

ON THE PAPER OF PROFESSOR WINTERS

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Professor Winters' paper is a model of exposition. It is also a fine contribution to our discussions at the Academy this year, in part because it offers a viewpoint of globalization that can be set against that of Professor Stiglitz: We have two contrasting views on offer. Winters' exposition is balanced, and he offers empirical evidence to support his claim, that trade expansion has come in alliance with economic betterment in the world's poorest countries.

Winters' evidence is based on findings from cross-country regressions. As you know, in a cross-country regression an economic quantity in need of explanation (e.g., the annual percentage rate of growth of GNP per capita) is regressed against other economic quantities (e.g., per capita GNP at some earlier date, an index of a nation's openness to trade, population growth rate) so as to see if there is a significant correlation between the quantity to be explained and an explanatory variable of interest.

Two criticisms are regularly advanced against such exercises. First, it is argued that correlation is not the same as causation. Even if the variable to be explained in a regression (Y), is found to be correlated with a variable X, it does not mean that X is a causal agent of Y. Secondly, it is noted that changing the specification of the model (e.g., introducing additional explanatory variables and deleting others) can affect the extent to which a particular variable (X) influences the variable to be explained (Y). In a field of inquiry I have myself been much involved in, namely, demography, a number of experts on cross-country regression analysis have recently moved from their earlier view that population growth has had little to no relationship with economic growth in recent decades, to the view that it has displayed a negative relationship. It is not so much that the analysts have studied wholly new evidence, it is more that their model specifications have

changed. Similarly, there are macroeconomists who remain unconvinced of the message Professor Winters reads from the regression analyses reported in his paper.

A third criticism that is sometimes raised against cross-country regression analyses is that such studies miss national particularities. National case-studies are the response of such critics. They study the particular institutional structures in a given country to be studied (including their culture and norms), they study past policy choices, and then offer a narrative of what happened in that country. The variables included in such case-studies are frequently of a kind that cannot be included in cross-section studies. One reason is that they may be far too many (more than the number of countries in a regression analysis!), another is that many such variables may not come in measurable forms, at least not on a cross-country basis.

But there is a fourth criticism that can be levelled against trying to reach an understanding of contemporary development processes from cross-country regressions, which is that GNP per capita is not the correct index of economic development. I want to develop this line of criticism in what follows.

At our annual Academy Meeting last year I showed that growth in GNP per capita is not the right index of economic development, but that growth in wealth per capita is. I also showed that in measuring a nation's wealth we should include not only manufactured wealth (roads and ports, buildings and machines) and human wealth (knowledge and skills), but also natural wealth (natural resources, ecosystem services). So, it is worth asking what the findings would be in cross-country regressions if, instead of regarding the rate of growth in GNP per head as the index of economic development (i.e. the variable to be explained, Y), we were to use growth in wealth per capita as the index to be explained.

I do not know the answer, but I would guess that openness to trade would not look as good a thing as Professor Winters concludes from his evidence. And the reason why I believe openness is not wholly beneficial is that many services humanity obtains from Nature are unpriced. They are unpriced because they have no markets. Therefore, expansion of international trade in those commodities that do have markets can place additional pressure on those goods and services that are unpriced. For example, an expansion in international trade in timber can be expected to have a deleterious effect on ecosystems within watersheds (e.g., water purification, soil preservation). But this in turn would lead to a decline in natural wealth, which, if it were sufficiently large, would mean a decline in aggre-

gate wealth per capita. But the analyst would not know that from a study of movements in GNP per capita, because GNP does not take into account the depreciation of capital assets. In short, my criticism of Professor Winters' analysis is that he has used what I am persuaded is a wrong measure of human welfare.

This said, I am not arguing against openness of trade per se. What I am suggesting is that when international agencies espouse trade expansion, they should simultaneously urge domestic governments to take note of the recommended expansion's effects on Nature. As it happens, the world's poorest live directly on Nature for their food and amenities. So, to pay particular attention to the effect of economic policies on Nature in the world's poorest economies is also to pay particular attention to the poorest people in them. This must be right.