



Institutional Reform and The Development Policy to Enhance Labour Freedom and Efficiency in The Agricultural Sector - An Emphasis on Developing Countries Perspective

Rajni Kapoor*

Rajnikapoor@sbs.du.ac.in, kapoorrajni2@gmail.com
Research Scholar, MRIIRS, (Deemed University)
Assistant Professor, Department of Economics at Shaheed Bhagat Singh College, University of Delhi, India

Dr. Nimai Das

nimai_econ@rediffmail.com, nimai.das@iifm.ac.in
Associate Professor, Indian Institute of Forest Management (IIFM) Bhopal, India

Abstract

The paper analyzes the concept of labour freedom in the agricultural sector empowering with the ownership rights, legal approvals and autonomy of choices involving policy changes in the rural development thereby giving more opportunities and choices to the rural labour. Institutional reform redistributes the ownership rights of landholding among the small, marginal and landless labourer. The reform has provided partial possession rights to tenants' and amended land rental agreements improving the bargaining capacity of the renters and made them capable to extract the lease while making contracts with the landlords. The paper focuses on the requisites of rural development policy to explore the farm-jobs and off-farm job opportunities thereby enhances labour freedom, rural wages and employment rate affecting the labour mobility. In the developing countries, rural development programme has responded to implement employment policy increasing rural employment with off-farm jobs to jobless workers in the local rural area. Labour freedom in the agricultural sector has implications on the economic development perspective as the concept of freedom is grounded upon the principle of equity and efficiency, subsequent to that institutional reform has provided equal freedom and opportunities to the rural labourer that has boosted up the growth and efficiency of the agricultural sector. The paper has suggests the policy makers to emphasize more on the rural development to reduce migration of labour for job, family education, health and better infrastructure. The provision of labour freedom establishes to build up capabilities among the rural labourer, farmers and migrant workers thereby raises living standards through reducing the rural poverty level and leading to the transforming of the rural sector.

Key words: farm-size, labour freedom, migration, agricultural efficiency

Introduction

Freedom is a central part of the opportunity for the workers to get better access in the labour market and is one of the important determinant of economic freedom that facilitated the growth of an economy. Economic freedom builds capability among the economic agents for taking decisions in an efficient way. At the individual level, the process of economic freedom affects capabilities with secured private property rights, civil liberties and human rights to attain well-being of the societies, and at the institutional level, it is the

skill formation to access the government offers, opportunities, options and openness (Sen, 1985). Hence, economic freedom is determined by the socio-economic factors like family income and occupation, technical, financial, legal, business environment and government regulations (Berggren, 2003). In the agricultural sector, labour freedom is empowered with private property rights, legal approvals and autonomy of choices including policy changes towards rural development and opportunities towards the labour that enhanced capabilities to fully utilize the resources.

Labour freedom involves institutional set up and legal rights for the farm workers to reduce the inverse farm size and labour productivity relationship. Legal implementation of land redistribution and tenancy reform is a political and institutional policy reform used to stabilize agricultural sector effectively (Besley and Burgess, 2000). The environment of freedom is given to labour after a sustained struggle, claims and agitations from the landless workers and make possible the significance of ownership rights in the history of the agriculture. Thus, institutional reforms and labour freedom have positive and significant effect on incentives, revenue and efficiency.

Ownership rights in agriculture has increased the incentives through tenancy reforms and has redistributed the landholdings to more productive and efficient farms within the village. Consequently, the greater demand for tenants and cultivators has absorbed the landless and casual workers of the rural labour market. The concept of labour freedom comprises a prominent strategy to completely increase labour usefulness through hiring workers on permanent or contractual basis (say for a year) in agriculture (Eswaran and Kotwal, 1985), there can be more faith and trust relationship for farming and even workers could then better think for the prosperity of the farms (Taslim, 1990). Therefore, the freedom of labour benefits the 'forced' labour or 'casual' labourers who have been engaged in the farm activities because of some credit interlinked transactions with big landlords, informal moneylenders and traders, may be promoted to work as hired labour¹.

Labour freedom compacts with income and employment opportunities for the workforce that is expanded through economic transformation and is facilitated to disburse in the process of development (Mellor, 2017). Therefore, the migration of labour from one place to another for employment and for better labour wage policy is most desired in the growing scenario to affect the farms rather being characterized as the surplus, involuntary or disguised labour (Ezeala-Harrison, 2004). Agricultural sector being the traditional, unorganized and informal sector is forced to hire only casual labour as most of the decisions are taken by the households thereby more chances of resource-use inefficiency of the workers (Moschini and Hennessy, 2001). Moreover, its lean and peak seasons wants timely access of labour to complete its cyclical operations (Taylor, 2010).

The efficiency of labour is significant component affecting agricultural productivity especially in the developing world. There is labour force inefficiency paradox in agriculture as the contribution of the sector in gross domestic product has been gradually falling relative to the share of industrial and service sectors worldwide, whereas the dependency of the workforce employment on agriculture has not declined much. Consequently, income and the living standards of the farm workers have declined. There is a group of unskilled workforce that has been hired as marginal labourers in another farming sector or absorbed in the informal off-farm activities of the urban area. Labour mobility and irrational movements for job cannot alone resolve the allocative ineffectiveness of labour. In this state, labour freedom enhances by developing the institutions through land and labour reallocation thereby accumulates off-farm job opportunities to the labour (Benjamin and Brandt, 2002).

The first objective of the paper is to review the institutional policy reform of redistribution of the ownership rights to enhance labour freedom in the rural sector. Second objective of the paper is to examine the impact of the favorable development policy towards opportunities and choices provided in the rural labour market. During the process, the paper reviews the impact of agricultural property rights on productivity and effects of the development policy on the rural-urban wage rate and employment gaps

¹ (a) 'farm labour'- marginal or landless labourers acquired the possession of land after the redistribution of ownership rights and become, (b) 'hired' labour – forced labour and casual labour benefitted with higher pay, and (c) 'tenant' labour- renters or sharecroppers get more incentive in contract farming after tenancy reform.

thereby affects the freedom of labour as these off-farm expansions in the rural sector may affect the in-migration and out-migration of the workers. At the end, the paper attempts to describe the indicators affected the labour freedom of the agricultural sector with some policy implications.

Literature Review

It is reviewed that labour freedom is the ability of the workers to work as much as death regardless to the workplace whereas, it is the facility given to employers to hire workers easily in need and to discharge when no longer required to sustain the productivity of the sector. In this way, labor freedom offers 'voluntary exchange' to both workers and employers with the regulation of labour laws. Labour freedom is widespread, it includes personal freedom or willingness and ability to do the work along with the legal rights to do (Mill, 1969). The notion of labour freedom is the regulation of labour laws with legal rights to work sanctioned by the authorities. At the conceptual level, labour freedom and labour laws contradictory to each other but, at the functional level, both are same. Labour freedom is most effective, well defined and sustained position of labour laws that has been protected under the rule of law. Labour market regulations need to be flexible to strengthen labour freedom as larger restrictions on the hiring and firing workers, non-binding minimum wage laws and rigid working hours have disregarded employer-employee relationship (Gwartney et al., 1996). These regulations require empirical evidence of implications before operating as over- or under regulation of labor markets laws can be mismanaged². Therefore, most of the countries of the developing world have established rules at the suitable level.

Fraser Institute³ has compiled data on Labour freedom and developed labour freedom index using quantitative measurement of labour market regulations. The study of Gwartney et al. (1996) mentions labour market regulation as a composite average of six components. Each sub- component and component is measured on a scale from 0 to 10, 0 reflecting most restrictive regulations meant for lacking of economic and labour freedom. 10 stands for perfect flexibility in the employment regulation. The six components of Labour⁴ have been scaled to estimate an index for labour market regulations. Labor-market regulations depict choices and opportunities for both the employer and employee, and in this way, labour freedom enhances and sustains labour market efficiency. In order to achieve high score value of the component of regulations in the labor market, a country need to allow market forces to determine wages, setting the conditions of hiring and firing from job. Labour market regulations aim to improve the functioning of the labour market while protecting workers and determining types of employment contracts, minimum wages, working hours, working conditions, prohibit certain employment practices, hence to provide job security and social protection to the workers (Walker, 1988; Block, 1991).

The remainder of the paper is organized as follows: Section II presents the evidence of land allocation and agricultural property rights for the efficiency of labour, Section III analyses the significance of the development policies and choices for the better reallocation of labour to access employment opportunities. Section IV contains conclusions and policy implications.

Methodology

Provision of agricultural property rights to attain labour freedom and efficiency

The institutional reforms aim to redistribute the private ownership rights from big landholders to marginal and landless classes related to agriculture thereby enhances the productivity of the sector and overcomes allocative ineffectiveness of labour. In short, the institutional reform provides possessions of landholding to enhance freedom of choice directing to improve the efficiency and incentives to work (Locke, 1980). The reform has created the possibilities to get more access of land for the crop diversification as large

² Designing labor market regulations in developing countries by Gordon Betcherman. IZA World of Labor 2019: 57v2, <http://www.wol.iza.org>

³ Since 1996 The Economic Freedom of the World Index, 1975–1995, has been published in the Fraser Institute following the ideas of Friedman and Gwartney et al. (1996), Walker (1988), Block (1991) at the global level.

⁴ Ratio of minimum wage to the average value added per worker, Hindrance to hiring additional workers, Rigidity of hours, Difficulty of firing redundant employees, legally mandated notice period, Mandatory severance pay.

number of harvesting options are made available to farmers to take output decisions for the best. This process needs the coordination of the exchange activities among the landlords and tenants for their mutual benefits (Powell, 2002). Therefore, institutional reform has included redistribution of the private ownership rights and tenancy reform secured under the rule of law provided to use the resources effectively.

The process of redistribution of ownership rights has given the freedom and opportunities to work to all forms of labour engaged in the farm activities, the impact of reform on labour freedom perspective can be discussed into three categories: the labour who has owned land after the reform will get autonomy being farmers, can take independent production decisions for the best and work as farm workers in their own farms, freedom to forced or hired labour entitle for those who still left landless but now will privilege to get job at improved working conditions with desired wage rate for a longer period of time, and the tenants or renters who are the part of land rental contracts will capable to enhance incentives and security of tenure in rent extraction process with the landlords as tenancy reform increases the negotiating capacity of the renter (Sharma, 1994). The details review regarding the impact of institutional reform and labour freedom discussed in the following sub-sections.

Redistribution of private property rights and labour freedom

Institutional reform requires to resolve allocative ineffectiveness of labour. There is evidence of inverse farm size and labour productivity relationship in the literature by Sen (1964), Hoque (1998), and Taslim (1990) stating smaller the farms, higher is the workers’ efficiency and vice-versa (see table-1). Table-1 represents reduction in the optimal allocative efficiency score of labour as farm size increases, it is proved and estimated in the study that large farms are allocative inefficient to use labour input and hire workers.

Table 1

Inverse relationship among farms-size & allocative efficiency of labour

Farm Size (in Acres)	Allocative efficiency of labour				Total Farms	Regression Coefficient	R ²
	.6-<.7	.7- < .9	.9 - < .1	>=1			
1 - < 3	..	16	28	56	25	0.55	0.86
3 - < 5	..	17	30	53	30	0.63	0.89
5 - < 10	11	11	43	34	35	0.79	0.96
10 - < 15	17	17	33	33	30	0.23	0.92
> 15	20	27	33	20	30	0.15	0.75
Total Farms	15	26	51	58	150		

Source: Estimates of Hoque, 1993

Small landholders use intensive land-use farming and focus on land-quality (Bhardwaj, 1974). In this way, small farms emphasize on land and irrigation improvements. Labour efficiency is improved when small landholders worked in family farms, their implicit wage rate will become lesser than marginal productivity as compared to the wage payments of the hired workers. Therefore, small landholders are more efficient to use the workers than big farms due to labour intensive methods of cultivation (Benjamin and Brandt, 2002). Thus, labour intensive cropping can be the reason of negative land-labour productivity relationship (Taslim, 1990). As supervisions costs are included in the implicit costs when a family worker is required proportionally with the hired labour. Hence, labour intensive cropping involves managerial issues to hire labour (Hossain, 1977).

Labour freedom develops specialization of farming and creates X-efficiency as the process will continue till the land is redistributed to the most efficient labourer (Leibenstein, 1966). Institutional

provision of land reform legislative⁵ seems to be varied across regions due to some political agenda and controversial views regarding the impacts of property rights reform on the agricultural productivity. There is evidence of the inclusion of institutional reform in the study of Chari et al. (2017) and has examined the Household Responsibility System in rural China in the early 1980s marked as a radical change in property rights to reduce the inefficiency of labour and has proved the redistribution of property rights permitting the big landowners to lease out their land in rural China (see Table-2).

Table 2*Impact of property rights reform on labour freedom and efficiency*

Dependent variables	Reform Year	Post Reform Year
Land renting year-wise	0.00657 (0.00561)	0.0151** (0.00715)
New Rentals to individuals	0.0392*** (0.00929)	0.0680*** (0.0186)
Agricultural Revenue	0.00724 (0.0336)	0.0723** (0.0350)
Average revenue per area	0.0543* (0.0302)	0.0698* (0.0349)
Aggregate TFP	0.0389* (0.0225)	0.0934*** (0.0242)

Source: estimates of Chari et al. (2017)

Standard error in parentheses. *, **and *** denotes the significance at the 10%, 5% and 1% level respectively.

Table 2 proves that property rights reform has positive and significant effect on the number of land rental activities, demand for new renters in farm-job, agricultural revenue and total factor productivity (TFP) after the post reform and the reform years, the study has analysed TFP as the most positive-significant factor affected by the ownership right reform in agriculture that has enhanced the freedom of labour (Chari et al., 2017). The study of Carraro and Karfakiss (2018) on the structural transformation in 11 sub-Saharan African Countries has estimated the redistribution of ownership rights as positive and significant component of economic freedom and thus, has enhanced the scope and growth of labour freedom through the structural and institutional transformation of the economy (Carraro and Karfakiss, 2018). The empirical literature of Besley and Burgess (2000) on India has proved that land reform has reduced the poverty level of the households of farm workers.

Labour freedom to ‘forced’ and ‘hired’ labour

Reform of ownership rights enhance the freedom to the ‘forced’ and ‘hired’ workers through improving the work conditions and/or higher pay. Redistribution of land improves the land/labour ratio of the large-size farms. In order to save time and labour hiring cost during the peak cropping and harvesting seasons, landowners are usually involved in explicit and implicit contract with labourers to confirm their continual supply in short-period whenever is needed (Eswaran and Kotwal, 1985). It is valuable to decide labour wage payments as per work capacity assuming the application of static real wage theory. In such a situation, labour is intensified to give their efficient level of services as real wage payments to hired labour will increase and the employers are bound to pay higher amount for engaging the efficient labour maintaining the consistency of labour employed as per productivity, and hence, employers have powerfully controlled the demand for labour during peak season to be able to obtain the optimal employment level at the stable and efficient wage rate (Ezeala-Harrison, 2004).

It is evidenced in the study of Chari et al. (2017) and has found that there is a remarkable rise in real wage payments of ‘hired’ labour in days relative to hours during the post years of institutional reform, table-3 reveals improvements in the marginal productivity of labour and farm profits levels. It represents negative and significant effect on hiring labour in day(s) and costs due to less demand for hired labour till the 3rd quintiles of post reform years (Chari et al., 2017). Improvement in demand is observed because of

⁵ There are four land related laws reallocation of land reform, tenancy reform, abolition of intermediaries and land-ceiling legislation.

managerial abilities of large landowners and the impacts of institutional policy reforms presenting positive and significant since the 4th quintiles (see table-3).

Table 3

Impact of property rights reform on renting land, revenue, hired labour, TFP

Years	Hired labour days	hired labour costs	Revenue	Productivity
1st	-0.103	-0.253	-0.119	-0.0186
2nd	-0.0789	-0.198	-0.0525	-0.0067
3rd	-0.000026	0.00434	0.0704	0.0345
4th	0.0902	0.214	0.109	0.048
5th	0.216	0.476	0.125	0.0642

Source: Estimates of Chari et al. (2017)

Tenancy reform and labour freedom

Tenancy is the possession of property on lease by ‘tenant’ labourer and acquires control on land for the specific duration with the legal rights through making contract on the specified conditions of cultivation (Deininger et al., 2007). Labour freedom enhances when contract farming whether in the form of sharecropping or fixed rent will benefit tenant as tenancy reform benefits sharecroppers with larger incentive in bargaining power and opportunity to register in lawful agreement. It will secure rent benefits of tenants through securing the tenure from the threat of eviction thereby gets greater freedom to invest and thus, enhances efficiency (Banerjee, Gertler and Ghatak, 2002). In short, tenancy reforms are like partial ownership rights offered opportunities and choices to sharecroppers and fixed rental tenants to resolve the incentive issues among the landlords and tenants.

In the agricultural based developing economy, a poor and landless workers have started their journey as farm labour and obtained enough skills and capital through experience, efforts, and savings to progress with good destiny through the ownership rights (Bell, 1990). The reform provides freedom to ‘tenant’ labourer to improve the economic conditions through developing skills and talents, and over a period of time as economic status of the tenants improves, their capabilities to spend on training, education and health will increase and hence labour freedom upgrades the position of tenants from ‘agricultural ladders’ to the ‘trained cultivators’ (Chayanov, 1991). In this way, tenancy reforms has explored significant freedom to labour to earn income for the livelihood of the family as well as for investing in human and physical capital. Thus, tenancy reform has significant and positive effect on income, consumption and assets whereas negative and significant on the landless workers (Deininger et al., 2007).

Labour freedom improves the ability of tenants through subsidizing the amount of rent and increasing the remarkable effects on productivity and allocative efficiency of labour reducing the rural poverty level (Ghatak and Roy, 2007). Tenancy reform of Philippines and West Bengal are the best examples of constrained efficient tenancy and improved transactions of extreme practice among sharecropping and rental contracts as efficiency is the difference between pre-determined incentives and rent extraction in tenancy contracts (Sharma, 1994). There is no risk sharing provision of the agricultural produce in the tenancy reform, in this way, it provides conditional efficiency and possibilities to enhance agricultural productivity (Bardhan and Mookherjee, 2008). Impact of tenancy reform is positive and significant estimated by IACD⁶ and MoA⁷ on Indian agriculture productivity (Ghatak and Roy, 2007; Banerjee, Gertler and Ghatak, 2002).

⁶ India Agricultural and Climate Dataset (IACD) estimated by Evenson and McKinsey for major crops for 13 states

⁷ Ministry of Agriculture, Government of India.

Development policy to enhance labour freedom and agricultural efficiency

The development policies are required to enhance the labour freedom and efficiency of the agricultural sector. A favourable development policy explores the farm-jobs and off-farm employment opportunities for the workers through increasing the rural wage and employment rate (Rhoda, 1983). The policy affects the in-migration and out-migration of the region and reduces the rural/urban income and employment gaps (Todaro, 1969; 1978), consequently, rural to rural and the rural to urban movements of labour will be discouraged. Besides, the development policy promotes investment on technology, agro-based industries, cooperative farming and infrastructure, hence, opening the options to provide better off-farm jobs to farm-labour. These interventions have enhanced the freedom and opportunities of labour in rural regions (Taylor, 2010) reducing the economic and sociocultural detachments of the area. Social gaps shorten by emerging the formal education, improving the skills and attitudes of the local community, whereas economic gaps are reduced with the off-farm employment provisions to nearby native region (Rhoda, 1983). Hence, labour freedom and migration decisions are related with the socio-economic factors such as family size, relatives, marital status, age, child education, family income, medical, infrastructure and commuting feasibility (Agbonlahor and Philip, 2015).

There are large number of farm-jobs during the peak seasons of the farming sector in the form of seeding, planting, collecting, and harvesting; that's why migrant workers are occasionally required to complete such tasks, the development policy provides off-farm jobs to such workers near the rural area forcing to settle them for long time in the farm-job receiving community (Renkow, 2003). The inclusion of the policy is benefited to the residing as well as workers of the nearby regions and has increased in-migration rate (Green, 1996). Thereafter, the policy will enhance the freedom and efficiency of the residents as well as in-migrant workers while performing a significant role in supplying the services during the peaks of the agriculture and getting off-farm works during the leans.

In the process of such rural interventions, labour freedom affects the labour mobility and migration of the workers. The detailed review of the policy implications on rural wage rate is described in the next section followed by section on increasing rural employment rate and the migration for employment.

Rural wage rate to enhance labour freedom and efficiency

The policy aims to increase farm production expanding labour demand in rural labour market, as a result equilibrium stabilizes at higher rural wage rate (Ezeala-Harrison, 2004) affecting in-migration and out-migration rate of the existed rural area. It is observed that rural development policy is required to reduce the rural/urban income and wage gaps affecting the incentives to move of the local workers. Whereas, rural wage rigidities have restricted rural labour market and forced to stabilize at an under-employment situation (Bardhan, 1979). However, high pressure of the population, scarcity of land and insufficient growth of the off-farm sector has deteriorated rural wages (Hossain, 2008).

Rural development improves the rural wage rate and endorses the efficiency of the agricultural sector (Hossain, 2008). There is a group of previous literature stating that rural real wages in labour surplus countries of the developing world are determined by subsistence or nutrition based theories along with the regulation of institutional policies (Bardhan, 1977). Labour movements from the rural to urban areas and from the rural to rural for the employment and migration (out-migration and in-migration) has affected the trends of agricultural efficiency and real wage rate (Hossain, 2008). It is evidenced that demand-supply labour forces determine the rural wage rate in the agricultural sector of the developing countries. Ezeala-Harrison (2004) has estimated peak-lean seasons, supply price and costs as factor affecting the rural wage rate.

Therefore, the inclusion of rural development policy minimizes the rural wage gap among farm and non-farm job thereby switches the surplus labour from one place to another. It is observed that the deployments of the farm-labour to off-farm jobs at the end positively affect the wage rate of the farm-jobs. It is evidenced from the study of Nagaraj et al. (2016) that the average wage rate of farm-job has increased after implementing rural employment programme in India.⁸ Besides, there is a group of previous literature

⁸After the implementation of MGNREGA based on the field survey data of the villages of Maharashtra state of

stating positive and significant impact of agricultural productivity and efficiency on the rural wages (Nagaraj et al., 2016; Himanshu and Kundu, 2017). In the surplus labour developing countries, rural wage has responded towards the productivity of the agricultural sector (Hossain, 2008). There are technical and institutional changes occur due to rural inventions and investments which further enhances rural wage rate and agricultural efficiency improving the marginal productivity of labour. It is discussed in the previous section of the paper that higher wage payments and better working conditions effectively engage labour into the crucial farm activities (Ezeala-Harrison, 2004). Thus, wage payments improves the labour freedom, labour productivity and efficiency indicating the development of the sector in association with a substantial growth in rural wages rate (Venkatesh, 2013).

Employment opportunities to enhance labour freedom and efficiency

This section introduces development policy to expand rural employment exploring off-farm jobs and to enhance labour freedom and agricultural efficiency. Rural employment is affected by the rural-urban employment gaps and social security (Renkow, 2003). However, the movement of labour for employment considers as an unpleasant choice affecting the socio-cultural lifespan of the migrant labour (Li, 1976). The underprivileged rural classes require remittances to spend on resources essential for the technical development of the farming (Taylor and Wyatt, 1996). Thus, policy is required to intervene into the rural sector growth plans to provide off-farm jobs as the employment is cause of migration (Miller, 1967; Nonthakot and Villano, 2008).

Migration reduces farm-jobs and off-farm employment opportunities of labour, whereas, in-migration or rural to rural movement of labour towards more efficient region with commuting increases the labour freedom and improves the economic status by getting access of the better job (Wouterse, 2010). It is observed that rural to rural movements of labour are seasonal and temporary towards off-farm-jobs along with the chance of getting back to the native place (Deshingkar and Akter, 2009). On the other hand, the impact of rural development plan on rural-urban migration for employment with no commuting facility reduces the labour freedom, as a result, labour mobility and out-migration will increase (Pingali, 2006). Rural development policy reduces the movement of workers for job and for the higher pay by providing off-farm jobs to unemployed/surplus farm-labour during leans (Li, 1976).

In the developing countries, employment orientated programmes are established at the village level in agro-based processing units. There is significant positive relation among the investment on the growth of agro-processing units and growth of rural employment. Kumar et al. (2016) has examined the impact of agro-processing units on the employment growth rate taking all categories of agro processing industries in India⁹ over the period 1980-81 to 2010-11 (see table-4). Table-4 presents the negative average growth of processing units and employment growth before liberalization. As employment policy has been introduced to promote agro-processing units in the rural areas during post-liberalization era, the average growth of rural employment has increased (Kumar et al., 2016). A favorable development policy is expected to improve the employment scenarios of the local area and after its implementation rural labour market become more fascinated to absorb the excess supply of labour with a greater employment possibilities and opportunities. At the beginning of the migration activities of labour for employment, policy endorses benefits to the 'local' as well as 'in-migrant' labourer (Renkow, 2003). Therefore, employment opportunities and income benefits are shared among the local workers of the rural area and migrants labourers, in short, has enhanced labour freedom of all the categories of labourers.¹⁰

India.

⁹ Data collected from various statistical abstracts of Haryana and Agro Processing Department of Haryana and triennium ending average was calculated.

¹⁰ Resident workers are local labour of the rural area, migrant labour included in-migrants and in-commuting labourer whether permanently residing or not in the rural area.

Table 4*Growth of employment in village level agro-processing Industries and labour freedom*

Industries	1980-1981 to 1989-90	1990-91 to 2000-01	2001-02 to 2010-11
Processings of Cereals and pulses	8.7	0.21	10.28
Village oil Ghanni industry	-13.7	-6	32.71
Jaggery and khandsari industry	-19.72	-9.09	4.55
Fruit preservation and processing industry	-16.06	-5.57	24.86

Source: Estimates of Kumar et al. (2016)

Table 5*Impact of development policy on rural employment and labour freedom*

Independent Variables	In-Migration	Out-Migration	Labour Force	Unemployment
Rural Employment rate	0.324***(.054)	-0.372***(.052)	0.287***(.017)	-0.017***(.0043)
Rural Labour force	-0.266***(.062)	0.498***(.062)

Source: Estimates of Renkow, 2003

As countries develops, rural employment programmes provide off-farm jobs and affect the migration intensity of the rural area. Renkow¹¹ (2003) has stated that off-farm jobs affect the migration for employment (out-migration) after improving the labour force participation and rural employment of the area. Table-5 represents that as rural employment increases in-migration, reduces out-migration and improves labour freedom. There is positive and significant relation among rural employment and total labour force, thus, high rural employment level has dropped down the unemployment rate (Renkow, 2003).

In developed countries world, a study of Boyer and Hatton¹² (1997) has estimated the impact of rural developments and technology on rural infrastructure and technology and has found reduction in the out-migration rate and the rural/urban wage gaps. In fact, development opportunities and freedoms increase labour demand in farming and non-farming sector, thus affects the labour mobility of the local area.

Discussions and Findings

The paper reveals and enables to describe various indicators of labour freedom in the agriculture sector (see table-6). Table-6 illustrates dimension wise description and measurable variables of labour freedom. All the indicators are qualitatively ranked by the response defined against each indicator on a four-point assessment scale (never, very little, little and high) varied from 1 to 4; large (4) for full freedom, little (3) for moderate freedom, very little (2) for low freedom (1) never for negligible freedom used to assess intensity of the indicator affected by the given indicators. The respondents have been asked open-ended questions in yes/no, if no- negligible freedom score is (1), if yes- then the intensity of the indicator is assessed into four-point assessment scale and the qualitative scores are quantified to arrive at average score of each indicator of labour freedom for four different categories of farm-size; medium, small, marginal and landless farmers of each village having equivalent weightage in primary survey.

¹¹ used the country-level data for North Carolina during the 1980 - 1990

¹² examined 100 farms of England and Wales used weekly cash wages and

Table 6
Indicators of labour freedom in the agriculture

Indicator	Description/ Measurable variable
Agricultural property rights	<p>Land reform redistributes the land ownership rights among the small, marginal and landless labourers to enhance labour freedom removing the land inequalities and farm size disparities (Besley and Burgess, 2000).</p> <p>Institutional Reform</p> <p>Redistribution of property rights is assessed by asking to the respondents, whether he or she and his or her immediate former generation have ever benefitted with any piece of land from institutional reform? (Yes/no) If yes, the reform is used to assess labour freedom intensity by asking, whether land had existed before getting from the land reform?</p>
	<p>Land rental contracts provide possession of land and improve the bargaining capacity, security of the tenure and rights of farm production, hence enhanced labour freedom (Banerjee, Gertler and Ghatak, 2002).</p> <p>Land rental contracts</p> <p>Possession of land is assessed by asking, whether tenants have made any kind of legal/formal land registration from land rental contracts (Yes/no). If yes, whether have improved bargaining capacity and security of tenure both? Whether have improved either the bargaining capacity or security of tenure?</p>
Labour wage Policy	<p>Labour wage contracts save time and labour hiring cost and make contracts with workers to confirm their continual supply in essential farm-works and increase labour freedom (Eswaran and Kotwal, 1985).</p> <p>Labour wage contracts</p> <p>The indicator is assessed by asking to labour, whether they have employed on regular basis for working in farm-jobs? If yes, whether have existed security of farm-job and benefits of real wages both? Whether have only security of farm-job existed?</p>
	<p>Minimum wage laws increase labour freedom paying wages as per the work capacity and skills of labour improving labour productivity to increase the wage payments (Benjamin and Brandt, 2002).</p> <p>Minimum wage laws</p> <p>The indicator is assessed by asking, whether the farm labour has been paid wages as per the minimum wage laws? (Yes/no). If yes, whether wages have paid as per the work capacity and skills of labour? Whether wages have paid either based on work capacity or skills?</p>

Labour market reform	<p>Labour market reform improves the labour wage rate and working conditions using capital inputs affecting the ratio of labour to land thereby enhances the labour freedom (Thirlwall, 1994).</p> <p>The indicator is assessed by asking to labour, whether the labour has benefitted with wage rate and working conditions from labour market reform? If yes, whether have improved wage rate and working conditions both? Whether have only working conditions improved?</p>
Off-farm works	<p>Rural development plans pay higher wages in off-farm jobs and affect the supply of labour for farm-works through increasing rural wage, employment rate and labour freedom (Rhoda, 1983).</p> <p>How off-farm works enhanced labour freedom is assessed by asking to labourers, whether they have ever benefitted with wage and employment rate from off-farm works? (Yes/no). If yes, whether they have employed before getting the job in off-farm works? If yes, whether they have accessed off-farm job easily?</p>
Rural development policy	<p>Labour mobility affects the out-migrant and in-migrant workers and the incentives to move through reducing the rural/urban wage and employment gaps as the rural labour market become more fascinated to absorb the excess supply of labour, and enhances the labour freedom (Renkow, 2003).</p>
Labour mobility	<p>Labour mobility is assessed by asking to workers, whether they have found in-migration in the rural area for wage and employment? (Yes/no). If yes-whether they have found wage benefits in rural area? If yes, asking, whether they have found out-migration in rural area for wage and employment? If yes, whether they have enjoyed commuting services?</p>

Conclusion

The paper has reviewed the concept of labour freedom for the agricultural sector through ownership rights, legal approvals and autonomy of choices providing policy changes in the rural development thereby giving more opportunities and choices to the rural labour. Institutional reform redistributes the ownership rights of landholding among the small, marginal and landless labourer. In this way, institutional reform has resolved the allocative ineffectiveness of labour existed due to widespread inverse farm-size and labour productivity association as small farms are more productive to employ labour with intensive land-use farming, whereas labour intensity cropping method is adopted in large farms that are affected by supervision and managerial costs.

Moreover, redistribution of ownership rights improve the land/labour ratio leading to high demand for labour, as a result, rural labour market stabilizes at higher wage rate and benefits to the hired labourer with better wage contracts and has improved the working conditions of forced labour or bonded labourer. The reform has provided partial possession rights to tenants' and has amended land rental agreements improving

the bargaining capacity of the renters making them capable to extract the lease in contracts with the landlords. The reform improves the prevailing skills and abilities of the tenants. Labour freedom and institutional reform affects the economic conditions and capabilities to spend on training, education and health over a period of time and tenant labour may acquire esteem place as 'trained' cultivators instead of agricultural ladders, hence labour freedom leads to farm efficiency through institutional reform measures.

The paper determines the requisites of rural development policy exploring the farm-jobs and off-farm job opportunities thereby improves rural wages and employment rate affecting the labour mobility. The paper emphasizes the practices to increase rural wages through direct rural growth plans to absorb surplus labour in off-farm rural works, the process is stabilized at higher farm-wages in the rural labour market to sustain supply of labour for the essential farm works, moreover farm work conditions is improved by giving more options and choices to labour hence, off-farm jobs help to reduce the farm wage fluctuations. In the developing countries, rural development programme has responded to implement employment policy increasing rural employment rate with off-farm jobs to jobless workers in the local rural area. The policy must plan to reduce the migration for employment as out-migrations are unfavorable options for workers and stops the benefits of off-farm work occasions however, rural to rural migration enhances labour freedom if commuting is possible towards the rural residing area. It is reviewed in the paper that rural development plans have been successfully launched in the developed nations relative to the developing countries world and will encourage in-migration dropping down the rural/urban wage and employment gaps, however, it reduces the incentives of labour to move due to this, out-migration and labour mobility of the area declined.

Implications

Labour freedom in the agricultural sector has implications on the economic development perspective as the concept of freedom is grounded upon the principle of equity and efficiency, subsequent to that institutional reform provides equal freedom and opportunities to the rural labourer. In the developing countries, labour freedom leads to reform in demand for specific labour or professionals at diverse real wages across the regions thereby raises the work-profile of the farm-labourer. The paper has suggested policy makers to emphasize more on the rural development to affect migration of labour for job, family education, health and better infrastructure. In agricultural based developing countries, the policy is required to focus on the balanced growth theory reducing the pressure of rural population on urban area adversely affecting the market and availability of resources of the urban area. Thus, it can be concluded that the provision of labour freedom needs to establish to build up capabilities among the rural labourer, farmers and migrant workers.

Acknowledgements

This article is based on doctoral study of first author under supervision of second author.

References

- Agbonlahor, M.U. and Phillip, D.O.A. (2015). Deciding to Settle: Rural-Rural Migration and Agricultural Labour Supply in Southwest Nigeria. *The Journal of Developing Areas*, 49 (1), 267-284.
- Ahmad, M. (2003). Agricultural Productivity, Efficiency, and Rural Poverty in Irrigated Pakistan: A Stochastic Production Frontier Analysis. *The Pakistan Development Review*, 42 (3), 219-248.
- Banejee, A. V. (1999). 'Prospects and Strategies for Land Reforms', In B. Pleskovic and J. Stiglitz Annual World Bank Conference on Development Economics, 253-84. World Bank.
- Banerjee, A. V., Gertler P. J. and Ghatak M. (2002). Empowerment and Efficiency: Tenancy Reform in West Bengal. The University of Chicago Press. *Journal of Political Economy*, 110 (2), 239-280.
- Bardhan (1977). Rural Employment, Wages and Labour Markets in India: A Survey of Research — II. *Economic and Political Weekly*, 12(27), 1062-1074.
- Bardhan, P. (1979). Wages and Unemployment in a Poor Agrarian Economy: A Theoretical and Empirical Analysis. *Journal of Political Economy*, 87, 479-500.
- Bardhan. (1989). Poverty, Growth and Rural Labour Markets in India. *Economic and Political Weekly*, 24 (12), A21-A38.

- Bardhan P. and Mookherjee D. (2008). Productivity effects of land reform: a study of disaggregated farm data in west Bengal, India.
- Battese, G. E. and T. J. Coelli. (1992). Frontier production functions, technical efficiency and panel data: With application to paddy farmers in India. *Journal of Productivity Analysis*, 3, 153-169.
- Bell, C. (1990). Reforming property rights in land and tenancy. *The World Bank Research Observer*, 5(2), 143-166.
- Benjamin and Brandt. (2002). Property Rights, Labour Markets, and Efficiency in a Transition Economy: The Case of Rural China. *The Canadian Journal of Economics*, 35(4), 689-716.
- Besley, T., and Burgess, R. (2000). Land Reform, Poverty Reduction, and Growth: Evidence from India, *Quarterly Journal of Economics*, 115(2), 389-430.
- Bhardwaj, K. (1974). Production Conditions in Indian Agriculture: A Study Based on Farm Management Surveys. *Cambridge University Press*. Department of Applied Economics Occasional Papers.
- Boyer and Hatton. (1997). Migration and Labour Market Integration in Late Nineteenth-Century England and Wales. *The Economic History Review*, 50 (4), 697-734.
- Carraro, A. and Karfakis, P. (2018). Institutions, economic freedom and structural transformation in 11 sub-Saharan African countries.
- Chari, A.V., Liu, E.M., Wang, S.Y. and Wang, Y. (2017). Property rights, land misallocation and agricultural efficiency in china (No. w24099). *National Bureau of Economic Research*.
- Chayanov, A. (1991). The theory of peasant co-operatives. *The Ohio State University Press*.
- Deininger, K. S. Jin & Nagarajan, H. K. (2009). Land Reforms, Poverty Reduction, and Economic Growth: Evidence from India. *The Journal of Development Studies*, 45(4), 496-521.
- Deshingkar, P. and Akter, S. (2009). Migration and human development in India.
- Eswaran, M. and Kotwal, A. (1985). A Theory of Two-Tier Labour Markets in Agrarian Economies. *American Economic Review*, 75(1), 162-177.
- Gavian and Fafchamps. (1996). Land Tenure and Allocative Efficiency in Niger. *American Journal of Agricultural Economics*, 78(2), 460-471.
- Ghatak, M. and Roy, S. (2007). Land Reform and Agricultural Productivity in India: a Review of the evidence. *Oxford Review of Economic Policy*, 23(2), 251-269.
- Green, J.K. (1987). Evaluating the Impact of Consolidating Holdings, Individualization of Tenure, and Registration of Title: Lessons from Kenya.
- Gubert, F. (2002). Do migrants insure those who stay behind? Evidence from the Kayes area (Western Mali). *Oxford Development Studies*, 30(3), 267-287.
- Harrison, F. E. (2004). Analysis of Wage Formation Processes in Rural Agriculture. *The Journal of Developing Areas*, 38(1), 79-92.
- Kundu, S. (2016). Rural wages in India: recent trends and determinants. *The Indian Journal of Labour Economics*, 59(2), 217-244.
- Holcombe G. Randall. (1998). Economic Freedom and Economic Growth. The Freeman. *The Independent Review- A Journal of Political Economy*.
- Hossain. (2008). Rural Labour Market Developments, Agricultural Productivity, and Real Wages in Bangladesh, 1950-2006. *The Pakistan Development Review*, 47(1), 89-114.
- Hoque, A. (1993). Allocative Efficiency and Input Subsidy in Asian Agriculture. *The Pakistan Development Review*, 32(1), 87-99.
- Ip and Stahl. (1978). Systems of Land Tenure, Allocative Efficiency, and Economic Development. *American Journal of Agricultural Economics*, 60(1), 19-28.
- Kumar R., Dixit A.K., Kumar A. and Singh S. (2016). Agro Processing Industries in Haryana: Status, Problems and Prospects Performance and Determinants. *Economic Affairs*, 61(4), 707-715
- Leibenstein, H. (1966). Allocative Efficiency vs. 'X- Efficiency'. *American Economic Review*, 56(3), 392-415.
- Liefert, Lerman, Gardner and Serova. (2005). Agricultural Labor in Russia: Efficiency and Profitability. *Review of Agricultural Economics*, 27(3), 412-417.
- Li, W. L. (1976). A Note on Migration and Employment. *Demography*, 13(4), 565-570.

- Vaughn, K.I., (1978). John Locke and the labor theory of value. *Journal of Libertarian Studies*, 2(4), 311-326.
- Miller, A. R. (1967). Migration Differentials in Labor Force Participation: United States, 1960. *Demography*, 3, 58-67.
- Mellor, J.W. (2017). Agricultural development and economic transformation: promoting growth with poverty reduction. Springer.
- Mochebelele, M. T., Winter-Nelson, A. (2000). Migrant labor and farm technical efficiency in Lesotho. *World Development*, 28(1), 143-153.
- Moschini G, Hennessy DA. (2001). Uncertainty, risk aversion, and risk management for agricultural producers. *Handbook of Agricultural Economics*, 1, 88-153.
- Mendola, M. and Simtowe, F. (2015). The welfare impact of land redistribution: Evidence from a quasi-experimental initiative in Malawi. *World Development*, 72, 53-69.
- Nagaraj, N., Bantilan, C., Pandey, L. and Roy, N.S. (2016). Impact of MGNREGA on rural agricultural wages, farm productivity and net returns: An economic analysis across SAT Villages. *Indian Journal of Agricultural Economics*, 71(02), 176-190.
- Nonthakot, P. and Villano, R.A. (2008). Migration and farm efficiency: evidence from Northern Thailand (No. 419-2016-26575).
- Powell, B. (2002). Private property rights, economic freedom, and wellbeing. *Economic Education Bulletin*, 11, 1-8.
- Pingali, P. (2007). Agricultural growth and economic development: a view through the globalization lens. *Agricultural Economics*, 37, 1-12.
- Rahman, A. (1975). The Bangladesh Farm Size, Efficiency and the Socioeconomics of Land Distribution. *The Bangladesh Development Studies*, 3(3), 301-318.
- Renkow, M. (2003). Employment Growth, Worker Mobility, and Rural Economic Development. *American Journal of Agricultural Economics*, 85(2), 503-513.
- Rhoda R. (1983). Rural Development and Urban Migration: Can we keep them down on the Farm? *The International Migration Review*, 17(1), 34-64.
- Rudra, A. (1973). Marginalist explanation for more intensive labour inputs in smaller farms, *Economic and Political Weekly*, 8(22), 989-994.
- Rudra, A. and Chakravarty, A. (1973). Economic effects of tenancy: Some negative results, *Economic and Political Weekly*, 14(28), 1239-1246.
- Sauer, J., Gorton, M. and Davidova, S. (2014). Migration and Agricultural Efficiency (No. 329-2016-13000).
- Sen, A. (1981). Market failure and control of labour power: towards an explanation of 'structure' and change in Indian agriculture. Part 1. *Cambridge Journal of Economics*, 5(3), 201-228.
- Sen, A. (1981). Market failure and control of labour power: towards an explanation of 'structure' and change in Indian agriculture. Part 2. *Cambridge Journal of Economics*, 5(4), 327-350.
- Shaban, R. A. (1987). Testing Between Alternative Models of Sharecropping. *Journal of Political Economy*, 95, 893-920.
- Sharma, H. R. (1994). Distribution of Landholdings in Rural India, 1953-54 to 1981-82. *Economic and Political Weekly*, 29(39), 17-28.
- Taslim, M.A. (1990). The explanations of the inverse size-productivity relation in agriculture: a critical review. *The Bangladesh Development Studies*, 18(2), 77-86.
- Taylor, J.E. (2010). Agricultural labor and migration policy. *Annual Review of Resource Economics*, 2(1), 369-393.
- Taylor, J. E., Wyatt, T. J. (1996). The shadow value of migrant remittances, income and inequality in a household-farm economy. *The Journal of Development Studies*, 32(6), 899-912.
- Timmer, C.P. (1988). The agricultural transformation. Chapter 8 in *Handbook of Development Economics*, Vol. I, ed. H. Chenery and TN Srinivasan.
- Todaro, M. P. (1969). A Model of Labor Migration and Urban Unemployment in Less Developed Countries. *The American Economic Review*, 59(1), 138-148.

- Todaro, M.P. and Smith, S.C. (2006). *Economic development* 8th edition. Manila, Philippines: Pearson South Asia Pte. Ltd.
- Todaro, M.P. (1977). *Economics for a developing world: An introduction to principles, problems and policies for development* (No. 04; HC59. 7, T6.). London: Longman.
- Venkatesh, P. (2013). Recent trends in rural employment and wages in India: has the growth benefitted the agricultural labours? *Agricultural Economics Research Review*, 26(347-2016-17099), 13-20.
- World Bank. (2007). *World Development Report 2008, Agriculture for Development*, World Bank.
- Wouterse, F. (2010). Migration and technical efficiency in cereal production: evidence from Burkina Faso. *Agricultural Economics*, 41(5), 385-395.
- Yang, D.T. (1997). The effects of institutions on worker mobility and labor market efficiency. In *The reformability of China's state sector* (347-364).
- Yang, D. T. and Zhou, H. (1999). Rural-urban disparity and sectoral labour allocation in China. *The Journal of Development Studies*, 35(3), 105-133.
- Yang, J., Wang, H., Jin, S., Chen, K., Riedinger, J. and Peng, C. (2016). Migration, local off-farm employment, and agricultural production efficiency: evidence from China. *Journal of Productivity Analysis*, 45(3), 247-259.