

Economics of Scale vs. the Scale of Economics

Toward Basic Principles of a Bioregional Economy

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Economics of scale is what conventional industrial economies are all about, finding ways to more profitably and efficiently exploit nature. But the scale of economics is what the economies of the future must be about, finding ways to live so that healthy communities may foster a healthy earth. There are only two essentials to consider in coming at the problem of the optimum scale for an economy to produce and distribute goods and services: the natural ecosystem and the human community. An economy that does harm to the natural world—depleting resources, extinguishing species, producing pollution, piling up wastes—has grown too large; an economy out of democratic and humanitarian control—where decisions are made by distant corporations and a polity whose choices are beyond individual influence—has grown too large.

An economic scale optimum for the earth's systems would be based on conservation, stability, sustainability, recycling, and harmony. That means, for starters, an economy at a bioregional scale that more or less dictates the economy appropriate to it. An economy based on a watershed, for example, automatically considers downriver populations as well as headwater ones. The human constructs would adapt to the environment rather than be imposed, and human uses would be confined to those the bioregion allowed. In Vermont terms, it would be possible to think of the western watershed of the Connecticut River, with all the rivers running eastward from the Green Mountains, as a bioregion. Another bioregion would encompass the watershed to the west of the Green Mountains, to Lake Champlain. Dairy and general truck farming would naturally be at the heart of the bioregional economy, although if a truly ecological sensibility informs it those farms would not allow the disastrous waste runoff that now pollutes Lake Champlain and other waterways. Nor would they use artificial chemicals and fertilizers, nor allow factory farms of 1,000-plus cows and 100,000-plus hens.

An ecologically based agriculture would depend on solar power appropriate to the region, on human-powered machines, on organic pest-management systems, perennial polyculture, and permaculture, with markets geared to seasonal and regional foods. The economic scale desirable for the human community would be one in which decisions about the economy—what is produced, from what resources, by whom, for whom, how distributed, how recycled—are made democratically by towns and bioregions. Most power would locate at the level of the community, where we can imagine effecting basic economic justice: workplace ownership by the employees, workplace democracy for decision-making, and workplace commitment to the surrounding populace—all the things that are impossible with large scales and distant chain store corporations. And here we come to an essential element of a stable economy that dictates much of its scale: self-sufficiency. If Vermont's farms were part of a self-sufficient economy, feeding the 620,000 people within its borders as its primary mission, there would not be such a concentration on dairy farms (and the resultant pollution problems), but a greater diversity of animal products and crops, ultimately to the health of the ecosystems.

Self-sufficiency is operable only at a limited scale—say, bioregions of 10,000 to 20,000 square miles—where humans can understand the resources at hand, perceive and regulate the variants in the economy, and ensure that production and distribution are made rational and systematic. In terms of

population, too, there is a limit at which self-sufficiency can be achieved. In research for my book *Human Scale*, I found that historically self-sufficient communities with economies of some complexity tended to cluster in the 5,000–10,000 population range. Urbanologist Gideon Sjöberg has said that “it seems unlikely that, at least in the earlier periods, even the larger of these cities contained more than 5,000 to 10,000 people, including part-time farmers on the cities’ outskirts.” Even when larger cities grew in the thirteenth and fourteenth centuries to 20,000 or even 40,000, they were typically divided into quarters—literally four parts—of 5,000 to 10,000 people.

On a modern American scale we might imagine a mixture of somewhat self-sufficient cities within more self-sufficient counties within mostly self-sufficient bioregions within a totally self-sufficient state, and then the economy of self-sufficiency might be quite complex indeed. Such units would need to be guided by certain maxims to provide a full range of goods and services, and they would need to adhere to them with some ingenuity. But the maxims are simple and thoroughly practical. They would include the principle of sharing at the community level, recycling and repairing (or at a more complex level, remanufacturing) almost everything, an emphasis on handicrafts and bespoke production rather than manufactures and mass production, using raw local (instead of imported) materials, nurturing local ingenuity without patent and copyright restrictions, and agreeing to abandon as unnecessary and undesirable almost everything manufactured at the factory level anywhere and anyhow. All of which is no more complex than the old New England adage: Use it up, wear it out, make it do, or do without.

What follows are what I take to be the essential elements of a philosophy that would guide a bioregional economy, which I have constructed from a wide reading in alternative economics, including E. F. Schumacher’s great range of writings (particularly “Buddhist Economics” in *Small Is Beautiful*) mixed with various economic ideas expressed by the Buddha himself, and ideas I enunciated in the “Economy” chapter of my *Dwellers in the Land: The Bioregional Vision*.

1. All production of goods or services would be based primarily on a reverence for life, a biocentric understanding that includes animals, birds, insects, plants, trees, the living ecosystems, streams and rivers, forests and wetlands, hills and mountains, clouds and rains—fundamentally Gaia herself, understood as the only living, self-regulating planet in the galaxy.
2. All systems have limits and they must be learned and adhered to in every economic act; overuse, depletion, or exhaustion of a resource or species would be seen as a criminal act of violence; overproduction of a resource or a species, such as the human, would be seen as a criminal act of avarice and greed.
3. The primary unit of production would be the self-sufficient community, within a self-regarding bioregion, which would strive to produce all its needs, and essential political and economic decisions would be taken democratically at that level.
4. Consumption would be limited, for the goal of economic life is not the multiplication of wants but the satisfaction of basic needs.
5. Everything produced, and the means of its production, would embody the four cardinal principles of smaller, simpler, cheaper, safer—technology on a human scale, comprehensible, affordable for all, and nonviolent.
6. The only jobs would be those that enhance the worker, contribute to the community, and produce nothing but needed goods—and that means goods, not bads.
7. All people who wish to do so would work, for the purpose of work is not to produce things to satisfy wants but to nourish and develop the individual soul, aiming at fulfilling the highest nature of the human character, including identification with community and the satisfaction of its needs.
8. All economic decisions would be made in accordance with the Buddhist principle, “Cease to do evil; try to do good,” and the definition of good would be that which preserves and enhances the integrity, stability, diversity, continuity, and beauty of living species and systems; that

which does the contrary is evil. That is, to my mind, the essential moral and intellectual guide to a right and successful bioregional economics.