

CHAPTER 2

THEORETICAL EXPOSITION OF DEVELOPMENT ECONOMICS AND ENVIRONMENT

2.1 INTRODUCTION

This chapter deals with the concepts of development economics and environment. It outlines different concepts relating to development and underdevelopment. By dependence is meant a situation in which the economy of certain countries is conditioned by development and expansion of another country to which the former is subjected. It seeks to clarify concepts used to define development and underdevelopment and on how economic growth can impact negatively on sustainable development. A brief outline of sustainable development is also provided. Sustainable mitigation activities should strengthen a community's social, economic, and environmental resiliency.

To put the chapter into proper perspective a discussion on the pioneers of the concept developmental economics is succinctly provided. Marx's theory of the metabolic rift which seeks to link capitalism and environment teaches of capitalism's intensive, not merely extensive, destruction of the environment. Since economic development cannot be tackled in isolation, because it depends on the global balance of forces the implication of Washington Consensus and trade liberalization on developmental economics and environment forms part of the study. The failure of the Washington Consensus to rise to the challenge of human development, especially in the South, requires a look beyond its research, analysis and policy agenda. Trade liberalisation can harm the local environment as a result of the composition effect. This chapter also deals with the millennium development goals as one of the important components of environment and economic development. The state has an important role to play in both strategic areas and for this reason the notion of developmental state forms part of this chapter.

2.2 THEORY OF DEVELOPMENT AND UNDERDEVELOPMENT

Kuznets (1993:49) suggests that the long alteration in the rate of growth in population can be seen partly as a cause, partly as an effect of the long swing in income inequality which was associated with a secular rise in real per capita income levels. The long swing in income inequality is also probably closely associated with the swing in capital proportions, and narrower inequality for lower, countrywide saving proportions. According to Milonakis (2006:269) economic history and development have always been intimately related. The issues of development and growth have been the overwhelming preoccupation of economic history from its inception right to the present. Salvatore and Dowling (1977:1) define economic development as the process whereby a country's real per capita gross national product (GNP) or income increases over a period of time through continuing increase in per capita productivity.

Lal (1992: 32) draws distinction between poverty alleviation and reduction of inequality of income. According to him, most moral codes accept the view that, to the extent feasible, it is desirable to alleviate abject, absolute poverty or destitution. That alleviating poverty is not synonymous with reducing the inequality of income can be seen by considering a country with the following two options. The first option leads to the rise in the income of all groups, including the poor, but to larger relative increases for the rich, and hence a worsening of the distribution of income. The second leads to no income growth for the poor but to a reduction in the income of the rich; thus the distribution of income improves but the extent of poverty remain unchanged.

Valenzuela and Valenzuela (1993: 205) argue that the unequal development of the world goes back to the sixteenth century with the formation of a capitalist world economy in which some countries in the centre were able to specialize in industrial production of manufactured goods because the peripheral area of the world which they colonized provided the necessary primary goods, agricultural and mineral, for consumption in the centre. Contrary to some assumptions in economic theory, the

international division of labour did not lead to parallel development through comparative advantage. The centre states gained at the expense of the periphery.

Valenzuela and Valenzuela (1993: 210) distinguished between modernization perspective and dependency perspective. The primary focus in the modernization perspective is on individuals or aggregates of individuals, their values, attitudes, and beliefs. The dependency perspective, by contrast, is structural or macro-sociological. Its focus is on the mode of production, patterns of international trade, political and economic linkages between elites in peripheral and central countries, group and class alliances and conflicts. Both perspectives are concerned with the process of development in national societies. Wallman (1977:5) writes that non-development is explained by some impediment to the normal if not inevitable process of development. Since the evolutionary framework is so widely and variously used, the list of diagnosed impediment is very long. It ranges from inappropriate local institutions to the functioning of the international political-economic system, whether natural or conspired.

The highly unequal distribution of income that prevails in many countries of the periphery is explained by dependency theory as a result in large part of the fact that the accumulation and expansion of capitalism is controlled by powerful foreign actors. The few who became linked with the international sector of the economy are thought to profit from the infusion of foreign capital at the expense of the majority of the population, which remains or became increasingly "marginalized", since the superior resources of transnational corporations retard the emergence of a national industrial bourgeoisie, while the advanced capital intensive technology that is imported from abroad fails to absorb labour surpluses, and in some sectors increases them (Muller 1993 :268).

2.3 WHAT IS SUSTAINABLE DEVELOPMENT?

Sustainable development theory can be traced back to economic development theory, which simply defined it as the analysis of the economic progress of countries, taking into consideration sociological, anthropological, historical, political and even ideological

factors (Schwabe 2002:11). Mileti and Peek-Gottschlich (2001: 65) hold a view that disasters are more likely where unsustainable development occurs, and the converse is also true: disasters hinder movement toward sustainability because, for example, they degrade the environment and undercut the quality of life. Sustainable mitigation activities should strengthen a community's social, economic, and environmental resiliency, and vice-versa.

As reflected in the key instruments on sustainable development, namely the Stockholm Declaration on the Human Environment, the Brundtland Report, the Rio Declaration on Environment and Development and the Johannesburg Declaration, an important theme of this paradigm is the notion of limiting the influence of economic growth imperatives, including profit making. Sustainable development is often criticised for its indeterminacy, the idea that it is so flexible that it means different things to different constituencies (Tladi 2007: 402). Three models of integration can be distinguished, and consequently, three models of sustainable development. In the first model economic growth and related values take pole position. In a second model, the ecology centred model, the ecology is the prime concern. A third model, the human needs-centred model, places the general well-being of humanity centre stage. This is in contrast to the simplistic dual dichotomy presented by eco-centrists where an eco-centric model is represented as a weak model (Tladi 2004: 168).

Dockel (2002:2) writes that at current world growth trends, the per capita income will double by 2035 and quadruple by 2070. Given these numbers, and the associated tendency in environmental degradation, one can appreciate the view that, based on past experience, such growth would be unsustainable. O'Hara (1998:45) defines sustainability from ethical point of view. Accordingly, the reason for framing the integration of sustainability into economics in terms of the underlying ethical framework is twofold. First, sustainability, by definition, addresses the relationship between economics and the environment, and thus focuses on the welfare's limitation of economics itself. According to Schwabe (2002: 12) sustainable development is a continuation of the principles of economic development but with more emphasis on the

social well-being of people and the introduction of the environment as a major component.

2.4 THEORETICAL FOUNDATION OF DEVELOPMENTAL ECONOMICS

It is important to discuss some of the pioneers of developmental economics. It is acknowledged that the concept of developmental has a firm foundation in the history of humankind. For the purpose of this study the following are discussed:

2.4.1 German Economy

Reinert (2005:50) writes that different types of economics tend to be influenced by the professions from which the economists are recruited. English economists were, to a large extent, merchants and traders who brought their professional perspective with them. Adam Smith spent many years as a customs inspector, adding to the *commercial* bias of English economic theory. Indeed, a common German criticism of English classical economics has been that it reduced the science of economics to *catalectics*, that is, to a science limited to the study of barter, trade and exchange. German economists, by contrast, were involved in the management of the many small German states. The term "cameralism" itself originates in the *camera principis* or *Krammer*, that is, treasury. The perspective of the "cameralists" was that of public management, of taxes and institutions, laws and regulations. Their view of economic development was, therefore, very practical, and led them to a consideration of production- rather than trade alone- and the balance between different economic activities.

German economics, with an unbroken tradition from 1650 to 1950, is uniquely valuable as a full-fledged alternative to today's mainstream economics. This tradition represents the most consistent bulwark against mechanistic and simplistic economy solutions of all political shades. Creating, motivation, directing and controlling market forces in order to enhance human welfare has been the leitmotiv of German economic theory since its inception (Reinert 2005:65).

2.4.2 Ricardo and Mill

Patnaik U (2005:31) is of the view that Ricardian theory of comparative advantage contains a logical fallacy when used to argue that mutual benefit necessarily results from trade. Ricardo's two-country, two-commodity model assumes that both goods can be produced in both countries. It is then shown that even if unit production cost is lower for both goods in one country compared to the other, provided the relative costs for production differs, it would be of mutual benefit for each country to specialize in the good in which it has lower relative cost and exchange with each other. The benefit arises from an actual increase in total output owing to specialization, such that for each country there is vector-wise improvement in the consumption of the two goods through exchange, that is, a higher level of one for at least the same level of the other, in the post-trade situation compared to the pre-trade one.

A fallacy in an argument can arise either when the process of reasoning to draw an inference from the given premise is not correct, or when the assumption or the premise of the argument is not true. Fallacies can be of various kinds-material fallacies arise from an incorrect statement of facts, verbal fallacies from an incorrect use of terms and formal fallacies from an incorrect process of inference. Ricardo's process of reasoning is valid, but a material fallacy arises because his assumption or premise is not true of a general theory of trade. There is a serious problem with the assumption, which is that both goods are producible and indeed are actually produced, in both countries. Only on this assumption can the shifting of resources from one good to the other, and hence the transformation of one good to the other, be postulated. Ricardo's argument is applicable only to countries with a similar production structure, where the assumption of inapplicable argument when considering trade between temperate advanced countries and tropical developing countries, because such trade involves goods which cannot ever be defined (Patnaik U 2005: 32).

According to Prendergast (2005: 94), Mill's major innovation was his distinction between the laws of production and the laws of distribution. According to Mill, the laws of

production were real laws of nature, dependent on the properties of objects and not alterable by human will, while the laws of distribution were matters of human institution. As such, the laws of distribution were subject to human control and had a provisional character likely to be much altered by the progress of social improvement.

Like Ricardo, Mill saw the economy as tending to a stationary state. Mill did not regard this as a problem because he thought that it was only in backward countries that increased production was still an important object. In most advanced countries, what was needed was better distribution. The indispensable means of achieving this was a 'stricter restraint on population'. Other measures (for example, inheritance taxes) aimed at the equalization of fortunes would also be helpful, as would schemes for sharing profits, either directly or through cooperative societies (Prendergast 2005: 95). The method Ricardo employed in dealing with this problem gave to his analysis a tone of generality. His prose style-by contrast with that of Smith and Malthus was spare and formal. Moreover, his acute analytical perception led him well beyond the practical issue that had originally turned his mind beyond to theoretical investigations. It was the more general version of his model that was to leave a lasting mark on the techniques of economic theorizing (Barber 1967: 77).

2.4.3 Keynesian Theory

According to Ghatak (1995: 52), in the Keynesian theory, an expansion of money supply will raise bond prices and reduce interest rate, increase the level of investment and output and perhaps lead to a secondary effect on prices. Should there be excess capacity, the effect on prices of a rise in money supply will be even less. If it is concerned with an under-employment situation, prices should not be affected so long as the supply of output with respect to money supply is elastic. Thus the effect could well be on income, output and employment. It is difficult to see the application of Keynesian theory to the special features of an underdeveloped country.

Ghosh (2005: 112) writes that like Keynes, Kalecki emphasized that while ex-post savings and investment are equal, it is investment that is the active factor determining savings; further, the equality is brought about not by changes in the rate of interest but by changes in the level of economic activity. This was because Kalecki believed that, in general, there is unutilized capacity in capitalist economies. Within investment, he made the important distinction between investment decisions and actual investment outlays (which follows with a time lag). This is important because investment operates immediately to increase the level of output, but also raises capacity, and the increased capacity affects investment decisions in the next period. This, in turn, limits future output and creates over time a pattern of cyclical movement of output.

Ghosh (2005:113) is of the view that the most rational course for a government wishing to increase public spending in a context of unemployment would be either to spend on investment and therefore contribute to future development, or to increase expenditure or reduce taxation in such a way as to improve the consumption of the masses. In general, in advanced capitalist countries, Kalecki felt that the means chosen is neither of these but, rather, government expenditure on armaments. This is wasteful and destructive but nonetheless preferred by workers in the developed countries, because it provides levels of employment and wages that would otherwise not be possible in the absence of such spending.

Nell (1988:87) is of the view that surplus value comes into being as a result of exploitation-speed-up- and the process of exchange enables it to be appropriated at the very time that goods are swapped to set up a new round of production. But the entire process is accomplished through the circulation of money. An account of surplus value which remains in barter terms is misleading and untrue to Marx. Money- the universal equivalent as circulating medium-provides the crucial incentive. Beaud and Dostaler (1995: 25) write that following a tradition dating back to Aristotle and the Scholastics and which was affirmed by Sidgwick, Marshall and his own father John Neville Keynes, Keynes considered economics as moral science, he wrote that economics is essentially

a moral science and not a natural science. That is to say, it employs introspection and judgments of value.

2.4.4 Karl Marx

According to Marx, Mills aptly sums up the whole essence of the matter in a single concept when he describes money as the medium of exchange. The nature of money is not, in the first instance, that property is externalized within it, but that the mediating function or movement, human activity, by means of which the products of man mutually complement each other, is estranged and becomes the property of a material thing external to man, viz. money (Marx 1992: 260). Patnaik P (2005: 62) posits that Karl Marx was perhaps the first development economist, using the term for anyone who studies not only development under capitalism, but also development of capitalism. Classical political economy, which did not see history beyond capitalism, was less concerned about history before capitalism, that is, about the historical conditions for the emergence of capitalism itself, notwithstanding the several deep historical insights contained in Adam Smith's work. Szentes (2005: 148) is of the view that the economic theory of Karl Marx can also be considered a theory of development for at least three reasons. First, it contributed a lot to theoretical discussion of contemporary development issues, many of which are still relevant for the economics of development today. Second, by interpreting economic phenomenon and processes in a socio-political context, Marxian theory was a precursor of the kind of interdisciplinary approach considered a distinctive feature of development economics after World War II. Third, it presented an overall approach to the historical development of human society.

It should, perhaps, be made clear that when Marx spoke of the mode of production as the prime determinant, he was not offering a simple technological explanation of society, as some critics and commentators have assumed. According to his use of the term, it included, not only the "forces of production", but also the "relations of production". These latter referred to relations between men, which were simply an aspect of the relations in which men stood to the productive forces: for example, the

relationship between masters and slaves in a slave economy or of capitalists and workers in contemporary society, depending on their respective characters as owners and owned or as propertied and propertyless. It was essentially the contradiction between the productive forces and their development, on the one hand, and the prevailing relations of production on the other, which, in the form of a sharpened antagonism between classes, caused the disintegration of a mode of production and its eventual supersession (Dobb 2001:4).

Marx's political economy took a different view. He argued that accumulation was unavoidable under capitalism. For it was a consequence of the competition between capitalists in pursuit of profitability through productivity increases. Larger capitals had better chances of success and survival. For Marx, there were neither market nor natural absolute barriers to growth under capitalism, but the growing economy would intensify stresses and strains that could not be accommodated by market mechanism alone. As a result, economic growth would be punctuated by crises of greater or lesser severity and frequency. These, once resolved, would furnish the basis for a renewal of growth, unless capitalism was itself overthrown by socialist revolution (Fine 2006:69).

Patnaik P (2005: 90) added that Lenin's writings emanate from an intellectual integrity that has a blazing quality, which cauterizes, as it were, all humbug based on incorrect, class-biased and fallacious reasoning. Lenin applied the Marxist method of analysis consistently to the question of the development of capitalist relations of production, not only to Russia before the Revolution and to the Soviet Union after the Revolution, but also to other countries, including developed industrial nations like the USA. He thereby produced a rich corpus of work that spans the disciplines of history, sociology and economics, which helps to critique present-day fallacious reasoning relating to agrarian relations and guides in the direction of logically correct analysis.

A careful reading of Marx and Engels' work leads to the realization that their political economy, firmly grounded on materialist premises, contains important theoretical categories and methodological guidelines for the theoretical analysis of the

determinants of the current ecological predicament, and for the development of a Marxist theory. Inherent in the premises of historical materialism is the notion of the co-evolution of nature and society. Human development, the unfolding of human potentials, and the emergence of new needs and talents presuppose the material production and reproduction of life and of means of subsistence, processes through which both humans and the nature change and are mutually sustaining (Gimenez 2001:2).

The growing scale of the capitalist economy and the weight that it is imposing on a limited biosphere are not everything. More important, ultimately, is the actual integrity of ecosystems and the basic biogeochemical processes of the earth system. Here, Marx's theory of the metabolic rift helps to understand capitalism's intensive, not merely extensive, destruction of the environment. Marx's vision had included an ecological element from the beginning. He wrote of the environmental damage wrought by industrial capitalism, in the form of the universal pollution to be found in large towns (Foster 2009:10).

According to Magdoff (2002: 2), in the mid nineteenth century, Marx pointed to what he called a "metabolic rift" in which the natural cycling of nutrients was broken by developments within capitalism. As food was shipped to cities to provide the needs of the burgeoning populations created by early industrialization, soil became depleted of nutrients at the same time that residues of food waste—mainly human sewerage and garbage—fouled the rivers. The ecological problems flowing from this "metabolic rift", seen in its broadest sense as characterizing all capitalism's interactions with nature, are very much with us at the present time. Pepper (1993: 52) maintains that Marxists by and large believe that environment, feminist, peace and third world campaigns are, or should be, all part of the ultimate struggle against global capitalism itself. From their materialist perspective the ills which these campaigns highlight are outgrowths of capitalist relations of production. Such campaigns, furthermore, should focus less on the reform of the individual's attitudes and values; more on the collective political struggle of the world "proletariat".

Marxism reminds us that for most people, nineteenth-century environmental problems were clearly socially inflicted, though economic exploitation associated increasingly with urbanisation and capitalist industrialisation (including industrialisation of agriculture). This is substantially true today, world-wide (Pepper 1993: 63). Marx did not miss the importance of this socio-ecological relationship. He pointed out that humans are dependent upon nature, given that it provides the energy and materials that make life possible. What capitalists focused on exchange value and short-term gains, Marx explained that the earth is the ultimate source of all material wealth, and that it needed to be sustained for "successive generations". The "conquest of nature" through the endless pursuit of capital, which necessitated the constant exploitation of nature, disrupted natural cycles and processes, undermining ecosystems and causing a metabolic rift. Engels warned that such human actions left a particular "stamp ... upon the earth" and could cause unforeseen changes in the natural conditions that exact the "revenge" of nature (York *et al* 2009: 8).

2.5 WASHINGTON CONSENSUS

Deraniyagala and Fine (2006:47) write that the orthodox approach to international trade is based on the proposition that free trade promotes economic growth and global prosperity. The neoliberal resurgence in international economics since the early 1980s gave almost axiomatic status to the virtues of trade, a view that is now the conventional wisdom. Belief in free trade was an essential part of the "Washington Consensus" propagated by neoliberal resurgence. This orthodox position on international trade and trade policy consists of several propositions on the benefits of free trade: optimizing global resource allocation; maximizing consumer welfare; increasing productivity growth and promoting economic growth. In contrast, government intervention in trade policy is generally presented as distortionary, reducing welfare and growth. Thus, countries with liberal trade regimes supposedly grow faster than countries with 'closed' regimes, while trade liberalisation, by lowering tariffs and non-tariff barriers, should be the focus of the trade policy.

According to Van Waeyenberge (2006:21), the World Bank has since attempted to confront mounting criticism by expanding the reach of its agenda, in the course affecting the broader development agenda. As such, its discourse has moved from its initial focus on stabilization and structural adjustment under the Washington Consensus to promotion of participatory approaches, incorporating environmental concerns and attention to 'governance', institutional reforms, etc. This trend culminated in the Comprehensive Development Framework proposed by its president in the late 1990s, and the concomitant call for a post-Washington Consensus by its senior vice president and chief economist. Development was once again allowed to become a 'broader' process, evoking echoes of the developmental mandate associated with the McNamara era of the past.

The ostensible current focus on poverty reduction is better than the earlier emphasis on stabilization, adjustment and liberalization, but much of the recent discussion of poverty reduction is palliative, rather than developmental in nature, focussing on welfare and distribution without creating conditions for sustainable economic progress. On the other hand, there is widespread suspicion that including poverty on the economic development reform agenda has basically served as sugar-coating on the Bretton Woods institutions' economic liberalization agenda despite their by now well known inequitable and contradictory consequences. The failure of the Washington Consensus to rise to the challenge of human development, especially in the South, requires us to go well beyond its research, analytical and policy agenda. Instead of just adding poverty, or institutions, or governance, or social capital, or culture, or whatever the new policy 'flavour of the month' may be, commitment to rigorous economic analysis as well as egalitarian, balanced and sustainable development requires not only critical analysis of Washington Consensus analyses and policies as well as their consequences, but also of the alternatives currently on offer in order to develop feasible and viable development alternatives appropriate and equal to the challenges at hand (Jomo 2005:6).

Fine (2006:107) echoes sentiments of Jomo. He holds a view that the failure of the Washington Consensus to rise to the challenge of human development, especially in the South, requires more research, analytical and policy agenda. Instead of just adding poverty, or institutions, or governance, or social capital, or culture, or whatever the new policy 'flavour of the month' may be, commitment to rigorous economic analysis as well as egalitarian, balanced and sustainable development requires not only critical analysis of Washington Consensus analyses and policies as well as their consequences, but also of the alternatives currently on offer in order to develop feasible and viable development alternatives appropriate and equal to the challenges at hand.

Williamson (1999: 4) resorts to populist interpretation of interpretation of the Washington Consensus as meaning market fundamentalism or neo-liberalism: laissez-faire, Reganomics, let's bash the state, the markets will resolve everything... He does not subscribe to the view that such policies would be good for poverty reduction. Poverty reduction demands efforts to build the human capital of the poor, but on the populist interpretation the Washington Consensus signally fails to address that issue. An active policy to supervise financial institutions is needed if financial liberalization is not to lead to financial collapse, which invariably ends up by using tax revenues to write off bank loans that were made to the relatively rich. And some measure of income redistribution would be recommended by any policy that was primarily directed at reducing poverty rather than simply maximizing growth, but all income redistribution is ruled out as plunder by market fundamentalists. For these reasons, he agrees that the populist interpretation of the Washington Consensus is consistent with the World Bank's emphasis on poverty reduction. Mohamed and Roberts (2008:77) warn that the relationships between South African government departments have created a situation where finance and macro-economic policies take precedence over and dominate other policies. The South African government's choice to follow the Washington Consensus in order to conform to the expectations of financial markets and credit ratings agencies was made clear with the adoption of GEAR as "non-negotiable".

2.6 TRADE LIBERALIZATION

Dockel (2002:8) writes that given the production structure in a country, the scale effect leads to an increase in economic activity and to an increase in pollution. The scale effect in turn is counteracted by the demand for a cleaner environment, the so-called technique effect that is associated with higher per capita income, where consumers are demanding stricter environmental standards and are willing to pay more for such goods. Such a classification is convenient for descriptive purposes; it is however the net effect that is relevant. A review of literature shows that there is no one to one relationship between trade and the environment. Empirical studies, on the other hand, confirm the theoretical assertion that trade liberalisation can harm the local environment as a result of the composition effect.

According to Weisbrot (2005: 3), the term "free trade" is not just a one-sided slogan; it is also accurate and misleading as a description of current commercial agreements from an economic point of view. This is not a technicality: this is an economic misunderstanding that is so huge that if it were corrected, the entire debate over trade and global economic integration would change considerably. The easiest way to see this is to look at own government's most important foreign commercial policy objective today, which is getting the rest of the world (namely low and middle-income countries) to enforce U.S.-style patent and copyright laws. This goal is embodied in the Trade-Related Aspects of Intellectual Property Rights (TRIPS) agreement of the World Trade Organization (WTO).

By getting its opponents to accept the term "free trade" and "free markets" as a description of current commercial policies, the advocates of these policies have, for now, won most of the public relations battle. It allows them to portray their policies as promoting economic efficiency, and their critics as special pleaders seeking to impose costs on society for their own narrow interests. This misleading framework must be jettisoned, if environmental, or public interest groups generally are to have a chance at winning these crucial policy debates. From an environmental point of view, this can only

be seen as good news. Population growth rates in developing countries are higher, but they have also slowed considerably in recent decades. But people in high-profile countries, who comprise less than 20 percent of the world's population, account for at least three-quarters of the world's consumption. The United States has only about a quarter of the population in India yet puts about three times the amount of carbon emissions into the air. To slow the rate of environmental destruction, a slower-growing or even shrinking population in the rich countries is enormously positive (Weisbrot 2005:4).

This expansion of the free trade mandate and the expansion of the power and jurisdiction of the WTO, which is now the most powerful multilateral instrument of the global corporations, is a mortal threat to development, social justice and equity, and the environment. And it is the goal that must be thwarted at all costs, forget about sustainable development, social justice, equity and the environment if the big trading powers and their corporate elites have their way and launch another global round for liberalization during the WTO's fifth Ministerial Assembly in Mexico in 2003 (Bello 2004:110).

Copeland and Taylor (2003: 28) examine the effect of trade on the environment in a small open economy facing fixed world price to emphasize three major points. First, the effect of trade liberalization on the environment depends on a country's comparative advantage, which in turn depends on country characteristics. There is no reason to have the same effect on all countries. Second, the effects of trade on the environment depend on whether the environmental policy is rigid or instead responsive to challenges brought about by trade. When policy is rigid we will show that outcomes depend on the type of environmental policy instruments used by regulators. Finally, the welfare effects of trade liberalization are sensitive to both a country's comparative advantage and the flexibility of its policy regime.

If pollution regulations are unresponsive then the welfare effects of trade liberalization depend in the pattern of trade, the type of policy instrument used, and the existing

stringency of pollution regulation. If the number of pollution permits is held fixed during trade liberalization, then freer trade has to raise welfare and has no environmental consequences. But if comparative advantage in dirty goods, and decreases it in countries with a comparative advantage in clean goods. And when pollution does not fully internalize externalities, countries with a comparative advantage in dirty goods may loose from trade (Copeland and Taylor 2003: 33).

A much stronger version of the pollution haven effect is what the literature has referred to as the pollution haven hypothesis. Under this hypothesis, free international trade leads to the relocation of dirty good production from the stringent regulation countries (the North) to lax regulation countries (the South). That is, the pollution haven effect is so strong that it more that offsets other motives for trade in dirty goods. An often-stated corollary is that pollution-heaven-driven trade raises pollution in the developing countries and lowers it in the developed countries (Copeland and Taylor 2003: 44).

Unsurprisingly, liberalisation has reinforced the historical pattern of comparative advantage based on cheap energy and other resource-based exports. The one important exception in terms of export performance is motor vehicles and parts, which has had an incentive programme premised on continued, albeit reduced, protection. The capital- (and skill-) intensive nature of much of resource-based and energy intensive exports, including steel and aluminium, means that liberalisation has favoured these factors of production, and trade flows have not reflected the abundance of unskilled labour, contrary to the predictions of the orthodox economics (Mohamed and Roberts 2008: 85)

The 1990s therefore represents at least a structural break if not a positive turning- point for economic growth in South Africa. The stagnation of the 1980s was reversed, with renewed growth driven by productivity gains from the augmentation of technology and greater efficiency. Trade performance improved and foreign markets became increasingly important. Of particular relevance is the considerable empirical evidence suggesting that trade liberalization enhanced productivity and economic growth.

However, this positive growth-effect is insufficient to conclude that liberalization has had a positive effect on employment and wages and household incomes (Thurlow 2006:3).

2.7 DIALECTICAL LINKS BETWEEN ENVIRONMENTAL DEGRADATION AND ECONOMIC DEVELOPMENT

Environmental issues are a function of Developmental Economics. The theory involves as envisaged in the Brundtland Report, among others, population growth and development, food security, species and ecosystems, energy consumption and energy sources, industrialisation, urbanisation and migration (Van Wyk 2004: 26). Since environment, economy and demographic systems are naturally bound by intense and complex interactions- which to a reasonable extent arise out of the direction and extent feedback- the persistence of stochastic shocks in one of the systems, (i.e. environmental, population or economy) permeate the environment-demography-economic growth system as a whole (Azomahou and Mishra 2009:1).

Poverty threatens food security and biodiversity. Poor farmers are unable to invest in farm improvements to raise yields sustainable, such as grade cattle, improved seed and other farm inputs, and conservation practices. High regional rate of poverty result in inadequate effective demand to build the market size needed to justify investment in food market infrastructure and institutions. Poverty often reflects the lack of rights to land, water and forests, and the income options they provide. When income-earning opportunities are limited in the farm and non-farm manufacturing and service sectors, pressures on natural resources for subsistence use and cash income increase. Poverty is also associated with higher human fertility rates that indirectly increase food demand and supply (Scherr 2003: 4).

Biersteker (2000:154) writes that globalization as a change of mode of operation of institutional actors is not restricted to firms. It is also an evidence of a shift in orientation within non-profit non-governmental organizations (NGOs). They are no longer just 'thinking globally and acting locally', but many are beginning to act globally as well.

Environmental NGOs like Greenpeace have larger annual budgets than the United Nations Environmental Program (UNEP) and have begun to play a significant role in influencing the agendas of international environmental negotiations. Ecocentrism views humankind as part of global ecosystem, and subject to constrain human action, particularly through imposing limits to economic and population growth. There is also a strong sense of respect for nature in its own right as well as for pragmatic systems reason. Ecocentrics lack faith in modern large-scale technology and the technical and bureaucratic elites, and they abhor centralisation and materialism. If politically to the right they may emphasise the idea of limits, advocating compulsory restraints on human breeding, levels of resource consumption and access to nature's commons. If to the right, their emphasis may be on more on decentralised, democratic, small-scale communities using 'soft' technology and renewable energy, acting locally and thinking globally (Pepper 1993:33).

Simon (2008:2) is of the view that if revolutionary solutions are increasingly required to address the ecological system, this is precisely what the existing social system is guaranteed not to deliver. Today's environmentalism is aimed at those measures necessary to lessen the impact of the economy on the planet's ecology without challenging the economic system that is in its very workings produces the immense environmental problems. The so-called "the environmental problem" is in the end primarily a problem of political economy. Even the boldest establishment economic attempts to address climate change fall far short of what is required to protect the earth—since the "bottom line" that constrains all such plans under capitalism is the necessity of continued, rapid growth in production and profits.

Ecosystem rehabilitation and sustainable development, more specifically, sustainable management of natural resources are closely interlinked with each other, one leading to the other. The interplay of ecology, sociology, economics, anthropology and culture is to be tied together to constitute a meaningful rehabilitation strategy, with obvious trade-offs. This implies that we have to make a series of compromises in such a way that we do not lose track of the ultimate objective, namely, rehabilitation and management of

natural resources in a manner that satisfies current needs, at the same time allowing for a variety of options for the future (Ramakrishnan 1998: 220).

The greatest single case of environmental degradation and black impoverishment was the institutionalization of apartheid system itself. The massive population displacement this engendered wreaked devastation upon the natural resource base in areas of intense population concentration. Apartheid as a human resource management strategy was a disaster, in terms of both poverty alleviation and environmental management, in those areas designated for black settlement. Not least, this was because it drove major wedge in people's mind between environment protection and meeting people's basic needs (Munslow 2001: 500).

Akinboade *et al* (2002:3) are of the view that the production, transformation and use of energy generate substantial environmental impacts in South Africa. In the country, the coal fuel cycle is the dominant source of air pollution and overall waste generation. Liquid fuels in the transport sector are the second major source of air pollution whereas in the rural areas the major pollution related problem among households is related to indoor pollution resulting from the inefficient burning of low quality fuels, mainly wood and coal which affect health and visibility adversely.

2.8 ENVIRONMENTAL KUTZNETS CURVE HYPOTHESIS

Dockel (2002:12) writes that there is some empirical evidence that suggests that pollution increases at the earlier stages of development and decreases after a certain level has been reached. This phenomenon is called the Environmental Kutznets Curve (EKC). It might be valid for some types of environmental indicators of notably local pollutants. With respect to the more global pollutants this does not seem to be the case. Nguyen Van and Azomahou (2007: 291) assert that far from being an academic curiosity, the debate on the relationship between environmental quality and economic growth is of importance to national and international environmental and economic policy-making. In particular, the Environmental Kuznets Curve (EKC) hypothesis, which

states an inverted U-shaped relationship between environmental degradation and economic growth, raises several conflicting issues. This hypothesis means that environmental degradation is initially associated with economic development on average, and that further economic development is associated with cleaner environment on average. The EKC hypothesis underlines the crucial role of environmental policies to reduce negative impact of economic activities on the environment during the development process.

According to Copeland and Taylor (2003: 6), what is perhaps striking about the EKS literature is that the limited role that the theory has played in development. This has created difficulties in interpretation since the basic finding is consistent with many possible explanations. For this reason, they begin by asking what theory has to say about the relation between income and pollution before moving on to the empirical work. Despite the proliferation of papers in this area, very little work has gone into evaluating the various hypotheses offered for the EKC, or more generally in examining how the interaction between different sources of growth interact with income and other effects to determine the relation between growth and pollution. Unless we can clarify the casual mechanisms involved, the work will be of little use in helping us to understand how growth or trade affect the environment (Copeland and Taylor 2003: 23).

The EKC literature is important in several aspects: it brought the empirical study of aggregate pollution levels into the realm of economic analysis; it debunked the commonly held view that environmental quality must decrease with the economic growth; and it provided highly suggestive evidence of a strong policy response to pollution at higher income levels. The literature expanded rapidly because of the ease of estimation and the potential relevance of its findings. (Copeland and Taylor 2003: 27). The reason to study deforestation is that it is an important environmental indicator. It mixes the local and global dimensions of environmental degradation. The local characteristic of deforestation follows from the fact that forests are an important natural resource and contain a great amount of biodiversity resources. Consequently,

deforestation will cause a loss in biodiversity. With regard to the global dimension, it is well known that forests act as sources of carbon sequestration (Nguyen Van and Azomahou 2007: 292).

Smith (1994: 46) asserts that not only is environmental degradation itself caused by poverty. For many of the world's poorest people the 'environment' is their very means of survival: forests, rivers, land, are what they rely upon for their basic needs. When countries become involved with international institutions, multinational companies, or international bankers, they often find their economy becoming skewed towards cash crops and export orientated agriculture. Results include loss of rain-forests and desertisation to produce an environment unable to support its population.

2.9 WORLD ECONOMIC CRISIS

The key point about the New Wall System is that it has enabled financial firms to regularly inflate asset bubbles (from one asset type to another), then take profits, survive the burst bubble, and move on to the next asset type and the next country to initiate the next bubble. Through the process, they have been able to generate gigantic profit- to get rates of return of 20 percent and more out of economies growing at 5-7 percent or less, redistributing income upward to themselves and the top percentiles of national income distributions. They have invested some of their profit in lobbying legislatures and bribing officials to enable their serial bubble-blowing to continue unimpeded (Wade and Ocampo 2009: 34).

However, the laws of motion of capitalism will keep operating so long as the capitalist system remains intact, independent of the wills and against the best wishes of the upper-middle-class environmentalists. Sooner or later, those truly conscientious environmentalists will have to choose between the commitment to ecological sustainability and the commitment to an exploitative and oppressive social system. Furthermore, with the deepening of the global ecological crisis and the crisis of global capitalism in general, it may soon become increasingly difficult for the capitalist system

to accommodate the material privileges of the upper middle class while simultaneously meeting the requirements of production for profit and accumulation (Li 2008: 9).

There are many good reasons to think that the patterns and processes which held for the past one hundred years-e.g., economic growth- may not hold for the next one hundred, a point on which the present economic crisis should perhaps focus our attention. Justifying shifting costs from the present to the future based on the assumption that future generations will be richer than the present ones is highly dubious. In relation to the economy as well as the ecology the future is highly uncertain, though current trends clearly point to disaster. If global climate change, not to mention the many other interconnected environmental problems we face, has some of the more catastrophic effects that scientists predict, economic growth may not be hampered, but the entire economy may be undermined, not to mention the conditions of nature on which we depend. Therefore, future generations may be much poorer than present ones and even less able to afford to fix problems we are currently causing (York et al 2009: 9).

In his examination of crises of the contemporary world capitalist system, (Tabb: 2009:11) avers that today a quarter of all deaths in the world have some link to environmental factors and most of the victims are poor people who are already vulnerable due to malnutrition and lack of access to medical care as food prices continue to rise. Seventy-five percent of the world poor people are rural and most of them depend on agriculture.

2.9.1 Millennium Development Goals

Geda and Shimeles (2007: 297) write that improving health, education, employment and equality have been long-term, as well as recent Millennium Development Summit goals (MDGs) for Africa. Over the past few decades, the lessons learnt, statistics, and data that have accrued now inform the debate on social development policy. Comparative data from the 1990s show that human development is highly correlated with the status

of and access to education and healthcare. A number of countries have reported tangible progress in these sectors as a result of increased spending. Illiteracy rates have declined by nearly half since 1990, though gender disparity has remained largely unchanged. Encouraging results were also recorded for gross enrolment ratios and infant mortality rates, in which North Africa, followed by East and then Southern Africa, showed relatively improved performance.

Economic history and development have always been intimately related. The issues of development and growth have been the overwhelming preoccupation of economic history from its inception right to the present. Economic growth, however, in its modern meaning of the term, is mostly an economists' concept, normally defined in qualitative terms as a rise in per capita income over a period of time. Economic development, on the other hand, is a much broader concept encompassing all aspects of societal transformation from industrialization to 'modernization' (Milonakis 2006:269). Woodward and Simms (2007: 130) write that the rate of technological improvement is too much slow, given the severity of current environmental problems, such as climate change, and their impact, which is greatest in the poorest. This appears to give rise to serious tension between the objectives of human development and poverty reduction, on the other hand, and environmental sustainability, on the other.

While rich countries are disproportionately causing environmental problems, however, it is the poor countries-and especially the poorer people within them-who suffer the most serious consequences. The problem is one of inverse dynamics: while the poorest receive very little of the benefit of global growth they bear a disproportionate share of its costs- for example, the consequences of global warming. As a result, the pursuit of poverty reduction through a strategy based primarily on global economic growth quickly become perverse: the already wealthy become both relatively and absolutely wealthier, while the poorest slip further behind economically and have their well-being and prospects further undermined by environmental degradation (Woodward and Simms 2007: 134). To meet the MDGs, it is essential to agricultural, forestry and fisheries policies in food-insecure region to recognize the crucial role of biodiversity, and to

reposition biodiversity conservation policies in such regions to prioritize strategies that explicitly support hunger and poverty reduction. The synergies between food security, poverty reduction and biodiversity conservation could be greatly expanded by investing in programs and technologies that explicitly seek such synergies (Scherr 2003: 8).

2.10 DEVELOPMENTAL ROLE OF THE STATE

Davies and Van Seventer (2003:4) write that it thus seems clear that in principle those concerned with social policy should also be concerned with macroeconomic stability. However, while it is both theoretical and empirically incontrovertible that macroeconomic instability is harmful for society, this does not mean that macroeconomic stability necessarily and automatically promotes good social conditions. It is necessary that the enabling environment it provides be used to the good. This may require social intervention on the part of the state. However, this does not imply that any social intervention will be beneficial. Many such interventions are irresponsible, either because their wider consequences are ignored, or because they are motivated by populist political interests rather than genuine concern for social welfare. Such policies do not provide sustainable solutions to the problems they purport to address. Insofar as they fail to consider their macroeconomic implications, they may contain within themselves the seed for their own failure. According to Fine (2006:115), the role of the state in development, like development itself, needs to be situated in the context of class, power and conflict, each understood in both economics and political terms.

Harnessing social capital requires a facilitating state with devolved powers, partnerships with civil society and the private sector to combine growth, poverty alleviation, and environmental maintenance. If government policy can reconstruct social capital, this in turn can facilitate effective government policy implementation, thereby creating an upward spiral (Munslow 2001: 508). Although agreement has still to be achieved on a characterisation of the developmental state in South Africa, a broad consensus appears to exist around the idea that the process of development involves more than just

economic growth but includes life-and-death issues such as poverty, personal security, distributive equity, social justice and environmental sustainability (Mufamadi 2008: 1).

The developmental state concept is an attempt to bridge the gap between a centrally planned economy and a free market system, without emphasising an ideological position (Turok 2008: 3). A strong and democratic state, with clear objectives, internal cohesion, popular legitimacy and the capacity to control economically powerful fractions of the population and direct the use of their resources can achieve democratic economic development. It is possible to mobilise economic and social institutions towards socially determined ends democratically, without any implication that the state will either command or control the entire economy or society. These objectives require recognition of the strongly negative consequences of neo-liberalism, popular mobilisation against them, clarity of objectives and the relentless political determination of the vast majority (Mukhithi 2008: 45).

The two guiding principles for determining whether or not a state is developmental are the reasons for economic intervention and the manner in which it does so. State can intervene for many reasons, such as defence, environmental protection or the administration of justice, and use various tools, such as price ceilings and legislation. Where the states intervene for purpose other than to spur development, the state is said to be regulatory or market-orientated state, and not a developmental one (Jahed and Kimathi 2008: 97). States have a critical role to play in fostering development. Neither a liberal nor an overly interventionist state will manage to achieve sustainable development. States must formulate economic policies based on their local circumstances, implement the policies and then monitor them regularly and continuously (Jahed and Kimathi 2008: 109)

Economic development cannot be simply upgrading what exists, although that is essential. There is a need to expand and upgrade infrastructure, make industry competitive and build the capacity of the state to direct and regulate economy. This means developing the productive forces of the formal economy. But such expansion

benefits some more than others. State intervention must be designed to spread the benefits beyond its present beneficiaries (Turok 2007:24). According to the labour movement, the concept of developmental state does not simply mean that the government actively directs economic development. Instead, it has a peculiar intellectual history, which derives primarily from the experience of industrialisation in countries such as Japan, Korea and Taiwan. It emphasises the ability of the state to drive development by guiding capital toward new activities while maintaining broad-based support, including from workers (COSATU 2005:4).

Mayibuye iAfrica (come back Africa) is a call for the return of legal title, but also for restoration of the land, the forest, and the atmosphere; the greening of the country is basic to its healing (Sachs 1990:140). One of the key principles in relation to right to environment is sustainable development. In terms of Agenda 21(28:1), which is a programme of action for sustainable development worldwide in it, local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations, assist in implementing national and subnational environmental policies. As a sphere of government closest to the people, local government plays a vital role in educating, mobilizing and responding to the public to promote sustainable development.

2.11 CONCLUSION

Sustainable development theory can be traced back to economic development theory, which simply defined it as the analysis of the economic progress of countries, taking into consideration sociological, anthropological, historical, political and even ideological factors. Sustainable development is a continuation of the principles of economic development but with more emphasis on the social well-being of people and the introduction of the environment as a major component. Environmental issues are indeed a function of Developmental Economics.

Nineteenth-century environmental problems were clearly socially inflicted, though economic exploitation associated increasingly with urbanisation and capitalist industrialisation. The effects of trade on the environment depend on whether the environmental policy is rigid or instead responsive to challenges brought about by trade. A strong and democratic state, with clear objectives, internal cohesion, popular legitimacy and the capacity to control economically powerful fractions of the population and direct the use of their resources can achieve democratic economic development. The so-called "the environmental problem" is in the end primarily a problem of political economy.

Today a quarter of all deaths in the world have some link to environmental factors and most of the victims are poor people who are already vulnerable due to malnutrition and lack of access to medical care as food prices continue to rise. The EKC literature is important in that it brought the empirical study of aggregate pollution levels into the realm of economic analysis and it debunked the commonly held view that environmental quality must decrease with the economic growth. Ecosystem rehabilitation and sustainable development, more specifically, sustainable management of natural resources are closely interlinked with each other, one leading to the other. State can intervene for many reasons, such as defence, environmental protection or the administration of justice, and use various tools, such as price ceilings and legislation. Concepts of environment and sustainable development will be explored in the next chapter.