DEFINITION OF SUSTAINABLE ECONOMIC DEVELOPMENT

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INTRODUCTION

The *Sustainable Economic Development Toolkit* attempts to provide a practical integration of the theories and practices of professionals in the fields of sustainability and economic development. Such integration cannot occur without communication, and communication requires a common language and agreement on the meaning of words and concepts.

This appendix introduces key concepts for each discipline, and then ties them together to define Sustainable Economic Development (SED). It follows the same format of the web content report chapter, but provides more detail. It has three sections:

1. What is Economic Development?
2. What is Sustainability?
3. What is Sustainable Economic Development?

GROWTH VS. DEVELOPMENT

Economic *growth* and economic *development* are terms that are often used interchangeably, but development economists distinguish between them with important implications.

Economic growth is a narrower concept than economic development. Development economists use this term to refer solely to an increase in output. They measure growth quantitatively as, for example, increases in real gross domestic product (GDP), which includes consumption, government spending, investment, and net exports.

GDP is one way to try to measure a country's real level of national output, but it does not consider whether that output is really a net gain to citizens. For example, environmental cleanup and homeland security are expenditures aimed at fixing previous problems or preventing others that might not have occurred with different public policies. Economic growth may be a necessary condition for economic development, but not a sufficient one.

Economic development is broader. It considers output, but it also considers how the production or consumption of that output affects people. Are they getting more educated, productive, and able to advance succeed at higher-paying jobs? Are incomes increasing not just on average, but for various groups that are at or close to poverty levels? Are environmental quality and social services maintained or improved, and thus contributing (independent of income) to a better quality of life?

A Genuine Progress Indicator (GPI) is one way to start to quantify this broader development concept. It incorporates environmental and social factors into an economic accounting.[1] Although this particular indicator (and similar indices) is not a direct measure of economic growth, it provides information about conditions in the natural and social environments that support growth.

WHAT IS ECONOMIC DEVELOPMENT?

One can define economic development broadly or narrowly; the professional literature of economic development has examples of both perspectives.

In the *broader view*, development means improving well-being not only through economic activity, but also through improvements to the wider social and natural environment that strengthen the economy. This broad view recognizes that (1) economic prosperity is one of several high-level goals of a region and its inhabitants, and (2) many things addressed by other goals influence economic performance. The broad view places economic development in the context of the overall well-being or quality of life of the people that economic development is trying to benefit.

The *narrower view* focuses on the economic-prosperity component of quality of life. This view emphasizes job creation and, in turn, income generation as the primary path to economic prosperity and development. A justification for the narrower focus is that other agencies and departments in the public sector specialize in delivering other goods and services to meet other objectives that their citizens care about. In that context, it would not be the primary job of economic development professionals to improve education, health care, public safety, transportation, parks, and other things that contribute to quality of life—other agencies and departments have that mission.

[1] In rough terms, GDP is a measure of all economic activity, while GPI is the net beneficial activity after accounting for and subtracting from the GDP's environmental and social costs.

THE ECONOMIC DEVELOPMENT PROFESSION

Economic development professionals develop and implement "a program, group of policies, or activity that seeks to improve the economic well-being and quality of life for a community, by creating and/or retaining jobs that facilitate growth and provide a stable tax base."[2]

- They typically work for government or non-profit organizations at the state, regional, and municipal levels—as well public-private entities—on practical efforts to retain, expand, or attract businesses and the private-sector jobs they generate. Job creation or retention is the primary metric used to measure their success.

That description of what they do covers both the broader and narrower definitions of economic development: they aim at well-being and quality of life by creating and retaining jobs. The logic of the connection, in summary, runs like this:

- A household's economic well-being is defined by its economic resources. *Wealth* is a measure of a household's ability to have and acquire goods and services that contribute to its well-being. *Income* is how a household builds wealth.
- Most income for the majority of households comes in the form of compensation for services provided (i.e., in the form of wages or salary from *jobs*).
- Businesses provide jobs. More business activity correlates with more payments of wages and salaries, and with more jobs.[3]
- This chain of logic (business activity > jobs > income > wealth > economic well-being) illustrates that economic development policy and action should aim to (1) retain and grow existing businesses, and (2) attract new businesses, particularly those businesses that have strong multiplier effects and will pay higher wages, or otherwise create opportunities for more job growth, advancement, and income.

WHAT BUSINESSES NEED TO CREATE JOBS

Around 85 percent of all jobs in the U.S. are in the private sector. For a business to provide jobs, it must sell a good or service at a price that exceeds its average cost of producing that good or service. A business can improve profit, or the difference between revenues and costs, by increasing revenues (the "demand" side of the equation) or reducing costs (the "supply" side of the equation).

Businesses address the demand side through marketing to final and intermediate customers (e.g., advertising, networking, social media, donations). They address the supply side by reducing the cost (or increasing the value) of the production inputs they require.

One way to categorize these supply-side inputs is by *type of capital*. Five broad categories of capital are natural, physical, human, financial, and social.[4]

- **Natural capital: natural resources and supplies.** Firms need materials to develop the goods and services they sell. The quality, quantity, and cost of the available natural resources and supplies are all relevant, particularly for firms that convert high-bulk natural resources into smaller finished products.
- **Physical capital: land, buildings, supporting infrastructure, equipment, and supplies**. Land provides the physical foundation upon which buildings are constructed and the production process occurs. The demand for land is a function of the demand for functional built space businesses inhabit. Businesses need land that is appropriately zoned and supplied with utilities and services. For goods-producing businesses, equipment is essential physical capital. And all businesses need supplies, some much more than others.
- **Human capital: labor.** The relative productivity and cost of labor is usually the single most important cost factor for businesses (especially service businesses). Other things being equal, firms want higher productivity—more labor output per dollar—which is a function of both the costs and skills of labor.
- **Financial capital: money.** Business requires money to put labor, land, plant and equipment, and supplies (raw material and intermediate goods) into productive use.
- **Social capital: institutions, relationships, and norms that shape a society's social interactions.** "Increasing evidence shows that social cohesion is critical for societies to prosper economically and for development

[2]International Economic Development Council, 2014.
[3]Increases in productivity can reduce jobs even as income grows: sophisticated equipment may be substituted for less-skilled labor, but the skilled labor that remains receives higher compensation.
[4]The explanations provided for the types of capital draw heavily on a report ECONorthwest produced for the American Planning Association: An Economic Development Toolbox (see Resources / Bibliography).

to be sustainable. Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together."[5]

These forms of capital all contribute to economic activity. The first three (natural, physical, and human) are direct inputs into the production process. The last two (financial and social) are indirect inputs. Although all businesses need financial capital, they use it to purchase and use direct inputs. Although social capital is not an explicit factor of production, it plays a critical role in economic development.

"Forms of capital" is one way to think about business needs. Economic development practitioners tend to group these business needs by direct inputs to the production process, a categorization that more closely aligns with public policy:

- **Land and built space.** Most businesses require a physical space (e.g., office, warehouse, factory, or storefront).
- **Local infrastructure and local services.** For a business and its building to function properly, they need access to appropriate infrastructure and services. At a minimum, key infrastructure required for most business includes electricity, water, transportation, and telecommunication connections. Quality infrastructure and amenities also help to attract and retain a talented labor pool.
- **Labor and entrepreneurship.** Businesses need employees who are available, trained, and productive. A specialized subset of labor is entrepreneurs, as owners or managers.
- **Access to suppliers and consumers.** Where land and buildings are located matters at both the interregional and intraregional level. Some businesses need to be close to natural resources to reduce the cost of hauling raw material inputs. Others have strong needs for certain types of intermediate products (e.g., steel, oil, specialized product components) or for a variety of services (e.g., financial, legal). For yet others, the location of markets and final customers factors heavily into location decisions.

A region cannot do anything about its locational attributes; it is where it is. It can, however, work on attributes that increase its accessibility such as improving the quality or decreasing the cost of transportation or communications infrastructure. In addition, places with concentrations of certain types of business create economies that reduce costs of production for those businesses.

This Toolkit uses these four categories in other parts of the web content report to organize the discussion of possible SED actions.

WHAT GOVERNMENT CAN DO TO SUPPORT BUSINESS ACTIVITY

If one accepts that job creation is fundamental to economic development, and that private businesses are responsible for job creation, then the government's role in economic development is clear: help businesses be profitable.

But that leaves a huge menu of possible actions for government. For every aspect of the demand and supply sides of business activity, one can find a government policy offering assistance at some level. However, not all policies are equally effective or efficient, and many raise questions about fairness.[6]

The advice here: *government should focus its efforts on areas that are important to businesses, and where government has an acknowledged role and comparative advantage in improving market efficiencies or redressing the negative spillover effects of business operation.* Governments can:

- Ensure an adequate supply of **developable land and built space.** Governments can support access to land and buildings with efficient planning, entitlement, zoning, brownfield redevelopment, land assembly, land cost write-down, building improvements. Government has a critical role to play in ensuring that this key factor of production is of high quality and is delivered in a business-friendly climate.
- Invest in **local infrastructure and services** to support industrial, commercial, and residential development. Though the private sector usually provides these services on site (e.g., it pays for the pipes, wires, and roads that connect a development to a larger infrastructure network), it usually does not build or maintain the off-site network and facilities. Business cannot grow and add jobs without infrastructure and services; they recognize government's role in providing it and expect to pay reasonable fees as part of the cost of doing business. Providing necessary and expected infrastructure

[5]The World Bank, 2014,

[6]And fairness can feed back to efficiency: e.g., subsidies and protectionist government policies give advantages to certain types of businesses and in doing so may reduce the efficiency of markets.

efficiently and fairly may be the most significant thing that local governments can do to support economic development.

- Support the development of an educated and skilled labor force - Labor is often the most expensive input into the production process. Businesses will locate where they can find the best labor *value*: a pool of appropriately trained workers. Government can help retain and attract businesses by providing high quality public education (K – 12, college and university) and training, and coordinating public and private education and training efforts to ensure a robust and responsiveness system.

  Governments may also attempt attract an educated and skilled labor force through *placemaking*. Such investment in the public realm can make a region more attractive to households and reduce the difficulties and costs to businesses of attracting and retaining labor.

  Businesses are increasingly learning that diversity in the workforce can benefit their bottom line. Government can play a unique role in promoting *access to opportunity* for diverse groups in education, training, contracts, and jobs.

- Provide effective *regional branding and marketing* to improve **access to suppliers and consumers.** Marketing efforts can create demand for existing businesses. Governments may also design marketing materials to attract new businesses, by providing information about regional economic attributes (land, labor sectors, clusters, and the business climate) that enable businesses to make good location decisions.

The list could be expanded, but the significance of the impact, the presumed necessity of government involvement, and the directness of the connection to economic development all diminish. In fact, most of what state and local governments do has some effect—though sometimes indirect—on economic development. That conclusion is consistent with the idea that everything relates to everything else—one of the fundamental tenets of sustainability.

Although governments have a suite of economic development tools at their disposal, several challenges complicate the economic development process. Most importantly, government must balance competing objectives and provide oversight efficiently. The box above provides an example.

In the U.S., local government has a primary role in making land available for industrial, commercial, and residential development. It must do so in ways that protect health, safety, and welfare. For example, it must keep development out of the wrong places, and enact adequate site development and building codes that protect air, water, and land resources, and occupant health and safety, during and after construction. This kind of oversight adds a cost that someone has to pay (e.g., with fees or taxes), but it may be valuable and efficient because it reduces even greater "external" costs (e.g., the costs of diminished health and livability to adjacent households).

The challenge for government is to provide this oversight efficiently. Typical economic development policies in this area aim at making the permitting process more efficient and transparent for businesses (sometimes described as "creating a business-friendly climate"), and making fees reasonable (or even reducing fees to encourage the growth of businesses with certain characteristics).

These considerations illustrate the inevitable tension in the broader view of economic development: it is about economic prosperity *and* quality of life. Businesses and the jobs they support will grow faster (at least in the short run) if the regulatory process is fast and cheap. But if the regulatory process is too fast and too cheap, it will not adequately protect environmental and social attributes that are important to quality of life in the short run, nor will it generate revenues sufficient to fund its role in the maintenance of those attributes in the longer run.

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WHAT IS SUSTAINABILITY?

The organization of this section parallels that of the previous one on economic development: it begins with a definition of the role of sustainability professionals, and then takes a step back to discuss the theory and practice of "sustainability," which have important implications for SED.

THE SUSTAINABILITY DIRECTOR PROFESSION

USDN's *Tool Kit for Professional Development of Local Government Sustainability Directors* broadly defines the responsibilities of sustainability directors as, "managing, coordinating, facilitating, and advising the development, implementation, monitoring, and improvement of local government policies, programs, and initiatives that promote local environmental, energy, economic, and social sustainability."[7] This definition is intentionally broad (almost any issue could fit somewhere under the headings of economic, environmental, and social), in part because these issues are interrelated and in part because sustainability professionals have different specializations and different responsibilities in different jurisdictions.

WHAT DOES SUSTAINABILITY MEAN?

Sustainability, in concept and practice, is less well defined than Economic Development, which makes the exploration of possible definitions in this section more abstract. But acquaintance with the concepts and conundrums of sustainability can help all parties in a debate about public policy related to sustainable economic development. Serious consideration of sustainability takes one beyond typical politics and business as usual. It provokes thought about what is important, what is uncertain, what is possible, and what connections from different perspectives might be made to work toward a common good.

"Sustainability" is often used as a modifier for other nouns—sustainable development, sustainable communities, sustainable agriculture—by different groups, each with different implications. Its root, "sustain," means to continue something for a period of time. That definition implies two questions for the practice of Sustainability: "What is to be sustained?" and "For how long?"[8]

- **What to sustain: the weak vs. strong sustainability debate.** When considering what is to be sustained, some argue that a resource or capital stock can be used as long as a substitute for the function of that resource can be found in the future. That argument suggests that forms of capital are highly substitutable (be they natural, physical, human, financial, or social). It also suggests that resource use today may result in advancements in knowledge, technology, and policy that will allow future generations to be at least as well off as the current ones. This line of thinking is termed "weak sustainability."

  Others argue that different forms of capital are not necessarily substitutable, as some functions and processes are unique to specific resources. This theory, termed "strong sustainability," does not preclude consumption; it simply requires a system to maintain a sufficient quantity and quality of each required resource.[9]

[7] O-H Community Partners, 2011, "Local Government Sustainability Director Job Description," Tool Kit for Professional Development of Local Government Sustainability Directors," prepared for USDN, p. 1.

[8] The section on Actions later in this Toolkit addresses a subsequent question: "What actions help sustain the things of concern?"

[9] For a full discussion of this debate, refer to R. Ayres, J. van den Bergh, and J. Gowdy, 1998, Viewpoint: Weak versus Strong Sustainability, No 98-103/3, Tinbergen Institute Discussion Papers, Tinbergen Institute, http://EconPapers.repec.org/RePEc:dgr:uvatin:19980103.

Others argue that a sustainable system is one that conserves each stock of capital in the present. The underlying belief is that different forms of capital are not necessarily substitutable, as some functions and processes are unique to specific resources. This theory, termed "strong sustainability," does not preclude consumption; it simply requires a system to maintain a sufficient quantity and quality of each required resource.[10]

- **How long to sustain: the question of time horizons.** There is not one time period that fits all systems and circumstances. Businesses may look to sustain profitability (recover costs) in two to five years. Public investments typically consider time-horizons of 20 or 30 years. A current phrase affiliated with sustainability is "seven generations," a horizon of roughly 150 years.[12]

  Sustainability does not mean that there will be no change, or that something will last forever. Businesses and species go extinct, landforms change with time. Sustainability does mean that human activity should optimize the health and resilience of systems to maximize probabilities of survival and opportunities for evolution and adaptation. It requires action in the face of imperfect information and uncertainty. As described below, there are some key principles for doing so.

DEEP QUESTIONS AND THE BOUNDARIES OF THIS TOOLKIT

Another question is about the scale of what is to be sustained. Is the primary concern about individual living things, about groups of them, or about even larger systems?

Philosophy and science note that everything is simultaneously a part and a system. At the very small level, atoms are composed of sub-atomic particles; at the very large level, the universe is composed of galaxies and may itself be part of a multiverse.[11] Closer to home, some people (e.g., doctors and social workers) must care professionally about sustaining individual humans, others (e.g., city planners) about sustaining groups of humans, and still others (e.g., philosophers and scientists) about the ability of humans as a species to survive over time. The distinction between system and part is fuzzy: it depends on where one stands and what one cares about.

Sustainability as it is being discussed in the 21st century is about systems that are larger than what are considered individual organisms (a cat, a plant), and smaller than the solar system.

The systems of concern are at least as big as species, or ecosystems of subsets of species. If they were as big as the earth as a whole, it would be hard to study and discuss them: the discussion would inevitably start dividing the system called earth into parts.

A related point is the quest to sustain the functionality of the system, or the parts the system comprises? Can the system be said to still exist without some of its parts? Scientific consensus is that the earth is about five billion years old and has changed its inorganic and organic form considerably over that time. Is change and evolution part of the system definition, or does that change mean that the old system has not been sustained?

While these are real questions, they go beyond the scope of this Toolkit and the debate about sustainable economic development. This Toolkit focuses on economic development in U.S. metropolitan areas, and actions that can be taken now to make its practices more supportive of the long-run, triple-bottom-line goals of sustainability professionals.

PRINCIPLES OF SUSTAINABILITY

The answers to questions about how to sustain a system are specific to the system and its context. There are, however, principles that show up frequently in the extensive literature of sustainability. These include:

- **Interconnectivity and complexity.** Sustainability emphasizes that an action in one system (e.g., the natural environment) will have effects in other systems (e.g., the economy). Practically speaking, interconnectivity suggests a broader range

[10] For a full discussion of this debate, refer to R. Ayres, J. van den Bergh, and J. Gowdy, 1998, Viewpoint: Weak versus Strong Sustainability, No 98-103/3, Tinbergen Institute Discussion Papers, Tinbergen Institute, available at http://EconPapers.repec.org/RePEc:dgr:uvatin:19980103.

[11] This idea is embedded in the concept of fractals (zooming in does not reduce complexity) and has been illustrated as "orders of magnitude." For an entertaining treatment, see Molecular Expressions- S#398027 or https://www.youtube.com/watch?v=0fKBhvDjuy0.

[12] These horizons are clearly anthropocentric perspective. But few government entities are spending anytime on planning and policy for 150 years out, and no metropolitan areas in the U.S. are making plans or taking actions that address the preservation of ecosystems for millennia. The reason is less about sustainability than it is about the capacity of society to come to think agreement about likely futures more than 20 - 50 years out, or to make investments (and defer consumption) for uncertain benefits more than 10 - 20 years out.

of causes and impacts, which means more complex objectives, analysis, and decisionmaking. In the language of Triple Bottom Line, the subsystems of natural environment, economic environment, and social environment are connected and should be considered simultaneously and carefully when taking any action.

- **Uncertainty, risk management, and resilience**. Despite abundant data and computational power, analysts across disciplines increasingly agree that system complexity makes accurate prediction nearly impossible in many policy and planning contexts. The implication is that this uncertainty (risk) is most effectively managed by investing in resilience. "Resilience is the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks."[13] A system tends to be more resilient when its components and functions are distributed rather than centralized, diverse rather than specialized, redundant rather than singular.

In modern economic development, tension exists between resilience and efficiency. The prevailing tendency has been to emphasize efficiency and operate as if all background conditions will be mainly stable over the life of the business or its product. In changing systems, that is a risky strategy, as it leaves little in reserve. In practice, resilience requires effective risk management, to ensure the ability of the system to withstand exogenous shocks.[14]

WHAT IS SUSTAINABLE ECONOMIC DEVELOPMENT?

The purpose of this project is to show how the objectives and principles of sustainability can be integrated, to good effect, into the practice of economic development.

The professional practice of *economic development* aims to create and retain jobs and wealth in a community. Sustainability is about longevity: sustainable practices support sustainable systems—ones that can function for a long time. The professional practice of *sustainable development* aims to meet the needs of the current generation while ensuring that future generations have equal or better opportunities to meet their needs.

Putting these concepts together, this project defines Sustainable Economic Development as the creation and retention of jobs and wealth in ways that maintain or improve social and natural environments now and into the future.

Doing SED means:

- **Thinking broader: triple bottom line.** The main mission of economic development professionals will remain job retention and creation. The adjective "sustainable" means that connections between social, economic, and environmental factors are recognized and addressed. The improvement of all three bottom lines is an unambiguous win for public policy: more jobs, a better natural and built environment, better private and public services, and more jobs and wages for people that need them most.

PERSPECTIVE MATTERS

The noun in SED is development, and the primary modifier is economic. Sustainable is, thus, a modifier of economic development, both grammatically and technically. It is one way of doing economic development. A web content report about "Economic Sustainability" would have many similar concepts, but the organization and details would be different.

- **Thinking farther: 50-year time horizon.** The typical horizon for land use and infrastructure planning is 20 years; for business and economic development planning the typical horizon is three to 10 years. Yet many systems function on longer time horizons, especially in the natural world. Sustainability requires that we think on a much longer scale. That requires being honest about uncertainty, and putting a greater emphasis on designing for resilience.

Sustainable economic development is ambitious and essential. Here we have provided a definition; but how does it translate to practice? Other sections of this web content report provide information and examples for strategy, implementation, and action.

[13] Walker, B., C. S. Holling, S. R. Carpenter, and A. Kinzig, 2004, "Resilience, adaptability and transformability in social–ecological systems," Ecology and Society 9(2): 5, accessed at http://www.ecologyandsociety.org/vol9/iss2/art5/

[14] Nature has its entrepreneurs as well: a few make genetic adaptations that expand the opportunities of their species for survival. Most do not. But because that so many attempts are made, and made incremental, the species adapts to changing background conditions.