SPATIAL DISPARITIES IN AGRICULTURAL DEVELOPMENT: SPECIFIC AND HARD CHOICES BETWEEN GROWTH AND EQUITY

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Whereas the treatment of space in economic analysis leaves much to be desired, the economic policy issues raised by the existence of spatial disparities are prominent in many debates, as illustrated for instance at the international level by the debate around the need for a new international economic order and at the national level by the discussions about regional development policies. Some authors argue that the latter are not very important since spatial income disparities play a very useful role as incentives for the geographic mobility of resources required by economic growth. We intend to show that such a position, which corresponds to a clear preference for growth over equity considerations, is not tenable for policy analysis. Conversely, the call for attention to equity considerations alone leads to very distorted and partial policy recommendations, as illustrated for instance by much of the rhetoric on international development. In order to go beyond these ideological positions, one must assess more precisely the nature of the issues. The need for a theoretical detour regarding the treatment of space in economics will then appear before returning in the third part of this paper to the policy issues raised first.

Policy Problems Raised by Spatial Disparities

The Call for A New International Economic Order

The criticisms of Rostow's stages of economic growth presented by, among others, Amin and Furtado put the issue of international economic interdependence in very clear terms. If one follows Rostow--and there are very good reasons to do so--the process of economic development goes through various stages which follow each other in a logical sequential order. The idea is much akin to Clark's theory of the three sectors whereby the relative importance of the primary sector declines with economic growth as industrialization takes place, leading to growth of the secondary sector. Later on, services (i.e., the tertiary sector) employ a growing fraction of the labour force. Undoubtedly there is a lot of truth in this theory. Thus the relative share of the active population working in agriculture is often taken as an indicator of the level of economic development; i.e., a direct logical consequence of Clark's theory. Yet this view has its own limitations, which are too often neglected. Thus many newly independent countries have wrongly based their development strategy on the belief that industrialization (i.e., growth of the secondary sector) would ipso facto bring about economic development. More interestingly for our purpose here is the questioning of the belief that all economic development processes necessarily go through the same stages. Lévi-Strauss has cogently criticized that myth at the broader cultural level:[2]

> "Diversity, an implicit condition of civilization, implies that the various states of societies, in time and in space, cannot be taken as stages of a unique development process."

By contrast to Rostow's approach, Frank (p. 11) states that:

> "It is necessary in underdeveloped and socialist countries to elaborate theories and analyses capable of rendering account of the structure and development of the capitalist system at the world scale and to explain its

contradictory development, leading at the same time to economic development and underdevelopment at the international, national, local, and sectoral levels."

For him and for the other authors of the dependency school the central thesis is very clear--underdevelopment is a historical product of the process of capital accumulation in the centre of the capitalist system. Thus for instance Furtado (p. 97) writes:

"The observation, even superficial, of modern history makes it obvious that social formations, characterized by a great technolgical heterogeneity, large inequalities of labour and productivities between urban and rural areas, a relatively stable proportion of population living at the subsistence level, growing unemployment in urban areas, in other words underdeveloped economies, have been closely associated with the growth and expansion of industrial capitalism since it emerged."

Retracing the history of the development of the capitalist system since the second part of the 18th century, Furtado stresses the growth of international trade and the drastic changes in the international division of labour. Technical progress and capital accumulation in the centre permitted a growth in labour productivity in the periphery through geographical specialization. The surplus generated by the productivity increase has been either transferred to the centre through unequal exchange or confiscated by a small minority adopting the consumption models of the centre. Thus very little capital accumulation can occur in the periphery, even though the surplus generated there may be significant.

Later on, when industrialization substitutes for imported goods the same goods produced locally, the dependency becomes an almost irreversible process since it brings about a dual economy—one producing for the traditional sector and the other for the "modern" minority, the latter being wide open to foreign investments bringing with them the imported technologies required to produce the modern goods. At the end of his chapter on underdevelopment and dependency, Furtado (p. 120) asserts that the role of underdevelopment "in the construction of the present world capitalist system has been fundamental...It may even be possible that underdevelopment is inherent to the capitalist system; i.e., that it is not possible to have capitalism without assymetrical relationships among economic subsystems." But the author is cautious, saying that it would be pretentious to claim that he can demonstrate his hypothesis.

Clearly many public debates about underdevelopment are influenced by an ideology[3] which is directly derived from this approach but which, like all ideologies, does not embarrass itself with the researchers' intellectual scruples. Thus numerous economists tend to discard without discussion the claim made by many representatives of the Third World that the solution of underdevelopment problems can only be achieved through a change in the economic relationships between developed and developing countries, bringing a new choice between growth and equity at the world scale in the form of a new international economic order. It is true that the arguments put forward are sometimes rhetorical.

But this position does reflect a very serious issue of economic policy. Let us only remember at this stage that this issue is raised by the existence of major spatial disparities and, as claimed above, is an issue which policymakers cannot avoid, whatever position they may take about it.

Issues Raised by Regional Development Policies

The nature of these issues is relatively clear and does not need a lengthy elaboration. The very existence of regional development policies in most countries reflects that at least some spatial disparities in the distribution of income and economic activity are not acceptable. The arguments justifying these disparities are thus not accepted, yet it can be argued that they are both the result of past economic growth and one of the prerequisities for future growth. They are the result of growth because economic activity tends to concentrate in areas where conditions are favourable, thus at the disadvantage of the so-called "less favoured areas." They are a prerequisite of economic growth, because they provide incentives for the geographic mobility of factors of production, thus permitting a more efficient allocation of factors, which is the main internal cause of economic growth. In many countries, however, the behaviour of large segments of the population indicates that they do not accept this choice between growth and equity. When the right to work and live in one's own area is asserted, this means that another choice between growth and equity is made. In the name of a more egalitarian distribution of income and opportunities, some general economic growth can be sacrificed, presumably on the grounds that maximum economic growth does not necessarily mean maximum social welfare, since growth indicators do not reflect the social costs supported by those who are uprooted and must migrate, and the costs associated with population concentrations in urban areas. In addition, Orlando et al. point out that several economists have emphasized that because of the lack of mobility of factors of production, there is a case for regional policies on economic efficiency grounds, and not only for the sake of equity as suggested too simply here. Whatever the merits of these arguments, one fact will remain--the corresponding issue, again posed in terms of spatial disparities, is the object of a considerable and permanent public debate which cannot be avoided by policymakers.

The analogy with the international economic order is striking. Here again, it can be argued that the development of the less favoured areas, often called marginal areas, is the result of a global phenomenon of economic development benefiting areas where economic activity is more and more concentrated, whereas activity at the margin declines; i.e., a clear centre-periphery opposition.

Theoretical Approach

To what extent can economic analysis help policymakers faced with these problems arising from the existence of spatial disparities? The answer to this question implies an excursion into the theoretical approach regarding how space has been treated in economic analysis. The first introduction of space in economic analysis is related to the problems regarding the location of economic activities. Ricardo's famous concepts of rent and comparative advantage have direct implications for this question. Von Thünen's work was directly aimed at understanding the location of agricultural activities.

Without denying the interest of location problems, it must be stressed that they do not, by a large measure, cover all the economic issues raised by space. Generally speaking, the most fruitful point of view considers space as the locus and sometimes the object of relationships among people. A recent example is the work of Charreyre and Soler in the Vosges Mountains (France). They have shown the value of analyzing the evolution of agricultural activities in relatively small spatial units (a few hundred hectares) having identifiable natural boundaries, and where up to 100 farms were operated at the end of the Second World War. Their main finding is that the evolution of agriculture as a whole in these territorial units and of each individual farm can only be understood, if macroeconomic forces--mainly changes in relative prices and the resulting drive to improve competitiveness through higher productivity--are taken into account. But that is not sufficient. The relationships among these farms, particularly through the land market, have played a major role in the evolution of agriculture and can show the outstanding diversity among territorial units.

Of course it can be argued in this example, as in the general case, that any relationship among people has necessarily a spatial as well as many other dimensions. Why should economic analysis pay special attention to it? After all, many economic relationships can be conceptually defined without explicit reference to concrete space (for instance, the relationship between a firm and its customers). Alternatively, each economic analysis can, and perhaps should, construct its own concept of space. Leaving this second objection pending at this stage, it can at least be replied to the former that in everyday life economic agents are very much aware of the spatial dimension of their activity. Which marketing director does not pay attention to the spatial strategy of his competitors? Which monetary or fiscal authority can ignore the territory over which it has jurisdiction and the outside space it may influence?

Emphasizing the economic relationships in space has the advantage of bringing out the point that space is a resource or, more precisely, that a set of resources is always linked to space. These resources may be natural or man-made, renewable or not. The main results of resource economics are thus applicable to space. In many instances space can be viewed as a public good with multiple potential utilizations. Thus, for instance, the pollution which some produce is supported by others and even though measures and institutions can often be invented to compensate the victims and to charge the polluters, such a process can never be complete. Practicalities always prevent Pareto's compensation principle from operating fully. Thus conflicts of interest arise which can only be resolved through the political process. If space is the object of conflicts of interests, it is also, and by the same token, the basis of solidarities, as illustrated by the many pressure groups and other institutions being defined on a territorial basis. Witness the revival of regionalism and nationalism in so many parts of the world today. But here again one spatial solidarity may conflict with another. And again these conflicts can only be resolved through the political process. We shall return later to the policy implications of this importance given to the political process in the solution of the problems raised by the existence of spatial economic disparities. But, first, further reflection on the concept of marginality is needed.

Policy Implications

The importance of the political process in the regulation of economic conflicts supports the plea made earlier by this author for an analytical political economy (Petit). This expression suggests that for the analysis of economic policy problems, modern analytical skills can fruitfully be used in approaches and on problems which were those of the classical economists (let us say from Smith to Marx). All of them defined their discipline as political economy; they stressed the search for the public good defined as the wealth of the nation, emphasizing the organic link between production and distribution (we could say between growth and equity). Distribution was viewed as the result of conflicts of interest among wage earners, renters, and the profit-making capitalists. Today government intervention is so widespread that the political process plays a crucial role in the regulation of conflicts of interest. In order to render account of this regulation process, we need a model of political behaviour. Following Hathaway, it can be assumed that "the primary function of the political process is the compromising of the conflicting and competing values" of the "relevant groups in society." Such an assumption "rejects the concept that [the political process] is essentially and largely a process which derives the general interest or the public good." This probably goes without saying in the field of international negotiations. I claim that it is also true in the domain of regional policies. It should be emphasized that policy analyses conducted in terms of political economy correspond to a descriptive approach. This must be contrasted with the normative bias of any policy analysis geared to recommend best (or second best for that matter) measures; i.e., those which maximize the social utility function.

What can, in this perspective, be said of the search for a new international economic order? The most frequent claim made by the advocates of a new international order is that the trend in the evolution of the terms of trade between developed and developing countries should be reversed in the name of a more equitable distribution of wealth at the world level. Of course such a broad claim must be critically examined. There is no doubt that the price mechanism can be a very powerful tool of redistribution, but can we rest satisfied intellectually and accept that the normative statement that the terms of trade should be reversed is well founded analytically? The word "reversed" implies that the terms of trade have deteriorated. Yet if evidence can be gathered to support that factual statement in many cases, it is probably not valid at the level of generality of most pronouncements on the subject. Thus there seems little doubt that a careful assessment of the facts--price variations in time (beware of the choice of the relevant time period), in space, and among products--is often lacking.

Assuming now that it can be established as a fact that for specific countries and for major products exchanged among them there has been a definite trend in the terms of trade for a significant time period, the next question to be raised is of course: How and why did such a trend develop? Here specific supply and demand analyses have something to contribute, but one must be careful not to take the institutions, shaping supply and demand, as given exogenously. In many instances economic, social, and political power relationships play a very important role in this matter. Hence the value of an approach in terms of political economy identifying the distribution effects of possible changes, and the conflicts of interest and the way they are resolved through international negotiations, within the GATT for instance. These few remarks should be sufficient to illustrate the complexity of the questions which must be analyzed if one wants to be really thorough. Then and only then can one recommend practical choices; i.e., in most instances politically feasible compromises tilting towards the poorest. But that also often implies the need to have first conducted rather complex, concrete analyses. In international negotiations as well as international comparisons, one tends to take the nation as an element of the system under consideration. This means that the internal structure of the nation, and the internal conflicts of interest are ignored or taken as given. Yet recommending a specific measure for an international agreement in the name of greater equity implies knowing the internal distribution impacts of that measure and, most generally, that is not easy. Thus the political economy perspective invites us to intellectual humility.

The same is true in the field of regional policies. The first question to be raised in the analysis of a concrete issue in the domain is: What are the stakes and the conflicts of interest? Also, in the corresponding public debates, Who speaks for whom? Which alliances are formed? On the basis of which interests? Which ones are left out and thus have no chance to even get a hearing? This last question is particularly important in the domain of regional policies where regional (i.e., spatial) solidarities manifest themselves. Here again, asserting a regional solidarity of interests amounts to ignoring the internal conflicts of interest within that region. Thus, for instance, many zoning proposals in support of mountain agriculture tend to promote the interests of the modern farmer seeking to enlarge in order to improve his competitiveness through higher productivity at the expense of the poor, old, small farmer whose children have already migrated out of agriculture and who would benefit from the sale of a small plot of land to an urban dweller wanting to build a second home. Recognition of such conflicts of interest in the Vosges Mountains in France led our research team (Groupe INRA-ENSSAA) to recommend a much greater decentralization of decisions for implementing regional development policies on the ground that it is only at very decentralized levels that the weakest interests have a chance to be heard. Of course such a recommendation may be somewhat utopian on at least two counts. First, nowhere are the political forces needed to bring about such a high degree of decentralization in sight and, second, are we really sure that decentralized decisionmaking bodies would really protect the interests of the weakest sections? Yet it remains that an enlightened regional development policy cannot be conducted within a centralized decision organization, as would be the case if one could assume the existence of a reasonably well known social utility function.

Notes

[1]ENSSAA, Dijon, France.

[2]Lévi-Strauss thinks that there may even be an optimum degree of diversity for human societies, in their mutual relationships.

[3]"Tiers-mondisme" in French, a neologism, meaning literally "of the Third World," used to qualify a social and political movement supporting, in Western countries, help to and solidarity with the Third World.

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OPENER'S REMARKS—Somnuk Tubpun

Pudasaini's paper provides further evidence of the importance of education. It increases producers' productivity, and makes farmers more efficient in terms of allocation and selection of resources. These results are consistent with findings of earlier empirical work, done elsewhere. However, although the paper discusses the implications of education for growth, it does not mention equity. His conclusion that education made a higher contribution to output in a modernizing than in a more traditional environment is worrying. And since the data also show that the income level of farms is higher in modernizing than in traditional areas, this implies that the former are more capable of adopting new technology than the latter. Hence the policymaker considers the modernizing area favourable and the backward or traditional area unfavourable. Since most policymakers in underdeveloped countries aim at maximizing economic growth with little or no consideration for the equity goal, regional disparities tend to become wider.

The Veemans' paper is considered in terms of whether the effects of inflation on developed Canadian agriculture can be generalized to apply to the underdeveloped countries, with particular reference to Thailand. First, there is no doubt about the impact of inflation on farmland prices. However, the Thai experience indicates that tremendous increases in farmland prices follow on from new infrastructural developments, such as dams and roads. It is a basic point of micro theory that when the amount of one input, such as capital, increases, the demand schedules of other inputs, including farmland, shift to the right.

Secondly, inflation worsens terms of trade between agricultural and non-agricultural products. This effect of inflation must be stronger in Thailand than in Canada. Agricultural output prices in Thailand are kept at low levels through various government policies and measures, mainly because they are for food related products. Agricultural producers, however, have to pay uncontrolled or less controlled prices for farm inputs and other consumption goods.

Thirdly, the impact on efficiency of increasing risk due to inflation assumes that farmers are risk averse. Distributional effects may have had a greater impact on efficiency than inflation because the farmers are slightly risk averse or even risk neutral. Empirical evidence shows that producers in developed countries, with higher levels of education and wealth than those in underdeveloped countries, are less risk averse. This may imply a greater impact of increasing risk due to inflation in underdeveloped countries.

OPENER'S REMARKS—Ismail Shariff

Pudasaini, in trying to assess the effect of education on agricultural productivity, income, and allocative efficiency in Nepal, has failed to provide evidence of any positive correlation, and the paper is thus full of contradictions. First, there is no adequate definition of education, except for formal education, where he discusses the educational differences between the hill and terai regions, and finds a difference of only 0.86 years, i.e., 5.04 years of formal education in the hill region vs. 4.18 years in the terai region. From this small difference the absurd conclusion is drawn that the hill farmers' output and income are greater than that of the terai region's farmers. Application of modern technology is due to respectively greater economic strength rather than education. Above all, the paper fails to take account of climate and fertility differences between the two regions, as the main reasons for differences in productivity and income. Another contradiction is in the conclusion that extension had no impact, when earlier in the paper lack of adequate extension and infrastructure is listed among reasons for low level of farm innovation.

When discussing the profit function and test of economic efficiency differences between the terai and hill regions, the paper dismisses any significant impact of education in either region: "This meant that neither the educated nor the illiterates maximized profits in the sense of equating the marginal value product of the variable inputs."

In general the author has tried to build on the work of western authors, like Huffman, Nelson, Schultz, and Welch, but has failed to support their findings with the data presented. Overall, his efforts to assess the impact of education on agricultural productivity should be commended, although he fails to demonstrate clearly any linkages between educational differences and significant changes in productive efficiency and profit margin.

While agreeing with most of the Veemans' findings, I endorse their admission of the need for further research before any conclusions can be drawn on the impact of inflation on agricultural productivity and equity in Canada. However, an important omission is discussion of the question of price parity between the agricultural and nonagricultural sectors. Without such a frame of reference, one cannot isolate any one sector of the economy to analyze the inflationary effects on its performance.

The single most obvious effect of inflation on Canadian agriculture since 1973 has been on the price of farmland. However, in spite of increases in farmland prices, during the same period sales of farm machinery increased at a higher rate than during the 1962-1972 period when the inflationary pressure was not so great. The increase in farmland prices may have given the farmer greater equity, thus enabling him to purchase farm machinery; i.e., adopt modern technology. Inflation may thus have had a positive effect on the Canadian farmer, at least in the short run.

Finally, the authors have failed to address fully Tweeten's hypothesis that the rate of return on farmland consisting of both productive returns and capital gains is in variance with the rate of inflation.

I vehemently disagree with Petit's contention that existing spatial disparity has been discarded by economists, and hence policymakers. On the contrary, from Ricardo's exhaustive treatment onwards there has been a wealth of economic literature on the subject. However, it is true that policymakers operate in an entirely different sphere, so political rather than economic considerations may be the guiding factor.

The paper can be viewed as either ingenuous or the result of a confused set of logical deductions. For example, in an attempt to create a new international or regional order, the author is mistaken as to the applicability of either Rostow's stages of growth model or Clark's three sectoral development process to the existing conditions of developing countries.

On regional development policies the author is more than confused, particularly where he argues that: "They are the result of growth because economic activity tends to concentrate in areas where conditions are favourable, thus at the disadvantage of the so-called less favoured areas." Here I would only like to point out Max Weber's theory of location which provides a clear answer to his confusion.

Overall, the paper is nothing but a disjointed array of arguments, full of contradictions and palliatives.

RAPPORTEUR'S REPORT—Joachim Elterich

Rates of increase in farm size in Canada may have slowed less due to inflation than when it was not present. An additional positive aspect of inflation occurs in cases (countries) where farm credit conditions (interest rates) are not adjusted from the originally subsidized levels, which leads to accelerated interest rates. On the other hand, the fixed agricultural prices in the EC may create problems for farmers in those countries with faster rising interest rates.

There is evidently a cleavage between two schools of economists. One school states that resources and returns move automatically between regions. The other maintains that an optimum resource allocation is not given as a natural result, especially for high cost frontier areas. Governments are not necessarily profit maximizing.

A clarification was requested on the application of Rostow's stage theory to developing countries. Students from developing countries educated abroad need to know how to apply theories correctly to particular circumstances. Petit's reply stressed that while the specific application of the Clark and Rostow models needs adaptation for developing countries, they are usually applied by agricultural economists with respect to the share of agricultural employment and the stage of development. He agreed that the relevance of education of students in the West is an important challenge not adequately met. There has been too heavy an emphasis on growth, while the political process instrumental in achieving that growth is neglected. Further development of our knowledge about the economic and political processes is needed in tackling spatial disparities, especially in view of the disagreements among economists mentioned in the discussion. Research on the Vosges Region of France indicates that farmers do not have control over constraints which are imposed by the central government. Better solutions to these problems may be developed more profitably and efficiently by a decentralized (local) body, making enlightened decisions, as opposed to a blind, uninformed central government.

Participants in the discussion included D. Bergmann, D. K. Britton, and Allen B. Paul (Session Chairman).