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LEADING QUESTIONS

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The purpose of this note is to frame a discussion of new thinking about the prospects of small- and medium-sized manufacturing firms in developing countries and how, if at all, those prospects can be improved by public action. The aim is to establish common ground by characterizing surprising aspects of the current situation in four provocative assertions, each of which gives rise to open questions for action and reflection. Agreement with the assertions, and still less the associated questions, is certainly not a precondition for participation in the discussion. Willingness to engage, and at the limit refute them is.

1. At least with regard to models of industrial production-the deployment of machines and labour, organizing principles that define activities within and relations among firms-developing and advanced countries increasingly inhabit a single economic world dominated by what can loosely be called the new industrial disciplines: statistical process controls, "cells" or organization of production by group, just-in-time delivery and bufferless or inventoryless production. For the last century, what we now call developing countries were divided into two categories: those so preoccupied with subsistence as to be classed as pre-industrial, and those that were industrializing by imitation of the labour-intensive methods of production pioneered and later surpassed by the advanced countries. Debate centered on whether the pre-industrial countries could begin to industrialize and whether the industrializing laggards could ever escape the subordination of apprenticeship and fully master the most advanced methods of the day. Today, in contrast, the newest, computer controlled machine tools together with the new industrial disciplines are being introduced in many regions of the developing world even as, if not before, they reach the territories of the advanced countries. For evidence see (Alam 1994; Ansal 1994; de Quadros Carvalho 1994; Dominguez and Brown 1994; Humphrey 1994; Rasiah 1994Kaplinsky, 1994 #11; Tamayo 1994)

Two contrary lines of questioning follow immediately. On the one side are questions that raise the possibility of a continuing division between economic realms beneath the new appearance of unity. Suppose that many or even most of the new industrial disciplines are indeed diffusing among developing as among advanced countries. Might there not yet remain some master skill or capacity-in organizational design, in logistics or new accounting principles, for example-beyond the reach of newcomers and hence available to the advanced economies as a guarantee of continuing advantage? Could there be some limit, determined by the general skill level or the availability of infrastructure to the absorptive capacity of the new users? Or could it be that the diffusion of the new methods, even though explosive when judged against the expert expectations of a decade ago (Edquist and Jacobsson 1988) , will prove limited to certain industries or processes? Could it be, in short, that what was often called the new division of labour between capital intensive producers in the advanced economies and labour intensive ones in the developing world will be replaced by a newer still division between those who develop and universally apply the new methods and those who merely deploy them under conditions beyond their control?

On the other side are questions that raise the possibility that diffusion of the new methods may actually work to the advantage of the developing countries, making certain of their apparent competitive liabilities less onerous, and rendering them, perhaps, in some regards even more supple than the advanced adopters. Training may be an example. Suppose the new methods require a mixture of technical and managerial or problem solving skills best learned in the new settings or in training environments that simulate these. Suppose further that acquisition of these skills leads naturally to rapid assimilation of the traditional school-taught capacities for reading, writing and reasoning, but that the school-taught knowledge does lead naturally to acquisition of the new work-place skills. (For discussion of this possibility see generally (Koike and Inoki 1990) , and with reference to current difficulties with the German apprenticeship system (Sabel 1995)). Under such conditions, of course, not having an "advanced" vocational training or even secondary educational system may not be the bar to progress it once seemed; and industrialization by the new methods may accompany or even proceed, rather than presuppose massive educational reform. Analogous arguments might apply to managers and engineers and the institutions that shape them.

In the end, to be sure, the lines of inquiry are likely to be complementary, not contradictory. The new industrialization may create both hidden advantages and hidden disadvantages for developing countries; and the point of discussing both is plainly to learn how to maximize the former and minimize the latter, not to attempt the (impossible) task of determining in advance the balance between them.

2. Within the new general model the distinction between large and small firms is breaking down. Increasing volatility makes local knowledge important..... Large firms are therefore decentralizing authority regarding what to make and how to increasingly autonomous internal units, and these in turn are collaborating more and more intimately in these matters with independent external suppliers. In effect production is more and more carried out by federations of small- and medium-sized units linked by the new industrial disciplines. If true, this assertion is particularly important for developing countries, where firms, by and large, are small, and where the goal of economic growth has traditionally been interpreted as changing those small firms into (traditional) large ones. If the definition of the end changes, so too will understanding of the means.

Again the questions cluster into the sceptical and the hopeful, and in a way that reveals the second affirmation to be an aspect or specification of the first one. Even if large firms truly are decentralizing, we will want to know whether they still provide indispensable services-in, say, finance or marketing-to their internal units and external suppliers, and if so, how such services might be provided in their absence. Not having large firms is an advantage for developing countries in so far as existing large firms must be substantially reorganized, but a disadvantage in so far as large firms, maladapted to the current environment or not, provide assistance to small firms adopting the new methods. Detailed discussion of the reorganization of large firms in relation to the experience of small, developing country suppliers, for example, would illuminate the possibilities and pitfalls of the new industrialization at the level of the production unit, and thus indicate as well problems that can not be solved by individual private-sector actors. Such considerations in turn play into the third affirmation:

3. The new industrialization poses coordination problems that are not well resolved either by private markets or the bureaucratic state, but may be addressed by institutions that first pool information about local performance and best practice so firms can assess their capabilities and needs, and then provide assistance in the form of technical or managerial

advice to those companies or groups of companies that determine they need it. These institutions can be formed under the aegis of public authorities, trade associations, large firms or some combination of all three.

Given what has been said and supposed so far as common knowledge, it may seem peculiar to speak of coordination problems as a potential obstacle to the progress of the new methods at all, and even more abrupt to suggest that markets do not solve them. The new disciplines are diffusing, after all, because they are more efficient than the more centralized and rigid systems they replace. If firms can become more competitive by adopting new ways, the will: The proof is precisely the spread of the new in industrialization. Surely this is a case where the market will do its work?

The shortcoming of this view is that it vastly understates the costs and difficulties of adjustment. In many ways the change from either highly centralized vertical integration (the stereotypical situation in the advanced countries) or from labour-intensive production near the subsistence level (the model in the developing ones) to the new disciplines is like the transition form autarkic self-sufficiency to a division of labour in which each party must exchange its products with the others to survive. As in the abandonment of self-sufficiency the introduction of the new disciplines creates new vulnerabilities-for example, between suppliers and customers-and so shakes up the complex authority relations within each. For this reason firms may well prefer to attempt to survive by getting better at what they know rather than by changing methods; conversely, any measure that helps mutually dependent firms solve their adjustment problems together substantially raises the possibilities of joint success.

By their nature, finally, traditional bureaucracies and the kinds of incentives and penalties they can distribute are ill-suited to this task. Distant officials are unlikely to have the kind of information local actors need to make the most of their local autonomy. The most public authorities can do in this line is help establish an environment in which firms do have the incentives to gather and deploy that kind of knowledge; but authorities that pursue such ends by such means are a new, as yet unnamed kind of public-private partnership, and no longer traditional bureaucracies.

Surprisingly, however, not much is known about just how such partnerships function. Advocates of market solutions in debates in development economics have an easy time showing that bureaucratic interference in the economy can lead to enormous inefficiencies; advocates of public action, at least by far-sighted, muscular, developmental states, can return the favour by showing that in the post-war economic successes of Japan, Taiwan, and South Korea government played a guiding role that can not be accounted for in the market story. This exchange has dominated debate, leaving the parties so absorbed in their quarrels with each other that neither paid much attention to how the state might encourage the acquisition of knowledge by the actors that they could not have been otherwise furnished themselves, and that public authorities acting alone could not have discovered. The best current writing on the subject regards the market view as implausible but the attribution of guiding powers to the developmental state as unpersuasive because question-begging. (Moon and Prasad 1994).

Here, then, is where inquiry should start. What can be said in general about the role of public authorities in the advanced and developing countries in encouraging the new industrialization through collaboration with firms, singly or in groups? What is the relation, if there is one, between the new industrial disciplines and the new principles of public governance? If the same principles apply in both arenas, might there nonetheless be substantial and systematic differences in the way the requisite institutions in the respective settings are built? As these questions pile up they invite the fourth, final, and most encompassing assertion:

4. There is no consolidated model of industrial organization in either the advanced or the developing countries. A fortiori there is no consolidated model for public action to encourage economic development. If you have given the assertions so far the benefit of the doubt, this conclusion will come as no surprise at all. If we do not know whether and how the new industrialization advantages or obstructs the developing economies in relation to the advanced ones; if we can not define with precision what skill and training mean in the world of the new disciplines, or specify the role of large firms in it; if we can say that the transition to the new is not likely to be the automatic result of market action, but can not say how government may do better-if this is what we do and do not say, then how could we claim to have captured the new industrialization in a model connecting the principles of its operation with the structures, public and private, to which they give rise? At most we have a sketchy map of the new economic world, a rough chart that marks its boundaries with the old and indicates the gross topographic features with sufficient clarity to aid exploration. This chart is a considerable improvement over ignorance of the new territories; but it is not a reliable guide for routine commerce or those who would establish it.

From this summary observation follows a question of immediate practical significance for the consideration of our group: How do we discuss development, in theory and practice, without relying on the traditional assumption that the developing countries are imitating, or being limited by, the advanced ones? Put another way, what does it mean for investigation of, and practical efforts to aid, the developing countries when it is at least thinkable that their experimental experience with the new industrialization has as much to teach the advanced countries as the other way around?

It is from the vantage point of, or at least with a view towards, this last question that we ask you to write a paper of 20 or more pages as your initial contribution to our discussion. Such a paper would come to grips with any or all of these affirmations from your own point of view, but in any case with reference to empirical developments you know well or judge worthy of additional attention. Ideally the paper would connect analysis to programmatic reflection, perhaps by discussing why some program of assistance did or did not succeed in its aims. More than ideal would be a paper that proceeded from such discussion to comparison of like experiences in the developing and advanced countries. Better yet, and so beyond superlative, would be a paper that did all this, and then went on to say how the subsequent deliberations of our group might learn from the new lessons of federated learning and become themselves part of the process by which the experimental findings of the new industrialization are passed from zone to zone.

All this must seem like a tall order. Best efforts will do; and in any case there will be time and occasion to narrow discussion as the need arises. But our sense is that, like the actors themselves, we will have a better chance of keeping our bearing if we do suppress our wonder and anxiety at the many paths opening before us. A world without models, after all, may not be a world in which anything is possible; but it is a world in which nothing is gained and much risked by ruling surprises out.

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