationale of financially empowering the students to help them exercise freedom in making choices for their courses and the institutions, as advocated by Friedman (1962). Tuition fees are expected to rise as the HEIs would come under competitive pressure to deliver quality and attract students to recover cost to sustain their operations. If research funding comes from the industry, the pressure to perform mounts. However nudging the system to embrace competition is no guarantee for quality. To cater to the need of the students who are not always serious in learning outcomes, there exist possibilities of dumbing down of the courses (Nixon *et al* 2011). True assessment of quality can not be left to the students to decide as they have tendencies to show more interest for credentials rather than going through the rigour of learning as discussed above. Under pressure, the institutions would develop a tendency to cut corners and fabricate quality to satisfy the bunch of students who behave more like consumers. Expending more on cost does not automatically lead to improvement in quality unless the students are interested in studying and are concerned to raise their voice to be heard by the concerned institutions. The institutions should have a reputation to attract good quality students and the teachers to begin participation in the competition. The other approach is to link funding with the output or performance of the institutions, such as research output, number and quality of graduates produced and the students' satisfaction survey.

University ranking facilitates market construction by ranking the HEIs according to their performances and disseminating information to the prospective students to make well informed decisions. The ambiguity and uncertainty involved in assessment of true quality of a multi-product firm what a university is, can be addressed by ranking which

[34] Jongbloed (2003) proposes to analyse the market structure in terms of two sets of freedoms of four types each granted to the students as well as the HEIs. The four freedoms to the students are freedom to choose course and institution, to gather adequate information and fees correspond closely to cost recovery levels. The HEIs have four freedoms: to utilise resources at their disposal, freedom of entry and exit, to offer courses as they wish and to determine the level of tuition fees. (also in Teixeira *et al* 2004) Chattopadhyay (2009) has discussed this approach in the Indian context.

makes listing of HEIs possible in terms of quality as conceived by the ranking agencies.

Can Market construction improve quality?

The nature of competition is markedly different from that of a typical market. Competition in a higher education market is selection-based which produces S-efficiency in comparison with exchange-based, i.e., E-efficiency as in the case of commodity market (Glennerster 1991; Winston 1999). The inputs, that students and the faculty, are optimising decision making agents and hence they decide which institutions they would like to get associated with subject to the selection made by the HEIs. The top ranking institutions attract the top quality human capital embodied in the students and the teachers which enable them to produce good quality students and research output and generate funds which reinforce the tendency to be more selective rendering the hierarchy among the institutions rigid and stable.

Apart from measuring the performances of the universities, the reason why the policy makers favour the best of the universities to compete globally and feature in the world ranking is not only to benchmark quality but also to improve the quality of university performances albeit as per the indicators of the ranking agencies. However, this aspect is a little tricky. The neoliberals argue that valuation of output or what a university produces is a prerequisite to fix accountability and improve governance. This is where an educational production function can be invoked to understand how ranking could impact on quality as defined by the ranking agencies.

Quality of output = f (quality of human capital (HC), quality of physical infrastructure (I) and quantum of financial resources (F))

The quality of output is primarily determined by the quality of human capital with support from the other two inputs. Uniqueness and non-replicability of HC and given that the HC embodied are decision making agents in a market which functions based on S-efficiency the skewed nature of distribution of HC across the HEIs is inevitable. The improvement in the quality of output can be attributed to HC embodied, students and teachers and governance reform which seeks to establish a stable connection between HC and university output as indicated by ‘f’ in the EPF. As argued

(Chattopadhyay 2012; Chattopadhyay and Nandi 2022) because of lack of motivation and shirking and 'satisficing' behaviour by the faculty and even the administrative staffs (Gilead 2018), the f(.) is rather weak and unstable. This includes the application of corporate principles which strengthens the functional form of the educational production function in the form of implementation of NPM styled governance. For two universities, A and B at time t, university output (UO) measured in terms of ranking parameters, F and I refer to financial resources and infrastructure.

$UO^i_t = f^i (HC^i_t, F^i_t, I^i_t)$ where i = A and B

Let us assume that university A is ranked higher than B as HC^A is greater than HC^B.[35] As both the Universities undertake NPM in the face of competition, Output of University A continues to remain higher than that of University B.

However, as Teichler (2011) points out that there is hardly any evidence that ranking has led to any improvement in the quality of the system of higher education as a whole as mobility within the system declines, and there develops a tendency to compromise with the balances of regional development and inclusiveness undermining the public good character of the universities.

We would now like to examine two other policy aspects of Neoliberal approach to higher education reform in the context of India, one, whether private participation can lead to an improvement in quality and whether NPM styled governance reform can improve the functioning of public HEIs and quality of output.

Can private sector participation improve quality?

As the demand for professional education continued to grow in India and concomitantly the inadequate response to set up public funded institutions in the field on engineering, medical and management, the widening gap was covered up increasing private participation driven mostly by commercial considerations. This may appear to be a bit puzzling as education is not for business as profit making was not allowed in India. The reasons for failure to deliver quality by the private and the public

[35] Some measure of HC for a particular university can be obtained from the data shared by the world ranking agencies. The proxies can be per faculty research output, number of highly cited researchers, etc.

are however different. The private players could siphon out profit illegally by taking recourse to accounting manipulations (Chattopadhyay 2012) like artificial escalation of cost including salary bills. Options were available for some of the private HEIs to make money through third party profit in business ventures located within the campus. Costs get adjusted to revenue, and costs could be kept at a low level while delivering education that led to the delivery of poor quality education. This is not to deny that some privately funded universities are now doing well and some of them have been accorded the status of Institutions of Eminence by the Government of India (GoI (2017). The issue is why some of them are doing well while many others did not live up to expectations but continued to exist. The quality delivered by the private HEIs depends on two main factors: the endowment fund set up or donated at the time of setting up of the institution, and two, the motive which determined both funding and the extent of scruples imbued in the educational processes since quality depends heavily on the educational processes, which are prone to subversion and cost saving but on paper, processes were followed and rules and regulations were complied with[36]. Cost minimisation is inimical to delivery of quality as quality of output remains imprecisely defined and misleadingly projected too[37].

The challenge faced in the delivery of quality education if an institution runs on cost recovery model can be explained as follows. Following (Winston 1999) we can write the balance sheet of an educational institution as given below,

$$p + g + dr = c + v$$

where, p is the fees paid by the students, g = grants given by the government, dr = donative revenue or endowments; c = cost and v = surplus. For a purely privately institutions

$$p = c - dr$$

[36] Paying teachers lower salaries than they are entitled to as per rules and norms, employing contractual teachers, holding the PhD defences online to save costs of travel of the examiners are some of the instances followed in many Indian HEIs which make delivery of education look more like ritualistic processes. All this in the name of cost cutting leads to a compromise with quality.

[37] Say, in case of electronic gadgets, quality is precisely defined in terms of exact specifications which help the buyers to make informed choices. In case of higher education, costs are adjusted to the revenue (Bowen 1980; Massy 2016) and this is possible because educational processes offer plenty of scope for cost cutting which are tantamount to subversion as credentials awarded do not reflect these compromises.

If dr is zero, it has to be run on cost recovery mode. If fees are kept high, merit and accessibility of students get compromised in selection of students. If dr is large, the costs can be high and/or p can be lowered too to attract merit and expand the scope for students from the margin. .

When costs are curtailed and quality stands compromised, either the students accept as they have no choice to readily switch institutions, or they accept voluntarily because they are concerned more about degrees to act as signals rather than learning. It is the peculiarity of an education market that the mediocre quality institutions too can survive because of the selection mechanism where the students are also ranked depending on their performances in the entrance examinations.

In absence of g, a privately funded HEI can deliver good quality if dr is large and there is a genuine mandate and willingness for achieving quality in the longer run. Large dr helps in budgeting for high c and/or low p which implies low tuition fees and/or high scholarships to students which are both supportive of delivery of quality output. A large endowment helps a HEI to make strategies for expansion too.

For a public funded HEI, when there is a cut in public funding (a cut in g), the options are mainly in terms of cost cutting as the universities continue to function with vacant faculty positions and inadequate infrastructure.

Government failure Subversion of the educational processes, corruption and quality

Academic corruption of various kinds remain entrenched in a majority of the universities (Chandra 2017; Chattopadhyay 2012; Chattopadhyay and Nandi 2021). Nepotism in faculty recruitment, poor quality teaching, poor leadership (Chandra 2017) are orders of the day in many Indian HEIs. Since educational processes intrinsically are vulnerable to manipulation and subversion anywhere in the world, in absence of high moral values in pursuit of scholarship, instances of academic corruption proliferate.

Political interventions in appointment of the Vice Chancellors (VCs) and existence of power centres within the academia-administration set up (Bhushan 2019) have also

adversely affected university governance. The template designed by the University Grants Commission (UGC) (GoI 2016, 2018) for regulating faculty promotion and faculty recruitment for calculating the Academic Performance Indicators (API) is an example for straightjacketing with complete disregard for the differences in university mandate, discipline wise differences and individual differences (Das and Chattopadhyay 2014) not only restricted faculty autonomy but it also compelled faculty to publish in fake journals in the face of capacity constraint compounded by inadequate infrastructure and for some, heavy teaching responsibilities. A dynamic list of journals called CARE (Consortium for Academic Research and Ethics) is being maintained by the UGC to ensure uniformity in assessment, and curb mushrooming of fake journals. The UGC has brought out regulation to control plagiarism and unethical practices (GoI 2018c).

Part C Reflections on the National Education Policy 2020 (NEP)

The Essence of the National Education Policy 2020 (NEP)

The primary focus of the NEP (GoI 2020) is to completely overhaul and reorient the higher education regulatory system by giving autonomy to the students in their choice making of courses and institutions as well as autonomy to the HEIs to offer new courses and programmes and evolve as independent and autonomous institutions within a period of ten years. The primary objective is to orient the students towards skill based education to be achieved by expanding the scope of online education and digitisation of the teaching-learning system to facilitate students' mobility. It will also ensure a low cost expansion of the HE system to achieve the target of raising the Gross Enrolment Ratio (GER) from the existing 28 percent to 50 percent by 2030 with 50 percent of the students across the levels should have an exposure to vocational education. The steps mooted in the NEP for reform of higher education indicate an attempt to construct a regulated market by removing extant fragmentations in the HE system by encouraging students' mobility across different streams of education and across the HEIs while at the same time expanding the scope for cooperation and collaboration both nationally and globally among the HEIs. The NEP has classified higher education as a quasi-public good while recommending an increased public funding for the education sector as a whole to 6 percent of GDP over a period of ten years which has been a long standing demand. In all likelihood, this target is unlikely to materialize in view of the perennial fiscal crunch faced by both the Centre and the states as evident from the push for raising resources from extra-mural sources, cost recovery and even borrowing. At the same time, the Centre has budgeted for dedicating more resources for the Institutions of Eminence (IoEs, or, World Class Universities, WCU) in the latest Union Budget for 2024-25[38]. These IoEs are mandated to compete globally and feature in the list of top 100 universities in global ranking and development of digital infrastructure, in particular (GoI 2017).

[38] The Budgetary allocation for 2024-25 shows an increase by 20 percent over the Budgetary allocation for 2023-24.

Autonomy to the students and Academic Bank of Credits (ABC)

The ABC allows for opening up of a digital account of a student where courses opted for and the credits earned will be digitally stored. This will help the students to do courses from a wide range of courses across the streams and across the institutions, 'anywhere and anytime' and to claim award of credentials like diplomas/degrees as the case may be, once the requisite credits have been earned. The students are being given the autonomy of free entry and free exit subject to the programme specific admission criteria to be adopted by the HEIs. In a way they are now liberated from the departments/schools where they are admitted for enabling them to chart out their own pathways of higher learning both in terms of courses from general and vocational and duration of their study. A meta-qualification framework[39] is being prepared to facilitate the students' mobility across various streams ostensibly to nudge the students towards skill based courses by integrating general education with vocational and skill based education.

Other than orienting the students towards skill education, this will also serve two main purposes, one, to promote the culture of multi-disciplinary education which is required for a holistic education as emphasized in the NEP, and, two, to enable the students to respond to the changing demand for skill in the job market by choosing relevant courses in order to enhance their employability.

Giving autonomy to the institutions

A major significant departure from the past is in the policy that allows all the institutions to evolve as independent institutions phasing out in the process affiliation of colleges[40]. The institutions are now allowed to offer programmes in tune with the restructuring of the Under-graduate (UG)/Post-graduate (PG). The existing Three-year UG

[39] National Credit Framework (GoI 2022c) and Higher Education Qualification Framework have already been announced.

[40] This has to be understood in the context of the existing provision of Graded Autonomy (GoI 2018a) which seeks to bestow autonomy in a graded manner depending on the performances of the HEIs in terms of accreditation score and global ranking. The provisions of autonomy includes selection of students, faculty recruitment, financial autonomy and offering of courses if the NAAC score is above 3.50 out of a maximum of 4.00.

programme is to be extended to a Four-year UG and Two-year PG will be curtailed to a one-year programme in due course of time[41].

University governance reform

The Institutional Development Plan (IDP) involves collective planning by the university involving the teachers, students and the administration to envisage the future academic activities. To what extent the formulation of IDP will actually be a collective process will depend on the implementation of the proposed governance structure and particularly on the role the Board of Governors (BoGs), exercise of leadership of the HEI and the funding mechanism. The apparent of the faculty will remain circumscribed by competition for grants and the mission of the university to be determined by the university leadership to navigate the emerging highly competitive scenario. However, this competitive scenario opens up many opportunities to be facilitated by increasing reliance on online education but the overall competitive ambience will make the faculty and the university strategic in their approaches.

Internationalisation: looking for cooperation in a competitive set-up

Internationalisation of Indian higher education has been given a big push in the NEP. The NEP emphasizes on the India's role in the ancient past in the field of knowledge generation and dissemination as evident from some of the universities like Taxila which was established in 700 B.C. and Nalanda which was established in 700 A.D. However, India is no longer an attractive destination for the foreign students. The students who come to study in India is barely 0.1 percent of total students enrolled compared to the outbound ratio of 1.0[42]. India has opened the border for foreign universities to set up branch campuses and the Indian Institute of Technology Chennai (IIT) has set up an international branch campus (IBC) in Zanzibar, Africa. Though one

[41] Apparently, this move will make the Indian HE system in sync with some of the countries in the West. The apprehension is whether this policy push will dilute the rigour in view of the limited capacities of the colleges particularly in terms of expertise and orientation of the teachers to teach research based courses at the fourth year of the UG.

[42] The reputation of the top Indian HEIs in terms of Global Ranking is rather poor. This could be one possible reason for a very low inflow of foreign students. In terms of global ranking, the top Indian HEI, the Indian Institute of Science Bengaluru was in the range of 301-400 in terms of ARWU, in the range of 201-250 in the THE and 155 in the QS Ranking for 2023. The ranking of the Indian Institute of Technology (IITs) and a few top Central Universities featured in the range of 601-700 in the ARWU.

of the rationales is to rein in the increasing outflow of students for studying abroad, it is unlikely to materialise any time soon as the rate of return from higher studies abroad has to take into account the possibility of settling abroad which offers a higher stream of incomes and a better standard of living in relative terms. As per the latest UGC Regulations (GoI 2022b), the Indian universities can now enter into collaborations in research and teaching with the foreign universities to offer Twining, Joint Degree and Dual Degree programmes. By opening up the border, the competitiveness in the Indian higher education system will gradually intensify among the top HEIs. Collaborations among the Indian universities with the foreign universities would go up[43].

The regulatory framework

The NEP has suggested a wide range of reforms which include setting up of an entirely new set of regulatory institutions to overhaul the policy interventions in the Indian higher education system. The overarching authority, Higher Education Commission of India (HECI) as an umbrella institution will be supported by four pillars, the Higher Education Grants Council (HEGC) for funding, the National Higher Education Regulatory Council (NHERC) for the regulation, the General Education Council (GEC) for quality or specifically to regulate and standardize learning outcomes, and the National Accreditation Council (NAC) as a 'meta-accrediting body'. Arguing that regulation has failed to achieve its desired goal by stifling innovation and creativity among the teachers, the NEP argues for 'light but tight' regulatory interventions. Regulatory interventions would continue to treat the private and public sector at par with obliteration of any distinction between the general and technical education. Presumably, successful implementation of the recommendations would entail coordination between the Union and the states and states' cooperation in view of a centralizing tendency inherent in such a regulatory architecture in a federal country like India where education is included in the Concurrent List of the Indian Constitution. Given the huge tasks pending for accreditation, the NAC by shifting to binary grading

[43] It may be noted that an IBC of a foreign University set up in India cannot emerge to be even a close replica of the University abroad because of academic ambience constituted by the campus facilities and campus experiences. Intrinsic differences between the students and teachers in both the campuses, in terms of the very nature of HC and interactions among them. It is likely that the foreign universities will be mostly interested in offering market oriented employable courses which will create hierarchy and effect further differentiation within the system.

system is expected to play a key role in quality improvement by standardization and universal coverage[44]. The GEC will be entrusted with the responsibility to oversee the functioning of the 'professional councils' along with the issue of credit transfer and equivalences to facilitate the students' mobility between the general stream and the vocational stream as well as across the institutions.

The NEP recommends that the regulatory interventions should be minimalistic and at the same time the fewer and lighter regulations should be effectively and sincerely complied with as the NEP advocates 'light but tight' regulations. Exercise of leadership at the vertical level has to play a vital role as it would entail negotiation with the autonomy exercised at the horizontal level by the teachers at the departmental level where they engage in teaching and research as experts in their respective knowledge areas who deserve autonomy and desire autonomy too. The university has to work towards fostering a culture of excellence and innovation, the NEP has urged. Though the teachers assume a central role in the functioning of the universities, the overall approach of the NEP is one of student-centric reform as their exercise of freedom in choice of courses across the institutions would determine the extent of institutional autonomy.

Exercise of autonomy in the face of funding constraint

There are two kinds of issues related to autonomy here. One is the possible conflict between academic autonomy and financial autonomy, and two, the faculty autonomy and the institutional autonomy. For the former, exercise of institutional autonomy requires adequate funding for the institutions as input based funding provides for greater autonomy than output based funding. Raising resources from alternative sources which may come with strings attached, may interfere with institutional autonomy with each source having different implications for the scope of exercising of academic autonomy. Extra-mural sources of funding also has the potential to open up new vistas for the university. The second issue may arise when the institutional

[44] In the recently announced accreditation system (27 January, 2024), binary grading system has been proposed which would require the universities to transit from "level one" to "level five" where the level five is to get the tag of Institution of Global Excellence for Multi-Disciplinary Research and Education.

autonomy entails the university community in their academic engagements to be in sync with the objective of realization of institutional mandates.

There are two major sources of public funding from the Union government, the HEGC as proposed and the National Research Foundation (NRF) as the sole body for funding research. Allocation of funds among the HEIs would be made based on what they promise to deliver as articulated in the IDP. A major chunk of funding for research is hoped to be contributed by the industry which is expected to make research meaningful and relevant for the country. The base for research in STEM in Indian HEIs needs a significant rise in public funding. Given the paucity of public funds for the higher education which has remained a perennial feature for almost every government across the globe, competition among the institutions for maximizing their share in public funding is likely to intensify while the higher education budget of the Centre indicates an increased reliance on borrowing among the Centrally funded HEIs[45] and allocation of more resources towards the IoUs (or WCUs) comparatively speaking.

Categorisation and differentiation

The NEP has suggested three categories of the HEIs, the Research-University, Teaching-University and the degree granting Autonomous Colleges (ACs). Since funds for research are to be allocated mostly on a competitive basis, the best of the universities are likely to appropriate a chunk of the research funds even in a system designed for equitable allocation. While this categorization may be indicative, but the NEP desires that Teaching-University and the ACs to strive for excellence to acquire the status of Research-University. However, heavy teaching load and inadequate infrastructure particularly digital infrastructure in the majority of the HEIs, fostering competition for this progression is likely to have a very limited effect. The overall impact would be accentuation of the existing hierarchy in the higher education sector. This would partially nullify the benefits accruing to the socio-economically disadvantaged groups arising out of the ongoing massification of Indian HE as the

[45] Higher Education Financing Agency (HEFA) is a joint venture of the Ministry of Education, GoI, and Canara Bank with an agreed equity participation of 90.01 % and 9.09% respectively for financing creation of capital assets in premier educational institutions in India. The objective is to help the top-ranking HEIs to develop their academic and physical infrastructure quality to enable them compete in global ranking. (Source: www.hefa.co.in).

students from the top ranking HEIs stand to gain in the job market as higher education credentials become 'positional goods'. In any case, due to the inherent differentiation among the HEIs, there does not exist a level playing field to make this policy induced competition effective in improving quality in a fair manner. In absence of a level playing field as evident in capacity constraint (or inadequate level of HC) of the teachers as concurred by Bhushan (2019) and Marginson *et al* (2022) and infrastructure and resources constraint, fostering competition to reform the HE sector may not be effective and adverse impact of consolidation can be very high. One measure of capacity constraint is reflected in the per teacher publication. India now stands third in the table of nations with a high rate of growth of around 13.7 percent per annum arranged in terms of publication after USA and China with UK and Germany being in the fourth and fifth position respectively (Universities UK International 2023). If we make a rough assessment of per faculty publication for the entire higher education of 1.5 million teachers, it is only 17-18 per 100 faculty (Marginson *et al* 2022). The inefficacy of the existing UGC Regulations (GoI 2018b) to improve quality can be essentially attributed to capacity constraint as mentioned earlier. The assessment of the policymakers has always been that teacher autonomy has been abused and the teachers functioned sub-optimally leading to suboptimal functioning of the institutions as pointed out indirectly by GoI (2019)[46]. The academic ambience that prevails gets worse due to political interference. Role of peers in the academia remains greatly undermined in the Indian academia as networking is mostly based on the principle of reciprocity with disregard for scholarship.

The transformative role to be played by the teachers is getting eroded, teacher-student relationship is getting weaker and values to be inculcated as envisaged in the NEP may become empty words due to heavy thrust given to skill orientation. However, some faculty have excelled in teaching and particularly in research notwithstanding all

[46] In India, the public funded universities do not have their own independent template of teachers' assessment of their performances. This is possibly because of the apprehension that giving autonomy to the public funded universities may lead to abuse like favouritism and nepotism while at the same time, uniformity in recruitment and promotion across disciplines and HEIs requires use of same template. The professional HEIs like IITs and IIMs are allowed to have their own schemes for faculty recruitment and career progression. The template does not adequate distinguish between HASS and science, and among the HEIs (Das and Chattopadhyay 2014). This approach to straight-jacketing and standardisation has caused more damage for those who are above average and who strive for achieving excellence.

these constraints. It is in this context the NEP recommends Fast Track System to run parallel to the existing system which would incentivise those faculty who have performed exceedingly well. In academic domain, flexibility to recognise and incentivise scholarship should be the guiding principle[47].

Commercialisation has been inimical to the delivery of quality education, the NEP has noted. If the private sector is commercially run, and without adequate support from endowment and unconditional funding, the objectives of quality and inclusiveness can not be achieved by the expanding private sector participation.

Reflections on the NEP from the perspectives of Economics of Education

The institutionalisation of the ABC together with setting up of a meta-qualification framework is supposed to usher in a major change in the very purpose of education against the backdrop of a weakening linkage between education and the job market. The underemployment and unemployment particularly among the graduates has continued to remain a major concern for the policymakers. Focusing on skill orientation of the students and orienting knowledge generation towards the need of the economy as expressed in the demand from the industry as mooted in the National Research Foundation (NRF), the NEP can be considered to be a component of the economic policy of the government. We will reflect on the NEP by drawing on insights from Economics of Education in the following sections.

Is ABC an application of the HCT?

The implementation of the ABC is crucial to the realisation of the objective of the NEP which is to encourage skill-based education to respond to the changing demand for skill emanating in the job market and entrepreneurship to tackle the mounting problem of unemployment and underemployment and more so among the graduates. In the conceptualisation of the ABC and implementation of the Meta-qualification framework,

[47] Though incentivisation of academic activities is not the best way to run a university, incentives can however, be given in non-monetary terms. Excellent performances can be recognised by the University authority and the university authority should create congenial conditions for the teachers to strive for achieving excellence.

the students are now being viewed as life-long learners which would require them to remain life-long investors in their human capital formation in their quest for remaining job ready. This is necessitated, as the policymakers think, in the wake of changing demand for skill as generative AI occupies more and more space and advancement in deep-tech sectors in triggering changes in organisation of production and demand for skill labour. The students are now expected to satisfy the neoliberal condition of "perpetual human responsiveness" (Olssen *et al* 2004; p. 138). This depiction of the students' pursuit is essentially one of application of HCT but somewhat different from the typical portrayal of a student in the HCT in the sense that the student's rate of return calculation would have to be continuously revised now to guide her decision making, as the stress on 'anytime and anywhere' learning will become a continuous exercise as the students would remain engaged in exploring possibilities for opting for doing courses in high demand. The focus on skill formation makes the NEP a component of economic policy and it explains the political rationality in the context of high unemployment rates particularly among the graduates. Brown *et al* (2020) provides a critique of HCT on the basis of the reality of job scarcity rather than labour scarcity which they argue lead to the misplaced emphasis on the supply of skilled labour through in investment in education and skill formation which may entail government expenditure on training too. Brown *et al* (2020; p. 141) argues for drawing a distinction between humans as capital and humans as capitalizing where a broader notion of capital is proposed, "..individual knowledge, skill and other assets as a source of direct and monetary rewards". They rightly say that the scope for exercising freedom by investing in human capital will not be available to the majority who will be employed in low skill jobs. The very embodiment of human capital does not necessarily mean translation of asset to value unless there is a demand for it. The ABC offers a typical vision of HC in terms of skill but the individuals are also expected to be capitalizing while the majority will be looking forward for jobs in the face of job scarcity. The political rationality of the government is similar to what Marginson stated more than two decades ago (Marginson 1997a), "By securing individual investment behaviour in education, governments ensured not only that participation in education would regulate itself, but the labour market outcomes would be partly depoliticised" He quotes Gordon (1991, p. 24, 30, 44-46) to argue that unemployment will become

acceptable to the state (and even to the society, I think) as it "..can be plausibly attributed to the wide diffusion of the notion of individual as enterprise".

Thinking of University governance reform differently

The primary objective of University governance reform is to ensure optimal functioning of the university in compliance with the rules and regulations which are in force to achieve technical efficiency. The objective of IDP is no different either. Autonomy given to the HEIs under the policy regulation of Graded Autonomy (GoI 2018a) in conjunction with the NEP will contribute to further differentiation with the system. However the segmentation of the sector in two tiers, the elite and the remaining at the bottom of the education pyramid as discussed by Marginson (2016a) and a possibility of emergence of a bi-polar market (Chattopadhyay 2020) in the context of NEP should be understood in view of the two developments. The operation of the selection-based efficiency a hallmark of a higher education market has remained somewhat limited in the Indian HE system. The majority of the faculty still prefer public funded Universities to work with for job security mainly. The recruitment of the teachers in the public funded HEIs is determined by the reservation policy of the government whereas, the private funded universities can exercise full autonomy in selection of the faculty and their pay packages too. Due to skill orientation, the elite universities will remain coveted only for the students aspiring to do Masters and PhD. The binary grading to be adopted by the NAC and performance based fund allocation will contribute to the accentuation of the hierarchy. The emerging development is similar to what was argued by Marginson (2016a; p. 173) "..governments deploy competition to expose weak institutions and drive mergers, while evading responsibility for potentially unpopular outcomes that can be presented as natural outcomes of the free interaction of the aggregated individual market decision". The financial autonomy bestowed cannot be equally exercised by all the institutions given their respective constraints and mandate. Formation of clusters among the collaborating universities at the national and international level is also supposed to play a role in consolidation of the number of HEIs which are very small in sizes[48]. While the fragmentations in the higher

[48] The average enrolment as reported by the 43796 colleges (out of around 55 thousand) who responded to the survey conducted by the GoI is in fact terribly low. The average enrolment for the colleges were 646 for all the colleges combined, 1057 for the government colleges, 1097 for the private

education market will get substantially reduced with the implementation of the overarching regulatory framework and Meta-qualification framework, high costs of education and the delivery of quality education will get more concentrated at the top of the institutional hierarchy.

The IDP based governance reform is expected to motivate the students and the teachers to deliver their best with optimal and judicious utilisation of time given the infrastructure facilities but financing constraint would become a binding constraint as it can impinge on different types of HEIs in varying degrees. The leadership will assume more importance in guiding the universities to navigate through the emerging competitive scenario which will limit faculty autonomy in teaching and research. Students' mobility requires standardisation of courses for credit transfer which would restrict the scope in curriculum design. Industry funding will limit autonomy in choice of research areas and in conduct of research. There is no substitute of spending time to improve quality of HC embodied and their optimal utilisation to improve quality no matter how good and just the policy design is. Capacity build-up of the students and the faculty given availability of infrastructure and financial resources is the key to improve quality and rejuvenation of the sector. The most crucial requirement for transformation of Indian higher education is how to overcome capacity constraints and how to ensure motivated academic engagement.

The nature of Market construction under the NEP

Arguably, the student centric approach of the NEP seeks to construct an education market empowered by students' mobility to be facilitated by blended learning. However, this is not a full-fledged neoliberal market as funding will continue to be directed towards the universities and not channelled through the students in the form of vouchers. The mode of funding of course will shift more towards output based funding associated with a push for cost recovery and even borrowing. How this sort of market construction will help in ensuring wider access and improvement in quality is a major question in the context of ongoing massification we need to address. The market is supposed to achieve allocation efficiency where merit is prioritised over money or

aided and only 465 for the private aided. Source: All India Survey of Higher Education (AISHE) 2020-21, Table 4, p. T4. MoE (GoI 2022a).

affordability. The Central University Common Entrance Tests (CUCET) is a new initiative by the Government to reduce the transactions costs of applying to various universities separately as this single test is conducted to offer admission in the majority of central universities. This has widened the choices of the students to reveal their preferences for courses and institutions resulting in an increase in the diversity in the classroom.

Is this system fair to all the students from different socio-economic backgrounds? Endogeneity in choice making (Hogan 1997) implies that all students are not equally placed to seize the opportunities despite digitisation which takes classroom to the remotest part of the country. Though digital divide is being addressed, disparities across the different contexts of the students remain acute in a developing country context where geographical divide, economic and social divide and their intersectionalities add to the complexity in the choice making processes (Varghese *et al* 2022).

We also need to grapple with the very concept of what is meant by quality in higher education. The focus is very clearly laid on learning outcomes defined in terms of its connection with practice. A move away from rote learning was rightly felt to be much desired for. Students have shown a tendency for grade maximisation when they are given choices as observed in other countries (Nixon *et al* 2011; Molesworth *et al* 2011). The attempt so far indicates that the message is a mixed one, blending holistic education with skill-orientation with the possibility of the latter mitigating the objective of the former.

While a national level regulated market is being developed by removing barriers across its different segments (public-private, general and vocational, national and global) new forms of markets are also emerging. Kenway *et al* (1993) predicted in the context of Australia that the ties among the state, market and the ICT were getting stronger as the ICT realigned space and time. A similar situation is emerging in India as new forms of market are sprouting outside the state regulated terrain in the informal space with the entry of the EdTech companies and MOOCs and other digital platforms with the allowance of credit transfer and implementation of Meta-qualification framework. Marginson (1991) argued that the duality between state and market and market and non-market were no longer tenable for proliferation of various forms of

knowledge and training outside the Universities driven largely by software developments and electronic media. Unbundling (McCowan 2017) has emerged as a new phenomenon which has created possibilities for merger or formation of clusters, and collaboration and developments of micro markets which interact with the national level market. Education has been de-institutionalised and it is no longer limited to formal face to face interaction in the physical space. The National Credit Framework (GoI 2022a) has expanded the scope for informal learning which has the potential to award credit to any learning from even workshop and internship subject to certain conditions. What Kenway *et al* (1993) observed, the same is likely to materialise in India: “Educational democracy is redefined as consumer democracy in the education super market. Buying an education becomes a substitute for getting an education”. (p. 116).

Negotiating with crucial trade-offs efficiency, equity and quality

While approach to higher education reform seeks to achieve two kinds of efficiencies, technical and allocational, there may arise two kinds of trade-offs in the process, between efficiency and equity and between efficiency and quality. The negotiation between efficiency and equity depends on funding, in particular, adequacy of funding and mode of funding, admission policies among other factors. As indicated, efficiency is only a necessary condition for achieving quality. There exist possibilities where efficiency is achieved on paper as a compromise with the educational processes. The increasing presence of foreign universities and internationalisation and the IoEs will introduce another kind of trade-off between localism and globalism. Increasing collaboration and increased presence of foreign students and researchers without affecting the *status quo* may infuse energy and positivity in Indian higher education but only to a limited section of the sector who are prepared and all ready to gear up to confront the new challenges. The possibility of trade-offs cannot be discounted as some universities would gain from internationalisation and attain global status and recognition. The best of the universities also have to negotiate with their objectives of catering to the local needs with the imperative to meet the global demands in both teaching and research.

Some of these likely developments will augment the publicness of higher education as for example by raising the GER to 50 percent but since the differentiation is likely to increase, there exists a possible mitigation of some of the benefits arising out of increased enrolments. The changes in the job market will trigger changes in the delivery of the HEIs and their responsiveness will determine their survival. The supply side of this online education with the entry of the reputed Ed Tech companies, will improve access but inequity may rise because of the differentiation in the quality of education and their brand values.

Though the concept of efficiency is of limited applicability in case of a university, there is nothing wrong to make policies to minimise wastage of resources and to ensure judicious and optimum utilisation of time, to ensure a better allocation of financial resources within the HEI to achieve the goals set as pointed out by Massy (2016)[49]. Costs get adjusted to total amount of resources a university can marshal as pointed out by Bowen (1980). It is therefore the ability of the university to garner additional resources while downplaying cost recovery would determine delivery of quality and the possibility of survival. Maximisation of university output and minimisation of costs both are inimical to quality and even for attaining equity objectives for different sets of reasons. This competitive pressure needs to be dealt with by all the HEIs being endowed with different capacities.

Concluding observations

This paper has been developed around three main arguments revolving around the importance of the concept of human capital. In the first part, we argue that insights from Economics of Education, in particular, the very concept of human capital and its distinctive features could help us explain some crucial aspects of the higher education sector. The concept of human capital continues to hold enough explanatory power though the role of rate of return to guide students' investment decisions in practice is highly limited. The paper critically evaluates the main propositions of the Human

[49] As noted earlier, the conceptualisation of university mission and its operationalization is difficult in presence of resource usage in multiple overlapping activities and cross-subsidisation, but some kind planning to allocate resources across the various university activities has become imperative for the University and college leaders as framing of IDP has to be done subject to the resource constraint faced by the university.

Capital Theory in the context of a developing country like India. In the second part, we examined critically the Economic rationale behind the Neoliberal approach to higher education reform. The discussion focused on the concepts of technical and allocational efficiency to argue that the use of these concepts makes sense only up to a point in view of the specific distinguishing features of education, an educational institute, e.g., a university and in case of a higher education system which can be conceptualised as a higher education market. This is because education is neither akin to a typical commodity nor should it be commodified in the name of higher education reform. The same argument applies in case of a university and a higher education market.

The two major problems the Indian higher education is faced with are, first, the failure of the majority of public funded institutions to deliver quality education due to sub-optimal functioning of the HEIs as noted in the NEP, and second, a major part of the private sector too has failed to deliver because of commercialisation. These two failures are examined from the perspective of Economics focusing on the concept of human capital and its role in education production function. The paper ends with an analysis of the ongoing higher education reform in India as mooted in the NEP from the insights gained from Economics of Education. It is argued that unless conditions are created to develop the capacity of the faculty and the students, and public funding is increased to create a level playing field among the widely varying HEIs to the extent possible, merely by fostering competition in a regulated market for higher education, the overall situation of Indian higher education is unlikely to witness any substantial improvement. The efficacy of a massive thrust given to skill orientation in the NEP is also likely to remain limited in view of the endemic problem of job scarcity. Possibly a bi-polar market will emerge with increased differentiation which would make the ongoing massification facilitated by the ICT somewhat less meaningful too. The NEP seeks to construct a regulated market by giving autonomy to students and institutions. The IDP as envisaged is apparently a better way to improve governance and functioning of the HEIs, but in view of resource constraint, the gains are likely to be appropriated by a limited number of institutions.

However, as Academic Bank of Credit (ABC) and the National Credit Framework gain traction in the changing Indian higher education landscape triggered by the policy

changes, the possible implications will manifest in the weakening of the teacher-student relations, repurposing education and university primarily for skill despite thrust on imparting holistic education which may undermine public good character of higher education and self-formation of the students. Informed choice making by the students will remain difficult given wide contextual variation and changing demand for skill. In view of the disparities in India coupled with digital divide, the students with privileged background stand to gain more by seizing the new but limited opportunities. As technology is changing rapidly, students are expected to remain invested in life long earning. While widening the choices may be construed as a good step to establish connection between education system and the job market in the wake of rising graduate unemployment, the efficacy of such a policy move remains uncertain. The emerging demand for courses with free mobility being allowed between general and skill based education will determine the fate of many courses and programmes and even leading to possible closure of some departments/centres in some colleges and universities over time.

The application of economic principles as reflected in the Neoliberal approach to higher education reform is problematic as it compromises with the purpose of education, disregards the intricacies and complexities of the educational processes as required for regulation and setting up of accountability measures. The policy would usher in transformation in the students and the teachers and in their academic engagements, teaching and research. In a developing country context, the underlying conditions that prevail in the HE sector do not support the application Neoliberal logic. In the face of limited public funding, growing participation of the private HEIs and vocationalization of unequal type may magnify the adverse implications of the regulated HE market for fostering social mobility and addressing the objective of equity.

This paper has sought to make an attempt to examine the main propositions of Economics of Education pivoting around the concept of human capital and their relevance and applicability to understand some of the aspects of the HE sector particularly in the context of a developing country like India. The insights gained from Economics of Education are useful but the policymakers should be careful in applying economic principles in reforming higher education because if the underlying conditions

are not obtained in the reality, the expected outcomes of reform are unlikely to materialise. The approach, it is argued in this paper, should be to teach Economics of Education critically with an exposure to other social science disciplines as the boundaries between economics and other social sciences like Psychology and Sociology are blurred. This requires broader understanding of Economics as a social science discipline, ideally from a heterodox perspective to do justice to understand and study the complexity of the higher education sector.

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