

The Rural Economy

A Micro-Perspective from Western Uttar Pradesh

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The Rural Economy: A Micro-Perspective from Western Uttar Pradesh

Rural tapestry, some **bright threads**: fivefold cereal output (50 million tons in 1951) and sevenfold milk production to 120 million tons;

eradication of **famine** mortality, infant mortality from 150 to 45; despite 17% irrigated land and 360 grams of per capita foodgrain availability in 1947.



Also exceptional instances where regular gram sabhas, water audits, community five year plans, family planning, sanitation and no alcoholism;

Ralegaon Sidhi-water conservation; Hirawe Bazar 25% households million annually; Punsari has life insurance cover of Rs.1 lakh and a mediclaim policy of Rs.25,000.

On the **flip side**, rural **poverty** (as per revised criterion of Rs.30 per capita daily consumption) remains at 33% and by the vulnerability criterion of two dollars daily per capita consumption, at an embarrassing 75%; in many developed countries 0% by \$1.25 standard and 7% in Sri Lanka.

Developing nations built on **rural industry** and cheap exports from France to China; in India only 3% of GDP.

High underemployment; **per worker productivity** in agri is \$ 500 or 1/100 of US and Japan with \$ 50,000 per annum; 67% of rural India contributes 30% of our GDP and 49% of our agriculturists produce just 14% of output. India's own service sector eight times.

With aspirations rising, **resentments and violence** notable in regions like UP.



The Issue

Why such retarded growth; Rural development has a long history in India; medieval lakes, tanks and canals; British added property rights, tenancy protection, canals and agricultural research; counter by Gandhians, voluntary organizations, and communist parties. Followed by Nehruvian planning, liberalization. Yet, not much dent till today. Consider differences among **perspectives below**.



Before that consider **notable dilemmas**: can rural development come thru agri or rapid industrialization and ancillary units needed; is corporate sector a threat to small enterprises or a necessary evil for reducing wastage and inefficiency; can small farms raise incomes, is collective or cooperative farming feasible; does mechanization hurt labor; water conservation and organic farming or a second green revolution better; genetically modified crops ?

Factual uncertainties: Did 1990s witness a deceleration ? What is the extent of rural poverty ? is agriculture getting feminized ? did green revolution help small farms ?

Method

Need to relate micro (qualitative and quantitative) and macro (national and international) understandings in general and to check fallouts of land reforms, green revolutions etc in rural India.

Dhantala--a village in Meerut visited since 1989 to chart transitions.

Selected for proximity and thru migrants in neighborhood slum.



observed **since 1989** through surveys, interviews, life sketches, group discussions and some personal relations and telephone calls and local informants.

Rough data for **earlier period** elders' recollections and local records from 1930s; more definite from long stays in 1989, 2006 and 2012.

Shall relate findings from Dh with others in the region and with aggregate data on rural in conclusion to say **if the study adds anything** to perspectives on under-development and policy options. Before that look at sectors and introduce the site.

Issues Discussed

The Macro Picture
Aims and Methods
Location and History
Occupations in Dhantala
Primary Sector
Land, Population and
Holdings
Crops and Yields
Irrigation
Mechanisation
Costs and Earnings
Cooperatives
The State and the Farmer
After 1947
Welfare and Infrastructure
Some Paradoxes
Animal Husbandry



The Non-farm Sector
Secondary Occupations
The Tertiary Economy
Caste
Gender
Jajmani to Cash
Contracts
Rural-Urban Integration
Commuting and
Migration
Arrivals from Towns
Village and the State
Other Villages
An Overview
Surprises
Development Perspectives
Critiques; Left Alternative
For Synergies

National Rural Economy x

General focus on agriculture but in a maturing economy potential for growth and poverty alleviation is more in **non-farm rural sector** (including traditional crafts, semi-modern manufacturing, construction and services).

From Britain in the seventeenth century to China in the twentieth encash cheap rural land and labor **for export** led modern industrialization. By 1980, Taiwan 67% of rural output from industry while China has 78% by 2000.

India rural non farm employing **35% of rural workers** (over and above semi- farmers) and **50% of rural GDP** but little exports.

rural construction last two decades from 2 to 11% of rural GDP even as agriculture fell from 80 to 65% and manufacturing and regular services rose by 1 and 2%.

Required: roads, electricity, training and easy credit.

Instead, a negative regulatory framework that opposes economies of scale vital for exports.



Japan's per capita income grew 6 times 1870-1940; India's grew 5 times in 66 yrs from Rs.8000 in 2005 price or 250 in current price.

Indian Agriculture x

In 2003, NSS found 40% agriculturists wish to move out of agriculture.

yields per hectare for wheat stood at about 28 quintals in the country (having risen from 7 quintals per hectare in 1950-51); though best yields in Ludhiana go upto 60 and in world 94 best and 50 average in Netherland.



mechanization along with shrinking fields (1.1 hectares on average) subsidiarisation of cultivation. (incidentally the average holding measures upto 185 hectares in USA, 1900 hectares in Russia and Australia and two hectares even in China and Japan).

one to three per cent of workforce in agriculture (and has about same share in GDP)

Per acre **earnings** between Rs.600 and 4000, in 2004-05, half of agriculturists are indebted and total rural **debt** amounted to 1.1 lakh crore in 2007; half of which was derived from non institutional sources at interest rates exceeding 36%

Of 150 million hectares **about 40% is irrigated** (60% of big irrigation untapped); about 60% land tilled by animal power.



25 million tons of cereals and 25% of fruits and vegetables **wasted**; only 6% crops **insured** and same **processed for high value** products. Monopolies of **mandis and middlemen** leave about 10% in unsupported crops often

share in world trade in agricultural produce at 1.5%; foodgrain stock 80 million tons in 2012;

State's role: about three million occupancy tenants given ownership. less than **2% of cultivable land** for redistribution; 40% of this tied up in courts; **plan investment** in rural down to 16%);

cooperative successes in marketing milk but barely 2% of cultivators grouped in producer cooperatives while consolidation of holdings failed and even gram sabhas exceptions.

The Silver Lines x

growth in cereals by 2 to 3% per annum mercifully above the 2.2% rise in population aided by extention, abolition of zamindari in the fifties, green revolution, white revolution and mechanisation from seventies and 'second green revolution' and genetically modified cotton and horticulture as well as rural construction and transport in last two decades.



Table 1: India's Rural Economy: 1950-2011

Dimension// Year	1950s etc.	2001/2011
Rural Population	83%	68%; 50% in China
Agriculturists	70%	49%; 39% in China
Agri Share in rural Employment	85%	60%
Rural Share in GDP	70%	33%
Agriculture Share in GDP	56%	14%
Agri Share in Rural Production	70% ?	40%
Per capita rural income current price	Rs.150 appr.	Rs.25,000 appr.
Rural Poverty (as per Rs.33 pcpd)	66% in 1974	33%; 4% in Malaysia
New Amenities	Cycles, radio	Fourwheelers, dish TV

Net Area Sown		140 m hectares
Gross Area Sown		190 m hectares
Irrigated Area	17%	40%
Rural vs Urban Work Productivity	1:1.8	1:2.8
Rural Workforce		41% (50% M; 25% F)
Public Investment in Agriculture	22% in I Plan	18% in XI Plan 6.7 L Cr
Institutional Credit to Agriculture	6000 crore in 1984-5	5 lakh crore
Food and Fertiliser Subsidies (given by centre)		72 K cr + 35 K cr; Total subsidy was 2 Lakh crore
Minimum Support Price for Wheat	60 in 1971 to 630 in 2004	1300 in 2013
Food grain production	50 m ton; 120m in 1980	250 m ton
Horticultural Output	97mTon in 1992	190m Ton in 2006
Livestock Share in Agriculture		25% (4% of GDP)
Milk Production	20mTon in 1960	122m Ton in 2011
Worker Tending Live stock	2% full time ?	4% main 60% subsidiary
Non Farm Share in Rural Income	34% in 1933-34	45% in 2003(50%)
Non Farm in Rural Employment	22% in 1983; 24% in 1997	35% in 2011 (full time)
Construction in Non Farm Econom		22% in 2000
Manufacturing in Non Farm		16%
Trade in Non Farm		30%
Other Services in Non Farm		11%
Transport in Non farm		16%
Rural Manufacturing to Total Manu	5.3 in 1972-73	8.1 in 2004-05

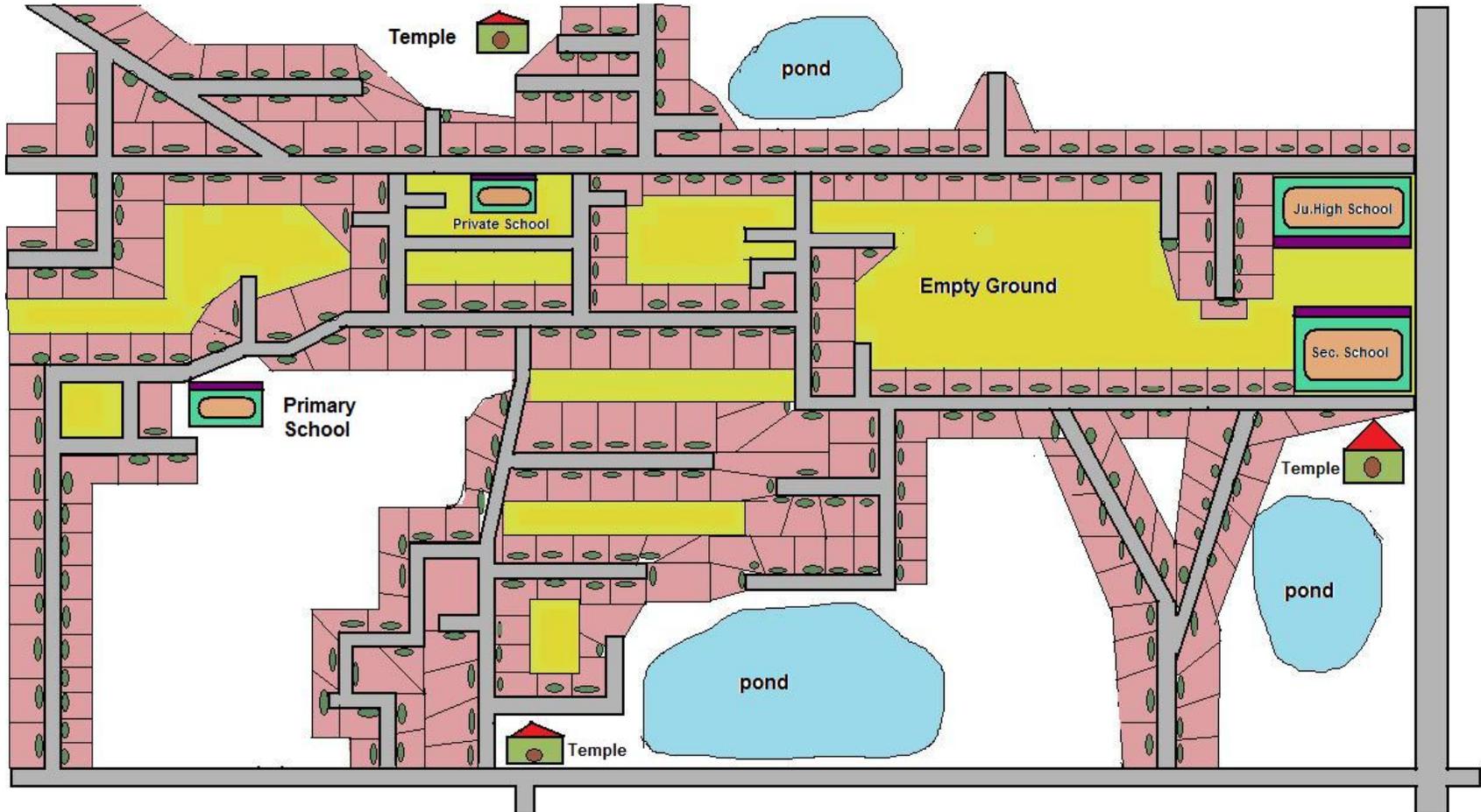
Rural Construction to Total Cons	1.4 ii	4.9 in 2004
Rural Trade to Total Trade	2.5 ii	6.1
Rural Transport to Total Trans	0.5 ii	2.5
Rural Services to Total Services	3.5 ii	5.0
Cereal yield (quintal/hectare) India vs UK vs Japan	11q/hectare wheat and Rice in 1965;	24q/ h in 2004 vs. 66 Uk vs. 56 Jap
Per worker Productivity (Rural vs Urban India)		1: 4
Rural per Worker Productivity (Farm vs Non Farm)		1:2.4
Per worker Productivity in India (Primary vs tertiary)		1:8.7
Per worker Productivity in Agri culture (India vs US vs Japan)		480 vs. 51,000, vs.48,000 per annum
Proportion of Worker in Agriculture (India vs. US vs. Japan vs. Australia vs. Malaysia)	75% vs. 07% vs. 33%	49% vs. 1.6% vs. 3.7% vs. 3.3 % vs. 13%
Agriculture Share in total GDP(India vs. US vs. Japan vs. Australia vs. Malaysia)		14% vs. 1% vs. 1% vs.2% vs. 9%
Industry's Share in Total GDP (India vs. US vs. China vs. Indonesia vs. S. Korea)		27% vs.22% vs.46% vs. 44% vs.41%

Segments within Farmers:-				
Category	2011 etc	Features	1951 etc	Features
Independent Farmers (do not hire out)	55% of agriculturists		65%	
Marginal and Small Farmers	86 % of Farmers	40 % of CultivatedLand	66% in 1991	20% in 1991
Medium Farmers	10%		27%	
Tenants	9 %		11% in 1990	
Big holdings (above 10 acres)	4% of Farmers (own 30 % of land)	1 million big holdings (0.8% of total)	2.2 million big holdings in 1981.	Covering 90 million acres
Rural Labor (Farm and Non Farm)	45% in 2011		33% in 1991	
Agricultural labor	25% of agri in 2004 (20% landless and 80% marginal)	98% of agri labor are casual and 2 % regular	30% of agriculturists in 1993	
Landless AgriculturalLabor	6 % of Agriculturalists	20% of Agri Labor	?	
Migrants Workers (in past one year)	40 million		30 million in 2008	

Sources: National Accounts Statistics and NSS data cited in Balakrishnan (2012), p.28-29 and p.178; Datt, Mahajan (2013), p37-38 and Dreze and Sen (2012), appendices.

LAYOUT OF DHANTALA

To Talhata



To Mohiddinpur

To Kharkoda

To Taudi VillGE

To Burhanpur

Dhantala

Dwellings and ponds in 100 acres (1 km X 0.3 km) surrounded by fields over 1500 acres.

2700 residents dominated by Gurjar and Jat landowners served by Kumhar and Muslim artisans and Jatav and Valmiki laborers traditionally.

1930s was seven hundred rising to twelve by 1960s.

declined to 2604 from 2704 in 2006 as 14 families left only four came in.



Economic History

Despite Mahalwari zone, village owned by absentee **landlord of Tori** of four villages;

Gujjar herdsmen settled since late 18th; three dalit families with manpower and bullocks also **masuri** (occupancy tenants).

Till 1947, no school, road, electricity, dispensary, 10 brick wells, one tubewell, bicycles.

Independence brought abolition of zamindari, land ceilings, adult franchise, reduction in tax, panchayat election, primary school, handpumps, fertilisers; but dalits' condition worsened as Gujjars more powerful.

In nineteen sixties, HYVs, tubewells; pucca road and pradhan through secret ballot;

1970s: power supply in some homes, first tractors,



Chakbandi, coercive sterilization.

1980s milk cooperative; CPM helped three acres for 120 landless; television.

1990s: liberalisation: factories closing but construction and migration growing; hired machines; new welfare schemes (including cheaper rations, mid day meals, pensions and 73rd amendment); deceleration not evident



2000s: buses touching village, personal vehicles, mobiles in 2004; satellite television; primary and middle school and employment guarantee scheme, right to food and education on paper.

Missing: dispensary, regular power, road; Also, water conservation and drip irrigation, agro processing; IT for agriculture, modern marketing and storage, insurance, gram sabhas, sanitation.

Occupations :

70 sub-categories: Work and non work

From pastoralism, **settled agriculture** by early 20th century.

Now Cultivation subsidiary/ part time activity for many small and big farmers.

With mechanization, small farms require maximum **four hours of work** for eight months from one person.

parallel income from dairy; 90 families do not have farms n 237 families out of 300 had non farm incomes too in 2012.

non farm jobs unstable; 65% **describe themselves** as agriculturists and 50% cultivators.

non farm work categories (besides students and job seekers): construction, transport, commuters, vendors and petty shopkeepers, gadget and tool repairs, teaching and coaching, healers, lawyers and middlemen, politicians and social workers, illegal and quasi-legal professions like adulterations, very few manufacturers like tool makers and potters.



The better off: property dealing, brokerage, money lending and higher studies.
 Most sought after are public sector jobs from sweeper's to police officer's.
 Absences are rural factories (despite cheap land and labor), cold stores etc if power, roads;
 Could be brick kilns, ply boards, iron structures, agro processing, snacks like khoya, papad,
 chips, sweets meat etc, local insurance, cyber café etc.

Table 2: Estimated Occupations in Dhantala: 1930-2012
 (Usual Principal + Subsidiary Status; brackets denote women workers)

Occupations// Years	1930s**	1960s	1989	2006	2012	SCs in 2012
All Workers	321	558	873	1132 (272)	1099 (242)	271
Total Population	700	1200	2080	2704	2604	599
Workers' Ratio	46%	47%	42%	42%	42%	45%
Employers***	05 2%	28 6%	31 4%	40 4%	38 3%	03 01%
Self Employed	238 74%	355 64%	708 81%	761 61%	710 65%	137 51%
Casual Laborers	56 17%	132 24%	88 10%	230 20%	228 21%	86 31%
Regular Wage Earners	22 7%	43 8%	41 5%	100 9%	107 10%	45 17%
Manual Workers	312 97%	550 93%	837 95%	1082 96%	1040 95%	260 95%
Low skilled Workers	269 83%	377 87%	745 85%	986 87%	931 85%	256 94%
Non Agriculturists	63 20%	127 23%	175 20%	321 29%	381 35%	114 42%
In manufacturing	62 in 2012 inc 25 artisans, 35 laborers, 2 manufacturers					
Agriculturists:-	258 80%	431 77%	698 80%	811 71%	718 65%	157 58%
Rear Livestock Alone \$			05	02	02	02
Women Livestock Rearers			151	182	171 16%	35
Tenant Cultivators						
Small Tenants			16	08	07	03
Substantial Tenants			00	01	01	0
Farmers:- \$\$			476	536	471	89
Sub Marginal Farmers			15	66 (2)	69 (2)	23

Marginal Farmers \$\$\$			223	292 (2)	248 (5)	46
Small Farmers			170	130	118	20
Small Leasors			10	08	08	0
Semi Middle Farmers			41	34	23	0
Middle Farmers			17	05	02	0
Absentee Landlords			00	00	00	0
Capitalist Farmers			00	01	01	00
All Cultivators	108 33%	225 40%	492 56%	545 (5) 8%	479 (7) 44	92 40%
Farm Labor^	60 (40) 9%	86 (50) 5	40 (36) 5%	65 (35) 6	46 (25) 4%	20 (15) 7%
<i>Casual Labor</i>			28	55 (29)	38 (20)	16
<i>Landless Casual Labor</i>			12	10 (6)	8 (5)	4 (2)
<i>Laborer cum Farmer</i>	<i>Most of the Marginal Farmers</i>					
<i>Bonded Labor</i>			02	00	00	0
Non-Farm Labor:-			47 6%	107 11%	116 11%	40
NFL Within Village			43	81 (17)	92 (11)	30 (3)
Casual Labor:-			31	79	90	30
<i>Construction Labor</i>			21(8)	31 (12)	49(9)	19
<i>Other Labor^^</i>			10 (4)	40(5)	41(2)	11
Wage Labor			12	02	02	07
NFL Outside Village			04	20	24	0
All Labor	70 22%	120 22%	87 10%	166 (62) 15	161 (36) 15%	60(18) 22%
Occupations// Years	1930s	1960s	1989	2006	2012	SCs in 2012
Artisans and Servers:-						
Traditional Artisans@			17	08 (1)	06 (1)	00
New Artisans/Mechanics			16	30 (4)	42 (8)	6
Artisans cum Farmers			40	30	28	0
Semi-skilled Servers@@			12 (12)	13 (2)	06	2
Skilled Servers			10	13 (2)	12 (2)	2
Petty Vendors			08	12 (4)	15(4)	4
All Artisans and Servers	43 13%	72 12%	92 11%	96 (13) 8%	109 (15) 10%	14 5%
Formal Sector Employees:-						

Private Sector:-//						
Grade IV)			03	34 (4)	37 (5)	32
Grade III))			02	29	30 (1)	00
Public Sector:-						
Grade IV			08	04 (1)	04 (1)	3
Grade III			12	28 (4)	31 (6)	9
Grade II			02	03	04	2
All Formal Employees	08 2%	15 3%	27 3%	95 (9) 8%	105 (13) 10%	45 17%
Petty Bourgeoisie and Entrepreneurs:-						
Professionals!			04	07	09	2
Village Shopkeepers			05	10	20	0
Manufacturers (in Dhan)			00	02	02	0
Business Persons!!			07	17	17	4
Multi-Taskers!!!			02	08	08	1
All Entrepreneurs	02 <1%	05 <1%	19 2%	44 4%	55 5%	11 4%
All Workers	321	558	831	1132 (272)	1099 (242)	271
No. of Households	120	220	302	364	384	90

Adult 'Non-Workers' in 2012:-	400 (35% of adult population)					
In Higher Studies	8	2	0	11	0	21
Unemployed (seeking wk) 12 (5F)						
Not seeking work	10 (including 13 Physically challenged)					
Social Workers	02					
Political Activists	02					
Semi-legal Works!!!!	04					
Illegal Workers!!!!	02					
Home Makers#	330 women					
Physically Challenged	17 (6 working)					

Examples of other Notable Work Categories, in 2012, in Dhantala:-

Landless Households	90 including 50 living away from parents with marginal farm
Rentiers	26 middle farmers + 8 land leasors
Single subsidiary work >	Women cattle rearer, child worker and physically challenged
Two or more subsidiary jobs	Most marginal farmer cum laborers
Disguised unemployed >>	Solely marginal farming, petty vending etc
One principal work	Wage earners, artisans, professionals and middle farmers
Principal and subsidiary work	Some public sector employees cum farmers
Two or more principal activities	Big farmers + business/ public sector/ brokerage etc
Bonded Labor	Nil Traditional Bonded; 25 child wkrs + some indebted labor
Earning Women	76 including farm labor, welfare workers and tailors
Independent Women Farmer ##	07
Child Workers Outside Home	25 work on others' fields
Semi-legal work	2 (no known beggar or prostitute)
Illegal Work	02 (adulteration but no known pickpockets etc)
Families with more than one Occupations	237
Families with more than One Occupation	81 (besides agriculture)
Individuals with more than one^ Occupation	24 (besides agriculture)
BPL Pensioners	8W+6H+0E
Retired Pensioners	16
MGNREGA card holders	25 (paid only twice between 2007 and 2012)
Daily/Weekly Commuters	126
Relatively Overpaid Persons	Rentiers and some public sector employees
Degree Holders	61BA, 15 Diploma holders
Beneficiaries of Job Reservations	11 dalits
Political Activists	06
Physically Challenged	17 (6 working)

The Primary Sector

Two thirds agriculturists; besides kharif and rabi crops, **livestock rearing and** collection and sale of hay, fodder and dung and a third harvest (mainly of vegetables) in some fields.

no mining, **fishing**, forestry

Population and Holdings

Population 700 to 2700

per capita availability of agricultural land fallen from about two to half acre since 1930s. (1 hectare per family) against 1.1 in India, 3.5 in Punjab and 0.4 in Bihar and 0.7 in Bengal

Nearly **249 out of 479 farmers**, in Dhantala, worked on marginal farms (between one hectare and one acre in area) while **69 were** sub-marginal (with less than one acre) and **only three** had more than ten acres (middle farmers).



economic holding and optimum holding moved in opposite directions; calculated at one acre and hundred acres respectively

Crops and Yields

70% of land covered by sugarcane today; till 1960s, millets and peas were common; early seventies rice and wheat. Vegetables by some as a third crop. sugarcane because gets more cash and is disease resistant.



crop yields of upto 20 quintals per acre for wheat, 15 to 25 for rice and upto three hundred quintals for sugarcane

Yields in 1930s, ranged between two and four quintals under normal rain. With improved seeds and irrigation, about six quintals by early sixties; with HYVs yields went upto fifteen quintals.

only 40 odd farmers in Dhantala sowed vegetables due to risks in horticulture that lacks price support from the state even as prices fluctuate more.

Irrigation

one stream and two ponds for livestock etc and one tubewell for some fields. Till sixties, rahat (persian wheels) principal means as no canal link.

Handpumps in 1950s and private tubewell bought by Pradhan in 1961.

By 1989, tubewells 45. By 2012, there were 199 tubewells (including forty five submersible pumps).



households do not have pumpset hire from others on hourly basis. In 2012, the charge for hiring a tubewell was Rs. twenty per hour on electricity and Rs sixty on diesel.

Flood irrigation common; Water table has fallen, since the seventies, from fifteen feet to more than fifty feet. falling at the rate of one foot every year; submersible pumps have averted a crisis for the time being.

state and community doing little water harvesting or drip and sprinkle irrigation.

Mechanisation

Till independence traditional machines and animal power including rahats, wells, bullock carts and ploughs and kolhus or presses.

In **early sixties**, tube wells and tractors bought by big landowners, threshers in seventies; improved in nineties. In 2000s, **'computer levellers'** for soil leveling.



In 2012: 45 Tractors, 199 tubewells, 50 threshers, no harvester, 197 two wheelers and cars 31

From 1990s, relative price of machines fell. **hiring** grew.

A grey revolution as major saving: draught animals entailed minimum Rs.fifty per day per bullock (or Rs. eighteen thousand a year) in 2012 while a tractor on hire (at Rs. 450 for one round of ploughing) and a diesel pump used for Rs. fifty per hour, in 2013 (Rs.6000 for two crops).

Mechanisation did **not pull down wages** as more intensive cultivation possible.

Costs and Earnings

Despite rise in yields and support price, earnings from fields remain **poor due to size**; In 2014 expenditure on cultivating wheat in one acre was Rs.11,000 appr. (not counting family labor or imputed interest on fixed capital), gross return about 22,000 (tables 4.4 and 4.5). From a normal harvest of wheat and rice (or of cane once a year), a marginal farmer could earn upto 30,000 to 40,000 per annum net or **Rs.3000 per month** on average.



With higher inputs a middle farmer upto Rs.4000 per acre per month. Family could rear two buffaloes each yielding upto 1000 rupees per month. total earning from one acre and one buffalo came to Rs.**6000 per month** in 2013. per capita per day income of only **Rs.33** for four consumption units when rural poverty pegged at Rs.29 per day.

In comparison, a **laboring couple** earn upto Rs. 450/- a day, at present wage rates or, about 45,000 rupees per annum if working for six months per year; rising from Rs.72 appr. In 1930s. **grade IV worker** in public sector receives a salary of Rs.12,000 per month besides medical and pension support now.

cost of cultivation (or C2 that excludes cost of family labor) crosses gross earnings. farming by itself is a loss making venture unless one counts the gain from the rise in land price over time and the employment generated.

Wheat's price rose 200 times from Rs.5 per quintal in 1930s to Rs. 1400 in 2013 while whole sale index rose 150 times. Combined with the five fold rise in yield rates, farmers' earnings (in current prices) went up almost thousand times (from appr. **forty rupees** per acre per annum to rupees **40,000 now**). This reflects a **500% increase in real** farm incomes, since 1951 after accounting for inflation of 200 times.



Marginal Farming before and after Independence x

Eighty year old Waheed Khan is a marginal farmer cum black smith. father Nanhe Khan, was a masuri (regular) tenant of Tori, with six acres of rented land. In 1940, Nanhe surrendered his tenancy as rents were high (Rs.13 per acre in 1940 or, half of total produce) and productivity was low as cultivation was dependent on rains. farmers harvested only one crop in a year and left land fallow in absence of fertilizers.



Irrigation was dependent on 'rahat' (persian wheels). required a lot of labor, of men and animals to water even a few acres. Nanhe received no compensation from the landlord and worked hard as a blacksmith. In nineteen seventies, agricultural productivity improved. electric tubewells and threshers started replacing 'rahat' and the 'dai' besides high yielding varieties. In fifties, secure tenants also received land titles and the landless got three acres each in 1984.

Waheed inherited one third of the plot allotted to his father. But, in 1998, he sold the 1.1 acre plot for Rs.one and a half lakhs to repay the debt incurred while marrying his three daughters. Meanwhile his wife expired in 1995. Waheed is now finding it difficult to make ends meet with no assets left except a house in the village and a monthly pension of Rs. three hundred from the state (increased to Rs.600 in 2013).

Shades of Multi Tasking x

Tejram Jatav is a **sixty year old dalit** ; a leading participant for land distribution in 1984. Soon after twentieth birthday, burdened with upkeep of a family of five; married to Daya--**his brother's widow** in 1973.

received a plot of three bighas and combined **casual labor** to make ends meet. turning came with distribution of land in 1984. Expenses galloped one son and two daughters born.

purchased two **buffaloes** looked after by wife and children. himself **masonry** as demand grew from 1990s. Wages grew from Rs. Seventy in 1990 to about 450 in 2013, Tejram lend a part of his **holding on rent** (charging Rs. 15,000/- per annum for acre; rest two acre to his son.

total earning, in 2012, was **fifteen thousand per month** including Rs.4000 from masonry (for about a fortnight per month) and 4000 per month earned by son. The family of seven (including three grand children) thus earns about **Rs.2000 per month per capita** despite daily drudgery on three fronts and a personal land holding.

The increasing demand for non farm labor has played a crucial role in improving the bargaining power of laborers and bringing Tejram and his family above poverty line of Rs.1000 per month.



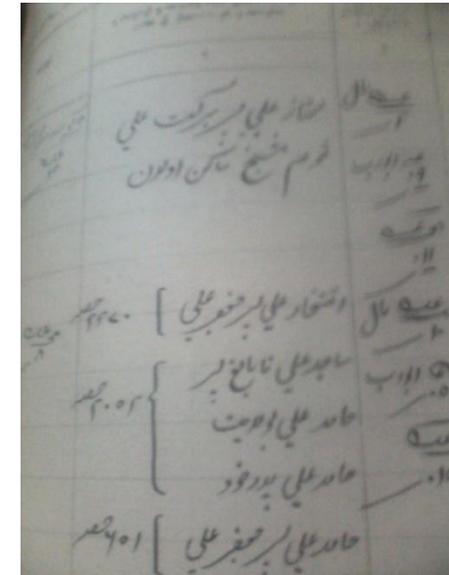
The State and the Farmer

relation between the peasant and the state saw transformation over the past century. The British continued to extract **revenue** mainly from agriculture. But by 1947, the rate declined to 10% of produce from 50% of rental in the 19th century. left the sub-continent with GDP at 1.5% per annum, 16% literacy, 17% irrigated land, 33 years of average life expectancy, and only 3700 electrified towns and villages besides 1.5 lakh kilometers of surfaced roads.

After 1947

Independence brought adult franchise and planned development along with abolition of zamindari, land ceilings, some redistribution and freeze on revenue demand (at Rs.15/- per acre on holdings of more than five acres in Meerut region) leading to a steep fall in the tax rate to less than **0.01% of the gross produce**; nil below 5

in long run **ceilings restricted** purchases by landlords while holdings got subdivided and upper castes and ex-landlords began leaving villages even as 'bhoodan' and other initiatives did not materialise.



In Dhantala, 120 landless men received upto three acre plots in 1984 after a valiant protest aided by local communists. Not all families that received holdings prospered but some did.

Struggles of a Landless Dalit x

Mangte Ram was born in Valmiki family around 1923. His father was a landless pig and cattle rearer and mother a sweepress and mid-wife. Mangte spent his childhood grazing animals along with his three siblings. In 1967, he purchased a few buffaloes with a loan but suffered a huge loss when several died.

Next tried manufacturing liquor. in 1973, job of the village chowkidar; salary was just Rs. thirty per month; had to report all criminal activity which drove him into clashes.

the new daroga of Kharkhoda chowki was abusive; Mangte gave up the job in 1985 even though salary had risen to Rs. hundred.

In the land distribution in 1984, Mangte received a plot of three acres. cultivation took a few years. When it became productive, his elder son decided to purchase a tractor but could not repay the loan and the plot was auctioned by the Bank.

In frustration, all his sons left Dhantala one by one and Mangte and wife Rajkali were left alone making a living from rearing pigs and working as sweeper—paid by households with a chapatti every day and Rs 30.



In 2007, one of Mangte's sons—**Srinivas died** of electric shock in Delhi leaving behind his widow and three children. Mangte Ram and Rajkali were forced to shift in order to support the children.

Prahlad Singh and Sons x

Shri Prahlad Singh--my **host in Dhantala**, since 1989, passed away at the age of 80 in May, 2013 after suffering from intestinal infections for one and a half years. had seen many ups and downs. Starting as a 'masuri' **(secure) tenant** of the Tori zamindars, he later worked as a manual labourer as Gujjar peasants harassed the family. received a plot of **three acres** in 1984.

The most remarkable aspect of his struggles was his investment in his **six children's education** of whom one son became a magistrate, another a lawyer, another a munshi and the eldest—a teacher. Only the third son is still to settle properly because of drinking.

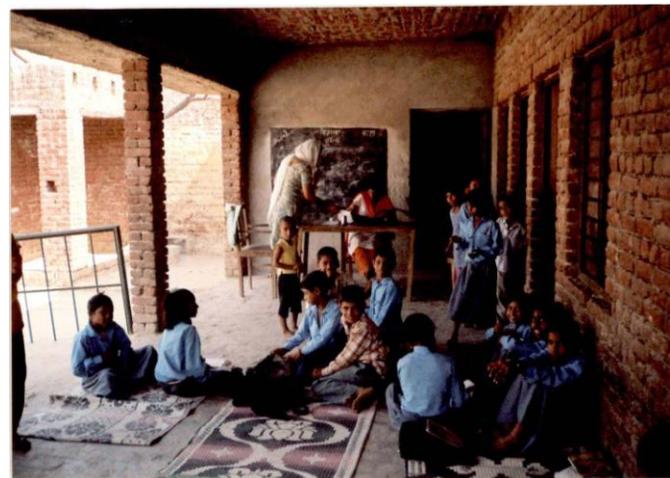


Welfare and Infrastructure

Other measures proclaimed by central and state governments for agriculturists include support price for major crops, subsidies on inputs (costing about Rs.70,000 crores in 2014),

provision of cheap credit to farmers, loan waivers (amounting to 70,000 crores waived for 4 crore farmers in 2008).

Relatively **successful measures** include subsidy on foodgrains; polio and malaria eradication; partially successful schemes like the Integrated Child Development Program and mid day meals in schools and the Sarva Shiksha Abhiyaan and others like the Sanitation Mission, Indira Awas Yojna etc that are **hardly visible** on the ground in this region.



The minimum support price for wheat rose from 475 in 1997 to 1400 in 2013. Yet, **majority of crops do not** have any assured price. Similarly, in Dhantala, 90% farmers had Kisan Credit Cards that enable loans of maximum 50,000 rupees for short term purchases at minimum 3% per annum interest but beneficiaries mainly better off farmers.

biggest failure of Indian state with regard to agriculture in **infrastructure** which does not assure regular power, all weather roads, cold storage and processing facilities for agricultural produce, easy credit, crop insurance and agricultural research. Power tolerable till 1990 has been worsening with corruption, inefficiency and mismanagement.

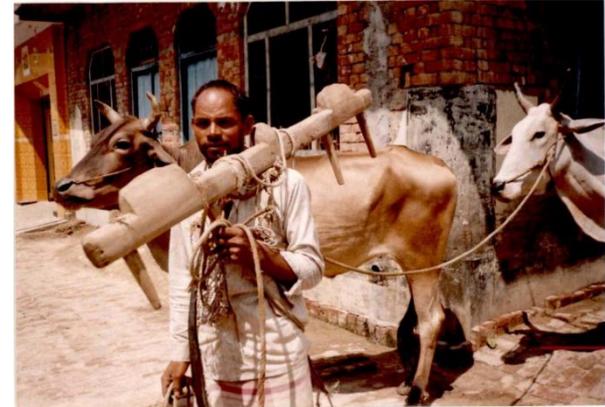
NGOs and Cooperatives

most producers are small, **desirable to pool** for economies of scale. Dhantala has three milk cooperatives; brought better sale price by cutting waist and commissions.

Besides milk, cooperatives have not succeeded in the region; a cooperative **sugar mill** opened with state aid but failed while one government and three private sugar mills running. Even government mill closed for several years and runs in losses.

The purchase price **for** cane announced by the state; raised to Rs 290 per quintal but mills claim losses preventing purchase.

mixed organizations like NABARD, cooperative banks and NGOs (besides gram panchayats) that receive aid but do not figure as major agents of change in the region.



Some Paradoxes

In 2005, NSSO found 40% of farmers **keen to leave agriculture**, while in Dhantala 90% of youngsters prefer 'service' while 10% want business; putting a question mark on restrictions on land conversion.

reason in shrunken holdings: tractors and pumps increased the size manageable from ten to hundred acres just when population reduced holding to four acre. Fortunately, higher yields decreased the size of 'economic' and subsistence holdings from five to three and one acres respectively.

Technology and state kept marginal farming viable though at a poor level. Yet, aspirations risen faster with exposure. Also, **price of agricultural land** rising steeply.

In 1940, Suraj Bhan purchased 5 acres for Rs.1300, costing about 260 rupees per acre; in 1968, Sohrab Singh bought a field of 0.78 acres, in adjacent Kharkhoda, at a price of Rs.4000 or about 5000 per acre.(Kessinger reports Rs.9000 per acre in Vilayatpur in 1968). Today price Rs. 5 million per acre. even a marginal farmer can be called a millionaire.



However, land is not easy to sell and most farmers do not wish to. But some do though the land laws made it difficult as dalits can sell only to dalit from five nyaya panchayat villages. False addresses may be shown but a **dalit seller** still gets less than half the market price.

The Land Law and a Sub Marginal Dalit Farmer

Bhopal Singh—the dalit marginal farmer with a small field of 0.4 acres in Dhantala illustrates the ironical **results** of protective laws. Besides farming, he rears two buffaloes for feeding his large family of four children and his handicapped wife--Suresh. Bhopal had **borrowed two lakh** rupees in 2004 for the treatment of his wife but could not repay them. Even after selling his buffaloes he could not save Suresh from loss of hands nor the family from mounting debt.

By 2013, he was desperate to sell his tiny field to tide over difficulties. However, because of the land law restricting the sale of a dalits' land to a dalit alone, he was not finding a buyer even at half the market rate (of rupees five million per acre). Currently, Bhopal is barely making ends meet by laboring at **welding unit** while his wife and children subsist by **selling milk** and together earning about four thousand per



Animal Husbandry

white revolution revived cattle rearing again as major supplement even as bullock down. In 2012, all but 68 families in Dhantala had milch cattle although only three with ten or more.

three milk cooperatives; In 1990, the price was Rs. 3.50 per litre while in 2014 Rs. 40 (for full cream milk).



One buffalo gives upto ten litres per day for only six months in a year; to be served upto Rs.100 of cattle feed daily. The sale price on average 200 rupees per day in 2011; interest returned thru dung and calves; now sold for slaughter too.

marginal farmers earn more through dairy with two or more buffaloes than farming.

Demand not met; some adulteration

Attempts for fresh water fishing, pig rearing, poultry etc by several villagers, outbreaks of disease and frequent death wound up. Lack of training and easy credit for this responsible for this loss.

The Non-farm Sector

3 segments of rural non farm is the **key to poverty alleviation**, job generation and slum reduction.

expansion at four per cent per annum since 1999 higher than pre-liberalisation pd but not satisfactory compared with **transitional economies**.

construction and services major drivers while rural manufacturing remains at 8% of rural GDP.

In Dh, in 2012, **35%** mentioned non-farm work as their principal livelihood up from 20% in 1989. Among 65% agriculturists many had non farm incomes though from subsidiary jobs. channel of upward mobility yet **mostly low skill** and low return occupations.

Intermediate Sector

major impetus to non farm from pucca houses. in 1989, there were no **pucca houses in the dalit quarters**; now out of 90 only four mud and thatch roofs. in middle caste zone, many are two storeyed.



construction boom **confined to housing and highways** rather than infrastructure like bridges, warehouses etc whose completion remains extremely slow.

Secondary Occupations

Till mid century, variety of crafts; declined with arrival of machine made cloth, utensils etc. from 1940s.

new manufacturing like iron tools, tailoring, agro processing etc negligible; **old include** two potters, three blacksmiths and two carpenters. thirty skilled workers **commute** daily in 2012.



Villages around report small scale milled oil, iron and wooden doors and frames and industrial grease. successful **along highways:** tannery units, slaughter houses, sugar mills, brick kilns and distilleries.

Three **census towns** have sweets, jaggery and milk processing. cloth, tyres and cement units of **Modinagar and Mohannagar** from colonial era, have wound up.

Industries like **sports goods, brassware,** snacks and garment industry are centred in Meerut, Ghaziabad and Noida and Greater Noida.

In 2005, six started **khoya manufacturing** in Dh took a loan of Rs. one lakh from Syndicate Bank. the potholed road lead to wastage, aggravating quarrels and break up.



The Tertiary Economy

tertiary expansion grew from **2% of workforce in 1930s to 10% in 2012**

traditional rural servers like barbers, water carriers etc have fallen.

declined water carriers (bhishtees), puppeteers and 'madarees'.

in **altered** form are tailors, mid-wife, tool makers, medical practitioners, and veterinarians etc. Unaltered are barber, cobbler, vendors.

New services are electricians, machine repairs, health workers, teachers, accountants, and lawyers, chemists, insurance agents, social workers and elected representatives; some commute daily.

In 2013, there were **23 shops** in Dhantala from three in 1989; 14 of these had been rented at a rate of Rs.300 to 500 per month;



no dhaba or dispensary or cloth shop yet nor qualified allopaths, post office, bank or potable water.

Most sought after is work in formal economy. In mid 20th, only two Grade III and three grade IV; in 2012, ninety three grade III and IV organized sector employees.

Dynamic segment of businessmen and middlemen; negligible till 1989 but 5% now. Some of them are enterprising multi-taskers with quasi-legal occupations.

lucrative activity running private school; another is the production and sale of liquor.

In 2012, Dhantala had 124 individuals covered by **life insurance; 195 admitted indebtedness** while six are creditors.

Caste x

Till mid-twentieth, **hereditary professions of sub-castes**. Today, within varna dalits confined to unclean jobs even though Jatavs may take up a sweepers' while Pasi become hide cleaner.



Mobility across varna extremes are rare. Till 2012, middle caste--Ved Prakash took sweepers' job under state government; only one Brahmin was forced to labor and died in penury in 2005.

dalits in top professions with literacy and dalit organizations; reserved quota helped 16.

Gender x

Most women **homemakers** though routine full of hard labor in home and field or cattle shed;



do not take up **private sector** jobs or commuting out daily.

242 women in a total of 650 adult females working and 214 engaged in cattle care.

female **farm laborers has come down** as dalit households withdraw women from farm work as migrants' support.

Para health and private teaching get **less than the BPL wage** at about 1500 or 3000 per month. regulars at the primary schools are getting upto **Rs.22,000 per month**.

From Jajmani to Cash Contracts

mutation in exchange practices between buyers and sellers and employers and servers.

Till 1960, crafts, services and agriculture were connected through 'lagbandi' (also called jajmani); loyalty, absence of competition and payment in kind.

Contractual work and cash payments started from mid twentieth century.

Villagers rue that many do not feed old cattle but sell them as they age.

even today some workers paid in grain at harvest and others delay payments; however, hereditary attachments are absent.

Factors: improved transportation; surplus generated by the green revolution and spurt in the non-farm economy besides changed ethos and aspirations; redistribution of land; legal protection to dalits landless.



Rural-Urban Integration

slow integration with regional networks and visibility of urban amenities inside the village.

Village's old autonomy in food, housing material and tools, utensils and vehicles gone.

Phalpota, in Jullunder shows imports were restricted to salt and metal while village sent ghee, jaggery and grain to make payments.

townships accessed daily for clothing, construction material, fruits, electronic gadgets.

Bicycles, education, hospital and city purchases in the second quarter of the previous century. followed by radio, newspapers, dairy and a pucca road and motorized vehicles in the third quarter and by television, cell phones, computers and the internet (on smart phones) in successive decades.



Daily Commuting and Migration

Between 1989 and 2012, ninety eight families had left Dhantala for good; only four families are said to have arrived from other villages.

despite village being more democratic and better paying, urban amenities, freedoms and incomes attract youngsters.

In 2012, 120 were going daily to Meerut, Hapur, Delhi or Ghaziabad for work; include poor laborers as well as well off office employees but no woman yet.

significant spin off is shortage of labor leading to rise in real wages.



Visitors from Towns x

For centuries, villages had three **townsmen**- tax collector, soldier or kotwal and occasional priest. British added the assessor, postman, and a veterinarian etc.

independence brought three teachers, two private medical practitioners, four auxiliary nurse and midwife (ANM), one state appointed sweeper, the panchayat secretary, patwari and block development officer, some inspectors and banking and insurance agents, vote seekers and some researchers and media personnel.

Most recently, the village has also seen **traders and laborers** coming for celebrations.



Village and the State x

Transition to democracy brought many programs for villages (including food, power and fertiliser subsidies, price support, loan waivers, land distribution and schooling and pensions), but marred by corruption and inefficiency.

In Dhantala, only 16 red ration cards issued till 2012 even though needy were 100. 16 elders and widows pensions of Rs.300 rupees per month while payments for work under MGNREGA had been made only twice to 25 since launch in 2007.



Poverty

Much **controversy on poverty** trends since independence and specially liberalization; wages and assets suggest absolute poverty decline from about 30% to 20% of households between 1989 and 2012 (revised poverty line)

sick and challenged in very miserable condition, more than laborers;

processes reducing poverty not government programs in this region, but rise in agricultural productivity and real wages by about 100% between 1989 and 2012 and multi-tasking by increasing numbers.



impact of construction boom on wages: in 1989, unskilled **wage was** Rs.20; for skilled Rs.40 per day. In 2014, Rs.250 and 400 respectively while inflation 600% Similar decline in Palanpur in same region for earlier period (from 50 to 33% between 1953 and 1983).

Tirthankar Roy estimated that real wages doubled between 1750 and 1950, the same rise has been noted within three decades since 1991 (Rs.20 to 250 vs price index 70 to 400).

In the Name of the Poor

Gajna was a 70 year old dalit widow who passed away in 2013 after battling with the official machinery for her long pending dues. On paper, she was a beneficiary of **four welfare schemes** including land distribution, monthly pension, subsidised ration through BPL card and a loan for rebuilding pucca house. Yet, remained poor and her **house remained kucha**. Apart from the loss of her husband and the burden of three more dependents (including two physically challenged members) suffered callous bureaucracy.

Thus, the three acre agricultural **field allotted** to her husband in 1984 shrank to one third in the process of marrying off four daughters and treating her husband's illness till death in 2002; is content with two or three quintals of wheat and does not use any fertilizer or pesticide for lack of funds and manpower. Under the **Indira Awas** Yojna to Gajna and she was to receive Rs. 8000 in the 1990s. But only three thousand given could complete only walls of a room; granted widow's pension bringing Rs.300 per month in 2006 in her bank account in Kharkoda. In 2005, ten thousand rupees were siphoned off; no compensation despite repeated visits; subsidised ration distributed at the rate of Rs.2.5 for twenty kg wheat and Rs.3.5 for fifteen kg. rice on the BPL card issued in 2002. not adequate as the total monthly allotment was only thirty five kg. on which also deductions made by middlemen. Gajna **continued to clean drains** for twenty houses for Rs. thirty per month and a chapatti from each till her death.



Other Village Types

Doymi, district Hapur, May, 2012

The extent to which distribution of land to the landless can make a difference in the occupational profile (specially among dalits) may be further noted by contrasting the livelihoods and living standards noted in Dhantala with those seen in communities that saw **little land redistribution** or which have a major industrial township in vicinity and some tribal villages with little irrigation support.



Doymi is a village of 2200 residents in Hapur district, close to Dhantala. Very little land was distributed to the landless here unlike Dhantala. As a result, former's occupational profile shows that **50% of the workforce are laborers** and 75% of these are dalits. Unlike Dhantala, Doymi has few dalit formal sector employees and no dalit professional. An indication of contrasting living standards of dalits in the two locations can be seen in the condition of their housing; while in Doymi most dalit homes are semi-pucca at best, in Dhantala, all have pucca houses save two.

OCCUPATIONS IN DOYMI VILLAGE, DISTRICT HAPUR, MAY 2012

Occupation/ Community/ (above 14 yrs)	Total populations	Landless Agricultur al Labor		Non Farm Unorgani zed Workers		Laborer cum Farmers	Tenant Farmers	Small Farmers	Land Renting Farmers	Landlords (owning more than 6 acres of	Landlords (owning more than 10 acres	Landless Artisans	Farmer cum Artisans	Shopkeepers & Businessmen keepers	Pvt. Organized Sector Workers	Grade IV Govt. Employees	Grade III Govt. Employees	Educated Professionals (Lawyers	Total Employment
		M	F	M	F														
Jatavs	1091	30	125	120	06	05	25	00	00	00	00	40	00	06	03	00	00	00	387
Valmikis	60	02	05	03	02	02	01	00	00	00	00	01	00	00	10	03	00	00	29
Muslims	51	05	04	04	03	01	00	01	03	00	00	09	00	00	00	00	00	00	30
Middle Castes	624	18	10	30	02	20	30	50	01	10	00	00	00	01	12	00	13(5)	04	201
Upper Caste	375	00	00	09	00	00	00	60	02	05	02	00	00	12	20	00	10(5)	03	123
Total	2201	55	144	166	13	28	82	111	06	15	02	50	00	19	45	03	23	07	770

Semi-Arid Farming in Belgaon, Jagdalpur, Chhattisgarh, November 2013

Total Population -547 (286-Male+261-Females); Number of Households-113

Tribals (55%) +OBSs (35%) +Upper Castes (10%); No landlord or big farmer; Independent Farmers – All

Cultivation with **Plough and Bullocks**; Irrigation by vessels from River Indrāvati;

Water pumps in last five years rented at Rs40 per hour.

Main crop rice– kharif season; only half go for a second crop of vegetables or pulses.

10 Quintal per acre with new seeds (5 quintal with old); Average income from 1 acre land **Rs.1500 or half of Dhantala**

Livestock alone– 0; Dairy- 0; Artisans -10; Fisherman – 05; Hunter Gatherers – 00

Landless Labour – 30; Farm labour – 60; Factory Labour – 20; Wages – Rs.150 (M), 80(F), 200(Skilled);

Formal Sector Grade IV – 05; Formal Sector Grade III – 07(Welfare Functionaries)

BPL Families – BPL Cards – 98; Kucha Houses – 60, Electricity now 24 hrs.

Motorcycles – 17; mobile phones-43; Television – 15; Fridge – 04; Bicycles – 65

Shops-3; regular electricity in last decade.



Middle School -1; NREGA- Discontinued; Rice at Rs.3/kg for 90% households for past decade.
Graduates – 03, Traditional Healers – 02
Support Price for Paddy– Rs. 1200 per quintal
Price of Land – Rs. 1 Lakh per acre

Villagers keep away from army as well as naxals.
At 12 kilometers is village Hukmsar where most members either hunt birds and small animals or work as laborers but do not cultivate.



In the Shadow of Industrialisation: Sersa Village District Sonipat, Haryana (November 2013)

Population: 5000; 900 families; 500 families in farming solely; 80 are landless; 50 have more than 3 acres; 100 families have less than 1 acre.

Number of landless families went up from 20 after state government acquired 800 acres out of total village land of 2000 acres, in 2007, at a rate of Rs.23.76 lakhs per 'killa' (same as acre roughly).

Factories have been constructed on acquired land and some are operational. Oustees filed a case in high court for better compensation since house plots were offered by the state at a rate of 6600 per square yard.

Despite the development of a mega industrial belt in Kundli, wages have not risen much and remain at Rs.250 per day for farm workers and Rs. 6000 per month for unskilled factory workers.



These wage rates are same as prevailing in Dhantala and lower than Delhi; The low wage rise is attributed by villagers to the arrival of migrant labor in large numbers specially from UP and Bihar where wages are reported to be half of those in Dhantala (often paid in kind at less than 4 kg rice for full day's work or Rs.40 in 2009 when wage in Dhantala was Rs.100).

Thus the benefit of urbanization (in increased land price) and of industrialization (in increased wages) have been mild within Sersa though ripples have held household incomes in migrants' homes in Bihar etc.¹

¹ For a lucid report on changing incomes in two Bihar villages in the wake of labor migration see Datta Amrita et.al. (2012), page 39 and 49.

Jharagram Sub Division, West Midnapore, West Bengal, February, 2014

Population increased from 25,000 to 1,00,000 between 1990 and 2014.

60% are santhal tribals; Raja Veerendra made owner of a large estate later supporter of Congress; Birsa Munda rebellion followed by Chhotanagpur Tenancy Act in 1890; Santhals did not benefit much from operation barga in the 1970s as land was given mainly to Mahatos and Bangals (refugees from east Bengal) taken from big landowners who had been with Congress largely.



Most Santhals are laborers; only one agro processing unit and a few rice mills. In industry unions are divided between SC and ST factions.

Some are forest dwellers with small agricultural plots; earn more from labor; known for hard work and honesty; very few even run a shop. but educated sons aspiring for better livelihoods;

CPM tried forced land acquisition for Jindals in 2008; Kishanje and Maoists supported by tribals; many killed. TMC improved ration, NREGA and dispensary functioning.

An Overview

transition is **mixed**: absolute poverty declined but vulnerability (\$ 2 pcpd consumption) high.

poor infrastructure and preponderance of the primary sector and along with shrunken landholdings main downward pulls.

Principal **changes**: association between occupations and sub-castes; connectivity with the wider economy, pucca houses and amenities and school enrolment, growth of a land market and emergence of educated employed women.



Surprises

outside binaries of farm and non farm and self employed and wage worker etc (including a large segment of farmer-laborers, semi-rural or census towns, quasi-legal work etc.

little dispossession of poor farmer, instead spread of marginal farms. one family of capitalist farmers employing wage labor; lack say in local politics;

liberalization reduced poverty through migration for constn and services leading to wage rise; also more revenue and welfare spending;

reported “deceleration in agricultural growth in **1990s; but** improvements in pucca houses, private vehicles (cars up from 3 to 31 and motorbikes from 20 to 145 between 1989 and 2012).

villagers welcome industry for good land price and also employment etc.

Cooperatives difficult specially in production units; eg sugar mills; even in marketing, nafed and safal did not replicate NNDB since price fluctuation;



Development Perspectives

concern since colonial era: colonial support to proprietary class to improve with a little state spending on irrigation and research; Gandhian constructive work and gram swaraj; the Marxists growth through social ownership of production; Nehruvian stress on industrialization n planning; populist welfare of Indira and Janata phases; liberalization from 1980s; ‘inclusive growth’ in preceding decade; growth, jobs and infrastructure through a **business friendly environment today.**

Among **academic perspectives**: Dipankar Gupta suggests agriculture and villages vanishing as sociological entities; futures can't be planned (hence urbanization and industrialization);

communitarian and environmentalist view that development breeds governmentality and destroys ecology n alternate modernities n community n social movements.

liberalisers stressing a bigger role for private sector and free market for increased productivity and less wastage assuming trickle down and virtuous cycle of revenue and jobs and productivity;

left critiques of free market and corporate capital and technologies as destructive for the small producer and workers; need for restricted capitalism if not collectivization.

Amartya Sen not against liberalization but first for broadening the meaning of development to include investments in a wide range of human capabilities first.



Critiques

Non farm options very important but not correct to deduce that village is “shrinking as a sociological reality”; in fact **more democratic** today; no dreams but you can’t design futures **in slums either**; on other hand you can in villages if electricity and indn like east asia.

alternative modernities exaggerate glorify communities and clubs governmentalities; village **hierarchies and traditions** also hinder development. Palanpur study highlights indifferent weeding, spacing etc, inactive gram sabhas and reluctance to adopt sledges in place of headloads, stoves in place of mud chulhas, family planning, few toilets, no dustbins.



also movements’ potential overstated: peasants demanding share in formal jobs and urban sphere with growing divisions between castes; contradictions specially gender violence). Even partnerships fail; nor are farmers’ against corporate; alternative disproved by Moditva. **environmentalists** question green revolution, GM crops, and big dams for irreparable damage to communities and environment. Objectionists more than creative lately;

green revolution a pillar for marginal farmer; reasons: heavy capital not required; cost of fertilizer, water and pesticide only Rs3000 out of input cost of 11000 in 2013 in one acre and only 10% of total cost including labor. machinery available on hire, dd for work grew with three crops, mechn saved cost of bullock; non-farm demand grew with income.

some criticisms in doubt: fertilizers and electric pumps came in 50s and would have grown even without HYVs though on a smaller scale; Monoculture in cultivation and water table going down continuously but urgency misjudged.

green revo reduced bio-diversity but also can free land; loss of varied diet (on the contrary food in famines and vegetables with income); more fertilizer and pesticides pollute soil and food chain (but before green revo DDT in use, soil exhaustion exaggerated); water table down but predictions of unsustainability of new agriculture invalid as productivity rising even after 45 years; regions like Africa without green revolution poorer; social worries also misplaced: little displacement and small farmer benefitted because of HYVs;



genetic modification of seeds for rural prosperity; precautions but no harm from GM over five lakh sq kms in North America and China for two decades.

NGOs and cooperatives criticize economism and rely on local for sustainable growth. But two million Ngos yet Dhantals untouched; milk only marketing; failure of khadi schemes; one coop sugar mill closed despite aid;



Sen discusses the problem of incentive in socialist thinking and welcomes liberalization along with the development of rights; but ignores problems in bureaucracy and panchayati structure in delivering the freedoms; little on measures for strengthening capacities or on problems within Bengal model.

No doubt class, caste and gender **inequities restrict** the capacity of the state besides being unjust. But reduced inequality not a condition for improvement and green revolution and economic liberalization reduced poverty by promoting demand.

cultural critique of capitalism as an economy of **artificial wants** fuelled by profiteering and perverted by cut throat competition; need to restrict inheritance and respect enterprise.

For Syntheses

alleviating poverty in six lakh villages stupendous. Yet, big n small **nations have succeeded**.

Accommodation between contending ideals specially growth, environment and equity; respect for business creating wealth and jobs along with redistribution thru taxation specially of inheritance.

In view of the subsidiarisation of farming now, development of rural **non-farm sector** n urban industry to generate sought after formal sector jobs and higher wages;

industrialisation only thru **non-coercive** rehabilitation. cottage industry as well as feeder and ancillary units to withstand competition.

within farming, water harvesting, drip irrigation, reduction of wastage and inefficiency trade and storage, compressed supply chains with least middlemen.



Professionally managed cooperatives as well as corporates be allowed in storage and marketing.

Computerization of land records, lab to land demonstrations. agro industry, forestry exports, mechanisation, micro finance, crop insurance, reversal of land ceilings, raising skills in high school and colleges.

Above all, governance and infrastructure especially roads, electricity and vocational training.

equality and land reforms imp not only because turnaround from 1984 but also for justice and opportunity.

Tax on large inheritances



Thanks
Specially to all Friends and Research Assistants since 2005
Who Gave a Lot without Much in Return Indeed:-



Rakesh Kumar



Madhavi Jha



Vikas Kumar



Vijay Prasad



Suraksha Sharma



Vidya Krishnamurthi



Sandeep Verma



Sandeep Arora

**Cost of Wheat Cultivation in Uttar Pradesh (Average)* in 2004-06
as Provided by Commission on Agricultural Cost and Pricing**

Cost Item	Uttar Pradesh		Percentages 2005-6
	2005-06	2004-05	
Operational Cost	15640.67	14228.46	60%
Total Human Labor	4130.27	3691.60	25%
<i>Casual</i>	1526.88	1298.29	
<i>Attached</i>	43.46	22.18	
<i>Family</i>	2559.93	2371.13	15%
Total Bullock Labor	746.65	801.58	5%
<i>Hired</i>	51.76	14.02	
<i>Owned</i>	694.89	760.56	
Total Machine Labor	3767.59	3091.88	20%
<i>Hire</i>	3274.32	2786.18	11%
<i>Owned</i>	493.27	305.70	
<i>Seed</i>	1755.31	1396.23	
Total Fertilizers n Manure	2232.18	2105.68	13%
<i>Fertilizer</i>	2201.54	2085.17	
<i>Manure</i>	30.64	20.51	
<i>Insecticide</i>	30.64	19.42	
Irrigation Charges	2580.26	2762.76	15%
Interest on Wking Capital	396.39	359.31	2.5%
Miscellaneous		1.38	
Rent Paid on Fixed Cost			6.6%
Interest on Rental Value			6.6%
<i>Taxes</i>			0.06%
<i>Depreciation</i>			5%

<i>Interest on Fixed Capital</i>			17%
Fixed Costs	9048		40%
Total Costs	24688		100%

Indices of Agrarian Transition in Palanpur 1957-1993						
Item	1957	1962	1974	1983	1993	2013
Normal Wheat kg yield	45kg	50kg	100kg	155kg	200kg	300kg
Normal Wheat q/ acre	2.2q	2.5	5q	7.5q	10q	15q
Index of Rs. Per day casual wage agriculture 1960-61 prices	0.93	1.02	0.93	1.14	1.19	05?
regular wage per month 60-61 prices	48	51	69	77	100 ?	

**Yearly Earnings from one acre irrigated field
of Wheat and Rice + Milk Income from two buffaloes in Dhantala**

Crop harvested in quintals per acre	Value in 2006 Rs per acre	Value in 2013 Rs. per acre
Sale of Wheat harvested in March:	12 q x Rs.900 10,800	15 q x Rs1380/- =20,700/-
Sale of Medium Variety Rice in September	15 q x 1000 15,000	20q x Rs1500/- =30,000/-
Fodder two harvests	Hay 200 Stalk 1000	Hay 500 Stalk 2000
Cultivation Earnings per acre	28,800	53,200
Net Earning from two Buffaloes	12,000	24,000
Total Earnings in Year	40,800	77,200
Operational Costs of Rice + Wheat cultivation	9186	22098
Net Earnings	31,664	55,102
Change in Earnings in 8 yrs.	23,438	Price rise 75%

Q stands for quintal

Processes and their Costs in Rice Cultivation Rupees per acre

Process Name	1988	2006	2013
In June -15- 5 times Ploughing by Harrow and Tiller (once each) (earlier bullock only once)	400	Rs.1000/-	Rs.1800/- (450 per round)
Water hr. 15	100	Rs.10/ per hr =150/-	370 25 per hr
Seed(10kg Munjee ie.dhan in one acre)	25	175/-	700 to quality
weeding	Self	300/-	1000/-
Transplanting till 8 Labor for 1 acre in 1 day 30 th July	300*	4 Labor Rs.400	4 Labor 1000/-
DAP (3bags) better than Urea for Rice	45	450/-	620/-
Zinc 10 Kg not necessary	NA	125/-	250/-
Vipul fertilizer not necessary		200/-	400/-
Pesticide after flowering	NA	100/-	200/-
Watering every 8days till June and every 15 days till Sept.		Rs.350/-	Rs.800/-
Weeding	Self	Self	Self
Harvesting	200*	200/-	500/-
Winnowing		600/-	1200/-
Transporting Rs.30/Quintal	64	225/-	450/-
Total	1134	3850/-	10,450/-
Net		12,000	18,000

Processes and their Costs in Wheat Cultivation (November to April) in Rupees per acre

Process Name	1988	2006	2013	
Ploughing- 4 rounds in 2hrs. By Tractor (3 rounds) 2 hrs	400	900 Tractor rent) 400 (Diesal--30Rs/ ltr.)	Satpal's field	Bhushan's field
			1500	1500
			Diesel – 56/L	
Seed (50kg / acre)	100	400	900	1100
Water for 10hrs.	60	70	250 (25 Rs/ hr diesel 50/hr)	-----
Urea (310 Rs per bag)	100	125	310	620
Water – 2 nd after 15 days		70	200	175
Urea		125	310	620
Water 3 rd –after 20days		70	200	175
Weeding	Self	self	self	Self
Pesticide	20	30	100	
Harvesting (3 days X 4 Labor)	400	1600	2760	10% of crop
Threshing Machine	300	08 kg on Quintal 1200	12kg on Quintal (2100)	
Transporting to market	Buggy	On Buggy	Self	Self
Total	1424	5336	11648	

By Plough + 2 Bullock – Labor=0, But feed - 50 + Depre = 3000 + Interest = 3500

Costs and Earnings from Cultivation in Palanpur: 1957-1984

Crop	1957-58	1962-63	1974-75	1983-84
<u>Wheat</u>				
Yield (kg/ bigha)	41	41	114	101
Value/ bigha (in1960 prices)	16	22	41	26
<u>Paddy</u>				
Yield (kg/ bigha)	11	26	103	130
Value/ bigha (in1960 prices)	2	9	32	34
<u>Sugarcane</u>				
Yield (kg/ bigha)	Na	Na	21	12
Value/ bigha (in1960 prices)	34	34	71	43
<u>Millat</u>				
Yield (kg/ bigha)	34	27	59	48
Value/ bigha (in1960 prices)	10	11	20	11

Required Holding Size for Supporting Peasant Family above PL (1997-98)

State	Poverty Line Per Family per Annum	Farm Business Income Per Hectare	Required Holding Size	Average Holding Size
Uttar Pradesh	20,500	12350	0.83	0.81
Punjab	22,100	13750	0.5	4.2
Bihar	20,250	6274	1.7	0.7
Rajasthan	20,900	8400	1.3	3.7
Bengal	21,300	12500	0.81	0.81

Source: Abhijit Sen and M.S. Bhatia, Cost of Cultivation and Farm Incomes 2004

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