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## Policy Issue Briefs

### Economic Growth and Development – A Briefing

Our traditional economic problems (poverty, overpopulation, unemployment, unjust distribution, environmental degradation) have all been thought to have a common solution—namely an increase in wealth. All problems are easier if we are richer. The way to get richer has been thought to be by economic growth, usually as measured by GDP. We do not here question the first proposition, that richer is better than poorer, other things equal. But we do question whether what is persuasively labeled “economic growth” is any longer making us richer. We suspect that physical throughput growth is, at the present margin and in the aggregate, increasing “illth” faster than wealth, thus making us poorer rather than richer. Consequently our traditional economic problems become more difficult with further growth. The correlation between throughput growth and GDP growth is sufficiently strong historically so that in the absence of countervailing policies even GDP growth may be increasing illth faster than wealth.

What we conventionally call “economic growth” in the sense of “growth of the economy” has ironically become “uneconomic growth” in the literal sense of growth that increases costs by more than it increases benefits. We are speaking here of the North rather than the South, because in many poor countries where the majority lives close to subsistence the benefits of production growth, even if badly distributed and ecologically damaging, justify incurring large costs. But the South is striving with encouragement from the IMF and World Bank to become like the North. One will surely ask, how do we know that growth has become uneconomic for many Northern countries?

As the scale of the human subsystem (the economy) expands relative to the fixed dimensions of the containing and sustaining ecosystem, we necessarily encroach upon that system and must pay the opportunity cost of lost ecosystem services as we enjoy the extra benefit of increased human scale. As rational beings we presumably satisfy our most pressing wants first, so that each increase in scale yields a diminishing marginal benefit. Like-wise, we presumably would sequence our takeovers of the ecosystem so as to sacrifice first the least important natural services. Obviously we have not yet begun to do this because we are just now recognizing that natural services are scarce. This is an important policy challenge for ecological economics. But let us credit ourselves with capacity to learn. Even so, that means that increasing marginal costs and decreasing marginal benefits will accompany increasing human scale. The optimum scale, from the human perspective, occurs when marginal cost equals marginal benefit—hardly an unfamiliar principle to economists! Beyond that point growth becomes uneconomic in the literal sense of costing more than it is worth.

It is probably unnecessary to add that these views do not find favor with mainstream economists. The concepts of throughput, of entropy, and even of optimal scale of the macroeconomy are absent in mainstream textbooks. The last is especially odd

since in microeconomics the concept of the optimal scale of each micro activity is central. Yet the sum of all micro activities, the macro economy, is not thought to have an optimal scale relative to its sustaining ecosystem. Probably this is because macroeconomists think of the macroeconomy as the Whole, not as a Part of some larger Whole. For them nature is not a containing envelope, but just a sector of the macroeconomy—mines, wells, croplands, pastures, and fisheries. When the Whole grows, in this view, it expands into the Void encroaching on nothing and incurring no opportunity cost. But of course the real economy is a Part and it grows not into the Void, but into the rest of the ecosystem, and really does incur opportunity costs.

It is interesting to know empirically if we have reached the optimal scale, but even if we have not, it is obvious that continued growth of a dependent subsystem relative to a finite sustaining total system will inevitably reach such an optimal scale. If we add to the limit of finitude of the total system the additional limits of entropy, complexity, ecological interdependence, as well as satiability of human needs, then it is clear that the optimal scale will be encountered sooner rather than later.

Additionally, if we expand our anthropocentric view of the optimum scale to a more biocentric view, meaning one that attributes not only instrumental but also intrinsic value to other species, then it is clear that the scale of the human presence will be further limited by the duty to reserve a place in the sun for other species, even beyond what they “pay for” in terms of their instrumental value to us. And of course the whole idea of “sustainability” is that the optimal scale should exist for a very long time, not just a few generations. Clearly a sustainable scale will be smaller than an unsustainable scale. For all these reasons we think that for policy purposes we do not need exact empirical measures of the optimal scale. If one jumps from an airplane it may be nice to have an altimeter, but what one really needs is a parachute.

So what policies constitute a parachute? Briefly, they are policies that limit aggregate throughput, while allowing the market to allocate that limited throughput—assuming the market is competitive and confined to some limited degree of inequality in the distribution of wealth and income. Such policy instruments are evolving now—e.g., cap-and-trade systems for extraction rights, pollution emission rights, fishing rights, etc. Also ecological tax reform limits throughput by making it more expensive. It shifts the tax base from value added (something we want more of) on to “that to which value is added”, namely the throughput (something we want less of). In differing ways each of the above “parachutes” would limit throughput and expansion of the scale of the economy into the ecosystem, and also provide public revenue, which would permit the abolition of some of our most regressive taxes.

Our policy goal is to limit growth (quantitative increase in throughput), not development (qualitative improvement in design of commodities and institutions). We aim to redefine progress away from growth and toward development.