Property rights and contractual approach to sustainable development

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Abstract Sustainable development is argued to exist in weak and strong versions. Although the use of a property rights and contractual approach has been well understood in the case of weak sustainable development, the approach has been virtually ignored in the strong version. This paper formulates a property rights and contractual approach for the strong version of sustainable development. By reference to an analytical model and examples from Hong Kong and Taiwan, a Schumpeterian process and the institution of resource entitlements are shown to be the necessary ingredients to promote the strong version of sustainable development.

Key words Sustainable development · Property rights and contractual approach · Schumpeterian process · Resource entitlements · Coase theorem

1 Introduction

Sustainable development is the most significant concept of the green movement that has become politically increasingly assertive during the last decade of the twentieth century. It is likely that the concept will dominate the policy agenda of most pluralist countries during the twenty-first century. This paper is an attempt to contribute to the articulation of the concept from an economic point of view, bearing in mind that the “received views” of sustainable development seem often hostile to economic inquiry.

A convenient starting point for articulating the concept is a definition provided by The World Commission on Environment and Development, often referred to as the Brundtland Commission. This commission defined the sustainable development in a 1987 report, Our Common Future, as: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

It is clear that the heart of the matter is a normative duty of the present generation owed to the next generations to conserve certain needs. Unfortu-
nately, the Brundtland definition is too ambiguous and elusive. What are the needs? Who is to decide the needs? To conservationists, this definition may be seen to embrace the perpetual preservation of all existing genes and other natural resources. To hedonists, however, it is the maximum possible flow of consumption and enjoyment that matters. The elusiveness of this statement also suggests no unique guidelines for sustainable development. As the UN Chronicle (June 1992, p. 46) explained, “Sustainable development is a complex concept more easily defined by what it is not, than by what it actually is. Fundamentally, it is not based on the conventional belief that economic progress and environmental protection are mutually opposing goals.”

Indeed, the subject of sustainable development is going through a stage of metamorphosis. It is now a multidimensional concept involving issues such as conservation or preservation, substitutability of manmade versus natural capital, uncertainty, irreversibility, intergenerational equity, resilience within an ecosystem, biodiversity, population growth and investment in human capital, decentralization, and community-based conservation, among others. These issues are often discussed in conceptual terms, which are not necessarily consistent with the tools or languages commonly used in neoclassical economics.

The divergent discussions of the concept of sustainable development can be said to be roughly divided into two schools of thought: a neoclassical economic school and an ecological school. The neoclassical school takes welfare or consumption per capita being sustainable or the total capital (manmade, human plus natural capital) being maintained intact as the goal of development with an implicit assumption of the substitutability of all forms of capitals. The writers in this school usually prefer to rely on voluntary exchange and market-based incentives to achieve the goal.

The ecological school (Barbier 1987; Barbier and Markandya 1990; Callicott and Mumford 1997) has a more conservative goal of keeping the stock of natural capital constant or nondecreasing in addition to the goal of sustainable total capital stocks, as they are highly skeptical of the assumed substitutability of capital stocks. The writers in this school can be sub-divided into those who prefer an authoritarian approach and those who favor a voluntary approach to achieve their normative ends. The authoritarian variant tends to rely on the conventional government command and control policies. This in turn implies that they would welcome an ultimate wise man or woman and a highly planned and centralized decision-making process to achieve its goal. The voluntary variant

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2 Manmade capital is the classical capital of produced goods. Human capital refers to the skills and knowledge embodied in humans. Natural capital is the sum of traditionally defined natural resources and stocks of assimilative capacities in the environment. See Solow (1992) and Pearce and Atkinson (1998).