ResearchArticle

IMPACTOFGOVERNMENTSCHEMESONAVAILABILITYOFAGRICULTURALLABOURSINTHEKARNATAKASTATE,INDIA-ANECONOMICANALYSIS

Abstract- This study investigates the labour supply behaviour of agricultural labourers at different wage rates. The objectives of thisstudy are to test the Impact of ruraldevelopment schemes on availability of agricultural labours supply and to observe agricultural labours responsiveness to changes in the wage rates by using 2013cross-sectional data. The reason for sub-optimal utilization of labour offerings was the provision of food in the public distribution system, which upsurges the foodavailability andsecurity foramonthwith only oneortwopersondays of labouroffering.If agricultural labourerswere foo dsecure, then they haveevery reason topreferleisure. On demand side, most of the farmers also opinioned that, labour availability has reduced due to implementation of MGNREGA and migration of agriculturallabour to other regions had a more significant role. In addition, in the rural areas, due to increased wages in the non-agricultural sector, there appears to beoperation ofbackwardbendingsupplycurveoflabourattwolevels.

Keywords-GovernmentPrograms, Labour supply,Foodexpenditure,Migration,Backwardbending,Transactioncost,Leisure,Availability

Introduction

Economists havetraditionally identifiedthreefactors ofproduction*viz*:land,labourand capital. Capital became the critical economic factor due to the revolution ofindustry. Production of goods and services, human resourcesplaysa significantrole in an economy. The study of human resources, their quality and problems isthus of immense importance for manpower planning in both developing as well asdevelopedeconomies(ShanmugamandGovindarajan,2011).Ithasbeenobserved that the agricultural labourers are socially and economically poorestsection of the society. Agricultural labour households constitute the historicallydeprived social groups, displaced handicraftsmen and dispossessed peasantry.Theyarethepoorestofthepoorinrural India.

Most of the agricultural labourers are landless and meager in land holding size,they mainly depends on employment in agriculture as a labour. Majority of theagricultural labours belongs to backwardclasses of thesociety.Their incomehasalwaysbeenmeagre,resultinginpoorlivingandheavyindebtedness.

It has been found that agriculturalworkers are basically unskilled; they may not beskilled even in the art of cultivation. Consequences of this, supply of labour by thelabourerisperfectlyelastictothattheirearnings.

Since Independence, the central as well as the state governments have takensome measures to improve the economic condition of agricultural labourer. Theyinclude fixation of minimum wages to the agricultural labour, implementation ofminimumnumberofdaysofemploymentguaranteeprogrammesandredistributio noflandtothelandlesslabourintheruralareasofthecountry.

The Indian census reports from 1961 to 2011 one of the earliest warning notesabout the growth of surplus population on land. It was cumulative effect of a largenumber of factors like land tenure, monetization and commercialization of theagricultureanddeclineofthehandicrafts,etc.Duringtheperiodafter independence the proportion of agricultural labour continued to be increased. Theproportion of agricultural labourers tended to rise withthe increasing year in Indianeconomy.Suchproportionwasestimatedat28.0millionand144.3millionin1951and 2011, respectively. It has also been observed that the agricultural labourersworkforcehas increased during the period of 1961 to 1991,whereas, in 2001 ithasslightlydeclined.However,theagriculturallabourersworkforcehasincreasedin 2011. The percentage of cultivators has also declined during the periods of1961to2011.

Till not very long ago, Indian agriculture was marked by abundant supply of farmlabour and a considerable portion of work force was absorbed in it, even when itwas not actually required. In recent years, Indian agriculture has undergone anaudiblechangedueto fact thatshortage of labours to the farmingintheruralareaof the country. This may be due to the fact that, migration of rural youth fromfaming to non-farm sector. One of the reasons for low level of productivity of thelabourer in agriculture is mainly low level of wage rate and also substitution oflabour hors to the leisure. This gave rise to a negative relationship between labourproductivityandlabourabsorptioninagriculturecurrently.

MaterialsandMethods

The present study was taken up in Mandya and Malavallitaluks of Manadyadistrict and Bijapur and Indi taluks ofBijapur district.We usedAgriculture LabourEnquiry Committee (A.L.E.C) concept for identification of agricultural laboursi.e.based on their income. Then migrant and non-migrant labour households areclassifiedbasedonmigrationof any number ofmembers from their family, butnotthewholefamily.Fromirrigatedsituation,twotalukswereselected,fromeachtaluk 15 migrant and 15 non-migrant labour households and 20 farmers were alsoselectedrandomlywhowerepracticingfarming.Thus,thetotalsampleforthe

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study comprised of 60 agricultural labour households and 40 farmers. Similarsampling procedurewas adopted forrainfedsituation. Thus, the totalsample fromboththesituationswas120agriculturallabourhouseholdsand80farmers.

In order to accomplish the objectives of the study, data were analysed byemploying different statistical and economical tools were employed to estimate thebenefitutilizationfromthedifferentgovernmentalprogrammesbytheagriculturallabourhouseholds.

Amortizationofbenefitsavailedfromdevelopmentalprogrammes

Some of the developmental programmes like Indira AwasYojana, Bicycle forchildrenstudying 8th standard etc... the benefits are extended over time. Thus,thebenefitderivedbysuchbeneficiariesisamortizedusingtheformula.

$$A=P\frac{r(1+r)^n}{(1+r)^n-1}$$

Where,

A=Amortizedbenefit peryear fromparticular developmentalprogramme.P=Totalinitialbenefitreceivedbythebeneficiaryfarmer.

r= interestrateperperiod,ristakenas2percentsincethebenefitsarefromsocialwelfareschemesoveralongperiodoftime

n=totalnumberofyearsofbenefitflow,nistakenasthetotalnumberofyearsforeachprogram(for eg.IndiraAwasaYojanahouseconstructionforruralpoor'sistakenfor20years,Bicycleschemeforschoolgoingchildrenfor10years).

Results

Benefitto labourhouseholdsfrom developmentalprogrammes

Agricultural labour households availing benefits through various developmentalprogrammesarepresentedin[Table-1]forirrigatedandrainfedsituation.

Table-1*Averageannualbenefitfromdevelopmentalprogrammestoagriculturallabourhouseholds(Rs./Household)*

SlNo.	NameoftheProgram/Scheme	Irrigated (Mandya)			Rainfed(Bijapur)		
		Migration	NonMigration	Overall	Migration	NonMigration	Overall
1	RationCard	5136 (26.51)	5410 (27.42)	5273 (26.97)	5352 (25.36)	5593 (31.63)	5473 (28.22)
2	Mid-DayMealScheme	768 (3.96)	768 (3.89)	768 (3.93)	768 (3.64)	768 (4.34)	768 (3.96)
3	Yashasvinicard	400 (2.06)	333 (1.69)	367 (1.88)	0 (0.00)	527 (2.98)	263 (1.36)
4	KaliyuvaMakkaligeBicycle	2350 [259] (1.34)	2350 [259] (1.31)	2350 [259] (1.32)	2960 [297] (1.41)	2960 [297] (1.68)	2960 [297] (1.53)
5	OldAgePensionScheme	2140 (11.05)	2280 (11.56)	2210 (11.30)	2200 (10.43)	2800 (15.84)	2500 (12.89)
6	NammaMane	22500 [1376] (7.10)	0 [0] (0.00)	11250 [688] (3.52)	55000 [3363] (15.94)	60000 [3669] (20.75)	57500 [3516] (18.13)
7	Bhagyalaxmiyojana	600 (3.10)	600 (3.04)	600 (3.07)	600 (2.84)	600 (3.39)	600 (3.09)
8	Bhagyajyothi	982 (5.07)	982 (4.98)	982 (5.02)	982 (4.65)	982 (5.55)	982 (5.06)
9	IndiraAwasYojana	26250 [1605] (8.29)	23333 [1426] (7.23)	24791 [1516] (7.75)	53333 [3261] (15.45)	40000 [2446] (13.83)	46666 [2854] (14.72)
10	BhoochetanaScheme	625 (3.23)	400 (2.03)	513 (2.62)	0 (0.00)	0 (0.00)	0 (0.00)
11	Ambedkardevboardscheme	27500 [1681] (8.68)	43750 [2675] (13.56)	35625 [2178] (11.14)	66666 [2077] (9.84)	0 [0] (0.00)	33333 [1039] (5.36)
12	NirmalaGrama	4393 [489](2.52)	5000 [556](2.82)	4696 [522] (2.67)	0 [0] (0.00)	0 [0] (0.00)	0 [0] (0.00)
13	Widowscheme	2400 (12.39)	2800 (14.19)	2600 (13.30)	2200 (10.43)	0 (0.00)	1100 (5.67)
14	MGNREGA	910 (4.70)	1240 (6.29)	1075 (5.50)	0 (0.00)	0 (0.00)	0 (0.00)
	Average	19371 (100)	19729 (100)	19550 (100)	21100 (100)	17682 (100)	19391 (100)

Note:Figuresinparentheses()representpercentagetototal.

Figuresin[]representamortizedannualbenefitinrupees

Irrigatedsituation

Inirrigatedsituation,non-migrantlabourhouseholdsbenefitedonanaverageRs19729byparticipatingin14developmentalprogrammesofwhichmaximumbenefit was from Ration card (27.42 %) followedby widow scheme (14.19%) andAmbedkardevboardschemes(13.56%).Inmigrantlabourhouseholds,abeneficiary family derivedonanaverageRs 19371of whichmaximumbenefit wasfrom Ration Card (26.51%), followed by widow scheme (12.39%) and Old AgePensionScheme(11.05%).

Rainfedsituation

Inrainfedsituation,migrantlabourhouseholdsderivedmaximumbenefitRs21100 by participating in 10 developmental programmes of which major benefitwasfromRationcard(25.36%),followedbyNammaMane(15.94%)andIndira Awas Yojana (15.45 %). In non-migrant labour households, the average benefitfromtheprogrammeswasRs17682byparticipatingin11developmentalprogrammes.Themojorportionofbenefitwasfrom Rationcard(28.22%),followedbyNammaMane(18.12%)andIndiraAwasYojana(14.72%).

In both the situations, the major portion benefit was from Ration card and housingschemes like Namma Mane and Indira AwasYojana. The labour households inirrigatedsituationwererelativelymorebenefitedcomparedtorainfedlabourhouseholdsduetolackofawarenessandparticipation.

ImpactPDSonfoodexpenditure

A majority of the agricultural labour households possess BPL ration card. Inirrigatedsituation,theannualsavings[rice,wheat,sugar,edibleoil]byamigration

labourhouseholdwasRs.8040andRs.6792bythenon-migrationlabourhouseholds from the benefit received through PDS [Table-2]. In case of rainfedsituation, migration labour households saved Rs. 5988 and non-migration labourhouseholdssavedRs.6444perannum.

As a food security policy of the government, rice and wheat are supplied to BPLfamiliesattherateofRs.1andRs.3perkgandwithaprovisionofaround30kgof foodgrains permonth. Duetothis, agricultural labours tendtobesatisfied,sincetheirfoodrequirementsoftheentiremontharemetwithwageincomeo foneortwodays.Duetotheseprovisions,agriculturallabourerstendencytoworkmaycomedo wn.

Table-2*ImpactofPDSonfoodexpenditureofagriculturallabourhouseholdsinthestudyarea(inRs)*

Particulars	Irrigated (Mandya)		Rainfed(Bijapur)	
	Migration	NonMigration	Migration	NonMigration
Monthly expenditure oncommoditiespurchase dthroughPDS(atissue price)	73	68	86	78
Monthly expenditure oncommoditiespurchase dthroughPDS(atmarket price)	743	634	585	615
Differenceamount	670	566	499	537
Savingsperyear	8040	6792	5988	6444

Impactofgovernmentalprogramsonlabouravailability

Most of the farmers also opinioned that, labour availability has reduced due toimplementationofMGNREGA andmigrationof agriculturallabour toother regionshad a more significant role [Table-3]. In addition, in the rural areas, due toincreased wages in the non-agricultural sector, there appears to be operation ofbackwardbendingsupplycurveoflabourattwolevels[Table-4][Fig-1].

Table-3*Impactofdevelopmentalprogramsontheavailabilityofagriculturallabour –opinionoffarmers*

Sl.No.	Labour availability hasreduced	Opinion(n=80)	
		Yes	No
1.	DuetoMGNREGA	71 (88.7)	9 (11.2)
2.	Migrationofagriculturallabours	64 (80.0)	16 (20.0)
3.	Expectationofhigherwagesbythe labourer	52 (65.0)	28 (35.0)
4.	DuetoPDS	58 (72.5)	22 (27.5)

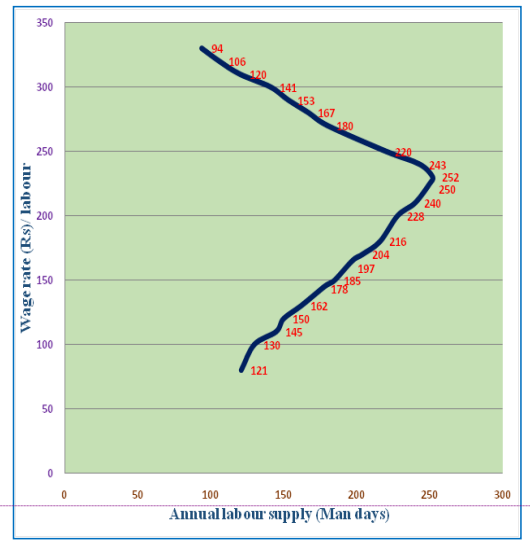

Fig-1Annualsupplyoflabouratdifferentwageratesbyalabour Backwardbendinglaboursupply curve.

Atthefirstlevel,thebackwardbendingsupplywasduetoprovisionoffoodgrainsforBPLfamilies. Thisprovisionoffoodwasindependentofinflationandprovidesthe barestminimum food, offering foodsecurity to the rural families. At thesecondlevel,thebackwardbendingsupply oflabouroperates andaround230mandaysof labourinthefamilywereseldominterestedtooffertheirlabour.Apersonwhohas offered 230 days of labour, if he/she stops working beyond this threshold,sufficiently proves that labour with the increased income prefer leisure over work[Fig-1].

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Appendix-I.a*ImpactofPDSonfoodexpenditureofagriculturallabourhouseholdsinirrigatedsituation*

Particulars	PDSprice(Rs)	Marketprice(Rs)	Migrationlabour households			Non-migrationlabour households		
			Purchased from PDS(Rs)	PDS Value(Rs)	Marketvalue (Rs)	Purchasedfrom PDS	PDS value(Rs)	marketvalue (Rs)
Rice	1	25	22	22	550	18	18	450
Wheat	3	35	1.2	4	43	1	3	35
Edibleoil	40	90	1	40	90	1	40	90
Sugar	5	45	1.3	7	60	1.3	7	59
Totalvalue(Rs)				**73**	**743**		**68**	**634**

Appendix-I.b*ImpactofPDSonfoodexpenditureofagriculturallabourhouseholdsinrainfedsituation*

Particulars	PDSprice(Rs)	Marketprice(Rs)	Migrationlabour households			Non-migrationlabour households		
			PurchasedfromPDS (Rs)	PDS Value(Rs)	Marketvalue (Rs)	Purchasedfrom PDS	PDSvalue(Rs)	marketvalue(Rs)
Rice	1	25	12	12	300	13.57	14	339
Wheat	3	35	3	9	105	3	9	105
Edibleoil	40	90	1.5	60	135	1.2	48	108
Sugar	5	45	1	5	45	1.4	7	63
Totalvalue(Rs)				**86**	**585**		**78**	**615**

Table-4*Annualsupplyoflabouratdifferentwageratesbyalabour*

Wage rate (Rs)/labour	Annual laboursupply (Man days)
80	121
100	130
110	145
120	150
130	162
145	178
150	185
165	197
170	204
180	216
200	228
210	240
225	250
230	252
240	243
250	220
270	180
280	167
290	153
300	141
310	120
320	106
330	94

Thereasonforsub-optimal utilizationof labourofferingswas theprovisionoffoodinthepublic distributionsystem,whichupsurges thefoodavailability andsecurityfor a month with only one or two person days of labour offering. If agriculturallabourers werefoodsecure, inotherwords whentheirfirst andforemost needwasmet, then they have every reason to prefer leisure. Another reason forsuboptimalsupply of labour for farm operations is the provision of relatively drudgery-freelabourandwageinMGNREGA.

Conclusion

The major goal of this paper was to re-examine the issue with more recent data toprovideabetterunderstandingofbothhoursworkedandwagerates.Theresultsof this paper offerstrongsupport for the conclusions reached by them. Themarkedlybackward-bendingshapeofthelaboursupplycurveofworkingagricultural labour suggests that the income elasticity of demand for leisure islarger relative to the substitution effect for supply of labour by the agriculturallabourers.

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