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INTERNATIONAL TRADE, FOREIGN INVESTMENT, AND THE
FORMATION OF THE ENTREPRENEURIAL CLASS

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ABSTRACT

In this paper, I examine the argument that free trade may be harmful to less developed countries, because such international competition inhibits the formation of a local entrepreneurial class. I view the entrepreneur as the manager of the industrial enterprise, as well as the agent who bears the risks associated with industrial production. A two-sector model of a small open economy is developed in which the size of the entrepreneurial class is endogenous.

It is shown that the entrepreneurial class is smaller under free trade than would be first-best optimal in the presence of efficient risk-sharing institutions such as stock markets. Nonetheless, there are potential gains from trade, and any protectionist policy that increases the number of entrepreneurs will have deleterious welfare consequences.

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I. INTRODUCTION

An important aspect of the development process in market-oriented economies is the formation of a "class of entrepreneurs" - that is, a group of individuals who are capable of organizing production and are willing to bear the risks associated with industrial activity. These agents serve an essential function in many less developed countries, because the markets and infrastructure necessary for the efficient and widespread allocation of risk across the population are often very imperfect or completely absent. In cases where the supply of entrepreneurs remains limited, there may occur what Rostow (1956) has called "secular stagnation", with little if any economic growth, and a tendency for overspecialization in the agricultural and traditional sectors. This point was argued most forcefully by W. Arthur Lewis:

Outside the sphere of agriculture, which can be conducted on a family size basis, economic growth is bound to be slow unless there is an adequate supply of entrepreneurs looking out for new ideas, and willing to take the risk of introducing them. Thus a private enterprise economy will be retarded if it has not enough business men, or if its business men are reluctant to take risks, whether because they cannot raise the capital, or because they are timid by nature, or because the differentials for risk-taking are inadequate.¹ (1955, p. 182)

It has been further claimed by some (see e.g., Pazos, 1967 and Hirschman, 1969) that openness to international competition, in the forms of free international trade, and especially inflows of direct foreign investment, serves to impede the development of the entrepreneurial class, and thus can be detrimental to the economy as a whole. Quoting from Hirschman,

The opponents of free trade have often pointed out that for a variety of reasons it is imprudent and harmful for a country to become specialized along certain product lines in accordance with the dictates of comparative advantage. Whatever the merits of these critical arguments, they would certainly acquire overwhelming weight if the question arose whether a country should allow itself to become specialized not just along certain commodity lines, but along factor-of-production lines. Very few countries would ever consciously wish to specialize in unskilled labor, while foreigners with a comparative advantage in entrepreneurship, management, skilled labor and capital took over these functions, replacing inferior "local talent". (1969, p. 5)

An implication that has been drawn is that (at least) temporary restrictions to commodity trade and inward foreign investment can be justified on these grounds. Such intervention would not necessarily be inconsistent with the tenets of welfare economics as applied to trade policy, since the assumed starting point is one with an incomplete market structure, and thus falls under the rubric of "the theory of distortions" (see Bhagwati, 1971).

Indeed, it is now known that in some situations of uncertainty, free trade may not be superior to autarchy, and that tariffs may be welfare-improving even for a small economy (see, e.g., Newbery and Stiglitz, 1981, Eaton and Grossman, 1981, and Grossman, 1983). Trade may cause the inefficiency associated with an initially suboptimal allocation of risk across agents to be exacerbated, and thus generate a deleterious side-effect that offsets the direct gains from specialization. In the present context, for example, free trade might be harmful if it ceteris paribus lowered the return to the entrepreneurial activity, and thereby caused fewer individuals to choose to become entrepreneurs, from an initial situation in which the supply of this factor was already suboptimally small. It seems, therefore, that a case might be made on this basis for sheltering (to some extent) domestic

industrial enterprises in the less developed economies from exposure to the competitive forces of international trade and foreign investment until such a time as factor-supply conditions allow them to compete with the industrialized world on a more equal footing.

Compelling as these arguments may appear to be, it is nonetheless necessary to subject them to careful analytical scrutiny. The purpose of the present paper, then, is to explore in the context of a formal model some of the implications of "openness", for an economy in which domestic markets for risk sharing are absent and the supply of entrepreneurs is endogenous. Drawing on the work of Kanbur (1979, 1981), I develop in Section II a two-sector model of the open, less-developed economy. There it is shown, in accordance with the verbal treatments cited above, that the free trade equilibrium is characterized by an undersupply of entrepreneurs and an excessive degree of specialization in agricultural (or traditional) production, relative to a first-best social optimum.

In Section III, I compare the free-trade outcome with the equilibrium under complete autarky. First I investigate the effects of international trade on the welfare levels of the various "classes" in society, in the absence of any government redistributive policy. Then the question of potential gains from trade is addressed, with explicit consideration of whether trade creates an opportunity, via a feasible compensation scheme, for Pareto welfare improvement.

The efficacy of interventionist trade policy is examined in Section IV. I show that protection from foreign competition can indeed be effective as a means of enlarging the pool of domestic entrepreneurs. However, the conclusions I draw regarding the welfare implications of such policies are considerably less sanguine.

Section V deals with direct foreign investment, taken here to mean the establishment of foreign-owned enterprises in the less-developed economy. I analyse the effects of an inflow of foreign firms on the size of the local entrepreneurial class, and on national income and welfare in the host country.

The main findings of the paper are summarized in a concluding section.

II. THE MODEL

I wish to endogenize the supply of entrepreneurs in an open-economy, general equilibrium setting. For this purpose, I borrow from Kanbur (1979, 1981), who has developed a model of occupational choice in which individuals face an ex ante decision as to whether to join a class of risk-bearers or work instead for a safe (i.e. certain) wage.² This approach to entrepreneurship can be embedded in a simple, familiar specification of intersectoral resource allocation and international trade, so as to provide a tractable framework for addressing formally the issues raised in the introduction.

Consider then a small economy comprising an agricultural or "traditional" sector, and an industrial or "modern" sector. The output in agriculture is denoted by x , and this good is chosen as numeraire. Industrial output is z , with an (exogenous) relative price of p on world markets.

Production in agriculture requires the input of labor L_x and land T , according to $x = g(L_x, T)$. Labor earns a wage w (in units of the x -good). The return to the fixed supply of land accrues to a predetermined group of rentiers, whom I shall refer to as the landlord class. The input of labor is assumed to be governed by rent maximization by landlords, and satisfies

$$(1) \quad g_L(L_x, T) = w$$

Production in the industrial sector is organized and managed by a class of entrepreneurs. This undertaking involves risk, which may stem either from uncertainty regarding the ability of the entrepreneur as a manager or from some inherent aspect of the production process. The output of the i^{th} enterprise is $\alpha^i f(\ell_z^i)$, where α^i is a random variable and ℓ_z^i is the labor hired by this entrepreneur (for simplicity, I assume that each firm or enterprise has exactly one entrepreneur). At the time that production takes place, labor is assumed to be perfectly mobile between firms and sectors, so that all labor in the industrial sector must be paid the (safe) competitive wage, w .³ The entrepreneur, then, must bear the production (and hence profit) risk, and it is assumed that there do not exist markets on which he can purchase insurance.

Let the number of entrepreneurs in the economy be N , and suppose that the individual uncertainties are stochastically independent, but governed by the same density function, $\phi(\alpha)$, with $E\alpha = 1$.⁴ Each entrepreneur seeks to maximize his profits given the realization of the relevant random variable; thus, employment in the i^{th} production unit is determined by

$$(2) \quad p\alpha^i f_\ell(\ell_z^i) = w.$$

It remains only to specify the occupational-choice decision. The total population excluding landlords is L . Each of these individuals may opt to become a laborer, in which case a nonstochastic income of w is ensured, or else may join the entrepreneurial class, and bear the associated profit risk. This decision is taken ex ante; that is, prior to the time when the prospective entrepreneur learns the value

of α^i which would be applicable for him. Once uncertainty is resolved, the occupational choice cannot be reversed. Implicitly, I am assuming that there are fixed costs associated with entrepreneurship which, once borne, prevent the entrepreneur from abandoning ship even if he discovers that he lacks managerial ability or that his luck is bad.

Suppose that all individuals (including landlords) have identical preferences represented by the indirect utility function $V(p, y)$, where y stands for the appropriate income variable. For algebraic convenience, let us further assume that the function takes the particular form $V(p, y) = h(p)y^{1-\gamma}/(1-\gamma)$ for $\gamma > 0$, $\gamma \neq 1$ or $V(p, y) = h(p)\log y$ for $\gamma = 1$. The indirect utility function has this form if underlying preferences are homothetic and individuals exhibit constant relative aversion to income risk (γ is the Arrow-Pratt measure of relative risk aversion, as extended to a many-commodity setting by Stiglitz (1969)).⁵ In equilibrium, neither the entrepreneurial activity nor the labor activity can be strictly preferred, if identical agents face a choice between the two and a positive number select each occupation. Incomplete specialization thus requires that the expected utility of an entrepreneur be equal to the utility derived from the (certain) wage earned by a laborer, or that

$$(3) \quad E\{h(p)[p\alpha^i f(\ell_z^i) - w\ell_z^i]^{1-\gamma}/(1-\gamma)\} = h(p)w^{1-\gamma}/(1-\gamma)$$

where ℓ_z^i in (3) is now the optimal (state-dependent) choice of labor input, as determined by (2). Since p is nonstochastic, (3) can be written more simply as

$$(4) \quad E\{[p\alpha^i f(\ell_z^i) - w\ell_z^i]^{1-\gamma}\} = w^{1-\gamma}.$$

The model is closed by the labor-market clearing condition. At the time that production takes place, the supply of labor is $L-N$, i.e. the non-landlord population less those who have chosen entrepreneurship as their profession. Full employment requires

$$(5) \quad L_x + N E \ell_z^i = L - N .$$

Equations (1), (2), (4) and (5) determine the endogenous variables L_x , N , ℓ_z^i and w as functions of the endogenous variables, p and T , and the distribution and ultimate realization of α^i .

To recapitulate, I have assumed that production in the modern sector involves risk. Examples might include uncertainty about whether a new production process is viable or whether a particular manager is capable of organizing his employees efficiently. Such uncertainty is specific to the individual enterprise, but there are no institutions such as stock markets in the economy under consideration which would allow risks to be pooled by entrepreneurs, or shared by the various income classes. Entrepreneurship involves fixed costs, so that occupational choice is irreversible. Finally, hiring decisions are taken ex post, and profit maximization governs interfirm and intersectoral resource allocation.

It is easy to show that relative to a first-best allocation (which would result if markets were complete or if the government could plan production and distribute income), the equilibrium described above has too few entrepreneurs and exhibits overspecialization in agriculture. Note first that with independent entrepreneurial risks, the economy as a whole is subject to no aggregate risk. Hence, the first-best allocation is the one that maximizes the value of national output at international prices. The central planner's problem is to

$$(6) \quad \max_{N, L_x, \ell_z^i} g(L_x, T) + p N E \alpha^i f(\ell_z^i)$$

$$\text{subject to } L_x + N E \ell_z^i = L - N$$

Let tildes denote variables in the first-best situation.

Manipulation of the first-order conditions to (6) gives

$$E p \alpha^i f(\tilde{\ell}_z^i) - g_L(\tilde{L}_x, T) E \tilde{\ell}_z^i = g_L(\tilde{L}_x, T)$$

or, if we substitute $\tilde{w} \equiv g_L(\tilde{L}_x, T)$ (where \tilde{w} is the shadow price of labor at the optimum)

$$(7) \quad E\{p \alpha^i f(\tilde{\ell}_z^i) - \tilde{w} \tilde{\ell}_z^i\} = \tilde{w}$$

By comparison, application of Jensen's inequality to (4), recalling the fact that γ is positive, implies $E\{p \alpha^i f(\ell_z^i) - w \ell_z^i\} > w$. It follows immediately that $\tilde{w} > w$.

Now, the marginal products of labor in agriculture in the equilibrium and in the first-best allocation are equal to the market and shadow wage rates, respectively. Thus, $\tilde{w} > w$ implies $\tilde{L}_x < L_x$ and $E \tilde{\ell}_z^i < E \ell_z^i$. These in turn imply $\tilde{N} > N$. Overspecialization in agriculture and a shortage of entrepreneurs are direct consequences of the absence of risk-sharing markets. The question that arises, then, is whether or not this inefficiency in risk-bearing and the attendant resource misallocation are exacerbated by the presence of free international trade or direct foreign investment.

III. FREE TRADE VERSUS AUTARKY

The size of the entrepreneurial class and the intersectoral allocation of resources will, of course, be different in the free trade and autarky equilibria, because the relative price of the industrial-sector good is altered by the presence of international trade. It is

useful to begin by considering the effect on equilibrium allocations, incomes and welfare levels of an exogenous change in the relative commodity price. Then the comparison of the alternative equilibria can be conducted by integrating the price derivatives between the autarky and free-trade price levels.

The effects of a relative price change are straightforward to derive. First, we divide both sides of equation (4) by $p^{1-\gamma}$, and note that this equation determines a unique value for the real product wage in terms of the industrial good. The supply of entrepreneurs is perfectly elastic at this real product wage, and incomplete specialization, which requires a positive supply of both entrepreneurs and labor, can only occur if this particular value for w/p is realized. Letting a circumflex denote a proportional derivative, it follows from (4) that

$$(8) \quad \hat{w} = \hat{p}.$$

Then, from (2), we have

$$(9) \quad d\ell_z^i = 0.$$

Differentiation of (1), and substitution of (8) gives

$$(10) \quad \hat{L}_x = \frac{-\sigma_x}{1-\theta_{Lx}} \hat{p}$$

where σ_x is the elasticity of substitution between land and labor in agriculture, and θ_{Lx} is the labor share in agricultural income. The proportional change in the rental rate, r , is found by differentiating the price-equals-unit-cost equation for agriculture, and is given by

$$(11) \quad \hat{r} = \frac{-\theta_{Lx}}{1-\theta_{Lx}} \hat{p}.$$

Finally, from (5) and (8) through (10),

$$(12) \quad \hat{N} = \frac{\sigma_{Lx} \lambda_{Lx}}{(1-\lambda_{Lx})(1-\theta_{Lx})} \hat{p}$$

where λ_{Lx} is the fraction of the non-landlord population employed in the agricultural sector.

What do these results imply about the effects of free trade? First, equations (9), (10) and (12) together show that supply responses are "normal" in the model; that is, an increase in the relative price of the z-good causes an increase in industrial output and a fall in agricultural output. Preferences are, by assumption, identical and homothetic, so aggregate demands must be negatively related to own prices. Hence, the economy's excess demand for the industrial-sector good is everywhere a non-increasing function of the relative price of this good. It follows that if the economy is an importer of this good, the autarky price must lie above the free-trade price. This is likely to be the case, both because the less developed country might suffer from a technological disadvantage in modern-sector production, and because the existence of stock markets which facilitate risk-sharing in the more advanced countries implies that any bias against industrial output will be quantitatively less important there.

Let us assume that the LDC does import the industrial-sector good in the free-trade equilibrium. Then from (12) it is clear that "openness" indeed can be held responsible for inhibiting the formation of the local entrepreneurial class. Furthermore, in the absence of any government redistribution policy, free trade has a striking and unambiguous effect on the welfare levels of the various

income classes in the LDC economy. Landlords necessarily benefit from free trade (relative to autarchy), because as p falls the real rental rate, measured in terms of either good, rises. Similarly, the labor class is harmed by the introduction of trade, since the wage remains constant in units of the industrial-sector good, but falls in terms of agricultural products. Finally, entrepreneurs must lose from trade as well, because equation (3) ties their level of expected utility to the welfare level of the laborers. These results are, of course, reminiscent of the Stolper-Samuleson (1941) findings for the familiar Heckscher-Ohlin model of trade. The similarity stems from the fact that the ex ante transformation schedule relating the number of entrepreneurs to the number of laborers is perfectly elastic at a particular product real wage. When this real wage prevails, the non-landlord population is "as if" a single factor of production.

In circumstances where the introduction of free trade generates both "winners" and "losers", it is natural to ask whether or not a feasible compensation scheme exists that could guarantee a Pareto welfare improvement. This standard gains-from-trade question is especially interesting in the present context, because we have noted that free trade effects a contraction of the entrepreneurial class, and an expansion of the agricultural sector, from an initial autarchy situation in which the former is smaller, and the latter is larger, than would be first-best optimal.

The redistributive policy that I shall consider is a proportional income tax-cum-subsidy scheme, with tax at rate τ on rental income and subsidy at rate s on "earned" income. Implementation of these policy instruments is more likely to be feasible in LDCs than would be lump-sum taxes and subsidies, and unlike the latter policies,

proportional income taxes do not alter the allocation of resources or occupational-choice decision under the assumption of constant relative risk aversion. My strategy will be to construct a tax scheme under free trade that restores all income classes to their autarchy level of welfare, and then check whether positive government revenue is thereby created. If so, it would be possible to lower a tax or raise a subsidy slightly to generate a situation that Pareto-dominates autarchy.

The utility of landlords, U^T , is given by

$$U^T = h(p)[r(1-\tau)]^{1-\gamma} / (1-\gamma)$$

from whence (applying Roy's identity),

$$(13) \quad dU^T = h(p)[r(1-\tau)]^{-\gamma} \{-c^T dp + (1-\tau) dr - rd\tau\}$$

where c^T is the consumption of industrial-sector goods by landlords. As the relative price moves from its autarchy to its free trade level, the welfare of landlords can be held constant by continuous variation of the income-tax rate that satisfies (noting (11))

$$(14) \quad d\tau \Big|_{dU^T=0} = -(1-\tau) \left[\beta + \frac{\theta_{Lx}}{1-\theta_{Lx}} \right] \hat{p}$$

where β is the proportion of expenditure devoted to z-goods.

Similarly, the utility of laborers, U^L , can be maintained at a constant level by an income subsidy that varies with the relative price change according to

$$(15) \quad ds \Big|_{dU^L=0} = (\beta-1)(1+s) \hat{p}.$$

Recall that the expected utility of entrepreneurs is equal to that of laborers, so that (15) also fixes the welfare of entrepreneurs.

Finally, the government budget surplus is

$$B = \tau r - s(x + pz - r)$$

so that

$$dB = (s+\tau)r \hat{r} + r(ds+d\tau) - (x+pz) ds - spz \hat{p} - s(dx + pdz).$$

Substitution of (10), (14) and (15) into (16), and some simple manipulation, yields

$$(17) \quad dB = p(z-c) \hat{p} - s(dx+pdz)$$

where c is aggregate consumption of the z -good. The first term is clearly positive, since both \hat{p} and imports of the industrial-sector good are negative. The second term can be computed from

$$dx = w dL_x$$

and (with $d\ell_z^i=0$),

$$dz = [E \alpha^i f(\ell_z^i)] dN = - \frac{E \alpha^i f(\ell_z^i)}{1 + E \ell_z^i} dL_x.$$

Thus,

$$-s(dx+pdz) = \frac{s(E\pi^i - w)}{1 + E \ell_z^i} dL_x$$

where $E\pi^i$ is the expected income (i.e. profits) of the representative entrepreneur. This term is positive as well, since $E\pi^i > w$ by risk aversion, and both s and dL_x remain positive as p falls.⁶

Despite the second-best setting created by the absence of risk-sharing markets, the occupational choice model of entrepreneurship generates potential gains from trade. A system of proportional income taxes and subsidies can always be constructed such that the social

classes which benefit from trade can compensate those that are harmed by it. Of course, whether or not the required redistribution will actually take place in any particular country is, as always, a political question that cannot be answered here. Nonetheless, the analysis serves to demonstrate that one cannot infer solely from the fact that free trade inhibits the development of the entrepreneurial class the conclusion that trade is harmful.

IV. CAN PROTECTION BE WELFARE IMPROVING?

Although free trade is necessarily better than no trade, policies that alter the intersectoral allocation of resources might conceivably raise social welfare above the free trade level, if they can work so as to offset the distortion associated with the inefficient allocation of risk. Such "tariffs and production subsidies as insurance" have been studied in other contexts by Newbery and Stiglitz (1981) and Eaton and Grossman (1981). The mere existence of risk with incomplete markets is not, however, sufficient for the non-optimality of free trade (see Grossman, 1983), so it is not obvious a priori whether trade or industrialization policy can be efficacious in the present context.

Consider then a tax on agricultural output at ad valorem rate t . As before, let us assume that the change in regime is accompanied by the implementation of proportional income taxes and subsidies that preserve the initial (in this case, free trade) levels of utility. It is easy to check that this policy package is fully equivalent to a production subsidy in industry plus the appropriate redistributive measures, so it will not be necessary to investigate the latter interventions separately.

A change in the tax on agricultural output does not affect the product real wage (in units of industrial-sector goods), as determined by equation (3). Since p does not change (because terms of trade are fixed for a small country), neither does the wage rate. This implies that the welfare levels of laborers and entrepreneurs are unaffected by the policy change, and no direct taxes or subsidies to their incomes are needed. There remains, therefore, only to check whether or not the revenue generated by the production tax is sufficient to compensate the landlords for their income losses.

After-tax income of landlords is $r(1-\tau)$ where $r = (1-t)x - wL_x$. A constant level of utility requires that τ be varied to satisfy

$$(18) \quad r \, d\tau = -(1-\tau)x \, dt.$$

The corresponding change in the government budget, (where $B = tx + \tau r$) is given by

$$(19) \quad dB = t \, dx + (1-\tau)x \, dt + r \, d\tau.$$

Substitution of (18) into (19) yields

$$(20) \quad dB = t \, dx.$$

The right-hand-side of (20) is negative for non-infinitesimal changes in t about $t = 0$, since dx/dt is clearly negative. But government deficits, as required here, are infeasible in the model. The implication is that any non-infinitesimal tax or subsidy to agricultural production must generate utility losses for some individuals in the economy.

This finding can be understood as follows. Intersectoral policy does indeed alter the supply of entrepreneurs; but it does not bring about a more efficient allocation of risk across agents. Since risk

misallocation, rather than the number of entrepreneurs, is the economically relevant manifestation of the distortion created by the incomplete market structure, a policy instrument which merely shifts resources between sectors and occupations is bound to be a failure. Instead, policy intervention should be tailored to work at the distorted margin - a point which was emphasized by Baldwin (1969) in his analysis of infant-industry protection. There, as here, the mere existence of a distortion is not enough to justify intervention with the blunt tools of trade policy.

Note, furthermore, that tariff intervention is even more costly here than is a production tax-cum-subsidy. The former entails consumption losses, which are in addition to the production losses implicit in (20) above. Indeed, a policy of free trade constitutes a type of constrained optimum for an economy with an endogenous entrepreneurial class. If the institutional constraints on risk sharing are taken as immutable, then the efficiency gains associated with specialization according to (endogenous) comparative advantage are the most that can be attained.

V. FOREIGN INVESTMENT AND LOCAL ENTREPRENEURS

Foreign investment, even more so than international trade, has been criticized on the grounds that it inhibits the development of an entrepreneurial class. It has been argued that foreign enterprises merely crowd out local efforts, and thus impart few if any benefits on the LDC economy. It is easy to see, without any formal algebra, that the logic of this argument is essentially confirmed in our model of the formation of the entrepreneurial class.

Consider the effects of an inflow of foreign enterprises into the industrial-good sector of the LDC economy. Managers of these foreign-owned establishments face an infinitely elastic supply of labor at the real wage determined by equation (3). Whatever their demand for labor, there will be no effect on the domestic wage rate, provided that some domestic business continue to operate in the cumulative foreign-investment equilibrium. The upshot is that an inflow of foreign enterprises has no impact on the welfare of any group in the domestic economy. With wages unaffected, landlord rents are constant at their pre-foreign-investment levels, and domestic entrepreneurs continue to have expected utility equal to the (unchanged) level enjoyed by laborers. All the surplus derived from the establishment of the new business accrues to the foreigners.

Furthermore, the inflow of foreign enterprises does indeed have the effect of crowding out local ventures. The supply of domestic entrepreneurs must shrink so as to release the individuals needed to serve as workers in the foreign firms. Although this shift in the occupational distribution has no direct consequences for welfare, it does imply a decline in national income for the less developed country, since the wages earned by the (new) laborers are less than the sum of the profits of the (former) entrepreneurs. The fall in aggregate income is, essentially, a premium paid by the domestic economy in exchange for the income insurance provided by the foreigners.

It does not follow from this analysis that foreign investment ought to be prohibited. For one thing, a tax on foreign profits would allow the host country to share in any surplus created by the inflow of foreign firms. But more to the point, we have seen that the size of the entrepreneurial class is not, in and of itself, a sensible

policy target for the less developed economy. The contraction of the supply of local entrepreneurs when faced with competition from abroad - whether in the form of international trade or of direct foreign investment - should be viewed as symptomatic of a more fundamental market failure, namely the inability of the economy to share its production risks in an efficient manner. Policy efforts should be devoted to rectifying this inefficiency, rather than reacting to its consequences.

VI. CONCLUSIONS

In this paper I have examined the argument that free trade and foreign investment may be harmful to less developed countries, because such international competition inhibits the formation of a local entrepreneurial class. A two-sector model of a small open economy was developed in which the size of the entrepreneurial class is endogenously determined. Following Kanbur (1979, 1981), I viewed the entrepreneur as the manager of the industrial enterprise, as well as the agent who bears the risks associated with industrial production in an economy in which markets for risk-sharing are absent. In the model, the non-landlord population faces an ex ante occupational-choice decision between the entrepreneurial and labor activities.

It was shown that the size of the entrepreneurial class so determined is smaller than would be first-best optimal in the presence of efficient risk-sharing institutions such as stock markets. Free international trade causes the supply of local entrepreneurs to fall relative to autarky, if the LDC imports the industrial-sector good in equilibrium. Nonetheless, there are potential gains from trade, in the sense that a feasible scheme of income taxes-cum-subsidies can

always be devised to allow those who benefit from trade (landlords) to compensate those who lose (entrepreneurs and laborers).

Protectionist policies, such as tariffs on industrial-sector imports or taxes on agricultural output, can be used to augment the size of the entrepreneurial class. However, these policies will always have deleterious welfare consequences. It turns out, much as in Baldwin's (1969) case against infant-industry protection, that intersectoral policy instruments are too blunt to deal with the distortion implicit in the absence of risk-sharing institutions. To improve allocative efficiency, an intervention would need to provide insurance to potential entrepreneurs against adverse outcomes in their industrial-sector ventures. Trade policy does not satisfy this criterion.

An inflow of foreign-owned industrial enterprises into the less developed country also has an adverse effect on the supply of local entrepreneurs. In the absence of any tax on the profits of these firms, all the surplus from direct foreign investment accrues to the foreigners. The less developed country experiences a decline in national income, but the (expected) utility levels of all social classes in the economy remains fixed at pre-investment levels.

An important lesson that emerges from the analysis is that the size of the risk-bearing entrepreneurial class should not, in and of itself, be a policy target in less developed economies. Rather, policy should aim to provide the mechanisms by which risk can be efficiently allocated across the population.

FOOTNOTES

1. Similarly, Rostow (1956, p. 41) argued that "... it is evident that the take-off requires the existence and the successful activity of some group in the society which accepts borrower's risk..." For further discussion, see Kilby (1971).
2. Kihlstrom and Laffont (1979) present a model of entrepreneurship and risk-taking which is quite similar to that of Kanbur.
3. The analysis could also be carried out under the assumption that entrepreneurs hire labor prior to the resolution of uncertainty, rather than afterwards. The main results of this paper do not depend upon which of these alternative timing assumptions is made.
4. The symbol E represents the expectation operator. In what follows, I shall also assume that N is sufficiently large to permit application of the 'law of large numbers.'
5. Many, but not all, of the results of the paper go through without this assumption, which, however, simplifies the exposition greatly.
6. Similar reasoning establishes gains from trade also in cases where the economy exports the industrial-sector good. Then $(z-c)$ and \hat{p} in (17) would be positive, and s would be negative, implying again $dB > 0$.
7. Kanbur (1981) analyzes the welfare effects of alternative policy interventions in a one-sector model of entrepreneurship and occupational choice. An example of a policy which facilitates risk-spreading, and thereby improves the efficiency of resource allocation, is a progressive income tax-cum-subsidy scheme.

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