

Chapter 19

Incidence of Green Accounting on Competitiveness: Empirical Evidences from Mining and Quarrying Sector

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ABSTRACT

The traditional growth theories and neoclassical economic development models have dominated the economic policies in both developed and developing economies over last decades. As a result, the global output has increased manifold due to inherent cost competitiveness ingrained in neoclassical model that heavily relies on optimization of output and resources based on the marginality principle. However, income growth has resulted in environmental degradation and depletion of natural resources as the framework of SNA does not treat these resources as fixed capital and hence, the depreciation of such resources are not treated aptly in the framework of income accounting. The environmental degradation and the recent phenomenon in global warming and the debate of climate change have taken centre-stage in the political discourse. This prompts for an urgent need for an institutionalized market oriented framework to treat environmental costs and depletion of natural resources. This paper makes an attempt to provide a framework to estimate green income from Mining and Quarrying sector by incorporating depreciation factor and examines its implications for export competitiveness of the sectors which use the output of Mining sector as inputs.

INTRODUCTION

The traditional growth theories and neoclassical economic development models have dominated the economic policies in both developed and developing economies over last decades. As a result, the global output has increased manifold due to inherent cost competitiveness ingrained in neoclassical model that heavily relies on optimization of output and resources based on marginality principle. Such optimization delivers high levels of growth as witnessed in recent decades and the income growth is reflected in the

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System of National Accounting. However, income growth has resulted in environmental degradation and depletion of natural resources as the framework of SNA does not treat these resources as fixed capital and hence, the depreciation of such resources are not deducted aptly from the income aggregates. However, the depreciation of man-made fixed capital is accounted for in the existing framework. Such zero-depreciation treatment to natural capital undermines the prices of output from the primary sector; specifically the Mining as well as Forestry sector. Since the inputs for the secondary sector and tertiary sector are output from the primary sector, such underestimation reflects on the prices of goods and services produced in an economy. In an increasingly globalised world economy, where all the countries aim at higher exports for their economic growth, cost-competitiveness determines the terms of trade, and hence the trade balance. The recent phenomenon in global warming and the debate of climate change have taken centre-stage in the political discourse. Many economists and advocates of sustainable development have long emphasized the need towards a green accounting system. In such scenario, the cost-competitiveness hitherto enjoyed by countries will decrease as accounting depreciation of natural capital would make production of output more expensive.

The environmental degradation and depletion of natural resources due to the process of industrialization and thereby achieving an export-led growth for the economy have warranted ample attention of academicians in the recent decades. Traditionally, both environmental aspects were neglected in the standard accounting system of an economy, since the objective has been to accomplish a higher rate of growth through maximum usage of available resources. With expansion and growth of an economy, the uses of environmental and natural resources become more intensive, and their excessive depletion posed a threat to the sustainability of the existing system of production.

Natural resources have been considered as *free goods* in economics. Such treatment in the System of National Accounts does not reflect the real cost of extracting natural resources. The underestimation of costs has resulted in over-exploitation of natural resources, specifically, the exhaustible resources in a competitive market economy, where firm maximizes profits by minimizing costs. However, in the wake of global environmental awareness, environmental repercussions resulting from the economic activities can no longer be neglected, especially in the estimations incomes aggregates, which represent development of an economy.

National income has been considered as one of the most important indicators of development. In the context of green accounting, on the definition of *income*, it is apt to quote J. R. Hicks (1946) here:

The purpose of income calculations in practical affairs is to give people an indication of the amount which they can consume without impoverishing themselves. Following out this idea it would seem that we ought to define a man's income as the maximum value which he can consume during a week, and still expects to be as well off at the end of the week as he was at the beginning. Thus when a person saves he plans to be better off in the future; when he lives beyond his income he plans to be worse off. Remembering that the practical purpose of income is to serve as a guide for present conduct, I think it is fairly clear that this is what the central meaning must be.

From this definition, it is amply clear the estimates of macroeconomic aggregates should represent true income figures for an economy. In SNA, national income measured in terms of *Value Added* is defined as a single measure of the value of goods and services produced in an economy during a particular period of time (one year), which ensures that none of the value of goods and services produced is counted more than once. If the income is overestimated, it provides a wrong guide, and subsequently distorts

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