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Editorial

In our renewed efforts at improving the quality of articles and expanding the reach of the *Orissa Economic Journal* several steps have been taken, including the increase the frequency of issues per year and changing the layout to suit to standards of refereed academic journals. These have taken some time and required much deeper attention. With the introduction of a stricter review process articles go through the scrutiny of experts in the relevant areas as chosen from across the country and even abroad. Articles are typically revised before being accepted. This issue of the *Orissa Economic Journal* includes articles of diverse foci and authors from across Indian states.

The opening article (by K.T. Rammohan and Abitha Ramakrishnan) takes a journey, of over one-and-a-half century through the emergence and consolidation of economics as an independent discipline in Indian colleges and universities. The painstaking enquiry into the challenges facing this rather complex and evidently less-researched process of adapting a largely occidental academic discipline to suit to the Indian local and national contexts brings forth interesting dimensions of curriculum-building in colonial India. The discipline that was groomed within influences of the colonial and nationalistic fervours seemed to have lost substance by the 1960s by when studies of local, rural and agrarian economies had come to be studied with a strong political economy approach that reemphasized the relevance of inter disciplinarity. However, similar process was also noticed in other developing economies.

The article (by Hastimal Sagara) examining the introduction and implications of demonetization in India delves into the question of if this rather abrupt policy announcement could address the removal or at least reduction of black money in the economy. Even after four years of this unsettling move it is difficult to attribute its role in tackling inflation or terror funding or black money that it originally aimed at. The article, based on secondary data, holds that disbanding the two high-valued currency notes was possibly a severely misplaced strategy that adversely affected business and jobs especially in an economy where the informal sector has a huge presence.

Focusing on the recent debate if a fast pace of farm growth is commensurate with inclusive agriculture the article (by Itishree Pattnaik) compares the

performances of the sector in two central-western dry land states of Gujarat and Madhya Pradesh, the former a more prosperous state than the latter. Even as agricultural growth rates turned out to be impressive in both states in recent years the analysis of its composition and dynamics, drawing upon extensive field survey and also secondary data, suggests that the gains might have percolated at a regional level but has hardly reached the small and marginal farmers. This brings to the fore need for a different strategy of agricultural growth whereby interventions could be broad-based and also sustained.

Taking into consideration the chronic neglect of the socio-economic status of Muslim women in the Indian context the article (by MdIsrar Alam) brings together arguments that highlights the need for paying attention to enhancing access to education, creating opportunities of work as well ensuring empowerment for them. Exploring information mostly from the landmark Sachar Committee Report (2006) and supplementing it with data from the NSSO 68th Round the article discusses marginalisation of Muslim women from multiple dimensions. It makes for a case for using the lens of intersectionality to examine challenges facing the particular section of the Indian nation.

The potential of information and communication technology (ICT) in enhancing the socio-economic status of women in India forms the content of an article (by Prasenjit Ghosh). Using standard econometric tools as vector autoregressive model, Augmented Dickey-Fullertest and Granger causality test an attempt has been made to explore the relation between ICT and women empowerment. Broadening access to ICT and also an emphasis on social sector are important steps towards improving the status of women, the article observes.

In yet another article (by Arghya Kusum Mukherjee) on women's issues an evaluation of the 'Kanyashree Prakalpa' of the Government of West Bengal has been undertaken through a detailed field investigation. While the prime purpose of the scheme has been to encourage education amongst women to ensure that girls do not get married before the age of eighteen it is purported to bring in elements of modernity through underscoring individualism. The study suggests that the scheme might not have made much difference in terms of promoting modernity, but it has been able to

an extent in strengthening decision making at the household level. The stereotypical gendered norms still remain, however.

In a comparative analysis in two north Indian states Uttarakhand and Uttar Pradesh the chapter (by Tanya Nautiyal and Saba Ismail) looks into the degree of relationship between socio-economic development indicators and financial inclusion at the district level. It brings out the fact of wide disparity in Uttar Pradesh where about 80 per cent of districts were classified below average in financial inclusion index. The situation was reverse in Uttarakhand which showed a far better situation. The study emphasizes the role of literacy and urbanization in contributing towards achieving a higher level of financial inclusion.

The research note (by Somdeb Lahiri) on rational choice theory offers a necessary and sufficient condition for a binary relation on a given non-empty, finite and fixed set of alternatives.

This issue also includes a book review.

Keshab Das

Executive Editor, *Orissa Economic Journal*

The Making of Economics as a Discipline in India: Universal Theory and Local Tensions

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K.T. Rammohan
Abitha Ramakrishnan

Abstract

Economics as a university discipline in India has a history of over 150 years. Yet, there has been hardly any attempt to write a disciplinary history documenting the agency of early institutions of teaching and research and associated individuals, and detailing the practices of generation and distribution of knowledge. The paper focuses on an important moment in the genealogy of economics in India —the emergence of Indian Economics. The attempt to adapt the western discipline to the local, historical-institutional context was not unique to India, as evidenced by the rise of Chinese Economics occurring around the same time.

Introduction

Despite the vast literature on the history of economic thought, our knowledge of the development of economics as a discipline in India is meagre. When was economics introduced as a course of study in India? What prompted its introduction? Which were the institutions that imparted training? What attracted Indians to the study of economics? Who were the first teachers and students? What was the content of the curriculum? When did economics research begin and what were the early concerns? How was knowledge of economics disseminated? These questions offer entry-points to writing a disciplinary history of economics in India.¹

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¹ Disciplinary histories are social scientific studies of science. A disciplinary history of economics is therefore different from history of economic thought. Elements of a disciplinary history of economics in India may be traced to Rosen (1985) and Byres (1999).

Transplanting the discipline formed in capitalist, industrial England onto the tropical soil was an unanced process. The ‘making’ of economics as stated in the title of this paper thus comprises the twin aspects of the trajectory of a metropolitan discipline in the colony: that is, “the relatively simple institutional history of transmission” and “the complex genealogy of translation” (Chatterjee, 1995: 1-29).² The paper is organised in four sections. Section 1 documents the early phase of transmission of the discipline in India. It traces the first institutions of economics learning, teachers, courses of study, and textbooks. Section 2 explores aspects of ‘translation’ of the discipline and focuses on the field of study called Indian Economics. Scholars like Morris D Morris and Burton Stein, have chosen to dub Indian Economics as a ‘peculiar field of study’ (Morris and Stein, 1961). The contrary view considers it as a major contribution to early, development economics (Krishnamurty, 2009). Writing from the perspective of disciplinary history rather than history of economic thought, we do not explore the significance — or otherwise — of the knowledge-contribution of early economic thinking in India. Clearly yet, as the paper argues, the emergence of Indian Economics represents a significant moment in the genealogy of economics in India. The subsequent section 3 reviews the central method of Indian Economics, namely, village study, and highlights its historical-sociological thrust. A brief comparison is drawn with Chinese Economics that displayed a similar institution a list orientation and considered village as the unit of study and experimentation. The concluding section 4 discusses the decline of Indian Economics in the context of the rise to dominance of marginalist economics, the branching out of economic history as a separate domain of enquiry, and the development of sociology as an independent discipline.

1 Economics Arrives in India

1906: Speaking at the Fergusson College, Poona, Dinshaw Edulji Wacha noted: “Indian Universities and Colleges are extremely backward in the teaching of this great subject which dominates, if closely searched, all human action and pervades the whole domain of human ethics” (Wacha, 1906). Was Wacha entirely right in lamenting on the backward status of economics in India? Just about three years earlier, Cambridge had introduced Economics Tripos, and Oxford had commenced Diploma in Economics. Although

² The book marks the beginning, in the Indian context, of writing disciplinary histories. It does not explore the trajectory of political economy/economics - which allows additional room for the present paper.

political economy was an optional subject in the Honour School of Modern History since its establishment in 1872, the 'Modern Greats' - Philosophy, Politics, and Economics (PPE) - in Oxford had to wait till 1921 (Arena, 2011: 29-34). The Indian scene was similar. By the latter half of the nineteenth century, political economy formed a part of the arts curriculum in the colleges in Calcutta, Bombay, and Poona. Right from its inception in 1857, Calcutta University offered political economy for BA Honors programme in mental and moral sciences. At least from 1871, political economy was included in the course on 'History of England from 1760 to 1832' for BA Pass programme.³ In Bombay, for BA, history was a compulsory component, and that included political economy. By the end of the nineteenth century, the subjects for BA examination in Allahabad included philosophy, political economy with political science, mathematics and physics. Already in 1898, MG Ranade, a student trained in one of the early colleges had authored the book *Essays on Indian Economics*, which showed considerable awareness of economic theory. Admittedly, specialist teachers in political economy were not appointed and the course was offered in conjunction with other disciplines – but such then was the case even in English settlement colonies like Australia, and in Asian countries like China and Japan.

What then explains Wacha's impatience and sense of urgency in advancing the study of economics in India? The urgency was political. The central question in the Indian public sphere then was the country's economic backwardness and knowledge of economics was critical to the nationalist intellectuals to engage in debates with colonial authorities. As Wacha noted,

[How] many among our publicists are trained in Economics and, therefore, able to follow the facts or reasoning or both which may be embodied therein and offer well-informed and intelligent criticism thereon?...How many of our Indian publicists intelligently follow the annual budget and endeavour to offer enlightened criticism thereon, and expose the fallacies underlying the Ministerial statements or his figures?... how many were the Indians, who, in the first place, clearly comprehended the significance of that currency revolution [divorcing Rupee from its bullion value and depreciating it], and how many, having comprehended it, were able to discuss the matter in a critical spirit in the public prints? (ibid)

³ See, GoI (1857) and *The Calcutta University Calendar* of various years.

The colonial state, on the other, could not afford to leave economics discourse to the Indian nationalists. It had to represent the economic problems as specifically Indian, with their causes internal to the country. As a British colony, a good part of economic knowledge flowed into India first through the conduit of colonial governance. The East India College at Haileybury, where the English East India Company trained its officials for employment in India contributed greatly to this knowledge-flow. The Haileybury curriculum comprised ‘Orientals’ and ‘European Subjects’. The latter included, among others, political economy – taught by TR Malthus, during the early decades of the nineteenth century (Ambirajan, 2007). From the 1870s, Trinity College, Dublin offered special courses in political economy for students preparing for Indian Civil Services examination.

Economics learning in India began in the schools. During the latter half of the nineteenth century, the must-read in schools across India was Richard Whately’s *Easy Lessons on Money Matters*. Drummond Professor of Political Economy at Oxford, Whately was “the great evangelist of political economy in nineteenth-century”.⁴ The book was a condensed version of his Oxford lectures delivered in 1831, which had aimed at acquainting the Oxford community with political economy, most of whose members were either ignorant of the discipline or distrustful of it, under the impression that it challenged Christian morals (Whately, 1831). When published as *Easy Lessons* in 1836, it was addressed to a different audience: comprising mostly children in elementary schools, and working classes and women in England and Ireland, who lacked access to university education (Boylan and Foley, 2005).

In India, as in other British colonies, Whately’s book was translated for use in local language schools. Sometimes it was near-verbatim like *Panakkaryangalude Varnana* in Malayalam undertaken by Anglican missionaries in Travancore in 1862. A second translation, *Dhanatatvanirupanam* was brought out by Keralavarma Valiyakoyitamburan. In Bangla too, at least two versions of Whately’s book were in circulation: the first, *Artha Byabohar* by Rajkrishna Raychowdhury was published in the

⁴ Subsequent to his Oxford tenure, Whately was Archbishop in Dublin. He established the Whately Chair in Political Economy at Trinity College, Dublin in 1832. Whately stood with the English movement to make political economy more ‘scientific’ and opined that the discipline should have been called ‘catallactics’ or the ‘science of exchange’. His book on Rhetoric was also a mandatory reading in Indian schools.

1860s; the second, Nrisinha Chandra Mukhurji's *Arthaniti-o-Arthavyvahara*, published in 1875, also carried extracts from James Mill's *Elements of Political Economy*. By its twelfth edition of 1875, Raychowdhury's work too had been "considerably improved and enlarged by incorporation of important materials from the works of Mill, Fawcett and other standard writers on Political Economy"; yet, it was "adapted to the requirements of this country" (Raychowdhury, 1875: 2).

Whately's book has been viewed as an instrument of social control over the lower classes in England and Ireland exercised through the command of science (Boylan and Foley, 2005). The book avoided discussing the exploitative aspects of private property relations. "Can it be supposed that the poor would be better off if all the property of the rich were taken away and divided among the poor, and so allowed to become rich for the future? ... Poor would then be much worse off than now...All would soon be as miserably poor as the destitute beggars are now. Indeed, so far worse, there would be nobody to beg of".⁵

Whately subscribed to the universal law of economic progress, disregarding the implications of colonialism. As the book noted: "[I]n any country in which property is secure, and the people industrious, the wealth of the country would increase". The book erased the inequities of colonial exchange by emphasising comparative advantage: "God has made other countries useful to us, and has made us useful to other countries."⁶ While in the metropolis Whately's book was an instrument of social control of working classes, in the colonies, by justifying both capitalism and colonialism, it served to control the masses at large.

While much of political economy initially came to India through colonial governance and school textbooks, and political economy had been a course of study in Indian universities since their inception, institutionally it came of age - with independent, university departments of teaching and research, establishment of chairs, formation of a stratum of researchers engaged in individual and/or joint work, and a greater frequency of publication of articles and books - only during the twentieth century. The recommendations of the Indian Universities Commission 1902 formed the starting-point. The Commission urged rationalisation of economics teaching across the five

⁵ As cited in Boylan and Foley (2005: 87).

⁶ As cited in Gore (2005: 191).

universities then existing. It supported the then practice of offering political economy together with history; but insisted on introducing political economy as an optional for BA. The Commission recommended offering MA in four streams: a) languages; b) philosophy; c) history, political economy, and political philosophy; d) mathematics. It also called for institution of research degree in all four streams, to be granted “after some years spent in original research” (GoI, 1902: 34). Accordingly, Calcutta University awarded its first doctorate in economics in 1911.⁷

Following the Commission’s recommendations to expand teaching and research, the first chairs in economics were instituted. It is worth recalling the names of early professors since the available histories of Indian economic thought fail to acknowledge the contributions of European economists who taught and researched in India, especially those who did not subscribe to the Indian nationalist view of the economy. In 1908, the Minto Chair in Economics was established in the Calcutta University. The first appointee was an Indian, Manohar Lal, who had graduated from Cambridge. Lal taught from 1909 to 1914. He was succeeded by CJ Hamilton, economic historian, who had earlier taught at Cardiff and Oxford. Their efforts paid off leading to a flourishing department of economics, established in 1914. During the same year, in Allahabad, HS Jevons - who conducted research on sun spot theory after his father WS Jevons - was appointed professor, and MA programme was launched. The government proposed a school for economic research in Bombay University in 1912, but it materialised only by 1919. It was set up as the University School of Economics and Sociology; the multifaceted academic, Patrick Geddes – botanist, sociologist, ethnographer, and civic planner – was appointed professor. In Madras, the department of economics was set up in 1912 but the appointment of professor was delayed. First, there was dispute between pro-philology and pro-economics campers in the administration. The question was settled in favour of economics but the government initially hesitated as the prospective professor, Gilbert Slater, formerly of Ruskin College, Oxford was a socialist. Slater joined in 1914 and served a five-year term.

Disciplines are not formed merely within the bounded walls of the classroom

⁷ Jajneswar was the first scholar to be awarded; his thesis was on ‘The History of Land Tenures in England, France, Germany and Russia and the Agrarian Question’. It was published under a shorter title *English Theories of Rent* in 1924. See, Ganguli (1977).

or around the table of the board of studies. A great deal of dissemination of knowledge occurred through journals, books and monographs, and professional bodies. Among the first journals exclusively concerned with economic affairs was *The Indian Economist*. Established in Calcutta in 1870 as a monthly journal, it was, as the motto stated, “devoted to economic and statistical inquiries concerning India”. During the first decade of the twentieth century, R Palit launched ‘another’ *Indian Economist*, which he conceived as “the best way of helping the [Swadeshi] movement”. The *Sarvajanik Sabha Journal* in Poona carried analytical articles on the Indian economy during 1880s and 1890s. Both *The Calcutta Review* and *The Indian Review* regularly carried articles on economic matters. Besides, *The Social Service Quarterly* of the Social Service League, Bombay and the Chanakya Society Bulletins of Patna College, published economic surveys and studies. Down south, ideas from Adam Smith’s *Wealth of Nations* were carried in a series of articles in the Malayalam journal *Vidyavinodini* in the 1890s. Another Malayalam journal, *Lakshmi Vilasam*, published from 1906, dedicated itself solely to economic affairs. Pioneering economic analyses of landlordism in Malabar and coir-yarn spinning industry in Travancore appeared in the pages of this journal.

The first professional body of economists to be formed was the Madras Economic Association established in 1913. Soon after, such associations were established in smaller centres too – for instance, in Madurai and Kumbakonam. The association published *Journal of the Madras Economic Association*. No copies seem to have survived but the fact of publication is evidenced by a brief note in the *American Economic Review* of September 1914.⁸ The Bengal Economic Association, founded in 1916, laid down its central objective as “to stimulate interest in, and to promote the advancement of economic science in India”. Towards this, it identified three strategies: “the publication of a journal”, “the organisation of periodical conferences”, and “building up of an Economic library”. Its organ, *The Bengal Economic Journal*, issued thrice a year during 1916-1917, and jointly edited by CJ Hamilton and JC Coyajee, highlighted the need for historical and fieldwork-based research on economic problems of the country. An article in the inaugural issue noted that an important aim of the association was “the encouragement of original research ... By original research is meant the

⁸ “Students of Indian Economics will be interested in the first number of the *Journal of the Madras Economic Association*. It contains surveys of the economic condition of two typical Madras villages”. ‘Notes’ (1920): *American Economic Review* 4 (3): 762-770.

collection first hand of facts and figures regarding some side of economic life of the country which has not formed previously the subject of systematic or, at any rate, exhaustive study.”

The idea of an economic association for the whole of India and a corresponding, pan-Indian journal of economic research was mooted at the meeting of the Bengal Economic Association held in Calcutta in January 1918. The meeting proposed the formation of “an Economic Association for the whole of India which will serve to link together all those interested in Economic Science throughout the country and afford a medium for their common action in promoting the study of the subject” and the launching of “a journal of a thoroughly representative character”. Soon, *The Bengal Economic Journal* gave way to *The Indian Economic Journal*. In 1919, the new, Indian Economic Association met in Bombay, and thereafter, the annual conferences were held in various centres.⁹

Besides exchanges among economists within the country, there were exchanges such as between Marshall and Lal that cut across national borders. Further, the robust public sphere drew in professional economists. Both Jevons and Slater were in communication with Gandhi — most often, to air a different view from his. In his letter of August 11, 1918 to Jevons, Gandhi strongly reacted to his suggestion of increasing the salt tax: “Your talk of a rise in the salt tax ... send a shudder through my body”. A visibly agitated Gandhi ended the letter by noting, “I did not want to give you a long letter but my pen would not be checked” (Gandhi, 1999: 188-189). Slater, who had listened to Gandhi in a public meeting in Madras in 1921, wrote an unsigned letter to *Young India*. This was to express dissent with Gandhi’s view that the root of the political trouble owed to the British looking down Indians as inferior. Slater noted that in certain respects the British were actually superior. Gandhi published the letter with his stamp of approval: “What my correspondent says is perfectly true. We must improve in these respects”. (Slater, 1936: 332).

2 Indian Economics

The early usage of the term Indian Economics may be traced to *Essays on Indian Economics* authored by Ranade in 1898. The opening chapter was

⁹ Information and quotes drawn from early issues of *The Bengal Economic Journal* and *The Indian Economic Journal*.

his lecture, 'Indian Political Economy', delivered at the Deccan College, Poona in 1892. The book emphasised relativity of economic analysis in time and space as opposed to the presumption of its universality. As Ranade noted:

The Laws of Social Progress in Wealth must be sought in the history of the general Social Evolution which is different in different countries If in Politics and Social Science, time and place and circumstances, the endowments and aptitudes of men, their habits and customs, their Laws and Institutions, and their previous History, have to be taken into account, it must be strange, indeed, that in the economical aspect of our life, one set of general principles should hold good everywhere for all time and place, and for all stages of Civilisation (Ranade, 1906: 5).

He noted that the idea of Economic Man was inapplicable in the Indian context, and that, such was the case with many other assumptions of economics— like mobility of capital and labour:

With us [Indians] an average individual man is, to a very large extent, the very antipode[s] of the economical man. The Family and the caste are more powerful than the Individual in determining his position in life. Self-interest in the shape of the desire for wealth is not absent, but it is not the only principal motor. The pursuit of Wealth is not the only ideal aimed at ... Custom and State Regulation are far more powerful than Competition, and status, more decisive in its influence than Contract. Neither Capital nor Labour is mobile and enterprising and intelligent enough to shift from place to place ... Population follows its own law ... In a society so constituted the tendencies assumed as axiomatic, are not only inoperative, but are actually deflected from their proper direction (ibid, 10-11).

Radhakamal Mukerjee may be described as the methodological powerhouse of Indian Economics. In 1916, he published *Foundations of Indian Economics*, which followed the method of “comparative and applied economics”. The book formed the seed of his two subsequent treatises, *Principles of Comparative Economics* (1921) and *Regional Sociology* (1926). Under his intellectual lead, the Lucknow School formulated an approach which involved “bridge-building between natural sciences and human sciences; between economics and sociology; between theory-building and fact-finding; between social theory and practical social work” (Joshi, 1986: 1458-1459).

Such attempts to adapt the western discipline to the local, historical-institutional context were not unique to India as evidenced by the rise of Chinese Economics during the early twentieth century. It would be tempting to trace the roots of both fields of study to the German Historical School but this might not be fully warranted as these were shaped as much by the Asian context. In China, as in India, it was felt that economics instruction had been too much based on Western ideas and experience. Like Indian Economics, Chinese Economics emphasised that “the unit [of study and experimentation] ... will generally be the single village or group of villages” (Trescott, 1992: 1228).

The term Indian Economics was absorbed into colonial vocabulary with the *Report of the Indian Universities Commission 1902* and the *Indian Universities Act 1904*. While the nationalists viewed Indian Economics as embodying a socio-institutional approach to the study of the economy, the colonial state used the term in a mere descriptive sense, to indicate the geographical focus of study. The Commission noted that “the study [of political economy] might be made more intelligible and instructive if attention were directed to the economic conditions with which the students are more familiar, and if they were encouraged to investigate in a scientific manner the economic problems of India” (GoI, 1902: 31). The Commission had recommended a similar special focus on India for subjects like history and geography. To the state, Indian Economics thus meant special attention being paid to economic problems of India — without acknowledging the most serious economic problem of all, that is, colonialism. Some of the early professors, both Indian and European, also subscribed to the statist-view of Indian Economics.

The Universities Commission claimed that in directing a greater emphasis on local economic issues, it was being proactive to the suggestions made by the teaching community: “Some teachers complain that they are restricted to the abstract doctrines of certain European and American economists and that the students learn the subject matter of the books without grasping the theories or comprehending the illustrations”. At once, however, the state sought to stall the entry of the harder questions of political economy into

¹⁰ Slater, a Fabian socialist, was involved with gas workers’ union. He joined Ruskin College as Principal, immediately after a long-drawn students’ strike, which had demanded, among others, the inclusion of Marxist political economy in the curriculum.

the curriculum: “economics at Ruskin [the workers’ college in Oxford] might be too strong a meat for Indian students”, as a colonial educationist quipped while trying to prevent the appointment of Slater as professor in Madras University (Abitha, 2012: 44).¹⁰

The nationalist attempt to re-appropriate Indian Economics often saw an over-emphasis on ideology, as revealed by Radhakumud Mookerji’s *An Introduction to Indian Economics* (1913). Mookerji noted that the term Indian Economics has been varyingly used to refer to “the history of Indian economic thought”, “the history of Indian economic evolution”, and “an illustration of universal economic principles with Indian examples”, but in its true sense Indian Economics is “a systematic and scientific study of the principal problems of India from the strictly Indian national standpoint” (Mookerji, 1913: 2-4).

The early decades of the twentieth century saw a profusion of books on varied aspects of India’s economy. Besides the growing nationalist movement, this owed to the increased demand for textbooks, following the spread of economics education. The new books reflected important changes in Indian economic thinking. While early authors like Ranade dismissed the relevance of Western economic theory in India, later authors like Brij Narain were of the view that “the principles of the [economic] science are less inapplicable to the Indian conditions now than they were a quarter of a century ago”. In his book *Essays on Indian Economic Problems* published in 1919, Narain noted that “both Political Economy and our country have much changed since 1892 [when Ranade delivered the lecture on ‘Indian Political Economy]”.

For Narain, Indian Economics meant the study of Indian economic life; showing “how the laws of Economics work in India”. As he proceeded to note, “It should not be supposed that they will, someday, become the basis of a new science of Economics; their chief value consists in explaining and illustrating the operation of economic laws in India ... [there is] no science of Indian Economics as apart from the science of General Economics”. Yet, as he emphasised, there was need for “an exclusive study of Indian problems in their historical and environmental perspective, though in that study our knowledge of western economic doctrines will help us a great deal” (Narain, 1922: 3-5).

Indian Economics was not a monolith as it is often assumed to be.”It comprises many different, and sometimes mutually contradictory, opinions on many different economic problems of India. In this sense it would be more correct to speak, not of one but about a dozen “schools” of Indian Economics” (ibid., 5). As we sift through the different perspectives of Indian Economics, three emerge prominent. These may be called the ‘agricultural school’, the ‘industrial school’, and the ‘walking on three legs school’.

To follow closely the rhetorical nuances of different schools (‘rhetoric’ viewed, as ‘the capacity of persuasion’, ‘the forms and methods of reasoning recognised as valid’, following Deirdre McCloskey), we shall draw passages from the works of the early masters. Mukerjee, the leading exponent of the agricultural school, advocated “a line of evolution not towards the so-called ‘modern’ or Western industrialism, but towards a fuller and more determinate Indian industrial order”.

The synthetic vision of India will be the sorely needed corrective of the rigid, analytical, mechano-centric standpoint ... The large industry implies an army of intermediaries and middlemen. The small industry by the extreme simplicity of its organisation diminishes economic friction and avoids the conflicts between the different classes which share in distribution, e.g., between the labourers and the capitalists, which have destroyed social peace in the West. The locale of that industry will be the cottage. The home, and the family, the caste and the social environment humanise and socialise the labourer. In agriculture, on account of the peasant’s rights in the soil, the family as the sociological unit and the small holding of land as the economic unit will assert their full social values ... it destroys the spell of monetarism and militarism (Mukerjee, 1916: 463-465).

Interestingly, Alfred Marshall was a leading votary of the agricultural path to Indian economic development. In his letter of February 22, 1911 to Lal, he noted: “I do not think that manufactures are more conducive to prosperity than agriculture ... to try for manufactures, as in themselves a remedy for India’s ills seems to me a fatal error” (Whitaker, 1996: 282-283).

There were many variants to the agricultural school. JM Keynes upheld one such variant which hailed the technical-economic approach to cultivation.

[In India] a considerable part of the educated class seems to desire, with patriotic favour, the industrialisation of their country and the greatest possible development of manufacture. In my own opinion such a change is not, in the future which one can foresee, either desirable or likely. It is an unfortunate consequence of the English connection that industrialism should present itself to Indians as the royal road to prosperity and to a dignified position among nations ... Yet is there not good reason to believe that, so far from this being the case, her future prosperity is to be sought almost entirely in the application of more skill, and especially of more capital, to the methods of agriculture? ... The raising of the level of comfort amongst the vast mass of population must be brought about by the application to the land of the brains and the capital of new India (Keynes, 1911: 426-431).

Such views as those advanced by Mukerjee, which held caste-based organisation as an organic trait of Indian society, and capable of being fused with future economic development, invited severe criticism from both within and outside the academia. Palme Dutt viewed the agricultural school as representing “the backward-looking tendency, which seeks to build its programme on the basis of an idealised ancient Indian civilisation, purged of its grosser evils, but retaining the essential tenets and institutions of Hinduism”.

BR Ambedkar was another staunch critic of the view that the caste-system was merely a case of division of labour and promoted economic efficiency. As he noted,

[T]he first thing that is to be urged against this view is that the caste system is not merely a division of labour. It is a division of labourers. Civilised society undoubtedly needs division of labour. But in no civilised society is division of labour accompanied by this unnatural division of labourers into watertight compartments ... Social and individual efficiency requires us to develop the capacity of an individual to the point of competency to choose and make his own career. This principle is violated in the caste system... (Ambedkar, 2011: 233-234).

Narain's essay 'Indian versus Western Industrialism' challenged the perspective of the agricultural school and its leading advocate, Mukerjee:

Those of us who are opposed to Western industrialism and who want India to pursue her ancient line of economic evolution, should remember two things –that an agricultural country means a poor country, and that growth of civilization with all that it implies, depends upon the growth of town life, which, in its turn, depends upon the growth of industrialism. Revive the village community if that be possible; restore the village by all means, but that is not how the problem of Indian poverty can be solved. The lesson that history teaches, is that so long as a country has remained a predominantly agricultural country, it has remained poor and in a lower stage of civilization as compared with manufacturing countries... Industrialism alone can save India. And our industrialism will, probably, have to be of the same type as the Western industrialism. We shall have to fight the West with the same weapons which it employs against us (Krishnamurty, 2009: 55-62).

Even before Narain wrote, Theodore Morison, had emerged as an advocate of the industrial school. VM Kale was another ardent supporter. In *The Economic Transition in India* published in 1911, Morison noted:

India's industrial transformation is near at hand; the obstacles which have hitherto prevented the adoption of modern methods of manufacture have been removed; means of transport have been spread over the face of the whole country; capital for the purchase of machinery and erection of factories may now be borrowed on easy terms; mechanics, engineers and business managers, may be hired from Europe to train the future captains of Indian industry; in English a common language has been found in which to transact business with all the provinces of India and with a greater part of the Western World; security from foreign invasion and internal commotion justifies the inception of large enterprises (Morison, 1911: 242-243).

The third prominent school of Indian Economics –which we designated as the 'walking on three legs school' — rejected the exclusive emphasis of the first two schools on agriculture/industry as unrealistic. Slater and Padmanabha

Pillai were the leading exponents of the third school. Unlike Narain and others of the industrial school who were outright critical of the agricultural school, Slater displayed a nuanced understanding. This is revealed in his 'Introductory Note' to Pillai's *Economic Conditions in India* published in 1928,

Mr Gandhi, and the small band who accept his economic doctrine, look with horror upon the physical and moral evils engendered in India by the massing together of helpless immigrants from the countryside into slum-cities like Bombay and Ahmedabad to supply labour power to factories, and advocate, instead of a more rapid forward rush into big capitalist business, a retreat to more primitive industry and social organisation.

The problem, as Slater viewed it, was one of practicality:

If all India were resolved to wear nothing but hand-woven, hand-spun cloth of Indian manufacture, there would be work in the villages for the many months in the year in which agricultural employment either ceases altogether or requires only a fraction of the available workers. That waste of time would become productive ... [A]s the production of food in a village is largely determined by the supply of labour available in the week or two of maximum pressure of work, the total output of food would be increased, and therefore the real prosperity of the country.

There is more reason in this gospel of the Charkha – the spinning wheel – than would be supposed by people unfamiliar with Indian conditions. In the Gandhi programme it should be combined with other reforms [equality of caste, abolition of untouchability, non-violence, birth-control by sexual restraint etc] ... The one objection to this programme is that it requires that the ordinary man should become much more like Mr Gandhi than he possibly can for many generations to come (Pillai, 1928: xi-xviii).

At once, Slater rejected the exclusive stress on modern industrialisation as put forth by the dominant, industrial school:

The dominant opinion in India finds the solution of the problem [economic backwardness] in rapid industrialisation ... India had in

1921, 3957 factories and workshops liable to inspection, employing 1,263,658 men, women and children. It would be a great achievement if in ten years these were increased to such an extent as to double the number of hands employed. But even this would only accomplish the absorption of workers, with their dependants, to the number of about a quarter of a million per annum. Certainly we must allow also for the increased employment which such an increase in factory activity would demand in mining, transport and distributive trade; but on the other hand, we must also make allowance for the throwing out of vast numbers of hand-loom weavers and other craftsmen whose occupation would be taken away by increased factory competition (ibid).

The third school advocated a “programme of simultaneous trilinear advance in agriculture, rural handicrafts utilising the spare time of agricultural families, and large scale industry”. It sought agricultural improvement through changes in the distribution of land, techniques of cultivation, access to finance and market. The third school did not rule out modern industry but did not worship it either. The role of handicraft industry was recognised for its contribution to employment-generation and possibility of increased income-generation through the use of better productive techniques – ‘appropriate technology’, as it came to be subsequently called. While paying regards to many aspects of the nationalist strand of Indian Economics, it sought to demystify the idea of India’s ‘glorious economic past’: “it affords no useful precedent for guidance in a recasting of economic life on account of the changed conditions of the present day” (ibid).

3 Through the Village Lens

Objectifying village India has a much longer history than Indian Economics. The Orientalists projected an image of the Indian village to contrast and place European modernity in a hierarchic relationship with India and the rest of Asia. The idea helped colonial administrators to reduce the complex social reality of India to the bipolarity of the state and the village. Proclaiming village as fundamental was a means to its incorporation in the governance apparatus. For the early nationalist intellectuals based in urban centres, the village appeared as a pristine space inhabited by simple folk and demanding preservation, or alternatively, a site polluted by colonialism and calling for recovery.

Even without discounting the representational aspects of the Indian village, on which there has been a spate of writings, it may be noted that the village was indeed fundamental to Indian society. By the twentieth century, for both the colonial government and the nationalists, the Indian village marked a definitive sign of economic backwardness. Surveying the village was therefore central to Indian Economics. Speaking of his work *The Foundations of Indian Economics*, Mukerjee noted: “the main source of my information is my own first-hand study and actual investigation on the spot of the cottage and village industries and the systems of trade, credit and transport” (Mukerjee, 1916: xix-xxiii). The economic and social organisation of the village was closely interwoven, necessitating the historical-sociological approach that Mukerjee championed.

A remarkable spurt in village studies occurred from the second decade of the twentieth century. It owed, among others, to the spread of economics education. In 1919, the Director of Public Instruction, while sanctioning the expansion of economics faculty in a presidential university noted: “the need for the development of the study of economics has been continually before the public and government during the last few years” (Abitha, 2012: 39).

Following the first five universities established during the nineteenth century, a much larger number of universities came up in the twentieth, especially during the period following the First World War. Both Patna University, established in 1917, and the Osmania University, Hyderabad set up in 1919, offered courses in economics. The Lucknow University established School of Economics and Sociology in 1921; the department of economics in Dacca University was founded during the same year. The University of the Panjab established in Lahore in 1882 instituted a chair in economics in 1919. The Aligarh Muslim University instituted Bachelor’s degree in economics in 1935, and Master’s two years later.

During this period, the discipline expanded to a large network of colleges as well. Further, a specialised centre of economics teaching and research, the Gokhale Institute of Politics and Economics, was set up in Poona in 1930; it was recognised as a centre for MA and PhD in economics during the next year. The Indian Statistical Institute established in Calcutta in 1931, prioritised, besides statistics, research in economics and anthropology. Nearly all these institutions were engaged in village studies. The stride in

village studies also owed to the emphasis on village development and decentralised governance in the early economic programmes of the Indian National Congress.

The most substantive among the Indian village studies of the early twentieth century was those undertaken by Slater and his students in the Madras University from 1915 to 1916. Slater was advantaged by his earlier research on village: he was a student of economic history and the doctoral dissertation he submitted at the London School of Economics and Political Science in 1904 was on the destruction of English village communities (Slater, 1968). Distinguished by historical-sociological method, insights of comparative economics, thoroughness of fieldwork, and cautious drawing of inferences, Slater's studies of south Indian villages almost became a model for many subsequent village studies.

Slater's surveys carefully avoided generalisation. In 1913, Morison, while delivering the inaugural address of the Madras Economic Association, had remarked: "economic enquiry in the Madras Presidency should begin with a sociological and statistical survey of a typical village." Slater noted that "too much stress must not be laid upon the word 'typical' ... as no single village can be typical". Therefore, "instead of endeavouring to select typical villages, I made my choice on the simple principle of taking those that were most available. I asked students of the University who were willing to help, to make surveys of their native villages during the long vacation" (Slater, 1918: 1). Involvement of students yielded insider knowledge and facilitated access to information.

Slater's team compiled and analysed information on population, castes, cultivated land and commons, agrarian relations, agricultural practices, dwellings, trade and industrial activities, wage-rates, savings and indebtedness, sanitary conditions, literacy and education. The surveys also explored the history and speculated on the prospects of development. In South Arcot, Slater was horrified to find that the basic unit of his method, the village, was actually split into two: the caste village and the pariah village. He, therefore, clarified: "I have used the word 'village' to signify the organized community ... and the land belonging to it [and connected through the exchange of labour]. In the other sense of a collection of dwellings it was not one village but two" (Slater, 1936: 61-64).

Altogether, Slater's team conducted detailed surveys of 11 villages and condensed surveys of eight others. These were published under the title *Some South Indian Villages* in 1918. Twenty years after Slater's survey, PJ Thomas, his successor in the Madras University, re-surveyed nine of the 11 villages surveyed by Slater. The objective was to explore "the changes in the social and economic life of the villages in the twenty years that elapsed since they were first surveyed". The re-surveys were published under the title *Some South Indian Villages: A Resurvey* in 1940. To the students who were involved, the surveys served as a reality check for the abstract knowledge they acquired in the classroom. These villages have been subject to re-surveys by individual researchers and research teams, even into the present century, yielding thus, a fascinating, long run, socio-economic history.

4 As Indian Economics Wanes Away

Even after marginalist economics attained dominance in the curriculum, institutional concerns continued to inspire economic thinking in India. By the early twentieth century, Marshall's *Principles of Economics* became the standard text-book in universities across India; theory was increasingly equated with neoclassical economic theory. Teachers like Slater had conceived the village surveys to liberate the students' thinking from the oversimplifying abstractions of neoclassical economics. Over time, however, faced with the rising dominance of neoclassical economics, the historical-sociological traits of Indian Economics began eroding. This influenced village studies as well. When PJ Thomas re-visited the Slater villages in 1936, he sought to modify Slater's questionnaire with much less emphasis on sociological aspects and a greater stress on statistical measurement (Thomas and Ramakrishnan, 1940: xi-xiv).

Alongside, there was growing specialisation in the Indian academia. With the establishment of independent, university departments of sociology beginning from 1917, sociological enquiry was left to these. As economic history emerged as a separate field of study, increasingly, economic analyses of past and present were de-linked.¹¹ From the 1930s, there was increased consensus on the project of industrial India and the debate among different schools of Indian Economics died down. Soon, industrial India emerged as

¹¹ By 1929, there was enough literature on economic history of India to warrant a bibliographic survey. The survey was undertaken by WH Moreland and published in *Economic History Review*. See, Rammohan (2011).

an idea shared by nearly all - the state, capital, the most vocal middle and upper classes, leaders of depressed castes, the communists, and the leadership of the Indian National Congress.

Under these conditions, Indian Economics was turned into a shadow of its former self. The field increasingly indicated a descriptive treatment of India's economic activities and problems. Methodological orientation lost, it was reduced to merely a course of university study. The course was varyingly called 'Problems of Indian Economy', 'Indian Economic Development', and 'Indian Economy'. It earned the ill-fame of being the most monotonous course in economics, full of so-called facts and figures to be learned by rote, and replete with colonial clichés like 'agriculture in India is a gamble in the monsoons'. Casual statements like "Indian Economics ... means a mass of statistical and other material which would be of invaluable help in the solution of Indian economic problems" (Narain, 1922: 20), coming from some of the accomplished authors of Indian Economics, tended to misdirect students, teachers, and authors. The once-robust field of study became a haven for writers and publishers who produced textbooks of the most unimaginative kind.

Behind the decline of Indian Economics, there were political reasons too – the field of study that had originated in the context of colonialism and nationalism waned with the exit of colonial power and the slackening of nationalist sentiment. It was increasingly delinked from the public sphere. By the early 1960s, Indian Economics had lost all robustness. Serious work on rural Indian economy and society, inspired by the principles of political economy and broadly socialist in orientation continued to be undertaken – like the mode of production studies of the 1970s, the ethnographies of rural elites and subalterns, and the more recent agrarian studies initiatives– but this was no longer under the banner of Indian Economics.

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Demonetization and the Indian Economy: A Critical Relook

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Abstract:

The labyrinth of black money is spread deeply and expansively all over the world, albeit its extent and form may vary from country to country. In order to clean the system from this vice, governments are legitimately equipped with multiple tools including demonetization of currency by a government or its central bank. However, monetary economists across continents would agree that demonetization could be resorted to as a strategy of the last resort to contain the volatile and rather rare eventuality of hyper-inflation or, as the adage goes - 'too much of money chasing too few goods'. Whether demonetization can deal a deadly blow to black money squarely depends upon the nature and extent of the black practices that are carried out in the form of currency notes or, simply, cash. Disbanding a legal currency could, in fact, be a severely misplaced strategy if the larger economic dynamics of an economy are driven by deep-seated corruption, discrimination and informality. Excepting in the event of a glut of currency notes, demonetization has hardly served any other purport unless the state in question aims to jettison its old currency for the new.

In India, demonetization of Rs. 500 and Rs. 1000 currency notes was effected November 8, 2016 to fasten black money, to abate corruption, block terror funding, and transforming India into a cashless (later, less cash) economy. It has been about four years since demonetization was announced in India, it would be interesting to look at the extent to which this endeavour was able to achieve its objectives. With this backdrop, an attempt is made here to delineate as to how the demonetization in India has impacted the Indian economy in the short run as well as long run. The discussions and conclusions are essentially based on secondary data sources.

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Key Words: Demonetization, black money, money supply, monetary policy, RBI

Introduction

The labyrinth of black money is spread deeply and expansively all over the world, albeit its extent and form may vary from country to country. Black money is generated and circulated both in the organized and unorganized sectors through, *inter alia*, tax evasion, bribes, political and corporate frauds, under (or) over invoicing, money laundering, extortions and other illegal activities which need not be carried out using *cash*, as in fraudulent land deals, for instance. In fact, the *White Paper* on black money (GoI, 2012a) provides a list of such activities generating black money in the system that include investment in precious metals, shares, *benami* properties and bank deposits in tax havens. The size of the black economy is at a staggering 62 per cent of the GDP, about Rs 93 lakh crore (\$1.4 trillion). (Kumar, 2016a). Or, in other words, rupees three lac crore black money would be held as cash (Kumar, 2016b).

In order to clean the system from the vice of black money, governments are legitimately equipped with multiple tools including demonetization of currency by a government or its central bank. However, monetary economists across continents would agree that demonetization¹ could be resorted to as a strategy of the last resort to contain the volatile and rather rare eventuality of hyper-inflation or, as the adage goes - '*too much of money chasing too few goods*'. Whether demonetization can deal a deadly blow to black money squarely depends upon the nature and *extent of the blackpractices* that are carried out in the form of currency notes or, simply, cash. Disbanding a legal currency could, in fact, be a severely misplaced strategy if the larger economic dynamics of an economy are driven by deep-seated corruption, discrimination and informality. Excepting in the event of a *glut* of currency notes, demonetization has hardly served any other purport unless the state in question aims to jettison its old currency for the new.² Aiyar (2016) identifies principal cash transactions like donations to political parties, cash

¹ Quite a few countries like United States (1969), Britain (1971), India (1978), Ghana (1982), Nigeria (1984), Myanmar (1987), Soviet Russia (1991), Australia (1996) and North Korea (2010) had tried demonetization by disbanding currency of one or more denominations.

² The shifting over to Euro by a host of western European nations under the collective agreement reached by the members of the European Union is a classic instance in recent memory.

bribes, rural trades, real estate deals, hawala operations and organized money market. In India, demonetization of Rs. 500 and Rs. 1000 currency notes was effected November 8, 2016 to fasten black money, to abate corruption, block terror funding, and transforming India into a cashless (later, less cash) economy. It has been about four years since demonetization was announced in India. Therefore, it would be interesting to look at the extent to which this endeavour was able to achieve its objectives.³

Short Impact of Demonetization

Though cash dominated transactions may be an easy medium for unaccounted transactions, however, it is important to note that all cash transactions are not illegal. A host of prominent countries including US (55 per cent), China (90 per cent), Japan (86 per cent) and UK (48 per cent) deal overwhelmingly in cash.⁴ Given that in India, 78 per cent of transaction demand and 98 per cent of consumption demand are met in cash. As revealed by the RBI (2016), the value of the banned notes was a massive Rs. 14179.43 billion (Rs. 500 currency notes add up to Rs. 7853.75 billion and Rs. 1000 currency notes to Rs. 6325.68 billion) (Table 1) forming 86 per cent of total money in circulation at that time. Demonetization aimed at transforming India into a cashless, later on less cash, economy, but, it seems, objective was not materialized. The RBI in its annual report for 2017-18, pointed out that the value of banknotes in circulation increased by 2.1 per cent at end-March 2018 which is in sharp contrast to the government's push for digitisation and a less-cash economy.⁵

³ Media reports suggested highlighted several instances of elderly and unwell citizens collapsing while standing in long queues for long hours at banks and ATMs to withdraw, if they could, a part of their own cash. The most distressing was the claims of over 100 deaths due to demonetization made by the Opposition in the Parliament reported widely. At <http://www.dnaindia.com/india/report-demonetization-government-not-mourning-over-100-deaths-due-to-cash-crunch-says-opposition-2280902> (Accessed on February 8, 2017). Additionally, deaths of 11 bankers due to stress caused by dealing with demonetization demands were also reported (Bose, 2016).

⁴ <https://www.bloombergquint.com/business/the-beginning-of-the-end-of-the-parallel-economy-in-india#gs.jI3ip24o>

⁵ <https://www.businesstoday.in/current/economy-politics/rbi-says-99pc-demonetised-notes-were-returned-10-major-points/story/281766.html>

Table 1: Currency Notes and Coins in Circulation in India, 2015-16

| Denominations of Currency Notes and Coins | Value (Rs. Billion) | Share (per cent) |
|---|---------------------|------------------|
| Small Coins (less than 1 Rupee) | 7.00 | 0.04 |
| 1 Rupee Note | 3.09 | 0.018 |
| 1 Rupee Coin | 41.78 | 0.25 |
| 2 Rupee Coin (1990-91) | 59.26 | 0.35 |
| 5 Rupee Coin (1985-86) | 70.45 | 0.42 |
| 10 Rupee Coin (2009-10) | 37.03 | 0.22 |
| <i>Sub Total</i> | <i>218.61</i> | <i>1.30</i> |
| 2 Rupee Note | 8.53 | 0.05 |
| 5 Rupee Note | 36.8 | 0.22 |
| 10 Rupee Note | 320.15 | 1.90 |
| 20 Rupee Note | 98.47 | 0.58 |
| 50 Rupee Note | 194.50 | 1.15 |
| 100 Rupee Note | 1577.83 | 9.36 |
| 500 Rupee Note (since 1987-88) | 7853.75 | 46.60 |
| 1000 Rupee Note (2000-01) | 6325.68 | 37.54 |
| Total | 16852.93 | 100.00 |

Source: Drawn on data sourced from RBI

Immediately after the announcement of demonetization, people rushed to jewellery shops to buy the precious metal to get rid of it with the banned notes. For instance, Hyderabad jewellers sold Rs. 2700 crore gold during 8-30 November, 2015 (*ToI*, Ahmedabad, December 18, 2016). Aiyer (2016) opined that demonetization had increased demand for imported gold leading to balance of payments strains. People thronged bank branches queuing themselves to convert banned notes with currency in circulation for over a month. Bank employees were neck-deep busy working overnight. This had jeopardized the day to day business of the banking sector.

Aggrawal and Sudha (2017) estimated that demonetization had displaced domestic agricultural trade in regulated markets by over 15 per cent (23 per cent for perishable goods) in the short run settling at 7 per cent (18 per cent for perishable goods) after recovery at the end of the 90 day period after demonetization. Cash starved farmers lost their sowing time but agriculture performed good during the January – March quarter (Dharinipriya and Kartikeyan, 2019). The RBI traced cases of violation of banking norms, discrepancies and money laundering in the functioning of 621 Urban Cooperative Banks (UCBs), therefore, the top regulator banned the UCBs from accepting the banned currency.⁶ However, this banning resulted into small and marginal farmers - who own 73 per cent of co-operative bank accounts - are left cashless. The government permitted payment in old

⁶ <https://indianexpress.com/article/business/banking-and-finance/urban-co-op-banks-violations-seen-across-621-lenders-during-note-ban-reveals-rbi-5285396/>

currency against hospital bills, school fees, public transport fares, medical stores bills, government taxes and penalties, petrol pumps, etc. with conditions for a definite period.⁷ Despite these facilitations, for millions of farmers and low-income people particularly in villages, co-operative banks have been vital credit institutions. Precise estimation of the extent of mental torture, physical hardship and loss of man hours for millions of people across the country during first few weeks would be a colossal exercise.

Demonetization appears to have led to the acceleration of the financialization of savings in India and had induced a shift towards formal channels of saving by households and a noticeable downward shift in the currency demand of public (Singh et al., 2017). The Pradhan Mantri Jan Dhan Yojana (PMJDY) – aiming at enhancement of the scope of financial inclusion and banking services to the citizens of the nation – found many takers after declaration of demonetization. Singh et al. (2017) estimated ‘the unusual cash deposits in specific usually less active bank accounts including the Jan Dhan accounts in the range of Rs. 1.6 - 1.7 trillion of demonetized currency’. New Jan Dhan accounts were opened in all categories of banks including scheduled commercial banks (SCBs), public sector banks (PSBs), Regional Rural Banks (RRBs) and private sector banks (PrSBs) in that order (Table 2). Post-demonetisation, 23.3 million new accounts were opened under the bulk of which (80 per cent) were with public sector banks (RBI, 2017: 25) and deposits amounted to Rs. 871 billion post-demonetization (Natasha, 2017). More precisely, for instance, on November 9, 2016, Jan Dhan accounts had Rs 45,600 crore, within a week, the deposits rose by 41 per cent to Rs 64,200 crore and by December 7, these accounts had Rs 74,600 crore, a 63 per cent increase from the day demonetisation was announced, however, depositors started withdrawing money from their accounts and the deposits fell to around Rs 63,000 crore by the end of March 2017.⁸ Critiques of demonetization claim that Jan Dhan bank accounts were illegitimately used as a means for money laundering in exchange of certain commission that could have led to generation of new black money in the economy.

⁷ <https://economictimes.indiatimes.com/news/economy/policy/demonetisation-23-places-you-can-still-use-your-old-rs-500-notes/articleshow/55604427.cms?from=mdr>

⁸ <https://scroll.in/latest/893205/centre-looking-into-60-of-deposits-in-jan-dhan-accounts-following-note-ban-business-standard>

Table 2: Deposits under PMJDY: Number of Accounts (in million)

| Bank Group | As on November 9, 2016 | | | As on March 1, 2017 | | | Variation (March 1, 2017 over November 9, 2016) | | |
|------------|------------------------|-------|-------|---------------------|-------|-------|--|-------------|------------|
| | Rural | Urban | Total | Rural | Urban | Total | Rural | Urban | Total |
| PSBs | 114.3 | 89.3 | 203.6 | 122.1 | 100.8 | 222.9 | 7.8 (6.8) | 11.5 (12.9) | 19.3 (9.5) |
| RRBs | 37.1 | 6 | 43.1 | 40 | 6.4 | 46.4 | 2.9 (7.8) | 0.4(6.8) | 3.3 (7.7) |
| PrSBs | 5.3 | 3.1 | 8.4 | 5.4 | 3.6 | 9 | 0.1(1.3) | 0.5 (16.8) | 0.6 (7.0) |
| SCBs | 156.7 | 98.4 | 255.1 | 167.5 | 110.9 | 278.4 | 10.8(6.9) | 12.5 (12.7) | 23.3 (9.1) |

Source: Drawn on data sourced from RBI

Demonetization brought some capital gains for the Government. The Government's contemporaneous unearthing of huge stashes of cash in new currency notes by the Department of Income Tax (IT), Enforcement Directorate (ED) and other state agencies in different corners of the country underscored the deep nexus between black money holders and the banking system. The government agencies in their 667 raids have seized Rs. 3185 crore including Rs. 86 crore new currency notes and Rs. 428 crore worth jewellery. The Income Tax department made cash seizures of Rs. 3185 crore (*Gujarat Samachar*, Ahmedabad, December 21, 2016). As per the RBI data, 522,783 pieces of counterfeit notes were detected in the banking system in 2017-18⁹.

The Indian economy has long been marked by poor tax compliance, especially given a large informal segment, however, the tax compliance has improved after demonetization. According to CRISIL (2017: 18), "After demonetization, direct tax buoyancy has almost double from 0.6 in 2016 to 1.3 in the fiscal 2017 and direct tax collection increased to 14.3 per cent in the fiscal 2017." Demonetisation has benefitted the tax authorities of the government at various levels. Indirect tax collections grew by 14.2 per cent in December, 2016, of this, while central excise grew 31.6 per cent as compared to the corresponding year-ago period, service tax collections rose 12.4 per cent and customs duty declined by 6.3 per cent mainly on account of a fall in gold imports¹⁰. It pushed up total tax revenue of 47 municipalities over two and a half times the sum collected during the same month the

⁹ <https://www.businesstoday.in/current/economy-politics/rbi-says-99pc-demonetised-notes-were-returned-10-major-points/story/281766.html>

¹⁰ <https://www.livemint.com/Politics/nW92FZCxdbft3f9tVbc7kO/Demonetisation-impact-Direct-tax-collection-up-by-1201-s.html>

¹¹ <https://timesofindia.indiatimes.com/india/Demonetisation-Windfall-for-municipalities-as-47-civic-bodies-collect-Rs-13192-crore/articleshow/55571926.cms>

previous year.¹¹ The VAT collection data between October and December 2016 showed growth for the manufacturing states of Maharashtra (4.74 per cent in 25.99 per cent) and Tamil Nadu (5.96 per cent to 11 per cent).¹² Further, while Nagaland (133 per cent), Meghalaya (84 per cent) and Jammu & Kashmir (82 per cent) witnessed massive increases in the VAT collection, the combined VAT collection of 23 states was up by 18.1 per cent in November itself. From Table 3, it is evident that there was a surge in direct tax collection, number of income tax returns filed and new income tax return filers. Theoretically, increased VAT and direct tax collections suggests that demonetization had no impact on production as well as on demand in the economy. However, analysts argue that this was more a reaction of traders to get rid of old notes in a huff rather than a sign of improved business environment post-demonetization (Sikarwar, 2017).

Table 3: Direct Tax Collection in India during November- December, 2016

| Particular | 2015-16 | 2016-17 | 2017-18 |
|---|--------------------|--------------------|-------------------|
| Direct Tax Collection (in Lakh Crore) | 7.4 (7 per cent) | 8.5 (15 per cent) | 10 (18 per cent) |
| Filing of Income Tax Returns (in Lakh) | 4.6 (15 per cent) | 5.4 (19 per cent) | 6.8 (25 per cent) |
| New Income Tax Returns Filed | 66.2 (20 per cent) | 85.5 (29 per cent) | 100 (25 per cent) |

Source: Drawn on data sourced from RBI

Demonetization resulted into gains for the non-banking financial intermediaries such as debt/income oriented mutual funds and insurance companies, into moderation in interest rates on bank deposits and decline in the price of gold enhancing the relative attractiveness of both debt and equity oriented mutual funds (Singh et al., 2017). Singh (2018) in his survey in Karnataka, Andhra Pradesh and Telangana found that gold retailers who had an inventory of gold and were ready to accept old denomination notes made brisk business after demonetization, however, small retailers' business was almost completely paralyzed due to their inability to mobilize cash thus clearly shaking the gold business to the extent that it even impacted the social realm affecting philanthropy.

Chodorow-Reich, et al. (2018) observed that ATM transactions were at its minimum in December 2016, the GDP growth rate slipped down below six

¹² <https://economictimes.indiatimes.com/news/economy/finance/states-record-jump-in-vat-collections-after-note-ban/articleshow/56409057.cms?from=mdr>

per cent in the fourth quarter of 2016 and the current daily and weekly status unemployment rates were recorded highest. However, they also found that payments through e-wallets and POS and bank deposits were highest in the last quarter of 2016 and the first quarter of 2017. Overcrowded bank branches exchanging banned currency notes with the money in circulation for more than one month indicate poor execution of the decision of demonetization. The long queues of people waiting for their turn outside the ATMs machines and several ATMs running out of cash during the first two months confirmed severe shortage of funds with the banking system. Even as official statements suggested the cash shortage was only temporary and banks were receiving replenishments of new currency notes, however, frustration, anger and listlessness of the 'common man' were at their peak.¹³ Frequently changing of notifications by RBI or government announcements related to limits of cash withdrawal added confusion and misunderstanding among people. Banks fixing up individual cash withdrawal limits - Rs 24,000 a week, including a maximum of Rs 2,500 from ATMs per day - each week proved RBI's unpreparedness to match the demand and supply gap. Reddy (2017: 22) has rightly described the situation after announcement of demonetization: "The immediate effect, however, was that much of the trade froze. Electronic transactions took place, but in the absence of cash, much of the everyday transactions in the market ceased. Institutions and people struggled to adapt- some continued to use old notes for a while, some resorted to barter and some entered into credit arrangements."

The short term impact of demonetization was felt by people from all walks of life particularly in the informal sector. The reason is that over 90 per cent of entire work force is employed in the informal sector (Mehrotra, 2019: 1), wherein usage of cash is enormously high. Litvack and Vigne (2017: 11) are of the view that demonetization has clearly had a detrimental effect on the income of casual labourers in the tertiary sector, who not only live their lives outside of the formal economy, but rely on cash for their income payments, and carry out virtually all of their transactions in cash. According to RBI (2017: 39), 'Demonetization impacted some segments of the export sector such as readymade garments, and gems and jewellery but the impact was only transitory but it increased import of gold sharply in November that moderated in December in 2017'. Aggarwal and Narayanan (2017)

¹³ Instances galore as to how those in ATM queues spent much of their day and night moving from one facility to the other just because cash would be over by the time they reached closer to the machine.

found that demonetization displaced domestic agricultural trade in regulated markets by over 15 per cent and perishables by 23 per cent in the short run which settled at 7 per cent and 18 per cent lower than usual trade at the end of the 90 day period. There were instances of jobs loss in informal sector due to demonetization and labourers were laid-off generally for short periods for couple of months till sufficient cash was available for business (Singh, 2018). Due to non-availability of cash, the diamond industry of Surat has not been able to do a single dealing in polished or rough diamonds since November 8 (*ToI*, 2016). Kumar (2017c) found that due to demonetization, working capital for the unorganised sector had dried up, impacting the small and cottage industry leading to a decline in output in the affected sectors. He concluded that due to shortage of cash and fall in velocity of circulation of money, a forced contraction in transaction would reduce income and production generation. India's export growth, after having accelerated in September-October 2016, slowed in November 2016 (2.4 per cent in US\$ terms on a year on year basis) as shipments, especially from some labour-intensive sectors, were adversely affected by demonetization (RBI, 2017: 37). Housing prices in 42 major cities across India could drop by up to 30 per cent over 6-12 months after the demonetization of high-value notes, wiping out over Rs. eight lakh crore worth market value of residential properties sold and unsold by developers since 2008.¹⁴ Luxury home rate was estimated to fall by 25-30 per cent after demonetization.¹⁵ However, such anecdotes are not convincing in the absence of reliable data and research studies.

Demonetization created a need to print new currency notes ones in a given short period to replace the banned but at a big cost. And for that, the RBI incurred Rs 4,912 crore (as against Rs 7,965 crore in 2016-17) as the cost of printing new currency as well as transporting both the new and banned currency all over the country. Vyas (*Outlook*, 2016) estimated Rs. 168 billion as total cost of demonetization recently in the form of the cost of printing new currency notes, the cost of transporting the new currency notes to all

¹⁴ <http://www.millenniumpost.in/top-42-cities-housing-prices-may-crash-30-in-6-12-months-171342>

¹⁵ <https://m.economicstimes.com/wealth/real-estate/luxury-home-rate-may-fall-by-25-30-after-demonetisation/articleshow/55440301.cms>

required places; paying highway tolls and the costs in terms of human resources and corresponding overheads to manage this mammoth operation.

Four Years of Demonetization

Narayana (2016) argued that long term negative impact of demonetization would be for the common man, the unorganized and informal workers, the small businessmen, the retail traders, and small and micro enterprises. According to the Local Circles survey on assessing the impact of demonetization, “21 per cent people were of the view that demonetization reduced black money in the economy, 12 per cent of them believed that it increased direct tax collections, 42 per cent said it brought a large number of evaders in the tax net while 25 per cent said they felt demonetisation had no benefits at all.

In the first few months, demonetization affected essentially all areas of India but with varying intensity, and by summer 2017 the shock had mostly been undone (Chodorow-Reich et al., 2018). Regarding the long term impact of demonetization on the pervasive black economy of India distinguished macro economists have made it clear that little would be achieved through this measure. Demonetization would leave the economy in trouble and people harassed (Ghose, 2016). It would fail even to ‘pinprick’ the black money (Patnaik, 2017). Aiyer (2016) stated that as a stock, probably not even two per cent of historical black hoards are held in cash - almost all have been converted to gold, real estate and financial investments, some at home and much abroad and much is brought back to India (via Mauritius and other legal routes) to be invested in Indian shares and real estate.

The share of coins and currency upto Rs 100 in total money supply has marginally decreased after demonetization. Prior to November 8, 2016, currency in the form of Rs 500 and Rs 1000 notes formed about 85.24 per cent of the total money supply in circulation. However, Rs. 2,000 (22.39 per cent) and Rs. 500 (60.16 per cent) and the new Rs. 200 currency note (4.38 per cent) combined together to form 86.93 per cent of total money supply in circulation in 2020 (Table 4). The Rs 500 notes constitute around 60 per cent of the money supply in circulation in 2020. The high denomination currency notes i.e. Rs 500, Rs 1000 and Rs 2000 form around four fifth of the total money supply in India. It is easy to hide illegal cash

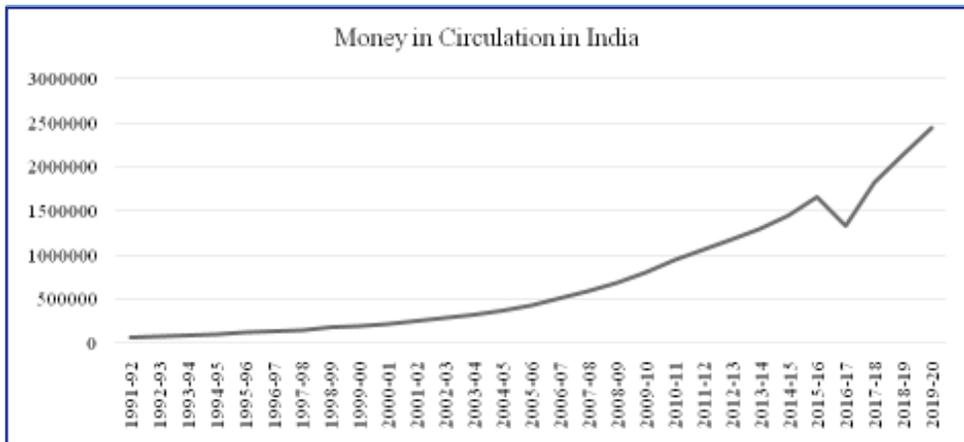
in high denomination. Therefore, Rs 2000 and Rs 500 notes would arguably help black money holders. As per the RBI records, the total money in circulation was Rs. 1335234 crore in 2016-17 but increased by Rs 27145.15 crore to Rs. 2447280 crore in 2019-20. The Government was not successful in achieving its goal of less cash economy as the money in circulation has increased by almost 30 per cent since the date of announcement of demonetization (Figure 1).

Table 4: Currency Notes and Coins in Circulation in India (per cent)

| Year | Coins and small denomination currency | Rs 100 Notes | Rs 200 Notes | Rs 500 Notes | Rs 1000 Notes | Rs 2000 Notes |
|---------|---------------------------------------|--------------|--------------|--------------|---------------|---------------|
| 2015-16 | 5.27 | 9.49 | NA | 47.21 | 38.03 | NA |
| | | | | 85.24 | | |
| 2016-17 | 9.16 | 18.93 | NA | 22.03 | 0.67 | 49.21 |
| | | | | 71.91 | | |
| 2017-18 | 6.44 | 12.14 | 2.03 | 42.27 | 0.36 | 36.76 |
| | | | | 79.39 | | |
| 2018-19 | 5.71 | 9.40 | 3.75 | 50.35 | NA | 30.80 |
| | | | | 81.15 | | |
| 2019-20 | 4.93 | 8.13 | 4.38 | 60.16 | NA | 22.39 |
| | | | | 82.55 | | |

Source: Drawn on data sourced from RBI

Figure 1: Total Money Supply in Circulation in India (Rupee Crore)



Source: Drawn on data sourced from RBI

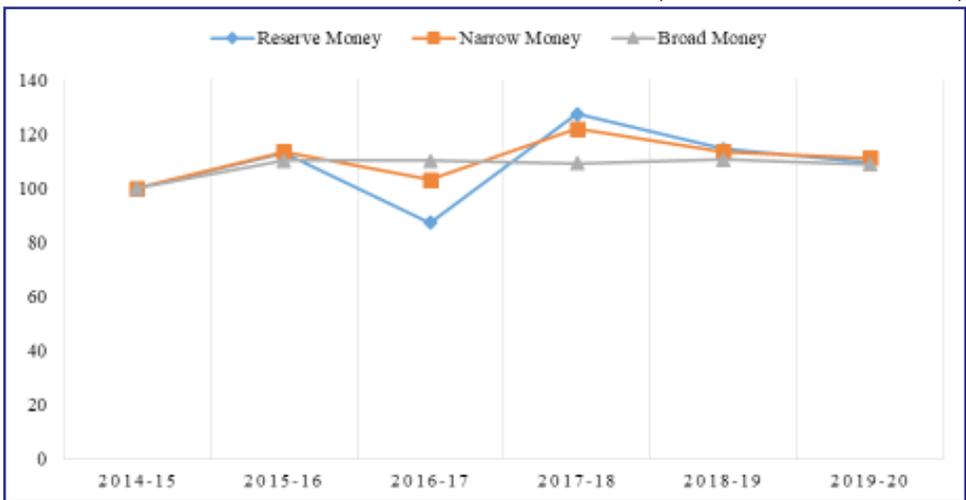
Due to demonetization, all forms of cash transactions were by and large affected in first few weeks, however, with continuously increase in the flow of money, things returned to normalcy. However, to presume that such

obnoxious and criminal activities have been downed permanently is to be too naive. Having access to exactly the same printing machine, ink, computer software and paper and trained personnel, for them, it is only a matter of re-think, re-design and re-distribute the fake of new Rs. 500 and Rs. 2000 currency notes. Demonetization may destroy a tiny part of the black wealth but it would not stop black income generation (Kumar, 2016e). Leaky and underprepared banking system helped put bulk of new currency notes into illegal and unwarranted channels.

Demonetization aimed at less cash economy but money supply has only augmented since demonetization. For example, Reserve Money, Narrow Money and Broad Money had increased by 38.93 per cent, 58.53 per cent and 44.61 per cent respectively in India since November 2016 (Figure 2). Hence, the government could not achieve the goal of less cash economy. Bankers' Deposits with RBI (8.38 per cent), 'Other' Deposits with RBI (149.22 per cent), Demand Deposits (75.55 per cent) and Time Deposits (40.59 per cent) had outpoured since 2015-16 (Figure 3). But interestingly, excess liquidity with the banks and surge of bank deposits after demonetization depict lack of both consumption and investment demand. Despite reducing interest rates and continuous increase in money supply, borrowings from banks seemed to have remained low. It indicates that demonetization pushed people to deposit more with banks despite falling interest rates and this trend continued till 2019-20.

Figure 2: Indices of Select Money Stocks in India

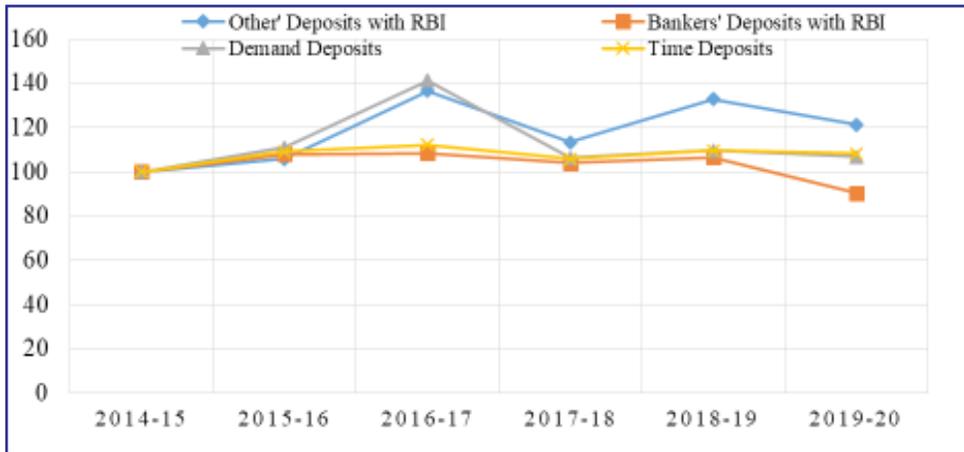
(2014-15 as Base Year 100)



Source: Drawn on data sourced from RBI

Figure 3: Select Indices of Select Deposits with Banks and RBI

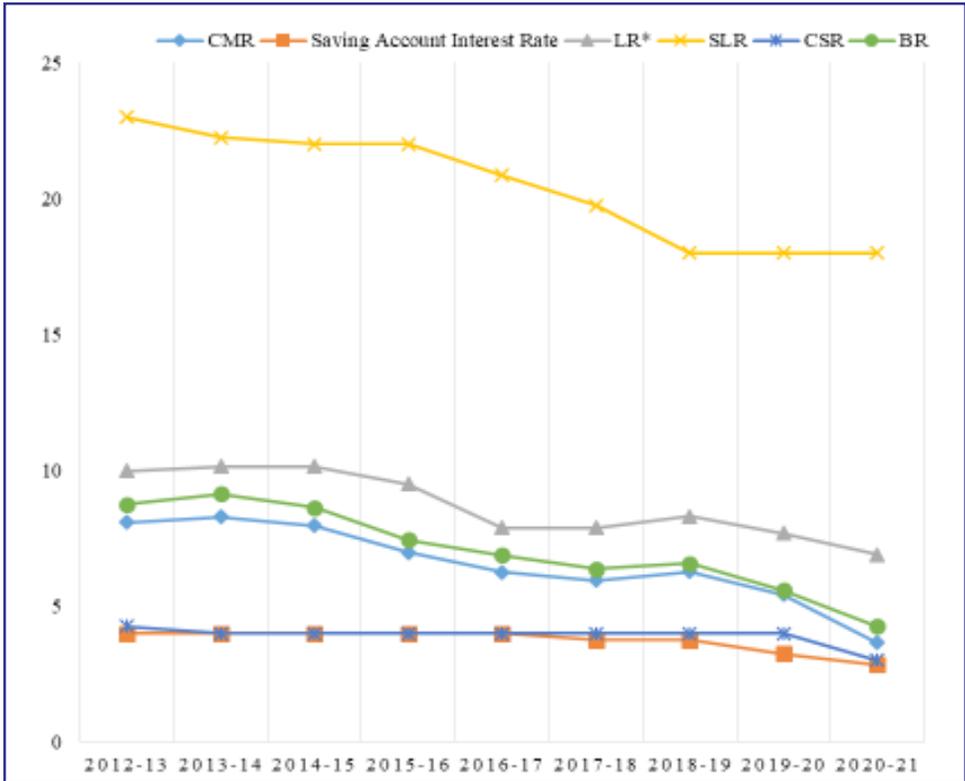
(2014-15 as Base Year 100)



Source: Drawn on data sourced from RBI

Theoretically speaking, Cash Reserve Ratio (CRR), Statutory Liquidity Ratio (SLR), lending rate (LR), Bank Rate (BR) and call money rate (CMR) are passive indicators of pace of economic activities in a country. For instance, between 2012-13 and 2016-17, CMR had been high and remained above 6 per cent indicating expansionary phase of Indian economy, however it has moved down after demonetization (Figure 4). Similar trends were observed in case of bank rate, CRR and SLR as well. It appears that the RBI had to resort to a cheap money policy after demonetization had arguably triggered economic slowdown in India. However, there is no empirical evidence to substantiate this concluding statement.

Figure 4: Key Interest Rates in Indian Economy(per cent)



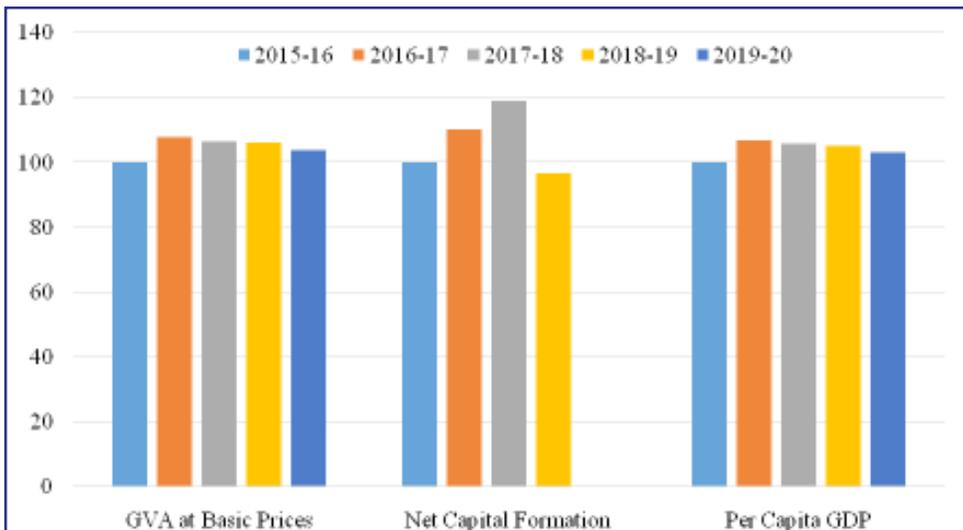
Source: Drawn on data sourced from RBI

*Average lending rates was considered.

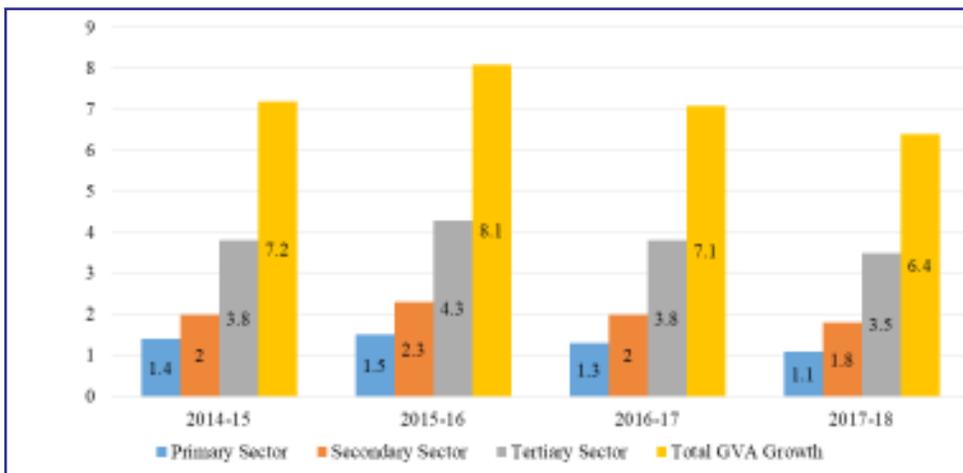
Chaitip et al. (2015) in their study observed that money supply had a positive correction with GDP growth, while demand deposits had a negative correction on Gross Domestic Product (GDP) growth. However, Ahmed and Suliman (2011) found there existed no causality between real GDP and money supply in the case of Sudan during the period 1960-2005. Demonetization had reduced money supply for a couple of quarters post-November 8, 2016. Gross Value Addition (GVA) at basic prices and Per Capita NNP that had already slowed even before announcement of demonetization, further slipped downwards after November 2016. Demonetization had led to a further decline in the annual growth rate of select macro economic aggregates (at constant prices) including GVA at basic prices, Net Capital Formation and per capita GDP (Figure 5). The adverse impact of demonetization is also visible on the GVA measured as a percentage growth over the previous year at basic prices. The GVAs for the primary, secondary and tertiary sectors started falling since 2016-17 (Figure 6).

Figure5: Indices of Select Macro-Economic Aggregates

(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

Figure 6: Share of Various Sectors in Total GVA Growth Rate(per cent)Source: Drawn on data obtained from <http://www.mospi.gov.in/slider/graph-1>

Unemployment rate has been a major constraint for the Indian economy during last half a decade or so. As per an article published in the Business Standard on the Labour Bureau's Sixth Annual Employment-Unemployment Survey,¹⁶ 'The unemployment rate rose to a four-year high in 2016-17, when

¹⁶ https://www.business-standard.com/article/economy-policy/unemployment-peaked-to-4-year-high-during-demonetization-govt-survey-119011001329_1.html

the government demonetised old currency notes, at the same time as more people joined the labour force looking for jobs'. The International Labour Organization report titled 'World Employment and Social Outlook: Trends 2018' observed similar developments. Average unemployment rate - calculated on the basis of 30-days moving average - for the years 2017, 2018 and February 2019 had remained 4.55 per cent, 6.1 per cent and 7.1 per cent in India respective (Figure 7). The unemployment situation has been much worse in the rural India. As on February 5, 2019 the unemployment rate in the rural economy rose to 8.5 per cent. After demonetization, the situation of unemployment has further perpetuated in India.

Figure 7: Unemployment Rate in India(per cent)



Source: Drawn on data sourced from CMIE website

According to the fifth annual employment-unemployment survey at all-India level, about 77 per cent of the households were reported to be having no regular wage/salaried person. According to Roy (2016), “the surplus cash deposited in banks would lead to RBI not being able to efficiently manage the government securities eventually hurting the balance sheet of the central bank”. Evidently, uncertainties caused by demonetization have played a role in the fall in the flow of investments. The Indian economy post-demonetization has miserably missed the big push from black money that had kept both entrepreneurial motivation and profit margins higher.

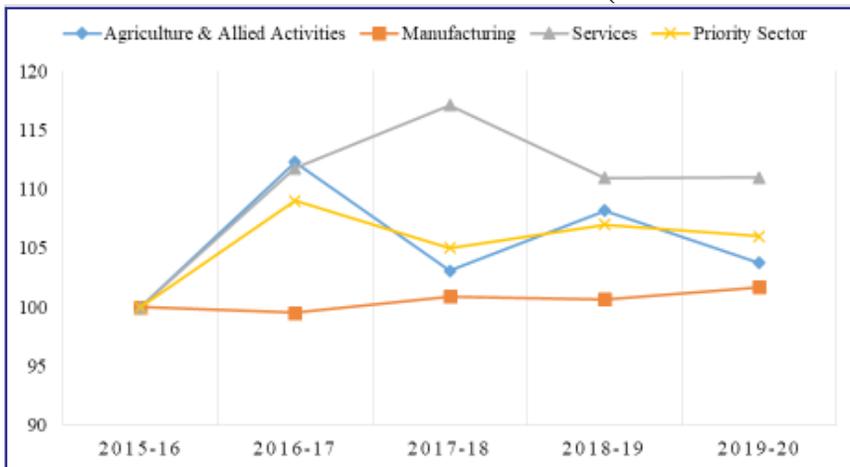
Summary of Sectoral Impacts of Demonetization

Due to currency withdrawal by RBI, some sectors were very badly affected where as others remained relatively insulated, however, it is difficult to say

whether change in credit requirements was only due to demonetization. Agriculture sector typically faced a temporary shortage in the near-term post-demonetization but rural transactions became normal once liquidity was infused in the rural areas (Ganesan and Gajendranayagam, 2017). Dash (2017) is of the view that “The impact of demonetization was felt more in the social sector and the worst affected was also the poor and the common people”. Farmers were worst impacted by the prohibition of primary agricultural co-operative credit societies in exchanging the demonetized notes as more than 60 per cent rural population transacted through the co-operative sector that led to expansion of informal credit activities in the countryside (Dharanipriya and Karthikeyan, 2019). Demonetization had varying effects on bank lending to various sectors. Total bank credit to the priority sector post-demonetization remained almost the same. The credit deployment for agriculture and allied activities slowed down in the following year, however, services sector benefitted with greater bank credit after demonetization (Figure 8). On one hand, bank credit deployment for micro and small enterprises and micro credit categories increased but its deployment decreased in other categories including education loans, export credit and credit state-sponsored organizations for SC/ST decreased after demonetization (Figure 9). Services sector too felt the jerk of demonetization as the flow of credit decelerated down during 2017-18. Within services, the worst impact was felt by tourism, hotel and restaurants, shipping, wholesale trade and computer software, however, other services had either moderate or no sustainable impact of demonetization (Figure 10).

Figure 8: Indices of Sectoral Deployment of Non-Food Gross Bank Credit

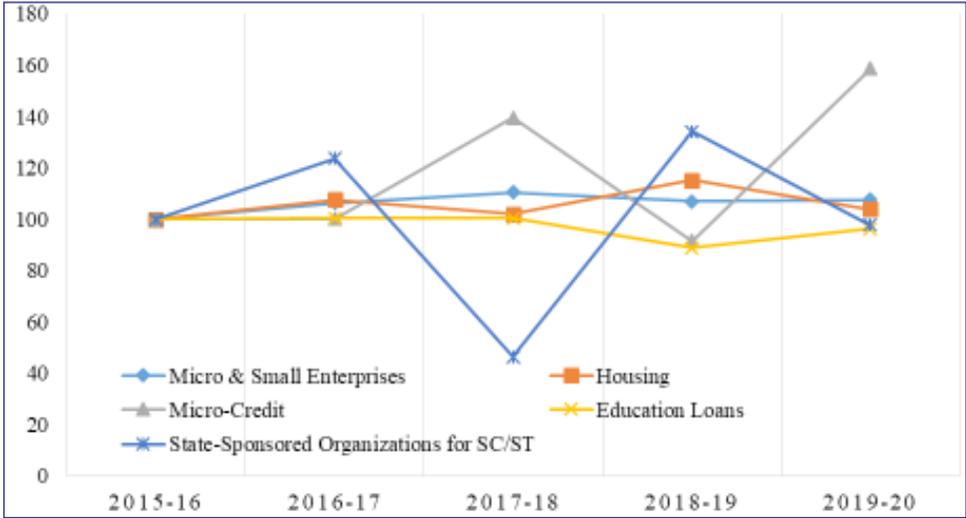
(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

Figure 9: Indices of Bank Credit to Select Priority Sectors

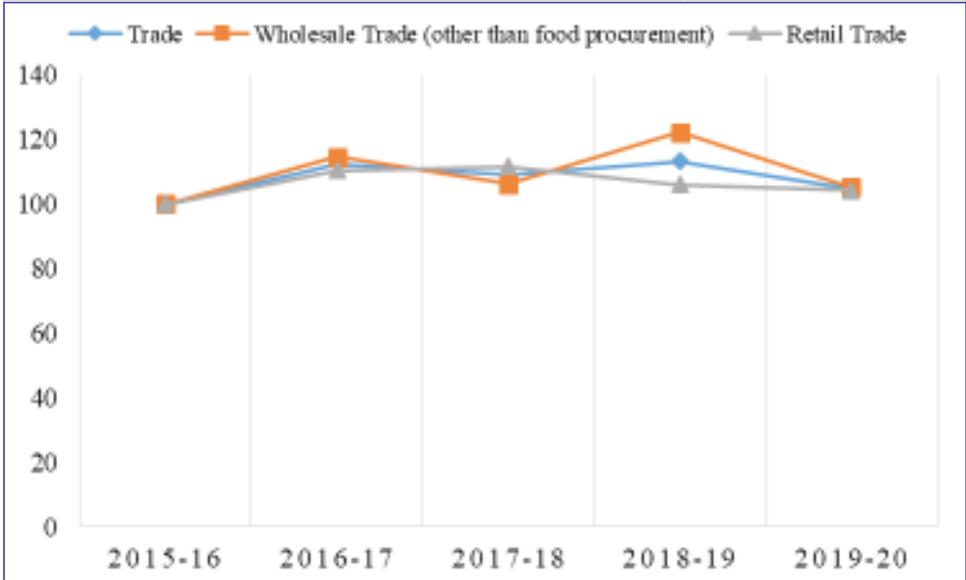
(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

Figure 10: Indices of Bank Credit Deployment to Trade in India

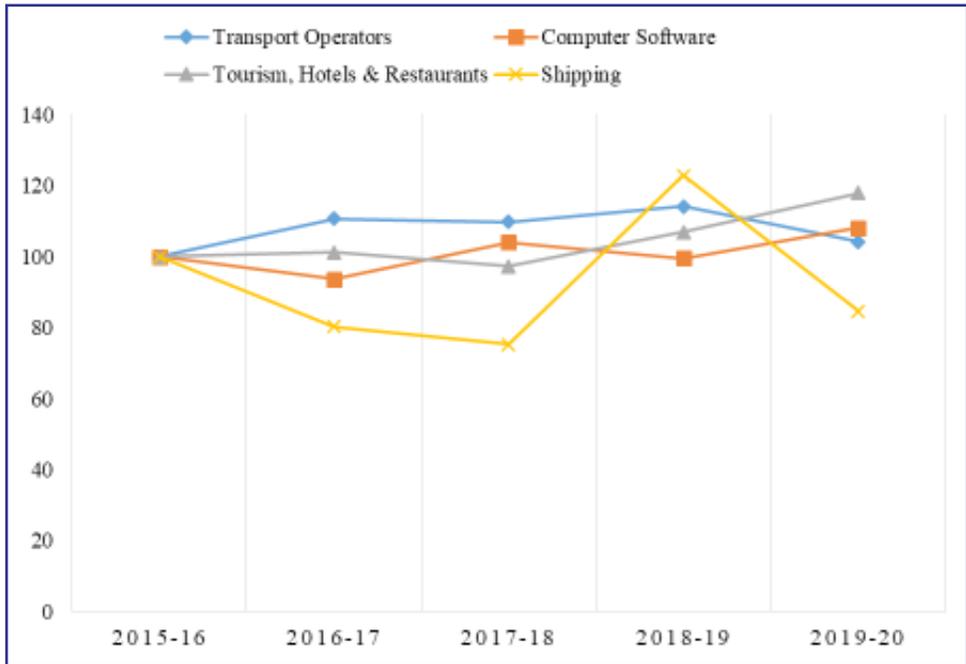
(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

Figure 11: Indices of Bank Credit Deployment to Select Services

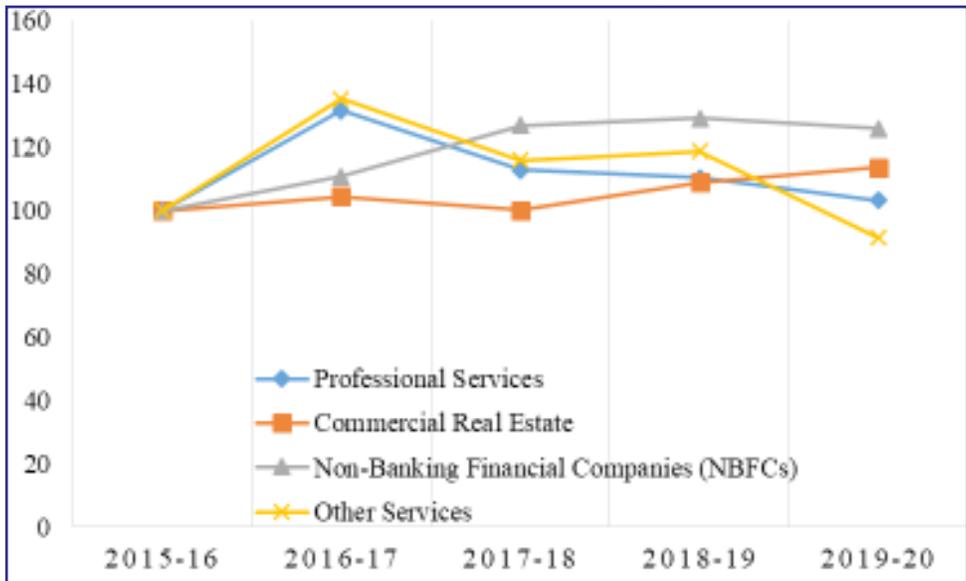
(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

Figure 12: Indices of Bank Credit Deployment to Select Services

(Base Year: 2015-16 as 100)

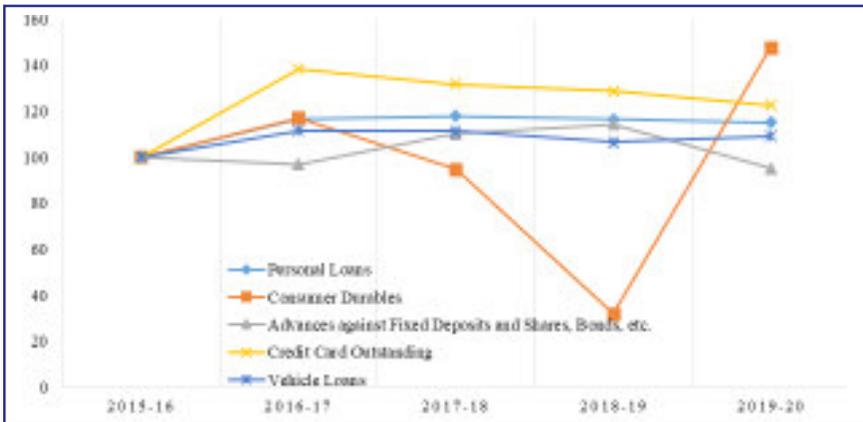


Source: Drawn on data sourced from RBI

Due to demonetization, the worst affected sectors included real estate, automobile, banking and retail trade. The Society of Indian Automobile Manufacturers (SIAM) observed that vehicle sales across categories registered a decline and this was the highest decline across all categories since December 2000¹⁷. Despite aggressive sales policy by auto firms, there was a sluggish demand for cars and commercial vehicles particularly in rural areas for first three months at least. The real estate sector and even cement, metal, bricks and sand industries were badly affected in top cities after November 8. Number of real estate deals to a large extent had fallen. But in the long run, the real estate sector is likely to benefit from a greater transparency and a fall in the black money component in its transactions. The sector has started focussing more on affordable housing. Ganesan and Gajendranayagam (2017) argued that the real estate sector has been affected in a short term period negatively, whereas this sector are likely to have positive growth in the forthcoming years. It is important to note that the growth of volume of personal loans remained almost same during last five years, however, loans in the consumer durables, advances to individuals against shares and bonds experienced a decline (Figure 13). Housing loans, vehicle loans and other personal loans kept growing even after monetization during the post-demonetization period. Export dependent and overwhelmingly dollar and pound based India’s IT-BPO industry and pharmaceutical industry came out totally unaffected. The organized whole sale business was affected minimum particularly for having limited cash transactions.

Figure 13: Categories of Bank Loans in India

(Base Year: 2015-16 as 100)



Source: Drawn on data sourced from RBI

¹⁷ For details, see, <http://www.dnaindia.com/money/report-demonetization-effect-automobile-sales-at-16-year-low-in-december-2291031>

The digital payments in the past few years have significantly expanded both in value and volume. For instance, it increased by 135.4 per cent from 1,459.02 crore in 2018 to 3,434.55 crore in 2020¹⁸. The pace of digitalization, as pushed by the Government after demonetization, depends on a number of factors like access to electricity, internet and banking facilities in economy. India has achieved remarkable progress in most of these areas that are likely to help accelerate the pace of digitalization in India. For instance, a mere 0.1 per cent of the households are yet to benefit from a reliable, adequate and uninterrupted electricity supply in India. In addition to this, mobile and internet penetration, expansion of banking facilities and credit card usage have increased significantly between 2016 and 2019 (Table 5). Digitalization would not be a passing phase as a large number of people still do not have access to electricity, mobile and internet connectivity and banking facilities particularly in rural areas. Moreover, despite all efforts of digitalization by the Government, the currency in circulation rather increased from 12.1 per cent in 2016 to 12.2 per cent of GDP in 2019-20. Demonetization had impacted Indian economies in varying degrees differing from sector to sector (Table 6).

Table 5: Some Factors affecting Digitalization in India

| Particular | 2016 | 2019 |
|--|---------------------------|---|
| Internet penetration | 31 per cent (420 million) | 50 per cent (687.6 million), in the year 2020 |
| Urban | 60 per cent | 51 per cent (205 million) |
| Rural | 17 per cent | 27 per cent (227 million) |
| Smartphone users | 29.2 crore | 50.22 crore |
| Rural households without any access to electricity | 13 per cent | 0.1 per cent |
| Population without banking facilities | 40 per cent | 20 per cent |
| People with credit card | 3 crore | 8.3 crore |

Source: Relevant data were sourced from IANS (Internet), RBI (banking), credit card (Medianama), mobile phone (digital portal)

¹⁸ <https://www.financialexpress.com/industry/digital-payments-jump-135-during-fy18-20-upi-cards-see-highest-volume/2103051/>

Table 6: Summary of Sectoral Impact of Demonetization

| Sectors/Related sectors | Short Term Impact | Medium Term Impact | Long Term Impact |
|---|---|--|---|
| IT-BPO/call centre, mobile stores, computer hardware and accessory | No impact at all | No impact at all | No impact at all |
| Export business/ export of diamond, textile, handicraft, leather and pharma | Negatively impacted exports to Nepal and Bhutan Adversely affected exporters needing cash for stock up before exports | No impact | No impact at all |
| Auto industry/ spare parts, tyre, auto accessory | Sluggish demand particularly for cars and commercial vehicles | Demand improved slightly | Neutral |
| Real estate/cement, steel, bricks, sand | Highly negative, no buyers at prevailing exorbitant rate and problem of unsold inventory and postponement of new projects | Negative Demand improved slightly but luxury component took a while to return to normalcy | Less cash reduced black money component of housing/real estate transactions Real estate developers focussing on affordable housing |
| Agriculture | Negative impact as cash dominates transactions | Less impact | No impact |
| Banking Industry/Financial services, insurance, micro-finance | Too much of cash deposits and only limited takers of bank loans NPAs of micro-finance organizations increased | Too much of cash deposits and only limited borrowers With economy going cashless, the demand for various banking services increased | The demand for bank credit improved. |

Source: Based on conclusions drawn in the earlier sections of this article.

Emerging Concerns

Accordingly to Forrester Research, online shoppers buy through COD in 70 per cent case would find it difficult to opt for cash option. In a Local Circles¹⁹ survey of about 30,000 respondents from 220 districts of India, it was observed that even after demonetization, black money has continued

¹⁹ Local Circles takes Social Media to the next level and makes it about Communities, Governance and Utility. It enables citizens to connect with the community.

dominating the real estate market and 66 per cent of real estate transactions were done in cash.²⁰

Litvack and Vigne (2017: 10) are of the view that a cashless society or digital payment ecosystem could potentially address many of the country's fiscal issues, reducing the risks of tax evasion and money laundering and diminishing the costs of maintaining the infrastructures, over time, not only reduce financial exclusion, but can increase tax revenue from a more diverse workforce. Chodorow-Reich et al. (2018) concluded that unlike in the cashless limit of new-Keynesian models, in modern India cash serves an essential role in facilitating economic activity. In fact, as a group of experts deliberated the likely impact of demonetization, it was held that not only there was serious doubts regarding the efficacy of this move to bring back black money, but it was going to “damage the economy in the long term” while cashless digital payment system might not be effective.²¹ Similar concerns have been expressed by at least two Nobel laureates, namely, Paul Krugman and Amartya Sen. While the former observed that “I understand the motivation, but it is a highly disruptive way to do it. I hardly see significant long-run gains, but there certainly are significant, although temporary, costs” (Prasad, 2016), the latter minced no words to denounce the move as he opined “It is a gigantic mistake, both in terms of its objective of dealing with corruption as well as the objective of one rapid jump of getting into a cashless economy” (Jose, 2017).

Demonetization seemed to have little impact on economic frauds in the country. For example, nearly 70 per cent of the income of political parties in India comes from unknown sources between 2004 and 2015²² and it marginally slipped to 67 per cent in 2018-19.²³ About 140471 cases of cyber frauds involving about Rs. 589.14 crore related to usage of credit cards, internet banking and debit cards were reported between 2017 and 2020.²⁴ Cybercrimes in India caused Rs 1.25 lakh crore loss in 2019. Recent

²⁰ <https://www.localcircles.com/a/press/page/three-years-of-demonetisation#.X5JrxtAzbIU>

²¹ For details, see, IANS (2016).

²² <https://www.ndtv.com/india-news/70-political-funding-comes-from-unknown-sources-says-report-10-facts-1652293>

²³ <https://scroll.in/latest/955666/indias-seven-national-parties-got-80-of-funds-from-unknown-sources-in-2018-19-says-report>

²⁴ <https://www.livemint.com/brand-post/financial-frauds-on-the-rise-safeguard-yourself-with-the-wallet-care-plan-11603949227292.html>

hacking of 32 lac debit cards of major Indian banks due to technology related loopholes implies that similar crimes might reoccur in various forms in the future as well.²⁵ In absence of strong cyber laws and relevant information technology policy, a secure and trusted cyberspace for India would be a distant dream.

Interestingly, the countries that had adopted demonetization completely failed in curbing black money, corruption and spiralling prices. On the contrary, the economic policies that followed demonetization dramatically turned out ineffective and ambiguous and eventually led to unstable economic environment there. But, that does not mean, at least at this stage that India would also see a similar fate. The Government of India has been pushing digitization and cashless economy would have an impact felt in the medium to long term. Announcements of tax benefits for certain sectors, subsidized interest rates for the housing sector and other incentives on the December 31, 2016 clearly indicate that the authorities had accepted the potential adverse effects of demonetization on the economy.

Concluding Observations

Global experience, including that of India, in the past has shown that the impact of such measures have been fairly short-lived as it does not attack/ plug the mechanism that gives rise to black income (Allirajan, 2017). Demonetization arguably failed to meet most of its objectives related to black money, cashless economy, counterfeit currency and terror funding. Despite overflowing with cash, the Indian banks found limited borrowers during first ten weeks of demonetization. The biggest gainer was the government(s) including local bodies that received outstanding tax dues. By no means, demonetization could guarantee an economy cent percent digital and black money free. It did help accelerate digital transactions in the economy, but it pushed people from a costless cash-dominated economy to a costly digital one (Patnaik, 2017). Looking at the present state-of-affairs, a cashless or less cash economy is still a distant dream in India.

During this period, investment, employment and GDP were undesirably

²⁵ For details, see, <http://indiatoday.intoday.in/technology/story/32-lakh-atm-cards-hacked-is-your-debit-card-safe-should-you-change-pin-everything-you-need-to-know/1/791424.html>

affected for about six months. For instance, production in agriculture remained unaffected, informal sector credit market got strengthened (Dharanipriya and Karthikeyan, 2019) but rural transactions had dwindled. The biggest losers of demonetization included professionals, auto industry and real estate developers at least in the short run. Demonetization could not succeed in unearthing the black money wholly but the new currency in high denomination was easier to store. Otherwise defunct, the bank accounts of poor people were deceitfully used to deposit disbanded cash for remonetisation.

While populism and platitudes, unfortunately, have occupied centre-stage in vote bank politics a philistine state's surprises as economics could strike a body blow to the poor and poorly employed in a full-blown informal economy. Despite fiercest opposition, the Government of India appeared extremely firm on its stand on demonetization—seemingly for political reasons- and promises optimistically to deliver the best out of demonetization for the common man who had suffered quite heavily, therefore, to undo the damage, the government had to untimely announce populist measures. Apart from the deaths caused in bank lines or the jobs losses, demonetization's lasting impact may be the general populace's loss of faith not only in the currency, but also in the government's ability to govern in accordance with the rule of law (Kumar, 2016d). The Government should have used the term 'currency replacement' instead of demonetization. In that case, it could have found many approvers and could have attracted less criticism. Shaken to the hilt, the Indian citizens have shown remarkable tolerance hoping that this difficult phase would pass over soon. Since, the total money supply in India now is more than that in 2016, demonetization has visibly no impact on the fundamental economic variables in the long run, and of course difficult to accurately estimate either.

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Agricultural Performance in Gujarat and Madhya Pradesh: An Enquiry into the Patterns, Processes and Impacts

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Abstract:

The poverty reducing impact of agricultural growth is widely analysed by the scholars. However there seems to be a trade-off between faster and inclusive growth in agriculture rather than the two moving hand in hand. The agricultural growth among the central-western dry land states in the recent period raises concern over the spread, equity, and sustainability of such growth and also about the impact on poor. In this context the study aims to examine the composition and dynamics of agricultural growth in two Indian states; Gujarat and Madhya Pradesh. While the former is a developed state with higher per capita income the latter is economically less developed. However, the agricultural growth story in the two states started around the same period. Hence, the present study tries to analyse how the recent growth process has helped the poorer and marginalized communities in the two states. The study is based on both secondary and primary data. The primary data analysis was conducted in 720 households spread across 36 villages in the two states. The result of the study shows that the percolation of growth has happened across region but not among the poor section of rural population, particularly in Madhya Pradesh. The small and marginal landholders have hardly gained anything out of the fast track growth process.

Keywords: Agricultural income, Farm size productivity, Challenges in farming, Gujarat and Madhya Pradesh

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1. Introduction

A large number of studies in India have suggested the significant growth inducing as well as poverty reducing impact of agricultural growth (Ravallion, 2000; Radhakrishna, 2002). In fact, this is more or less in continuum of the post-Green Revolution era where productivity led growth in agriculture had eventually led to rapid reduction in rural poverty, especially in the states that had experienced higher growth in agriculture (Mellor & Desai, 1986). However, not only the percolation mechanism of growth in terms of poverty reduction has weakened but the pace of poverty reduction has declined in the post reforms period. Moreover, the pace of poverty reduction is neither consistent nor smooth (Radhakrishna & Chandrashekhar 2007; Dev & Ravi 2007), which could mainly be attributed to the low and fluctuating growth in agricultural sector since the nineties (Bhalla, 2009). This is not entirely surprising as reducing poverty below a certain threshold level is more complex as compared to the initial phase of poverty reduction. In the same vein, extending similar approach, like that of Green Revolution, for promoting agricultural growth in the remaining parts of the country is bound to be more difficult. For, the next phase of agricultural growth is to be located in relatively difficult scenarios with respect to agronomic potential (in rain-fed and semi-arid regions), agrarian relations (erstwhile feudal belt); socio-cultural (concentrated in poverty stricken central-eastern states with predominance of tribal communities); economic (predominantly agrarian economies with little sectoral diversification and market development) and spatial (remote from the western-southern part)-all these disadvantages operating simultaneously and also impinging on each other.

There is however, no guarantee that faster growth in agriculture, irrespective of its locus, composition and distributive implications may necessarily reduce poverty in the short-medium time frame and within the micro level context of rural economy, given the weak percolation mechanism (Panda, 2008). At the same time it is plausible that the faster growth in agriculture may bring in its fold a set of outcomes that may not meet the needs/aspirations of the poor-farmers as well as wage earners. A scenario such as this may take place owing to a number of reasons characterizing the agrarian scenarios in the hitherto lagging where faster growth is likely to take place in near future. These, inter alia may include factors like: a) significant infrastructural gap especially in the central-eastern regions; b) crop diversification in water scarce dry land regions leading to a shift towards more water intensive

crops; and c) concentration of the higher valued crops, especially in water scarce regions, among relatively (water) resource rich farmers.

An additional dimension that needs careful scrutiny is that these households are rapidly losing their stakes in agriculture owing to a number of factors including high level of risks and uncertainties (emanating from weather as well as market related fluctuations); growing rural urban gaps and lifestyle related demonstration effects; and above all more or less hopeless scenarios on employment front-both rural and urban. It is quite likely that several of these households having gained from the buoyancy of agriculture growth may give up farming (Agarwal & Agarwal, 2017) by leasing out their land, or selling it off to farmers and/or even converting the land for non-agriculture uses.

The two scenarios noted above thus re-instate possibility of a trade-off between 'faster' and 'inclusive' growth in agriculture rather than the two moving hand in hand (Bhalla, 2009). It is not entirely clear as to in what way the surplus earned from the 'fast growth tract' are likely to be invested thereby creating new jobs- that too of what type, where, and within what time frame. In this background the present paper aims at examining the nature and pattern of agricultural growth and the implications on poverty reduction in two Indian states Gujarat and Madhya Pradesh.

1.2 Drivers of Agricultural Growth and Challenges

The major drivers of agricultural growth during the in recent past are irrigation, fertilizer use, availability of labour, crop diversification, public sector investment and terms of trade (Chand & Parappurathu, 2011). However there are several challenges that the sector is facing such as declining plot sizes, rise in food price, growing costs of production, increasing capital input, poor market access and/or contracting markets, climate. All these together leading to stagnation of income and even farmer suicides, which is termed as agrarian crisis by the scholars. Agrarian crisis has become all pervasive; the manifestation of crisis is felt in different forms in different agro-climatic and institutional context. While Bhalla and Singh (2010) mentioned decline in yield growth rate in most of the states and at sub-district level, Nadkarni (2018) noted that the crisis is structural in nature which arises from the non-viable size of holdings. The need therefore is for a policy shift to strengthen economic and social support systems to make

small-marginal farming especially in dry land regions and to ensure that these farmers are protected against multiple uncertainties and risks within domestic as well as global markets (Reddy & Misra, 2008). On a similar but somewhat different note Vaidyanathan (2006: 4013) argues that 'the grim situation (in agriculture)' is not so much due to factors like inadequate price support, low public investment, and declining size of land holdings, besides sub-normal rainfall in large parts of the country. Rather the critical issue is about the composition of investment that would help 'improve product potential of land and water resources already under use'.

Further the income sustainability of the small/marginal landholders is a serious concern though there exists inverse relationship between farm size and productivity (Bardhan 1973; Chand et al., 2011). Higher yield among the small-marginal landholders does not necessarily mean higher net return (Gaurav & Mishra, 2019). The desperate struggle of the subsistent farmers for the survival leads to rigorous use of the natural resources. Hence the inverse relationship does not occur due to technology, better quality of soil nor due to superior management by the small farmers but rather due to the desperate struggle of the subsistent farmers for the survival (Dyer, 1997).

However, some states with low potential dry land region, Gujarat, Maharashtra, Andhra Pradesh and Rajasthan, have attained significantly higher rates of growth as compared to most of the states in the high potential regions in the north east states such as Bihar, Assam, West Bengal and Jharkhand. Much of the growth in the dry land states seem to have come from irrigation, crop diversification and access to better rural infrastructure. It is important to note that these different set of regions have fairly different implications in terms of resource use on the one hand and poverty reduction on the other. The ongoing discourse need to capture them in detail. Nevertheless what is little explored is about the spread, equity, and sustainability of such growth and also about the impact on poor. Evidence of widening income gap among the better-off and the poorer group of farmers suggests the persisting inequality among the farming community (Bathal & Kumar, 2019). This raises the serious concern on the inclusiveness of the growth especially in the short and medium term; the full impact through percolation mechanisms may take longer time to realize.

Given this backdrop, the study seeks to examine the composition and poverty implications of the recent growth/dynamism in agriculture (crop production)

taking place in two Indian states viz; Gujarat and Madhya Pradesh. The two states represents diverse growth pattern, as Gujarat is mainly an industrialised economy as compared to dominance of primary sector in Madhya Pradesh. Gujarat in an economically advance state with per-capita income Rs. 153495 (2018-19) compared to per capita income of Rs. 56498 in Madhya Pradesh. The miracle growth of Gujarat is being upheld as a potential 'role model' for several of the agriculturally lagging states in the country (Shah et al., 2009). However after a long stagnation, Madhya Pradesh witnessed higher growth in agricultural income in the recent period. The agricultural growth rate in Madhya Pradesh was as high as 9.7 per cent during 2005-06 to 2014-15 surpassing even record holder Gujarat's 7.7 per cent (Gulati et al., 2017). The phenomenally high rate of growth in the two states raises question on the equity aspect of the growth. Gujarat, highly commercialized, Bt technology (for cotton) led, and heavily ground water dependent, agricultural growth poses concern about the underlying structural factors that may explain the (weak) link between the high rate of growth and the low developmental impacts thereof. On the other hand the wheat-soybean led agricultural growth in Madhya Pradesh seems to have not achieved regional equality in agricultural development which is further prominent in tribal dominated regions (Kannan, 2017). Hence this present study makes an attempt to analyse how broad-based is agriculture growth in terms of coverage of area/ regions and households in the two states? What has been the change in intra-state equity in growth over time? To what extent the growth has led to horizontal and vertical diversification? and, what are the implications for small and marginal farmers?

2. Methodology

The paper is constructed with help of both primary and secondary data. The long run trend of agricultural performance of the two states is analysed with the help of the secondary data, collected from various government records. The detailed regional level analysis is presented by analyzing the primary data collected from the household survey, conducted during 2013-14.

2.1 Selection of Study Area

Gujarat and Madhya Pradesh, represents fairly different initial conditions pertaining to nature and pace of agricultural growth within state specific

context. Gujarat's agricultural growth process augmented after 2002-03 and recorded around 10 per cent growth till 2010 (Shah & Pattnaik, 2015). Madhya Pradesh on the other hand, after a long stagnation witnessed around 11.24 per cent growth rate in Gross Value Added (GVA) in agriculture during 2011-2017. Thus, it is interesting to understand how the recent growth in Madhya Pradesh have spread over the regions and impacted the poor.

Three districts in each state were considered for the primary data analysis. The three districts represent the different agro-climatic zone of the states. Sabarkantha, Panchmahal and Rajkot selected from Gujarat whereas Dhar, Ujjain and Hosangabad were selected from Madhya Pradesh. One block capturing the core feature of each of selected districts was identified for conducting primary surveys. Six villages from each block were selected randomly which include three with higher irrigation (than the district average) and another 3 with low irrigation facility. Total 36 villages in two states were surveyed for the analysis. A total of 360 landed households were surveyed in each state constituting a total of 720 landed household.

2.2 Sampling and Methods

Random Sampling method was used to select households from different landholding group. Before starting the household survey the structured questionnaire has been prepared. A pilot survey was undertaken before starting the actual field and the questionnaires have been tested.

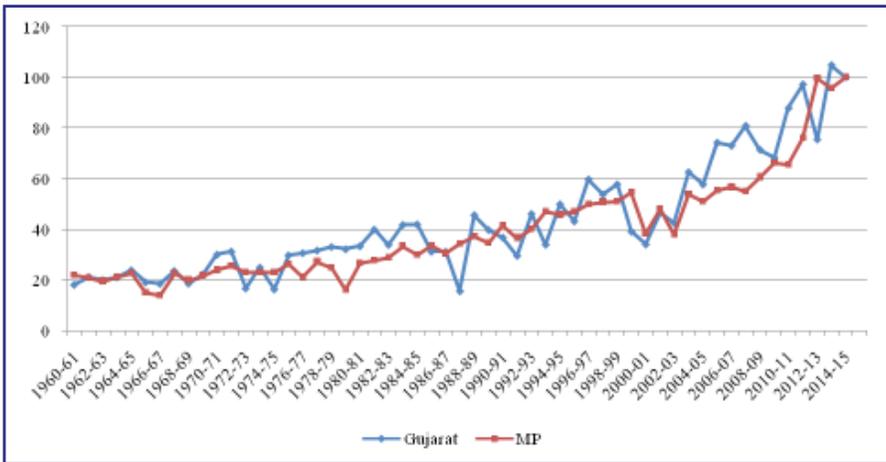
The respondents were asked about their employment, agricultural income and wages from other non-farm sector. The detail agricultural income and performance were asked, such as cost of cultivation, cropping pattern, irrigation status etc. Income, employment and value of crop was calculated for _____ tow time period; 2013-14 and 2006-07 (7 years prior to the survey) to analyse the changes over period. The agricultural cycle or the drought cycle is about 4-5 in the selected states (Pattnaik, 2011). However, the years 2007-08 and 2008-09 were reported as severe drought years and affected most parts of central-western India thus we considered year 2006-07 as our recall period. Acknowledging that recall over 7 years period is fairly long and might affect quality of responses several measures have been taken such as

collecting district level wage rate, farm harvest price and wholesale price of each crop, yield of major crops for the period 2006-07 from government documents, in order to cross check our responses. The income of two periods, 2006-07 and 2013-14 were adjusted with inflection and the real income are presented.

3. Agricultural Profile of the Two States: The Macro Trend

The state, Gujarat represents scenarios of relatively low agronomic potential yet, high growth and commercialization of agriculture with already low levels of poverty, Madhya Pradesh represents better agronomic potential yet, low growth and high incidence of poverty. However, in both the states, rural workforce still depends upon agriculture as their main occupation. A relatively higher proportion of rural workforce are engaged in agriculture in Madhya Pradesh (74.3 per cent) compared to 66.6 per cent in Gujarat (PLFS, 2019) thereby suggesting a higher level of inter-sectoral movement along with higher rate of urbanization in Gujarat as compared to Madhya Pradesh.

Figure 1 Index number of agricultural Net State Domestic Product (NSDP) in Gujarat and Madhya Pradesh



Source: *Statistical Abstract* of Respective States, various issues.

Over the period of 55 years the growth rate of agricultural NDSP in Gujarat is 6.3 per cent compared to 4.4 per cent in Madhya Pradesh (Table 1). Gujarat experiences a phenomenal high rate of growth particularly after the early 2000s. On the other hand the growth rate of agricultural sector in MP was not so impressive until recently. However, though low but the trend of agricultural NSDP is found to be less volatile in Madhya Pradesh compared to Gujarat (Figure 1 and Table 1).

Table 1 Average Annual Growth rate of Agricultural NDSP in Gujarat and Madhya Pradesh

| Years | Gujarat Growth rate (CV) | Madhya Pradesh Growth rate (CV) |
|-----------|--------------------------|---------------------------------|
| 1960-1969 | 3.6 (10.2) | 2.6 (15.3) |
| 1970-1979 | 9.8 (22.7) | -1.3 (13.1) |
| 1980-1989 | 4.5 (15.7) | 8.4 (10.8) |
| 1990-1999 | 4.0 (22.8) | 5.0 (11.9) |
| 2000-2009 | 7.6 (25.4) | 3.9 (17.2) |
| 2010-2015 | 10.3 (12.5) | 9.2 (19.6) |
| 1960-2015 | 6.3 | 4.4 |

Source: *Statistical Abstract* of Respective States, various issues.

Note: The growth rate increases to 9.9 and 7.6 in Gujarat and MP respectively after excluding the year 2000-01, which is a drought year.

The growth in Gujarat was mainly due to the massive expansion of area under bt-cotton (around 25 per cent of GCA during 2016-17). This, to a large extent, was supported by multi-pronged policy initiatives besides increased availability of irrigation from Sardar Sarovar (Narmada) project and large number of small water harvesting structures-all these coinciding with consecutive years of favorable monsoon (Shah et al., 2009). Madhya Pradesh is mainly a foodgrain and oilseed growing state with around 62 per cent of its gross cropped area (GCA) devoted to foodgrains and 32 per cent to oilseeds (during 2014-15). Soybean and wheat are the two main crops grown in the state with around 25.4 per cent and 23.7 per cent of GCA devoted to the crops respectively. However after 2003-04 there is constant expansion of area under wheat and provision of remunerative price for which helped in higher growth during the recent period. The main drivers of growth in agricultural income in the recent period in MP was explained as increase in irrigation through tube wells and canals, increase in power supply to agriculture, development of infrastructure through public investment (Gulati et al., 2017). The overall agricultural growth pattern in two state shows that -a) the growth in Gujarat is more productive as well

as water intensive as compared to Madhya Pradesh, b) Madhya Pradesh is a late starter in growth but fast moving.

4. Evidence from Field

4.1 Employment in Farm and Non-farm Sector

A total of 58 per cent in Gujarat, 66 per cent in Madhya Pradesh reported income from agriculture as their main source of livelihood (Table 2). In Gujarat, the dependence on agriculture was varying much across districts, the share being much higher in Rajkot (around 65 per cent) compared to Sabarkantha (55 per cent) and Panchmahal (53 per cent). However, the district wise variation was not observed among the sample households in Madhya Pradesh (66, 66 and 64 per cent in Dhar, Ujjain and Hosangabad respectively). Employment in non-farm was only 16 per cent in Madhya Pradesh compared to 20 per cent in Gujarat. While both the state showed negative change in farm and positive change in non-farm workforce over the period but in Gujarat it is linked with higher urbanization and industrialization (Shah & Pattnaik, forthcoming) unlike agricultural based RNFE in Madhya Pradesh (Som et al., 2002).

Table 2 Main Source of Income of the Landed Households

| | Gujarat | Madhya Pradesh |
|--|---------|----------------|
| Agriculture | 57.7 | 65.8 |
| Livestock | 23.2 | 17.9 |
| Agricultural labour | 5.2 | 7.6 |
| Non-Agricultural labour | 6.3 | 3.9 |
| Self-employed in non-agricultural sector | 2.0 | 2.6 |
| Service | 5.6 | 2.1 |
| Total | 100 | 100 |
| Farm sector | 80.9 | 83.78 |
| Non-farm sector | 19.1 | 16.22 |

Source: Field Survey, 2013-14.

The dependence on multiple sources of income was common in both the states. Agriculture as a single source of livelihood was not significant among the surveyed landed households in two states. While only 8 per cent in Gujarat, 11.4 per cent in Madhya Pradesh solely depend upon agriculture for their livelihood. There exist hardly any marginal/small landholding households who depend solely on agriculture as their livelihood. Multiple source of income among family member was common, as they reported several secondary occupations. in a way the definition of agriculturist and

non-agriculturist households has become blurred as all most all the households have combined income sources. The traditional grouping of the activity category is becoming vague. Given the demographic change there is a different non-agricultural economy already developed mainly depending on agriculture. Property right structure may actually generate an income even if they like to gain but not able to as a large part have small piece of land. Income diversification among the rural households was higher in Gujarat compared to Madhya Pradesh. Rapid industrialisation of the rural economy, and increasing education in rural areas could be treated as prime movers of the growth of the non-farm economy (Shah & Pattnaik, forthcoming). However, what is not clear is how far education has created inter-linkage between farm and non-farm sector. In Gujarat what seems to have happened is the closeness to urban area (with better infrastructure) and higher net cost of agriculture products might have higher non-farm employment but lower rural non-farm employment (RNFE); hence, RNFE is still scope to improve. Education has played a role in improving the process. Gaurav & Mishra (2019) have pointed that education is associated with higher yield and return, thus with weak agricultural extension among farmers formal education may offer informational substitute.

4.2 Rural Landed Households and Dependence on Agricultural Income

Income earned from all sources was calculated but we are aware about the fact it is difficult to get the exact income from each source as income is always undervalued. However, we have tried various measures to validate the data.

Table 3 Share of farm and non-farm income in Gujarat

| Land Category | Marginal | Small | Medium | Large | Total |
|------------------------|----------|-------|--------|-------|-------------|
| Sabarkantha | | | | | |
| Agri and Allied sector | 43.0 | 76.6 | 84.5 | 89.4 | 84.9 |
| Non-Agriculture sector | 57.0 | 23.4 | 15.5 | 11.6 | 15.1 |
| Panchmahal | | | | | |
| Agri and Allied sector | 29.1 | 55.4 | 59.0 | 70.8 | 54.7 |
| Non-Agriculture sector | 70.9 | 44.6 | 41.0 | 29.2 | 45.3 |
| Rajkot | | | | | |
| Agri and Allied sector | 31.6 | 57.7 | 90.0 | 90.9 | 81.5 |
| Non-Agriculture sector | 68.4 | 42.3 | 10.0 | 9.1 | 18.5 |
| Total | | | | | |
| Agri and Allied sector | 28.7 | 63.5 | 79.4 | 85.6 | 75.7 |
| Non-Agriculture sector | 71.3 | 36.5 | 20.6 | 14.4 | 24.3 |

Source: Field Survey, 2013-14.

In Gujarat, out of the total income around 75 per cent was contributed by agriculture and 25 per cent from the other sources (Table 3). This implies till recently around three fourth of the income in the rural area was earned from the agriculture and allied sector. It is also seen from the data that share of income from agriculture was higher among the medium and large landholders. Even though our sample specifically considered only the landed households the share of income from non-farm sector constitutes a major share of the total income for the small and marginal landholders. The region wise analysis shows that the share of agricultural income out of the total household income was highest in Sabarkantha and Rajkot in contrast to Panchmahal. In Panchmahal there was not much gap between agriculture and non-agriculture income. The share of agricultural income was more than 80 per cent out of the total household income in Sabarkantha except among the marginal land holders. Similarly in Rajkot, income from agriculture constitutes around 90 per cent of the total income among the medium and large landholders. Rajkot being a dry land region it is only the well-off land holders could earn larger share of income from agriculture. On the other hand in Panchmahal the share of income from agriculture out of the total income were lesser then other regions across all the landholding groups.

Table 4 Share of Farm and Non-Farm Income among the Sample Households in MP

| Land Cat | Marginal | Small | Medium | Large | Total |
|------------------------|----------|-------|--------|-------|-------|
| Dhar | | | | | |
| Agri and Allied sector | 19.3 | 69.0 | 84.7 | 92.1 | 85.9 |
| Non-Agriculture sector | 80.7 | 31.0 | 15.3 | 7.9 | 14.1 |
| Ujjain | | | | | |
| Agri and Allied sector | 48.1 | 75.1 | 94.4 | 91.7 | 88.4 |
| Non-Agriculture sector | 51.9 | 24.9 | 6.6 | 9.3 | 11.6 |
| Hosangabad | | | | | |
| Agri and Allied sector | 30.0 | 72.0 | 92.5 | 93.1 | 90.6 |
| Non-Agriculture sector | 70.0 | 28.0 | 7.5 | 6.9 | 9.4 |
| Total | | | | | |
| Agri and Allied sector | 35.9 | 72.1 | 91.9 | 92.1 | 87.1 |
| Non-Agriculture sector | 64.1 | 27.9 | 8.1 | 7.9 | 12.9 |

Source: Field Survey, 2013-14.

In Madhya Pradesh, agriculture and allied sector constitutes around 87 per cent of the total income of the rural landed households. Across three districts the share of income from agriculture was highest in Hosangabad and lowest in Dhar. It was quite evident that Hosangabad being a highly irrigated and adequate rainfall zone the income from agriculture constitute the major

share of the total household income. On the other hand Dhar being a tribal region and mainly depend upon the monsoon the income from agriculture was lowest compared to other regions.

Except the marginal landholding households rest all the category earn more than three fourth of the total income from agriculture. This result is quite expected that the income from the tiny piece of land would not be enough for the households to sustain thus they depend upon the other sources for the livelihood. Around 64 per cent of the total income among the marginal land owning households obtained from non-farm sector. The share even increase to 80 in Dhar and 70 per cent in Hosangabad. The marginal land owning households mainly work as casual labours inside or outside village. Around 58 per cent of the marginal land holders work as casual labours out of the total number employed in various non-farm activities as their main occupation. It implies the marginal land owners are even worse off as neither are they supported by agriculture nor they are not working in better paid non-farm activity but only as casual labours.

The dominance and dependence on agricultural income in the rural set up in Madhya Pradesh was higher than that of Gujarat. This also highlights that in Madhya Pradesh the opportunity of getting employment in non-farm activity was quite low. Thus, the rural households are stuck up in the agricultural sector. The analysis also shows persisting regional level disparity in agricultural income within the states.

4.3 Per Capita Agricultural Income among the Land Holding Groups

The income earning among the various group of households shows that the income from agriculture has increased among all the landholding size (Table 5). However the rate of increase in income for the weaker groups should be higher than the rate of increase among the large landholders for the gap to reduce among the high and low groups. The rate of increase in income was relatively higher among the marginal and small landholding group in Gujarat whereas reverse trend was found in Madhya Pradesh. In Madhya Pradesh the growth rate of agricultural income among the marginal and small landholders was lower than the increase in income for the large and medium landholders. It is evident that in Madhya Pradesh though there

was spread of growth across region but not across landholding category. It implies the vertical transformation has not taken place whereas the horizontal spread of growth has happened in the in Madhya Pradesh.

Table 5 Average Monthly Per Capita Income from Agriculture across landholding Group

| States/Land categories | 2006-07 | 2013-14 | CAGR |
|------------------------|-------------|-------------|------------|
| Gujarat | 2903 | 3126 | 0.6 |
| Marginal | 364 | 469 | 6.4 |
| Small | 1392 | 1666 | 2.8 |
| Medium | 4242 | 3822 | -1.4 |
| Large | 7865 | 8362 | 0.9 |
| Madhya Pradesh | 2836 | 3229 | 3.8 |
| Marginal | 579 | 493 | -2.1 |
| Small | 1077 | 1427 | 4.6 |
| Medium | 2933 | 3291 | 1.7 |
| Large | 6413 | 7925 | 4.1 |

Source: Field Survey, 2013-14.

4.4 Cropping Pattern and Cropping Intensity

The average landholding size among the surveyed households was 2.9 and 3.2 hectare respectively in Gujarat and Madhya Pradesh. The major crops cultivated among the surveyed households were cotton, groundnut, bajra, maize and wheat in Gujarat and soyabean, wheat, cotton, maize and gram in Madhya Pradesh.

Cropping intensity¹ is a major indicator of the change in productivity (Chand et al., 2011). The intensity of cropping refers to raising a number of crops from the same field during one agricultural year. Higher the index, greater is the efficiency of land use. According to the *Socio Economic Review* 2013-14, the CI in Sabarkantha, Rajkot and in Panchmahal was 134, 116, and 112 respectively. The CI among the surveyed households was 156 during 2013-14 in Gujarat (Table 6). It was highest in Panchmahal and lowest in Rajkot. Rajkot being relatively dry land region and the farmers mainly concentrates on cotton cultivation the CI was lower in that region compared to others. The landholding wise analysis shows that there was decline in the CI with the increase in the landholding size in Sabarkanth and Panchmahal. In Rajkot the CI was higher among the higher land holding groups.

¹ The intensity of cropping refers to raising a number of crops from the same field during one agricultural year. Higher the index, greater is the efficiency of land use.

Table 6 Cropping Intensity across Region and Landholding Size in Gujarat

| | Marginal | | Small | | Medium | | large | | Total | |
|-----------------------|----------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| | 2006-07 | 2013-14 | 2006-07 | 2013-14 | 2006-07 | 2013-14 | 2006-07 | 2013-14 | 2006-07 | 2013-14 |
| Gujrat | 151 | 171 | 137 | 164 | 131 | 169 | 131 | 152 | 134 | 156 |
| Sabarkantha | 198 | 181 | 146 | 177 | 122 | 169 | 136 | 172 | 135 | 172 |
| Panchmahal | 118 | 189 | 141 | 152 | 139 | 134 | 105 | 123 | 127 | 141 |
| Rajkot | 107 | 99 | 125 | 138 | 138 | 151 | 139 | 150 | 138 | 139 |
| Madhya Pradesh | | | | | | | | | | |
| Dhar | 158 | 173 | 148 | 190 | 153 | 177 | 174 | 182 | 165 | 183 |
| Ujjain | 117 | 128 | 102 | 185 | 102 | 140 | 126 | 141 | 110 | 151 |
| Hosangabad | 157 | 188 | 173 | 188 | 177 | 196 | 173 | 190 | 173 | 191 |
| Hosangabad | 185 | 185 | 192 | 197 | 188 | 199 | 189 | 186 | 193 | 195 |

Source: Field Survey, 2013-14.

According to the Director of Economics and Statistics during 2013-14 the CI of the state was 151. The CI was 156, 185 and 179 in Dhar, Ujjain and Hosangabad, respectively. However, the CI among the surveyed households in Madhya Pradesh was little above the state average (183). Among the three regions the intensity was the highest in Hosangabad and the lowest in Dhar. Hosangabad being agriculturally developed and with higher share of land irrigated the practice of more than one crop in the same field was higher. The CI is directly related with irrigation and technology. Hosangabad is the fifth highest district with the state with area under irrigation as a share to the total cropped area as 56 per cent. The district has the highest land under canal irrigation as around 52 per cent of the total irrigated area is covered through canal and mainly government canals.

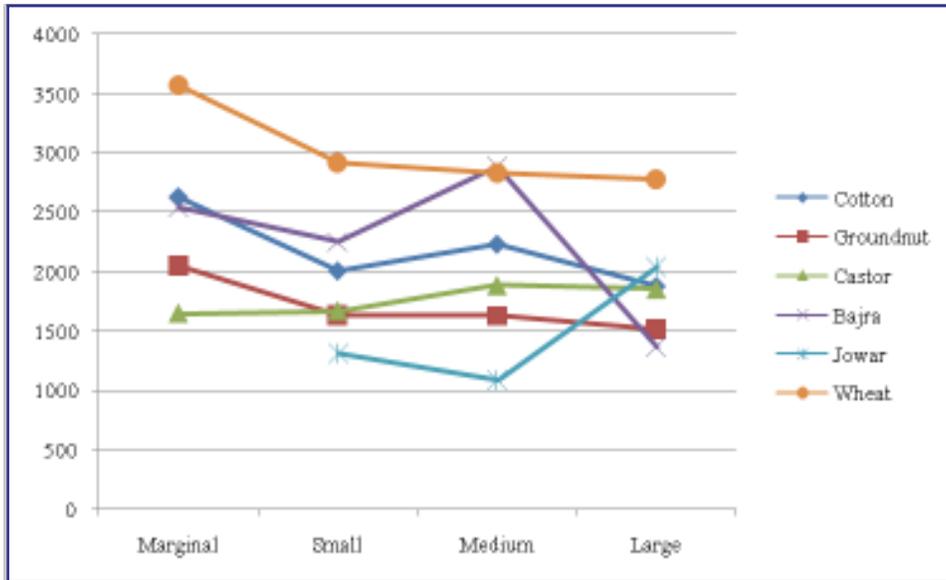
The nature of crop also defines the cropping intensity in the two states. In Gujarat, the three regions selected for the survey were mainly dominated with cotton cultivation, whereas the major crop among the sample households in Madhya Pradesh was soybean. The average days for soybean production being 120-130 days compared to 150-160 days in case of cotton, in Gujarat the CI was lower.

4.5 Land Size and Productivity

The yield per hectare of land among the sample households was calculated and presented in the Figure 2 and Appendix Table 1. The yield of cotton, groundnut, castor, tobacco and chilli was higher among the marginal and small landholders compared to the large. Thus for commercial crops the yield per hectare was higher among the small and marginal landholders.

However, the yield of the foodgrains: bajra, jowar and maize was higher among the large and medium landholders.

Figure 2: Landholding Wise Yield of Major Crops in Gujarat

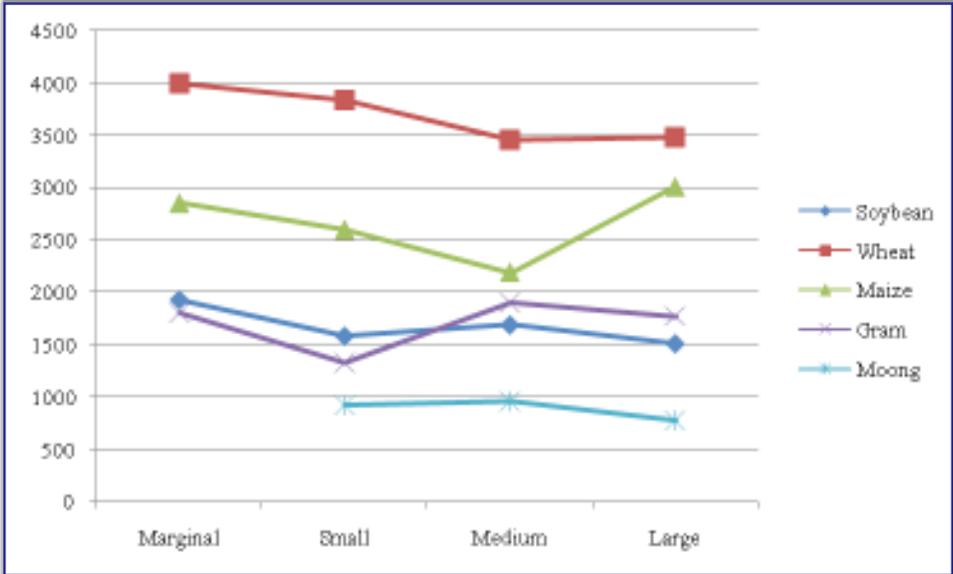


Source: Field Survey, 2013-14.

The yield analysis across region and category of landholding shows that in Sabarkantha the yield of major crops like cotton, groundnut, maize, wheat and tur was higher among the marginal and small land holders whereas only castor, bajra and jowar experienced higher yield among the large and medium land holders. In Panchmahal the yield of all almost all the crops was higher among the small and marginal landholders whereas lesser yield achieved by the large and medium landholders except for the crops likes cumin and maize. The cultivation of cumin was mainly concentrated among the medium farmers in Panchmahal. It implies in the tribal district there was inverse relationship between farm size and productivity. In the tribal region use of technology and machinery is comparatively lower, hence, the inverse relationship does not hold true with higher level of technology but it exists at lower technology level. Rajkot, which is considered as one of the developed region, the yield of major crops was higher among the large and medium landholders. The yield of cash crops like cotton, castor, cumin and foodgrains like bajra, jowar and wheat was higher among the higher landholding groups except for groundnut. This shows the in the developed region with higher mechanization the inverse relationship vanishes (ownership of tractor was highest among the sample households in Rajkot). The study found three

type of relationship in three regions i.e., in the tribal region there exist strong inverse relationship between farm size and productivity. In the average performing district like Sabarkantha, the inverse relationship exists for the cash crops and inferior cereals like jowar, bajra. In the developed region Rajkot the inverse relationship between farm size and productivity vanishes.

Figure 3: Land holding wise yield of major crops in Madhya Pradesh



Source: Field Survey, 2013-14.

The detailed region-wise analysis of the yield and farm size shows that in Dhar the inverse relationship between farm size and productivity holds true for most of the crops except chilli and tur (Figure 3 and Appendix Table 2). The area under cultivation under these two crops was quite small compared to others. In Ujjain except for gram all the other major crops shows decline in the productivity with the increase in the farm size. Similarly in Hosangabad the yield of the major crops were higher among the marginal and small landholders and lower among the larger landholding groups.

The yield per hectare of land was higher among the marginal and small land holders for the crops like soybean and cotton. For these two cash crops the yield declines with the increase in the land size. The yield of the marginal landholders was highest and relatively declines with the increase in landholding size for soybean and cotton. The relationship between land size and productivity does not show any trend when we consider the yield of foodgrains.

4.6 Crop Yield and Income

There was increase in the yield of major crops in both the states. The cropping pattern is widely different in two states thus instead of doing a one to one comparison of each crop, the yield of major crops are compared in the table 7. Wheat is one the most important foodgrains produced in both the state. The yield of wheat is higher in Madhya Pradesh compared to Gujarat. The increase in the yield of wheat in Madhya Pradesh was almost double of the increase in the yield in Gujarat. However, the value of wheat has declined in both the states but the rate of decline was higher in Gujarat compared to Madhya Pradesh. This may be due to higher cost of cultivation in Gujarat. Among foodgrains the cost of wheat was highest in both the states which are the reason of decline in value of wheat in the two states. However, the cost of wheat was even higher in Gujarat compared to Madhya Pradesh. Among the various input cost the cost of labour was four times higher in Gujarat as compared to Madhya Pradesh. The water and labour costs are too high in Gujarat which ultimately add to the total cost of cultivation in Gujarat. The higher rate of groundwater price is one of the factors for the higher water cost in Gujarat (Shah, 2000).

Table 7 Comparisons of Yield, Income and Cost of Major Crops (per ha)

| | Yield | | | | Value of Crop | | | | Cost of Cultivation | |
|---------|---------|------|---------|------|---------------|-------|---------|-------|---------------------|-------|
| | 2005-06 | | 2012-13 | | 2005-06 | | 2012-13 | | 2012-13 | |
| | Gujarat | MP | Gujarat | MP | Gujarat | MP | Gujarat | MP | Gujarat | MP |
| Cotton | 1774 | 1476 | 2440 | 1900 | 47440 | 44236 | 83055 | 66832 | 25118 | 15634 |
| Soybean | 865 | 1475 | 1173 | 1642 | - | 22390 | - | 28828 | - | 12817 |
| Wheat | 2735 | 2918 | 2948 | 3385 | 36388 | 39262 | 33685 | 37884 | 22828 | 13351 |
| Maize | 1645 | 2725 | 2248 | 2772 | 17293 | 17976 | 25400 | 19776 | 10665 | 6314 |
| Jowar | 2795 | 1387 | 2619 | 433 | 15385 | 13098 | 16603 | 4866 | 11095 | 986 |
| Paddy | 2148 | 1433 | 2519 | 1700 | 21993 | 21204 | 24788 | 26036 | 12080 | 13272 |

Source: Field Survey, 2013-14.

Cotton which was also produced in our sample villages in Dhar and Ujjain, the yield of the crop has increased both the states. The value of cotton in Gujarat has increased double the increase in yield of the crop. The increased in the value of cotton and soyabean also lead to increase in the yield, unlike wheat. Overall it shows the yield of major crops has increased in two states but the cost of cultivation was high in Gujarat compared to Madhya Pradesh which is a matter of concern and it raises serious questions on the sustainability of the agricultural sector as a whole in Gujarat.

4.7 Issues and Challenges in Farming

In Gujarat among the total surveyed households the major issue was related to timely availability of fertilizer. Around 79 per cent of the total household reported problems like non-availability of fertilizer when required, higher price and lower quality of fertilizer as the major problems (Table 8). Farmers reported of depending upon private traders for buying fertilizer thus several times they get cheated. The price of fertilizer is quite high thus it is really difficult for the marginal and small farmers to buy required quantity of fertilizer that in turn leads to lower quality of output. The timely unavailability of fertilizer leads to delay in the application of the same which affect the production, as reported by the farmers. Other major problem is not receiving optimal price for the output. Out of the total households those who reported of not getting proper output price among them around 67 per cent reported of being cheated by the trader. Labour scarcity and higher wage for the hired labour is another major problem and around 50 per cent of the households reported it as a major problem. The poor quality and duplicate seed and higher price for the seed is another major challenge. Timely unavailability of seed, higher price, and lower quality are some of major problem related to seed.

Table 8 Major Challenges in Farming among the Surveyed Households in Gujarat

| Major issues | Sabarkantha | Panchmahal | Rajkot | Gujarat | Dhar | Ujjain | Hosangabad | Madhya Pradesh |
|--|-------------|------------|--------|---------|------|--------|------------|----------------|
| Unavailability of Seed | 58.7 | 39.2 | 36.7 | 44.9 | 34.2 | 11.7 | 14.2 | 20.0 |
| Higher price and timely unavailability of fertilizer | 76.9 | 79.2 | 81.7 | 79.2 | 48.3 | 58.3 | 47.5 | 51.4 |
| Lack of Irrigation | 49.6 | 33.3 | 25.8 | 36.3 | 5.8 | 8.3 | 18.3 | 16.9 |
| Timely unavailability of labour | 45.5 | 43.3 | 60.8 | 49.9 | 15.8 | 20.0 | 5.0 | 13.6 |
| Higher price or timely unavailability of Pesticides | 41.3 | 23.3 | 36.7 | 33.8 | 19.2 | 5.0 | 5.8 | 10.0 |
| Lack of electricity for irrigation | 12.4 | 51.7 | 35.0 | 33.0 | 35.0 | 44.5 | 21.7 | 29.4 |
| Unable to get optimal production price | 62.0 | 67.5 | 67.5 | 65.7 | 36.7 | 30.8 | 27.5 | 31.7 |

Source: Field Survey, 2013-14.

Note: The share is calculated from multiple answers.

Out of the total 360 households surveyed around 51 per cent reported unavailability of fertilizer and 31 per cent reported not getting optimum

price as the major issue. Farmers in Madhya Pradesh reported they took loan and borrowed money to buy fertilizer during the required period.

Most of them bought fertilizer from black market and paid double to the actual price (around 25 per cent reported). Higher price of seed, unavailability of seed and lower quality of seed are some of the major seed problem.

The major challenge of the farmers being higher price and timely unavailability of chemical fertilizer, this raises the concern over accessing right kind of fertilizer which is still a bigger issue. It is essential that promoting and facilitating organic farming or other substitute of chemical fertilizer at the institutional level.

4.8 Perception of Farmers about the Viability of Farming

We have asked hypothetical question to the farmers whether they would continue farming in future and whether they think farming would be a viable occupation in future. Around 47 per cent farmers in Gujarat and 51 per cent in Madhya Pradesh responded that they might not continue farming in future (Table 9). Across the region in Rajkot highest number of farmers replied that they will not prefer to farm in future. Even though Hosangabad is an irrigated and high rainfall region, around 66.7 per cent of farmers told that farming will be not any more a viable option for them.

Table 9 Perception of farmers about farming as a nonviable occupation

| | Marginal | Small | Medium | Large | Total |
|----------------|----------|-------|--------|-------|-------|
| Sabarkantha | 36.4 | 38.6 | 54.5 | 35.0 | 42.1 |
| Panchmahal | 48.4 | 48.1 | 61.5 | 36.4 | 50.0 |
| Rajkot | 56.3 | 58.5 | 61.5 | 52.0 | 58.3 |
| Gujarat | 48.3 | 49.4 | 49.4 | 39.3 | 47.4 |
| Dhar | 73.3 | 51.7 | 51.4 | 10.0 | 50.8 |
| Ujjain | 54.5 | 35.7 | 17.4 | 30.3 | 35.0 |
| Hosangabad | 81.0 | 67.6 | 55.6 | 65.7 | 66.7 |
| Madhya Pradesh | 69.0 | 52.6 | 42.5 | 44.9 | 51.1 |

Source: Field Survey 2013-14

In both the state higher share of marginal and small land holders do not wish to continue farming in future. Even among the large land holders as high as 45 per cent and 39 per cent reported that they do not wish to continue farming in future. Given other opportunity they would like to shift away from farming.

Table 10 Reason for quitting/continuing farming

| | Sabarkantha | Panchmahal | Rajkot | Dhar | Ujjain | Hosangabad |
|---|-------------|------------|--------|------|--------|------------|
| No | | | | | | |
| Increase in utilization of fertilizer | 22.3 | 26.7 | 29.2 | 29.2 | 24.2 | 50.8 |
| Increase in input price | 5.8 | 6.7 | 10.0 | 4.2 | 5.5 | 7.5 |
| Lack of agricultural development policies and not proper execution of those policies | | | | 6.7 | 8.5 | 4.7 |
| Farming need better planning which is lacking | 5.0 | 5.0 | 2.5 | 2.5 | 1.8 | |
| Decline in water table | 13.3 | 1.8 | 11.7 | 1.7 | 1.7 | |
| Decline in quality land | 11.7 | 1.7 | 10.9 | 3.3 | 6.9 | 11.7 |
| Uncertain rainfall | | | 5.0 | 8.3 | 13.3 | 5.0 |
| Increase in industrialization | 4.9 | 2.1 | 12.5 | | 7.9 | 3.2 |
| Increase in pests in farm | 1.7 | 2.5 | 2.5 | | | |
| Due to permanent migration of children | 4.5 | | 16.0 | | | |
| Torture of wild animals | 2.5 | 6.7 | | | | |
| Doubtful | | | | | | |
| If prices volatility increases in run-run | 1.7 | 2.5 | 3.3 | 3.3 | 1.7 | 3.3 |
| Yes | | | | | | |
| Organic farming by – increasing use of dung and decrease in chemical fertilizer | 38.0 | 31.7 | 25.8 | 10.0 | 21.7 | 1.7 |
| Mix cropping and multi cropping and better planning for crop sowing | 14.0 | 15.0 | 10.8 | 23.3 | 37.5 | 27.5 |
| Adoption of drip irrigation system | 4.1 | | 7.8 | 1.8 | | |
| Increase in area under irrigation | | 1.8 | 2.8 | 8.3 | 2.5 | |
| land leveling and adding gypsum in land | | | | 2.1 | | |
| Soil testing and taking help of agricultural scientist for improving the soil quality | | | | | 1.7 | 2.7 |

Source: Field Survey 2013-14

Note: The share is calculated from multiple answers.

Reasons for not continuing farming in future and also various plans to continue farming in future among the sample farmers are presented in the table 10. Increase in use of fertilizer (increase in cost) was reported as one of the major reasons reported to stop cultivating. Increase in use of fertilizer adds to the cost of cultivation, hence, farmers wish to quit farming. Thus, those who plan to continue farming in future would like to focus on organic fertilizer. Lack of institutional support to promote farming is reported as one of the major reasons to quit farming in Madhya Pradesh. However, increase in industrialization is reported as reason to quite farming in future

by only a few farmers. Hence, in order to make farming as a profitable occupation the overall perspective of rural development needs to be changed. The policies should focus on improving sustainable use of resources with the institutional support.

5. Conclusion

The main objective of the study has been to examine the pattern of agriculture growth in Gujarat and Madhya Pradesh and its implications for income and poverty reduction in the short and medium time frame. The study found that there was a definite increase in the income from agriculture across regions in two states. Gujarat's performance of agricultural growth was better compared to that of Madhya Pradesh. However, during the recent period Madhya Pradesh has witnessed increase in the growth rate though its income is lower than that in Gujarat.

Among the states there exists district level variations in income and earnings. Some regions like Ujjain and Rajkot out-performed compared other districts like Panchmahal and Dhar. When we compared the agricultural performance across landholding category of households it shows that the big landholders gained more compared to the small and marginal especially in Madhya Pradesh. Income from agriculture even though has increased among all the landholding sizes, the rate of increase in income among the poorer groups was less than the rate of increase in income among the richer groups especially in Madhya Pradesh. The analysis on income shows that over a period the income has increased and spread across regions whereas the gap between rich and poor has widened. It has direct implications on equity. The lower income from agriculture among the marginal and small landholders brings to the fore a very important but often neglected or missed out issue of using land or access to land among the poor not only in terms of quantity but also in terms of quality. Further the value of crops per unit of land has not increased at the same rate as compared to the increase in the physical yield. Even though the physical yield was higher per unit of land among the poorer groups the value has not increased similarly.

However, Madhya Pradesh has the potential to produce foodgrains at lower cost compared to Gujarat. Physical yield of wheat was higher in Madhya Pradesh with the lower cost compared to Gujarat. The increasing fertilizer uses in land in Gujarat with increase in labor cost and water cost the Gujarat

farmers prefer to produce high value crop which has higher return. Thus Madhya Pradesh could be the wheat-rice bowl of India due to the fact that it has good quality of water and land for foodgrains. This state might take care of the basic food security of the country with less environmental implications.

For long Gujarat has been supported fairly significantly by the state and its economy. However, having limited natural resources the growth pattern has moved faster but latter on have raised significant issue on the quality of land and water which now needs to be kept in forefront in growth of agriculture in the state. So far the growth pattern in agriculture in Gujarat is yet to capture the inter-linkages between economic growth and natural resource being affected by that. Interestingly Madhya Pradesh gives a more positive view but the issue regarding farmer capacity to invest for getting higher growth without exploiting the land and other natural resources is important to look into. Fortunately the land has not been overused in Madhya Pradesh compared to Gujarat, thus the question arises how technology, institution arrangements, natural resource management can be work together in this context.

Four important major indicators need to be recognized – technology improvement, institutional support, managing natural resources and most importantly the political support. All these need to act together for the growth process to takes place. Lack of any these will slow down the growth process though the growth might take place for a short run but not in the long and medium run. The political economic process should keep the marginal-small and landless in the top of the priority thus a new way of looking at the rural development.

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Appendix Table 1

| Land cat | Cotton | Groundnut | Castor | Bajra | Jowar | Wheat |
|--------------------|--------|-----------|--------|-------|-------|-------|
| Sabarkantha | | | | | | |
| Marginal | 2763 | - | - | 2648 | - | 3962 |
| Small | 2188 | 1383 | 1341 | 2330 | 1210 | 2757 |
| Medium | 1973 | 1397 | 1659 | 3908 | 1964 | 3046 |
| Large | 1515 | 1162 | 1704 | 1230 | 2039 | 2391 |
| Panchmahal | | | | | | |
| Marginal | 2290 | 2648 | 1149 | 2484 | - | 2892 |
| Small | 1670 | 2052 | 1447 | 2302 | 2773 | 3133 |
| Medium | 1666 | 1734 | 1838 | 2115 | 2471 | 2487 |
| Large | 1755 | 2595 | 1606 | - | - | 1995 |
| Rajkot | | | | | | |
| Marginal | - | 1900 | 2059 | - | 1981 | - |
| Small | 2155 | 1708 | 2024 | 1236 | 2061 | 2619 |
| Medium | 2185 | 1737 | 1859 | 1692 | 3289 | 3114 |
| Large | 3402 | 1478 | 2011 | 2471 | - | 3491 |
| Total | | | | | | |
| Marginal | 2628 | 2050 | 1649 | 2538 | - | 3576 |
| Small | 2005 | 1630 | 1669 | 2250 | 1311 | 2918 |
| Medium | 2229 | 1627 | 1886 | 2884 | 1088 | 2834 |
| Large | 1876 | 1514 | 1855 | 1368 | 2039 | 2778 |

Appendix Table 2

| | Soybean | Wheat | Maize | Gram | Moong |
|-------------------|---------|-------|-------|------|-------|
| Dhar | | | | | |
| Marginal | 2826 | 3002 | 2855 | | |
| Small | 1912 | 3011 | 2570 | 2674 | 938 |
| Medium | 1776 | 2707 | 2190 | 1325 | 849 |
| Large | 1614 | 2550 | 2326 | 905 | 454 |
| Ujjain | | | | | |
| Marginal | 2075 | 4222 | | 1802 | |
| Small | 1710 | 4384 | 4261 | 1876 | |
| Medium | 1726 | 3695 | 2168 | 2192 | |
| Large | 1561 | 3751 | 3810 | 1952 | 1469 |
| Hosangabad | | | | | |
| Marginal | 1585 | 3855 | | | |
| Small | 1271 | 3681 | | | 791 |
| Medium | 1607 | 3895 | | | 1182 |
| Large | 1435 | 3450 | | 2080 | 906 |
| Total | | | | | |
| Marginal | 1926 | 3999 | 2855 | 1802 | |
| Small | 1581 | 3838 | 2600 | 1325 | 922 |
| Medium | 1687 | 3455 | 2190 | 1905 | 960 |
| Large | 1509 | 3482 | 3012 | 1773 | 774 |

Status of Muslim Women in the Workforce: Critical Reflections on Challenges

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Abstract

Muslim marginalization has been perennially distressing which poses a serious question both for the development institutions and intelligentsia. Although Muslims constitute 14.2 per cent of the population, yet their contribution to the GDP is only about 6 per cent. Sachar Report shows that on most socio-economic indicators, general condition of Muslims is comparable to or even worse than the SCs and STs. The situation remained almost same when the NSSO 68th round data on employment and unemployment was released. Muslims are the largest minority and so do Muslim women who constitute largest number of women population among the women from all minorities. But unfortunately, they stand at the last most position of development ladder with reference to various indicators of empowerment specially education and work force participation. The paper examines status of Muslim women's re-presentation in workforce using data from Sachar Committee Report (2006) and NSSO 68th round report (2012). In doing so, the paper attempts to locate major challenges and gaps with regard to Muslim women's access to work and empowerment and proposes a framework of study Muslim Women's challenges in accessing work using Intersectional Lens.

Keywords: Women Empowerment, Muslim women, Workforce participation, Intersectionality.

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I. Introduction

Emergence of development debates raised several pertinent questions related to the issues of poverty and marginalization which are considered as major bottlenecks in the process of development. Search for answering those questions has paved ways for the advancement of progressive values, inclusive policies and affirmative action. Series of attempts were made to address issues of different weaker, vulnerable, and marginalized groups so that they could lead a life with worth and dignity. One of the important progresses in development debates is the identification of gender equality as a key element of development (Parpart et al., 2000). Women question in development debates have been given due attention during the 1970s where it was realised that without focusing on women empowerment and their contribution in the process of development, imagination of development and happiness is an impossible task. This attempt has brought about a paradigm shift in development thinking giving utmost importance to gender equality as an inevitable condition for balanced growth and development of any society or country. Countries and societies willing to achieve better position in terms of development indicators realised the necessity to create conducive environment for both men and women that provide them equality and equitable opportunity to prosper (Sen, 1992, 1995; Kabeer, 1994, 1999; Chua et al., 2000; Robeyns, 2003; Mosedale, 2005; Chant, 2006).

Bearing in mind the perspective that gender matters in development or emphasis of women's development to achieve holistic and all-round development of society, there is a need to see and re-examine the status of women with specific identities – for this case gender and religion – as two simultaneous identities are enforcing upon Muslim women at the same time. Therefore, a need arises to assess the status of Muslim women who belong to the most backward community in terms of socio-economic conditions. In this context, we find two major landmark reports viz. Sachar Committee Report (2006) and Ranganath Mishra Report (2007) reportedly made public the appalling socio-economic status of Muslims. While the first is described as the diagnostic report which shows that Muslims in general and Muslim women in particular are faced with critical problems related to matters of equity in social security, education, employment and livelihoods, credit and market facility; the second suggests remedial measures for ensuring inclusive reservation policy for Muslims.

It is, therefore, required to examine how far Muslim women have been benefited from the development strategies which have resulted in their significant growth and development over the last 15 years. It is believed that such attempts will enable us to better locate and analyze critical dynamics restraining Muslim women to enjoy the fruits of development and inducing well being into their life. Besides, it is also expected that such attempts will help in integrating the same with national development strategies centred on inclusive growth and gender equality considering Muslim women's upliftment a genuine concern.

II. The Framework

Given the fact that participation in economic activities is a major indicator of promoting women's empowerment and emancipation an attempt is made to understand the status of Muslim women's access to livelihood activities and related challenges. The paper is based on a detailed and critical review of data about Muslim women's access to work and related challenges. For the purpose of having overall picture of Muslim women's status in workforce participation at the national level, data collated from the Rajinder Sachar Committee Report and NSSO 68th Round on Employment and Unemployment (2012) is reviewed. Though there other micro studies as well, but the reasons to take these two studies are- one that they are gazetted documents; and, second, they give a national level status of Muslim women's workforce participation in more detailed manner. Keeping Muslim women as central subject of the development concern, a discussion is made around the dimensions of challenges which Muslim women encounter in access to work with reference to women's question of development and empowerment. Finally, a conceptual framework is proposed to explore and locate issues related to Muslim women's access to work and economic empowerment.

III. Women Empowerment and Participation in Economic Activities

Human society witnesses long-established patriarchal social structure largely responsible for lack of power to women and restrictions on freedom for choices. This unequal gender-based social order gave rise to the radical feminist movement and struggle for equal and dignified social identity during the 1960s and 1970s. This movement was substantially influenced by the Freirean advocacy (Freire, 1970) to enable oppressed groups, men and women

to develop their power to perceive critically the way they exist in the world and to see the world not as a static reality but as a reality in the process of transformation (p. 12). This critical perspective along with feminist movements led to the emergence of idea of empowerment in the field of social work practice (Neil, Domingo, & Valters, 2014, p. 4) and more precisely the idea of women empowerment at the economic and political level across nations. Subsequently, the women question in development gained currency and got significant attention in development debated especially in 1970s. As a result of it, efforts were made to study the status of women in society which further revealed the fact the fruits of development could not benefit almost half the population, mainly women. The World Bank in its report titled '*Engendering Development through gender equality in rights, resources, and voice*' says that in spite of the fact...gender inequalities undermine the effectiveness of development policies in fundamental ways, it is an issue that often lies only at the periphery of policy dialogue and decision making, both in national and international arenas (World Bank, 2001).

The idea of empowerment is about change, choice and power. The questions surrounding women's empowerment is critical to the fundamental values of human rights and social justice approaches of development. According to Keller & Mbewe (1991) women's empowerment is a process whereby women become able to organise themselves to increase their own self reliance, to assert their independent rights to make choices and to control resources which will assist in challenging and eliminating their own subordination. Notion of empowerment in facts is embedded with power relation framework. Various dimensions of empowerment are embedded infollowing four levels of power relation which help in articulating the:

1. Power from within: self- acceptance and self-respect which extend, in turn, to respect for and acceptance of others as equals
2. Power to: generative or productive power (sometimes incorporating or manifesting as forms of resistance or manipulation) which creates new possibilities and actions without domination. '*It includes increase in skills, abilities including earning an income, access to market and networks*'
3. Power over: controlling power, which may be responded to with compliance, resistance or manipulation
4. Power with: a sense of the whole being greater than the sum of the individuals, especially when a group tackles problems together

(Rowlands, 1997: 13 Emphasis added)

Interwoven with the power relation, empowerment operates from three major dimensions of personal, relational and collective domains (ibid: 15). One of the major initiatives in recent times is the creation of UN Women in 2011 with a view to lead great gender equality and women empowerment. In addition, for the first time, the World Bank devoted its *World Development Report-2012* to Gender (World Bank, 2011). The report signifies the call for unremitting efforts to guarantee gender equality in achieving better development objectives. To end gender gap, the report identified....end gender gaps in access to economic opportunities, earnings, and productivity and shrinking gender differences in voice and agency within society as major priorities. UN Women (2015) in its summary report titled 'The Beijing Declaration and Platform Action Turns 20' presents a 20-year review and appraisal of the implementation of the Beijing Declaration and Platform for Action (1995) and emphasises the need for ensuring women's access and control over productive resources (in an economic sense) and their voice and agency in decision-making at all levels. The report also highlights the concern for implementing gender-responsive planning and legal and policy reforms that protect rights of women over resources and creating decent work for women and men should be prioritized (p. 44).

It has been found that women's access to paid work and economic empowerment increases women's agency in strategic way (Robeyns, 2003; Eyben et al., 2008; Kabeer, 2009, 2015; Nussbaum, 2011). For instance, Kabeer (2009: 4) finds the women's economic empowerment is critical concern for human rights and social justice. She opines that the central importance of women's economic empowerment is to strive to promote human capital and human capabilities for women and the necessity of policy implementation so that women can participate in, contribute to and benefit from processes of economic growth. According to Kabeer, economic empowerment enhances women's capacity for strategic choice and agency related to economic pursuits and also has potential to opens up for change in other spheres of their lives (Kabeer, 2009: 7).

The perspective of women's emancipation and economic empowerment has recently been integrated with the Sustainable Development Goals-2030. Particularly Goal-5, to achieve gender equality; and Goal-8, to promote full and productive employment and decent work for all are central to women's empowerment. It is in this context, every woman's life and development is core concern of social and national progress and happiness.

IV. Muslim Women's Participation in Workforce

Gender has several implications on people's lives, but one of the most consequential is that it acts as a basis for inequality between persons leading to creation of hierarchy between men and women in material resources, power and status. Categorical inequalities are created and sustained by embedding membership (e.g., being a man or woman) in systems of control over material resources and power (e.g, Jackman 1994; Jackson, 1998; Tilly, 1998 ascited in Ridgeway, 2011: 4). The dynamics and the processes of operationalizing women centric poverty and subsequent marginalization can be understood by Jefferson (2018: 51-52) as follows:

Social scientists call this disparity the feminization of poverty. It has a multitude of causes. First, there may be discrimination against women in the labour market. If women do not receive equal pay for equal work, then households headed by them will have fewer resources with which to manage. Second, society may channel women into occupations that do not pay well. Low-paying occupations effectively cap earning at levels that may be insufficient to make ends meet. Third, workplace norms may not easily accommodate disruptions in female labour supply due to childbirth and child rearing. Such norms compromise the career trajectory of women. Fourth, women do a disproportionate amount of the unpaid care work in society, which reduce their time available for paid work. These reasons connect with the challenges facing women and girls more generally in their struggle to graduate out of poverty.

Jefferson's description about the multitude of causes pertaining to women's marginality in accessing livelihoods and the interrupting constraints from social and economic structure provides us a useful outline to study and examine the performative processes of discrimination and marginalization in the context of Muslim women. Moreover, given the Intersectionality perspective (Crenshaw, 1989, 1991; McCall, 2005; Nash, 2008; Walby et al., 2012) and its impact on ethnic and religious groups (Stewart, 2002; Shepherd et al., 2014; Kabeer, 2015), it is imperative to examine Muslim women's economic status and their workforce participation. The position of exploring any particular group/section with multiple or cross-cutting identities from any specific vantage point can be better understood through 'Intersectionality Approach' that explores the intersections of various social markers shaping individual's or group's experience relating to their social

location and inequalities (Crenshaw, 1989, 1991; Belkhir & Barnett, 2001; McCall, 2005; Hancock, 2007; Nash, 2008; Shields, 2008; Walby et al., 2012). The evolution of Intersectionality as a theoretical foundation is credited to American civil rights activist and leading scholar Kimberle William Crenshaw. Crenshaw (1989, 1991) proposed intersectionality towards the study of overlapping or intersecting social identities and the related systems of production and reproduction of inequalities, dominance and oppression. Further, Leslie McCall has also stressed intersectionality's importance as calling it '...the most important theoretical contribution that women's studies, in conjunction with related fields, has made so far' (McCall, 2005: 1771). Nash (2008: 1) has also encouraged feminist and anti racist scholars to apply intersectionality approach in ways to construct more complex theorization of identity and oppression as it draws upon the marginalized subjects' vantage point providing a sound epistemological position (ibid: 3). Intersectionality as a framework to study multiple marginalisations has been used widely in the case of dalit women in India. Shewli Kumar made an attempt to highlight the issues of intersectional identities of Dalit women and their marginalization with special emphasis on their claim for dignified livelihood. In her study she quoted findings from Uttar Pradesh and Rajasthan where the Dalit women have been denied access to NREGS cards because they are dalits and are forced to carry out their traditional caste-defined occupations of manual scavenging (Kumar, 2008: 161) and due to less income and unprotected work, they are more vulnerable to physical and sexual exploitation from the upper caste men (ibid: 163). Applying intersectionality perspective in the case of Muslim women would help in discovering the 'sites of oppression' (Zack, 2005: 7, cited in Nash, 2008: 10) experienced by these women.

In the subsequent section we shall review the fact-finding reports related with Muslim women's workforce participation. The Sachar Committee Report and NSSO 68th Report will be used to have an overall picture of Muslim women's access to work at the national level. After that, it will be argued the need to see Muslim women's issues of accessing work and related challenges in a more specific and exclusive manner incorporating different theoretical constructs.

1. Findings of The Sachar Committee Report on Muslim Women Access to Work

The Sachar Committee Report (2006) was a landmark official document which revealed the deficits, deprivation and marginalization of Muslim community in India. The report exposed the evidences of official and structural discrimination with Muslims and the vocabulary of ‘appeasement’ and ‘favoured treatment’ attached to Muslims was found a mere illusion. The report highlighted that as employees, Muslims generally work as casual labour and they are very poorly represented in regular, salaried employment.

In 2004-05, total workforce participation of Muslim remained at the lowest position of 54.9 per cent whereas the condition of Muslim women was worst. The participation in workforce was only 25.2 per cent which was much lower than the national average of 43.6 per cent. Surprisingly, the workforce participation was more than double among the SCs/STs i.e., 54.9 per cent (Table-1). Unemployment rate among Muslim women again remained on the higher side amounting 9.2 per cent as equal as the national average.

Table 1: Worker Population Ratios by Socio-Religious Categories, 2004-05

| Social Groups | | Urban | Rural | Male | Female | Total |
|------------------|------------|-------|-------|------|--------|-------|
| Hindus | All Hindus | 53.1 | 70.3 | 84.9 | 46.1 | 65.8 |
| | SCs/STs | 56.3 | 74.5 | 87.3 | 54.9 | 71.4 |
| | OBCs | 56.4 | 70.5 | 85.8 | 48.3 | 67.3 |
| | UC | 49 | 63.5 | 80.8 | 33.1 | 57.4 |
| Muslims | | 51.1 | 57 | 84.6 | 25.2 | 54.9 |
| Other Minorities | | 51.6 | 70.2 | 81.8 | 47.2 | 64.5 |
| All | | 52.7 | 68.9 | 84.6 | 43.6 | 64.4 |

Source: Adapted from *Sachar Report, 2006: 110*

Table 2: Unemployment Rate by Social Religious Categories, 2004-05

| | Hindus | | | | Muslims | Other Minorities | All |
|--------|------------|---------|-----|-----|---------|------------------|-----|
| | All Hindus | SCs/STs | OBC | UC | | | |
| Urban | 8.1 | 10.5 | 8.2 | 6.8 | 8.1 | 10.9 | 8.3 |
| Rural | 8.0 | 10.0 | 7.4 | 6.0 | 8.4 | 10.8 | 8.2 |
| Male | 7.2 | 10.2 | 7.0 | 5.1 | 8.1 | 10.2 | 7.8 |
| Female | 9.0 | 9.9 | 8.8 | 8.0 | 9.2 | 12.2 | 9.2 |

Source: Adapted from *Sachar Report, 2006: 110*

27 per cent of Muslim workers in urban localities are engaged in regular work in comparison to workers from SCs (40 per cent), STs (36 per cent) and OBCs and Hindus (49 per cent). A large number of around 70 per cent of Muslim women work from home than the average of 51 per cent. The report finds, participation of Muslim women in the workforce in urban areas is 18 per cent where 70 per cent work from their home typically engaged in sub-contacted work with low level of earning. Majority of Muslims are engaged inside their own dwelling for income generating activities constituting 66.8 per cent as compared to 52.1 per cent Hindu OBCs. Merely, 6.3 per cent of Muslim female have their own enterprises compared to Hindu OBCs whose holding on own enterprises is 12.4 per cent. The Report further indicates poor access to institutional credit that is, 6 per cent took credit from banks and 1.1 per cent from credit societies. Their share in the total outstanding credit from banks was a mere 2.8 per cent whereas 16.2 per cent borrowed from money lenders.

Table 3: Distribution of Female Workers in Each Socio-religious Category by Enterprise, 2004-05

| | <i>Hindus</i> | | | | <i>Muslims</i> | <i>Other Minorities</i> | <i>All</i> |
|---|-------------------|----------------|-------------|-----------|----------------|-------------------------|------------|
| | <i>All Hindus</i> | <i>SCs/STs</i> | <i>OBCs</i> | <i>UC</i> | | | |
| Informal Sector | 88.3 | 89.4 | 91.1 | 82.3 | 95.3 | 87.9 | 89 |
| Proprietary Male | 44.8 | 44.3 | 49.8 | 37.1 | 38.4 | 30.4 | 42.8 |
| Proprietary Female | 32.2 | 32.1 | 32.0 | 32.8 | 47.7 | 42 | 34.8 |
| Partnership with members of same household | 1.8 | 1.6 | 1.8 | 1.9 | 1.8 | 5.9 | 2.2 |
| Partnership with members of other household | 0.9 | 0.8 | 0.9 | 1.0 | 0.4 | 0.9 | 0.8 |
| Others | 8.6 | 10.5 | 6.8 | 9.6 | 7.0 | 8.8 | 8.4 |
| Formal Sector | 11.7 | 10.6 | 8.9 | 17.7 | 4.7 | 12.1 | 11.0 |
| Government/Public sector | 8.7 | 7.8 | 6.0 | 14 | 3.5 | 9.8 | 8.2 |
| Public/Private Ltd Company | 3.1 | 2.7 | 2.9 | 3.7 | 1.2 | 2.3 | 2.8 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Source: Adapted from *Sachar Report, 2006: 114*

Table 4: Distribution of Female Workers in Each Socio-religious Category by Location of Work, 2004-05

| Location of Work | Hindus | | | | Muslims | Other Minorities | All |
|----------------------------|---------------|---------|------|------|---------|------------------|------|
| | All Hindus | SCs/STs | OBCs | UC | | | |
| | <i>Female</i> | | | | | | |
| No fixed place | 3.3 | 5.3 | 3.2 | 1.5 | 3.6 | 1.2 | 3.2 |
| Own dwelling | 48.7 | 44.5 | 52.1 | 47.5 | 69.7 | 51.8 | 51.3 |
| Own enterprise | 10.9 | 6.8 | 12.4 | 12.8 | 6.3 | 13.3 | 10.7 |
| Employer's Dwelling | 7.0 | 9.7 | 5.4 | 6.5 | 5.8 | 6.1 | 6.7 |
| Employer's Enterprise | 19.8 | 16.7 | 17.5 | 27.2 | 9.8 | 21.5 | 18.9 |
| Street- Fixed location | 1.5 | 2.0 | 1.5 | 1.0 | 0.4 | 1.0 | 1.3 |
| Street - No fixed location | 1.7 | 3.0 | 1.8 | 0.3 | 1.5 | 0.6 | 1.6 |
| Construction sites | 4.6 | 8.4 | 3.9 | 1.5 | 1.1 | 2.5 | 4.0 |
| Others | 2.5 | 3.7 | 2.3 | 1.6 | 1.9 | 2.2 | 2.4 |
| Total | 100 | 100 | 100 | 100 | 100 | 100 | 100 |

Source: Adapted from *Sachar Report, 2006: 116*

The committee recognises that women are trapped with the limits of social structures, sometimes due to community pressure and sometimes due to experience of gender-based fear of 'public'. Notion of 'safe' and 'unsafe spaces' restricts women within safety of familiar orthodoxies while confirming to the visible markers of community identity (Sachar Committee, 2006: 13). Such life circumstances obstructing them from accessing opportunities for development and as result they remain away from projects of modernity.

2. Findings of NSSO 68th Round Report on Muslim Women Access to Work

The NSSO 68th round (National Sample Survey Office, 2012: 32) data specifies that during 2011-12, the Labour Force Participation Rate (LFPR) was the lowest for Muslim in both rural and urban areas for both males and females. It was 51.1 per cent for rural males, 15.9 per cent for rural females, 55.3 per cent for urban males and 10.9 per cent for urban females.

Table 5: LFPR According to Usual Status among Persons of Major Religious Groups in NSSO 61st, 66th and 68th Rounds

| Major Religious Groups | 2011-12 | 2009-10 | 2004-05 | 2011-12 | 2009-10 | 2004-05 | 2011-12 | 2009-10 | 2004-05 |
|------------------------|------------|---------|---------|--------------|---------|---------|--------------|---------|---------|
| | Rural Male | | | Rural Female | | | Rural Person | | |
| Hinduism | 558 | 560 | 561 | 264 | 279 | 350 | 415 | 423 | 457 |
| Islam | 511 | 526 | 505 | 159 | 146 | 185 | 337 | 344 | 348 |
| Christianity | 560 | 573 | 577 | 304 | 346 | 385 | 431 | 459 | 481 |
| Sikhism | 576 | 550 | 569 | 260 | 268 | 369 | 426 | 415 | 473 |
| | Urban Male | | | Urban Female | | | Urban Person | | |
| Hinduism | 565 | 563 | 576 | 161 | 151 | 186 | 372 | 368 | 390 |
| Islam | 553 | 536 | 546 | 109 | 101 | 128 | 342 | 327 | 345 |
| Christianity | 565 | 540 | 535 | 277 | 226 | 283 | 417 | 382 | 409 |
| Sikhism | 568 | 568 | 575 | 136 | 167 | 168 | 363 | 380 | 383 |

Source: Adapted from *NSSO, 2012: 33*

Table 6: LFPR According to Usual Status among Persons of Major Religious Groups in NSSO 61st, 66th and 68th Rounds

| Major Religious Groups | 2011-12 | 2009-10 | 2004-05 | 2011-12 | 2009-10 | 2004-05 | 2011-12 | 2009-10 | 2004-05 |
|------------------------|------------|---------|---------|--------------|---------|---------|--------------|---------|---------|
| | Rural Male | | | Rural Female | | | Rural Person | | |
| Hinduism | 549 | 551 | 553 | 261 | 275 | 344 | 408 | 417 | 451 |
| Islam | 499 | 517 | 495 | 153 | 143 | 178 | 328 | 337 | 339 |
| Christianity | 541 | 558 | 562 | 284 | 326 | 359 | 412 | 441 | 461 |
| Sikhism | 569 | 535 | 550 | 257 | 263 | 355 | 420 | 405 | 457 |
| All | 553 | 556 | 555 | 253 | 265 | 333 | 406 | 414 | 446 |
| | Urban Male | | | Urban Female | | | Urban Person | | |
| Hinduism | 550 | 547 | 555 | 153 | 142 | 174 | 359 | 355 | 373 |
| Islam | 532 | 523 | 526 | 105 | 94 | 121 | 328 | 317 | 331 |
| Christianity | 540 | 528 | 505 | 252 | 215 | 244 | 392 | 371 | 375 |
| Sikhism | 548 | 539 | 555 | 128 | 153 | 153 | 349 | 356 | 365 |
| All | 563 | 559 | 570 | 155 | 146 | 178 | 367 | 362 | 382 |

Source: Adapted from *NSSO, 2012: 33*

The report further says that the Workforce Participation Rate (WPR) was also lowest for both males and females in both rural and urban areas. It was 49.9 per cent for rural males, 15.3 per cent for rural females, 53.2 per cent for urban males and 10.5 per cent for urban females (p. 34). If we compare the status of workforce between 2004-05 and 2011-12, we find a decline both in urban and rural areas in Muslim women's representation. This decline is retrograding sign showing deepening of the gender gap in case of Muslim women's empowerment.

V. Discussion

Above facts from the Sachar Committee report and the report of NSSO 68th round describes that Muslim women's representation in workforce is significantly low in comparison to other socio-religious communities. At this juncture, it is needed to revisit the views of Jefferson again to contextualise women's centric marginalization in the case Muslim women. Jefferson's identification of 'discrimination in labour market' as determining factor of poor employment is evident in the case of Muslims in general and Muslim women in particular through Sachar Committee findings and its reflection can be seen in the NSSO report as well. Findings of Sachar Committee (2006: 22), specifically delineates that Muslim women had strongly felt discrimination in labour market on religious grounds. The report notes that the distinct pattern of Muslim women's employment in home-based work is due to discrimination in formal employment. The ability of Muslim women to bargain for better work conditions is curtailed due to the nature of their work being sub-contracted which leads to lesser employment opportunities and poor monetary returns.

The cumulative impact of engagement in economically productive activities and earning from them is directly proportionate to per capita expenditure and savings of family. It is known fact that family where the income is gainful and resonant, sufficient expenditure is made on food, clothing, education, health, etc. to give family members a good and fulfilling life. Besides, gainful return from employment provide a fair chance for savings and enable families in coping risks and hazards during odd and unforeseen situations. But, since Muslim (men) are majorly concentrated in informal and unorganised sector, their earning is uncertain and income is not up to the mark leading in poor standard of living. The Kundu Committee Report (2014), records the marginal rise in monthly per capita expenditure (MPCE) of Muslims by 60 per cent between 2004-05 and 2011-12. Increase in MPCE by moving into urban areas and metro cities are 40 per cent and 70 per cent for the Muslims against the national average of 90 per cent and 140 per cent. Hence, it is observed that poor saving coupled with insecure and scanty income forms a vicious cycle of vulnerability context (Chambers, 1995) where Muslim families are exposed to more risks on the one hand and their incapability to confront those risks and hazards on the other.

Participation of women in economic activities and their empowerment are the basis of ensuring women's rights and enabling them to have control over their lives, decision making and exerting influence in society (Boraian, 2003; Kabeer, 2009) but this does not seem to be impactful as compared to women belonging from other socio-religious communities. In preceding section, we discussed that access to financial services and credit facilities play a role as catalyst in improving women's economic status by creating better livelihoods opportunities. But Muslims as a whole community are faced with lack of financial services and support which means that formal financial services such as bank accounts, loans and insurance, are not readily available to them. The Sachar Committee (2006) reports that Muslim areas are designated as 'negative or red zones' in some states in which their loan applications are rejected. The report also finds lack of access to credit is a more serious problem for a community whose larger proportion of workers are engaged in self-employment, especially home-based work. Therefore, it is assumed that non-availability of credit can have compounded implications for the socio-economic and educational status of the Community. The Kundu Committee (2014) suggests that given the expanse and depth of deprivation among minorities, especially among the Muslims, and size of their population, there is an urgent need to increase the credit amount and number of beneficiaries.

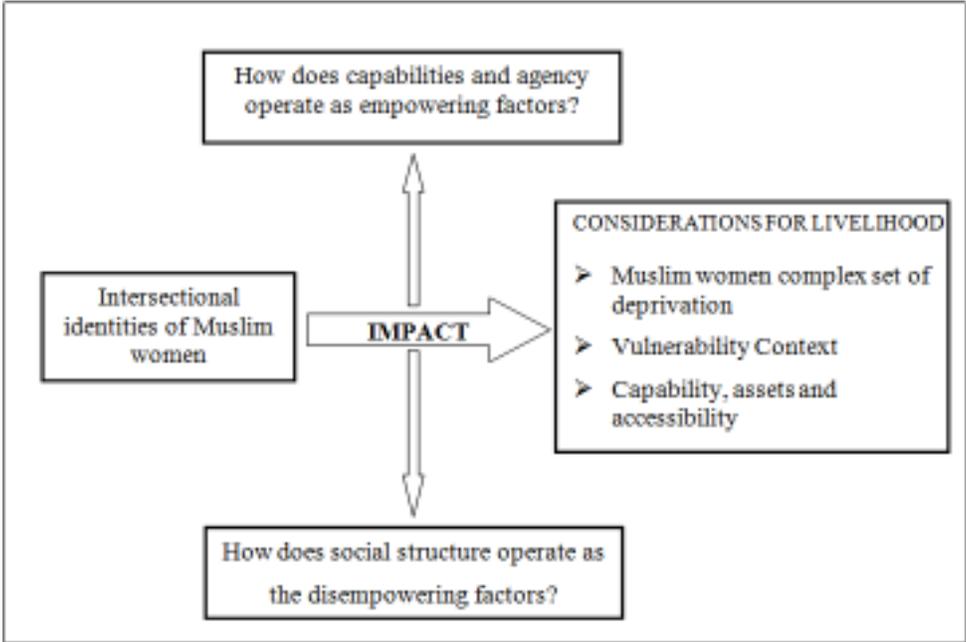
Muslim women's restriction to family and community strictures are legitimised by several socio-cultural and religious factors, sometimes declaring women's movement outside home and meeting with people other family members (*ghair mehram*) as unreligious. But the major reason behind their restricted movement, in views of poor Muslim women is their horrifying fear of gruesome brutality on Muslim women during communal riots and pogroms (Sachar Committee, 2006; Khan, 2007; Nussbaum, 2007). The increasing ghettoisation (Ghazala, 2018; Hasan & Menon, 2004; Khan, 2007; Nussbaum, 2007; Robinson, 2007) of poor Muslims mostly due to anti Muslim campaigns in the form of communal violence, targeting and raping Muslim women as weapon; typical example being Muzaffar Nagar Riots (2013), Gujarat Riots of 2002, Bombay Riots (1992) and Bhagalpur Riots (1989) leads to the seclusion of home-based female workers, cutting them off from channels of communication and hindering their ability to organize into collectives. The scenario like this has emerged due to repeated riots and communal violence in and around various Muslim dominant slums location resulting in the formation of ghettoised homogeneous neighbourhoods and

create the perception of greater safety for the community. This means that Muslim women not only have less of a chance to venture out of community boundaries but also that their movements and behaviour are more closely policed by their families and their community (Khan, 2007: 1529) In last 7 years, growing incidences of violence against Muslims in the form of mob lynching and hatred leads to fear in general among Muslims and specifically among women. Jefferson's explanation of women's centric poverty and marginalization on account of 'societal processes and dynamics which channelize women into less paid occupation' can clearly be inferred from these facts in the case of Muslim women where the constraining situation arises mostly due religious identity.

It is in this context, there is need to understand the gendered power relations and the dynamics of women empowerment within the framework of political economy. This need arises due to the fact that women's lack of power is not merely caused by gender hierarchies alone, but also because of the fact that political arrangement favours elite to bargain in issues of political, social and economic affairs which reflects as well as frames the balance and distribution of power and resources in any given society. It is important to note that however patriarchy and gendered social institution affect women at large but the degree and intensity of impact varies when women's experience of patriarchy and disempowerment mediates with issues of institutions (both official and unofficial), identity and interests. The practice of discrimination and oppression takes place on account of age, ethnicity, disability, sexuality, religion, class or ideological preferences etc. It is inferred that when woman's singular identity of patriarchal subordination intersects with different forms of identities and horizontal inequalities, it severely affects women of marginalised ethnic or religious groups in having the least power (Crenshaw, 1989, 1991; Stewart, 2002; Shields, 2008; Shepherd et al., 2014; Kabeer, 2015). More recently, attention have been made to analyse how *intersection* between vertical inequality with the multiple and overlapping horizontal inequalities of gender, caste, race, and ethnicity helps to explain the persistence of poverty, discrimination, and social exclusion, over lifetimes and generations (Kabeer, 2015: 190).

Given the argument, it is observed that there is evident link between intersecting identities of Muslim women and major considerations for livelihood (i.e. their complex set of deprivation, vulnerability context and their capabilities, assets and accessibility). This form the basis of research which be understood more comprehensively in the form of given framework:

Figure 1: Framework to Study Muslim Women’s Access to Work



It is expected that that the above given frame would be helpful in to understand Muslim women’s experience of intersectionality of identities of gender, class and religion in order to explore and examine women’s capacity in making choice to participate in work and the challenges faced. It is expected that such a framework would help in locating how do Muslim women opretionalize their agencies in negotiating access to work.

VI. Conclusion

This review gives us an opportunity to look at the status of Muslim women’s workforce participation to reflect upon issues and dynamics of their socio economic development and empowerment. Analysis of both theoretical perspective on women’s economic empowerment and data set on Muslim women’s workforce helped us see and examine the critical areas which form unique set of vulnerability inhibiting Muslim women accessing gainful employment. It is felt that the popular stereotypical representation of Muslim women as ‘veiled’ and ‘entrenched by issues of tripal talaq and polygamy’ frame a very narrow and incomplete narrative about them and make the reality opaque. The paper indicates the lack of power and ability among Muslim women to have choices and make decisions, and especially the

inability to have a say at crucial junctures of one's life. The complexity is arguably reflects the elements most frequently associated with the notion of agency. From this perspective, Muslim women's creative self is not found to be actualised to the level that could yield a meaningful impact on their lives. People's individual assets (such as land, housing, livestock, savings) and capabilities of all types: human (such as good health and education), social (such as social belonging, a sense of identity, leadership relations) and psychological (self-esteem, self-confidence, the ability to imagine and aspire to a better future), and by people's collective assets and capabilities, such as voice, organization, representation and identity (Samman & Santos, 2009: 3) constitute inevitable areas which seeks attention in case of comprehending Muslim women's agency and also to create a conducive atmosphere to build sound agency of Muslim women to exert a positive change in sustained manner.

It is, therefore, inferred that access to work and participation in workforce should not merely be taken as the employment perspective or income perspective rather; it should be seen as a process of empowerment, emancipation and well being. It is pertinent to note that economic empowerment of Muslim women should not merely be linked or studied with a tapered lens of employment - income thinking or poverty line thinking but it needs to be viewed from the perspectives of capability, equity and sustainability. This would pave ways to explore interactive process of access, control, choices, freedom and power in more meaningful manner. That is because, investigation and studies on economic empowerment of women, specifically Muslim women needs to be engendered with the notions of capability; agency; and access, claim and control over resources. It is also believed that Muslim women identity of religion is also another vector that constitutes a unique set of challenges to Muslim women. It is believed that seeing Muslim women through intersectional lens would precisely unearth their social position where their womanhood (already a socially disadvantaged position) intersect with other social positions (of class and religion) to multiply the intensity of vulnerability. In this way the understanding of Vulnerability Context (Chambers, 1995: 189) would be more accurate and sound. It is very important to locate the unique context of Muslim women's vulnerability in terms of access to livelihood to make the sustainable livelihood approach more meaningful and effective. It is observed that very fewer studies are available which have studied Muslim women as intersectional subject characterized by intersections of vulnerability.

So, we find that the challenges of Muslim women's livelihood needs an intersectionality perspective as methodological standpoint to better understand Muslim women's multiple marginalization in the pursuit of economic freedom and improved well-being. It is strongly felt that using the proposed framework would help in understanding how do women experience freedom/unfreedom in life, how do women use their agency in addressing the challenges which they face in accessing livelihood options and is there any dynamic interplay among gender, class and religion with regard to Muslim women's livelihood.

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ICT and Socio-Economic Status of Women in India: A Strategy of Development

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Abstract

Concentrating on the potential impact of ICT, the present study considers the performance of modern technology to improve the economic activities of women in India, which in turn empowers them. To establish the relationship between role of ICT and women empowerment; present analysis focuses on three factors - occupational opportunity or standard of living, access to secondary education and longevity. Standard econometric methods such as Vector Autoregressive Model Augmented Dickey Fuller and Granger Causality Test have been considered in the analysis to examine the aforesaid relation. The study concludes that ICT considerably influences the possible socio-economic conditions, necessary to achieve empowerment of women in India. Then the present paper turns to explore the link between ICT and the development indicator 'Human Development Index' (HDI) as the components of HDI are also required for women empowerment.

Keywords: ICT, Women empowerment, VAR, ADF, Granger Causality, HDI.

Introduction

Empowerment of women is essential to achieve improvement in economic and social status of women in India, particularly poor women. Empowering women includes progress of their educational status, employment opportunity, decision making power in the family, health condition and their ability to fight against various forms of violence in the society.

Information and Communications Technology (ICT) helps spread knowledge, information and skill among the people. It connects people through internet, telephones and mobile devices. Knowledge and information regarding various economic activities are disseminated through ICT and this empowers the poor and illiterate people as well. By creating employment and earning opportunities, ICT changes the economic status of women (Philip, 2018). This modern technology also helps women to upgrade their productive activities that improves their choice and Socio-economic status. (Suresh, 2011).

According to the United Nations Development Programme (UNDP), living standard, life expectancy and basic education are the three components of the Human Development Index (HDI) of any country. ICT may be an important strategy of development that contributes to the three determining factors of HDI (Ghosh, 2018). The present study focuses on the impact of ICT in the process of empowering women in India. The relation between ICT and the three components of HDI in India has also been examined here.

Education is the process that improves the economic conditions of women and helps them to overcome all forms of disparity, deprivation and backwardness. Lack of schooling experience of women enhances the socio-economic inequality in the economy. ICT may be an important mechanism to allow women to acquire various types and levels of education through distance learning especially in rural areas. In urban areas, ICT also favours women those who spend time looking after home and caring children by providing an opportunity to access education and earn money (Chen, 2004). ICT interface has enhanced job opportunity for women with a higher salary in the labour market (Nikulin, 2016).

Nagamani and Veni (2016) also discuss the role of ICT in the process

of women empowerment. ICT mainly includes internet and cell phone and helps young women in attaining knowledge, skill and socio-economic security. With the help of ICT, women, particularly pregnant women, can get medical advice from health workers through SMS. In another study, Arrawatia and Meel (2012) explore the role of internet, television and mobile phone in helping women to get proper price for their handmade products in the regional, national and global markets without exploitation by middlemen.

In this manner, ICT promotes living standards and status of women in the society and increases economic activities of women. As a consequence women become economically independent and actively participate in the development process (Mishra & Kiran, 2012).

2. Theoretical Framework

The HDI has been development, developed by UNDP. Human development is the process to enhance the freedom of people to select various resources for their wellbeing (UNDP, 1990). Amartya Sen's (1993) 'capability approach' also focused on the people's choices but people will achieve wellbeing for themselves if they properly use the available or selected resources. In the same way, women empowerment is possible if they have freedom to access basic facilities such as education, employment and long and healthy life. But it is difficulties for women, particularly rural women and housewives, to access these facilities smoothly or freely with socio-economic barriers, poor infrastructure and misplaced conceptions about their role. In this regard ICT may play an important role to help women to access the above mentioned facilities with minimum effort (Manoj, 2014).

It is clear that with the help of ICT women can access the three important elements of empowerment and function efficiently to achieve wellbeing in their present and future life. The present study concentrates on the impact of ICT use on these three important determinants – access to basic education, employment opportunities and long and healthy life. The study then turns to examine the relationship between ICT use and HDI in determining women empowerment.

Objectives

Following objectives have been considered in the present study.

- To assess the impact of ICT on the process of women empowerment in India.
- To explore the linkage between ICT and HDI in India.

3. Methodology and Data

Variable ‘Wage and salaried workers, female (per cent of female employment) (modeled ILO estimate²)’³, ‘Life expectancy at birth, female (years)’⁴ and ‘Growth rate of Female Enrolment in Secondary Education,’⁵ have been considered as representing living *standard, life expectancy and basic education respectively in the present paper*. The time series data on these three variables have been extracted from World Bank’s World Development Indicators. ‘Fixed broadband subscriptions (per 100 people)’, ‘Fixed telephone subscriptions (per 100 people)’, and ‘Mobile cellular subscriptions (per 100 people)’ have been considered, in the present study, as representing ICT use by the people. The average value of these three factors has been taken as ICT Index to examine the impact of ICT, as follows:

ICT Index

$$\frac{[\text{Fixed Broadband} + \text{Fixed Telephone} + \text{Mobile Cellular}] \text{ Subscriptions (Per 100 People)}}{3}$$

Data from secondary sources have been taken for the econometric analysis to establish a significant relationship between use of ICT and determining factors of women empowerment in India. The causal relationship between ‘ICT Index’ (ICT) and ‘wage and salaried workers, female (% of female employment)’ (EMP) is examined first. Then the relationship between ‘wage and salaried workers, female’ (EMP) and ‘Growth rate of Female Enrolment

² International Labour Organisation, ILOSTAT database

³ Women salaried workers associated with “paid employment jobs” and a minimum salary have been assured with explicit (written or oral) or implicit employment contracts, independent of the revenue of the unit (Source: World Development Indicators).

⁴ Life expectancy at birth of female indicates the number of years a female newborn child will remain alive if mortality pattern remains unchanged throughout its life (Source: World Development Indicators).

⁵ "Total number of female students enrolled at public and private secondary education institutions regardless of age." (Source: World Development Indicators).

in Secondary Education' (FER)'; and the link between FER and female's life expectancy at birth', (LEB) have been examined. The study covers the period 1991 to 2019. Data used have been presented in Table 1 and Table 2.

Table 1: Three Components of ICT Use in India

| Year | Fixed broadband subscriptions (per 100 people)* | Fixed telephone subscriptions (per 100 people)* | Mobile cellular subscriptions (per 100 people)* | ICT Index** |
|------|---|---|---|------------------------|
| | 1 | 2 | 3 | =(col.1+col.2+col.3)/3 |
| 1991 | - | 0.651868 | 0 | 0.217289 |
| 1992 | - | 0.747465 | 0 | 0.249155 |
| 1993 | - | 0.865382 | 0 | 0.288461 |
| 1994 | - | 1.03588 | 0 | 0.345293 |
| 1995 | - | 1.242631 | 0.007955 | 0.416862 |
| 1996 | - | 1.480371 | 0.033385 | 0.504585 |
| 1997 | - | 1.778569 | 0.088105 | 0.622225 |
| 1998 | - | 2.1181 | 0.117255 | 0.745118 |
| 1999 | - | 2.553936 | 0.181523 | 0.91182 |
| 2000 | - | 3.06993 | 0.338556 | 1.136162 |
| 2001 | 0.004651 | 3.584761 | 0.608372 | 1.399261 |
| 2002 | 0.007538 | 3.788471 | 1.189042 | 1.661684 |
| 2003 | 0.012628 | 3.778599 | 3.030976 | 2.274068 |
| 2004 | 0.020803 | 4.089684 | 4.622779 | 2.911089 |
| 2005 | 0.117462 | 4.372262 | 7.854585 | 4.11477 |
| 2006 | 0.197343 | 3.498111 | 14.24727 | 5.980908 |
| 2007 | 0.264535 | 3.317249 | 19.7446 | 7.775461 |
| 2008 | 0.439755 | 3.156572 | 28.89137 | 10.82923 |
| 2009 | 0.63608 | 3.043377 | 43.12053 | 15.6 |
| 2010 | 0.890397 | 2.84295 | 60.94154 | 21.5583 |
| 2011 | 1.067849 | 2.626216 | 71.49253 | 25.0622 |
| 2012 | 1.183632 | 2.444391 | 68.31525 | 23.98109 |
| 2013 | 1.165457 | 2.26671 | 69.19699 | 24.20972 |
| 2014 | 1.215652 | 2.083983 | 72.86262 | 25.38742 |
| 2015 | 1.293189 | 1.947865 | 76.4076 | 26.54955 |
| 2016 | 1.40831 | 1.842483 | 85.14868 | 29.46649 |
| 2017 | 1.333856 | 1.735646 | 87.31774 | 30.12908 |
| 2018 | 1.343297 | 1.616702 | 86.94256 | 29.96752 |
| 2019 | 1.445348 | 1.537197 | 84.27001 | 29.08419 |

Source: *World Bank Report, World Bank Indicators

**Author's calculation

Table 2: Data on Internet Use and Determining Factors of Women Empowerment in India

| Year | ICT Index(ICT) | Life Expectancy at Birth, Female (years)(LEB) | Wage and Salaried Workers, Female (% of female employment) (Modeled ILO Estimate)(EMP) | Growth rate of Female Enrolment in Secondary Education (FER) |
|------|----------------|---|--|--|
| 1992 | 0.2492 | 59.3370 | 8.147 | 6.06 |
| 1993 | 0.2885 | 59.9000 | 8.257 | 2.07 |
| 1994 | 0.3453 | 60.4540 | 8.377 | 4.68 |
| 1995 | 0.4169 | 60.9910 | 8.505 | 1.63 |
| 1996 | 0.5046 | 61.5030 | 8.635 | 2.72 |
| 1997 | 0.6222 | 61.9920 | 8.751 | 5.34 |
| 1998 | 0.7451 | 62.4600 | 8.877 | 0.22 |
| 1999 | 0.9118 | 62.9060 | 9.015 | 0.22 |
| 2000 | 1.1362 | 63.3340 | 9.135 | 6.54 |
| 2001 | 1.3993 | 63.7450 | 9.428 | 2.46 |
| 2002 | 1.6617 | 64.1450 | 9.727 | 7.57 |
| 2003 | 2.2741 | 64.5430 | 10.048 | 11.33 |
| 2004 | 2.9111 | 64.9430 | 10.365 | 4.40 |
| 2005 | 4.1148 | 65.3570 | 10.685 | 6.87 |
| 2006 | 5.9809 | 65.7930 | 11.032 | 2.99 |
| 2007 | 7.7755 | 66.2530 | 11.384 | 6.56 |
| 2008 | 10.8292 | 66.7350 | 11.72 | 7.43 |
| 2009 | 15.6000 | 67.2310 | 12.088 | 1.38 |
| 2010 | 21.5583 | 67.7300 | 12.461 | 6.80 |
| 2011 | 25.0622 | 68.2180 | 14.482 | 6.44 |
| 2012 | 23.9811 | 68.6800 | 16.757 | 5.15 |
| 2013 | 24.2097 | 69.1060 | 17.715 | 3.31 |
| 2014 | 25.3874 | 69.4910 | 18.719 | 8.57 |
| 2015 | 26.5496 | 69.8350 | 19.768 | -0.02 |
| 2016 | 29.4665 | 70.1420 | 20.86 | 2.19 |
| 2017 | 30.1291 | 70.4250 | 21.99 | -2.18 |
| 2018 | 29.9675 | 70.692 | 23.162 | 1.54 |
| 2019 | 29.0842 | 70.950 | 23.388 | -0.32 |

Source: World Bank Report, World Bank Indicators

Before analysing the causal relationship, the existence of ‘trend’ in ‘ICT’ and ‘EMP’, ‘FER’ and ‘LEB’ series has been tested with the help of moving average method. If ‘trend’ is found in the series, then the ‘detrending method’ is used to eliminate the effect of trend from the series. To implement the detrending method for any series, the concerned series is regressed on time and the residual values are taken as the detrended series. Then ADF (Augmented Dickey Fuller) has been considered to examine the stationary status of the ‘ICT’ and ‘EMP’, ‘FER’ and ‘LEB’ series. The confirmation decision regarding the stationarity of the abovementioned series has been

taken on the basis of the statistical significance of ADF value and the minimum value of AIC (Akaike Information Criterion) and SBC (Schwarz Information Criterion).

Then 'ICT' and 'EMP', 'FER' and 'LEB' series have been estimated for examining short run interdependence by using Vector Autoregressive Model (VAR). The VAR model has also been used to find the optimum lag length with the help of the following - Likelihood Ratio Test (LR), Final Prediction Error (FPE), AIC, SC and Hannan-Quinn Information (HQ). After taking the optimum lag length, Granger Causality Test is done to get a proper idea about the above mentioned causal relations. The values of F-statistic, finally, provide the information about the direction of causality relations between two variables. EVIEWS-9 has been deployed to examine the direction of relationships those have been taken in the present analysis.

4. Analysis and Findings

The time series of ICT Index (ICT), employment (EMP), secondary education (FER) and life expectancy (LEB) of female as displayed in Figure 1 shows an upward trend. The detrending method has been used by estimating the following regression: regress 'ICT' on time (t), regress 'EMP' on time (t) and regress 'FER' on time (t), respectively, where t (time) is a trend variable taking chronological values, 1, 2, ..., 26. The present study considers residuals of the above estimations and denotes 'dICT', 'dEMP', 'dFER' and 'dLEB' as detrending series of 'ICT', 'EMP', 'FER' and 'LEB' series, respectively.

Before examining the causal relationship between the concerned variables, it is necessary to check the stationary status of the series. The stationary status of 'dICT', 'dEMP', 'dFER' and 'dLEB' series has been examined with the help of ADF which has been preceded by estimating the following equations.

$$\begin{aligned}\Delta ICT_t &= \beta_1 + \beta_2 t + \delta ICT_{t-1} + \dots + u_t \\ \Delta EMP_t &= \beta_1 + \beta_2 t + \delta EMP_{t-1} + \dots + v_t \\ \Delta FER_t &= \beta_1 + \beta_2 t + \delta FER_{t-1} + \dots + \varepsilon_t \\ \Delta LEB_t &= \beta_1 + \beta_2 t + \delta LEB_{t-1} + \dots + \psi_t\end{aligned}$$

Where u_t , v_t , ε_t and ψ_t are the disturbance terms and

$$\begin{aligned} \Delta ICT_t &= ICT_t - ICT_{t-1}, \\ \Delta EMP_t &= EMP_t - EMP_{t-1}, \\ \Delta FER_t &= FER_t - FER_{t-1} \text{ and} \\ \Delta LEB_t &= LEB_t - LEB_{t-1} \end{aligned}$$

In Table 3, the ADF test shows that dICT, dEMP, dLEB and dFER are stationary series.

Figure 1: Time Series Trends of Select Variables

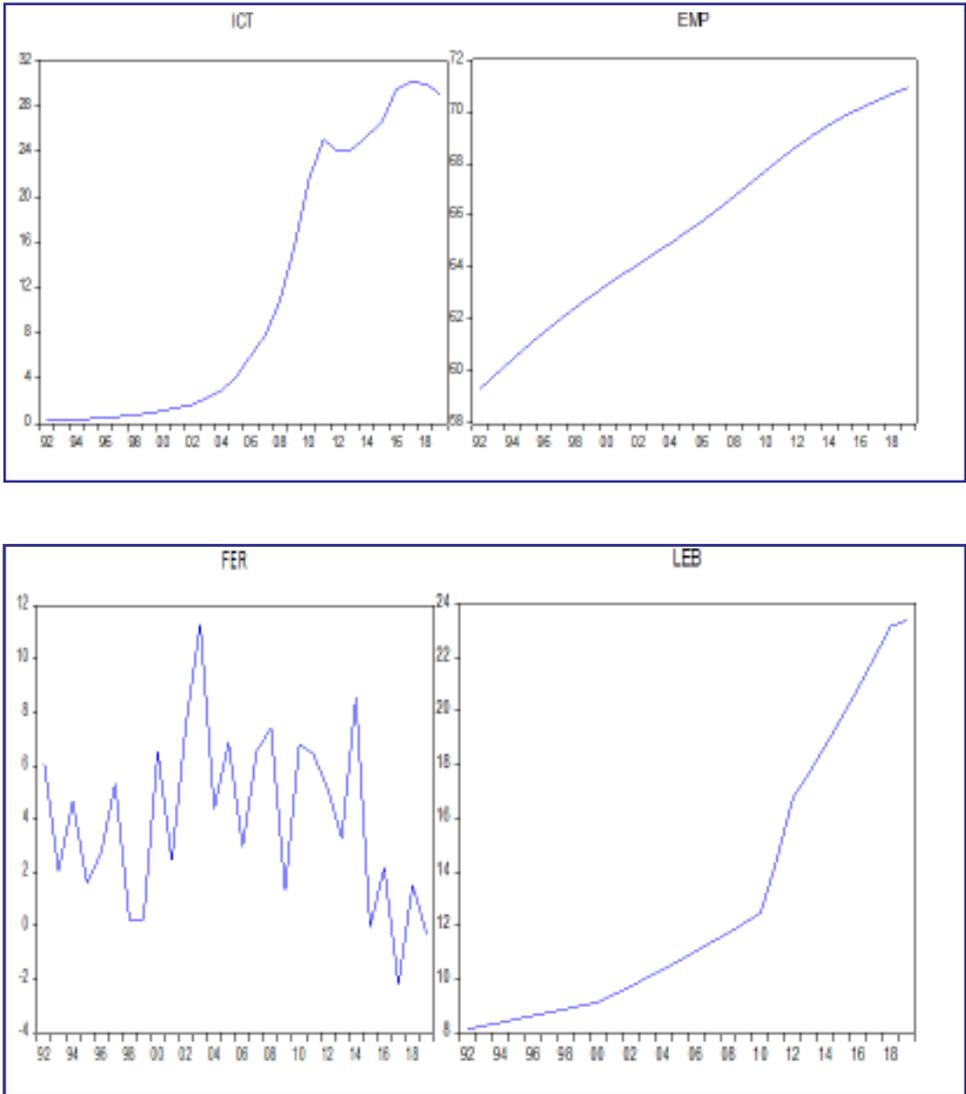


Table 3: ADF Test Results

| Variables | Constant | Coefficient of the trend variable | Coefficient of the lagged variable | R ² | AIC | SBC | ADF |
|-----------|----------------------|-----------------------------------|------------------------------------|----------------|---------|--------|------------|
| dICT | 0.8331 (1.7039)* | - | -0.0069 (-0.5451)** | 0.4562 | 3.4623 | 3.6076 | -0.5451* |
| dEMP | 0.2521 (9.5303)** | - | -0.0010 (-7.3329)*** | 0.9985 | -8.5216 | -83266 | -7.3329*** |
| dFER | 6.3473 (3.5528)** | - | -0.8120 (-3.9901)*** | 0.3891 | 5.3247 | 5.4207 | -3.9901*** |
| dLEB | - | - | 0.0209 (1.9862)** | 0.4716 | 1.2473 | 1.3441 | 1.9862** |

Notes: The values in the parentheses indicate the respective t-values

*Significant at 1% level

** Significant at 5% level

*** Significant at 10% level

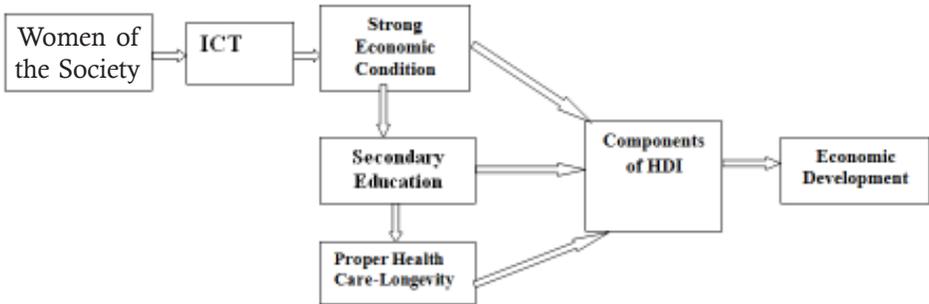
Table 4: Results of Granger Causality Tests

| Null Hypothesis: | Observations | F-Statistic | Probability |
|----------------------------------|--------------|-------------|-------------|
| dICT does not Granger Cause dEMP | 20 | 3.2430 | 0.1811 |
| dEMP does not Granger Cause dICT | | 11.9365 | 0.0330 |
| | | | |
| Null Hypothesis: | Observations | F-Statistic | Probability |
| DICT does not Granger Cause DFER | 27 | 2.7557 | 0.1099 |
| DFER does not Granger Cause DICT | | 0.4434 | 0.5118 |
| | | | |
| Null Hypothesis: | Observations | F-Statistic | Probability |
| dFER does not Granger Cause dEMP | 20 | 6.9783 | 0.0689 |
| dEMP does not Granger Cause dFER | | 9.2716 | 0.0469 |
| | | | |
| Null Hypothesis: | Observations | F-Statistic | Probability |
| dFER does not Granger Cause dLEB | 27 | 1.6671 | 0.2090 |
| dLEB does not Granger Cause dFER | | 3.6383 | 0.0689 |

According to the Granger causality test, in Table4, dEMP Granger causes dICT, if dICT is regressed on dEMP and lagged values of dICT. However, dICT Granger causes dEMP, when dEMP regressed on dICT and lagged dEMP. Thus, there is a bidirectional Granger causality between dEMP and dICT, implying use of ICT significantly influences the employment opportunity of female in India and reverse is also true. dICT also influences the dFER which is supported by the result of Granger causality test. Thus, use of ICT increases the access of basic education of women in India.

According to the Granger causality test, in Table 4, dEMP Granger causes dFER, if dFER is regressed on dEMP and lagged values of dFER. However, dFER Granger causes dEMP. Thus, there is a bidirectional Granger causality running from dEMP to dFER. The result shows that dEMP Granger Cause dFER and reverse is also true. It is clear that salaried women or economically strong women can take their own decisions in case of secondary education, and at the same time, they can encourage the future generation to take at least basic education.

Figure 2: Framework Showing Relationships among Role of ICT, Determining Factors of Women Empowerment and Components of HDI



Source: Author’s conceptualisation.

It is observed in Table 4 that dLEB Granger causes dFER when dFER is regressed on dLEB and lagged dFER. And dFER Granger causes dLEB if dLEB is regressed on dFER and lagged dLEB. Hence, Granger causality shows a bidirectional relation between dFER and dLEB. Hence, it may be held that schooling experience of women or secondary education for women magnifies the life expectancy of women in India, as education provides the knowledge and information about healthcare and awareness helps them to fight various types of diseases.

Figure 2 shows a framework of inter linkage between the impact of ICT and the three factors that mostly influence the process of women empowerment. Results of the empirical analysis show that ICT use and the proportion of salaried women to total female employment or standard of living of women are interdependent. Thus, there is a possibility of increase of employment opportunity or financial power if women use ICT to upgrade their skill and efficiency. As women experience better standard, of living they can take decisions independently regarding their basic education and encourage the future generation to access education. Access to education is

another determining factor of job opportunity and women empowerment. Educated independent women are able to take decisions about their healthcare and ICT has been enriching women by creating knowledge, and awareness about various diseases. Thus, education improves the health condition of women and in turn increases their life expectancy. It is clear that ICT influences the employment level and financial independence; and improves the education status and literacy level increases the longevity of women. All these contribute to women's empowerment. This interdependence has been shown in Figure 2. But the factors that lead to women empowerment are the components of HDI. Hence, the study concludes that ICT considerably influences the process of women empowerment and through the improvement of women's socio-economic power, ICT enhances the level of economic development in India.

5. Conclusion

The use of ICT has been considered an important strategy of development in India, as the modern technology improves the socio-economic conditions of people, particularly women. ICT enhances the knowledge, information of various aspects and skill of women, which helps them to get a decent job. As employed women are economically strong, they are more capable to take various decisions about their lives. Independent women can overcome all forms of barriers in the way of accessing basic education and inspire the future generation to enroll in the school for secondary education. Educated and financially independent women with the help of ICT improve their health condition which, in turn, enhances their longevity. Thus, ICT enhances the employment opportunity or standard of living, basic education and longevity of women; ICT empowers women in India. But these are the components of the HDI. Hence, the present study concludes that use of ICT boosts the development process through the process of empowering women in India. As ICT has been considered an important determining factor for women empowerment it may be an effective development strategy, particularly for women, in India. It is necessary to improve and upgrade the availability of ICT in rural and urban areas; so that women's access to ICT and important becomes cheaper and easier.

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Can Female Education Enhance Modernity? Evidence from Kanyashree Prakalpa of West Bengal

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Abstract

The Government of West Bengal has introduced 'Kanyashree Prakalpa' to postpone the marriage of girls till the attainment of age 18 through encouraging education. The programme aims at delayed marriage for the adolescent girl as well as development of a strong sense of individualism. The sense of individualism is at the core of modernity. On the contrary, traditions put faith on collective. Therefore, our a priori expectation is that interventions like 'Kanyashree Prakalpa' will widen modernity and accommodate 'traditions'. To investigate this hypothesis we conducted a field investigation. Data from the field suggests that 'Kanyashree Prakalpa' doesnot have any significant impact on 'modernity' and 'traditions'. However, if we unmask the problem of sample selection, then we find that Kanyashree girls have demonstrated more autonomy or individualism compared to the control group. But, it does not mean retreat of tradition. Modernity means not only liberating girls, but also a modern process of change that suits the contemporary nature of society. Education of woman is greeted so long it is not hurting the male authority. However, in traditions, there is no such significant difference between programme beneficiaries and non-beneficiaries. Therefore, the intervention 'Kanyashree Prakalpa' has widened modernity and accommodated traditions.

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Introduction

The traditional gender role has deprived women of reaping the full benefits of economic and social participation. An intervention like access to education can enhance the bargaining power of women in both within and off the household. A priori expectation is that increased education will delay marriage and change fertility preference of women.

To the literature on the development of marriage market Becker (1973), Keeley (1977) and Oppenheimer (1988) have contributed significantly. Becker has explained marriage market in terms of specialization of job. Marriage occurs because the total welfare of the husband and his spouse in married state is more than the sum of the individual welfare in single state. Becker assumed that wife is efficient in household chore and husband is efficient in market related works, i.e., both husband and wife have some comparative advantages. But, gains from specialization decreases as women become more educated.

Keeley (1977) tried to find out age at marriage. Age at marriage is determined by the age of entry into the marriage market and duration of search for a suitable partner. Gains and cost of searching determine the duration of search. In a traditional society where women are not in the labour force, the age of marriage for both men and women is determined by the time when men's uncertainty in the career path is resolved. Brüderl and Diekmann (1997) told that education influenced marriage decision through institutional effect and human capital effect. Institutional observes held that marriage and schooling are incompatible event. It is very difficult for a school student to perform the role of an adult; schooling means engagement for a significant portion of time; and marriage requires financial independence (Thronton, 2001). Human capital effect implies that increased education has some impact on marriage choice. Schooling can enhance consumption aspiration which might increase the cost of child bearing, and, thus, fertility preference. If higher education of women implies well paid job for women, education increases opportunity cost of rearing children. In this backdrop, 'Kanyashree Prakalpa' (KP), a conditional cash transfer programme, might check early marriage of girls. The KP has been designed to delay marriage, through increasing school enrolment and retention. If a girl is married once, then she is denied to access the benefit of stipend. It is a good signal for parents to delay the marriage of girls. In development discourse, the fertility transition

in West Bengal is an important aspect. This scheme has been admired by international organizations like UNESCO. The Objective of this scheme states that: Even if girls do get married soon after they turn 18, it is expected that their education and enhanced social and emotional development will give them a better foundation for in their adult lives... as entire generations of women begin to enter marriages only after attaining some degree of economic independence, the practice of child marriage will be eradicated (Kanyashree undated; Chowdhury, 2018).

There is much evidence to suggest that enhanced female education can increase household's nutrition, reduce in fertility rate and infant mortality rate. These benefits might be seen as women's participation as agent of change by developing their families and communities (Gonnesekere & Silva-De-Alwis, 2005). However, there is some doubt whether women's education can reproduce the traditional social structure.¹ Using the framework of (2017)² we have tried to investigate whether KP is being used by participants for empowerment and or accommodating traditions. The paper has been organized as follows. Section-II describes the concepts of tradition and modernity; Section-III deals with literature review; Section-IV describes features of KP; Section-V discusses data, methodology and significance of the study; and Section-VI presents conclusions.

Section-II Concepts of Tradition and Modernity

Lerner (1958) and Eisenstadt (1966) had laid the foundation of modernisation theory on historical development. This theory addressed two types of social systems: traditional and modern. 'Traditions' are defined as stagnant, backdated, communal and non-western in nature (Eisenstadt, 1972; Wolf, 1997). Modernity can be explained as the notions of "imperatives of change and progress" and "universal norms and the promise of a better life". Modernization was a term typically akin with the western countries of West; however, a country of the East can embrace modernity only if it throws away the traditional cultures. This sort of interpretation of modernity might be impractical and a bit harsh.

On the contrary, Eisenstadt (2000) offered the idea of 'multiple modernities'. that rejects the notions of the homogenizing and hegemonic model of the

¹ Existing gender hierarchies and division of labour within the household.

² Kohli (2017) has used the framework of multiple modernity.

Western modernity in the non-Western modernizing societies. The Western European model of modernity transmitted to non western society through several channels like trade, transfer of technology etc., however, the non-western society does not embrace all features of European model (Eisenstadt, 2000). Therefore, modernity is not synonymous with westernization, and European model of modernity is not superior in any sense (Eisenstadt, 2000).

Modern practices are evolved from the existing historical and social context (Kaviraj, 2000). For example, India had a different colonial experience from Latin America and other Asian countries because of different sociocultural settings and histories (Kaviraj, 2005). Similarly, social movements may be anti-western as well as modern, because they deal with current concerns (Eisenstadt, 2000). Notion of modernity varies with culture, and in a given society it is formed through the interaction between historical experiences and traditional values of that particular society. Given socio-cultural and historical settings, institutions like family, education, economic and political structures are shaped in the process of modernization. It signifies different expressions of modernities both at the local and national level (Eisenstadt, 2000). We can see 'multiple modernities' in contemporary India which is markedly different from the western modernity (Kohli, 2017). Gupta (2002) held that India has still not achieved modernity.

There is a huge variation of modernity within western Europe itself (Casanova, 2011; Eisenstadt, 2000; Kaviraj, 2005). Non-western countries adopted some features of western modernity within their local context, and without assuming away their own traditions (Casanova, 2011). On the contrary, Gupta (2000) suggests that there is a coexistence of patriarchy, oppression and modernity, and true modernity can be achieved through adherence to western modernity. This version of modernity does not accept the fact that each society experiences and reproduces modernity in a distinct way and its socio-cultural structures and history cannot be completely eroded while achieving modernity. Kohli (2017) disagreed with this version of modernity, and she thought that Indian modernity is distinctively modern though traditional cultural values have profound impact on this modernity. Modernity in India, therefore, cannot simply be understood as countering patriarchal norms, nor is it simply western and alien (Chaudhuri, 2012).

Therefore, traditions and modernity are not mutually exclusive concepts;

rather there exists complex interactions between the two. Many theorists like Inglehart and Baker (2000) and DiMaggio (1994) observe that traditional values might not lose their relevance in spite of economic and political changes. The likelihood of convergence towards “modern” values is very less, and traditional values will have a continuous influence on the cultural changes caused by economic development. Oliver and Yanick (2008) hold that in some studies emphasis is laid even more on the preservation of strong cultural specificities, as testified, for instance, by the debate on “the clash of civilizations” brought about by Huntington (1996).

Section-III: Review of Literature

Herz et al. (1991) find that there exists wide gender gap in adult literacy, school enrolment and attainment in several parts of south Asia, Africa and middle east. However, that is more pronounced at the secondary education level than primary education. Economic returns to education might be greater for women compared to men in countries having low income. However, gender disparity in schooling persists in those countries (Schultz, 1987). There are ample evidences that if mother is educated, then there will be lower fertility and increased spending on children’s health and education. Here secondary education of women has greater impact than that of primary education. Herz et al., (1991) and Mannan (1988) have seen that the cost of higher education is high for girls than for boys in many developing countries.

Actor like cultural practices explains why parents may pay more for clothing and transportation for girls than for boys. Like inferior goods, as income increases gender disparity decreases (Herz et al., 1991; and Schultz, 1987).

Income growth can reduce gender disparity significantly, but developing countries require many years to achieve that desired level of growth. In this context Khandekar et al. (2003) discuss about government intervention for fast reduction of gender disparity. There is much evidence to show that governments of developing countries make sincere efforts for the promotion of the education of girls. Kim et al., (1999) conducted a study about a female fellowship programme at the primary school level in Pakistan. It found that the programme had enhanced school enrollment of both girls and boys. School voucher for girls had increased enrolment of both girls and boys in Colombia. Chowdhury (2018) conducted a study in four districts

of rural West Bengal to see the effectiveness of KP. The study highlights the fact that rather than promoting higher education of women, the scheme has ended up entangled in the marriage economy of rural Bengal. However, Sen and Dutta (2018) have shown that early marriage and drop-out both have declined after the introduction of KP. This study also finds enhanced empowerment of adolescent girls. Against this backdrop, the present study has tried to see whether KP has enhanced modernity or reduced traditions or accommodated both.

Section-IV-Features of Kanyashree Prakalpa

Justification for the Introduction of the Programme

In India, the legal age of marriage for boys and girls is 21 and 18, respectively. However, child marriage is a widely known phenomenon in India including West Bengal. District Level Household Survey-3 (DLHS-3, 2007-08) shows that the share of currently married women married below age 18 is 41.3 per cent. In DLHS-4 (2012-13), this figure is 31.6 per cent, however for rural areas about 35.9 per cent. Girl child marriage is the worst form of sexual abuse of minor girls. Low educational attainment also correlates with high rates of child marriage, early pregnancies, and high fertility and also poor health and nutrition for mothers and their children. Cleland and Van Ginneken (1989) and Hobcraft (1993) used a meta-analysis of available global data to find that education is important for maternal and child survival independent of other socioeconomic markers, although the pathways are not always clear or consistent between different countries.

Less education and earning capability reduce the bargaining power of worried girls within and outside the household. Early married girls are also susceptible to trafficking. In West Bengal, districts having higher incidence of child marriage have witnessed higher incidence of trafficking. There is a proportional relationship between child marriage and school dropout (Sen and Dutta, 2018). The National Family Health Survey (NFHS) report –III (2005-06) shows that 85 per cent girls of the age group of 10 years go to school, whereas mere 33 per cent girls of the age group 15-17 years turn out at school in West Bengal. High enrolment of girls in primary education might be due to free elementary education initiative by the government of India. However, secondary education is not free of cost. Parents have to do a cost benefit analysis for sending girl children to school. There is an interplay of

several forces for exclusion of girls from education. One major way of exclusion is putting restriction on the movement of girls in the public sphere. Often a girl is harassed to and from school and in the class room.

Traditionally, a woman in Bengal derives her status from her family; her role includes maintaining her family as a social institution and as an economic entity. The girl's reputation remains at stake due to unwanted attention and perceived risk in the public arena. Therefore, marriage is seen as a safe avenue against sexual attention and unsanctioned sexual activity. In the rural society of West Bengal it is admitted that the main goal of a girl's life is a good marriage. The role of education is limited as the facilitator of marriage. Investment in daughter's education is seen an investment in marriage capital, not in daughter's human capital (Arends and Amin, 2004).

The high cost of schooling inhibits the poor from education in West Bengal. Expense is often cited as the prime reason that prevents children from attending school. The cost includes not only the cost of tuition, stationery and books but also the opportunity cost of lost income. The financial and non-financial costs of schooling often are perceived to outweigh the benefits. Therefore, there should be a two pronged attack on the early marriage of girl children. One policy should be to make girls' education less costly, and another to change existing social norms of early marriage of girl children.

Design of the Scheme

The Kanyashree Prakalpa scheme has been designed on two principles: (a) keeping girls at school and (b) remaining unmarried till they attain of 18 years of age. This is a conditional safety net programme. A girl child will receive some financial benefits if she fulfils the above mentioned conditions. These financial benefits have two components: (a) an annual grant of Rs. 750 for the girl students of age group 13 to 18; and (b) one-time grant of Rs. 25,000 after the attainment of 18 years age provided that the girl remains unmarried and engaged in some academic activities.

The scheme is not universal in nature. Girls from the economically weaker section are more susceptible to child marriage. Therefore girls from the households having annual income Rs. 1,20,000 or less are eligible for under the scheme. This income criterion is not applicable to girls with special needs or orphans. Girls with special needs, but in a class below class VIII, can also apply for the annual scholarship.

The scheme comprises cash transfer as well as complementary measures to augment self-confidence of adolescent girls. These measures include creating 'Kanyashree Club' and make adolescent girls aware regarding health and nutrition; evils of early marriage and gender discrimination in all spheres of life. Kanyashree girls are imparted vocational training, life-skill and martial arts. Nadia and Bankura districts have initiated employment and entrepreneurship oriented training for Kanyashree beneficiaries. In some districts, out of school adolescent girls were integrated with 'Sabla' for enrolment in formal or informal schools; and these beneficiaries later were linked with the KP. District administrations have devised some social communication methods using folklore and local festivals to engage communities in discourse on child marriage and women's empowerment. The scheme has been depicted in such a way that being a Kanyashree girl fetches social prestige. They are part of a bigger social movement. Kanyashree girls are joining Kanyashree club, peer group; wearing Kanyashree embalmed bangle as a mark of honour; being felicitated by state in several occasions. Kanyashree girls can talk stridently about their desires of continuing study or postponement of marriage. They can alone decide what to do with Rs. 25000, the one-time grant girls receive after the completion of 18 years. They can spend that money for finishing their higher education, starting a small business or something else. It does not matter as to where girls are spending their money. The scheme has widened the set of goods and services for the girls from where they can choose according to their will. This programme has inculcated a sense of individualism among Kanyashree girls (Annual Report of Kanyashree, 2015).

Section-V-Research Objectives, Methodology and Significance

Research Objectives

The ideology of promoting female education on traditional ground assumed that female education can reduce all forms of discrimination against women. There are ample evidences that female education can enhance household nutrition; reduce fertility rate and infant mortality rate; and improve health and education of children. These benefits are viewed to be effective for participation as agents of change by developing their families and communities (Gonneskere and Silva-De-Alwis, 2005; Kohli, 2017). However Kohli (2017) is sceptical about this approach, and her opinion is that in this approach education will reproduce traditional social structures. The KP has

been introduced to enhance education of women. In this context we are interested to investigate whether this programme is being used for enhancing modernity and or for accommodating traditions.

Methodology

Profile of the sample: *Census 2011* depicts a dismal picture of child marriage in West Bengal: 7.8 per cent females in West Bengal are married before the attainment of age 18, whereas this figure is 3.7 per cent for All India average. We have chosen Murshidabad district as it is one of the most backward districts in West Bengal in terms of district Level Human Development Score. Murshidabad District has 26 blocks of which Bharatpur has been chosen randomly. This block has 9 higher secondary schools and one school has been chosen from them. We got the entire list of students who got the benefits of K_1 and K_2 during 2013-18. We found 53 beneficiaries who got the benefits of KP, married and living within 2 km radius of the school. Control group comprises 60 women having same socio-economic back ground but attend the age of 18 before 2013. All units of the sample are from rural areas. The sample is non-random in nature.

Table 1. Respondents Receiving Annual Scholarship and One-time Grant.

| | 2013-14 | 2014-15 | 2015-16 | 2016-17 | 2017-18 |
|----------------------------|---------|---------|---------|---------|---------|
| K_2 (One-time grant) | | | 15 | 28 | 10 |
| K_1 (Annual scholarship) | 9 | 53 | 38 | 10 | |

Among 53 beneficiaries, only 9 got benefit of K_1 in 2013-14. In 2013-14, the school was not able to submit application for annual scholarship of all eligible beneficiaries. All 53 beneficiaries got the benefits of K_1 in 2014-15. In 2015-16, 15 of them got K_2 , and the remaining 38 beneficiaries got K_1 . Among these 15 beneficiaries 4 were about to complete their college education. In 2016-17, 28 out of 38 beneficiaries got K_2 and the remaining 10 got K_1 . Among these 28 beneficiaries 9 got admitted in college. In 2017-18, the remaining 10 beneficiaries got K_2 . Among these 10 beneficiaries 5 took admission at colleges.

Measuring Traditions

We have taken two aspects 'Traditional Family Custom' and 'Moral rule in Private Life' for measuring the impact of the intervention KP.

1. Traditional family customs: The idea of attachment to traditional family values is in conformity with the idea that one must respect what comes from the past. In the traditional family, there is hierarchy in the relationship: younger should respect the elder; role of male and female are clearly earmarked. Females are entrusted to domestic chore whereas males are responsible for earning money. As domestic works is performed by mother, wife or daughter is unpaid in nature, therefore more emphasis is put on earning money, which is predominantly done by male members of the household. It is also assumed that culture of the family is transmitted across generations through male child. Therefore, there exists a strong preference for male child.

Though in our country women have right to equal share of paternal property, there is a strong preference within the household for greater share of ancestral property in favour of the male child. In south Asia, predominantly, elders of the family decide about the bride and bridegroom in the marriage. In traditional family men are adjudged as superior to women. In the marriage market it is preferred that bridegroom will earn more and be more educated compared to the bride. Marriage as an institution has been tested since ages. In a traditional family people have deep faith in marriage as a pious institution.

We collected respondents' views on the following aspects:

(a) whether girl's opinion should get utmost importance for selecting a life partner; (b) whether husband should be more educated compared to the wife; (c) whether husband should earn more compared to wife; (d) whether there should be specification of work for husband and wife; (e) whether there is a preference for male children; and (f) whether it is justified that both son and daughter have equal right in paternal property? For each positive answer respondent gets 1 score. Therefore, score would vary from 0 to 6.

2. Moral rules in private life: One can view moral rules in private life from the perspective of Weber's 'traditional' behaviour. 'Moral rules' can be clubbed in the framework of "tradition" because moral rules governing daily life should be obeyed today the way they were once obeyed. It strongly opposes the idea that there is no universal set of moral principles. Therefore, individual specific choice of moral rule is completely rejected here. Legitimacy does not depend on its content, rather it depends on permanent nature (Galand and Lamel, 2008).

In this context respondents are asked: whether they think (a) adultery is justified; (b) divorce is justified; (c) homosexuality is justified; (d) abortion is justified; and (e) suicide is justified. For each negative answer the respondent gets 1 score. The score varies from 0 to 5.

Measuring Modernity

Modernity exists at the diametrically opposite direction of traditions. It certainly refers to the dimensions of individualism. The concept of “autonomy of the individual” negates the notion of “submission to institutions, ideas, and principles” that is the basis of traditional behavior. On the contrary, ‘individualism’ puts individual human being at the centerstage of society rather than of the community, tribe, group or nation. When we tried to measure the “autonomy of the individual” we did not make any distinction between actual participation in decision-making and a sense of participation in the decision-making. We have collected information on:

(a) decision taken on small purchases (b) decision taken on large purchases like land, live stock, land, etc., (c) decision taken on children’s health and education; (d) decision taken on one’s own self, like access to healthcare, fertility decision etc., (e) ability to stay with parents and siblings; (f) ability to go to market, movie, bank, government offices, etc., alone; and (g) can she spend her money according to own will. For variables (a) to (d) if decision is taken alone or jointly the respondent gets score 1, otherwise her score is 0. Therefore, maximum score for a respondent is 7 and the minimum is 0.

Measuring Impact

Empirics of this paper are based on primary data. Data collected from January to March, 2018 in Murshidabad district of West Bengal. The sample comprises ‘treatment’ group and ‘control’ group. Recipients of the benefits of KP are considered as treatment group with all other being the control. Impact analysis based on experimental data suffers from the problem of ‘selection bias’. Members of the treatment group might differ from the control group in terms of the distribution of observable covariates. To minimize this difference we took those members as control who completed secondary schooling before KP had been introduced. Therefore, they had

the eligibility to get the benefits of the programme, but did not get the benefits as the program was introduced later. As we collected data using 'snowball' sampling technique, it might suffer from the problem of selection biases. We have used Heckman's "Treatment Effect Model". The Model comprises two equations: (a) outcome equation and (b) participation equation. Both these equations are estimated simultaneously. In the present context dependent variable in the 'outcome' equation is score on two indices of 'traditions'; and score on one index on 'modernity'. In outcome equation one of the explanatory variables is a binary variable which takes value 1 for the treatment households and 0 otherwise. The dependent variables in participation equation and treatment variable in the 'outcome' equation are same. This is a binary variable. Therefore, Heckman's Treatment Effect model deals with endogenous covariate.

To explain the application of Heckman's Treatment Effect Analysis, we start by identifying the outcome variable. Here, we have three outcome variables: (a) the modernity index, (b) index for traditional family customs and (c) index of moral rules in private life. All these variables are continuous in nature.

We have eight observable covariates. One covariate is dichotomous, and the remaining covariates are continuous variables. In what follows, we present a detailed description of covariates.

1. Age of the respondent: Age of the individual member of treatment and control group. Age is measured in number of years. It is a continuous variable.
2. Level of education of the respondent: Education of the respondent of treatment and control group. It is a continuous variable.
3. Caste of the respondent: Caste of the individual member of treatment and control group (dummy variable, 1= higher caste, 0= lower caste)
4. Ownership of land: Ownership of cultivable land of the respondent household. This is a continuous variable. It is measured in 'Katha'³.
5. Age of the household head (continuous variable),
6. Education of the household head (continuous variable)

³ 1 katha = 4 decimal

7. Education of the mother of the respondent (continuous variable)
8. Number of family members: Number of family-members of individual woman (continuous variable),

In addition, there is another covariate to identify the treatment effect. This is a binary variable. It takes value 1 for programme beneficiary and 0 otherwise.

Table 2 Descriptive Statistics of Explanatory Variable across 'Treatment' and 'Control' Groups.

| Variable | Treatment | | Control | |
|-----------------------------------|-----------|-------|---------|-------|
| | Mean | S.D | Mean | S.D |
| Age of the respondent | 20.05 | .705 | 25.68 | 1.346 |
| Education level of the respondent | 12.69 | 1.016 | 12.73 | .989 |
| Caste | .25 | .43 | .58 | .49 |
| Land | 2.16 | 2.13 | 10.7 | 5 |
| Age of HH | 34.8 | 46.1 | 46.1 | 10.24 |
| Education of the HH | 7.71 | 5.67 | 7.48 | 5.24 |
| Mother's education | 2.78 | 3.58 | 2.93 | 3.74 |
| No. of family members | 4.025 | 1.76 | 4.75 | 2.41 |

Notes: 1 Difference of mean between treatment and control group is statistically significant for age of the respondent, land, age of HH, and insignificant for level of education of the respondent, education of HH, mother's education and no. of family members.

2. Difference for sample proportion is statistically significant for Caste.

From Table 2 of the 8 study variables, 4 showed statistically significant differences between treated cases and non treated cases. Therefore, assignment of treatment is not independent of the affiliation to caste, land or age of the household head. Without controlling for these selection biases, the estimates of differences on index of modernity, index of traditional family customs and index of moral rules in private life would clearly be biased.

Table 3 shows the estimated differences in outcome variables between groups before and after adjustment for sample selection.

Table 3 Estimated Differences in Outcome Variables between Groups Before and After Adjustment for Sample Selection.

| | Score on index of modernity Mean (S.D.) | Score on index of traditional family custom Mean (S.D.) | Score on Index of moral rule in private life Mean (S.D.) |
|--|---|--|---|
| Treated | 4.52(1.47) | 2.97(1.16) | 4.37 (.77) |
| Control | 4.63(1.87) | 3.44 (1.2) | 4.07 (1.07) |
| Unadjusted mean difference | -.11 | -.47 | .3 |
| Regression adjusted mean (SE) difference | .537(.454) | -.423(.351) | -.058(.281) |
| Adjusted mean (SE) difference controlling sample selection | 2.8 (.69) ^{**} | -1.09(.62) | -.91 (.5) |

Table 3 shows the estimated difference in the score for modernity and traditions between treated and control groups before and after adjustment of sample selection. Taking the score of ‘index of modernity’, ‘index of traditional family customs’ and ‘index of moral rule in private life’, mean score for the treated are 4.52, 2.97 and 4.37, respectively. These scores for control groups are 4.63, 3.44 and 4.07, respectively. The unadjusted mean difference between treated and control groups for these three indices are -.11, -.47 and .3, respectively. Using an OLS regression we have tried to adjust the impact of covariates. In the OLS regression we have used those covariates which are used as covariates in the outcome equation of ‘treatment effect with endogenous covariate’. Compared to unadjusted mean difference, there is a sizeable increase in the regression adjusted mean difference for the ‘index of modernity’, and major decrease in the value of ‘index of moral rule in private life’. However, both these differences are not statistically significant. So far we can conclude that being beneficiaries of KP has insignificant impact on modernity or traditions.

The treatment effect model with endogenous covariate control heterogeneity between treatment and control group by taking into consideration covariates affecting selection bias. Adjusted mean difference controlling sample selection is 2.8 for ‘index of modernity’. It implies that KP beneficiaries have 2.8 more score compared to non beneficiaries, and that difference is statistically significant ($p < .001$). Compared to regression analysis, difference of score is higher between treated and control in treatment effect model. However, that difference is not statistically significant. The analysis suggests that significant impact on KP on modernity may be wearing a veil in simple mean differences and even in the regression adjustments.

Participation in KP has delayed the age of marriage for the adolescent girls, but respondents have expressed their deep faith in marriage as an institution. Beauty is an important attribute for the prospective bride, but there is an increasing demand for educated bride as well. KP enables women to fulfil social and material desires and build self-reliance; but unable to change the patriarchal ideology. These changes mean that Kanyashree girls have a range of choices which were earlier denied to the girls from the same socio-economic strata.

Kanyashree girls have demonstrated more autonomy or individualism compared to those from the control group. 'From small purchase' to 'number of births', decision making agency of the Kanyashree girls has increased significantly within the household compared to the control group. But it does not mean retreat of tradition. Modernity means not only liberating girls, but also a modern process of change that suits the contemporary nature of society. Education of a woman is greeted so long it is not hurting the male authority.

The modernity that India experienced is a colonially mediated modernity which led to a set of paradoxical responses. Educated women will play their traditional familial role better compared to the uneducated women. Education will help Indian women to garner traditional qualities of domestic skills, and modern virtues of socialisation and employment opportunities. Modern abilities should be in conformity with the dominant patriarchal ideology that marriage is quite crucial for a woman even more than education.

V. Conclusions

Huntington (1971) rightly said that traditions and modernity are not in diametrically opposite positions. Modern society also comprises the element of traditions. In some cases attitudes and behaviour pattern peacefully stay together, and in some cases they blend to form single entity. KP has increased female education, delayed marriage, and has inculcated a sense of individualism for Kanyashree girls. After controlling both observed and unobserved heterogeneities, we can see that Kanyashree girls are more modern compared to non-programme participants. But this modernity is in agreement with dominant patriarchal ideology. Kanyashree girls with more autonomy will perform traditional familial roles better compared to the control group. Therefore, KP has widened modernity and accommodated tradition. There is no trade off between traditions and modernity in colonially mediated Indian society. This paper suffers from the usual errors of sampling. It could be a better work if more dimensions of modernity and traditions were added.

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Financial Inclusion in Uttarakhand and Uttar Pradesh: A Comparative Study

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Abstract

Financial inclusion aims at providing well-functioning financial system in an equitable and transparent manner at a reasonable cost to all the sections of society. In India, there are wide disparities in access to financial services among different segments of the society. The study is an attempt to find out the status of financial inclusion in the states of Uttar Pradesh (UP) and Uttarakhand. Apart from discussing the concept of financial inclusion the study analyzes the degree of relationship between socio-economic development indicators and financial inclusion in the two states. The study reveals huge disparity amongst the districts of Uttar Pradesh, where almost 60 districts were categorized below average as per the financial inclusion index. However, in case of Uttarakhand, all the districts were categorized under 'high' and 'above average' groups. The study unveils that literacy rate and urbanization are significant factors whereas population tends to be an insignificant factor in determining the level of financial inclusion. Finally, the study concludes that Uttarakhand continues to lead in the Index of financial inclusion as well as in other social development variables as compared to Uttar Pradesh.

Keywords: Financial Inclusion, Literacy Rate, Urbanization, Uttar Pradesh, Uttarakhand.

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1. Introduction

A vast majority of population in India resides in rural areas and still remains outside the ambit of basic financial services. Various efforts have been made by the government and the Reserve Bank of India (RBI) to provide financial services to the rural population. Despite and commendable progress there is a long way to go as banks have not been able to include the underprivileged section of society into the field of basic banking services.

The contribution of financial development in the economic development of an economy has been established by many empirical studies as for example, Levine & Zervos (1993); and Galor & Zeira (1993). Development of the financial sector may accelerate economic growth by reducing poverty and income inequality. In an underdeveloped financial economy, availability of funds from formal sources is limited while costs of informal sources of funds are high; this results in fewer economic activities. Therefore, improvement in the provision of affordable financial services can accelerate growth, reduce income inequality and poverty. The idea of access to institutional finance to the excluded people and banking to all got boost when the concept of financial inclusion was introduced in 2005 by the RBI in its annual policy statement.

Rangarajan (2013) defined financial inclusion as the process of ensuring access to financial services, timely and adequate credit where needed by vulnerable groups such as weaker sections and lower-income group at an affordable cost. These include other pecuniary services such as pension, insurance and equity products. Sarma (2008) defines financial inclusion as a process that ensures the ease of access, availability and usage of the formal financial system for all members of an economy. This definition highlights several dimensions of financial inclusion, namely accessibility, availability and usability of the financial system. Financial inclusion has become one of the most critical aspects in the context of inclusive growth and development Goldsmith (1969). Thus, financial inclusion is important from both the economic as well as social perspectives.

India's position with respect to financial inclusion is not just poor but in view of the fact that the nation has nationalized commercial banks around 50 years ago to extend financial services to all the people, the position is

still not satisfactory. Despite rapid overall development in the last 20 years the financial sector still has not been able to bring a vast segment of society into the ambit of basic financial services. Due to low financial inclusion, excluded people of the society lose opportunities of growth and save a part of their earnings for unforeseen situations and also to borrow. The broad motive behind financial inclusion is to meet the needs of the poor through formal financial institutions and convert the moneylender-dependent rural economy into formal banking groups, stop the draining of resources from poor, encourage strong saving culture which will further boost investments and eliminate high cost interest regime.

The first ever index of financial inclusion (IFI) at the International level was prepared to find the extent of banking access in 100 countries in which India secured 50th position (Sarma, 2008). Low level of literacy, lack of awareness, and high incidence of poverty are the major obstacles in the way of financial inclusion. Another major problem related to financial inclusion in India is inter-district and inter-state disparity in the development of the financial sector. It would be useful to understand the extent to which inter-state and inter-district disparity exists in the India and at the same time identify factors that have contributed to the differences to perpetuate. The present research aims at studying the disparity in financial inclusion at the district level in Uttar Pradesh and Uttarakhand and identifies the degree of relationship between financial inclusion and other social development variables.

The rest of the paper is organized as follows. Section 2 provides a review of theoretical and empirical literature and Research Gap. Section 3 gives information on financial inclusion in Uttarakhand and Uttar Pradesh. Section 4 describes the dimensions of financial inclusion and research methodology for data analysis. Empirical analysis is done in Section 5. Finally, Section 6 presents the concluding remarks.

2. Literature Review

Chhabra (2015) attempts to assess the relation between development and financial inclusion with the help of IFI and Human Development Index (HDI) and other social development variables at state level in India, and finds that HDI has significant impact on financial inclusion. Suggestions given by the researcher include measures to improve the institutional credit

A region wise comparison of IFI by Nautiyal & Ismail (2018) examines the relationship between financial development and economic growth in 13 states using per capita income (PCI). The study used Dumitrescu & Hurlin (2012) Granger non-causality test to identify the causality between IFI and PCI. The study concludes that the widest regional disparity is visible in all the parameters of financial inclusion with the Southern region being far ahead of other regions. It observes that trickling down of economic growth depends on demand factors more than supply variable.

A study in Hooghly district of West Bengal found that the extent of financial exclusion was very high among less acted SC; ST households and marginal workers Majumdar & Gupta (2013). Ananth et al. (2013) studied the institutional challenges of financial inclusion in Andhra Pradesh, as formal financial institutions are unable to meet the specific needs of poor people enabling informal service providers to fill the gap. They held that expanding financial inclusion requires initiatives beyond opening bank accounts and banks should come with products which are customer friendly. The primary survey revealed that the formal banking sector lacked of knowledge on the needs of rural masses but in a large number of districts the formal sector had displaced informal sector players with the help of technology. They concluded that public sector banks should expand inclusion efforts as private banks emphasized more on profit maximization.

A study conducted in Gubbi district of Karnataka finds that large and medium farmers prefer banks over Self Help Groups (SHGs) whereas marginal and small farmers prefer SHGs; however, within informal sources the share of moneylenders is the highest (Singh & Naik, 2017). To examine the ease with which respondents can avail banking services and the study observes that a large proportion of farmers has to avail transport services to go to bank but MFIs, SHGs, and moneylenders conduct business within short distances. Suggestions given by farmers include bank officials should be customer friendly, norms should be simple etc., Jamal & Alam (2017) observed that economic performance of Uttar Pradesh has been slow as compared to other states of the country due to financial exclusion. They institutions including microfinance institutions, self help groups non-banking financial companies, non-governmental organisations etc., should expand their business to reach the excluded segment of the population.

In order to analyze financial inclusion in the slums of Mumbai Bhatia & Chatterjee (2010) found that only one-third of the respondents had bank accounts. The study also reveals that mobile penetration is higher than the banking penetration. It found that almost 96 per cent of respondents had valid identity proof which cancels out the identity barrier of financial inclusion.

Mohanty (2012) discussed the economic and financial development of Uttarakhand. Although banking penetration and average population per bank branch was found favorable the credit-deposit ratio was lower than the all-India average and the ratio of bank credit to gross state domestic product was also low in the state indicating the need for credit expansion. Further, the considerable disparity across the districts of Uttarakhand called for an expansion of financial services in the hilly areas of the state.

Beck et al. (2007) discusses different views of authors about in a study on the impact of financial development on income growth and redistribution of income to the weaker section of the society Beck et al. (2007) used a dynamic panel estimator model and found that financial development is related to faster poverty alleviation.

To the best of our knowledge and literature reviewed no empirical study of financial inclusion has been done at district level, particularly in the states of Uttarakhand and Uttar Pradesh. In this backdrop the present analysis has made an attempt to analyze and compare the status of financial inclusion in both the states.

3. Financial Inclusion in Uttarakhand and Uttar Pradesh

Uttarakhand state was formed on November 2000 when it was carved out of the Himalayan districts of Uttar Pradesh in view of long-pending demand of the local people. Twenty years since its formation Uttarakhand has been doing fairly well on all the social and economic indicators of development as compared to Uttar Pradesh. The HDI of Uttarakhand was 0.677 in 2017 whereas for Uttar Pradesh it was 0.583. Besides this, the literacy rate of 79.63 per cent and sex ratio of 963 of Uttarkhand also indicate better development in the state as compared to Uttar Pradesh with literacy rate and sex ratio of 67.68 per cent and 912, respectively, as per the *Census of India* 2011.

To compare the financial inclusion of different districts of Uttar Pradesh and Uttarakhand it is worthwhile to see IFI calculated by Credit Rating Information Services of India Limited (CRISIL) taking all three dimensions of financial inclusion namely, branch penetration, credit penetration and deposit penetration. Using data for 71 districts of Uttar Pradesh and 13 districts of Uttarakhand on all three dimensions for the year 2011 districts were categorized as high if (IFI >55), above average if (IFI is in between 40.1-55); below average if (IFI is in between 25-40) and low if (IFI<25) by CRISIL. Table 1 shows the categorization of the districts of Uttar Pradesh on the basis of their financial score. It is found that only two districts belong to the high financial inclusion category and majority of the districts belongs to the category of low and below average financial inclusion indicating low financial development and low outreach of banking in Uttar Pradesh. In Table 2 districts of Uttarakhand are distributed on the basis of their financial score where 3 districts belong to the category of high financial inclusion and rest were placed in the above average category showing increasing financial development in the state.

Table 1: Distribution of Uttar Pradesh Districts on the Basis of Financial Inclusion Score

| Index Value | Number of Districts |
|---|--|
| IFI>55 (High) | 2 (Gautam Buddha Nagar, Lucknow) |
| IFI Between 40.1 and 55 (Above Average) | 7 (Kanpur Dehat, Meerut, Jhansi, Mathura, Hamirpur, Jalaun and Agra) |
| IFI Between 25 and 40 (Below Average) | 56 (Jyotiba Phule Nagar, Banda, Bara banki, Kanpur nagar, Varanasi, Saharanpur, Hathras, Moradabad, Lalitpur, Mahoba, Aligarh, Ghaziabad, Rampur, Chitrakoot, Muzaffarnagar, Unnao, Shravasti, Azamgarh, Rai Bareli, Baghpat, Bareilly, Bijnor, Farrukhbad, Kanauj, Sultanpur, Ghazipur, Gorakpur, Ballia, Jaunpur, Bulandshahr, Shahjahanpur, Sitapur, Etawah, Allahabad, Mainpuri, Mau, Pilibhit, Etah, Faizabad, Pratapgarh, Hardoi, Basti, Ambedkar nagar, Gonda, Deoria, Fatehpur, Auraiya, Firozabad, Chandauli, Sonbhadra, Budaun, Mirzapur, Kanshiram Nagar, Sant Ravidas Nagar, Maharajnagar, Balrampur.) |
| IFI<25 (Low) | 6 (Kheri, Sant Kabir Nagar, Khushi Nagar, Siddharathnagar, Kaushambi, Bahraich) |

Source: CRISIL *Inclusix Report 2013*

Table 2: Distribution of Uttarakhand Districts on the Basis of Financial Inclusion Score

| Index Value | Number of Districts |
|---|---|
| IFI>55 (High) | 3 (Dehradun, Pauri Garhwal, Pithoragarh) |
| IFI Between 40.1 and 55 (Above Average) | 10 (Almora, Nainital, Rudraprayag, Udham Singh Nagar, Chamoli, Bageshwar, Tehri Garhwal, Haridwar, Champawat, Uttarkashi) |
| IFI Between 25 and 40 (Below Average) | 0 |
| IFI<25 (Low) | 0 |

Source: *CRISIL Inclusix Report 2013*

4. Dimensions of Financial Inclusion and Research Methodology

Problems of income inequality, debt trap and poverty can be tackled by inclusive growth. To accomplish this, the concept of financial inclusion is promoted by the government and various policy makers. As already defined, financial inclusion refers to providing basic banking services to the financially excluded people. World over and in India constant efforts have been made to achieve 100 per cent financial inclusion. CRISIL, in 2009, in its report has stated that there are 120 million (12 crores) financially excluded households in India. Further, the Rangarajan Committee (2009) referring to NSSO data observed that 51.4 per cent farmer household in the country did not have access to credit either from formal or informal sources. There also exists huge disparity across the states in India where developed states are more financially included in comparison to less developed states. Thus, apart from the fact that exclusion is large in general, it also varies widely across regions which clearly portrays that poorer the group, greater is the exclusion.

On June 2013, CRISIL launched an index to measure the status of financial inclusion in India. The CRISIL Inclusix is an analytical tool that comprehensively measures financial inclusion based on four parameters namely, branch penetration, credit penetration, deposit penetration and insurance penetration and weighs these parameters against the ideal level set for each of these parameters. The CRISIL Inclusix gives state, districts and region wise data related to financial inclusion which further helps in tracking the progress made with respect to financial inclusion. It is measured on a scale of 0-100, where 0 is the minimum score and 100 is the maximum score achievable. In this report IFI score or CRISIL Inclusix Score for India in 2011 was 40.1. Uttar Pradesh had a score of 29.6 (2009), 31.5 (2010) and 33.5 (2011)

showing below average performance of the state whereas for Uttarakhand the score was 45.6 (2009), 48.5 (2010) and 50.5 (2011) categorizing the state above average. It is worth noting that most of the districts of Uttar Pradesh fell in the below average category and in Uttarakhand all the districts fell under high or above average category.

Table 3: Dimensions and Parameters to Measure Financial Inclusion

| | Parameters | Significance | Interpretation |
|-----------------------|---|---|-------------------|
| Branch Penetration | Number of bank branches per lakh of population. | Measures the ease with which a particular region or a group of people could access banking services | Higher the better |
| Credit Penetration | Number of loan accounts per lakh of population | Credit access is measured for small borrowers who are financially excluded | Higher the better |
| Deposit Penetration | Number of saving deposit accounts per lakh of population | Measures the quality and extent of access of saving products offered by banks | Higher the better |
| Insurance Penetration | Number of insurance accounts per lakh of population | Measures the extent of access of insurance products offered by government and banks. | Higher the better |
| Credit-Deposit Ratio | Ratio of loans given by banks to people and savings deposited by people | Gives an insight into the money credited from banks and money deposited in banks | Higher the better |

Source: *CRISIL Inclusix Report 2013*

The latest report of CRISIL for the year 2016 revealed the All-India IFI score of 58; this suggests the financial growth of the nation. The score of Uttar Pradesh has also increased to 44.1 in 2016 from 33.5 in 2011 bringing the state into below average category whereas for Uttarakhand the IFI score for the year 2016 had increased to 69 from 50.5 in 2011 showing commendable progress made by the state with high financial inclusion. In 2016 CRISIL modified the scores of the categories of financial inclusion as follows:

IFI > 65 (High)

IFI between 50.1-65 (Above average)

IFI between 35-50 (Below average);

IFI < 35 (Low).

Table 4 shows the value of various parameters of financial inclusion for Uttar Pradesh and Uttarakhand for the year 2011. As noted above, CRISIL Inclusix measures financial inclusion based on three parameters branch penetration, credit penetration and deposit penetration. Insurance penetration was further added from 2016 because it is believed that extending insurance and social security services to the financially excluded would help widen the financial inclusion goal. As Table 4 shows Uttarakhand leads in all the parameters of financial inclusion except credit-deposit ratio. The credit-deposit ratio of Uttar Pradesh (44) is higher than the that of Uttarakhand (35.4).

Table 4: Values of the Parameters of Financial Inclusion in Uttar Pradesh and Uttarakhand

| Dimensions of financial inclusion | Uttar Pradesh | Uttarakhand |
|---|---------------|-------------|
| Branch penetration (Number of bank branches of both Schedule commercial banks and regional rural banks per lakh population) | 7.08 | 14.73 |
| Credit penetration (Number of credit accounts per lakh population) | 5090.8 | 8046.14 |
| Deposit penetration (Number of deposit accounts per lakh population) | 58187.2 | 84847.9 |
| Credit-Deposit ratio | 44 | 35.4 |

Source: Authors' calculation of data accessed from www.indiastats.com

There is no universally accepted measure of financial inclusion. However, many researchers have used many indicators to measure various dimensions of financial inclusion such as number of bank accounts per population, number of deposit accounts per population, credit-deposit ratio, number of bank branches per population, number of credit accounts per population, etc. However, each parameter provides biased information about the inclusion. Thus, using one single indicator leads to misleading results of financial inclusion.

Researchers and policy makers have developed various methods for measuring financial inclusion. The method which incorporates several dimensions of financial inclusion in one single number was first developed by Sarma (2008) with some modifications in the approach used by UNDP for computation of HDI, Gender Development Index (GDI) etc. Sarma's

index was further used by CRISIL and many researchers to measure state-wise, region-wise and district-wise financial inclusion in India.

As noted above, IFI calculated by CRISIL is a composite index that measures financial inclusion as an aggregate of 3 dimensions (BP, CP and DP). Every dimension is normalized first by using min-max method of normalization. The normalization is done in order to make the value fall between 0 and 1. This normalization is further done by applying the following formula:

$$D_i = \frac{A_i - m_i}{M_i - m_i} \quad (0 < D_i < 1)$$

A_i = Actual or real value of dimension i

m_i = minimum or lowest value of dimension i

M_i = maximum or highest value of dimension i

Greater the value of D_i , greater will be the state's achievement in dimension i. Now, the IFI of the i^{th} state or the i^{th} district is measured by using the following formula:

$$\text{IFI} = \frac{1 - \sqrt{(1 - \text{BP})^2 + (1 - \text{CP})^2 + (1 - \text{DP})^2}}{\sqrt{3}}$$

$(0 < \text{IFI} < 1)$,

Greater the value of IFI, higher will be the achievement of financial inclusion in that state or district.

The present study is based on secondary data, Which is analyzed using descriptive statistics and multiple regression models. The secondary information for the research is collected from the following sources: Reserve Bank of India (official website), *CRISIL Inclusion Reports* from 2011 to 2016, *District Census Handbooks* of Uttar Pradesh and Uttarakhand for 2011, *indiastats*, *Census of India* and various research papers and journals.

As our data series consists of 84 observations for a single time period, cross-sectional approach is expected to deal better with the analysis. In the cross-sectional framework, the relation between IFI score and other social and development indicators such as literacy rate, urbanization, and population are analyzed using multiple regression model. The same has been used by

Chhabra (2015) and Ananth and Oncu (2013) in their research; our study follows the regression used by these researchers. The multiple regression equation explains the relation between more than two variables and is used to predict the dependent variable. The multiple regression model used in this study examines the impact of social development variables on financial inclusion. In this model, IFI is taken as dependent variable and literacy rate, population and urbanization as independent variables and as a proxy of social and economic development.

$$\text{LOG (IFI)}_i = \hat{a}_i + \hat{a}_1 D_i + \hat{a}_2 \text{LOG(LR)}_i + \hat{a}_3 \text{LOG(UR)}_i + \hat{a}_4 \text{LOG(POP)}_i + \hat{a}_i$$

Where for $i = 1, 2, \dots, N$ and \hat{a}_i is disturbance term

\hat{a}_i is constant

D_i is the Dummy variable

IFI is Index of Financial Inclusion, which is the dependent variable

LR is Literacy rate

UR is Urbanization

POP is Population

In the above regression equation, IFI is the dependent variable whereas LR, UR, POP are independent variables, \hat{a} is the intercept which is the benchmark category 0, representing districts of Uttarakhand and D_i is 1 representing districts of Uttar Pradesh and $\hat{a}_1, \hat{a}_2, \hat{a}_3$ are parameters to be estimated from the secondary data and \hat{a}_i is the disturbance term following classical OLS assumptions of mean 0 and variance constant. According to the literature reviewed, the independent variables literacy rate and urbanization in the above model are expected to have a significant and positive impact on financial inclusion whereas for population, it is expected to have a negative influence on financial inclusion score.

On the basis of the regression analysis, the following set of hypotheses has been tested:

1. H_0 : There is no significant difference in the level of financial inclusion between Uttar Pradesh and Uttarakhand.
 H_1 : There is a significant difference in the level of financial inclusion between Uttar Pradesh and Uttarakhand.

2. H_0 : There is no significant relationship between financial inclusion (IFI) and independent variables, namely literacy rate, urbanization and population.

H_1 : There is a significant relationship between financial inclusion (IFI) and independent variables, namely literacy rate, urbanization and population.

5. Empirical Analysis

The descriptive statistics for all four variables have been calculated and presented in Table 5. The number of observations in the table represents the number of districts in Uttarakhand and Uttar Pradesh. The mean value of IFI of the districts of Uttarakhand is 49.14 with maximum value of 64.30 and minimum value of 41.50. In case of Uttar Pradesh districts, the mean value of IFI is 33.52 with maximum value of 62.40 and minimum value of 22.40 which shows that the level of financial inclusion is more in the state of Uttarakhand as compared to that in the state of Uttar Pradesh. The standard deviation of IFI in the districts of Uttarakhand is 7 while in Uttar Pradesh districts it is 7.72. This indicates that the level of inequalities among districts in case of financial inclusion is more in Uttar Pradesh as compared to that in Uttarakhand.

Further, the mean value of literacy rate of the districts of Uttarakhand is 79.11 with maximum value of 84.25 and minimum value of 73.10 while in case of Uttar Pradesh districts the mean value of literacy rate is 67.30 with maximum value of 80.10 and minimum value of 46.70 portraying a more developed picture of Uttarakhand in education as compared to Uttar Pradesh. Now looking at the standard deviation of literacy rate in the districts of Uttar Pradesh and Uttarakhand the table shows standard deviation of 4.11 for Uttarakhand and 7.40 for Uttar Pradesh indicating high variation in the level of literacy rate across the districts of Uttar Pradesh as compared to that in Uttarakhand.

The mean value of population of the districts of Uttarakhand is 776488.7 with maximum value of 1890422 and minimum value of 242285 while in case of Uttar Pradesh districts the mean value of population is found to be 2781282 with maximum value of 5954391 and minimum value of 867848. This shows that Uttar Pradesh is more populated than Uttarakhand.

Further the standard deviation of population in Uttarakhand districts is 590704.8 and for Uttar Pradesh districts it is 1198415 showing greater inequality across the districts of Uttar Pradesh in terms of population.

Lastly, Table 5 reveals whereas the mean value of urbanization of the districts of Uttarakhand as 19.81 with maximum value of 55.50 and minimum value of 3.40, the mean value of urbanization in the districts of Uttar Pradesh is found to be 20.52 with maximum value of 67.50 and minimum value of 3.50. This indicates high degree of urbanization in Uttar Pradesh as compared to Uttarakhand. The standard deviation of urbanization in Uttarakhand districts is 16.20 whereas for Uttar Pradesh districts it is 15.07 showing more variation across the districts of Uttarakhand as compared to Uttar Pradesh in terms of density of urban population.

Table 5: Descriptive Statistics of Uttarakhand and Uttar Pradesh

| Uttarakhand | IFI | Literacy | Population | Urbanization |
|------------------------|------------|-----------------|-------------------|---------------------|
| Mean | 49.14 | 79.11 | 776488.7 | 19.81 |
| Maximum | 64.30 | 84.25 | 1890422. | 55.50 |
| Minimum | 41.50 | 73.10 | 242285.0 | 3.40 |
| Standard Deviation | 7.0 | 4.11 | 590704.8 | 16.20 |
| Number of Observations | 13 | 13 | 13 | 13 |
| Uttar Pradesh | IFI | Literacy | Population | Urbanization |
| Mean | 33.52 | 67.30 | 2781282 | 20.52 |
| Maximum | 62.40 | 80.10 | 5954391 | 67.50 |
| Minimum | 22.40 | 46.70 | 867848.0 | 3.50 |
| Standard Deviation | 7.72 | 7.40 | 1198415 | 15.07 |
| Number of Observations | 71 | 71 | 71 | 71 |

Source: Authors' calculation

Table 6 represents results of the regression analysis. It reveals F-statistic which explores the overall significance of the independent variables on dependent variable. The value of F-statistic in our model is 26.36 and statistically significant. The coefficient of determination is 0.571 or 57.16 per cent, which means 57 per cent of variation in IFI (dependent variable) is explained by the explanatory variables. The coefficient of dummy variable (D) is significant but negative indicating the level of financial inclusion low in Uttar Pradesh as compared to the benchmark category state,

Uttarakhand. Therefore, the null hypothesis “There is no significant difference in the level of financial inclusion in Uttar Pradesh and Uttarakhand” in this case is rejected.

Literacy rate has a “crystal clear” beneficial impact on financial inclusion. In terms of usability aspect i.e., “use of financial services” the effect of higher literacy rate reinforces the effect of greater financial depth. The health of the country’s financial system depends upon the ability of its citizens to manage their own finances effectively. This causal interpretation is supported by the regression results presented in Table 6, which show that the coefficient of literacy rate is positive and significant having t value of 2.36. Therefore, the null hypothesis “Literacy rate does not influence financial inclusion” is rejected and we can say that literacy rate has a positive impact on financial inclusion. The results of the study reveal that 1 per cent increase in the level of literacy leads to an increase in IFI by 0.44 per cent. Results establish that adult literacy is associated positively and significantly with financial inclusion implying that higher the adult literacy, higher will be the level of financial inclusion.

Urban financial infrastructure is likely to affect the usage of formal financial services, as urban areas are more developed in a variety of forms (i.e., physical, technological, social, informational and financial). This infrastructure development is likely to affect financial inclusion in a positive way. Urban population or the proportion of urban population is found to be positively associated with financial inclusion, i.e., higher the level of urbanization higher will be the level of financial inclusion. The null hypothesis in this case “Urbanization does not have any impact on financial inclusion” is rejected. The study reveals that the coefficient of urbanization is positive and significant with t value of 4.54. The results of the study reveal that 1 per cent increase in the urbanization (proportion of urban population) leads to an increase in IFI by 0.13 per cent.

The coefficient of “Population” variable is insignificant at 5 per cent level of significance and, hence, the null hypothesis “Population does not have any impact on financial inclusion” is not rejected.

Table 6: Results of Multiple Regression with Dependent Variable: Log (IFI)

| Variable | Coefficient | Standard error | t-statistic | Prob. |
|----------------------|-------------|----------------|------------------------------------|-----------|
| C | 2.19 | 0.96 | 2.26 | 0.02 |
| Log(Literacy) | 0.44 | 0.18 | 2.36 | 0.02 |
| Log(Population) | -0.04 | 0.04 | -1.15 | 0.25 |
| Log(Urbanization) | 0.13 | 0.03 | 4.54 | 0.00 |
| Dummy (D) | -0.28 | 0.07 | -3.57 | 0.0006 |
| R-squared | 0.571682 | | Mean dependent variable | 3.550376 |
| Adjusted R-squared | 0.549995 | | S.D. dependent variable | 0.248631 |
| S.E. of Regression | 0.166788 | | Akaike information criterion | -0.686510 |
| Sum squared residual | 2.197635 | | Schwarz information criterion | -0.541819 |
| Log Likelihood | 33.83343 | | Hannan-Quinn information criterion | -0.628346 |
| F-statistic | 26.36063 | | Durbin-Watson statistic | 2.186580 |
| Prob(F-statistic) | 0.000000 | | Number of Observations | 84 |

Source: Authors' calculation

6. Concluding Remarks

The study reveals that the value of IFI is low in Uttar Pradesh as compared to that in Uttarakhand. Penetration of bank branches per lakh population is low in Uttar Pradesh. Besides branch penetration, Uttar Pradesh has shown sluggish performance in credit penetration and deposit penetration whereas Uttarakhand has been doing fairly well in all the three dimensions of financial inclusion. The study concludes that there exists wide disparity in IFI in Uttarakhand and Uttar Pradesh where the districts of the former continue to lead in all the parameters of financial as compared to that in the districts of Uttar Pradesh. The widest disparity is witnessed in the districts of Uttar Pradesh where almost 60 districts were categorized below average in the IFI. However, in case of Uttarakhand, all the districts were categorized as high and above average in IFI which clearly establishes that Uttarakhand is more developed in terms of banking as compared to Uttar Pradesh. The probable reason for this could be the presence of high literacy rate of 78.82 per cent in Uttarakhand in comparison to 67.68 per cent literacy rate in Uttar Pradesh. In most parts of the country, the level of financial inclusion is low because of poor illiterate people. The level of literacy rate has a positive association with the level of financial inclusion. Uttarakhand, popularly known as Dev Bhoomi due to many pilgrimage centers, and Hindu temples has a great

scope for tourism development. Tourism is one of the key sectors of economic growth and development in the state from the point of view of employment and income generation as well as state revenue generation (Banday & Ismail 2017). Further, Uttarkhand has a better per capita income of Rs. 92566 as compared to Rs. 33482 of Uttar Pradesh (indiastats). Per capita income growth of Uttarakhand has been much more than that of Uttar Pradesh in all the years.

The findings of the study show that financial inclusion and other social development indicators like urbanization and literacy rate are significant and positively related. Literacy rate and urbanization significantly predict or explore financial inclusion whereas population is insignificant and negatively related with financial inclusion. Finally, the study suggests that the government of each state needs to make efforts to reach all the districts of the state and increase financial literacy by setting up credit counseling centers so that people could take advice on gaining access to financial services and money management especially in the rural areas. Further, more empirical research needs to be encouraged to identify the reasons of low financial inclusion at the micro level.

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Rational Choice from a Finite Set of Alternatives: A Note

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Abstract

We provide a necessary and sufficient condition for a binary relation on a given non-empty, finite and fixed set of alternatives to have a non-empty set of maximal alternatives in that set of alternatives.

Keywords: Maximal alternatives, fixed set of alternatives

1. Introduction

We provide a necessary and sufficient condition for a binary relation (at least as good as relation) on a given nonempty, finite and fixed set of alternatives to have a non-empty set of maximal alternatives in that set of alternatives. This issue was raised for the first time in a seminal contribution on majority voting by Pattanaik (1970). For a general and comprehensive reference on rational choice theory one may refer to Sen (1970).

Economy of assumptions on preferences required to obtain the desirable or best outcomes is the object of our study in this paper.

2. Model

Let X be a non-empty finite set of alternatives and R be a binary relation on X (i.e. $R \subseteq X \times X$). If $(x,y) \in R$ where $x,y \in X$, then we write this simply as xRy and interpret it as “(alternative) x is at least as good as (alternative) y .”

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Given a binary relation R , let $P(R)$ denote the asymmetric part of R (i.e. $xP(R)y$ if and only if xRy and $\text{not}[yRx]$). $xP(R)$ is interpreted as “ x is preferred to y ”. When there is no scope for confusion (as in the case of what follows) we will write P instead of $P(R)$.

Further, let $M(X,R) = \{x \in X \mid \text{there does not exist } y \in X \text{ satisfying } yPx\}$. $M(X,R)$ is said to be the set of **maximal** alternatives with respect to R in X . It is quite possible that $M(X,R)$ is empty.

R is said to be **acyclic** if there does not exist a list $\langle x_1, \dots, x_k \rangle$ of alternatives X with $k \geq 2$, x_jPx_{j-1} for all $j \in \{2, \dots, k\}$ and x_kPx_1 .

An **R-sigma** is a list of $k \geq 2$ distinct alternatives $\langle x_1, \dots, x_k \rangle \in X$ such that: (a) for all $j \in \{2, \dots, k\}$, x_jPx_{j-1} and (b) x_kPx_1 for some $k \in \{1, \dots, k-1\}$.

The reason why, we call the list an R-sigma is because while depicting the points on a piece of paper, if one begins at x_k and moves clock-wise through $x_k, x_{k-1}, \dots, x_{k-1}$ and returns to x_k then one has to keep moving right through x_{k-1}, x_{k-2} etc. to stop at x_1 . The resulting figure will then look like the lower case Greek letter sigma (σ).

In particular it is possible that $k = 1$, and in that case the R-sigma $\langle x_1, \dots, x_k \rangle$ reduces to an **R-cycle**.

An alternative $x \in X$ is said to be **at the end of an R-sigma**, if there is an R-sigma $\langle x_1, \dots, x_k \rangle$ with $x_1 = x$.

3. A Result in Rational Choice Theory

In this section we prove a proposition that provides a necessary and sufficient condition for the set of maximal elements of a given fixed set of alternatives to be non-empty.

In Sen (1970) it is shown that $\{x \in A \mid \text{there does not exist } y \in A \text{ satisfying } yPx\}$ is non-empty for all finite subsets A of X , if and only if R is acyclic. Hence the acyclicity of R is a sufficient condition for $M(X,R)$ to be non-empty. However the following example shows that a cyclicity is not a necessary condition for $M(X,R)$ to be non-empty.

Example: Let $X = \{x,y,z,w\}$ and suppose $xPyPzPx$. Thus, $M(X,R) = \{w\}$, although R is not acyclic. However, as required in the proposition that follows we may note that w is not at the end of any R -sigma.

Proposition 1: $M(X,R)$ is non-empty if and only if $\{x \in X \mid x \text{ is not at the end of any } R\text{-sigma}\}$ is non-empty.

Proof: For the case of X containing exactly one element, $M(X,R) = X$ and so the desired property is vacuously true. If X contains two elements, then by the asymmetry of P , $M(X,R)$ is either equal to X or is a singleton, and it is easy to see that the desired property is easily satisfied. Hence suppose X is a finite set, containing at least three elements.

It is easy to see that if $M(X,R)$ is non-empty then no x in $M(X,R)$ can be at the end of an R -sigma. Hence, suppose $\{x \in X \mid x \text{ is not at the end of any } R\text{-sigma}\}$ is non-empty. Towards a contradiction suppose $M(X,R) = \phi$. Let $x_1 \in \{x \in X \mid x \text{ is not at the end of any } R\text{-sigma}\}$. Then since $M(X,R) = \phi$, $x_1 \notin M(X,R)$. Hence there exists $x_2 \in X \setminus \{x_1\}$ such that x_2Px_1 . Having found x_j with $j \geq 2$, $x_j \in X \setminus \{x_1, \dots, x_{j-1}\}$ and x_jPx_{j-1} , $[M(X,R) = \phi \text{ implies there exists } x_{j+1} \neq x_j \text{ such that } x_{j+1}Px_j]$.

Since X is a finite set, there exists $K \geq 2$ distinct alternatives $x_1, \dots, x_K \in X$ such that: (a) for all $j \in \{2, \dots, K\}$, x_jPx_{j-1} and (b) x_kPx_k for some $k \in \{1, \dots, K-1\}$. But, then x_1 is at the end of an R -sigma, contrary to hypothesis.

Hence $M(X,R) \neq \phi$. Q.E.D.

Note: This is an extract from an earlier paper entitled “Generalized Sen-Coherence and Existence of Pair-wise Majority Winners”.

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***Foundations of Real-World
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OEA

Annabhula J.C. Bose

Are you an economics teacher taking pride and reveling in the Austrian School of Economics' calling: "Teach the principles of economics as if it will be the last class your students will ever take in economics and it will be the first of many classes in economics they will take"? Or, are you unhappy about teaching fictitious and useless economics? What is the right and useful economics?

In particular, what is the economics with which we can understand inhuman capitalism as is actually found in the US or India?

It is the real-world, and not fantasy, economics. In other words, it is not the academic blackboard economics that we teach, but economics with empirical approach that we do not teach in introductory micro and macro economics, which will serve as a foundation for a new regime of capitalism with a human face anywhere.

Even if we are not "Born in the USA" a la the American arena rock star Bruce Springsteen, let us consider the troubled American economy and society as a case study.

The American economy is trapped in anaemic GDP growth, actual GDP falling below the official potential GDP, productivity slowdown, endemic nonemployment, stagnating or declining wages, secular stagnation in the 21st century, unjust inequality, and poor quality of life in terms of longevity, life satisfaction, child welfare, poverty, educational attainment, etc. The labour market is unjust with at least 10 per cent of those wanting to work

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excluded from gainful full-time employment. The economy is not producing enough full-time jobs. And the number of part-time workers has soared by 2.5 million during the Financial Crisis and then remained at that level thereafter. Around 4.9 million adults are so frustrated that they have given up looking for work and dropped out of the labour force completely although they would like to work. Moreover, the lack of jobs affects minorities the most whose underemployment rate is usually twice that of the whites. Inequality has been damaging to the social fabric. The appetite of the super-rich is insatiable. The top 1 per cent earns an average of \$900,000 per annum after tax and has captured 20 per cent of total income. The top 20 per cent of the income distribution earns one-half of total income. American people have more and more anxieties about their health insurance, college education and a secure safety net in case of need unlike people in other developed countries where taxes are higher. Emotional prosperity has eluded most people. A larger share of the population is on antidepressants than at any time in history. Some 2.3 million people are in jail. About 13 per cent of the population is living in poverty, which is approximately what it was in the late 1960s. Median household income is almost the same as it was at the end of the 20th century. The typical American is now overweight and deeply in debt, unable to control either his/her finances or appetite!

There is no tailwind to uplift this unkind, loveless socio-economy. Instead, it faces numerous gale-force headwinds so much so that the prospects are becoming bleaker day by day. The salient headwinds are endemic budget deficit (a goodly portion of which is financed by the Chinese politburo), excessive private debt, negligible savings rate, continued trade deficit, costly military commitments around the globe, political gridlock without any new ideas, financial sector decoupled with the real economy making considerable profits without creating decent jobs or real investments, GNP growth decoupled from full-time middle-class employment, mediocre primary and secondary educational system, depreciating infrastructure and so on and so forth.

Mainstream economists are at a loss to propose a viable policy mix to put the economy back on the road to stable inclusive growth. Academic economists are divided too much ideologically and otherwise. Macroeconomics is particularly in crisis. Paul Romer has bemoaned modern macroeconomics as unhelpful. Supply-sided economics in terms of tax cuts has increased the wealth of the millionaires significantly so much so that

money begets power and lots of money begets lots more political power, implying that the corporate and financial oligarchy's hold on the body politic will continue to increase. The tax giveaways also mean that the government will not have the funds to address any of the major headwinds (including global warming) and private funds will not be invested into infrastructure, education, renewable energy, health, and the like things the economy would need to escape from its malaise.

In this milieu, students need to be exposed to the formidable challenges to our ability to navigate through the economic system by way of imperfect information, opportunistic behavior, heterogeneous cognitive ability, externalities, safety, nonexistent markets, transaction costs, uncertainty, sustainability, too-big-to-fail oligopolies and monopolies, protection of children, power imbalances, nonrationality, and unequal distribution of wealth and income. These are exactly the topics that introductory mainstream textbooks are silent about. Mainstream textbooks also fail to mention even the important breakthroughs of such Nobel Prize winning economists as Herbert Simon (satisficing), Amartya Sen (welfare economics), George Akerlof (asymmetric information), Michael Spence (signaling), Joseph Stiglitz (information economics), Daniel Kahneman (behavioural economics), Paul Krugman (new trade theory), Oliver Williamson (transaction costs), Robert Shiller (behavioural finance), and Richard Thaler (behavioural economics). Without these ideas, mainstream textbooks irresponsibly mislead students into thinking that markets work flawlessly if only they are left to their own devices.

The argumentative John Komlos is saying all this, and rightly so. Instead of singing religious hymns to the invisible hand, he takes an empirical approach to analyse the real existing markets that deviate markedly from the cock and bull theoretical ones. He finds that without well-designed institutions and incentive structures, real markets are inefficient and unstable, and accumulate and magnify inequities. Without adequate oversight and a regulatory structure, real markets can become dangerous, unstable, even chaotic.

He establishes these points cogently and powerfully by taking us through eight chapters of microeconomics and five chapters of macroeconomics loaded with real-world concepts that every economics student must now know. According to him, teachers should not claim that introductory courses

should not have these complex concepts or give lack of time as an alibi for not teaching them. As teachers we must value “utter honesty” not to impart wrong economics leading to wrong economic policies leading to a troubled economy and society.

Given that most of us do not have autonomy in deciding the syllabus and readings at the undergraduate level, we could at least convey to the students the existence of alternatives to standard and even nuanced principles of economics of the celebrated textbook writers such as Greg Mankiw (2020) and David Colander (2016). We could at least tell the students that the free-market Chicago school is not the best vehicle to tell a convincing story of economics.

Be that as it may, I have found it very refreshing to read up Komlos’ book. It empowers me to share critical thinking with my students. In his discussion of economics from the bottom up - microeconomics - Komlos has elaborated on the downside of free markets, government as an essential component of the economy, precedence of morality over markets, psychology of consumption underlying the extensive frustration with the system, importance of abandoning the rational-agent utility-maximising model, focusing on equity and sustainability rather than efficiency, salient aspects of imperfect competition that affect market outcomes for consumers, whether factors of production receive just rewards in terms of their opportunity cost or the value of their contribution to the firm, deviations of real markets from ideal markets, and relevant models and their applications characterized by imperfect competition. And in his bird’s eye view of the economy - macroeconomics - he has dealt with macroeconomic policy void, unfair organization of the labour market, policies such as the role of taxes, national debt, and savings, impact of international trade in the presence of unemployment and endemic trade deficits, and the 2008 financial meltdown. The introductory and concluding chapters are sharp and wonderful in making the case for real-world economics.

John Komlos’ book, coming from the heterodox World Economics Association unlike the American Economic Association or even International Economic Association, has definitely expressed the sense and sensibilities for building up an economy that works for the 99 per cent, not just 1 per cent. You can appreciate the insights of an interview with him at www.unravel

economics.com. And I can share with you a free read-only pdf copy of this book which he had shared with me, if you are eager to read.

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