EMPOWERMENT AND GENDER

Aspects of Economic Development

WORKING PAPERS

Volume – III

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Pranab Kumar Chattopadhyay

Chair Professor

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1

Kannyashree Prakalpo in West Bengal: A Case Study

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The Kanyashree Prakalpa in West-Bengal aims at providing incentives to school going teenage girls, aged 14-18 so as to prevent child marriage. This scheme provides scholarship to girls from economically backward backgrounds and it is designed in such a way that will reduce the tendency of drop out from school. It motives girls from poor families to pursue higher study so as to prevent forced child marriage. The paper addresses the issue of girl child and it examines the programme of Kannyashree in a Girls Schools to examine how the scheme is helping the poor girl children to pursue education, preventing dropout and reducing child marriage.

Keywords*: Child marriage, dropout, Kanyashree-1 (K-1), Kannyashree-2 (K-2), National Family Health Survey (NFHS), etc.*

Conceptual Note

Child marriage refers to the incidents when a girl married before the age of 18 or a boy before 21 years of age. The legal age for marriage in India is 18 years for girls and 21 for boys. Child marriage is often referred as "early and forced" marriage. Girls for being their young age can rarely get a freedom to decide or they are forced or get informed decision by their family due to family's pressure. It is of course a violation of human rights. The Scheme Kanyashree Prakalpa is implemented mainly to protect and empower all adolescent girls for supporting their healthy development by

creating an environment for their participation through education and meaningful contribution to society.[1] National Family Health Survey, 2005-06, shows a slow improvement occurs on child marriage in India since 1999 was 50 percent decline marginally to 47 percent in 2006. The incidence of child marriage in rural areas stands at 52 percent as when compared to urban areas it is 28 per cent. The data shows that child marriage is common in India prevalence highest in Bihar (69 percent), Rajasthan (65 percent), Jharkhand (63 percent) UP (59 percent), MP (57 percent), Chhattisgarh (55 percent), A.P (55 percent, West Bengal (54 percent). According to District Level Health Survey (DLHS)-3, 2007-08, shows that the state ranks 5th highest in the country when it comes to the prevalence of child marriage. In West Bengal, almost every second there is a girl child bride, over 54.7 percent of the state's currently married before they reached the age of 18 (all India figures of 43 percent). The incidence is higher in rural areas 57.9 percent and in urban areas 36.1 per cent in West Bengal.[2]

The districts like Murshidabad, Malda, Bankura, Purulia, Birbhum, South Dinajpur, South 24 Parganas, Nadia, and Cooch Behar are more vulnerable districts where the highest incidence of child marriage in the state. The Selected Educational Statistics (2010-11) published by MHRD, Government of India shows that for the state of West Bengal, the Gross Enrolment Ratio (GER) gradually decrease for high school (ix-x) and higher secondary (xi-xii) which means that more children, including girls are leaving school in the adolescent age group. This leads to a high drop-out rate. The drop-out rate between class I-X was 63.5 percent for girls and 64.9 percent for boys which are relatively higher in comparison to all India average. A number of factors contributed to child marriage and as a result of this it is leading to the problem of school dropout. This paper describes the Kannyashree programme in West-Bengal specially its objectives, eligibility criteria and examines the socio-economic background of the beneficiaries. It also analyses at what extent it is helping the poor girl children to get benefits and continuing study with a highlights of views of different stake holders, such as parents, students and teachers on this programme to prevent dropout and child marriage.

Methodology

The objectives of this paper are:

1. To present the basic features of the Kannyashree scheme in West-Bengal to find out who are the actual beneficiaries.

2. To understand the socio-economic background (i.e. educational background of parents, income, occupation, special status –i.e any membership in any formal body or Association) of parents of beneficiaries.
3. To find out the age and class at which they started receiving the money.
4. To take opinion on what extend Kannyashree Prakalpo is helping girl students to continue education and reduced child marriage.
5. To trace out the problem of girl child in getting the benefits of the scheme, if any.

The paper is based mainly on primary and secondary data, collected information relating to Kannyashree scheme in west Bengal at the beginning and then the researcher has gone through an in depth study. He collected primary data from Kannyashree beneficiaries from one girl's schools, namely Pattelnagar A. B. Balika Vidyalaya, Mohammadbazar Block in Birbhum districts. The views of parents and teachers are also taken into consideration for this paper.

Defining Key Terms

1. Child Marriage-Child marriage is a formal marriage or informal union entered into by an individual before reaching the age of 18.[3] Child marriage, defined by UNICEF as a formal marriage or informal union before age 18, is a reality for both boys and girls, although girls are disproportionately the most affected. Child marriage is widespread and can lead to a lifetime of disadvantage and deprivation.[4]
2. Kannyashree-I (K-1): Under this category an annual scholarship of ₹ 500 is given to girls based on the eligibility criteria such as the age should fall between 13 to 18 years of age and a copy of birth certificate be issued by Municipal or Panchayat authorities OR certificate of age issued by the Head of institution of Education or training where the girl is enrolled provided that she is unmarried and a declaration by applicant's parent/guardian and attested by the appropriate certifying authorities.
3. Kannyashree-2 (K-2): one-time grant under this scheme of ₹ 25000 given to girls based on the girls should have the age of 18 and a copy of birth certificate issued by Municipal or Panchayat authorities and attested by the appropriate certifying authorities or certificate of age issued by the Head of institution of Education

or Training or institution of Higher Education where the girls enrolled. A declaration is also necessary by applicant she was unmarried on attaining the age of 18 years. The certificate of enrolment and attendance by Head of institution is also compulsory.

4. Drop out: someone who has left an educational institution without completing the course.[5]

Kanyashree Prakalpa—its basic objectives, history and eligibility criteria

The Government of West Bengal has taken a special initiative for Girl child education in 2012 and in this respect, under the supervision of the Department of Women Development and Social Welfare (DWSW), the state introduce a scheme called Kannyashree Prakalpa in October 2013. The scheme aims at improving the status and well-being of the girl child in West Bengal by incentivizing schooling of all teenage girls and delaying their marriages until the age of 18 legal age of marriage. It provides scholarships to continue education of the girl child in Secondary and H.S. classes, and those undergoing vocational training or sports training, discouraging early marriage of girls to ensure compliance with the legal provisions pertaining to the minimum age at marriage, reducing the incidence of drop outs, especially amongst girls from poor families, eradication under nutrition and mal-nutrition of girl child, preventing trafficking and exploitation of the girl child.

Eligibility Criteria

1. Kannyashree-I, The applicants should be enrolled in class's VIII to XII in government recognized regular or equivalent open school or equivalent vocational/technical training course — certificate of enrolment and attendance by Head of institution or school of education or training institute. The family income should be less than or equal to ₹ 12000 per annum. For Self-employed parents/guardians, a declaration by the parents/ guardian stating definite income from all sources, attested by the appropriate certifying authorities is necessary. There is a family income waiver provision available in case the girl is physically handicapped and certificate of disability is furnished.

2. Kannyashree-2, under this category the family income of the beneficiary should be less of equal to 1, 20, 000 per annum and a declaration by the parents/guardians stating definite income from all sources be attested

by the appropriate authorities or copy of income certificate furnished by employer be attested by the appropriate certifying authorities.

Kanyashree-1 (K-1) and Kanyashree-2 (K-2)

Kanyashree Prakalpa has two parts, one K-1 under which annual scholarships is for girls between the age of 13 and 18 years and studying in class viii to class xii in a government or government aided school. According to the scheme K-1 ₹ 500 has been credited to the beneficiary account in each year up to the age of 18. It motivates poor family's girls to continue with their studies and provided they are unmarried; two, **K-2** one-time grants is applicable to unmarried girls who are enrolled in a government or government aided college aged between 18-19 years. With the scheme K-2, a beneficiary will receive ₹ 25000 to pursue higher education after completion of school education. With this amount a college girl can easily bearing her expenses in graduation level. It relives poor parents to bear the expenses of girls' education and to encourage girls for higher study. Both the benefits under the scheme will be granted to girls who belong to families with annual family income not more than ₹ 120000. From K-1, a girl will enjoy the benefit till she is reached at the age of 17. Survey shows that most percentage of girl child marriage occurs during the age of 15-17. Most of the cases the marriage is organized by family with force and parents think it is their liability. But under the scheme, families will think again and again to marry their girl at early age. Because after marriage the girl will cut off from beneficiary.

So to get the benefit, the families would not arrange the marriage of the girl before her legal age 18, which ultimately reduce the child marriage in the state. The scheme, Kanyashree Prakalpa ending of child marriage will help break the intergenerational cycle of poverty by allowing girls and women to participate fully in society. Empowered and educated girls are better able to nourish and care for their children, leading to healthier, smaller families. This scheme is expected to protecting and empowering all adolescent girls by creating an enable environment for their participation and meaningful contribution to society.

Importance of the scheme

The project has received international recognition. Department for International Development, United Kingdom and UNICEF have selected the scheme for presentation at the "*Girl Summit*" 2014 to be held in London.

UNICEF citing a state survey said, there were visible changes at the ground level with regard to enrolment of girl students and child marriage. UNICEF has provided technical assistance to the scheme and is aiding the state in its evaluation and monitoring processes. UNICEF representatives also pointed out that apart from increasing enrolment in schools and preventing child marriage, the scheme would also address the issue of trafficking of young girls. Since 2013 till March 2014 around 9 lakh girls were brought under the programme.[6] After recognition by UNICEF and invitation to the Girl Summit 2014 in London, the Kanyashree scheme has been portrayed in a short-film made by an Oscar-winning director and filmmaker Megar Mylan on a young girl's fight to stave off marriage and help her family make ends meet. The success story of this scheme is that Kanyashree has been launched on 1st October, 2013 in West Bengal, but the response is so huge that within a year 16 lakh girls were registered under the scheme. School dropout rate among girls falls in Bengal. According to a data from the National Sample Survey 2014 dropout rate for girls is 3.23 percent, the same for the state is 1.28 percent. In the 2009 survey, the figure stood at 2.34 per cent for Bengal. It canot be said that it is only reason to reduce dropout as there are Mid-day Meal scheme is in operation and the Kannyashree Prakalpo is introduce only end of 2013. So, in depth study is necessary in this regard.

Case Study of a School

Atul Bhabini Balika Vidlaya is a Girls school located at Pattelnagar of Mohammadbazar Block in Birbhum district. Mr. Shambhunath Mondal from Komarpur donated 3.5 bigha land. Mrs Atulbhabini given the money for building. The school initially started till class VIII, later on continued till class X. It has got government approval in the year 1967. The school is meeting the needs of education specially in and around the villages of pattelnagar areas—— namely the villages Rajyadharpur, Kharia, Komarpur, Md. Bazar, Kaijuli, Kulia, Baram, Kabilpur, Phulaipur, Basantapur, Bhutura, etc. The enrolment in the school is not so high, it is only 314 from class V to class X (Table 1). The enrolment especially in Class V in the school is less as there is another primary school running in the same area and those students are generally joining this school in class VI.

Profile of Enrolment in the School

The enrolment of different categories in the school reveals (Table 2) that the students from Scheduled Castes are more as compare to other

categories. Out of total 314 girls', the enrolment of Scheduled Caste girls constitute 139, 17 Scheduled Tribes, 14 OBCs and 135 general category.

Table 1: Enrolment in the school in 2014

Class	2014
V	24
VI	61
VII	61
VIII	49
IX	94
X	46
Total	**314**

The area is highly concentrated by the inhabitants by the Scheduled Castes, Scheduled Tribes and backward communities; the enrolment figure is also showing very high.

Table 2: Enrolment by caste category

Class	Gen	SC	ST	OBC	Total
V	12	9	1	2	24
VI	18	39	3	1	61
VII	31	28	1	1	61
VIII	18	29	2	0	49
IX	37	16	7	4	94
X	19	18	3	6	46
Total	**135**	**139**	**17**	**14**	**314**

Observation of Data

After going through the enrolment data of the school, the researcher collected primary data from the eligible beneficiaries from the age group from different classes. A total 40 beneficiaries' was selected from the list and it shows that there is a lesser number of representations in the age group 17 or 18, mainly due to the fact that it is a secondary school and they can continue till Xth standard only. The age wise representation of respondents in Table 3 shows that the beneficiaries are more in the age 15 and 16, only a few cases are there in age 17 and 18. In case of 18 years there is only one case found in the school who already received 25, 000 one time

benefit. A majority of them, about 75 percent belong to between 13 and 14 years of age.

Table 3 : Distribution of students by age group

Age	No of respondents	Percentage
13	18	45
14	12	30
15	08	20
16	00	00
17	01	2.5
18	01	2.5
Total	**40**	**100**

The income category of parents are less than 36, 000 per annum and there are a number of respondent from poor background whose income fall between 21000-25000 per annum. The actual data on this is difficult. But they have received the certificate from panchayat for the said income group. It shows that more than 92 percent respondents income only upto 30000 per anum.

Table 4: Parent's income level

Income (annual)	No of respondents	Percentage
Upto 20,000	22	55
20001-25000	10	25
25,000-30,000	05	12.5
>3000 but < 36, 000	03	7.5
Total	**40**	**100**

It is an interesting point that a large number of their parents belong to occupational category as daily labour, which constitute 55 percent, 25 percent of the parents are doing private service in nearby factory and 12.5 percent doing pretty business and 7.5 percent engaging themselves in agricultural activities.

As it is observed that the enrolment of Scheduled category is higher than the general caste. The case of beneficiaries are also reflected such fact (Table 6).

Table 5: Occupation of parents

Occupation	No of respondents	Percentage
Daily labour	22	55
Pretty Business	05	12.5
Agriculture	03	7.5
Private Service	10	25
Total	**40**	**100**

The distribution of caste category among the beneficiaries reveals that there are only 37 percent from general category, 47.5 from Scheduled Castes, 5 percent from OBC and 10 percent from Scheduled Tribe category.

Table 6: Distribution of students by caste

Caste category	No of respondents	Percentage
General	15	37 .5
Scheduled Caste	19	47.5
Scheduled Tribes	04	10.0
Other Backward Classes	02	5.0
Total	**40**	**100**

Mostly the beneficiaries in the school observed that a number of them have been started receiving the benefits from class VIII and IX.

Table 7: Distribution of students according to class perusing study in 2014

Class studying	No of respondents	Percentage
VIII	15	37.5
IX	25	62.5
X	—	00
Total	**40**	**100**

The educational backgrounds of the beneficiaries are very low (Table 7). A majority of their parents either illiterate or primary educated. No parents could be observed who is Higher Secondary educated. Only 52 percent of the parents have secondary education and 27.5 percent are illiterate and 20 percent are educated upto primary level. It can be said that there the beneficiaries are mostly the first generation learners.

Table 8: Distribution of students according to parent's educational background

Education of parents	No of respondents	Percentage
Illiterate	11	27.5
Primary	08	20
Secondary	21	52.5
Hr. Secondary and above	00	00
Total	**40**	**100**

The land holding of the parent respondent observes is also negligible, they have only house or homestead land for kitchen gardening purpose (Table 8). 80 percent of them own only a house.

Table 9: Distribution of students according to land holding pattern of family

Land holding of family	No of respondents	Percentage
Only House	32	80
Homestead land and House	08	20
Total	**40**	**100**

The special status is defined in terms of membership in different bodies like member in PRIs, Cooperative Society, NGOs. It is interesting that none of the parent beneficiaries found to be in such category.

Table 10: Special status of the family

Status of parents	No of respondents
Member in PRIs	0
Member in Cooperative Society	0
Member in NGOs	0
Member in School Committee	4

The views of teachers as narrated to us are that it is one of the important schemes of Government of India. This money is helping them in continuing their education as mostly their parents belong to very poor families. The cases of child marriage and child labour in the area were highly prevalent. But this scheme to some extent has helped in reducing child marriage; otherwise, they know that they would be losing the benefits of education.

Parents of course have given the opinion that it is a good scheme and we support the education of our daughters.

Some case stories

Case No-1

Jhuma Akure, 18 years of age, residing in village Angagoria. His father is a daily labourer. Their family is facing hardship for daily earning. She has received one time grant of ₹ 25, 000 in class IX under Kannyashree Prakalpa. She is very happy and her parents are happy as they would be using this money for the purpose of a suitable age at her marriage.

Case No-2

Sulekha Mal, 18+ residing in Ingacha. Her father is doing agricultural activity. Her form for Kannyashree is rejected as her age has crossed over 18 years. She could not clear Madhyamik examination.

Case No-3

Anima Konra, aged 18+ Her father name is Bimal Konra. She has appeared Madhyamik Examination in 2014. She belongs to Scheduled Tribe community. She did not receive the benefit as her age has crossed 18 years.

Case No-4

Madhumita Das, aged 17 staying with her mother in her mamas house. She is continuing her study in class X now. She has applied but she is yet to receive the amount. Her mother is working as domestic worker and supporting her for continuing the study. As observed she is struggling a lot and the money will of course will help her in perusing education further.

Observation of the study

1. The socio-economic condition of the beneficiaries is very low. Most of the respondent family belong to poor families. A majority of their parents are struggling to fulfil their daily needs. The introduction of this scheme and Mid-day meal and Kannyashree which attracted the poor children and the benefits of course encourages parents to send their children in school.

2. The scheme is a conditional direct cash transfer scheme for young school girls of lower income families. A large number of families receiving money under this scheme which signify that the project has the potentiality for checking child marriage; encouraging girl's education of adolescent category, leading to a quantum change in girls over all development and empowerment.
3. The sources in the state government said that Kannyashree forms of around 3000 beneficiaries in several districts have been cancelled. Allegations have been levelled against various schools saying that they uploaded the same form twice in the website without checking. As a result, names of many beneficiaries are repeated. State Nodal Officer of the scheme admitted that they are receiving some complaints from pradhans that K-1 and K-2 forms which are issued from the office have been rejected by the head of some schools.[7] But in this school there is no such case except one which is mainly because of similar name of her father and student.
4. The schemes provide some relief to the poor girl students and their empowerment. The views of the parents given the feedback that the money is helping them in bearing the expenditure of their daughters.
5. As a final remarks it can be said that a proper awareness to the beneficiaries and other stake holders such as parents, teachers and PRIs
6. A proper training should be given to the representative of the school, PRIs members and officials connected to this programme so as to avoid problem occurring in the process.
7. A cell should be opened to provide necessary assistance in every panchayat level should be

Footnotes

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Thoughts on Population and Resources: A Retrospect in Miniature

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Abstract

The theories of population has a long historical journey beginning two centuries earlier. Time has passed and several theories appeared relating to population, food, and resource use but the debate among the schools of thought still prevails. Purpose of this paper is to make a retrospective analysis starting from utopians through classsical, neoclassical, neo-malthusian to corncucopians and to put forward some queries because time has come to rethink those age old theories for contemporary relevance as well as a perspective for framing new policies.

Keywords: *Population, economic growth, resource use*

Introduction

Apropos to the theories of population it has a long historical journey. Therefore the domain of the literature is no doubt vast. The past few decades have perceived two parallel trends of thought regarding population, growth and resource use –one in positive discourse and the other in negative one though the discord got its root two centuries earlier in the 'Essays on the Principle of Population' (1798) by Thomas Malthus where he expressed his concern about geometric population growth that outstrips arithmetic food supply. The outcome of Malthusian crisis lies in

food shortage and consequently famines. This strand of thought was later modified and brought forward by Paul Erhlich (in late 1960s) who and others moved beyond Malthus and comprised many other environmental issues to strengthen their lobby and logic; they are called Neo-Malthusians. The opponent thinkers (E. Boserup, Julian Simon and others) propounded that it is the demographic pressure that promotes higher productivity and better technique through innovation. This paper attempts to review the theoretical literature on population and to identify the main assumptions underlying in order to demonstrate whether the pervasive "dooms day" prediction holds at all. In this stipulated span its tough focus the entire existing ideas and inferences rendered by several scholars till date rather worthy to discuss on salient contributions. Later on eminent economists, philosophers, researchers have heralded this debate starting from utopians through classical, neo-classical, neo-Malthusian to cornucopian. Neo-Malthusian population theories are modified pessimistic version of that of Malthus while the Cornucopian nurtures population optimism

Objective

The ideological war between two thoughts— neo-malthusianism vis-a-vis corucopianism is the platform with which interest of this article is associated. As the paper is based on thoughts one must look back the available existing theories with their logical validities and to provide an impetus to rethink how far population growth is detrimental to economic growth. Can the neo-malthusianism be unambiguously established irrespective of all (developing and developed) countries in terms of resource use and its depletion? May be its time to recheck neo malthusian theories which is in vogue and to perceive whether remodeling is possible for recent developing third world countries? May be an alternative way out to population problem by enhancing the quality of human capital or a technological advancement to resolve demographic problems.

While quantity population is depleting resources quality population can ameliorate environment by developing human capital, regenerating renewable resources, controlled use of resources and by innovating resource substitutes. With the passage of time theories in social science need to be modified and rectified. The thought on population growth vis-a-vis economic growth over time and space must be dynamic in nature. So one cannot undervalue the trends of thoughts that promote the idea of

"population optimism". However the first and primary objective of this paper is to provide a retrospective analysis of population theories .

Existing literature—a brief review

Egalitarian utopia

Ancient Greek philosophers believed that a balance between population and resource must be maintained and practiced by a policy of progressive colonization. Plato in his *Republic* propounded the utopian view of zero population growth whereas Aristotle perceived that a populous country is too tough to govern. The egalitarian utopia of Robert Wallace (1761) was destroyed through utopian optimism by Godwin (1793). Godwin averred that the earth could carry its population for many centuries and there was no viable reason to "conceive discouragements for so distant a contingency". After five years in response to Godwin's proposition Malthus wrote Essay on the Principal of Population in 1798.

Malthusian

Malthusian theory being based on syllogistic argument that population grows geometrically and food production can only grow arithmetically. Therefore population growth will ultimately outstrip the ability of the economy to meet the demand for food. As food is must for survival, food shortage would surely prevent further population growth either through malignant diseases or death due to natural catastrophe—known as positive check; on the other hand by late marriage or no marriage at all—known as preventative checks. However Malthus was cynic about human behavior as he described "inert, sluggish, and averse from labor unless compelled by necessity". His social status, the French revolution and growing demands for reform in Britain possibly made himself frustrated about the ability of the labor. After five years, Malthus virtually reversed his thought and opined that if self-control among all classes of society is practiced, population growth would not outpace food supply i.e. an anticipation of family planning.

Marxian reaction

The Malthusian view, specially the first edition was vehemently criticized by Karl Marx who called Malthus' essay a "libel on the human race," and viewed "Overpopulation" as the outcome of the laws of

capitalism, not the laws of nature because it was not a true overpopulation, but a surplus of unemployed labourers' created by capitalism's investment in machineries during industrial revolution.

Boserupian

Ester Boserup (1965) in her book The conditions of Agricultural Growth argued that not only the agricultural production determines population growth but the reverse as well. So it is the population pressure that compels farmers to continue food production to cope up with population growth. Agriculture will improve its production from single cropping to crop rotation and multi-cropping with better irrigation and manures for better yields.

Neo-Classical

The neoclassical economists Solow (1956), Denison (1962), Koopmans (1965) and others came with their growth models by denying the concept of fixed land as a constraint to production rather a technology co efficient with constant returns to scale for labour and capital. The neoclassists has shown in their models that population as well as technology will rise at constant geometrical rates. Under competition in market consumers propensity to save will ensure a return on capital and the domestic rate of capital formation will surpass the rate of population growth in the long run. The growth in technology and capital per hour of labor combine to increase labor productivity and real GDP per capita. So economic growth ends only if technological progress stops. The neoclassical models have considered population growth as an exogenous variable and they are silent on effects of demographic variables like fertility and longevity.

Neo-Malthusian

The neo-Malthusian school of thought was launched in 1968 (The Population Bomb) by Paul Ehrlich an American ecologist. He termed over population as a great threat to terrestrial life. He in his analysis predicted vast famines during 1970s.He believed in compulsory measures to control population and opposed food aid to populous countries like India where "the unbalance between food and population is hopeless". In his work in the late seventies he studied that daughters in societies are deemed as net drain of household resources and strive for sons is for old age security of parents. The situation has of course changed a lot as gender discrimination has reduced.

After four years in 1972 Meadows published Limits to Growth and members of the Club of Rome used a system dynamics computer simulation model to forecast the likely futures of the world economy in terms of population, resource use, food, industrial output and pollution. They predicted that under usual scenario there will be a dramatic shortage of mineral and land resources early in 21st century, external pollution level will be beyond earth's assimilative capacity and a dismal existence of survivor during 2025. The neo Malthusians added the pollution concern to strengthen their logic and lobby. Their predictions for dire consequences based on certain assumptions— (a) fixed carrying capacity in terms of resource use and assimilative capacity; (b) no technological change; (c) no substitutability of scarce resources (d) exponentially growing population (e) no rise in prices with scarcity which induce substitutes and technological innovation. Under these assumptions the "doomsday" prediction was mathematically indispensible but is it actually feasible at present? Ehrlich's hundreds of millions yet not starved. Neither of us survives in dismal condition nor has our technology collapsed.

Cornucopian

In response to the ne-Malthusian school of thought Herman Kahn (1976) and Julian Simon (1980) presented an alternative version. Simon argues that population is the solution to resource scarcities and environmental problems, since people and markets innovate. His ideas were appreciated by Nobel laureate Fredric Hayek and Milton Friedman. The central thrust of the thought is the continuous technological progress. Simon studied with different raw materials, especially metals and their prices in historical times. He observed that the price of tin went down because of an increased use of aluminum, a much more abundant, useful and quality material and better mining technologies allowed ceramics in place of tungsten for the use of cookware.

Herman Kahn postulated an S-shaped logistic curve for population growth with a point of inflection around mid-1970s. Looking backward from mid 1970s one can view an exponential population growth but looking forward i.e. after 19070s one can expect a continuing decline in world population growth. They believe that by the middle of 22nd century the neo-Malthusian tension will be no more and population will be stable. This also contrasts to the 'Limits to Growth' prediction.

Conclusion

We have perceived the major schools of thought in a historical retrospect where the debate concentrated mainly between neo-Malthusian pessimism and cornucopian optimism. The whole literature is too large to cover in this stipulated domain while environmental concern with population is another important perspective. In this regard one must remember that mere population growth cannot be blamed for resource depletion (or causing negative externality to environment). Study reveals that 80% of global resources consumed by 20% of global population (IEA Report 2012). Less populated developed countries are affluent enough to avail luxurious goods and services associated non-renewable resource use and environmental emission. One would expect countries with large population such as China and India to have the highest accountability for resource depletion but the US, with only 4% of the world's population accounts for 23% of the world's total greenhouse gas emissions (NAS 1992 Report on Climate Change)which is more than five times of India, five times populated than U.S. These are other empirical issues. Finally the thought on population growth, resource and economic growth over time and space must be dynamic in nature. May be the age-old theories were relevant in past decades but with the passage of time theories need to be modified taking into consideration the multiplicity of factors other than population as well.

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3

Rural Employment Generation through MGNREGS: Pretext and Context

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Since Independence India is a low income developing economy. There is no doubt that nearly one-fourth of its population lives in conditions of misery. Poverty is not only acute but is also a perpetual malady in India. At the same time, there exist unutilized natural resources. A major developmental issue in India is to eliminate unemployment and provide gainful employment to millions of people without work. The employment strategy of planned development is directed to many parameters. The main focus should be to expand employment through labour absorbing technologies. The expansion of infrastructure and social services i.e., road connectivity, rural electrification, water supply, village schools, community health schemes etc. will help to generate massive employment. It is obvious that a large number of workers are forced to remain jobless both in rural and urban areas is true.

Since 1951, India completed eleven five year plans. The guiding principles of India's five year plans are provided by the basic objectives of growth, employment, self-reliance and social justice. Apart from these basic objectives, each five year plan takes in to account the new constraints and possibilities faced during the period and attempts to make the necessary directional changes and emphasis. Though removal of unemployment has been a proclaimed objective of India's economic planning, yet until the Sixth Five year plan one does not find any reference to long term employment policy with a bold approach to tackle the unemployment problem in a forthright manner. The Planning Commission of India

acknowledged in the Sixth Plan document the hard reality that despite economic planning employment opportunities had not adequately increased over the years. The position was not satisfactory even in terms of long term employment. Keeping in view the facts the employment policy under the Sixth Plan aimed at "the two major goals of reducing under employment for the majority of labour force and cutting down on long term unemployment." Obviously for a lasting solution to these problems, employment oriented rapid economic growth was necessary.

During the late 1970s and 1980s having recognized the fact that in Indian conditions the percolation effects of growth were not sufficient to generate the required employment opportunities. According to the Planning Commission, employment generation does not necessarily imply creating wage employment.

Under the Seventh Plan there was considerable emphasis on creation of conditions for additional self-employment. Therefore, apart from sectoral programmes, the package of poverty alleviation programmes aimed at giving self-employment and wage employment to the poorer sections of the community were continued on a big scale. From this point of view, National Rural Employment Programme (NREP), The Rural Landless Employment Guarantee Programme (RLEGP), and the Integrated Rural Development Programme (IRDP) were particularly important. The first two were merged into the Jawahar Rozgar Yojana (JRY)) in 1989. The Sixth Plan(1980-85) proposed that "such multiplicity of programmes for the rural poor operated through a multiplicity of agencies should be ended and replaced by one single integrated programme operative throughout the country." This programme was named as Integrated Rural Development Programme (IRDP). The IRDP was initiated on October 2, 1980 in all the 5,011 blocks in the country. The main feature of the programme was during the five-year period in each block 600 poor families were to be assisted. In this way, a total of 15 million families of about 75 million persons below the poverty line were targeted to be beneficiaries. For each block a uniform allocation of ₹ 35 lakhs was to be shared between the Centre and the States on a 50-50 basis. The programme assisted a total of 108 lakhs families, out of which 50% belonged to SC/ST categories, thus achieving the target set for the plan. But the percentage of women beneficiaries was only 34% which was below the target of 40%. The IRDP was started in 1980-81 in all blocks of the country and continued as a major self-employment scheme till April 1, 1999. Since inception of the programme till 1998-99, 53.50 million families were covered under IRDP at an expenditure of ₹ 13,700 crores.

Then, it was restructured as the Swaranjayanti Gram Swarojgar Yojna (SGSY) which aimed at self-employment of the rural poor.

It is rightly argued that a high rate of economic growth is a necessary but not a sufficient condition to solve the unemployment problem in India. In India, where employment elasticity is quite low, an annual growth rate of 8-9 percent can provide only a partial solution to the unemployment problem. During the periods 1990-2002 the Government took major Employment Programmes like:

(a) Swaranjayanti Gram Swarazgar Yojana (SGSY);
(b) Sampoorna Grameen Rozgar Jojana (SGRY);
(c) Swarana Jayanti Sahari Rozgar Yojana(SJSRY);
(d) Prime Minister's Rozgar Yojana (PMRY);
(e) National Rural Employment Programme (NREP);
(f) Rural Landless Employment Guarantee Programme (RLEGP);
(g) Integrated Rural Development Programme (IRDP);
(h) Scheme of Training Rural Youth for Self-employment (TRYSEM);
(i) Jawahar Rozgar Yojana (JRY);
(j) Jawahar Gram Samridhi Yojana (JGSY); and
(k) Employment Assurance Scheme (EAS).

All the above programmes were either withdrawn or discontinued and the ongoing programme of Sampoorna Grameen Rozgar Yojana (SGRY) and National Food for Work Programme (NFFWP) have been subsumed in NREGS because of three major problems which prevent pursuit of these programmes on a considerable scale are the choice of appropriate works to be done; finding the resources to finance the programmes; and the lack of clarity with regard to the organization of rural works programmes meant to generate employment.

Meanwhile, the Government witnessed that rural unemployment has sharply accentuated in India in recent years. Between 1993-94 and 1999-2000 rural employment grew at the annual rate of 0.58 percent while the rate of growth of rural labour force was much higher.

In the absence of gainful employment opportunities in rural areas, an increasing number of rural households were faced complete collapse of their incomes. This miserable scene of rural households has driven an unprecedented number of farmers to commit suicide. Recognising this

humanitarian aspect, the UPA-I (United Progressive Alliance) Government at the centre made a commitment in its Common Minimum Programme (CMP) that it would enact an Employment Guarantee Act.

The National Rural Employment Guarantee Act (NREGA) was enacted in September, 2005 and brought it in to force with effect from February 2, 2006 in 200 most backward districts of the country. This Act will provide a legal guarantee to provide 100 days of guaranteed unskilled wage employment to each rural household choosing of it. NREGS is different from other wage employment programmes as it bestows a legal right and guarantee to the rural population through an Act of Parliament and is not just a scheme like other wage employment schemes.

The focus of NREGS is on works relating to Water Conservation and Harvesting, Soil Conservation, Watershed Development, Flood Control including drainage in waterlogged areas, Drought Proofing including afforestation, Land Development, Social Forestry and Rural Connectivity in terms of all-weather roads. As a result, the countryside has not only witnessed the creation of millions of working man days for the rural households but has also witnessed a huge creation of permanent assets. The other notable features are Panchayats have a key role in planning, implementation and monitoring of NREGA through preparation of perspective plan, approval of projects, execution of works at least to the extent of 50 per cent in term of costs. It has been made compulsion that at least one-third of the beneficiaries are to be women. The present NDA (National Democratic Alliance) Government at the Centre after assumption of office has been considering some important changes that will ensure more man days and reduce wasteful expenditures. At present, the contractors and use of machinery are barred in NREGA to keep it focused on its basic purpose of providing rural employment to the needy households.

It may be considered worthy to note that as the scheme is a demand-driven, it has provided work to one in three rural households during the last decade. MGNREGS was named after the father of the nation, Mahatma Gandhi which ensured a socio-economic safety net through direct cash transfer to hundreds of thousands of rural households, not at the initial stage but in the later part of the implementation of the scheme. This scheme is known to be the main flagship rural employment scheme over the other employment schemes which were taken up by the Government since independence. It is believed that the Aadhaar based cash transfers to the rural poor and underprivileged would do a lot more to provide a safety net.

Embedded in parliamentary legislation, this social welfare Act envisages an economic safety net for the rural poor during the lean season by promising hundred days' work through a calendar year. Now with the new 'Jan Dhan Yojana' and Social Security Schemes launched by the Central Government promising a no-frill, zero-balance bank account for every Indian with life insurance and accidental insurance coverages if opted for, the MGNREGS wage transfers shall get a further impetus. Once people are at liberty from the tyranny of whimsical discretions of the bureaucracy and political class, they will become more enlightened and empowered. This would reduce poverty, strengthen democracy and improve the overall governance at all levels.

Finally, Many Panchayati Raj Institution (PRI) members have mentioned the difficulties being faced by them following non-release of funds. The Gram Panchayats across the country have utilised NREGA funds to not only provide work to the rural poor as and when demanded, but also for the improvement of rural infrastructure, thereby leading to the overall improvement in the quality of life, not to mention the macro-economic Keynesian implication for the economy as a whole. There are many positive aspects regarding MGNREGS creating opportunities for the rural poor to ensure basic entitlements for themselves and their dependents.

4

Reform, Informal Sector and Extortion

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Abstract

Informal economy involving unrecorded, unregistered, extra legal activities employs majority of the workforce in the developing world. Such extra legal existence of informal production is facilitated through extortion by agents of political forces in power. Also extortion activities themselves constitute an informal segment. Full scale general equilibrium consequences of such institutions are rarely discussed in the literature. We develop a well specified general equilibrium model to explore the possible consequences of reform. Economic reform may have an expansionary effect on the number of extortionists. Depending on capital mobility and factor intensity assumptions informal output and informal wage may increase.

Key words: *International trade; extortion; general equilibrium.*

Introduction

Informal sector is an important ingredient of the contemporary world economy particularly in the developing regions as this segment occupies a formidable chunk of the unskilled labor force. This sector covers primarily the non-agricultural employment of unskilled labor. It accounts for 50-80% of total employment in South Asia, 30-50% in South East Asia, 40-50% in Africa, 55% in Latin America and Caribbean, 24% in Southern Europe, 10% in Western Europe, 18% in Canada and 8% in USA (ILO, 2002)[1,2]. Yet,

informal sector's jobs are not considered as respectable ones. The main derogatory feature of informal sector is its extra-legality or illegality by law since it does not conform to government regulations. These units presumably do not abide by labor regulations of the government, and do not pay taxes. In fact a large part of it would have vanished if they had to confront government regulations. The paucity of legal protection makes the informal sector an easy pray for extortion and corruption.[3,4]

Existing literature on informal sector conventionally defines informal activity as something which takes place underground, covers smuggling, mafia etc. (Konrad and Skaperdas, 1998). Informal sector is not generally considered as a segment which provides livelihood to a sizeable amount of mass without doing any dangerously harmful illegal activity per se. There are also a few papers (Johnson, Kaufmann and Zoido-Lobaton, 1998; Johnson, Kaufmann and Shleifer, 1997; Gerxhani, 2004; Loayza, 1996; Shneider and Enste, 2000) where it has been shown how the existence of bureaucratic control, corruption and higher tax rates in the formal counterpart induces firm to operate in the informal sector. The interface of contract theory and informal economy is analyzed in Quintin (2008). Quintin (2008) finds that the size of the informal sector has an inverse relation with an increase in contract enforcement in the formal sector.[5] In another interesting paper Dijkstra (2006) shows how under different circumstances an economy may end up with good (no informal sector), bad (no formal sector) and mixed (both formal and informal sectors) equilibria. But none of these papers recognize the existence of both corruption and production in the informal sector itself. Nonetheless, Friedman, Johnson, Kaufman and Zoido-Lobaton (2000) have found the existence of corruption and production both as separate activities within the informal sector. Their paper is a partial equilibrium one where existence of corruption in the informal sector is slightly touched upon. Whereas, our model intends to bring in both these parts of informal fragments in a simple general equilibrium framework.

In a very recent paper Ghosh and Robertson (2011) nicely extended the literature on property rights and crime by bringing in general expropriation concept into a general equilibrium factor endowment model of trade. They have argued why under certain factor intensity ranking trade liberalization may reduce expropriation. Their result crucially hinges on the factor intensity of expropriation activity[6]. Though we use similar kind of general equilibrium model, our work is significantly different because of the existence of informal sector which is absent in Ghosh and Robertson

(2011). Unlike Ghosh and Robertson (2011) we consider only informal sector to be subject to extortion. Therefore, informal sector itself has two components: informal production and extortion.

To suit our purpose we shall define informal sector as the one which does not have to pay the minimum wage. Several papers have used this interpretation of informal sector such as Agenor and Montiel (1997), Carruth and Oswald (1981), Beladi and Chao (1993), Beladi and Yabuuchi (2001), Chaudhuri (2003) etc. In a recent Oxford University Press volume Marjit and Kar (2011) have thoroughly used the similar notion to talk about various intricacies of the informal sector. But they have not considered the issue that we focus here.

Survival of informal production requires negotiation with administration as this part of the economy is illegal by structure. Sometimes this negotiation is done by politically supported intermediaries, the "extortionists". Extortionists take care of legal troubles and other hurdles for the informal producers. They keep the police at bay by paying bribes which in turn are extracted from the informal entrepreneurs, labors, capitalists etc. As we mentioned before, there is a substantial literature on extortion and mafia related activities such as Skaperdas (1992, 2001), Konrad and Skaperdas (1998) etc. Nevertheless, our work is substantially different from that literature. First, we consider extortion as a facilitating device for organizing production in the informal sector. Extortionists are facilitator in that it 'protects' the extra-legal informal segment of the economy from legal hassles, and in exchange of providing protection to the informal units extortionist get pecuniary benefit. It is, however, not pure extortion involving all segments of the society, contrary to other papers on extortion. Second, more significantly, we consider mobility of labor between extortion and informal production as well. Thus extortionists also have the option to work in informal production. Such mobility is then embedded in a general equilibrium structure where capital mobility also plays an important role[7].

The story of the paper runs as follows. We assume that there are three goods out of which two are produced in the formal sector and the rest is produced in the so-called informal sector. All goods are different and only formal goods are traded. Informal good is non-traded. One commodity in the formal set up uses skilled worker as specific factor and the other uses unskilled labor as the same, with capital moving between them. Formal unskilled workers are organized but not the informal workers. This implies that only formal sector has to pay minimum wage. Informal unskilled workers

have to face a competitive market. Therefore, unskilled wage in the formal and informal segments are not identical. Formal workers are likely to get higher administered wage than their informal counterpart because of the existence of trade unions that ensure the minimum wage. Furthermore, whoever does not find a job in the formal sector will get one in the informal sector and wage there can have a free fall.

The model we develop is in the tradition of more recent work in trade theory on extensions of the basic Heckscher-Ohlin-Samuelson (HOS) set up drawing from an early work of Gruen and Corden (1970) and from later contributions of Jones and Marjit (2009), Marjit and Beladi (1999) etc.

It should be noted at the very outset that the extortionists in our model will be intermediaries lubricating the activities of the informal sector and have the option of engaging in informal production activities as well. Given this set up reformatory policy may have counterintuitive outcomes with unintended expansion of the informal segment, extortion activity etc. The basic results that we derive in this paper are as follows: (i) following reform informal workers would be worse off in money terms; (ii) reform amplifies the informal output; (iii) a policy of reform is more likely to increase the extortion activity.[8]

Rest of the paper is arranged as follows. Section 2 discusses the basic model and the equilibrium. Section 3 deals with the impact of tariff cut on outputs, informal wage, informal good's price and the size of the extortion sector. Section 4 briefly discuses the role of capital mobility. The last section concludes the paper. However, the detailed mathematical derivations are relegated to the Appendix.

The Basic Model and Solutions

There are three goods *X*, *Y* and *Z* produced in the neo-classical framework using four factors such as skilled labor (S), unskilled labor (L) and two types of capital (K and T). K is perfectly mobile across X and Y but T is specific to Z. The specificity assumption of capital needs a bit of qualification. In general credit markets for formal and informal sectors are not identical. Formal sector can avail government/legal credit whereas informal units are shunned from accessing this market as they are illegal by nature. They have to rely on local money lenders who usually charge high return for capital. In addition return to capital in the informal sector is not necessarily linked with that of in the formal sector. Hence we assume formal and informal sector capital as specific. We will, however, relax this

assumption in a later section of the paper. S is specific to X and gets Ws as wage. L is mobile between Y and Z. Unskilled labors (L) are unionized in Y. They get $\overline{W}$ as their wage. K gets identical return r across X and Y while T gets R in Z. Who are not fortunate enough to work in Y, have to go out of the formal segment. Because of their livelihood they need to find out alternative workplace. This is provided by Z[9]. Producers of Z, however, need to comply with some institutional and political menace as it is an extra-legal, if not illegal, activity. To combat such menace producers obtain service of intermediaries. Intermediaries are unproductive in that no additional output is produced by them. Their marginal productivities in terms of the volume of goods are zero though they get positive return for their work[10]. However, without such an arrangement production of Z could not have taken place. We call sector Z as informal productive sector.

We further assume that intermediation is done only by unskilled labor. As we have already stated, people engaged in intermediation activities get pecuniary benefit without producing goods. Let L_N be the people and N be the sector representing intermediation/extortion. The return to extortionist, W_N, must be greater than competitive informal wage, W. The difference between P_Z and sum of the returns to productive factors in Z goes to extortionists as a payment for intermediation activities. N people also have to take care of the police personnel who are supposed to go for evicting these informal production units as these are illegal from government's perspective. The informal units survive with the probability of being caught in act is q and under this condition intermediators need to pay b fraction of W_N as bribe. After paying out for the police the return to L_N must be equal to W since labor is mobile between Z and N. Here it is worth mentioning that L_N people always receive W_N as return it does not matter whether administration can identify the informal units or not. Thus here both, a part of administration and N people are involved in corrupt practices. N people pay bribe to police not only for the informal production units but also for their own existence. If there are no informal production the return to N people goes down to zero. And on the other hand whether Z survives or not that crucially depends on how many people are involved in extortion activities or how much is paid to these extortionists. Say α is the fraction of the value of informal output that is lost due to intermediations or extortion. Precisely speaking represents the fee of extortion[11].

Here, we have a small open economy with competitive markets for production as well as for extortions related intermediation or corruption.

Competitive corruption market implies that the lost output due to intermediation is fully exhausted in paying out extortionists out of which a part (may be fixed or variable) goes to police. Moreover, we have the standard neo-classical assumptions of constant returns (CRS) to scale and diminishing return to factors. The following set of equations describes the model and the interpretations of symbols are usual and well used in trade models (Jones, 1965, 1971)[12]. Let the prices of X and Y be normalized to unity. Y is the importable commodity and subject to protection. Protection of any kind, tariff or subsidy, is merely reflected by an increase in the ffective price of Y. In case of tariff price goes up straightaway as tariff inclusive price of import should be equal to the domestic price. Whereas, if we consider a subsidy either effective cost of production goes down (production subsidy) or producer gets more than the cost of production (consumption subsidy) that can easily be re-interpretyed as gain for producers. The implications should identical with that of tariff. Therefore a carefully designed subsidy rate or tariff rate are in fact indistinguishable in nature. Here we consider protection in form of tariff t.[13]

Competitive commodity market guarantees the following equalities:

$$W_S a_{SX} + r\, a_{KX} = 1 \tag{1}$$

$$\overline{W} a_{LY} + r\, a_{KY} = (1+t) \tag{2}$$

$$W a_{LZ} + R\, a_{TZ} = P_Z (1-\alpha) \tag{3}$$

Note that, $\alpha \in [0,1]$; a low α will mean lower fee of extortion and conversely.

The production function for Z is represented by,

$$Z = Z(T, L_Z) \tag{4}$$

The expected wage for extortionist satisfies the following equation,

$$(1 - b\ q) W_N = W \tag{5}$$

The labor mobility between informal production and extortion segments ensures the equality in equation (5). This has to hold true. If the LHS (RHS)[14] of equation-5 becomes greater than RHS (LHS) everyone would find it more worthy to be involved in extortion (production) related

activities and would eventually result in non-feasibility of both the informal segments. The reason is the complementarity between extortionists and productive workers in the informal sector. And equation (5) further makes informal workers, essentially, indifferent between extortion and production.

Therefore,

$$W_N = \frac{W}{(1-b\,q)} \qquad \text{where } 0 < b \text{ and } 0 \leq q \leq 1 \tag{6}$$

Equation (6) always ensures that $W_N > W$ except the extreme case where $q = 0$. We further, sensibly, assume that $\overline{W} > W_N > W$.

We have mentioned earlier that N people are paid out of the amount lost from the value of Z. And in a competitive set up the value of output lost in Z must be identical to the payment made for extortionists. Thus,

$$\alpha \cdot P_Z \cdot Z = W_N L_N \tag{7}$$

Plugging (6) into (7)

$$\frac{\alpha \cdot P_Z \cdot Z(T, L_Z)}{L_N} = \frac{W}{(1-b\,q)} \tag{8}$$

Full employment conditions ensure the following:

$$\alpha_{SX} \cdot X = S \tag{9}$$

$$\alpha_{KX} \cdot X + \alpha_{KY} \cdot Y = Y \tag{10}$$

$$\alpha_{TZ} \cdot Z = T \tag{11}$$

$$\alpha_{LY} \cdot Y + \alpha_{LZ} \cdot Z = L - L_N \tag{12}$$

We further assume that the demand for Z follows standard Cobb-Douglas preference where β fraction of consumers' income is spent on the informal good. Therefore demand-supply equilibrium in the informal sector entails,

$$\beta\{X + (1+t)Y\}\,(13) = (1-\beta) P_Z \cdot Z \tag{13}$$

This completes the structure of the model. Now let us solve for the unknown variables. Note that $\left\{t, \alpha, \overline{W}, K, T, L, S\right\}$ are exogenously given and we need to solve for $\{W_S, W, r, R, P_Z, X, Y, Z, L_N\}$ from equation (1) - (3) and (8) – (13). We have nine equations and nine unknown variables. Thus the system is solvable. Given the tariff rate, we solve for r from (2) as $\overline{W}$ is exogenously determined by workers' union. Equation (1) would determine Ws for already determined *r*. Thus α_{SX}, α_{KX}, α_{LY} and α_{KY} are determined through CRS assumption. Hence (9) gives us the value of X and given this value of X we can solve for Y from (10) as endowment of S and K are constants. However, *W, R, P*$_Z$, *Z* and L_N are still to be determined.

Substituting from (9) equation (12) can be rewritten as,

$$L_Z + L_N = L - \frac{\alpha_{LY}}{\alpha_{KY}}\left(K - \frac{\alpha_{KX}}{\alpha_{SX}}S\right) \tag{14}$$

Given the commodity prices we know the values of α_{LY}, α_{KX}, α_{SX} and L, K and S are given. Thus RHS of (14) is constant. This implies a negative relationship between L_Z and L_N.

Again equation (8) can also be represented as,

$$\frac{\alpha \cdot Z\left(T, L_Z\right)}{L_N} = \frac{W}{P_Z} \cdot \frac{1}{\left(1 - b\ q\right)} \tag{15}$$

Here $\frac{W}{P_Z}$ is the real wage of informal workers; *bq* and α are given. Following an increase in L_Z the RHS of (15) would fall as the marginal productivity of *Lz* falls. And simultaneously the numerator of the LHS must go up as the supply of variable factor increases. Thus to bring back equality in (15) L_N has to increase. Therefore, L_N and L_Z are positively related following equation (15).

In what follows we can represent equation (14) and (15) in L_N and L_z space (Figure-1) to determine the equilibrium values of L^*_N and L^*_Z.

Given the equilibrium values of L^*_N and L^*_Z one can easily calculate Z from (15) as all the remaining variables are given. In fact, the equilibrium value of L_N can also be calculated for any given value of *Lz*.

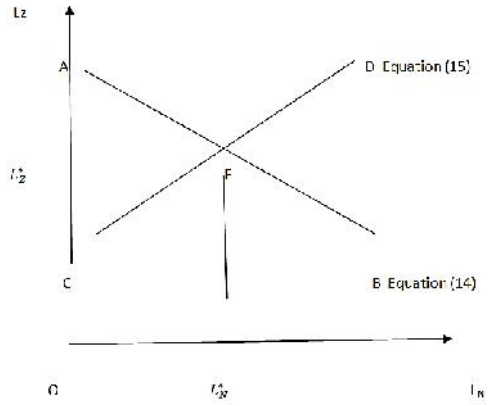

Fig. 1: Determination of equilibrium

Once Z is determined, the Cobb-Douglas preference function helps solving P_Z. It is apparent from (13) that given the values of X and Y, demand for Z coming from the formal sector remains constant. Hence, on the one hand, if Pz goes up Z has to fall in the RHS of (13), signifying the standard negative relationship. On the other hand an increase in Pz must be followed by a rise in the return to informal workers and the specific factor T. The return to specific factor would increase more compared to informal labor[15]. Therefore, producer will try to economize on the usage of dearer factor, implying a rise in Z. This explains the positive supply side relationship between Pz and Z. This is precisely how, the equilibrium Pz is determined in this model. Therefore, given the equilibrium value of Pz, W is determined from (8). And eventually using Pz and W we can calculate the value of R. Thus the entire system is solved. However, it is worth mentioning that once W is determined, W_N is calculated from (6) without any apprehension.

Effects of Reform

There is no wonder that restrictive policies are gradually becoming an issue of past. An era of reform has set in and the entire developing world in some form or the other has responded to such transformation thanks to the negotiations at the WTO. Therefore to start with the analysis of reform we assume that the government has initiated the liberalization strategy and accordingly opted for a tariff cut or reduction in subsidy in the importable sector. Setting $\hat{\bar{W}} = 0$, we derive,

$$\hat{r} = \hat{t} \cdot \frac{t}{\theta_{KY}} < 0 \text{ and } \hat{W_S} = -\frac{\theta_{KX}}{\theta_{SX}} \cdot \frac{t}{\theta_{KY}} \cdot \hat{t} > 0 \qquad (16)^{16}$$

Given the values and equation (3) gives us,

$$\hat{W}\theta_{LZ} + \hat{R}\theta_{TZ} = 0 \qquad (17)$$

Since W_S and r change, the possibility of substitution of factors of production arises. Applying the elasticity of substitution we obtain[17]

$$\left.\begin{aligned} \hat{X} &= (-)\sigma_X \cdot \frac{\theta_{KX}}{\theta_{SX}} \cdot \frac{t}{\theta_{KY}} \cdot \hat{t} > 0 \text{ ; as } \hat{t} < 0 \\ \hat{Y} &= \sigma_X \cdot \frac{\theta_{KX}}{\theta_{SX}} \cdot \frac{\lambda_{KX}}{\lambda_{KY}} \cdot \frac{t}{\theta_{KY}} \cdot \hat{t} < 0 \text{ ; as } \hat{t} < 0 \\ \hat{Z} &= (-)\sigma_Z \cdot \theta_{LZ} \left(\hat{W} - \hat{R}\right) \end{aligned}\right\} \qquad (18)$$

In the following segments as and when required we shall discuss the economic arguments behind such results derived above. This would keep us away from repetitive discussions.

(a) Informal Wage and Informal Output

Using the full employment condition of unskilled labor and plugging the value of change the number of extortionists from equation (8) we have,

$$\hat{Z} = (-)\left\{(-)\frac{\lambda_{LN}}{\lambda_{LZ}}\hat{W} - \frac{\lambda_{LN}}{\lambda_{LZ}}\sigma_Z \cdot \theta_{LZ}\left(\hat{W} - \hat{R}\right) + \lambda_{LY} \cdot \sigma_X \cdot \frac{\theta_{KX}}{\theta_{SX}} \cdot \frac{\lambda_{KX}}{\lambda_{KY}} \cdot \frac{t}{\theta_{KY}} \cdot \hat{t}\right\} \qquad (19)$$

Equation (18) and (19) together help deriving the values of $\hat{W}$ and $\hat{R}$ as follows:

$$\left.\begin{aligned}\hat{W} &= \frac{\lambda_{LZ}.\lambda_{LY}.\sigma_X.\frac{\theta_{KX}}{\theta_{SX}}.\frac{\lambda_{KX}}{\lambda_{KY}}.\frac{t}{\theta_{KY}}.\hat{t}.\frac{\Delta.\theta_{TZ}}{\lambda_{LN}}}{1+\Delta.\theta_{TZ}} \\ \hat{R} &= (-)\frac{\theta_{LZ}}{\theta_{TZ}}\frac{\lambda_{LZ}.\lambda_{LY}.\sigma_X.\frac{\theta_{KX}}{\theta_{SX}}.\frac{\lambda_{KX}}{\lambda_{KY}}.\frac{t}{\theta_{KY}}.\hat{t}.\frac{\Delta.\theta_{TZ}}{\lambda_{LN}}}{1+\Delta.\theta_{TZ}}\end{aligned}\right\} \text{ where,}$$

$$\Delta = \frac{\lambda_{LN}}{\lambda_{LZ}+\lambda_{LN}} \qquad (20)$$

It is evident from (20) that $\hat{W} < 0$ as *t* falls. Therefore, $\hat{R} > 0$ since there is no change in the price of informal good and extortion-fee. Any benefit of informal workers has to be offset by tantamount loss to other complementary factor. Hence, $\left(\hat{W} - \hat{R}\right) < 0$. This inequality guarantees an increase in Z. Therefore,

Proposition I: Consequent upon reform:

(a) Informal wage and return to extortionists would fall;

(b) Informal output will increase.

Economic argument behind this outcome is very easy to follow. Due to liberalization, as Y shrinks, the supply of unskilled labor increases in the informal sector. This depresses W as the supply of complementary factor, T is fixed. The fixity of T causes a decrease in the marginal productivity of labor in informal sector. This corroborates our claim on informal wage. Extortionists' return also goes up because W_N and *W* are positively related with the condition that $W_N > W$. The exact relation is defined in (6). Again, notice that, when W falls, R must increase. This induces α_{TZ} to decline implying factor substitution in Z. A decrease in per unit requirement of T in Z ensures unambiguous expansion of Z, informal output.

(b) Number of Extortionists

In this subsection we focus on a striking issue of this paper – number of extortionists. Extortion activity shares informal workers with Y, and again Y shares K with X. This inter-linkage forces us to look at all the issues simultaneously.

Results for X and Y (recall equation (18)) are quite obvious as both *X* and *Y* share same mobile capital, *K*. As *Y* shrinks some unskilled labor would be released. They would immediately rush to the informal fragment. Therefore, informal activity must expand. Note that informal activity consists of both production and extortion. This implies an unequivocal increase in (L_N+L_Z). Whether output of *Z* would spread out that depends on as to where these relinquished labors get employed: in production *(Lz)* or in extortion related intermediation (L_N) or in both. Thus the interesting question is what happens to L_N and *Lz* separately.

Proposition II: L_N will increase due to reform if unskilled labor using informal sector's share of expenditure is not insignificant.

Proof: From equation (14) the RHS must increase as labor employed in *Y* dwindles and simultaneously the LHS has to go up. This is portrayed in figure-2. It is evident from the diagram that *Lz* will increase coupled with an increase in L_N. Hence output of *Z* should rise as *T* remains fixed at an exogenously given level.

Yet there are some other possibilities regarding Keep *Lz* fixed by assumption. This will ensure an increase in L_N. In figure-2 CD has to shift right along with an upward shift of AB. Thus the prime point of concern is, as a consequence of such assumption how much likely that *Lz* will remain unchanged. *Lz* would stay unaffected if "in equilibrium" *Z* remains impervious.

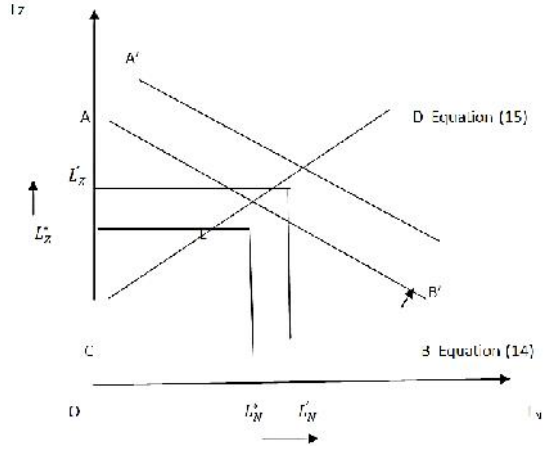

Fig. 2: Determination of equilibrium L_N and L_Z due to a fall in *t*

From the Cobb-Douglas preference it is apparent that (a) as *Y* falls demand for *Z* should fall; (b) as *X* increases demand for *Z* should rise; and (c) demand for *Z* also rises because of an increase in L_N (note that to start with *Lz* is kept frozen). "In equilibrium" if (a) is offset by the (b) and (c), informal production does not change and hence an unchanged *Lz*. This underwrites an unconditional expansion of L_N as total amount of informal labor has already risen. However, if (a) is strong enough *Lz* must fall and if positive demand effect is sufficiently strong both L_N and L_Z are likely to expand. This state has been described in figure-2. Therefore it is more likely that L_N or extortion activity will increase due to a tariff cut.

Mathematically, from (8)

$$\hat{L}_N = \hat{Z} - \hat{W} = (-)\sigma_Z.\theta_{LZ}\left(\hat{W} - \hat{R}\right) - \hat{W} \tag{21}$$

Simple manipulation delineates,

$$\hat{L}_N = (-)\hat{W}\left\{\frac{\sigma_Z.\theta_{LZ}\left(\theta_{LZ} - \theta_{TZ}\right)}{\theta_{TZ}} - 1\right\} \tag{22}$$

Equation (21) is relatively easy to explain the outcome. $\hat{W}$ itself is negative and $\left(\hat{W} - \hat{R}\right)$ is also negative. Thus, $\hat{L}_N$ has to be positive. Careful investigation explores that and positive $\hat{R}$ has a tendency to increase Z and to reduce L_N. This is precisely why we had different possibilities in theoretical explanation.

(c) Informal Price

What happens to the informal price consequent upon a reformatory policy that is not very undemanding as liberalization conventionally raises the formal income[18]. The increased income induces higher demand for informal good, the supply of which has already been raised. In what follows the eventual impact on Pz relies on the relative strength of these two effects.

Differentiating and manipulating equation (13) we get,

$$\hat{P}_Z = (-)S_X\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{t}{\theta_{KY}}\hat{t} + S_Y\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{\lambda_{KX}}{\lambda_{KY}}\frac{t}{\theta_{KY}}(1+t)\hat{t} + \left\{\hat{L}_N\frac{\lambda_{LN}}{\lambda_{LZ}} + \delta_Y\hat{t}\right\} + t\hat{t} \qquad (23)$$

where, $S_X = \frac{\beta.X}{(1-\beta).P_Z.Z}$ and $S_Y = \frac{\beta.Y}{(1-\beta).P_Z.Z}$

Eventually plugging the value of $\hat{L}_N$ into (23)

$$\hat{P}_Z = (-)S_X\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{t}{\theta_{KY}}\hat{t} + S_Y\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{\lambda_{KX}}{\lambda_{KY}}\frac{t}{\theta_{KY}}(1+t)\hat{t} + \hat{W}\frac{\sigma_Z.\theta_{LZ}}{\theta_{TZ}} + t\hat{t} \qquad (24)$$

Proposition III: Following reform informal price would fall if $\theta_{KX} > \theta_{SX}$.

Proof: A closer look at (24) reveals that if S_Y is sufficiently large than S_X it is more likely that $S_Y\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{\lambda_{KX}}{\lambda_{KY}}\frac{t}{\theta_{KY}}\hat{t} > S_X\sigma_X\frac{\theta_{KX}}{\theta_{SX}}\frac{t}{\theta_{KY}}\hat{t} \Rightarrow \frac{\theta_{KX}}{\theta_{SX}} > 1 \Rightarrow \theta_{KX} > \theta_{SX}$. In this situation all the remaining values are negative. This confirms that P_Z must fall.

Benefitted workers' value share is less in X. These people are not likely to spend much on Z as $S_X < S_Y$ (assumed). Despite that there would be some positive demand effect for Z as X expands and a small fraction of increased income will be directed towards informal good. On the other hand whose expenditure share on Z is much higher that shrinks indicating a negative demand effect. On top of this, a positive demand effect is also generated through an increase in L_N. Coupled with this supply of Z goes up which has a tendency to push down P_Z. Therefore, it is more likely that informal price should fall owing to tariff cut.

Capital Mobility between Formal and Informal Sector

In the basic model we have not allowed the capital to move from formal to informal sector since informal producers did not have access to legal credit market. This, essentially, acted as a restraint for capital mobility between formal and informal sector. If we relax this assumption and allow both formal and informal producers to get hold of required capital from same market, we can imbibe the essence of capital mobility in the structure that we have developed before. Allowing capital mobility simplifies the structure and solution of the model a bit. Under this condition the formal sector represents the standard specific factor model whereas sector Y and Z in concert resembles the Heckscher-Ohlin (HO) structure. Therefore the output effects and the change in factors' return crucially depend on the factor intensity comparison between Y and Z.

The initiation of liberalization policy forces a fall in the return to capital which is perfectly mobile across all sectors. So capital also gets relatively less return in informal sector. This promises an increase in informal wage, W. Extortionists' income will increase as well. Note that return to skilled workers must go up. Factor substitution follows in both skilled formal sector and informal sector. Skilled formal output increases. This draws capital from other sectors. Capital from both unskilled formal and informal sectors has equal probability to move to X. In what follows whether Y or Z will expand that depends on factor intensity assumption. Formal sector is traditionally capital intensive than informal one. Thus Y contracts and Z expands. As Y contracts, some unskilled labors are released and instantaneously rush to either Z or N. Z spreads out with immediate effect. This also calls for an increase in L_N. However, increased W influences L_N otherwise (see equation (7) for any given Pz) therefore, eventual effect is uncertain. Here introduction of capital mobility completely reverses the effect on informal wage though L_N is indeterminate.

Concluding Remarks

In this paper our endeavour is to propose an apt extension of HOS framework where both formal and informal sectors work in tandem. Formal goods are produced in the fair segment of the economy while informal sector is affected by extortion. But informal good is never unwarranted. Under these circumstances a policy of reform leads to: a fall in informal wage and return to extortionists; informal output rises; number of extortionists in economy is more likely to go up. However, if we allow

capital to move between formal and informal sectors informal wage would escalate.

Appendix A

Given all other variables except Pz, differentiating equation (3) and using the standard notations for general equilibrium trade model we get,

$$\hat{W}\theta_{LZ} + \hat{R}\theta_{TZ} = \hat{P}_Z(1-\alpha) \quad \text{(A.1)}$$

Note that, nothing would happen to X and Y as $\hat{\bar{W}} = \hat{W}_S = \hat{r} = \hat{t} = 0$ Factor substitution is not permitted due to non-changing factor prices and in addition to this, unchanged factor supply confirms constancy of X and Y.

Mathematically, using the elasticity of substitution for Z one gets the value of change in Z as,

$$\hat{Z} = (-)\sigma_Z.\theta_{LZ}\left(\hat{W} - \hat{R}\right) \quad \text{(A.2)}$$

Assume no change in L. From the full employment condition of unskilled labour,

$$\hat{Z} = (-)\hat{L}_N \frac{\lambda_{LN}}{\lambda_{LZ}} \quad \text{(A.3)}$$

Plug $\hat{L}_N$ from (8) and modify equation (A.3),

$$\hat{Z} = (-)\frac{\lambda_{LN}}{\lambda_{LZ}}\left(\hat{P}_Z + \hat{Z} - \hat{W}\right) \quad \text{(A.4)}$$

Comparing (A.2) and (A.4) and then manipulating a bit,

$$\hat{W} = \hat{P}_Z\left\{1 - \frac{\alpha.\sigma_Z.\theta_{LZ}}{\sigma_Z.\theta_{LZ} + \Delta.\theta_{TZ}}\right\} \quad \text{(A.5)}$$

Here, $\Delta = \frac{\lambda_{LN}}{\lambda_{LZ} + \lambda_{LN}}$ and $0 < \alpha < 1$. Hence $\hat{W}$ is unambiguously positive if $\hat{P}_Z > 0$ and $\left(\sigma_Z.\theta_{LZ} + \Delta.\theta_{TZ}\right) > \alpha.\sigma_Z.\theta_{LZ}$.

Equation (A.5) asserts that,

$$\left(\hat{W} - \hat{P}_Z\right) = (-)\hat{P}_Z\left(\frac{\alpha.\sigma_Z.\theta_{LZ}}{\sigma_Z.\theta_{LZ} + \Delta.\theta_{TZ}}\right) \qquad \text{(A.6)}$$

Therefore, for $\hat{P}_Z > 0$, $\left(\hat{W} - \hat{P}_Z\right) < 0$ Or, $\hat{W} < \hat{P}_Z$ (A.7)

Equation (A.7) coupled with the argument of (A.1) ensures a positive $\hat{R}$ and $\hat{R} > \hat{W}$. Therefore, $\left(\hat{W} - \hat{R}\right) < 0$ which indicates a positive $\hat{Z}$ due to an increase in Pz through equation (A.2).

Appendix B

An increase in monitoring or *bq*

An improvement in the quality of administration (may be due to an institutional/administrative reform) in presence of kleptocracy is straightway reflected by an increase in monitoring /auditing probability of identifying the people who defy laws. Here the law breakers are informal units. Therefore a better administration would be followed by an increase in *bq*.

Differentiating the price equation of Z,

$$\hat{W}\theta_{LZ} + \hat{R}\theta_{TZ} = 0 \qquad \text{(B.1)}$$

Output of X and Y would not change as $\hat{\bar{W}} = \hat{W} = \hat{r} = \hat{t} = 0$.

From the full employment condition of labor and substituting (8)

$$\hat{Z} = -\left(\frac{\lambda_{LN}}{\lambda_{LZ}}\right)\left(\left(1 - \widehat{bq}\right) + \hat{Z} - \hat{W}\right) \qquad \text{(B.2)}$$

Simple mathematical manipulation yields,

$$\hat{W} = \frac{\Delta.(1-\widehat{bq})}{\Delta.\theta_{TZ}+\sigma_Z.\theta_{LZ})} \qquad \text{(B.3)}$$

Therefore, $\hat{W}$ is unambiguously negative as $1-\widehat{bq})<0$. In that case $\hat{R}>0$. This is obvious from equation (B.1). This guarantees $\left(\hat{W}-\hat{R}\right)<0$ which in turn makes sure that $\hat{Z}>0$. Basically this takes place through relocating adjustments of Lz and L_N. Here Lz increases and L_N falls.

The exact value of $\hat{R}$ is denoted by,

$$\hat{R} = -)(1-\widehat{bq})\left\{1-\frac{\Delta}{(\Delta.\theta_{TZ}+\sigma_Z.\theta_{LZ})}\right\} \qquad \text{(B.4)}$$

We have already argued that $\hat{R}>0$, which implies an automatic and obvious satisfaction of the inequality: $\frac{\Delta}{\Delta.\theta_{TZ}+\sigma_Z.\theta_{LZ}}<1$. Under this circumstance the effect on Pz is straight and simple. It must decrease as supply goes up without changing the demand. However, for a given T an increase in Lz ensures a decline in real wage of informal workers. Nevertheless, what happens to the money or real wage of extortionists that is not yet clear. From equation (6) we get,

$$\hat{W}_N = \hat{W}-(1-\widehat{bq}$$

In the RHS of the above equation, W has already fallen and $\widehat{1-bq}$ is also negative. Thus W_N would decrease if W falls at a rate faster than *(1-bq)*. Accordingly, extortionists are relatively less worse-off than informal workers, if they lose at all. Symbolically,

$$\hat{W}_N \lesseqgtr 0 \text{ if } \left|\hat{W}\right| \gtrless \left|\left(1-\widehat{bq}\right)\right| \qquad \text{(B.5)}$$

However, when monitoring probability increases, except W_N all factors' return would remain unaffected if we allow for capital mobility across all sectors. W_N goes up. L_N must fall and hence L_Z and Z would increase. The increase in Z would squeeze Y because of Heckscher-Ohlin structure.

Footnotes

[1] Some other relevant and interesting information regarding percentage share of informal sector in GDP etc. can be found in Schneider (2004).

[2] More than 70% of all employment in countries like Zambia (80.7%), Uganda (83.7%), Thailand (72.1%), Nepal (73.3%), Lithuania (72%), Ghana (78.5%), and Gambia (72.4%) falls in the category of informal sector (ILO, 2010).

[3] It has been reported in Ethiopia that the urban informal sector of this rural country is comprised of almost one million people and is vastly distorted with extortion. While Morocco experiences an annual loss of $ 3.6 billion because of lack of transparency related extortion/ corruption/bribe (Drakard, 2009).

[4] In order to reduce extortion in the informal segment countries like Ghana, Senegal, Kenya etcetera have already attempted to facilitate and promote registration and license to informal units. This has resulted in a significant reduction in the degree of extortion (Fjeldstad, 2001).

[5] It is noteworthy to mention here is that by using a competitive framework Amaral and Quintin (2006) has shown why the most talented managers operate with more physical capital and self-select into the formal sector than managers in the informal units. This analysis emphasizes that most skilled labor work in the formal sector as long as the enforcement gap between formal and informal sector is ample.

[6] The main driving force of Ghosh and Robertson (2011) is that if falling trade cost raises the return to the factor intensively used in expropriation, the potential for efficient expropriation decreases. The paper has been extended further to endogenize the legal services for controlling expropriation.

[7] In this context we need to mention that our work is related to the research area dealing with economics of corruption. Marcoullier and Young

(1995) has developed a two sector model on graft and corruption demonstrating tacit political support for informal sector. But they do not model extortion in a general equilibrium framework. Similarly Marjit, Ghosh and Biswas (2007) brings in informal sector and corrupt bureaucrats but they do not constitute labor mobility between various informal segments and does not consider a general equilibrium framework. Dobson and Dobson (2012) is another important reference in this line.

[8] It is also interesting to note that a better quality of administration might bring about more informal production though corruptive activity shrinks. The effect of such a change is outlined in Appendix B. Readers are advised to check this result only after having a fair idea about the structure of the model that is developed in Section 2.

[9] Z cannot be produced by these two factors only. It requires the service of another factor that actually negotiates between producers and administrators since Z is not permitted to be produced legally. But if Z is never produced some labor must remain unemployed and they will not survive. Therefore Z is a necessity for a perfectly competitive full employment framework.

[10] We can coin this sort of intermediations as directly unproductive profit-seeking activities (Bhagwati, 1982). This is the concept of corruption and/or related extortion that we are going to use in our model.

[11] Here it is advisable not to confuse between "fee" and "wage": fee means the fraction or the value of per unit of output that is lost due to extortion whereas extortionist's wage is the return to a single extortionist for his service.

[12] The symbols that would be used extensively in this paper are: $P_J \Rightarrow$ price of the jth commodity ($j = X, Y, Z$); $W_S \Rightarrow$ skilled wage; $\overline{W} \Rightarrow$ unskilled formal wage; $W \Rightarrow$ unskilled informal wage; $r \Rightarrow$ rate of return to K; $R \Rightarrow$ rate of return to T; $a_{ij} \Rightarrow$ production requirement of the ith factor in one unit of jth commodity ($i = S,L,K,T$ and $j = X,Y,Z$); $S \Rightarrow$ total supply of skilled labor; $L \Rightarrow$ total supply of unskilled labor; $L_N \Rightarrow$ number of unskilled labor employed in extortion; $K \Rightarrow$ total supply of capital, K; $T \Rightarrow$ total supply of capital, T.

[13] One can effortlessly disagree to argue that Y should not be the importable commodity for any developing economy as it uses unskilled workers. But we do not find any harm in assuming this. Here skilled good (X) is exportable and Z is non-traded. In order to avoid the possibility of complete specialization we have taken the remaining good (Y) as importable. Introduction of any other commodity as importable, instead of Y, would not matter much to the basic results of the paper.

[14] LHS = Left Hand Side of the equation, RHS = Right Hand Side of the equation.

[15] For a detailed mathematical derivation see Appendix A.

[16] Note that throughout the paper a circumflex over a variable represents proportional change; θs signify the distributive share of a factor in a particular good or service e.g. $\theta_{LZ} = \frac{Wa_{LZ}}{P_Z}$, $\theta_{TZ} = \frac{Ra_{TZ}}{P_Z}$ and so on; and λs imply employment share of factor in any commodity such as $\lambda_{LZ} = \frac{Za_{LZ}}{L}$ etc.

[17] Elasticity of substitution for X, Y and Z are represented, respectively, by $\sigma_X = \frac{\hat{a}_{KX} - \hat{a}_{SX}}{\hat{W}_S - \hat{r}}$, $\sigma_Y = \frac{\hat{a}_{KY} - \hat{a}_{LY}}{\hat{W} - \hat{r}}$ and $\sigma_Z = \frac{\hat{a}_{TZ} - \hat{a}_{LZ}}{\hat{W} - \hat{r}}$.

[18] One special case under this situation could be the unchanged income from X and Y together. It is not impossible possible as X goes up and Y falls in tandem.

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5

The Daily Life Struggle of Tribal Women Fabricates Empowerment: A Study

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Abstract

Empowerment is the new buzz word in Women Development sector. The indicators of empowerment vary place to place and it may differ community wise. In this paper different indicators of empowerment are showcased from the perspectives of marginalised community mainly ST or Tribal Culture. Murshidabad District is the remote and backward district of West Bengal in respect of economic, social and cultural development. This paper will discuss mainly the power gained by the tribal women in every aspect of their family life in Bahadurpur GP of Farakka block. Their rigid customs, beliefs and adaptation towards the improved living standard provide a good example of empowered women against all odd circumstances. They not only construct their own self-esteem but raise the consciousness of their betterhalfs to think and work positively. They also influence their children to take education as an important element in their lives. Alcoholism, addiction and sluggishness are the critical conditions found common in male population of this community, but these women has used their 'Atma Sakti' to demolish those evils and re-established their families and community. SHG also plays vital

role in this community to realize the leadership quality of the woman which exits in them as part of Matriarchal society.

Keywords: *Woman, empowerment, tribal, development, education, indicators, health*

Introduction

"If you educate a man you educate an individual, however, if you educate a women you educate a whole family. Women empowered means mother India empowered."

—PT. J.L. Neheru

Gender and gender discrimination are the few important topics always remain in hit least around the globe. May be the thinkers and activists perspectives differ time to time. So lot of discussions took place related to female gender in the developed and developing countries. Conference, summits, seminar, publication, media etc., are used to highlight the topics of gender discrimination, violence against women, molestation, rape, eve teasing etc. to aware masses but very few are practically affective or proactive for society.

The status of women among marginalised community like SC, (ST) Tribal, Muslims, poor, elderly, sick and disable are worst than mainstream females. These women do not even get the light of education and health awareness to protect them from the brutality of our so called civilized world. This paper tries to discuss the livelihood pattern of the tribal women in their community through which they get the strength to become empowered.

The word "community" is derived from Latin and has been used in the English language since the 14th century. It refers to both the development of a social grouping and also the nature of the relationship among the members. The term is most often associated with one or more of the following characteristics:

- common people, as distinguished from those of rank or authority;
- a relatively small society;
- the people of a district;
- the quality of holding something in common
- a sense of common identity and characteristics.

"Empowerment is the process through which individuals gain efficacy, defined as the degree to which an individual perceives that he or she controls his or her environment" **— Bandura (1986)**

Tribe

Piddington (1956:164) says that "a tribe is a group of people speaking a common dialect, inhabiting a common territory and displaying a certain homogeneity in their culture"[1]

Why and where the term tribal originates

Man and society have been the subjects of study in India from time immemorial. The Manusmriti gives an exhaustive social and structural account of the people of India. The important principle of Varna has been presented by Manu with many other principles. Valmiki muni also gave an ethnographic account of Bharatvarsha by describing the Arya, Deva, Danava, Rakshasa, Vanara, etc. The Shrimat Bhahagwat – Gita highlights the individual's character on the axis of self. Lord Buddha's teaching are part of the study of man and his bani itself brings out the truth about the association which one wishes to join for salvation. Emperor Ashok's inscriptions are all full of descriptions about man and the grammar of his social life. In the medieval period the poets like Surdas, Tulsidas and Kabir made a penetrating study of man and came up with substantive material about the social life in general and about the folk people of India in particular. In the modern period the study of man and his society became the subject – matter of anthropology.

Indian anthropology has a history of two centuries which began in A.D 1774 with the establishment of the Asiatic Society of West Bengal which makes the beginning of a scientific tradition in India for the study of "nature and man". The country's independence in 1947 gave it a tremendous momentum and, within a short span of two and a half decades, the usefulness and status of anthropology in the academic fields like universities and research institutes and in the development fields like the welfare of the Scheduled Castes and Tribes have been recognized and anthropology as an integrated science of man is making a headway.

The Tribal India lives in the forest, hills and naturally isolated regions known as a rule by different names meaning either the people of forest and hill or the original inhabitants, and so on. The popular names are: Vanyajati (castes of forest), Vanvasi (inhabitants of forest), Pahari (hill dwellers),

Adimjati (original communities), Adivasi (first settlers), Janjati (folk people), Adimjati (primitive people), Anusuchit Janiati (schedule Tribe) and so on. Among these terms Adivasi is known most extensively, and Anusuchit Janjati Schedule Tribe is the constitutional name covering all of them.

Tribal History

Coming to the tribal history, we find that the tribal's are an integral part of the Indian civilization. Various elements of the ancient civilization of India were contributed by tribal. It is believed they were the earliest among the present inhabitants of country. So far as we know, four main races and cultures welded together into one people, the Hindu people (Chatterjee, 1968). These are: (1) The Austro – Asiatic, in their primitive from are represented by the Kols or the Mundas, the Khasis and the Nicobarese (2) the Mongoloid people speaking dialects of the Sino – Tibetan family who are found largely among the sub – Himalayan regions and who are represented by the Nagas, the Bodos, the Kuki- Chins, etc; (3) the Dravidians – the Malers, the Oraons, the Gonds and the Khonds – who speak tongues of the Dravidian family; and (4) the Aryans – who supposed to be last to come to India .

Demographic Aspect of the Tribals

These are altogether 427 tribal communities (Roy Durman, 1972:2) all over India. The Anthropological Survey (1967) has estimated the number at 314 considering a number of tribes to be the constituents of a group of tribes designated by a common name such as the Gonds, the Bhils etc. In 1950 the number of schedule tribes was 212. This numbers increase in 1956 with the reserve list of 1956. All this gave rise to fluctuating figures of tribal communities and tribal population. Thus it is important to consider the growth of tribal population. Looking at the various Census report since 1891 we find the tribal population varies census to census.

Economic Classification

The economic life of the tribal is specific in nature. The broad economic classifications based on the manner in which they primarily and distinctively make their living are eight.

- Forest – Hunting type
- Hill Cultivation type

- Settled Agriculture type
- Simple Artisan type
- Cattle –herder type
- Labour Agriculture and Industrial type
- Folk – Artist type
- White Colour jobs and Trader type

Plain Agriculture Type: These live in undulating plateaus and are predominantly dependent on plough cultivation. They live in bigger village with several tolas. Under this category are major tribes like the Santal, the Munda, the HO, the Oraon, the Gond, the Bhil, the Mina etc.

SANTHAL: *The largest tribes of India are the Santhal Tribe. This tribe habitation is mainly in the states of West Bengal, Bihar, Odisha, Jharkhand and Assam. They belong to the Pre -Aryan period and were the great fighters during the British regime in India. A bantam bunch comprising of the Santhals can also be traced back to Bangladesh. Santhals were brave and courageous people who waged war against the permanent settlement of Lord Cornwallis in 1855.*

The Santhal (also spelled as Santal, and formerly also spelt as Sontal or Sonthal) are one of the Munda peoples who live mainly in the states of Jharkhand, West Bengal, Bihar, Odisha, and Assam. There is also a significant Santhal minority in neighbouring Bangladesh, and a small population in Nepal (known as Satar in Nepal). The Santhals speak the Santali language, one of the Munda languages.

Profession

The Santhals are an agricultural tribe, from time immemorial they have cleared forests, toiled the land, and produced food for subsistence. Santhal labourers were considered very efficient and they easily found employment in coal mines. Beside agriculture they also domesticate animals like cows, buffaloes and pigs. Apart from these the Santhals also are well versed in the art of hunting, where their exceptional skill with bow and arrow is noticeable. After the ban on hunting by the Government of India, the Santhals do not get chance to practice their archery skill but recently a new venture of organizing village level archery competitions during festive seasons has given a chance to culture this unique legacy. Those adopted and educated by the Christian missionaries were in a better position. There were a few Santhals in Government jobs holding high posts like Santhal

Deputy Commissioner, the village Heads, the Darogas, musicians and the teachers.

Tribal system

Tribal's are not part of the caste system, and usually constitute egalitarian societies. Christian tribal's do not automatically lose their traditional tribal rules. The tribals of Chhotanagpur are an endogamous tribe. They usually do not marry outside the tribal community, because to them the tribe is sacred. The way to salvation is the tribe. Among the Santals, it is tabooed to marry outside the tribe or inside ones clan, just as Hindus marry inside their caste and outside their gotra. More precisely: To protect their tribal solidarity, the Santals have very stringent marriage laws. A Santal cannot marry a non-Santal or a member of his own clan. The former is considered as a threat to the tribe's integrity, while the latter is considered incestuous.

Language

Santhals speak Santhali, which belongs to the Austro- Asiatic language family. Santhals have their script called Olchiki, which was developed by Dr Raghunath Murmu in 1925. They are generally bilingual. Apart from Santhali they also speak Bengali, Oriya and Hindi. The members of the Santhal tribe have accepted the dialect Santhali as their mother-tongue. This language has also been derived from the Austro-Asiatic group of languages and has a lot of features common with the languages like Vietnamese and Khmer like most of the lingos used by the tribes. The alphabet used by the Santhali language is known as Olchiki. A strange feature of this alphabet is that it does not possess any similitude with the Indic or the Devanagiri scripts. Another specialty of the Santhali language is that they possess three extra vowels along with six regular ones.

Area Profile

Murshidabad district is situated in the northern point of south Bengal. It is surrounded by Malda, Birbhum, Burdwan and Nadia district. It also shares state boundary with Jharkhand and international boundary with Bangladesh. Majority of the population depends on agriculture for their livelihood. There are some silk farms and weaving machines, but they are losing out fast against the modern industries. Murshidabad is known for quality and diversity of mango produced. Also the district is famous for production of high quality silk.

The district constitutes of:

- Municipalities -7
- Blocks - 27

The district rank is 4th in terms of sex ratio among all other districts of West Bengal. Being situated on the left bank of the river Ganges, the eastern portion of the district is a fertile, low-lying alluvial tract. The district is drained by the Bhagirathi and Jalangi rivers and their tributaries.

Population: According to Census Data (2011), the Total Population of the district is 71, 02,430 out of which there are 36, 29,595 males (51.10%) and 34, 72,835 females (48.90%). Out of a total 640 districts in India, Murshidabad is ranked 9th in terms of population. The population density in the district is 1334 persons per sq km.

Farakka block of Murshidabad district of West Bengal is a backward district with varied population of Hindu, Muslims and tribal. The block had many stigmas related to religion, caste which results in to poor productivity, development and lower level of living standard. The different stigmas, superstitions, customs, beliefs and practices provoke people to with draw them from development and creative life.

Demography Profile about Farakka Block

Sl No	Particulars of Farakka Block	Numbers
1	Total No of GP	9
2	Total No of Village	124
3	Total Population	280049
4	Total Male Population	112495
5	Total Female Population	107554
6	Literacy Rate	49%
7	Population Density	1520
8	Total Villages in Bahadurpur GP	18
9	Total no of Tribal village in Bahadurpur GP	9
10	Population of 9 tribal village	3113
11	Total house hold in 9 tribal village	636

Farakka block have a lot of biri workers or it can be said that livelihood of many people depends on biri making which results in different health hazards. The tribal men population of this block largely addicted in

alcoholism and gambling which reduces their active participation in social, economic and political life. So the tribal women's basically Christians are more powerful than their men counterparts in every sphere of life.

Methods used for data collection

Survey method, Group Discussion, face to face interaction with the tribal women's of five villages (Chilemara, Shamlapur, Khupi, Kalaidanga, Baramashia) and purposively through Observation under Bahadurpur GP of Farakka block lots of experiences are gathered about their life style, customs, beliefs, religion, relationship, decision-making etc. These women's are transformed into Christianity, so they believe in 'Jesus' but their livelihood of tribe doesn't change much. Interactions are mainly done with 10 SHG members in these villages.

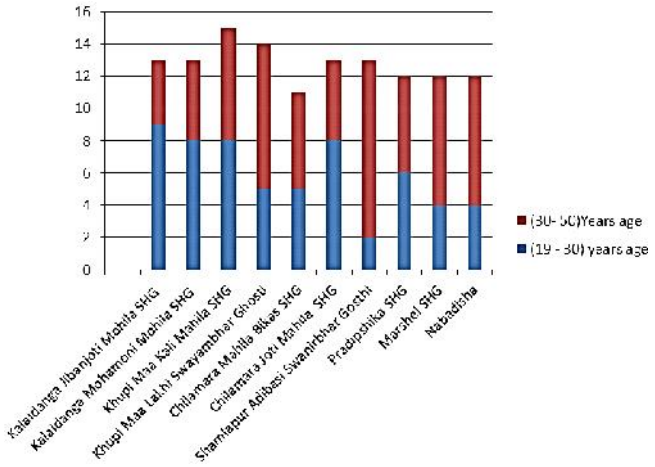

Fig. 1: shows the age group of SHG members in these villages.

These tribal women's aged 19 to 50 is a part of social institution (SHG) since 2010 are the inhabitants of these tribal villages (Chilemara, Shamlapur, Khupi, Kalaidanga, Baramashia) under Bahadurpur GP of Farakka block.

Sl No	Name of SHG	Village	Date of formation	No of Members	Saving/ member(Rs)	Monthly saving(Rs) March 2015	Cummulative Saving(Rs)	Loan Disbursed during the month(Rs)	Loan Repay(Rs)	Outstanding loan last month(Rs)	Total internal loan(Rs)	Income/ interest earned during the month(Rs)	Last month cummulative (Rs)	Cummulative income / interest earned(Rs) (12+13)	Corpus (Rs) (7+14)	Bank loan(Rs)	Loan Repay
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	0
1	Jibanjoti Mohila SHG	Kal aida nga	6.5.10	13	50	500	26600	0	0	14500	14500	773	8172	8945	35545	21045	0
2	Mohamoni Mohila SHG	Kal aida nga	6.5.10	13	50	700	35360	0	0	27250	27250	1028	8841	9869	45229	17979	0
3	Maa Kali Mahila SHG	Khu pi	6.5.10	15	30	610	17350	0	80	930	850	0	16256	16256	33606	32756	0
4	Maa Lakhi Swayambh ar Ghosti	Khu pi	2.2.10	14	50	700	36750	0	0	13500	13500	0	17302	17302	54052	40552	
5	Mahila Bikas SHG	Chil ama ra	6.5.10	11	50	1950	23400	360 9	0	0	32609	1352	19176	20528	43928	11319	0
6	Chilamara Joti Mahila SHG	Chil ama ra	18.5.10	13	50	0	23150	0	0	0	21300	0	37013	37013	60163	38863	0
7	Adibasi Swanirbhar Gosthi	Sha mla pur	1.10.10	13	50	650	27430	0	500	5000	4500	0	17784	17784	45214	40714	0
8	Pradipshik a SHG	Sha mla pur	23.8.11	12	50	600	25400	0	100 0	2400	1400	40	17463	17503	42903	42503	0
9	Marshel SHG	Sha mla pur	23.8.11	12	50	1200	23820	150 00	200	1500	16300	2920	16260	19180	43000	26700	150
10	Nabadisha	Bar ama shi	23.8.11	12	50	600	24600	0	0	15000	15000	1661	17449	19110	43710	28710	
				128	480	7510	263860	186 09	178 0	80090	14720 9	7774	17571 6	183490	44735 0	30114 1	

Fig. 2 shows SHGs Economic status in these villages. (Up to March 2015)

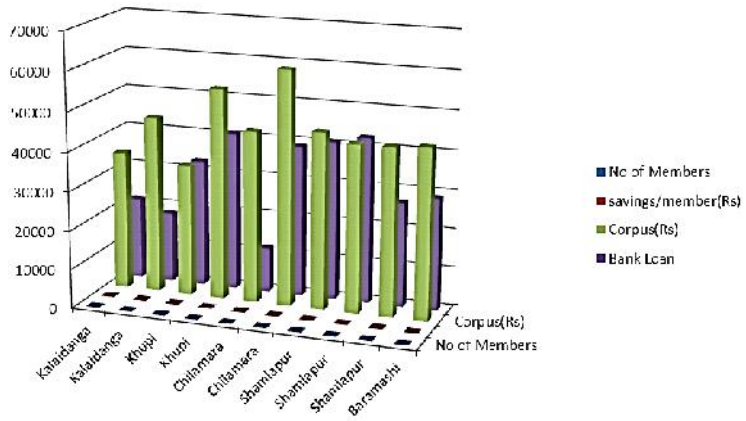

Fig. 3 shows the group corpus and bank loan of SHGs in these villages which signifies the potentiality of their savings

Findings of the study conducted in 5 tribal villages focuses different aspects of women life:

Asset: An asset is a resource controlled by the entity as a result of past events and from which future economic benefits are expected to flow to the entity (International Accounting Standards Board, 2015. p. 14). A resource with economic value that an individual, corporation or country owns or controls with the expectation that it will provide future benefit. A balance sheet item representing what a firm owns.

Authority: The status of tribal women can be judged mainly by the roles they play in society. Their roles are determined to a large extent through the system of descent. The families try to pass their property by the line of descent. The family surnames too are traced on the basis of the system of descent. In a unilineal system the descent is traced either through the male or female line. When the descent is traced through the mother's line, it is called a matrilineal system and when it is traced through the father's line, it is called a patrilinear system. Most of the tribes in India follow a patrilinear system. But the women's of these tribal villages who are basically santhal preferred matrilineal system. The status of a person quite often depends on the system of authority he/she enjoys in the community. When the authority is held through the male line, it is called 'patriarchy' and when it is held through the female line; it is called

'matriarchy'. These type of cases often found in these villages under Bahadurpur GP where both the mother line and matriarchy prevails.

As per Group members individual savings

Sl. No	Name of Group	Village	Individual Asset (including personal saving and group interest)	TDF (Tribal Development Fund)	Total Income
1	Jibanjoti Mohila SHG	Kalaidanga	2734	0	2734
2	Mohamoni Mohila SHG	Kalaidanga	3449	0	3449
3	Maa Kali Mahila SHG	Khipi	2240	10000	12240
4	Maa Lakhi Swayambhar Ghosti	Khipi	3860	0	3860
5	Mahila Bikas SHG	Chilamara	3993	10000	13993
6	Chilamara Joti Mahila SHG	Chilamara	4627	0	4627
7	Adibasi Swanirbhar Gosthi	Shamlapur	3448	0	3448
8	Pradipshika SHG	Shamlapur	3575	0	3575
9	Marshel SHG	Shamlapur	3642	10000	13642
10	Nabadisha	Baramashi	1592	10000	11592
					73160

- It has been observed that the group members of these village created different assets like animals, clothes, home based materials, agricultural land, bicycle, electrical gadgets etc. by using the savings or taking loan from the group. About 90% of the group members are benefitted after forming SHG in these five villages of Farakka Block

Family and Marriage: The position of a woman to a large extent depends on the kind of family one is placed in. In a joint family system the eldest woman usually enjoys a prerogative in the decision-making process. The type of family differs to a large extent with the type of marriage prevalent

in the community. The nuclear family formed through monogamy is the most common type of family prevalent in the santhal community in Bahadurpur GP. The extended type of family is also quite a common norm in these santhal villages wherein the daughters leave the natal home after marriage to distant places. The older sons too leave the parents after marriage to set up new homes in the near vicinity. It is common to find the youngest son residing with the parents even after marriage. Some of the santhal men enter into polygamy but now it is rare. When one woman marries more than one husband, it is called polyandry and it is also not so common in these villages. In such marriages the eldest woman usually wields greater respect and command. Since women in these santhal villages toil hard, they are considered to be assets. Not surprisingly, the practice of bride price during marriages is quite common among them. This is in sharp contrast to the general caste-Hindu population. Sometimes when the prospective groom is not in a position to pay the bride price, he has to render physical labour and service at the wife's house. At times he even stays back at the wife's house throughout his life to reside as a 'ghar jowai'. And in these villages between Christian santhal tribes the marriage age of daughters is above 18 and they do marriage registration as per Christian laws. There are no possibilities of early marriage in this community. The women often take prior decision related to pregnancy, immunization of mother and child, family planning without the help of their husband.

As Collector: The status of the tribal women usually depends on the economic roles they play. The tribal's in the past were usually forest dwellers and their livelihood to a great extent depended on the food-gathering economy. More than the men, the women walked long distances to fetch wood and fodder. Besides, they also collected fruits, roots and tubers, lac, gums and leaves for self-consumption and sale. The men never helped them in this matter. As there has been large scale deforestation, women have to slog harder to retain the gathering economy. It has been observed in these villages that collection and marketing of firewood is generally the domain of tribal women. They sell it and whatever income they have, they immediately spend it on meeting the basic requirements such as rice, pulse, edible oil, soap, detergent powder, tobacco, bidi and so on.

In Agriculture: While the men mainly felled the trees and spread them around on the ground to dry before collectively clean the land and prepared it for cultivation, it is the women who were engaged in broadcasting the seeds, weeding and harvesting. It is the women who preserved the

seeds at home and took the decisions about the crops to be cultivated every season. The men mostly guarded the crops from wild animals and trapped wild-life games, big and small. Multi-cropping practices too are getting popular in Farakka where Paddy and Mango are cultivated and the emphasis on mono-cropping is also being laid.

In Industries: For quite some time the tribes have been exposed to industries like NTPC and Ambuja Cement. There have come many big and small dams and many development projects as well. The forests being depleted and very little poor quality land to cultivate on, the tribes are compelled to serve in the industrial sector to work as coolies, unorganised labour. Many women and men are being forced to work in brick kilns and the building sector in Farakka. Maximum tribal women work as labourer rather than men. Women are physically stronger than general caste women.

In Household Activities: Maximum houses in the tribal villages under Bahadurpur GP are mud houses and very little are cement houses. The cleanliness in homes, child rearing, cooking, education of children, accounts of house, ration and essentials are the sole responsibility of the mother or the woman. Father or the male in the house rarely assists the woman.

Inheritance: The tribal women generally inherit the ornaments from the mother. The customary laws permit them to own land. It is, however, seen that the kitchen garden is controlled by the wife. The pigs, goats and chicken too are owned by her. The sale proceeds of the domesticated animals are retained by the housewife and she makes purchases of her own liking when visiting her parental home. Women are also adept at selling fruits and forest products in the weekly markets. In Bahadurpur GP one tribal market (village haat) is there where the tribal women used to go for marketing and selling their household goods in Saturday and Tuesday in a week. Vegetables, egg, meat and fish are usually sold by them in the markets.

Enterprise: Many women run small family businesses, called micro enterprises, which require very little initial capital and often involve the marketing of food articles and handicrafts produced under the domestic system. The different small businesses like grocery, poultry, Talpata Mat are run by women in the villages.

Religious: Christianity has brought about a significant emancipation of the tribal women. While earlier the women were restricted from attending schools, it is the missionaries who opened schools and encouraged the

girls to attend them. They also opened up church forums where women could participate and also take the lead. They gave trainings to the girls to be not just good home-makers but to become teachers, doctors, nurses and good village dwellers.

Education: Christian tribal women are trying their best to make themselves educate as they know that the education is the only one path which leads them to empower their inner 'atmashakti'. Mothers promote their daughters for taking higher education like master degree, nursing etc. Mothers are also encouraging their daughters to go outside their community to get education. Maximum sons have left their education and became drop outs but daughters hold themselves in different honourable posts like High school teacher, Primary school head teacher, Parateacher, Nurse, ANM, AWW, AWH, ASHA and Panchayat resource person. Not only daughter but mothers also enhance their education status through Open University.

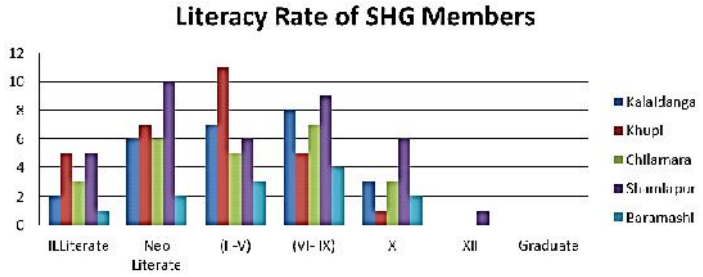

Fig. 4 shows the literacy rate of SHG members in these villages

Case Study: 1

Name – Anita Murmu, 28 years, Female (Unmarried)
Village - Kalaidanga
Educational qualification – MP
Name of Group - Jibanjoti Mohila SHG
Time of Joining Group – 6.5.2010
Duration attached with Group – 47 months as on March 2015
Individual Saving - ₹ 2734
Loan History – ₹ 3000 for 6 months as on January 2014
Status of Loan – Cleared
Purpose – Her own education

Anita Murmu is a good girl with all round performance. As her Father is an Alcoholic, after joining the SHG she realised and started to raise her voice in this field and ultimately her father became non-alcoholic and was engaged in the household activity. Anita was class VIII passed when she joined the SHG and she seamlessly monitored the group, organised monthly meetings in regular basis, Involved with different Govt. departmental like BDO office, Bank, Panchayat etc. During that time she took a job as ICDS helper in her village, Kalaidanga. After her own initiative she thought that she will give MP examination from distance mode which will influence her to become ICDS worker, so she took ₹ 3000 amount as loan from group. Ultimately she became MP passed and trying to become ICDS worker. Even after this she is helping her sister for giving MP Examination. Her inborn leadership quality not only pushed her own struggling life but also provide a boost to other women in her group.

Case Study:2

Name – Mariya Soren, 42 years, Female (married)

Village - Chilamara

Educational qualification – VIII

Name of Group - Mahila Bikas SHG

Time of Joining Group – 6.5.2010

Duration attached with Group – 47 months as on March 2015

Individual Saving - ₹ 13993 (TDF Fund also included)

Loan History – 5000 for 2years 4 months as on October 2014

Status of Loan – Cleared

Purpose – Her Daughter higher education

Husband purely alcoholic, no concentration on family, through SHG a bicycle was purchased for her family purpose. Through her own initiative and physical labour she decided to give education to her son and daughter. Ultimately her son passed HS. Most important matter is her dedication and effort towards her daughter education who is presently BA 2nd year student. She wants that after complication of BA; her daughter will get a job .She was always against early marriage of girls. She leads the village women for taking education which would be the key element to fabricates empowerment in their struggling life.. In addition she is an important group member who maintains all register and loan and does all official work

(Bank , BDO, Panchyat) with the help of her daughter. Her own initiative Group availed TDF and those amounts were utilised properly. Her new initiative is giving awareness to village women for family planning, against early marriage, institution delivery, and fight against TB, female education.

Conclusion

To conclude, it may be stated once again that the women in the tribal society in Bahadurpur GP of Farakka Block enjoy a greater freedom to mix and move around, their social organisations and institutions supports them to be educated and empowered. Though they does not get the help of male population of the community but they used their inherited leadership quality in every spare of life be it decision making, housekeeping, business, child rearing and education etc. So the different roles of these tribal women in dealing their day to day fight fabricate empowerment which energises their creative and visionary life.

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6

Women in Early India: As Depicted in Selected Dramas of Bhasa

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Abstract

Inspite of many changes and transformations there is a persistent tendency in Indian society to keep women oppressed. The ideology of slavery and contempt for women in the family plays a more important part in Indian society and culture. All societies must strive to do everything possible to integrate women in all walks of life in an equitable and just manner. Any genuine concern about over all human rights question cannot be complete if women are not given due coverage and response. According to the classical and orthodox view as described in early Sanskrit literature and religious texts is that the perfect Indian woman is the devoted wife whose entire existence is dedicated to her husband, a perfect mother dedicated to her children and a perfect servant dedicated to the all members of the family. Gender inequality, humiliation and poor treatment of women, discrimination based on religion and cast were present during the days in the society in 350 A.D. when Bhasa lived. He depicted some pictures of enlightened women as well. This essay describes the status and conditions of women taking some representative characters from Bhasa's dramas.

Keywords: *Human rights, Bhasa, Indian society, poor treatment, transformations*

I

In the past few years there has been a growing awareness of this disturbing phenomenon of discrimination against women and its long term impact on the empowerment, employment and development of women.

Women are vital element in society. A society's progress depends a lot on them. All societies must strive to do everything possible to integrate women in all walks of life in an equitable and just manner. Any genuine concern about over all human rights question can not be complete if women are not given due coverage and response. Women need to be considered the pivot not only of domestic life but of entire society.

However, the fact remains that the denial of rights to women has been often defended by various cultures and religions. As a result almost all sections of contemporary societies suffer from varying degrees of violation of human rights of women. Today, all women share a common degradation, indignity, oppression, violence and discrimination in every society.

Inequalities between men and women are very important and dominant questions in a society since long and the questions have not lost their sheen even today. Problem is that how the conditions of women in a particular society and their quality of life should be judged. We have seen and it is also an established truth that women are deprived as they are often unable to enjoy the necessaries and conveniences of life compared to their mail counterpart in a society. Women's well-being and quality of their life should be judged by looking at what they are actually able to do and what they wanted to be. We have seen that there are barriers in society erected against full justice for women. Also the fact that this discrimination on the basis of gender is so deeply rooted in the history of humanity that it is not even perceived as discrimination.

II

What is the traditional view of Hindu women? According to the classical and orthodox view as described in early Sanskrit literature and religious texts is that the perfect Hindu woman is the devoted wife whose entire existence is dedicated to her husband, a perfect mother dedicated to her children and a perfect servant dedicated to the all members of the family. Sometimes the word pativrata in Sanskrit, meaning a woman whose vow is to her husband, generally used to identify a perfect traditional Hindu woman. During her lifetime the good wife should regard her husband as

her personal god. This also as per the ancient myths and traditional stories. This ideology was extremely powerful and was deeply rooted in Hindu society. This is widely accepted and followed by both men and women even in India today.

In the Indian tradition the status and role of an individual, man and woman, in society is guided by India's sacred scriptures. These ancient treatises contain the vast literature of Sanskrit religious laws. These sacred treatises are threefold——*Sruti*, *Smriti* and *Nyaya*. The most sacred of these three are the *Srutis*—the *Vedas*. The *Vedas* are the oldest religious texts of Hinduism, composed in archaic Sanskrit and brought to India by the Aryans approximately in thirteen thousand B. C. The second most sacred source of right behavior is provided by the *Smritis*, that is by the precepts of sacred Sanskrit religious laws and by the principles laid down in the great epics, the *Ramayana* and the *Mahabharata*. These two epics are also deriving their basic principles from the ultimate sources, the *Vadas*. The third source is the accepted customs based on the behavior of the respected members of the early orthodox society. Individuals, both man and woman should not do anything that comes into conflict with the guidelines set by these three authorities. If, in any case, there is a conflict between these three authorities, some texts allow an internal guideline. The entire corpus of the treatises containing Sanskrit religious laws, from the ancient to the present day, derives their basic postulates from the tradition of the *Vadas*. In the later scriptures the sanctity and authority is emphasized by quotations from and allusions to Vedic texts. The process of development within the literature of religious laws is self-perpetuating. Later texts quote or allude to earlier ones. Commentators quote earlier commentators as they expound upon and reinterpret the great and established authorities of the past. Compilers of digests rearrange earlier ancient material in new combinations for the edification of their contemporaries. This complex literature forever feeding upon itself is divided into two main groups——primary texts and secondary material.

III

The discovery of important fragments of dramas of Bhasa has thrown unexpected light on the early social history of India. Bhasa remained all time legends in the era between Asvaghosa and Kalidasa. For centuries his creations ruled the stage and inspired the contemporary people or the people of his age. He also had a crucial impact on his successosors including

Kalidasa. It is a fact that we know practically nothing of the life and age of the great dramatist Bhasa. However, we can infer from the writings of later writers, from the language used, from the technicalities and style of writing and from the general history of Sanskrit literature that Bhasa was definitely prior to Kalidasa. If we date Kalidasa at 400 A.D. this gives us a period 350 A.D. for Bhasa. He was later than Asvaghosa, as it is unquestionably established that latter's prakrita is older in character.

Our task is not to find the dates and age of Bhasa but to find what was the condition of women in society during that time. In tracing the conditions of women let us select a few typical characters as specimens for description. Some important women characters of pre-classical dramas, specially from Bhasa-dramas are selected to throw some unexpected light on the conditions of women in society. We are interested to see this in the light of the new thoughts available today.

IV

The sources of dramas are either the Epics or the Legends. The Ramayana and the Mahabharata were the integral part of India's socio-cultural life from very ancient times. They reflect the social mores of ancient India. Gender inequality, humiliation and poor treatment of women, discrimination based on religion and cast were present during those days. Inspite of many changes and transformations the same characteristics were present in the society where Bhasa lived. What the conditions of women were during the pre-classical age as reflected in Bhasa's dramas? This can be described by looking into the women characters projected by him in his dramatic scenes. There are many women characters but I shall take only few as specimens or representatives to look into the status of women in contemporary society. I shall discuss the women appeared in the dramas based on legends. This is because as they are based on the stories originated, circulated and accepted by the people in society. It is also considered prudent as they will reflect the social reality more accurately. Let me take the two dramas based on legends *Charudattam* and *Swapnabasabdattam*. It is seen that there were polygamy in the society where people were marrying with more than one woman. This practice was prevalent among the rich and the kings. There was slavery in the society. Madanika, in *Charudattam* was such a lady who was purchased. Prostitution was also there in the society. They were educated and properly trained in certain fine arts and music. There were some with

enlightened characters who had some attraction to the good and enlightened people in society. They were most beautiful and sufficiently rich and with broad heart, Basantasena in *Charudattam* was such a character who refused the rich and most powerful brother-in-law of the king and gave herself to the poor but enlightened Charudatta. Thus we get feeling of suffering and the glimpses of good taste, self-respect, social consciousness, broad heart and other qualities among the women of the society in question. The characters, Basabadatta and Padmavati, described in the drama *Swapnabasabdattam* are also very rich. Both of them were beautiful, educated, adept in arts, had love for their husband, broad-hearted, full of self-sacrifices.

V

The Hindu scriptures never placed women on a level with men. These sacred treatises are threefold—*Sruti*, *Smriti* and *Nyaya*. They contain the vast literature of sanskrit religious laws. Individuals, both man and woman should not do anything that comes into conflict with the guidelines set by these three authorities. If, in any case, there is a conflict between these three authorities, some texts allow an internal guideline. The popular teaching of these *prasthanas*—the authorities containing guidelines—are full of diatribes against women in general. In the essay some representative women from Bhasa's dramas are discussed and it is seen that there were stratification among the queens, prostitutes and slave girls. Centuries have passed but little change is noticed in the condition of women in Hindu society. Let us conclude from the editorial of the feminist magazine *Manushi* that describes the status of women in India as follows:

"The pervasive popular cultural ideal of womanhood has become a death trap for too many of us. It is woman as a selfless giver, someone who gives and gives endlessly, gracefully, seemingly, whatever the demand, however unreasonable and harmful to herself. She gives not just love, affection and ungrudging service but also, if need be, her health and ultimately her life at the altar of her duty to her husband, children and the rest of her family……..This ideology of slavery and contempt for women in the family plays a more important part than even beatings or bullets in keeping women oppressed."

(Quoted in Julia Leslie's article Recycling Ancient Material: An Orthodox View of Hindu Women, in *Women In Ancient Societies* edited by Leonie J. Archer *et al*, P.233, Macmillan, London,1994.)

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7

A Household-Level Study of Multidimensional Poverty in Bankura District

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Abstract

The purpose of this study is to assess the multidimensional poverty and its determinants for the households in Bankura district, West Bengal. We have compared the assessment of poverty/deprivation using the traditional money-metric measure and using its multidimensional constructs. In order to construct multidimensional poverty we have considered ten indicators covering three dimensions viz. health, education and the standard of living. The Ordered Logit regression model has been formulated to investigate the factors affecting the probability of multidimensional poverty at different extents. Using a set of primary data collected from 580 households this study has reported that 40 per cent of the sample households are income poor while 52 per cent suffers from multidimensional poverty. Besides, 13.6 per cent of the sample households, who are 29 per cent of the non-poor households, are vulnerable of multi-dimensional poverty. The Ordered Logit regression analysis reveals per capita household income, landholding, major occupations and castes as significant determinants of multidimensional poverty for the households in Bankura district. However, type of family, social status and participation in SHG-

centric microfinance programme are less important in the determination of the extent of multidimensional poverty.

Keywords: *Bankura district, ordered Logit, multidimensional poverty*

Introduction

Extent of poverty of household is normally measured by per capita income or consumption level. However, it has been acknowledged that poverty is a manifestation of monetary and non-monetary deprivations of mankind. In other words, poverty is not only the lack of necessities of material wellbeing but also the denial of the opportunities of living with dignity. Poverty is now viewed as a multidimensional issue. The dimensions of poverty are heavily grounded on the components of basic needs approach and Sen's capability approach. The common dimensions of poverty are health, education, standard of living and entitlement, empowerment etc.

The money metric measure of poverty fails to encompass these issues. It encourages the development of alternative measures that include the multiple dimensions of poverty and alleviate the shortfall in money metric measures. As a result, the famous Human Development Index (HDI) pioneered by the UNDP has been appeared. We have got Human Poverty Index (HPI). The Gender Development Index (GDI) and the Gender Empowerment Measure (GEM) have also been developed to measure poverty in a gender perspective. These indices are now used to measure the average achievement for the country as a whole; such indices divert the focus from the poor. They do not take into account the distribution of human development within population subgroups or households. Thus, these measures are not applicable to measure the extent of poverty at the household level and at the individual level.

Very recently, Alkire and Santos, (2010) have introduced Multidimensional Poverty Index (MPI) to focus multidimensional deprivations among poor households. The first effort to implement a multidimensional measure of poverty has been in the UNDP Human Development Report, 2010, following methodology of Alkire and Santos, (2010). The MPI evaluates poverty based on a household's deprivation in three basic dimensions –health, education and living standards. The main advantage of MPI over HDI is that it is applicable at the country level and as well as at the household level. The MPI helps identify the poor and design policies to address the interlocking deprivations of the poor

households. Therefore, this approach is consistent with the household level empirical work which would be helpful for decentralised planning. This paper has tried to focus glimpses of the extent of multidimensional poverty of the households in the district of Bankura, West Bengal.

The rest part of this paper has been designed as follows. Section-2 deals with the literature review and objectives of this paper. We have specified the methodology and data base for this empirical study in section-3. In section section-4 we discuss our empirical findings. Section-5 concludes this study with some policy prescriptions based on empirical findings.

Motivation and Objectives

Recently, researches on poverty measurement and analysis have been shifted to understanding poverty in its multidimensional form (Wagle, 2005; Bourguignon and Chakravarty, 2003; Atkinson, 2003). According to Sen (1988) income represents the means to better living conditions but it is not the better living condition in itself. In order to alleviate poverty he has proposed to reduce deprivations in living conditions or functionings that people can achieve. Income creates the ability to purchase commodities that help achieve some functionings but the conversion of commodities into functionings is not precise for all. Individuals/households differ in their ability to convert commodities into functionings due to a range of factors such as physical entitlement, nature of occupation, public actions, and social status.

However, Sen (1988) did not propose any measure that captures multiple dimensions of deprivations or poverty. The first successful attempt to measure multidimensional deprivations was HDI in 1990 proposed by Mahbub ul Haq. It has been appearing as achievement index of the countries in Human Development Reports since 1990. The measure of HDI includes average income, longevity and educational attainment of the country. But this measure is not applicable for the household level data. Alkire and Santos, (2010) were the first who have computed MPI for 104 developing countries using household survey data. They have considered ten indicators corresponding to same three dimensions as the HDI: Education, Health and Standard of Living. The MPI captures a set of direct deprivations that batter a person at the same time. In their working paper they have explained the computational methodology and components in the MPI. They have examined the relation between three income

headcounts (using the $1.25/day, $2/day and national poverty lines) and deprivations in each of the three dimensions of the MPI, as well as with the MPI itself. They have found that the headcounts with the two international poverty lines are highly correlated with the MPI, but correlations are much lower with the headcounts using the national poverty lines.

However, they have documented many examples of mismatches between the two poverty criterions. Following Alkire and Santos, (2010), UNDP Human Development Report has published that most of the world's multidimensional poor live in south Asia and Sub-Saharan Africa. They have calculated that 55.4 per cent of the population of India is multi-dimensionally poor. Intensity of multidimensional poverty among the Indian states is highest in Bihar (MPI=0.5) followed by Jharkhand, Uttar Pradesh, and Madhya Pradesh. It shows that the value of MPI of West Bengal (MPI=0.32), Orissa Rajasthan and that of north eastern states belongs to the range 0.3-0.4 in 2008-9. Bagli (2013) has developed a comprehensive index of housing deprivation (IHD) for each state in India. This index combines four indicators of housing condition viz. percentage of households having kancha house; percentage of households use unsafe source of drinking water; percentage of non-electrified households and percentage of households without improved sanitation facility. The IHD has been computed measuring the normalized inverse Euclidian distance of the deprivation index vector from the worse situation of deprivation. It has been reported that housing deprivation is highest in Orissa followed by Bihar, Jharkhand. Housing deprivation is least in the states of Delhi, Kerala, Goa and Hariyana. The study has obtained a close and negative association between IHD and HDI. However, this measure has covered only the living standard dimension of poverty and is also applicable in macro level study.

So far, these studies and reports did not provide district level MPI which is very important for decentralised planning. Even human development reports of the districts did not cover the issue of MPI. We know that the districts of Bankura Purulia and West Midnapore are the most backward districts, which are called Jangalmahal, in West Bengal. They deserve separate plan for human development. However, for this purpose we need to understand the present situations of MPI and its components for these districts. With this end in view, we have planned to study multidimensional poverty and its determinants in the district of Bankura with the following objectives.

First, we study the extent of multidimensional poverty for the households residing in the district of Bankura, West Bengal.

Second, we investigate the determinants of multidimensional poverty at the household level.

Study Design

In order to measure MPI for the households in Bankura district this study follows the methodology proposed by Alkire and Santos (2010). It covers the overlapping deprivation across the field of health, education and standard of living. We have considered ten indicators in total for capturing the deprivation in the array of three dimensions viz. health, education and standard of living. The dimensions and indicators of multidimensional poverty with deprivation criteria and weights have been presented in table 1.

Table 1: Dimensions and Indicators of Multidimensional Poverty at Household

Dimension	Indicators	Weight
Health	1. At least one member suffers from malnutrition	5/3
	2. One or more child have died during last five years	5/3
Education	1. No one has completed five years of schooling	5/3
	2. At least one school-age child not enrolled in school	5/3
Living Condition	1. No electricity	5/9
	2. No access to safe drinking water	5/9
	3. No access to improved sanitation	5/9
	4. House has dirt wall/floor	5/9
	5. Household uses dirty cooking fuel (dung, firewood or charcoal)	5/9
	6. Household has no car and owns at most one of: bicycle, motorcycle, radio, refrigerator, telephone or television	5/9

Source: Compiled from UNDP Human Development Report, 2010

Equal weight has been attached for each dimension and each indicator

within a dimension has also got equal weight. We assign value '1' for deprivation in each indicator and '0' otherwise. The maximum total deprivation score (d) will be 10. The maximum deprivation score in each dimension is 10/3 since the MPI puts equal weight for each dimension. As the dimension of health has two indicators each indicator with deprivation in the health dimension is worth 5/3. Similarly, each indicator of education dimension of deprivation takes score 5/3. The standard of living dimension has six component indicators so each indicator with deprivation carries score 5/9. Now to measure the deprivation level of a household we take the summation of the score obtained the household in the range of all the dimensions and indicators. According to UNDP a household (or all members of the household) is said to be multi-dimensionally poor if the sum of weighted deprivation score (WDS) for a household is 3 or more.

Alkire and Santos (2010) have already explained the justification behind the inclusion of these dimensions and indicators for measuring MPI. Their empirical study is, however, based on secondary data. Among the indicators the measure of malnutrition due to poverty is difficult one. Usually, the malnutrition status is measured following BMI for adults and weight for age for children. We follow these measures but it was not possible to follow these accurate measures for each household member due to absence of some of them and due to our time and technical constraints. We rather measure it by personal observations keeping the measures of BMI and weight for age of children in mind. For other indicators we simply gather the required information asking the respondents and from our observations.

The multi-dimensionally poverty head count ratio (H) is the proportion of the multi-dimensionally poor people to the total population. Therefore,

$$H = q / n$$

where, q stands for the number of multi-dimensionally poor people/ households and n is the total population/households. It actually measures the incidence of poverty. The intensity of multi-dimensional poverty (A) reflects the proportion of the weighted component indicators, in which, on average, poor people are deprived of. Technically,

$$A = \sum_{1}^{q} c / qd$$

where, *c* denotes the total score of weighted deprivations the poor people experience and *d* stands for the total number of indicators in all the dimensions of deprivation. Finally, the multi-dimensional poverty index is obtained by multiplying the multi-dimensionally poverty head count ratio (H) with the intensity of multi-dimensional poverty (A).Therefore,

$$MPI = H \times 4$$

In accordance with the sum of weighted deprivation score this study has ordered the extent of multidimensional poverty in four different classes. If $0 \leq WDC \leq 2$ for a household we treat it as well off class. The households having $2 < WDC \leq 3$ have been considered as vulnerable of multidimensional poverty. The households with $3 < WDC \leq 5$ are belonging to marginally poor class. Finally, we have identified the households as extreme poor who have $5 < WDC \leq 10$. We have attached value 1 well-off class, 2 for vulnerable class, 3 for marginally poor and 4 for extreme poor. Therefore, the extent of multidimensional poverty is a category variable and the categories have hierarchically order. Against this backdrop, formulation of ordered logit model is appropriate for investigating the determinants of multidimensional poverty. This model may be build around a latent regression such that,

$$Y_i^* = X_i' \beta + U_i$$

U_i is logistically distributed with $F(z) = \dfrac{e^z}{1+e^z}$

A normalisation is that the regressors do not include an intercept. However, in this model usually Y_i^* is unobserved. In order to observe it we specify,

$$Y_i^* = j \text{ if } \alpha_{j-1} < Y_i^* < \alpha_j,$$

where, $j = 1,2,3,4$ and $\alpha_0 = -\infty$ and $\alpha_4 = \infty$

$$\Pr(Y_i = j) = \Pr(\alpha_{j-1} < Y_i^* \leq \alpha_j) = \Pr(\alpha_{j-1} < X_i' \beta + U_i \leq \alpha_j)$$

$$\text{then, } = \Pr(\alpha_{j-1} - X_i' \beta < U_i \leq \alpha_j - X_i' \beta)$$

$$= F(\alpha_j - X_i' \beta - F(\alpha_{j-1} - X_i' \beta)$$

Here, F is the cumulative distribution function of U_i. The regression parameters β and the three threshold parameters α_1, α_2 and α_3 are obtained by maximising the log likelihood with $P_{ij} = pr(Y_i = j)$.

In this model we can compute the marginal effect after logit on the probability of choosing alternative *j* when regressor X_r changes such that,

$$\frac{\delta \Pr(Y_i = j)}{\delta X_r} = \left[F'\left(\alpha_{j-1} - X_i'\beta\right) - F'\left(\alpha_j - X_i'\beta\right)' \right]\beta_r$$

Where, X_r is *r*th independent variable and β_r is corresponding coefficient parameter.

This study is based on a household survey conducted in two blocks, Kotulpur and Chhatna, of Bankura district during 2012-13. The district of Bankura is a backward district in West Bengal. Among the selected blocks Kotulpur is relatively developed whereas Chhatna is relatively underdeveloped area in the district of Bankura. At the first stage we have randomly selected two Gram panchayets from Chhatna block and three from Kotulpur block. This study has covered twelve villages taking at least two from each *Gram Panchayet*. Finally, after making a pilot survey for each village, sample households have been selected randomly from the sample villages. It should be noted that sample households from each village are not equal. It has varied with total inhabitant and other socio economic characteristics of the villages. Therefore, sampling for this study may be looked as a multi-stage stratified random sampling. During the field survey we have recorded the relevant information of 580 households which constitute our sample size for this empirical study.

Empirical Findings and Discussion

This section is devoted to analyse the empirical findings. Table 2 describes the summary statistics of the indicators of multidimensional poverty of the sample households. We find that 37% of our sample households have at least one malnourished member. 11% of our sample households have reported that at least one child below five years has died during the last five years. In more than one fifth of the sample households no one household member has passed primary level education. In spite of the commendable expansion of educational infrastructure in West Bengal still at least one child (up to 14 years) of one third sample households do not enrol in educational institutions at the time of survey.

It has been found that 23% of the sample households are not electrified. It is not surprising that 35% of the surveyed households drink unsafe water. Most of these households drink water with heavily contaminated by iron. Three fourth of the sample households use dirty fuel like dung, firewood or charcoal for cooking. It indicates that households in the area under study have hardly access to modern fuel and energy for cooking. We obtain that housing condition of the sample households is not so good. It is observed that 70% of the sample households live at house with completely dirt wall/floor. Although no one have car of their own we have observed that majority of the sample households are not asset poor.

Table 2: Description of the Indicators of Multidimensional Poverty (N=580)

Dimension/Indicator	Number of Household	Percentage
Health		
At least one member is malnourished	215	37
One or more child have died during last five years	66	11
Education		
No one has completed five years of schooling	121	21
At least one school-age child not enrolled in school	190	33
Living Conditions		
No electricity	135	23
No access to safe drinking water	203	35
Household uses dirty cooking fuel (dung, firewood or charcoal)	435	75
House has dirt wall/floor	405	70
Household has no car and owns at most one of: bicycle, motorcycle, radio, refrigerator, telephone/mobile or television	86	15
No access to improved sanitation	398	69

Source: Author's own computation based on sample observations

A few households have refrigerator and landline telephone connection along with other assets. Ownership of bicycle, mobile, motorcycle and television are very common in the area under study. We find that only 15% of our sample households do not own more than one of the listed assets

under the dimension of standard of living. Our survey has reported that more than two third of the sample households do not have access to improved sanitation. It tells us that the households in the district of Bankura are not conscious regarding health and hygiene. The description of the indicators, therefore, shows that majority of the households in the districts of Bankura are poor in terms of health, education and standard of living.

Table 3 and table 4 present the socio-economic profile of the sample households. Based on the criteria of identifying multi-dimensionally poor we have found that 53% of our sample households are multi-dimensionally poor. While 40% of the sample households are income poor in accordance with the poverty line income (₹ 643.20 per head per month) for the rural people in West Bengal (Government of India, 2012). The average annual household income is ₹ 13.81 thousand which is below the poverty line income for the rural people in West Bengal. In order to measure the extent of multidimensional poverty of the households we consider the sum of the score obtained the household in the range of all the dimensions and indicators. In this respect average extent of multidimensional poverty is 3.34 which is greater than the cut off value for the multidimensional poverty.

Table 3: Percentage Distribution of the Attributes of the Households (N=580)

Selected Attributes of the Households	Number	Percentage
Multidimensional poor	305	52.59
Income poor	232	40.00
Landless households	85	14.65
Social Status of Household Head (leader/committee member =1)	199	34.31
Participation in Self-Help Group-Centric Microfinance Programme	255	43.97
Participation in MGNREGS	183	31.55
Financial Inclusion (A least one member have at least one of: a bank A/C/post office A/C/Life Insurance/ Health Insurance)	356	61.38
Cultivation as Major Occupation	257	44.31
Nonfarm Self Employment/Service as Major Occupation	125	21.55
Casual Labour as Major Occupation	198	34.14
Belonging to Scheduled Castes	195	33.62

Belonging to Scheduled Tribes	68	11.72
Belonging to OBC	136	23.44
Belonging to General Castes	181	31.20
Nuclear Family	475	81.90

Source: Author's own computation based on sample observations

The SGSY and MGNREGS are functioning to serve the poor in the district of Bankura. It has been reported that 44% of the sample households have participated in self-help group (SHG) centric microfinance programme under SGSY. The average length of participation of sample SHG-members is 27 months. Among the sample households 31% have job-card under MGNREGA. However, most of the job-cardholders under our sample have reported that they have got 35-40 days employment in average during the financial year 2011-12. The policies of SGSY and MGNREGS, therefore, fail to reach the vast section of poor in the area under study. Thus there is a greater scope for further extension of these policies for improving the economic condition of the rural poor. A least one member of 61% of the surveyed households have at least one of: a bank A/C/post office A/C/ Life Insurance/Health Insurance. While 54% have access to formal credit. Thus majority of the households in the area are financially included. In terms of major occupation we have divided the households into three categories- cultivation, self-employment/service and casual labour. Among the sample households 44% 21% and 34% are cultivators, self-employed/ service and casual labour respectively. One third of the sample members are leader or committee member of different social institutions. Our sample is comprised of 34% SC, 12% ST and 54% general caste/OBC households. Majority of the households are of nuclear type.

Table 4: Descriptive Statistics of the Households Characteristics (N=580)

Households Characteristics	**Mean**	**Std. Dev.**	**Max.**	**Mini.**
Family Size (Number)	3.86	1.17	8.00	1.00
Weighted Deprivation Score of the Households	3.34	2.30	10.00	0.00
Duration of Participation in SHG DPSHG (Month)	27.24	36.79	145.00	0.00
Highest Education Among Males (HIEDUM) (Year)	7.89	4.43	22.00	0.00

Highest Education Among Females (HIEDUF) (Year)	5.54	4.55	19.00	0.00
Landholding, LANDH, (bigha, 1 bigha = 0.4 acre)	2.65	2.99	16.00	0.00
Worker Population Ratio WPR (%)	50.32	21.98	100.00	0.00
Annual Per Capita Income (APCIN) (₹ '000)	13.81	13.86	150.00	3.90

Source: Author's own computation based on sample observations

In table 4 we find that average family size of the sample households is 4. Average education of the highest qualified male (female) member in the sample households is eighth (sixth) standard. Average landholding of the sample households is 2.65 bigha while 14% households are landless. The statistics of worker population ratio tells us that in average half of the households members are engaged to earn livelihood.

In accordance with the sum of weighted score of the indicators of multidimensional poverty we have categorized the households into five categories as shown in table 5. We find that 21% of the sample households are extreme poor. The extent poverty of 31% households is marginal. We already said that in total 53% are multi-dimensionally poor. Besides, 13% of the sample households, who are 29% of the non-poor households, are vulnerable of multi-dimensional poverty. Therefore, our empirical study reveals that in accordance with the methodology of multidimensional poverty two third of the households in Bankura district are either vulnerable or poor. Finally, the calculated value of multidimensional poverty index for the sample households is found to be 0.270. Alkire, *et al.* (2010) have found MPI is equal to 0.32 for West Bengal in 2008-09. Therefore, we can say that the intensity of multidimensional poverty in West Bengal slightly reduced during period 2008-09 to 2012-13. However, the value MPI shows that in average households of Bankura district are vulnerable in multi-dimensional poverty.

Table 5: Extent of Multidimensional Poverty among the Sample Households

Weighted Deprivation Score (WDS)	Extent of Multidimensional Poverty (Y)	No.	%	Cumulative %
$5 < WDS \leq 10$	Extreme poor (Y=4)	124	21.45	21.45

3< WDS ≤ 5	Marginal Poor (Y=3)	181	31.20	52.65
2< WDS ≤ 3	Vulnerable (Non-poor) (Y=2)	79	13.60	66.25
0< WDS ≤ 2	Well-off (Non-poor) (Y=1)	196	33.75	100.00

Source: Author's own explanation

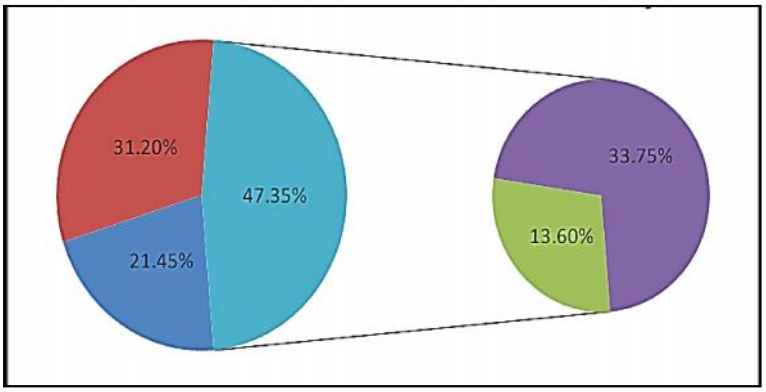

Fig. 1: Distribution of Multidimensional Poverty

Source: based on table 5

In table 6 and table 7 we present the results of the estimated ordered Logit model and marginal effects after logit on the probability of belonging to alternative extent of multidimensional poverty. The coefficient of per capital household income is negative and statistically significant. It indicates that an increase in per capita income necessarily reduces the probability of being extreme poor. The marginal change in probability of being multidimensional poor household tells us that one thousand additional per capita household income above mean reduces the probability of the incidence of extreme (marginal) multidimensional poverty or have less deprivation by 1.22% (2.18%) points. On the other hand, a household with additional per capita income above average has 0.04% point more probability to belong in vulnerable or well off class. However, additional income increases the probability of being well-off class by 2.9 % points. Income increases the purchasing power which helps the households fight against multiple deprivation. Thus income generation is a favourable instrument for alleviating multidimensional poverty.

Landholding of the household has also significant impact of poverty reduction. The marginal effects indicate that one bigha extra landholding from mean reduces the probability of being extreme (marginal) poverty or less deprivation by 1.4% (2.5%) points. Further extra landholding increases the probability of belonging in well-off class. The coefficient of the major occupation (cultivation=1) and (Non-Farm/Service=1) indicate that cultivator and nonfarm self-employed /service holder households are relatively less poor compared to casual labour class. If a household can move from casual labour to cultivator, the probability of being extreme (marginally) multi-dimensionally poor will reduce 5.7% (10.43%). Therefore, land redistribution in favour of landless or poor is urgent requirement in order for multidimensional poverty reduction. On the other hand, if a labour class household can shift to self-employed or service holder household the probability of being extreme (marginally) multi-dimensionally poor will reduce 5.41% (11.61%). Thus occupation mobility from casual labour to cultivator or self-employment or service is needed to arrest multidimensional poverty.

We have found that households with socially empowered heads are less likely to belong in extreme poor class. However, this finding is not statistically significant. The coefficient of the Duration of SHG membership is positive but insignificant. It implies that participation in SHG centric microfinance program is immaterial in the determination of the extent of multi-dimensional poverty. Our several studies conducted in this district (Adhikary and Bagli 2012, 2013, Bagli and Adhikary 2013,) reveal that SHG-centric microfinance programme successfully have ensured access to affordable micro credit of the rural people. SHGs reduce income poverty of the rural people. It can finance to smooth consumption throughout year, to purchase durable assets to facilitate drinking water to build sanitation etc. So we expected that the duration of SHG membership reduce the probability of the incidence of multidimensional poverty. But our empirical finding comes against our hypothesis although it is not statistically significant. It indicates that SHG centric microfinance program fails to improve health, education and standard of living conditions of the people in Bankura district.

The marginal probability of the incidence of multidimensional poverty reveals that in contrast to the general caste households, scheduled caste and scheduled tribe households are more likely to fall in multidimensional poverty.

Table 6: Estimated Ordered Logit Model for Multidimensional Poverty®

Dependent Variable: Extent of Multidimensional Poverty

Method: ML - Ordered Logit (Newton-Raphson)

Included observations: 580

Convergence achieved after 5 iterations

Independent Variables	Coefficient	Std. Error	z-Statistic	Prob.>z
Annual Per Capita Income (APCIN) (₹ '000)	-0.136	0.0197	-6.89	0
Landholding (LANDH) (bigha) (1 bigha =0.4 acre)	-0.156	0.039	-3.95	0
Type of Family (Nuclear =1)	-0.022	0.225	-0.1	0.923
Major Occupation CULTI, (Cultivation =1)	-0.657	0.242	-2.71	0.007
Major Occupation NFARM (Non-Farm/Service= 1)	-0.704	0.285	-2.47	0.013
Social Status of Household Head (Leader/Committee member =1)	-0.295	0.221	-1.33	0.182
Duration of Participation in SHG DPSHG (Year)	0.004	0.002	1.44	0.15
Caste (OBC=1)	0.648	0.232	2.78	0.005
Caste (Scheduled Caste=1)	1.23	0.233	5.25	0
Caste (Scheduled Tribe=1)	1.585	0.314	5.04	0
Cut Point (Well off group)	-2.790	0.387		
Cut Point (Vulnerable group)	-1.878	0.377		
Cut point (Poor)	0.212	0.361		
Summary Statistics				
Pseudo R-squared	0.212	Log likelihood		-608.804
LR statistic [$Ch^2(10)$]	326.82	Probability (LR statistic)		0

®Casual labour class is reference category for major occupations, Common persons are reference category for social status and General caste is reference category for Castes.

Source: Author's own computation using software STATA 9.2

The probability of being multi-dimensionally extreme poor for a scheduled caste (scheduled tribe) household is 13.17% (22.53%) is higher than that for general caste households. The probability of the incidence of extreme multi-dimensional poverty for OBC households is 6.6% higher than that of the general caste households. Thus the scheduled tribe households are most deprived of health, education and standard living opportunities than other households in Bankura district.

Table 7: Marginal Effect of the Independent Variables at Different Extents of Multidimensional Poverty

Independent Variables	Y =4	Y =3	Y =2	Y =1
Annual Per Capita Income (APCIN) (₹ '000)	-0.0122	-0.0218	0.0048	0.0292
Landholding (LANDH) (bigha) (1 bigha =0.4 acre)	-0.0140	-0.0249	0.0055	0.0333
Type of Family (Nuclear =1)#	-0.0020	-0.0035	0.0008	0.0047
Major Occupation CULTI, (Cultivation =1)#	-0.0576	-0.1043	0.0202	0.1417
Major Occupation NFARM (Non-Farm/Service= 1)#	-0.0541	-0.1161	0.0103	0.1599
Social Status of Household Head (Leader/Committee member =1)#	-0.0255	-0.0477	0.0090	0.0642
Duration of Participation in SHG DPSHG (Year)	0.0004	0.0007	-0.0001	-0.0009
Caste (OBC=1)#	0.0669	0.0936	-0.0319	-0.1286
Caste (Scheduled Caste=1)#	0.1317	0.1657	-0.0587	-0.2387
Caste (Scheduled Tribe=1)#	0.2253	0.1325	-0.1064	-0.2513

Source: Author's own computation using software STATA 9.2

Policy Implications and Conclusion

This study reveals that multidimensional poverty in the district of Bankura is more serious problem than the income/consumption poverty. Income generation, no doubt, has some accelerating effect on reducing multidimensional poverty. In addition to income generation, we need to ensure the accessibility to other improved facilities like health care, safe

drinking water, education, affordable housing, and sanitation that directly fight with multidimensional poverty. These are badly needed particularly for the socially backward people belonging to scheduled caste, scheduled tribe, OBC people and casual labour class.

This study claims upward occupational mobility towards cultivation or non-farm self-employment or service for reducing the pangs of multidimensional poverty. In order to speed up the occupational mobility we have to take some further decentralized planning towards land redistribution and micro entrepreneurship development which help poor people shift to cultivation or non-farm self-employment occupation. Some continuous employment generation plan/programme is also necessary. We have the experience that immediate steps towards land redistribution towards poor have some socio-economic difficulty. Of course, we may follow the scheme like land purchase scheme for SC/ST women in Tamil Nadu. Under this scheme, landless women can purchase land for cultivation with a maximum project cost rupees two lakhs. This scheme entails 50 per cent subsidy from Tamil Nadu Adi Dravidar Housing and Development Corporation Ltd. and remaining part comes as bank loan. Moreover, implementation of policies regarding non-farm self-employment or salary based employment generation is relatively socio-economic trouble-free and suitable too.

We have already MGNREGS for employment generation for the rural people. It is evident that this programme has been able to provide only 35-40 days job per year in the area under study. So, it is another casual employment system for the rural households. It implies that MGNREGS has done little for the poor and fails to change major occupation of the households in Bankura district. In order to generate incessant employment we actually need new industrialization or modernization of the traditional industries in this district. Juxtaposed with the industrialization we have to take some policies for rural entrepreneurship development. It can shift the major occupation of the casual labour towards self-employment. We have found that SHG-centric microfinance programme has been functioning for rural entrepreneurship development in general and women entrepreneurship development in particular.

During field survey we observe that the performance regarding entrepreneurship development of this programme is, however, not commendable in position in Bankura district. Majority of the beneficiaries of SGSY in the area under study could not undertake self-employed activity.

We feel that the lack of management efficiency and social responsibility of the microfinance institutions are the primary cause of the low performance. However, we find some negligible direct effect of this programme on the multidimensional poverty. Therefore, financial inclusion policies through SHG are less important for reducing multidimensional poverty. This study clearly shows that the households under scheduled caste, scheduled tribe and OBC are more deprived of multiple dimensions of poverty. Among the castes the incidence multidimensional poverty is relatively highest among the households under scheduled tribe households followed by scheduled castes, OBC and General castes. Therefore, the socially lower castes deserve some special package like extension of health care facility, local language based education, sanitation and housing programme, for reducing their multidimensional poverty.

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