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Land acquisition for industrialization and compensation of displaced farmers ☆

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ABSTRACT

This paper addresses the question of how farmers displaced by acquisition of agricultural land for the purpose of industrialization ought to be compensated. Prior to acquisition, the farmers are leasing in land from a private owner or local government with a legally mandated sharecropping contract. Compensation rules affect the decision of the landlord to sell the land ex post to an industrial developer, and ex ante incentives of tenants and landlord to make specific investments in agricultural productivity. Efficiency considerations are shown to require farmers be over-compensated in the event of conversion.

1. Introduction

A major issue in contemporary development policy concerns compensation paid to those whose traditional livelihoods are uprooted by modern industrial projects. This involves both equity and efficiency considerations. In the absence of a welfare state those who are rendered unemployed by industrialization are left at the mercy of market forces. Inadequate compensation of such groups results in a political and social fallout, which can undermine the political sustainability of such programs.

Political effects aside, compensation policies have important effects on economic efficiency as well. They affect decisions made by landowners to convert land from agricultural to industrial use. Frictions in the leasing market (e.g., resulting from moral hazard and low wealth of tenants) can result in farmers earning surpluses which would be foregone in the event of eviction. Landowners would have no private incentive to incorporate these losses in their decision to convert land. Inadequate compensation can thereby create incentives for excessively rapid industrialization. Moreover, the anticipation of such conversions in the future breeds insecurity of tenure among those currently engaged in agriculture, with implications for their incentives to undertake investments that enhance farm productivity.

These problems have surfaced quite prominently all over the world in the past two decades, and in particular, in rapidly industrializing countries such as China and India.[1] The transition to industrialization in these countries has been marked by conversion of agricultural land into land earmarked for industrial projects and urban real estate development. The process has been facilitated by local or regional governments anxious to raise the rate of growth in their jurisdictions, which generate large spillover effects and/or raise government revenues. At the same time, farmers cultivating these lands and workers employed by these farmers lose their livelihoods. The compensations paid to those displaced have been criticized as being inadequate. The process of determining and implementing these compensations has been described as arbitrary, ad hoc and lacking transparency. There have also been complaints of the lack of any rights or participation of those displaced in the process of transition.

These problems of compensation have created widespread social and political tensions. For instance, Cao et al. (2008) report that in the

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[1] See Chan (2003), Ding (2003, 2007), and Su (2005).

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first nine months of 2006, China reported a total of 17,900 cases of "massive rural incidents", in which a total of 385,000 farmers protested against the government. They go on to state that:

> "…there are currently over 40 million dispossessed farmers due to urban expansion and transportation networking and 70% of the complaints lodged from farmers in the past 5 years are related to rural land requisition in urbanization" (Cao et al., 2008, pp. 21–22).

Likewise in the eastern state of West Bengal in India, farmers were displaced by a motor car project started in 2007 for which land had been compulsorily acquired by the state government.[2] A significant proportion of these protested that the compensation paid to them was inadequate. These protests were orchestrated by the principal opposition party to the party controlling the state government. The resulting tension and confrontations eventually led to the industrial group in question moving its factory to a different state in India in 2008, and eventually contributed to the incumbent government being voted out of power in 2011. Despite agreement between most parties that the land ought to be converted to industrial use, the problem of inadequacy of compensation caused the process of conversion to be reversed.

These events raise important questions regarding economic principles that should guide the design and implementation of compensation for agents displaced by industrial development projects. According to most legal frameworks, property owners do not require the permission of their current tenants or workers in order to sell the property. Nor are they required to compensate them in the event that the tenant gets evicted or the workers lose their jobs. Ownership rights include both freedom to decide how the property is to be used as well as freedom over the sale of the property. Yet the preceding events in China and India raise the question whether tenants or workers employed by landowners should be legally entitled to some compensation if the owner were to sell the property. And if so, what principles should guide the design of such compensation.

The purpose of this paper is to initiate a theoretical analysis of compensation arrangements for incentives of owners to sell and concerned parties to invest in productivity-enhancing investments. We examine contexts with limited scope for transferability of utility, owing to limited liability and wealth of agents undertaking productive investments, which is relevant to poor farmers in developing countries. Like most of the existing literature, we focus on implications for efficiency, as evaluated by a utilitarian social welfare function which neglects the issue of distributive equity. We examine whether there is an efficiency argument for restricting the rights of owners over the sale of assets in the sense of mandating compensation of displaced tenants. If so, inclusion of considerations of distributive justice would further strengthen the argument, in contexts where landowners and industrial developers are substantially wealthier than displaced farmers.

We study a setting where a landlord (or local government which is the de facto owner) currently leases a large number of contiguous plots of agricultural land to different tenants.[3] The landlord and tenants make specific non-contractible investments in their respective plots. The law stipulates the share of the agricultural produce that must be given to tenants, as well as lump-sum compensations they are entitled to if they were to be evicted as a result of sale of the land.[4] Sharecropping arrangements are necessitated by limited liability and limited wealth of tenants, combined with uncertainty in agricultural production. These imply fixed rent contracts are unenforceable when adverse production shocks occur.[5] Moreover, compensations paid in the event of acquisition are lump-sum owing to the inability of the government to accurately evaluate the productivity enhancing investments already made in the plots being acquired.[6]

Opportunities for sale of the entire area of land to an external industrialist arise stochastically, and the landlord makes this decision after specific investments have been made in agricultural improvement. The indivisibility and large scale of the industrial project imply that the owner either sells all the plots of land to the industrialist, or none of them. As there are large numbers of tenants, the investment decisions of any particular tenant has a negligible effect on the owner's decision to sell. This implies that possible 'disciplinary' effects of the threat of uncompensated eviction do not arise.[7]

The question we analyze concerns the effects of varying the compensation paid to the tenant in the event of a sale. We consider three channels of potential impact: the owner's decision to convert, and resulting implications for ex ante investments of the two parties respectively.

In the absence of specific investments, the only allocative role of property rights concerns their implications for decisions for whether or not the property will be sold. Optimal resource allocation necessitates paying compensation to the tenant so that the landlord correctly internalizes the cost imposed on the latter as a result of the property sale. This will be traded off against the various benefits that will accrue to the landlord or the industrialist. If the rental market for property operates without distortion, the current rent captures the value to the tenant of leasing the asset. Since the landlord earns this rent which will be foregone upon selling the property, vesting the sole decision right over the sale to the landlord results in an efficient outcome. The argument is further strengthened if the landlord makes ex ante investments in the construction and upkeep of the property. Retaining full rights over sale will generate the correct (i.e., first-best) incentives to the landlord for making such investments.

However, in the presence of distortions in the rental market, the tenant may be earning a surplus (owing either to limited liability and moral hazard, or a legally stipulated minimum crop share).[8] In this case, vesting sole decision rights with the landlord concerning sale of the asset will generate socially excessive incentives to sell to third parties when the opportunity arises. This is because the landlord will neglect the effect of the sale on the loss of surplus by the tenants. To correct this problem, the landlord needs to pay a compensation to the tenant that equals the surplus lost by the latter in the event of conversion.

The effect of this distortion on the sale decision is compounded by effects on investment incentives. Sharecropping implies that both the landlord and the tenants under-invest in agricultural improvements. We show that increasing the compensation paid to tenants in the event of conversion raises investments by both landlords and tenants, owing to the induced effect on sale decisions by the landlord. By

[2] For a detailed account, see Ghatak et al. (2012).

[3] In the context of the Singur land acquisition by the West Bengal government, there were over 17,000 plots acquired, and at least 1600 households from whom agricultural land was acquired. See Ghatak et al. (2012, Tables 1a, 4).

[4] In West Bengal, for instance, tenancy is regulated by sharecropper protection laws that mandate a minimum share for tenants. See Banerjee et al. (2002) and Bardhan and Mookherjee (2011) for further details.

[5] This resembles the formulation of tenancy in Mookherjee (1997), and Banerjee et al. (2002). In the context of this paper, we additionally incorporate investments made by the landowner or local government, whereby a team moral hazard problem arises.

[6] See Ghatak et al. (2012) for a detailed analysis of the acquisition process in Singur, showing that the government was unable to identify many relevant characteristics of plots relevant to assessment of their market values. Hence the compensation for any given acquired plot ended up being largely independent of past investments made on that specific plot.

[7] If there was only a single plot and tenant in question, the owner would be more inclined to sell if the tenant invests less in agricultural productivity. In such a context, the threat of being evicted without suitable compensation would motivate the tenant to invest more. Increasing tenant's compensation in the event of sale could then reduce his incentive to invest. This 'disciplinary' effect does not arise in the context studied in this paper. In Ghatak and Mookherjee (2012) we study the context of a single tenant or agent, wherein results concerning optimal compensation turn out to be considerably different. In that paper we also allow the owner to design the tenancy contract, whereas in this paper the terms of the contract are set by law.

[8] For example, in tenancy models with moral hazard and limited liability (e.g., Banerjee et al., 2002; Mookherjee, 1997) it is not in the landlord's interest to extract all the rents from the tenant as this destroys the latters incentive to undertake costly investments that raise farm productivity. Fixed rent contracts are unenforceable in states of the world where adverse natural shocks depress tenants incomes so much that they are unable to pay the mandated rent. So the landlord offers a sharecropping contract which ends up generating rents for their tenants, particularly for those that are poor.