INCREASING POLITICAL RETURNS

AND RURAL-URBAN MIGRATIONS

Gabriel Sánchez* ♯

August 1998

Abstract. This paper analyzes the different equilibria in rural-urban migrations and political redistribution that result from the interaction between increasing political returns, the distribution of land, and credit market imperfections. Governments that put a special weight on the welfare of urban workers when setting agricultural prices generate a political externality in the urban sector, giving peasants an incentive to migrate in anticipation of policy determination. If credit markets are imperfect, land ownership confers higher productivity to peasants, who require large price changes to migrate. In this context, land inequality would lead to large migrations and to large policy change, while an egalitarian land distribution would lead to no migration and to a small policy change. This interaction sheds light on the the contrasting experience of Latin America and East Asia at the outset of World War II.

1. Introduction

Political exclusion by type of activity and/or geographical location has been singled out as an important determinant of urban concentration. The empirical study of Ades and Glaeser (1995) shows that urban concentration is positively associated to political instability, which they interpret as reflecting the fact that "unstable regimes must cater to the mobs near the centers of power." These findings are consistent with the abundant historical accounts on the lack of political clout of peasants in most developing countries.[1] This would suggest that rural-urban migrations, by increasing the number of workers with political rights, could induce endogenous policy changes. Increasing returns of a political nature would arise: the more people migrate, the larger the support or demand for re-distributive policies, and the larger the value of migrating for an individual peasant.

On the other hand, the distribution of wealth in general, and of land in particular, have been pointed out as important determinants of distributive conflicts that lead to the political determination of distortionary policies.[2] Inequality in the distribution of land has been largely blamed for the implementation of discriminatory agricultural pricing policies that re-distribute income from the rural

---

[1]See Díaz-Alejandro (1970) and Scobie (1964) for Argentina, Frieden (1991) and Houtzager (1997) for Brazil, and Binswanger and Deininger (1997) for an excellent survey. According to Scobie (1964): "In Argentina the farmer very rarely had any political clout or power ... During many years the small farmer was apolitical. Isolation, illiteracy, and precariousness made difficult, if not impossible, any kind of political organization or action."

[2]See for instance Alesina and Rodrik (1994), and Benabou (1996).

sector to the urban sector in many developing countries.[3]

This paper develops a two-sector model in which the size of re-distributive policies depends on the size of the urban labor force, and in which land ownership confers higher productivity to agricultural workers. Agricultural prices are endogeneized via the maximization of a political support function by a government that assigns a special weight to the welfare of urban workers, who strictly prefer lower prices. This makes the marginal benefit of taxing agricultural exports an increasing function of the size of the urban labor force. If the government is unable to commit a priori to a certain policy, the bigger rural-urban migrations in anticipation of policy implementation are, the higher the adopted taxes will be. Due to this complementarity there will be a political externality in migrating.

The distribution of land among peasants plays a role by introducing different opportunity costs of migrating according to the amount of land owned. Peasants who are small holders of land will be more productive when working in agriculture, and they will be reluctant to migrate if imperfections in the land sales market prevent them from capitalizing this higher productivity.[4] The larger the land held by any peasant is, the larger the associated productivity, and the larger the

---

[3]A very good example is given by Díaz-Alejandro (1970): "The unequal distribution of land created the conditions for a conflict between economically efficient policies and what was considered to be by the majority of Argentinians a fair distribution of wealth and of income".

[4]This is the main insight of the literature on landownership and productivity in the presence of imperfect credit markets. See chapter 12 in Ray (1998) for an excellent survey on the subject, and for the extreme thinness of land sales markets in most developing countries.

opportunity cost of migrating in response to a change in relative prices.

In this context, when policy implementation by a pro-urban workers government is anticipated, inequality in land ownership can lead to massive migrations when peasants own little or no land, or to "migration waves" when the migration of the land-poor makes profitable the migration of the land-richer, who would not have migrated by themselves, and to a large taxation of agriculture. On the other hand, equality in land distribution would lead to no migration and to a small tax in response to the emergence of urban political externalities, because of coordination failures or opposition to a massive migration (See Figure 6).

These results are the main contribution of the paper. They shed new light on the contrasting experience of East Asia and Latin America at the outset of World War II. In Latin America, strong urban labor movements with weak ties to the rural sector supported the ascendancy of populist regimes that displayed a strong commitment to urban workers' welfare, full employment, and real wage growth.[5] The re-distributive policies implemented typically included very large rates of direct and indirect taxation of agriculture, in order to provide cheap food to urban workers, which were present in large numbers in the Latin American

---

[5]Frieden (1991) provides an excellent survey on the ascendancy of the populist regimes in the interwar years in Latin America, and of the policies subsequently implemented. The most notable examples of the rise of populism in the region were Perón in Argentina, Vargas in Brazil, and Cárdenas in México, under whose aegis political power shifted from the agricultural exporters' elites towards the urban interests. See also Deyo (1990) on this subject.

metropolitan areas during this period.[6] Instead, in Korea and Taiwan regimes with a weak support from the urban masses ruled, implementing a less intense import substitution industrialization strategy and a much milder discrimination against agriculture.[7] This area was characterized by a lack of urban industrial concentration in the 1940s and 1950s.[8]

These differences in the degree of urbanization and in the taxation of agriculture are explained here by the interaction between urban political externalities, imperfections in the market for land sales, and the distribution of land, which is very egalitarian in Korea and Taiwan, and very unequal in Latin America.[9] In response to the emergence of pro-urban workers regimes, land inequality in Latin America led to significant migrations and to a large taxation of agriculture.[10] On the other hand, the timidly populist postwar regimes in the highly egalitarian East Asia were met with little or no migration, which led to small policy change, because of coordination failures, or of opposition to a massive migration.

---

[6] At the end of World War II, over 25 percent of the population of Latin America lived in cities of more than 20,000, a level reached by continental Europe only after 1900 (Frieden, 1991).

[7] See Moon and Kang (1991) for Korea, and Huang (1993) for Taiwan. Ranis (1990) aptly characterized the differences between both regions: "... the East Asian countries ... neglected their agricultural sectors less, raised their real interest rates earlier, and maintained lower levels of effective protection of their industries than the Latin Americans."

[8] Agricultural employment in Korea absorbed 67% of total employment in 1953-55, and 60.2% in 1960 (Moon and Kang, 1991). The share of agriculture in total employment in Taiwan in 1960 was 50% (Anderson and Hayami, 1986).

[9] The Gini coefficients for land ownership in Argentina, Brazil, Korea and Taiwan in 1960 were 0.87, 0.85, 0.39 and 0.46, respectively (Taylor and Hudson, 1972).

[10] For instance, Perón's ascendancy to power in Argentina was supported by the masses resulting from the vast rural-urban migrations in the late 1930s and 1940s, largely driven by the *expectation of future further decline* in the relative price of agricultural goods (Díaz-Alejandro, 1970). Most migrants came from the highly unequal Northern region (Lattes and Lattes, 1969).

This paper offers other contributions to the understanding of trade policy formation in developing countries. First, it presents a novel approach to endogenous policy determination by allowing urban workers to affect their relative political power by means of migrations, whereas in most other political economy approaches the relative power of pressure groups is exogenously determined.[11] Second, it challenges the conventional view that concentration of landownership can affect the determination of trade policies only by allowing the formation of a powerful agricultural lobby that can overcome the free rider problem, inevitably leading to a more benign treatment of landlords' interests.[12] The contrasting experience of East Asia and Latin America in this period suggests the opposite. Finally, the paper focuses on the analysis of externalities of a political nature. In this model, convergence to the sector that offers increasing returns is not a good equilibrium, as it leads to welfare losses from distortionary export taxes, which may be exacerbated by the productivity loss of the smallholders that migrate.[13]

In section 2, a model economy in which land ownership confers higher productivity is presented, and its properties are analyzed. Section 3 studies the political determination of agricultural export taxes and the effect of migrations on policy changes. The effect of the distribution of land on the decisions to migrate in antic-

---

[11] See Long and Vousden (1991), Findlay and Wellisz (1982), Mayer (1984), Magge, Brock and Young (1989), and Grossman and Helpman (1994). For an exception, see Mitra (1996).

[12] See Olson (1965).

[13] In models with increasing physical returns or pecuniary externalities, convergence to the sector that offers externalities enhances welfare. See Krugman (1991) and Matsuyama (1991).

7

ipation of policy determination and the nature of the possible resulting equilibria are analyzed. The main conclusions are presented in Section 4.

2. Land Ownership and Rural Productivity

This section introduces a general equilibrium model for a competitive small open economy that produces two goods, Urban and Agricultural, using constant returns to scale technologies. It is assumed that this country exports the Agricultural good. The effects of landownership on peasants' productivity and on the opportunity cost of migrating are considered. This allows to determine the effect of the distribution of land on the size of migrations in response to changes in relative prices driven by changes in Agricultural export taxes.[14]

The Urban good X_u is produced using only labor, $X_u = n_u$, where n_u is urban labor, while the Agricultural good X_a is produced using a constant returns to scale technology, $X_a = G[E_a, T]$, $G_i > 0$, $G_{ii} < 0$, $G_{ij} > 0$, where E_a is the agricultural labor force measured in efficiency units, and T is the stock of land, which is specific to the production of this good. Aggregate land and labor are supplied inelastically. This is a two-class economy, populated by a number n_T of identical landlords who do not work and who own large land plots, and by a measure normalized to 1 of workers indexed by $i \in [0, 1]$. Workers may own land

---

[14]The same results could be obtained considering Urban import tariffs instead.

8

plots, their sizes given by $H(i) \in \left[0, \bar{H}\right]$. Plots are small enough as to make a worker derive most of her income from the provision of labor. Workers are indexed such that $H'(i) \geq 0$ in general, although discontinuities in the distribution of land are allowed. The amount of land owned by landlords is equal to $T - \int_0^1 H(i)di$.

It is assumed that credit markets are imperfect and that only the small-holders who can use their plots as collateral have access to credit for the purchase of inputs that enhance their productivity when working in the rural sector.[15] [16] The number of efficiency units as rural worker that each smallholder has is given by $\alpha\left[H(i)\right]$, $\alpha' > 0$, $\alpha[0] = 1$; to simplify the exposition, let $\alpha\left[H(i)\right] = \alpha(i)$, $\alpha' \geq 0$. It is also assumed that a market for land sales does not exist, in line with the thinness of land markets in most developing countries, and the prohibition to sell land in Korea and Taiwan, imposed by the land reforms of 1949-50.[17] Therefore,

---

[15] Here it is considered that the productivity of a small holder is higher over all the land that she exploits, not only over the land that she owns. The intuition would be that smallholders can get credit to purchase a tractor instead of a yoke of oxen, for instance. This channel is supported by the empirical findings of Binswanger, Deininger, and Feder (1995), and Reardon, Crawford, and Kelley (1994). Another channel through which land ownership may affect productivity is through the provision of incentives for higher effort from farmers in the absence of perfect credit and insurance markets (Newbery, 1977; Shaban, 1987; Mookherjee, 1997). A final possible mechanism is an efficiency wages story (Moene, 1992; Dasgupta and Ray, 1986; Bliss and Stern, 1978). For an excellent survey on all these channels see Ray (1998), chapter 12.

[16] The positive effect of landownership by small farmers on their productivities has sound empirical support. Sen (1981) finds that in West Bengal productivity on own land is always bigger than on tenanted land, and that this productivity is higher for plots of 0-8 acres. Productivity on tenanted land shows no relation between size and productivity. Similar results hold for India, Northeast Brazil, the Punjab (Pakistan), and Muda (Bangla Desh) (Berry and Cline, 1979).

[17] See Ray (1998), chapter 12. In the presence of credit market imperfections, the value of land for the seller is made up of the present discounted value of income streams that emanate from working the land, and of the value of the land as collateral for credits. If the buyer needs a loan to purchase the land, and has to mortgage it to get this credit, then the land will have no use to him as collateral for further credits until this loan is payed off. In this case, he values

small holders cannot capitalize their higher productivity by selling the land, and have only one efficiency unit when working in the urban sector.

The labor and land rental markets are assumed to be perfectly competitive. Assuming that world prices of both goods are equal to one, and choosing the Urban good as the numeraire, urban wages are always equal to one. An ad-valorem Agricultural export tax $t_a \geq 0$ is imposed, yielding a domestic price $\tau_a = 1 - t_a$ for this good. Agricultural wages per efficiency unit of labor are given by $\tau_a G_1 [E_a, T]$, where $E_a = \int_{n_u}^1 \alpha(i) di$. The wage income for worker i in the rural sector is given by $\tau_a \alpha(i) G_1 [E_a, T]$. If land ownership is smoothly distributed among workers, then the labor market equilibrium is determined by the equality between the urban wage and the *wage income* of the marginal agricultural worker (peasant type n_u). If the distribution of land among workers shows a discontinuity, labor market equilibrium can attain at a point where the urban wage is lower than the wage income of the marginal peasant.[18] Therefore, in equilibrium,

$$1 \leq \tau_a \alpha\left(n_u\right) G_1 \left[\int_{n_u}^1 \alpha(i) di, T\right] \tag{2.1}$$

The rental rate of land is given by its marginal value product, $R = \tau_a G_2 [E_a, T]$.

---

land less than the seller, and sales do not take place. See King (1973), and Powelson and Stock (1987) for land reforms in Korea and in Taiwan.

[18] If the marginal urban worker (denote it by type $n_{u'}$) owns a discretely smaller land plot than the marginal peasant (denote it by type $n_{u''}$), then $\alpha(n_{u'}) < \alpha(n_{u''})$, and it is possible that $\tau_a \alpha\left(n_{u'}\right) G_1 \left[\int_{n_{u'}}^1 \alpha(i) di, T\right] < 1 < \tau_a \alpha\left(n_{u''}\right) G_1 \left[\int_{n_{u''}}^1 \alpha(i) di, T\right]$.

Preferences are non-homothetic: $\omega = v(c_a) + c_u$, $v' > 0$, $v'' < 0$, reflecting the stylized fact that the share of food on consumption expenditure declines with the level of income.[19] Individual and aggregate demand schedules for this good are independent of income levels, and given respectively by $c_a(\tau_a) = v^{-1}(\tau_a)$, $c'_a < 0$, and $C_a = (1 + n_T)c_a(\tau_a)$. Aggregate demand of the Urban good is equal to the income leftover after satisfying the demand for the Agricultural good, $C_u(\tau_a) = n_u + \tau_a G[E_a, T] + (1 + n_T)t - \tau_a C_a(\tau_a)$, $C'_u(\tau_a) > 0$.[20] The trade balance condition, $C_u(\tau_a) - n_u(\tau_a) = G[E_a, T] - C_a(\tau_a)$, closes the general equilibrium.

Let us now determine how the responsiveness of rural-urban migrations to price changes is affected by the distribution of land. If all peasants were landless, the migration response would be $dn_u/d\tau_a = G_1[.]/\tau_a G_{11}[.]$. As the distribution of land becomes more egalitarian as a result of a transfer of land from landlords to peasants, the latter will become more reluctant to migrate, and migrations will be smaller. In the case when land is smoothly distributed among workers, the migration response to a change in τ_a becomes $dn_u/d\tau_a = \alpha(n_u) G_1[.]/\tau_a[\alpha'(n_u) G_1[.] - \alpha(n_u)^2 G_{11}[.]] < 0$. A decrease in the Agricultural good price would elicit a smaller migration because now the opportunity cost of migrating is given not only by the

---

[19] While farm products represent about half of low-income household expenditure in developing countries, they account for a much lower share of rich household expenditures (Anderson, 1995).

[20] Denoting by t the lump sum rebate of export taxes, incomes of an urban worker, of a peasant, and of all landlords are respectively given by $I_u(i) = 1 + \tau_a G_2 \left[\int_{n_u}^1 \alpha(i)di, T \right] H(i) + t$; $I_a(j) = \tau_a \alpha(j) G_1 \left[\int_{n_u}^1 \alpha(i)di, T \right] + \tau_a G_2 \left[\int_{n_u}^1 \alpha(i)di, T \right] H(j) + t$; and $I_T = R[T - \int_0^1 H(i)di] + n_T t$.

increase in the marginal productivity of agricultural labor (the second term in the denominator), but also by the increase in the efficiency units of the marginal peasant (the first term in the denominator).

When the marginal peasant owns a discretely larger land plot than the marginal urban worker, labor market equilibrium attains at $1 < \tau_a \alpha\left(n_u\right) G_1\left[.\right]$. In this case, for a range of agricultural export taxes such that $t_a \leq \frac{\alpha(n_u)G_1[.]-1}{\alpha(n_u)G_1[.]}$, there will not be any migration at all, as the price change will not be big enough to compensate the marginal peasant for her loss of the extra efficiency units.

3. Political Externalities, Rural-Urban Migrations, and Land Distribution

This section analyzes the different equilibria in rural-urban migrations and endogenous agricultural export taxes that result from the interaction between increasing political returns, the distribution of land ownership, and imperfections in the credit and land sales markets. It is first considered how rural-urban migrations affect the political determination of agricultural export taxes when the government cares relatively more about the welfare of urban workers. Migrations, by increasing the size of the urban labor force, raise the marginal benefit that the government derives from implementing a tax that increases the real wage of urban workers, thus leading to higher taxes. This complementarity in migration

12

generates a political externality in the urban sector.

It is then analyzed how the distribution of land affects the decision to migrate in response to the emergence of political externalities. Landownership, by conferring a higher productivity as agricultural worker, generates a higher opportunity cost of migrating. The change in relative prices required to migrate for each peasant will depend on the size of her land holding and its associated productivity. Migration in anticipation of policy determination may be profitable for many peasants only if other peasants migrate as well. Peasants will have to infer the other peasants' most preferred actions from the distribution of land in order to decide whether to migrate or not. Different distributions of land will thus lead to different outcomes regarding migration and taxation.

Let us first consider the welfare maximizing tax. Aggregate welfare is assumed to be given by the sum of individual welfares, which under perfect competition and constant returns to scale can be expressed as:

$$W\left[\tau_a\right] = n_u + (1 + n_T)[v(c_a^*) - \tau_a c_a^*] + \tau_a G[E_a, T] + (1 - \tau_a)M_a(\tau_a) \qquad (3.1)$$

where $M_a(\tau_a) = G[E_a, T] - C_a(\tau_a)$. It is straightforward to show that the welfare maximizing export tax is equal to zero, and thus $\tau_a = 1$. Let us now turn our attention to the political determination of the export tax via the maximization of a political support function. The government will assign a special weight to

13

the welfare of urban workers, and this weight will be larger the larger the size of the urban labor force. It is assumed that the government cannot commit a priori to a certain policy, and it will thus choose the optimal tax taking the number of urban workers as given. The government's objective function will be:

$$\Gamma\left[\tau_a\right] = a \int_0^{n_u} V_u\left[\tau_a, I(i)\right] di + W\left[\tau_a\right] \qquad (3.2)$$

where a is a parameter that measures the marginal rate of substitution between the urban workers' welfare, $\int_0^{n_u} V_u\left[\tau_a, I(i)\right] di$, and aggregate welfare, and $I(i)$ is the income of worker type i.[21] The rationale for such an objective function is that governments in most developing countries at the outset of World War II, albeit enjoying different degrees of authoritarianism, were rather unstable, and mainly needed the political support of the two most organized competing groups: urban dwellers and rural landlords.[22] Peasants were mostly politically excluded: they would be spread all over the country side and largely unable to organize, being easily controlled by paternalistic landlords.[23] Whereas urban workers' welfare is always improved with a rise in the agricultural export tax, it can be shown that

---

[21] See Footnote 20 for the composition of $I(i)$.

[22] See Binswanger and Deininger (1997). A more general specification of the government's objective function would have to put also a special weight on the welfare of rural landlords. In the present context, however, such a specification would only affect notation without changing the results, given that only workers can change the weight put on their welfare by migrating.

[23] See references in Footnote 1. According to Binswanger and Deininger (1997), large physical distances, the seasonal work cycles, and the lack of social ties and of access to education and to infrastructure, contributed to prevent peasants' political organization.

the welfare of the poorer peasants will also rise, but that the welfare of wealthier peasants may decline, and that the welfare of landlords will always be lower.[24]

The government in this model is thus a "populist," who faces a trade-off between increasing the real wage of urban workers and decreasing aggregate welfare. Taking n_u as given, the politically optimal tax is given by:

$$1 - \tau_a = t_a[n_u] = \frac{a}{M'_a}\left[n_u c_a^* - g'\left(\frac{T}{E_a}\right)\int_0^{n_u} H(i)di\right] \tag{3.3}$$

where $g'(T/E_a) = dR/d\tau_a$.[25] The optimal export tax is positively related to the consumption gain that urban workers derive from a tax rise, $n_u c_a^*$, and negatively related to the loss of land rent income imposed on urban workers by the tax (the second term between brackets). The net effect of an increase in the size of the urban labor force on the tax is positive.[26] The state's inability to commit allows migrations in anticipation of policy adoption to affect its choice of the export tax.

---

[24] The indirect utility of an urban worker is given by $V_u[\tau_a, I(i)] = 1 + R(\tau_a)H(i) + t + v(c_a^*) - \tau_a c_a^*$, and the effect of a price change is given by $dV_u/d\tau_a = -c_a^* + H(i)dR/d\tau_a$. Being smallholders, the land plot owned by workers is small enough so as to always have a reduction of τ_a lead to an increase in workers' welfare.

[25] Expressing agricultural production in terms of efficiency units of labor, $G[E_a, T] = E_a g(T/E_a)$, and with perfect land rental markets and constant returns to scale in production, the rent on land is given by $R = \tau_a g'(T/E_a)$.

[26] The effect of a rise in the size of the urban labor force is: $\frac{dt_a}{dn_u} = \frac{a}{M'_a}\left[\left(c_a^* - g'\left(\frac{T}{E_a}\right)H(n_u)\right) - g''\frac{T}{E_a^2}\alpha(n_u)\int_0^{n_u} H(i)di\right]$. The first term between brackets measures the increase in political support derived from an extra urban worker, and is positive by the assumption that urban workers are smallholders. The second term measures the decrease in the land rental loss as peasants migrate and the marginal productivity of land declines, and it is also positive.

Let us now consider the decision to migrate in anticipation of policy determination. It is assumed that starting from an equilibrium with zero export taxes, a government of the type described above takes office, and that peasants have a one-shot opportunity to migrate before the tax is implemented. Welfare must be larger in the urban sector for an individual peasant to migrate in response to the emergence of a pro-urban worker government. The gains of migrating will be given by the change in wage income resulting from moving to the urban sector:[27]

$$\phi(n_u) = V_u\left[\tau_a, I(j)\right] - V_a\left[\tau_a, I(j)\right] = 1 - \tau_a(n_u)\alpha(j)G_1\left[\int_{n_u}^1 \alpha(i)di, T\right] \qquad (3.4)$$

These gains will be a function of how many other peasants migrate: on the one hand the export tax will increase with the size of the migration, but on the other hand the marginal productivity per efficiency unit in the agricultural sector will also increase as fewer workers are left in this sector. The effect of a change in n_u on these gains is given by:

$$\phi'(n_u) = -\alpha(j)G_1\left[.\right]\frac{d\tau_a}{dn_u} + \tau_a(n_u)\alpha(j)G_{11}\left[.\right]\alpha(n_u) \qquad (3.5)$$

where the first term is positive, reflecting the increasing political returns in the

---

[27] The indirect utility of a peasant is given by $V_a\left[\tau_a, I(j)\right] = \tau_a\alpha(j)G_1\left[\int_{n_u}^1 \alpha(i)di, T\right] + R(\tau_a)H(j) + t + v(c_a^*) - \tau_a c_a^*$.

urban sector, and the second term is negative, reflecting the decreasing returns in the agricultural sector. The condition for the gains of migration to increase with the size of the migration is that the elasticity of the politically determined agricultural price with respect to the urban labor force must be larger than the elasticity of the marginal productivity of labor in the agricultural sector:[28]

$$\varepsilon_{\tau_a, n_u} > \varepsilon_{G1, n_u} \tag{3.6}$$

Sufficient conditions for this inequality to hold are that either the increasing political returns, which depend positively on a and on c_a^*, are large, or that decreasing returns in agriculture set in slowly, or both. Assuming that these conditions hold, the emergence of a populist policy-maker is equivalent to the emergence of a new technology for increasing the workers' income, the adoption of which is subject to political externalities.[29] The gains from migrating are represented in Figure 1 as the vertical distance between the $\tau_a(n_u)\alpha(j)G_1[.]$ line and the horizontal line at 1.

Peasants are assumed to know the distribution of land, from which they map

[28] The elasticity of the agricultural price is $\epsilon_{\tau_a, n_u} = -\frac{d\tau_a}{dn_u}\frac{n_u}{\tau_a}$, while the elasticity of agricultural labor productivity is $\epsilon_{G_1, n_u} = -\frac{G_{11}}{G_1}n_u\alpha(n_u)$.

[29] The difference with the traditional analysis of network externalities is here the old technology (staying in the agricultural sector) is subject to diminishing returns because of the fixed stock of land. In this vein, if (3.6) does not hold, then the incentives to migrate become smaller the larger the size of the migration, so that individual peasants may prefer to do the opposite than the others do: stay if they migrate, migrate if they stay. This would ressemble a matching pennies game, and would not be of much interest in light of the stylized facts.

17

the distribution of the opportunity costs to migrate. If we let Π denote the action

"migrate" and let S denote "stay," a strategy for peasant j can be described by

$$\sigma^j : [n_{uo}, 1] \times \{F[H(i)]\} \to \{\Pi, S\}$$

The individual peasant's move is conditioned on its own type $j \in [n_{uo}, 1]$,

where n_{uo} denotes both the pre-migration size of the urban labor force and the

type of the marginal peasant, and on the distribution of land among peasants,

$F[H(i)]$, which summarizes the information about the other peasants' strategies.

Each peasant j will define a cutoff point $n_u(j)$ for the size of the migration that

makes it profitable for her to migrate. This cutoff point will be given by

$$1 = \tau_a(n_u(j))\alpha(j)G_1\left[\int_{n_u(j)}^1 \alpha(i)di, T\right] \tag{3.7}$$

The cutoff points will differ among peasants depending on their land holdings.

Figure 1 illustrates the cutoff points for a relatively poor peasant who will be

willing to migrate unilaterally in response to the tax that supported by the initial

urban labor force (for this peasant, $n_u(j) < n_{uo}$), and for a relatively well endowed

peasant who would migrate only if other peasants migrate as well ($n_u(j) > n_{uo}$).

By determining the cutoff points of other peasants from the distribution of land,

each peasant will be able to determine the expected migration and use this infor-

18

mation to decide whether to migrate or not.

3.1. Case 1: Unequal distribution of land

Assumption 1: Land is continuously distributed among peasants.

Assumption 2: There exists a measure $\delta \leq 1 - n_{uo}$ of peasants for whom unilateral migration is profitable, $(n_u(j) \leq n_{uo}$ for all $j \in [n_{uo}, n_{uo} + \delta])$.

Assumption 3: The land plot of the wealthiest peasant (type 1) is relatively small, in the sense that $n_{uo} \leq n_u(1) \leq 1$.

This case corresponds to an economy where peasants are poorly endowed with land. Assumption 3 implies that a joint migration is favored by the wealthiest peasant. Together with Assumptions 1-2, both imply that this joint migration is favored by all peasants.

Proposition 3.1. *Under Assumptions 1 to 3, the emergence of a pro-urban workers government will lead to a unique equilibrium, characterized by iterated domination, with massive rural-urban migrations in anticipation of the government's response, and large agricultural export taxes (import subsidies).*

Proof of Proposition 1. If $n_u(j) \leq n_{uo}$ for all $j \in [n_{uo}, n_{uo} + \delta]$ (Assumption 2), then the poorest δ peasants choose to migrate unilaterally over stay. But then, since by Assumptions 1-3 $n_u(j) \leq j$ for all peasants, there will be another measure $j - (n_{uo} + \delta)$ of peasants for whom $n_u(j) \leq n_{uo} + \delta$, and for whom the payoff from

19

migrating will be bigger than the payoff from staying. These peasants will thus choose migrate over stay, and so on.

This migration-taxation equilibrium is reflected in Figure 2, by having the locus of cutoff points below the 45○ line for all peasants. This iterated domination of the "migrate" strategy gives rise to what looks like a migration wave: unilateral migration by the less endowed peasants induces the migration of wealthier peasants who would not have migrated by themselves.[30]

In this highly stylized case, having all peasants moving to the urban sector would lead to no production of the Agricultural good, which would have to be imported. The politically determined trade policy would now be an import subsidy

$$t_a\left[1\right] = \frac{a}{M_a'}\left[c_a^*\left(\tau_a\left[1\right]\right) - g'\left(\frac{T}{0}\right)\int_0^1 H(i)di\right].^{31 \ 32}$$

The heterogeneity among peasants regarding land ownership and the associated opportunity costs of migrating introduces an asymmetry among them in their advantages from moving. This allows for some first movers to arise that other peasants can follow in equilibrium. This should be contrasted with other models

---

[30] There could be peasants for whom $V_a\left[\tau_a(n_{uo})\right] > V_u\left[\tau_a(1)\right] > V_a\left[\tau_a(1)\right]$, who would have preferred that no migration occurred at all, but who would migrate if the rest does.

[31] Here it is possible to obtain an equilibrium where the welfare of landowners is brought down to zero because of the linear additive government welfare function. If a social utility function that were strictly concave in the welfare of different agents had been posited instead, the equilibrium would have attained with some peasants left in the agricultural sector.

[32] If Assumption 3 were relaxed, and $n_u(1) > 1$, there would be a migration of a limited size. There would be a peasant for whom $n_u(j) = j$. By the same line of reasoning as above, all peasants below this type would migrate, and all peasants above would stay (see Figure 3). This case could attain through a progressive transfer of land from landlords to the richest peasants.

with similar externalities where asymmetries have to be exogenously imposed.[33]

3.2. Case 2: Egalitarian distribution of land

Assumption 4: The cutoff point for the marginal peasant (type n_{uo}) is higher than the initial urban population size, $n_u(n_{uo}) > n_{uo}$.

Assumption 4 means that the marginal peasant is relatively well endowed, and that the agricultural export tax supported by the initial urban labor force is not enough to compensate for the loss of the extra productivity that she derives from her land plot, which makes her disfavor a unilateral migration. Compared to Case 1, this scenario could be obtained by a progressive transfer of land from landlords to the poorest peasants. By the Dalton principle, the distribution in Case 2 will be more egalitarian than in Case 1, and this would be reflected unambiguously in indicators of inequality such as the Lorenz curve, the Gini coefficient, and the coefficient of variation.

Proposition 3.2. *Under Assumptions 1, 3, and 4 the emergence of a pro-urban workers government will generate two pure strategy Nash equilibria. One would entail no migrations and a small agricultural export tax. The other would entail massive migrations and a large agricultural export tax. In the absence of jointly*

---

[33] See for instance Farrell and Saloner (1985), where the asymmetry is introduced by imposing a fixed sequence of opportunities to move for identical agents. In Rauch (1993), the asymmetry is introduced by the implementation of perfect land price discrimination by the developer of an industrial park who wants to attract identical firms to a new location.

held beliefs that everybody else will migrate, all peasants will stay.

Proof of Proposition 2. Assumptions 1, 3, and 4 imply that all peasants favor a joint migration. However, by Assumption 4, the marginal peasant will not want to engage in a unilateral migration, and by Assumptions 1 and 3 neither will the rest of the peasants. Unless every peasant believed that the rest would migrate, in a one-shot game no peasant will risk migrating.

These equilibria are described in Figure 4, by having the locus of cutoff points crossing the 45o line from above. There will be a measure $\lambda - n_{uo}$ of peasants for whom $n_u(j) > j$ (the poorest peasants), and a measure $1 - \lambda$ for whom $n_u(j) \leq j$ (the richest ones). These $1 - \lambda$ richest peasants would be willing to follow a migration started by the poorest $\lambda - n_{uo}$ peasants, but the latter would not migrate since the poorest one will not migrate on her own, and neither will the next poorest one, and so on. Even though it would be benefitial for all peasants to migrate together ($n_u(j) \leq 1$ for all peasants), there will be a coordination failure as nobody will want to migrate on her own and risk having the other peasants stay in the agricultural sector.[34]

With only one period, all peasants stay in the absence of an expectation of a massive migration. With a longer time horizon and a small cost of migrating,

---

[34]If all peasants were as well endowed as to have $n_u(j) > j$ for all j, then the expectation of a massive migration could never be self-fulfilled, because of the presence of peasants for whom $n_u(j) > 1$ (See Figure 5). This harms the peasants for whom $1 \geq n_u(j) > j$, who would have benefitted from a massive migration, generating a case of asymmetric excess inertia.

everybody would prefer to wait and see, and nobody would migrate. History would beat expectations.[35]

The migration-taxation equilibria under different distributions of land are compared in Figure 6. With inequality, the endogenous export tax at each size of the urban labor force (given by (3.3), and represented by $c - k$), is higher than the tax that is necessary to generate each of those urban labor force sizes (given by (2.1), and represented by $b - g$). The equilibrium entails a massive migration $(n_{uo} - 1)$, and a large tax $(f - k)$. The tax supported by the initial labor force $(a - c)$ is higher than the tax required by the marginal peasant to migrate unilaterally $(a - b)$, and this sets the migration in motion.

With equality, higher taxes are required to draw peasants into the urban sector (the labor market equilibrium combinations of tax and urban labor force are now given by $d - h$, which lies above $b - g$). One equilibrium entails no migration and a small tax $(a - c)$, supported by the initial labor force, which is lower than the tax required by the marginal peasant to migrate unilaterally $(a - d)$. Under a self-fulfilled expectation of a massive migration, another equilibrium would be reached, in which the politically determined tax $(f - k)$ is higher than the tax

---

[35] To see this, assume an infinite horizon and that the discount rate is zero. For peasant j the gain from migrating now if everybody migrates is $\int_t^\infty [1 - \tau_a(1)\alpha(j)G_1[0,T]]ds - c$, where c is the small migration cost. If nobody migrates, she gets $1 - \tau_a(n_{uo})\alpha(j)G_1\left[\int_{n_{uo}}^1 \alpha(i)di, T\right] - 2c$, which is negative by Assumption 4. If she waits and see, she still gains $\int_t^\infty [1 - \tau_a(1)\alpha(j)G_1[0,T]]ds - c$ if everybody migrates, but loses nothing if everybody stays. Aditionally, strategic behaviors that set a migration in motion can be ruled out by the atomistic size of each peasant.

23

$(f - h)$ that is required to generate such a migration.[36]

3.3. Comparative Statics

This subsection analyzes how changes in key parameters like the rate of preference for urban workers' welfare and the land-labor ratio in the economy alter the politico-economic equilibrium. This is done by considering their effects on the largest land plots that the marginal and the wealthiest peasants can own such that massive migrations happen, which are respectively given by $H^*(n_{uo}) = \alpha^{-1} \left[1/\tau_a(n_{uo}) G_1 \left[\int_{n_{uo}}^{1} \alpha(i) di, T \right] \right]$ and $H^*(1) = \alpha^{-1} \left[1/\tau_a(1) G_1 [0, T] \right]$.

When the marginal rate of substitution between urban workers' welfare and aggregate welfare increases, both upper bounds for the land plots rise, $dH^*(n_{uo})/da > 0$ and $dH^*(1)/da > 0$.[37] The larger is a, the larger the tax for a given size of the urban labor force, the larger the gains from migrating, and the larger the probability that migrations and large policy changes occur, for a given distribution of land. Land distribution must become more egalitarian to prevent migrations.

Now let us increase the stock of land, keeping everything else constant, including the land holding of each peasant, which means that the extra land is assigned to landlords. The upper bounds for the land plots of the marginal and the wealth-

---

[36] There is a third (unstable) equilibrium, represented by point e.

[37] The derivatives of these limiting land holdings of the poorest and the wealthiest peasan with respecto to a are respectively given by $\frac{dH(n_{uo})}{da} = -\alpha^{-1\prime}[.] \frac{1}{\tau_a(n_{uo})^2 G_1[.]} \frac{d\tau_a(n_{uo})}{da} > 0$ and $\frac{dH(1)}{da} = -\alpha^{-1\prime}[.] \frac{1}{\tau_a(1)^2 G_1[.]} \frac{d\tau_a(1)}{da} > 0$.

iest peasants both decrease, $dH^*(n_{uo})/dT < 0$ and $dH^*(1)/dT < 0$.[38] The larger stock of land will increase the marginal productivity and the opportunity cost of migrating of all smallholders.[39] Land distribution must now be more unequal for massive migrations to occur. Therefore, the scarcer is labor relative to land, the less likely it is that large migrations and policies that entail a harsh anti-rural bias take place, for a given distribution of land. This stands in stark contrast to the prediction, based on the factor proportions approach, that discrimination against agriculture is more likely to occur the is scarcer labor.[40]

3.4. East Asia versus Latin America

The model predicts that in the presence of political externalities and large inequality there would be a massive migration or migration "waves", ending in high export taxes. This is consistent with the Argentine experience where, after the government started implementing mild protectionist policies in the mid-1930s in response to the Great Depression, there was a large rural-urban migration wave in the late 1930s that in the interpretation of Díaz-Alejandro (1970) responded

---

[38] The upper bounds on the land of the poorest and richest peasants fall, $\frac{dH(n_{uo})}{dT} = -\alpha^{-1\prime}[.] \frac{1}{\tau_a(n_{uo})^2 G_1[.]^2} \left[\tau_a(n_{uo}) G_{12}[.] + G_1[.] \frac{d\tau_a(n_{uo})}{dT} \right] < 0$ and $\frac{dH(1)}{dT} = -\alpha^{-1\prime}[.] \frac{1}{\tau_a(1)^2 G_1[.]^2} \left[\tau_a(1) G_{12}[.] + G_1[.] \frac{d\tau_a(1)}{dT} \right] < 0$. The endogenous tax will be larger for all sizes of the urban labor force, as the land rental loss from the tax for urban workers is now smaller. This effect will be small, given the relatively small land plots of workers.

[39] The positive effect of an increase in the stock of land on peasants' income can be seen re-writing peasants' income as in footnote 24. Then, $dI_a(j)/dT = [H(j) - t_j]dR/dT > 0$, since smallholders are net tenants, who benefit from a decline in the land rental rate.

[40] See Rogowski (1989), for instance.

to the expectation of future changes in relative prices. This first move was followed by another migration wave in 1943-47, when 20% of the rural labor force migrated, coinciding with the adoption of the highest protectionist stance and harshest anti-rural bias under Perón.[41] These migrants came mostly from the highly unequal Northwestern region, and went to distant Buenos Aires, the center of political power, rather than spread their destinations over other urban centers in neighboring provinces, as it had happened in the previous decades.[42]

Díaz-Alejandro aptly described the relation between land inequality, migrations, and agricultural taxation: "If the distribution of land ownership in Argentina had been such that the "agricultural sector" had fitted more into the Jeffersonian idea of farmers, instead of that of powerful and influential farmers, maybe Perón would have been unable to impose his agricultural pricing policies. Instead, the large number of Argentinians who abandoned the rural areas after 1930 and migrated to the cities enthusiastically supported his strikes against the landlords oligarchy."

In the East Asian countries, the highly egalitarian distribution of land determined that most rural workers be relatively well endowed, and quite homogeneous,

---

[41] There was a large migration in the early 1930s, but that one was attributable to the dramatic terms of trade shock against agriculture induced by the Great Depression (Diaz-Alejandro, 1970). Rural employment in this country absorbed 46% of total employment in 1925, 37% in 1930, 28.2% in 1935, and 24% in 1945 (IEERAL; 1986).The extreme discrimination against agriculture is evidenced by the fall of the index of the ratio of domestic to external terms of trade from 100 in 1935-39 to 47 in 1947-49 (Díaz-Alejandro, 1970).

[42] See Lattes and Lattes (1969).

given the ceiling of 3 hectares per plot imposed by the land reforms. Because of the relatively large of opportunity cost of migrating associated to landownership, no peasant would have been willing to migrate unilaterally in response to the emergence of timidly populist regimes after 1945. Peasants would most likely have failed to coordinate, or played wait and see, or even rejected a simultaneous migration. Such a scenario would have resulted in no migrations and low taxes, which is consistent with the East Asian experience.[43] [44]

In line with the findings by Ades and Glaeser (1995) mentioned above, in Latin America the rural-urban migrations of mostly landless peasants fed the mobs in the center of power to which the government had to cater, whereas in East Asia, in spite of the unstable regimes present there, the lack of migrations meant that the relatively small urban labor force never turned into a mob that could sway the government in its policy decisions.

The comparative statics exercises show that the more land-abundant a coun-

---

[43] Agricultural employment in Korea absorbed 67% of total employment in 1953-55, and 60.2% in 1960 (Moon and Kang, 1991). The share of agriculture in total employment in Taiwan in 1960 was 50% (Anderson and Hayami, 1986). Rural-urban migrations accelerated only after 1960, with the shift from the import substitution industrialization strategy to an export oriented industrialization strategy (Ranis, 1990).

[44] There is little evidence to suggest that the agricultural sector in Korea transferred sizable financial resources to the non-rural sectors during the 1950s and 1960s (Moon and Kang, 1991). According to these authors, the political atmosphere after WWII was such that it did not permit heavy taxation of the rural sector. In Taiwan, the government purchase prices under the procurement and rice-for-fertilizer programs were typically only 70-80% of the prevailing free-market prices. In spite of the negative protection resulting from pricing policies, gains in production and productivity attained because of heavy public investment in research, extension, irrigation, and other rural infrastructure (Huang, 1993).

try is, the less likely it is that migrations and large policy change take place. This means that given that Latin American countries were very land-abundant, large migrations and large taxation of agriculture occurred in these countries inspite of this large abundance of land, and only because land was very unequally distributed. By the same token, given that Korea and Taiwan were very labor abundant, large migrations and large policy changes did not occur despite the scarcity of land, because of the very egalitarian distribution of land.

3.5. Welfare implications of land distribution

The distribution of land will affect welfare through its effect on migrations, which will determine the distortionary agricultural export tax and will affect aggregate productivity through their effect on the size of the aggregate effective labor force. Large inequality will lead to large migrations, to large deadweight losses from taxation of agriculture, and to the loss of the extra productivity that migrants derived from their land holdings.[45] Low inequality will lead to no migrations, small taxation of agriculture, and no loss of agricultural productivity. An egalitarian distribution of land will be a double blessing, by preventing a highly distortionary political re-distribution and a loss of aggregate productivity.

---

[45] The welfare loss is given by $W\left[\tau_a(1)\right] - W\left[\tau_a(n_{uo})\right] = \left\{(1 - n_{uo}) - G\left[\int_{n_{uo}}^1 \alpha(i)di, T\right]\right\} + \left\{v\left[c_a^*[\tau_a(1)]\right] - (1 + n_T)v\left[c_a^*[\tau_a(n_{uo})]\right]\right\} - \left\{C_a^*[\tau_a(1)] - C_a^*[\tau_a(n_{uo})]\right\} < 0$. The first term represents the aggregate productivity loss, the second term the gain in consumer surplus from a lower agricultural good price, and the third term the tax revenue loss, measured at world prices.

In this vein, it would be preferable that a reduction of inequality were attained through a progressive transfer of land from landlords to the poorest peasants, rather than to the richest ones. In the first case, the economy would move from a massive migration, large tax, equilibrium (Figure 2) to an equilibrium with small export taxes and no migration (Figure 4). The welfare gain would be lower in the second case, as the economy would move to an equilibrium where migrations, while not massive, would still be significant, and taxes would be larger than in the first case (Figure 3).

4. Conclusions

This paper shows how rural-urban migrations affect trade policy determination in the presence of a government that puts a special weight on the welfare of urban workers, thus generating increasing political returns in moving to the urban sector. It also shows how the distribution of land affects the peasants' decision to migrate in anticipation of policy determination. In the presence of credit market imperfections, land ownership confers a higher productivity in agriculture to smallholders of land. The change in relative prices required by each peasant to migrate will thus depend on her land holdings. Migration in anticipation of policy determination may be profitable for many peasants only if other peasants migrate as well. Therefore, peasants will have to infer the other peasants' most preferred

actions from the distribution of land in order to decide whether to migrate or not.

This interaction between political externalities, the distribution of land, and imperfections in credit and land markets yields the possibility of having a) massive migrations and large political re-distribution if most peasants own very little or no land, b) "migration waves" and large re-distribution if there are some peasants for whom it is always beneficial to migrate unilaterally, and richer peasants who while unwilling to migrate by themselves are nevertheless willing to follow a first "migration wave," c) coordination failures and small re-distribution when all peasants are smallholders who would benefit if they migrated together, but no one is willing to migrate unilaterally, d) no migration and small re-distribution when all peasants are so well endowed that the expectation of a massive migration cannot be self-fulfilled. In this setup, the emergence of a political externality in the urban sector will have negative welfare consequences that may exceed the deadweight losses of the tax, as it may induce the migration of smallholders that are more productive in the agricultural sector.

This mechanism of migration decision and policy determination is especially helpful for understanding the contrasting experience of Latin America and East Asia. In the first region, in which land is very unequally distributed, vast migrations waves during the 1930s and 1940s led to a powerful urban labor force that lent support to the adoption of a harsh anti-rural bias during the 1940s and 1950s.

In East Asia, which has a highly egalitarian distribution of land, only small migrations occurred during that period, and were associated with a politically weak urban labor force and a much lighter discrimination against agriculture. It is very likely that in this region, where most rural workers were relatively small landowners, a situation of coordination failure may have arisen.

References

[1] Ades, A., and E. Glaeser (1995), "Trade and Circuses: Explaining Urban Giants," *Quarterly Journal of Economics*, 195-227.

[2] Alesina, A., and D. Rodrik (1994), "Distributive Politics and Economic Growth," *Quarterly Journal of Economics*, May.

[3] Anderson, K. (1995), "Lobbying Incentives and the Pattern of Protection in Rich and Poor Countries," *Economic Development and Cultural Change*, 401-423.

[4] Anderson, K., and Y. Hayami (1986), *The Political Economy of Agricultural Protection*, London: Allen.

[5] Benabou, R. (1996), "Inequality and Growth," unpublished mimeo, New York University.

[6] Berry, R., and W. Cline (1979), *Agrarian Structure and Productivity in Developing Countries*, Geneva: International Labour Organisation.

[7] Binswanger, H., and K. Deininger (1997), "Explaining Agricultural and Agrarian Policies in Developing Countries," *Journal of Economic Literature*, Vol. XXXV (December), 1958-2005.

[8] Binswanger, H., K. Deininger, and G. Feder (1995), "Power, Distortions, Revolt and Reform in Agricultural Land Relations," in J. Behrman and T.N. Srinivasan (eds.) *Handbook of Development Economics,* Vol. 3B, Amsterdam: Elsevier Science, North Holland.

[9] Bliss, C., and N. Stern, (1978), "Productivity, Wages and Nutrition: Part I: The Theory," *Journal of Development Economics,* 5, December, 331-62.

[10] Dasgupta, P., and D. Ray (1986), "Inequality as a Determinant of Malnutrition and Unemployment: Theory," *Economic Journal,* 96, December, 1011-34.

[11] Deyo, F. (1990), "Economic Policy and the Popular Sector," in G. Gereffi and D. Wyman (eds.), *Manufacturing Miracles: Paths of Industrialization in Latin America and East Asia,* Princeton University Press.

[12] Díaz-Alejandro, C. (1970), *Essays on the Economic History of the Argentine Republic,* Yale University Press.

[13] Farrell, J., and G. Saloner (1985), "Standardization, Compatibility, and Innovation," *Rand Journal of Economics,* 16(1), 70-83.

[14] Findlay, R., and S. Wellisz (1982), "Endogenous Tariffs, the Political Economy of Trade Restrictions, and Welfare," in J. Bhagwati (ed.), *Import Competition and Policy Response,* Chicago: University of Chicago Press.

[15] Frieden, J. (1991), *Debt, Development, & Democracy: Modern Political Economy and Latin America, 1965-1985*, Princeton University Press: Princeton, NJ.

[16] Grossman, G., and E. Helpman (1994), "Protection for Sale," *American Economic Review*, LXXXIV: 833-850.

[17] Houtzager, P. (1998), "State and Unions in the Transformation of the Brazilian Country-Side, 1964-1979," *Latin American Research Review*, XXXIII(2), 103-142.

[18] Huang, S. (1993), "Structural Change in Taiwan's Agricultural Economy," *Economic Development and Cultural Change*, May, 43-65.

[19] IEERAL (1986), "Estadísticas de la evolución económica de Argentina. 1913-1984," *Estudios*, IX(39), 103-184.

[20] King, R. (1974), *Land Reform: A World Survey*, Westview Press, Boulder, Colorado.

[21] Krugman, P. (1991), "History Versus Expectations," *Quarterly Journal of Economics*, CVI, 651-667.

[22] Lattes, Z.L.R. de, and A. Lattes (1969), *Migraciones en la Argentina: Estudio de las Migraciones Internas e Internacionales, Basado en Datos Censales, 1869-1960*, Buenos Aires: Editorial del Instituto Torcuato Di Tella.

[23] Long, N. and N. Vousden (1991), "Protectionist Responses and Declining Industries," *Journal of International Economics*, 30: 87-103.

[24] Magee, S., W. Brock, and L. Young (1989), *Black Hole Tariffs and Endogenous Policy Theory*, Cambridge: Cambridge University Press.

[25] Matsuyama, K. (1991), "Increasing Returns, Industrialization, and the Indeterminacy of Equilibrium," *Quarterly Journal of Economics*, CVI, 617-650.

[26] Mayer, W. (1984), "Endogenous Tariff Formation," *American Economic Review*, LXXIV: 970-85.

[27] Mitra, D. (1996), "Endogenous Lobby Formation and Endogenous Protection: A Long Run Model of Trade Policy Determination," mimeo, Columbia University.

[28] Moene, K. (1992), "Poverty and Landownership," *American Economic Review*, LXXXII, 52-64.

[29] Mookherjee, D. (1997), "Informational Rents and Property Rights in Land," in J. Roemer (ed.), *Property Rights, Incentives, and Welfare.* New York: Macmillan Press.

[30] Moon, P., and B. Kang (1991), "The Republic of Korea," in A. Krueger and others, *The Political Economy of Agricultural Pricing Policy, Volume 2, Asia,* World Bank, Baltimore and London: The Johns Hopkins University Press.

[31] Olson, M. (1965), *The Logic of Collective Action,* Cambridge, MA and London, England: Harvard University Press.

[32] Powelson, J.P., and R. Stock (1987), *The Peasant Betrayed: Agriculture and Land Reform in the Third World,* Boston, MA: Oelgeschlager, Gunn and Hain.

[33] Ranis, G. (1990), "Contrasts in the Political Economy of Development Policy Change," in G. Gereffi and D. Wyman (eds.), *Manufacturing Miracles: Paths of Industrialization in Latin America and East Asia,* Princeton University Press.

[34] Rauch, J. (1993), "Does History Matter Only when it Matters Little?," *Quarterly Journal of Economics.*

[35] Ray, D. (1998), *Economic Development*, Princeton, NJ: Princeton University Press.

[36] Reardon, T., E. Crawford, and V. Kelley (1994), "Links Between Nonfarm Income and Farm Investment in African Households: Adding the Capital Market Perspective," *American Journal of Agricultural Economics,* 76, 1172-1176.

[37] Rogowski, R. (1989), *Commerce and Coalitions: How Trade Affects Domestic Political Alignments,* Princeton, NJ: Princeton University Press.

[38] Scobie, J. (1964), *Revolution on the Pampas: A Social History of Argentine Wheat, 1860-1910,* Austin: University of Texas Press.

[39] Sen, A. (1981), "Market Failure and Control of Labour Power: Towards an Explanation of 'Structure' and Change in Indian Agriculture: Part 1," *Cambridge Journal of Economics,* 5, 201-228.

[40] Shaban, R. (1987), "Testing Between Competing Models of Sharecropping," *Journal of Political Economy,* 95, 893-920.

[41] Taylor, C. L., and M.C. Hudson (1972), *World Handbook of Political and Social Indicators, 2nd. ed.,* New Haven, CT: Yale University Press.