

IS SUSTAINABLE REGIONAL ECONOMIC DEVELOPMENT POSSIBLE?

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ABSTRACT The fundamental elements of regional economic development theory identify options available for regions to work toward sustainable development. These elements are markets, resources, decision making capacity, economic rules, and space. The dimensions of time, marginalized social-economic groups, and dynamic economies provide focus on how regions can build sustainable strategies. Sustainable regional economic development is about changing perceptions and choices regarding regional resources, markets, rules, decision making capacity, and space. The idea of new knowledge and reframing issues is offered as a method to create new options.

1. INTRODUCTION

Events such as chemical spills and disposal, endangered species, water and air quality, soil erosion, drought, and visual aesthetics have given the issue of sustainability a high degree of popular awareness. In many rural regions, whose historic economic base has been tied to natural resources, the urgency to address sustainability is particularly acute. In most cases, physical and biological dimensions dominated the first wave of concern about sustainability, but for us to make sustainable regional economic development an operational reality, we need to strengthen the socio-economic-political perspectives in the proposed solutions.

What engenders fear among local residents is their, not totally unjustified, concern that their way of life is being ripped away by 'externals' (who contend they know what is best for the locals) with little to replace the previous way of life. The stimulus for the intervention by external interests is often technically based (e.g., species extinction, ground water contamination, wetlands loss). This characterizes two phenomena that are of great significance in achieving sustainable regional economic development. The first is we too easily believe that sustainability is only a physical phenomena. The second is we continue to use old logic to deal with new conditions.

Table 1 contains one list of old and new logic that appears to have substantial influence on how we might achieve sustainable development. An important way to look at Table 1 is as a statement of two contrasting paradigms about how our socio-economic-biological system works. Obviously, Table 1 is somewhat exaggerated to establish the different perspectives and hopefully move us toward some general ideas regarding sustainable development.

The paper progresses from describing the regional economic development system to what is sustainable development. Then it proceeds to how sustainability

Table 1. Development Paradigms

Old	New
Growth is preeminent {more of the same}	Development is preeminent {increasing options and access}
Benefits of growth will naturally trickle down and out to others	Equity considerations require conscious policy efforts
Individuals are wise and all knowing	Individuals can comprehend only part of what is happening and needed
Technological change is either always good or will solve most problems	Technological change is only one of many possible solutions, and may not even be one of the better choices
Tomorrow will look like today	Tomorrow may look like today, but certainly no guarantee
Externalities of space, time, and class typically of minor concern and likely to take care of themselves	Externalities of space, time, and class must be explicitly considered
Dynamic economies are expanding replications of the existing system	Dynamic economies are creating new choices, reframing of issues, changing perceptions of markets and resources, changing values
Socio-economic-biological elements are largely independent or can be treated that way	Socio-economic-biological elements are so inter-dependent that failure to consider linkages creates problems
Individuals and firms are the source of control	Interest coalitions are necessary to capture different perspectives
Power is hierarchial and flows out from urban nodes	Power is disbursed throughout a relatively flat network

modifies regional economic development and the necessary conditions for sustainable development to occur, closing with how can we support sustainable development.

2. THE REGIONAL ECONOMIC DEVELOPMENT SYSTEM

Figure 1 displays the essence of my conception of how regional economic development occurs. It seeks to display the interconnectedness among the nodes and our tendency to treat them as isolated components.

The model implied in Figure 1 requires some specific definitions of the nodes (Shaffer, 1989a). Rules of the economic game includes such realities as tax laws, eligibility rules for programs, environmental regulations, zoning, union contracts, tariffs, and cultural norms. These typically are so imbedded in our thinking, they are acknowledged only when someone else tries to change them in an unfavourable fashion. We implicitly acknowledge them with comments like: "That's the way they do business

in Queensland" or the famed "tall poppy syndrome." The crucial aspects of rules is they may obfuscate adjustment, and therefore require modification in a dynamic economy.

Decision making capacity is the ability to distinguish among problems and symptoms and inventiveness of the response. Analytical questions include framing issues in a fashion that enables possible solutions to appear (Bryson & Crosby, 1992). It definitely includes getting to the problem rather than dealing with symptoms and history. In many respects, tradition is not necessarily accepted (see Table 1). Policy suggestions include education and communications about problems and options, and create a collaborative learning environment that promotes exploration of alternative solutions. In the U.S. an effort embodied in the State Rural Development Councils and National Rural Development Partnership seeks to create a mechanism to explore and test alternative solutions regarding rural development and the roles of private and public sector actors (Shaffer, 1994; Shonka, 1994).

Markets generally refers to the external (export) and internal (nonexport) markets in the community. This node essentially contends that the community can produce competitively; it just needs to determine what to produce, how markets are changing, and where they are. The analytical questions are knowing what markets exist for regional output (consumer/industrial), location of markets, who is the competition, and how is the market changing. It includes how the local economies in the region are linked on both the input and output sides. The policy suggestions include increase inflow of outside dollars, reduce outflow of local income, and strengthen intra-regional linkages.

Resources generally refers to concerns with the amount of, access to, and mobility of resources. This perspective essentially contends that we know what markets are, we just need to know how to produce for them. The analytical questions are concerned with identifying capital, labour, technology and whether they are available for alternative uses (mobility) or in sufficient amounts to increase regional output. Policy suggestions include increasing the amount of capital, labour and technology, increasing mobility/access to capital, labour and technology, and shifting resources to more valued uses.

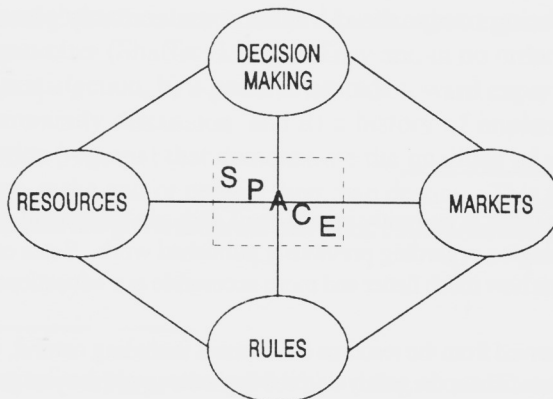


Figure 1. Regional Economic Development

Space is the obvious friction of distance and more. The more is the subtle psychological barriers to improved communication, to reading body language, to serendipity contacts and comments, and to agglomeration/disagglomeration forces. While the information super-highway certainly alters the possibilities, the type of information shared is qualitatively different.¹ Space intervenes in the interaction among the four other nodes. This intervention can be both centripetal and centrifugal.

3. SUSTAINABLE DEVELOPMENT

Any definition of sustainable development needs to start with the World Commission (Brundtland) report *Our Common Future* which defines sustainable development as "that which ensures the needs of the present are met, without compromising the ability of future generations to meet their own needs" (World Commission, 1987, p.9).² The balance of the Brundtland report emphasizes management and control over development, plus a holistic approach to problem solving. Special note is made that since the linkage between economic and ecological systems will not change, solutions must start with the policies and institutions of the social-economic-political environment. An overlooked aspect of the report, is recognition that "development is not a fixed state of harmony,³ but rather a process of change in which the use of resources, direction of investments, orientation of technological development, and institutional change are made consistent with future as well as present needs" (World Commission, 1987, p.9). Carter and Zimmerman (1993, p.6) suggest that "sustainable development" can relegitimise development values other than growth, such as class and gender equity, democratic governance, environmental preservation and fulfilment of basic human needs. Effective participation of disenfranchised groups in decision making extends the idea of sustainability beyond middle and upper income groups. While involvement of the disenfranchised in the actual decision making may not be a reality, the inclusion of their interests and perspectives in the choices considered is paramount.

The importance of time becomes crucial given the perceptions by many groups that they are having increased difficulty earning an acceptable standard of living and the increasing sense of being marginalised.⁴ This sense certainly places a premium on

¹ For example, the author is currently in an e-mail dialogue with small "reading" groups in Nova Scotia and Washington regarding previously published work. Since only one group is at a university it reminds me how much flatter and more accessible our educational hierarchies have become.

² Quality of Life is derived from the resource endowment including natural, cultural, technical, and institutional resources. Thus, the utility derived from the total (not just part of the) resource endowment transferred to succeeding generations exceeds that received by previous generations.

³ Schumpeter (1983) defines development as "creative destruction."

⁴ The sense of being marginalised may also appear in the form of "distant" decision makers imposing seemingly inappropriate decisions or standards on local groups.

decisions favouring this generation and attempting to capture the 'good life'.⁵ This is certainly present in academic and policy discussions in Australia and New Zealand.

Sustainability raises the issues of time, new forms of economic value and activity, and marginalized groups to a prominent place in regional development policy.

4. HOW DOES SUSTAINABILITY MODIFY REGIONAL ECONOMIC DEVELOPMENT?

An earlier definition of sustainable regional economic development as "...the capacity of local socio-economic systems to generate employment and income to maintain, if not improve, the region's relative economic position..." conveys some of the regenerative dimensions of sustainability (Shaffer & Summers, 1988, p.1). The aspects of the definition of particular interest here are relative capacity to adjust, social-economic systems, and time.

Sustainable regional economic development is about changing perceptions and choices regarding regional resources, markets, rules, decision making capacity, and space. While not obvious in Figure 1, sustainable development appears more achievable when we use accumulated knowledge (both scientific and experiential) to reframe questions that change the set of perceived options available. The choices we make regarding the four nodes of Figure 1 and their definition go a long way in making sustainable development attainable.

An important element of the definition is recognition of time and the changing circumstances in which the region functions. These changes can be depletion or revaluation of a resource (e.g. coal deposits, forest, scenic vistas), technological changes (e.g. drip irrigation, genetic engineering, fibre optics, biological insect control), demographic (e.g. aging population, single parent families, working couples), communication/transportation changes altering the spatial linkages, or economic structure (e.g. transnational corporations, relative decline of manufacturing employment). These changing economic circumstances alter the choice set for regional response. Sustainable regions recognize these changes and mount responses that allow the region to maintain and improve its economic position now and through time.

There are four characteristics associated with what appear to be economically sustainable communities (Shaffer, 1991).⁶ They are, in no order of importance: a) a slight level of dissatisfaction, b) a positive attitude toward experimentation, c) a high level of intra-community discussion, and d) a history of implementation.⁷ In a few words, communities (regions) that demonstrate the qualities of sustainability believe they, and they alone, make and/or control their own destiny. This recognizes that while individual communities are given different economic circumstances (resources, economic

⁵ For some marginalised groups the 'good life' is rising above subsistence (Summers *et al.*, 1993).

⁶ As distinguished from regions, but regions are really just aggregations of communities that explicitly recognize the spatial element among the four nodes of Figure 1.

⁷ Flora and Flora (1993) refer to this as social capital.

structure, access to markets, growth of local markets) the sustainable community (region) will capture the economic possibilities available.

Historically, sustainable development has generally started with resources and the solutions have emphasized the rules and decision making nodes of Figure 1. Yet, to build a sustainable regional economic development program requires that all four nodes of Figure 1 be considered in a dynamic context.

Sustainability expands the definitions of the nodes in Figure 1. Resources take on new meanings including assimilative capacity, considering marginalized groups, recognizing nonrenewable resources, lower energy use technology, organic technology, and different skill sets among people including access to acquiring new skills. Likewise markets start including recycling, consuming green products and lifestyles. Decision making capacity now adds sensitivity about the bio-sphere, sensitivity about inter-generational implications, and sensitivity about marginalized groups. The rules of the economic game now includes discharge permits and markets, actual compensation to people adversely affected, development impact hearings, and taxes on transboundary environmental use.⁸ Space means sensitivity about spatial flows of inputs, outputs, and discharges.

The themes that emerge from the expanded definition of sustainable regional economic development leads to policies that explore -- increased regional self-reliance (in contrast to self-sufficiency), increased niche marketing (i.e. less volume more value), increased ecological awareness (e.g. diversification of production from mono-culture, recycling wastes or reducing waste stream), changes in labour and management requirements, increased demands on knowledge and innovativeness. Another theme is increased collaboration among perspective partners (Gardner, 1994).

5. MOVING TO SUSTAINABLE DEVELOPMENT

Economists contend a major theme in achieving sustainable regional economic development is recognizing the externalities of decisions and actions (Castle, Berrens, & Polasky, 1994). Externalities can be both positive and negative, but are generally not accounted for in the market prices used to allocate resources across time, space, and groups.

In sustainable regional economic development, time and future generations are explicitly brought into considerations of decisions and actions. If decisions and actions adversely affect future generations, then current prices need to be increased to discourage that activity. To assert that time is important begs the question relative to what? To argue that some resources should be preserved for the future does not answer the economic questions of what alternatives are foregone — now or in the future? Who is being impacted by the choice of preserving a resource?

Castle, Berrens and Polasky (1994) and Martin (1994) remind us how the issue of time complicates the decision making. First, it requires us to make explicit our choice

⁸ Meyer's (1994) comparison of the European Community and U.S. approaches to environmental regulation and clean up clearly articulates how framing the question leads to different potential solutions.

about whether future generations are more or less (and by how much) important than the current. While it is legitimate to argue that many current decisions overly discount future interests, to replace that with an over discounting of current interests does *not* advance our understanding. Second, we are required to make judgement about the preferences of future generations with not much more than the assertion that it will be similar to or different than the preferences of the current generation. Third is the question of how many future generations are we concerned with in our current decision to conserve a resource. While the idea of sustainable development implicitly assumes eternity, that simplifying presumption becomes incredibly complicated as we try to operationalise it with our current state of knowledge and decision rules.

Another externality is that the benefits and costs of a decision or action are distributed spatially to separate groups minimizing the possibility that market prices will create self-correcting signals. So rather than getting negative and corrective feedback the system becomes self-reinforcing.

The interaction between urban and rural economies is an example of spatial flows. Changes in urban markets (e.g. natural or artificial fibres, use of rain forest wood) and rules (e.g. water quality standards, prevailing wage standards) often play out in rural economies in a perverse manner. Hite and Powell (1993) remind us of three qualities distinguishing rural from urban economies. These qualities are important to our discussion of sustainable regional economic development. Distance and how it influences the level and form of human interaction is the first quality. The lack of scale/size/density effect on the ability to generate agglomeration economies is the second quality. The lack of diversity of economic functions limits the range of choices available and their perceived feasibility is the third quality. These qualities, individually and collectively, influence (typically appear to limit) how regions make choices in moving towards sustainability.

An aspect of sustainable regional economic development that appears to have generated little direct discussion is that Schumpeterian development (creative destruction) and associated economic dynamics creates winners and losers. The sense of gains/losses may only be relative, but often is absolute (i.e. displaced worker, family, community). The assumption of beneficial spin offs from development efforts ignores they are an ineffective mechanism to reach many of these groups (Bartik, 1991; Shaffer, 1989b; Summers *et al.*, 1976). The inability of some adversely affected groups to contribute to decisions leads to re-enforcing patterns of shifting burdens to those groups. Economists deal with this in statements about needed adjustments (e.g. migration, training, identifying new business opportunities) in a dynamic economy. It is insufficient to expect the market to handle many of the noneconomic aspects of these adjustments (asset fixity, family, gender, education, personal traits, age, race) (Summers *et al.*, 1993).

6. SUPPORTING SUSTAINABLE DEVELOPMENT

In summary, sustainable development explicitly recognizes increasing limits (biological/physical) given past and current economic/cultural/social norms and knowledge. It is *not* absolute, but relative to shifting constraints, acknowledges different forms of capital (i.e., renewable and nonrenewable), and appreciates the capacity to

accommodate change. Sustainable development incorporates linkages between economic and ecological dimensions, distribution across generations (time), space, socio-economic groups and economic sectors.

The paradigm shift implied in Table 1 gives some sense of the task. Shifting paradigms that eventually govern the choices made and how we even frame the choices considered is difficult. Paradigms appear because they make life simpler by making each decision less of a struggle of collecting and analysing extensive data, by allowing acceptable patterns/procedures to reduce the burden. The paradigm shift difficulty is new choices must be demonstrably better than old choices, while using the old frame of reference to prove your argument.

Recognizing changing norms, knowledge, technology, and markets lead to shifting needs for capital, labour and space. Sustainable development is technically feasible, so the question becomes what policies, behaviours, and institutions are required to achieve it. Castle, Berrens and Polasky (1994) clearly remind us that maintaining a subsystem is generally easier than the whole system (i.e. we do not need consider where the resources come from or alternatives foregone). This leads to the issue of whether we frame the question appropriately. For example, energy is associated with economic growth, thus we must increase energy use to have economic growth, but remember growth is not development. Yet, if we adopt energy conserving technology we can conserve energy usage and still have growth. Or, if we adopt new product configurations (lower hydrocarbon content), we could have both.

The Oconto initiative (Behr *et al.*, 1993) used the ideas of reframing the issue to move the community forward on its development strategy of creating jobs and improving incomes without sacrificing the environment. Oconto, a community experiencing high unemployment, low per capita incomes and limited tax base, was able to reframe development questions by adding new local and external insights regarding the use of several hundred acres of wetlands. The reframed question enabled the community to realize its choices included more than upscale condos and marinas, but also eco-tourism that met residents and visitors preferences.

The proceeding examples exemplify the need to re-frame questions from either/or to multiple objectives. The paradigm shifts that must occur include reframing the growth/non-growth dichotomy and the market/state directed dichotomy, recognising that marginalized groups will not improve their relative position and thus that absolute growth is the only choice. Table 1 outlines the need to explore new procedures (collaboration rather than competition becomes the guiding principle) with new partners (Bryson & Crosby, 1992) as a possible avenue towards sustainability. Some of the new processes that sustainable regions will need to master include negotiation and conflict (both internal and external) management skills. A crucial component is accumulating and incorporating new knowledge into the choices considered and made.

The sustainable economic development paradox is it needs to occur at the grass roots level and become part of the local 'culture', but needs to be sanctioned by the global 'culture' as localities proceed. The regional paradox is the tendency to lie in a decision making vacuum with minimal mechanisms to make and implement decisions. Global, regional and local decision making is further complicated by the almost limitless number of unintended outcomes and often confusing information regarding causes of problems and choices available. The end result of this should not be "analysis paralysis"

or "all things to all parties" but reflective consideration of the choices available given our current state of knowledge and attention to how new knowledge can be incorporated into decision making.

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