

# The Rise of Landless Tenancy in Rural Bangladesh: Analysis of the Recent Evidence

Binayak Sen

Research Director

Bangladesh Institute of Development Studies (BIDS)

Presentation made at the BIDS Research Almanac 2018, 11-12 November, 2018, Dhaka

# Landless Tenancy and Upward Mobility: Motivation for Research

- The previous literature—both Neo-Classical and Marxist--suggests that agricultural tenancy is an inefficient form of contract and, with green revolution as the farm operations become profitable, the importance of owner-operated farming will rise and the share of land under share tenancy is likely to decline (Chayanov 1966; Cheung 1969; Marx 1974; Marshall 1961; Newbery and Stiglitz 1979; Otsuka, Chuma, and Hayami 1992; Patnaik 1994; Kautsky 1988; Ray 1998).
- The same literature also suggests that the group of landless tenants (the so-called “pure tenant”) will become a “vanishing tribe”, as they are likely to be more involved in non-farm and non-agricultural activities lacking both land and **draft animal power**.
- None of these have happened in rural Bangladesh: the share of cultivated land under tenancy has more than doubled and there has been a noticeable rise of landless tenants. In addition, we see a distinct shift from share tenancy to fixed-rent tenancy. **We seek to explain this puzzle and show that this is related to the nature of broader structural transformation in rural Bangladesh.**
- To this end, we use HIES (2000, 2010 and 2016) for primary analysis supplemented by the secondary evidence from the 62-Village Panel Surveys (1988, 2000, 2008 and 2014).

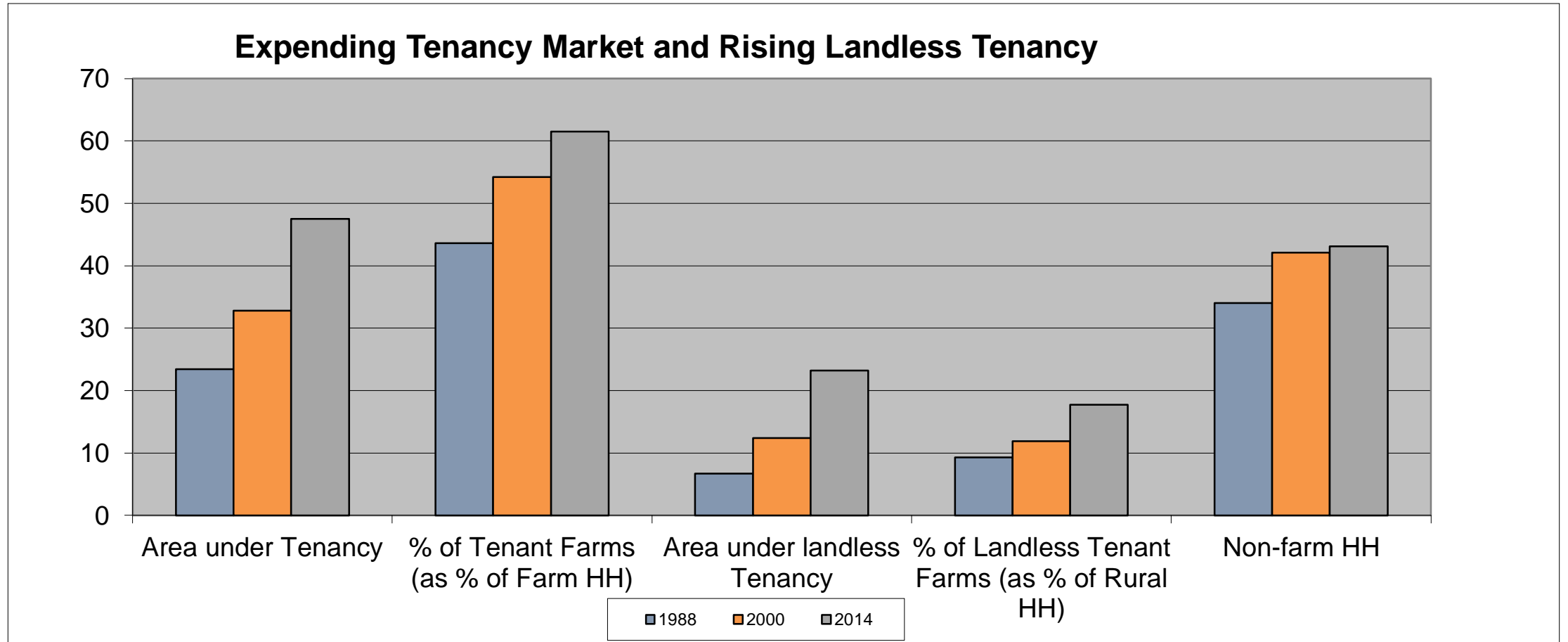
# Landless Tenancy on the Rise

Statistics on Long-Term Trends: 1988-2014

# The Rise of Landless Tenancy: Evidence from the 62-Village Panel Survey for 1988-2014

- **Share of Rented-In Land in Total Cultivated Land:** In 1988, only 23.4% of cultivated land was under tenancy in rural Bangladesh; the matched share increased to 32.8% in 2000 and 39.8% in 2008, rising further to 47.5% in 2014 (Hossain and Bayes 2018; Hossain and Bayes 2009).
- **Share of Sharecroppers/ Leaseholders in Total Rural Households:** In 1988, 43.6% of households rented land from others; the matched share rose to 54.2% in 2000 and 58.3% in 2008.

# Rising Importance of Landless Tenancy: Evidence from the MH Panel Survey of 62-Villages



# The Rise of Landless Tenancy: Evidence from the 62-Village Panel Survey (2)

- **Share of Landless Tenants in Total Rural Households has increased:** In 1988, only 9.3% of rural households were landless tenants; the matched share has increased to 11.9% in 2000, rising further to 17.7% in 2014.
  - The share of **pure tenants (17.7%)** is now **greater than the combined weight of tenant-owner (10.5%) and owner-tenant (6.7%) categories** as proportion of total rural households.
- **Share of Landless Tenants in Total Cultivated Land has increased:** In 1988, only 6.7% of total cultivated land was under the landless tenancy; the matched share has increased to 12.4% in 2000, rising further to 23.18% in 2014.
- **Forms of Tenancy Changed from Sharecropping to Fixed Rent and Mortgage:** According to 1960 Agricultural Census, 91% of land under tenancy were cultivated under the sharecropping system. As per the 2008 Agricultural Census, 43% of land are cultivated under the sharecropping system, the rest being cultivated under fixed rental and/or long-term mortgage arrangements.
  - The 62-village panel evidence suggests that the share of sharecropping in total land under tenancy declined from 72% in 1988 to 63.8% in 2000, dipping further to 42.2% in 2014. The rest is divided into fixed rent (38.4%) and mortgage (19.5%) in 2014.
- Bangladesh has made silent transition from 'inefficient' sharecropping to 'efficient' fixed rental system (a clear statement on the relative efficiency of the fixed rental system can be found in Debraj Ray's *Development Economics* discussing Marshall's "Principles of Economics" where Marshall compared the French *metayage* system involving the customary output sharing practice of 50-50 division with the British *fixed-rent tenancy* system)

# The Rise of Landless Tenancy: The HIES Evidence for 2000-2016 (1)

- The HIES data are not comparable to Mahabub Hossain's (MH) 62-Village data at levels, but they point out to the same trends. The definition of land categories is as follows: pure landless (having no cultivable land), functionally landless (owning up to 50 decimals of land), marginal (50-149 decimals), small (150-249 decimals), medium (250-499 decimals), and large (500 decimals and above).
- **Equity effects of the Tenancy Market:** The bulk of the 'rented out' land is supplied by the 'large' and 'medium' landowners (together they supply 72% of land under tenancy in 2016) while the bulk of the 'rented in land' is concentrated in the landless and functionally landless categories (together they demand 80% of land under tenancy in 2016).

# The Rise of Landless Tenancy: The HIES Evidence for 2000-2016 (2)

- The claim of 'pure tenant' farms over total rented-in land has increased from 45% in 2000 to 50% in 2010, rising further to 65% in 2016. Even if we assume some reporting errors on landholding of the pure landless and functionally landless in HIES, it is safe to conclude from both MH and HIES data that the land-poorest category is prominently represented among the tenant farms of rural Bangladesh.
- **Potential positive effects on landless poverty:** We argue that the rise of landless tenancy, together with the decline in the share of sharecropping as the form of rent payment, had considerable poverty reducing effects.



# Distribution of Landlord Farms and Rented-In Farmlands by Landownership Groups: Evidence from HIES 2000, 2010 and 2016

	2000	2010	2016
	% of Rented-In Land	% of Rented-In Land	% of Rented-In Land
<b>Landless</b>	45.22	49.87	64.46
<b>Functional landless</b>	20.74	22.24	16.47
<b>Marginal</b>	22.96	18.19	9.87
<b>Small</b>	5.87	5.96	3.59
<b>Medium</b>	3.63	3.38	2.31
<b>Large</b>	1.58	0.36	3.28
<b>Total</b>	100.00	100.00	100.00

# Distribution of Landlord Farms and Rented-Out Farmlands by Landownership Groups: Evidence from HIES 2000 and 2010

	2000	2010	2016
	% of Rented-Out Land	% of Rented-Out Land	% of Rented-Out Land
Functional landless	0.68	1.34	2.24
Marginal	4.43	9.31	12.62
Small	6.50	12.78	12.94
Medium	15.95	20.94	18.03
Large	72.44	55.63	54.15
Total	100.00	100.00	100.00

# Analytical Framework

Role of Migration, Microfinance, and Mechanized Service Markets (3-Ms)

# Who Gives and Who Takes: Outlining an Analytical Framework

- **Increased Supply of Farm Land to the Agricultural Tenancy Market:**
- We need to explain why there is an increased supply of rentable land in the rural tenancy market.
- Supply of agricultural land to the tenancy market can increase due to rising importance of non-agricultural incomes for agricultural landowners. Secondly, it may also increase due to rising 'supervision cost' in hired labor based farming due to increased specialization in nonagricultural work. Thirdly, even those medium/large farms who previously conducted family labor based farming may opt for tenant based farming, facing demographic decline in the supply of family labor.
- In the empirical work, we capture these tendencies by four variables: salaried work (proxy for non-agricultural income), domestic migration and foreign migration (proxy for supervision cost), and availability of male worker (proxy for family labor).

# Who Gives and Who Takes: Outlining an Analytical Framework (2)

- **Increased Demand for Farm Land in the Agricultural Tenancy Market:**
- We need to explain why there is an increased demand for farm land in the rural tenancy market on the part of landless tenant households.
- Firstly, traditional theory suggests that demand for landless tenancy will be limited because the latter has limited financial capital needed to pay for the land-rent (often such rent needs to be paid ahead of the cultivation season, as in case of the cash-leasing system). Secondly, the landless tenants typically lack complementary non-land assets such as draught power and irrigation pumps that are needed for cultivation.

# Who Gives and Who Takes: Outlining an Analytical Framework (3)

- However, these traditional theories are based on 'old' production conditions which no longer remain valid for rural Bangladesh.
- Thus, landless tenant households can address their financial capital need much better than before through access to microfinance, which has expanded virtually to each village of Bangladesh.
- Landless tenant households are no longer constrained by the lack of complementary non-land inputs. There has been a rapid expansion of mechanized service markets supporting agricultural operations (hiring power tiller services substituting for animal draught power, buying irrigation water from different private sources, and recently, taking recourse to mechanized thrashers). These labor saving techniques help landless tenants to reduce the costs of hiring labor in the face of peak season labor shortages.
- This also suggests that some landless households will specialize in (nonagricultural) wage-employment while other landless households will specialize in (agricultural) self-employment via the route of tenancy.

# Who Takes?

Correlates of Tenant farming (Households who *Rent in Land* from Others): Results for 'All Tenants' and 'Landless Tenants'

# Who Rents in land: Results for 'All Tenants' and 'Landless Tenants'

- What are the *likelihood of being a tenant farmer as opposed to owner farmer*? To answer this question, we run a probit model for both HIES 2010, HIES 2000, and HIES 2016. We estimated both 'unweighted' and 'weighted' probit models and the results were very similar (here we report the results of the weighted model). The model controls for standard demographics, income level, and spatial (divisional) fixed effects. Here we focus on the results for 2016.
- **Tenancy makes distribution of land more equitable:** The first thing to note is that the distribution of land tenancy market is highly biased towards the landless tenants. The less one owns cultivable land in rural areas, the more likely one will be renting in land. The reverse is also true for 'renting out' land: the more one owns land, the more likely one would be prone to renting out land.



# Probability of Renting In vs. Owner Farming: Key Results for 2010 HIES (Marginal Effects)

Variables	All Tenants	Landless tenants
Someone with salaried jobs	-0.0420***	-0.0430***
Domestic remittance	0.0116	0.0247*
Foreign remittance	-0.0185	-0.0168
Microcredit access	0.0182*	0.00637
Irrigation access	0.193***	0.185***
Rented power tiller/ tractor	0.342***	0.315***
HH Head's education	-0.00653***	-0.00388***
Female Headship	-0.0893***	-0.0825***
Number of adult males	0.0232***	0.0127*
Log of per capita expenditure	0.0410***	0.0254**

# Probability of Renting In vs. Owner Farming: Key Results for 2016 HIES (Marginal Effects)

Variables	All Tenants	Landless tenants
Someone with salaried jobs	-0.0214**	-0.0166**
Domestic remittance	0.0208**	0.00593
Foreign remittance	-0.0171	-0.0162
Microcredit access	0.0232***	0.0133**
Irrigation access	0.149***	0.143***
Rented power tiller/ tractor	0.295***	0.252***
HH Head's education	-0.00565***	-0.00454***
Female Headship	-0.0395**	-0.0173
Number of adult males	0.00959***	0.0132**
Log of Per Capita Exp.	0.00538	0.00409

# Who Rents in land: Results for 'All Tenants' and 'Landless Tenants' (2)

- **Access to mechanized service markets**--access to irrigation and power tiller services-- increases the probability of being in the tenant category both for 'all tenants' and for 'landless tenants'. It may be noted that access to mechanized service market has increased rapidly for the landless households (from 64.7% in 2010 to 77.9% in 2016).
- **Access to microfinance** enhances the probability of being in the tenant category, as it reduces the problem of raising finance. The microfinance result was not significant in 2010 for landless tenants, but became significant for them in 2016. This may suggest that MFIs now have become more involved in financing crop-agricultural activities in the 2010s compared to the previous decades.

# Who Rents in land: Results for 'All Tenants' and 'Landless Tenants' (3)

- **Access to migration to cities** acts as a stimulating factor for landless tenants. Financial support through the route of domestic migration helps them to pay for the cash rent.
- **Availability of adult male workers** adds to the **pool of family labor** and thereby increases the chances of being in the tenant category.
- Access to **salaried jobs** (as well as **human capital accumulation**) discourages tenant farming both for 'all tenants' and for 'landless tenants'. This finding may suggest the **possibility of specialization for the land-poorest**—one opting for the route of non-agricultural jobs and the remaining other, specializing in agriculture.

# Who Gives?

Correlates of Landlords (Households who *Rent out Land* to Others): Results for 'All Landlords' and 'Medium/ Large Landlords'

# Who Rents out land: Results for 'All Landlords' and 'Large Landlords'

- Renting out for common among the relatively large and medium sized landowning groups. Thus, an active tenancy market contributes to equitable land-distribution.
- We run the same probit model for exploring the decisions to rent out land. Decisions for renting out seem to be associated with factors which are almost the **mirror images** of factors correlated with decisions for renting in. This is true for both the groups of 'all landlords' and 'large landlords'.
- Thus, having salaried jobs and human capital encourages renting out. Similarly, non-availability of male family labor encourages them to rent out land. Female headship also motivates the households to rent out land.

# Probability of Renting Out vs. Owner Farming: Key Results for 2010 HIES

Variables	All Landlords	Large Landlords
Someone with salaried jobs	0.0168*	0.0807**
Domestic remittance	0.0227**	0.0818*
Foreign remittance	0.0158	0.0531
Microcredit access	0.00826	0.0279
Irrigation access	-0.0744***	-0.0783*
Rented power tiller/ tractor	-0.132***	-0.149***
HH Head's education	0.00492***	0.00775**
Female Headship	0.0303**	0.115**
Number of adult males	-0.0231***	-0.0339
Log of per capita expenditure	-0.00122	-0.0504

# Probability of Renting Out vs. Owner Farming: Key Results for 2016 HIES

Variables	All Landlords	Large Landlords
Someone with salaried jobs	0.0230***	0.0352
Domestic remittance	0.0236***	0.102***
Foreign remittance	0.0230**	0.168***
Microcredit access	0.00542	-0.00627
Irrigation access	-0.0316**	-0.111***
Rented power tiller/ tractor	-0.152***	-0.106***
HH Head's education	0.00497***	0.00962***
Female Headship	0.0490***	0.104**
Number of adult males	-0.0220***	-0.0259
Log of per capita expenditure	0.0260***	0.0316*



# Who Rents out land: Results for 'All Landlords' and 'Large Landlords' (2)

- Not all landowning groups opt out for the rent out option, however. In places where there has been a development of market for mechanized services some landowning groups may feel encouraged to remain in owner-farming.
- As regards foreign remittances there is conflicting evidence. In 2010, it did not matter in renting out decisions. However, in 2016, access to foreign remittances seem to be encouraging renting-out on the part of landlord households. Remittance-receiving households may be more biased towards non-agricultural sectors in terms of household labor allocation.
- Access to domestic remittances can have different meanings for landlord and tenants. For landlords, it can encourage renting out land (signaling greater non-agricultural involvement). However, for tenants, it can serve as a source for agricultural finance (signaling greater agricultural orientation).

# Concluding Remarks

- The **increase in the share of cultivated land under tenancy** and the **unpredictable rise of landless tenants** have been brought about by a confluence of **several factors that underpinned rural structural transformation** in Bangladesh
- Spread of **education, expansion of regular jobs, and urbanization (domestic migration)** have encouraged **renting out** of the agricultural lands on the part of land-rich households
- The **growth of microfinance and the rapid development of market for mechanized services** have made the tenant farming on an increasing scale a feasible proposition. This is true in case of landless tenants as well.
- These transformations in the tenancy market are brought about not by decree (i.e. land tenure reform, as in West Bengal) but by changing market conditions, and in that sense, **they are market-led, not state-led transformations**
- There seems to be a **trend of specialization going on among the landless households** in rural Bangladesh: some landless groups are entering into the land sector as tenants, while other landless groups are moving out of the land sector, being increasingly involved in non-agricultural jobs.
- In conclusion, the **agricultural route of upward mobility via landless tenancy** must be recognized as equally potent route as the non-farm route for uplifting the landless households out of poverty

# References

- Chayanov, A. V. (1966), *The Theory of Peasant Economy* (D. Thorner, D. Kerblay, and R.E.F. Smith, eds.), R.D. Irwin, Homewood, Illinois.
- Cheung, S.N.S. (1969), *The Theory of Share Tenancy*, University of Chicago Press, Chicago.
- Hossain, M. and A. Bayes (2009), *Rural Economy and Livelihoods: Insights from Bangladesh*, A. H. Publishing House, Dhaka.
- Hossain, M., B. Sen, and Y. Sawada (2016), “Bangladesh: Jobs and Growth in an Urbanizing Economy,” in G. Betcherman and M. Rama, eds., *Jobs for Development: Challenges and Solutions in Different Country Settings*, Oxford University Press, London.
- Kautsky, K. (1988), *The Agrarian Question*, Zwan Publications, London.
- Marshall, A. (1961), *Principles of Economics* (annotated by C.W. Guillebaud), Macmillan, London.
- Marx, K. (1974), *Capital: A Critique of Political Economy*, Vol. 3, in F. Engels, ed., Progress Publishers, Moscow.
- Newbery, D.M.G. and J.E. Stiglitz (1979), “Sharecropping, Risk-sharing and the Importance of Imperfect Information” in J.A. Roumasset, J.M. Boussard, and I. Singh, eds., *Risk, Uncertainty, and Agricultural Development*, New York Agricultural Development Council.
- Otsuka, K., H. Chuma, and Y. Hayami (1992), “Land and Labor Contracts in Agrarian Economies,” *Journal of Economic Literature* **30**, 1965-2018.
- Patnaik, U. (1994), “Tenancy and Accumulation” in K. Basu, ed., *Agrarian Questions*, Oxford University Press, Delhi.
- Ray, D. (1998), *Development Economics*, Princeton University Press, Princeton