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Oligarchic land ownership, entrepreneurship, and economic development☆

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ABSTRACT

This paper develops a theory in which oligarchic ownership of land or other natural resources may impede entrepreneurship in the manufacturing sector and may thereby retard structural change and economic development. We show that, due to oligopsony power of owners in the agricultural labor market, higher ownership concentration depresses entrepreneurial investments by landless, credit-constrained households, whose investment possibilities depend on the income earned in the primary sector. We discuss historical evidence from Latin America, India, Taiwan and South Korea which supports our theory.

1. Introduction

Economic development is intimately related to structural change from natural resource-intensive production like agriculture or mining to manufacturing and capital-intensive production. This process is typically driven by the emergence of a new entrepreneurial class which in oligarchic societies challenges the traditional elite of natural resource owners economically and politically. The relevant individual characteristic which enables agents to become entrepreneur is whether or not they have the means to finance the cost of setting up a firm. Under credit constraints and in the absence of bequests, this depends on the households' own income. An immediate implication is that, because every economy in an early stage of development is dominated by primary goods production, the income earned by landless workers or tenants in the primary sector is a decisive financial determinant of the possibilities to start the manufacturing activity.

This paper argues that, for this reason, the ownership concentration of land or other natural resources plays an important role for entrepreneurship, structural change, and economic development. According to our analysis, oligopsony power of large landowners in the agricultural labor market depresses the labor income in the primary sector and thus the entrepreneurial investments of landless, credit-constrained households.

Thus, our main focus is on the adverse effects of *economic* power of the preindustrial elite in early stages of development. We thereby propose a complementary theory to the recently emphasized adverse effects of *political* power of landowners which enabled them to block institutional reforms conducive to economic development. Galor et al. (2009) show that land inequality is negatively related to the point of time in which human capital promoting institutions are adopted, thereby delaying economic development. In Falkinger and Grossmann (2005a) we relate the opposition of the landed elite to mass education to trade; an open trade regime is politically supported by rich landowners under a comparative advantage for primary goods production. These general equilibrium theories advance the hypothesis that the landed elite in Latin America blocked reforms of the public education system towards mass education (e.g. Engerman and Sokoloff, 2005; Sokoloff and Engerman, 2000). In an interesting recent paper, Vollrath (2010) argues that in order to preserve high rents on land, large landowners also delayed financial development and therefore slowed

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down structural change towards manufacturing. Again, land concentration is an obstacle to political reforms which could be conducive to economic development.

Other contributions focus on the land market. Proto (2007) argues that high land inequality is associated with a high rental price of land, which in turn reduces the possibilities of tenant farmers to invest in education. Gall and Masella (2012) show that powerful elites have an incentive to form a coalition which prevents competitive land assignment to skilled producers.

This paper focuses on economic (rather than political economy) channels.[1] In economic approaches to inequality and economic development, capital market imperfections play a key role. For instance, Galor and Zeira (1993) show that inequality may be harmful for economic development if credit constraints prevent workers from investing in human capital. Our analysis abstracts from educational investments. We rather suggest a new link between credit market imperfections, occupational choice, and long-run growth patterns, which focuses on the dismal effects of oligopsony power of landowners on entrepreneurship.[2] Aghion and Bolton (1997), Banerjee and Newman (1993), and Piketty (1997) propose models in which individuals with one-period lives may open up a firm and leave bequests. They show that initial wealth inequality is typically negatively related to growth due to the disability of poor and credit-constrained individuals to cover fixed costs of setting up profitable projects. Banerjee and Newman (1993) consider a case where high wealth inequality may give rise to a poverty trap.[3] More specifically, they argue that a low ratio of wealthy entrepreneurs to workers depresses wages of workers so that their bequests are too low to allow their offsprings to move up to the medium or upper class of the self-employed or entrepreneurs. While they consider a one-sector economy, our focus is on structural change in a two-sector model, in which a low ratio of owners to workers in the primary sector depresses labor income such that the rural labor force is prevented from moving to the manufacturing sector. In our model, employment in the manufacturing sector requires the creation of work places by entrepreneurial investment. Individuals live two periods and all potential entrepreneurs are born without wealth. They thus have to rely on first-period wage income (rather than on inherited wealth) to invest in entrepreneurship. This implies a major role for labor market characteristics. We hypothesize that ownership concentration in the resource-intensive sector determines the means of the landless population to invest in manufacturing businesses.

Possibly closest to our paper, Ghatak et al. (2001) also link occupational choice to wage determination in a model with imperfect credit markets. They propose a principal-agent framework with limited liability constraints to focus on effort choice of workers. Removing credit constraints mitigates entry barriers into entrepreneurship and reduces inequality. Through affecting the agency problem, however, this may reduce incentives to work hard and therefore slow down development. Whereas their model is driven by the "*joint* presence of incentive problems in the labor market *and* imperfections in the credit market" (p. 783; italics original), our model is driven by the joint presence of oligopsony power of landowners and restricted access to credit of landless workers who face the choice whether or not to become entrepreneur. Moreover, our two-sector framework allows us to explicitly focus on structural change from primary production to manufacturing. We also discuss historical evidence on the relationship between land concentration, wages and the evolution of the manufacturing sector.

The plan of the paper is as follows: Section 2 illustrates the basic message of the paper in the static version of the model. Section 3 extends the model to a dynamic overlapping generation model. It characterizes the dynamics of the development of entrepreneurial activity and structural change towards manufacturing production. Section 4 discusses historical evidence. We first outline how oligopsony power in the rural labor market was historically associated with slow structural change in Latin America and India. We also document the increasing orientation of peasants towards non-agricultural enterprises and fast industrial development in Taiwan and South Korea in the aftermath of successful land reforms initiated in the early 1950s — consistent with the link between ownership concentration, income levels of landless households, and structural change suggested by our framework. The last section provides concluding remarks.

2. Static version of the model

We first illustrate the basic mechanisms how oligopsony power of oligarchic landowners in interaction with credit market imperfections may affect the economic structure, by employing a static version of our model. We consider a small open economy. There are two sectors, a primary (X-) sector, called "agriculture", and a manufacturing (Y-) sector. Goods markets are perfectly competitive. Consistent with the assumption of a small open economy, goods prices are exogenous. For simplicity, they are assumed to be equal to unity.

2.1. Endowments

There are three types of households: first, a "traditional elite", represented by a discrete number of $N^Z > 1$ households, who own some natural resource, hereafter referred to as "land".[4] Second, a large number of households, N, who are endowed with labor and do not own land. The N landless individuals may work in agricultural or manufacturing production. For simplicity, suppose that each production worker can be employed in only one sector. If employed in the Y-sector, he or she inelastically supplies one unit of labor. In contrast, workers employed in agriculture react elastically to the oligopsonistic wage setting of landowners. Denoting by N^Y the number of workers in the Y-sector, there are

$$N^X = N - N^Y \tag{1}$$

workers seeking employment in the agricultural sector. Third, there is an entrepreneurial and landless class of size N^E. Entrepreneurs create work places in the Y-sector. In the dynamic version of the model presented below, the number of entrepreneurs, N^E, will be endogenous, based on a decision of workers whether or not to become entrepreneur later in life, and there is heterogeneity in entrepreneurial ability. Here we assume that N^E is exogenously given and entrepreneurial abilities are identical.

We normalize total land size to be equal to the population size of workers, N. Thus, we abstract from effects of population density and focus on the ownership concentration. We measure this concentration by the ratio of workers to owners, $z := \frac{N}{N^Z}$, which with our normalization equals ownership of land per member of the traditional elite.

[1] This is not to deny that the dynamic interaction between political institutions and the distribution of resources is of major importance for development processes. Acemoglu et al. (2005) provide an excellent overview on the vast related literature, focussing on institutions like property rights protection.

[2] Falkinger and Grossmann (2005b) show that, when landowners possess oligopsony power in the labor market, they also oppose public investment and other policies which promote productivity in the manufacturing sector. Contrary to landowners, entrepreneurs support productivity-promoting reforms. This is in line with Galor and Moav (2006), who argue that educational reform in 19th century Western Europe was orchestrated by capitalists. This suggests a vicious politico-economic circle: by impeding business creation and the size of the manufacturing sector, a high oligopsony power of landowners also hinders the emergence of a bourgeois class so that the pre-industrial elite remains the dominant political force.

[3] Our paper is less related to Aghion and Bolton (1997) and Piketty (1997). They assume that all workers are self-employed whereas our focus is on entrepreneurship.

[4] For instance, the traditional oligarchy in 19th century South America mainly consisted of landowners. Some of them made their fortune from mining.