

## **Sustainable Development**

Sustainable development as a concept came into common usage with the contemporaneous publication of the 'Bruntland Report' (WCED 1987) and the environment pamphlet from the World Bank (1987). In a general popular sense, sustainable development refers to economic development which '...meets the needs of the present without compromising the ability of future generations to meet their own needs.' (WCED, 1987, p. 8) Many actions can be implemented in aiming towards this sustainable development concept by people, organisations (especially businesses) and governments; including energy efficiency, recycling, reduced planned obsolescence, improved mass public transport. All such actions can significantly address the climate change challenge that was conclusively acknowledged in the 2007 report of the Intergovernmental Panel on Climate Change (IPCC). Thus this concept deals with policy action for future path(s) of economic systems.

This entry addresses broadly how economic development can be 'sustainable' (leaving the microeconomic issues of natural resource and environmental economics to another entry in this book). From a Post Keynesian perspective, Vercelli (1998, p. 268) specifies a viable policy definition which states that economic development can be '...considered sustainable only when future generations are guaranteed a set of options at least as wide as that possessed by the current generation.' The power of this definition is that as a policy guide it underscores the need to keep viable options open; otherwise there is a danger of path-dependence (or 'lock-in') on strategies that may turn out unsustainable in the future. For example, adopting any renewable energy car (e.g. electric, hydrogen cell) as the major transport option prevents consideration of alternative, possibly more viable configurations than the 'personal car/road network' system. As Winnett (2005, p. 92) argues cogently, '[w]hat society acquires by keeping

options open is not just the negative avoidance of bad outcomes but also the positive good of maintaining options for future learning as more information accrues.’

Despite the excellent Vercelli starting point and given it is supposedly a ‘broad church’, there is precious little Post Keynesian theoretical discussion of this concept or policy guidance related to it (Berr, 2009). Ric Holt, in a series of papers – the latest is Holt (2009) – details the relevance of Post Keynesian analysis for sustainable development. Mearman (2009) has tried to explain, using survey and interviews, why Post Keynesians have ‘inadequately dealt’ with environmental issues. Acknowledging their lack of expertise and interest in the myriad of micro-environment issues, this does not absolve them from their non-contribution to the macroeconomic systems-based sustainable development issue. However as the Post Keynesian approach emerged out of concern with unemployment, there seems to be view that any consideration of this issue will be through trade-off with employment. Geoffrey Harcourt responded to Mearman’s inquiry with the view that historically ‘The Great Depression’, and huge concomitant unemployment, was the major issue that shaped the pioneers’ approach. To consider themselves relevant to the major issues of the day, the massive climate change challenge needs to engage Post Keynesians in the debate on the way to expunge the ‘so-called’ employment-environment trade-off. This entry aims to connect this challenge with the historical roots of the pioneers, identify constructive elements of such an effort, and use the standard Keynesian aggregate demand function to pull together the limited research effort that has been conducted mostly in the past decade. Hopefully, out of this will be an effort to construct a coherent and unified Post Keynesian theory of sustainable development which intersects the theory of growth (in advanced economies) and the theory of development (in less developed economies). Michał Kalecki was a significant

contributor to both theories, thus this entry ends with some reflective suggestions along Kaleckian lines.

Berr (2009) presents a persuasive history of thought account that Keynes's philosophy has elements in concert with operationalising sustainable development by the 'strong sustainability' rule in which natural (capital) resources are not substitutable with man-made (capital) resources. This rejects neoclassical economists' monetary valuation of the environment to allow for substitutability of production factors. Keynes recognises economic value is disconnected to ecological values and irreversibility of historical time leads to fundamental uncertainty with need for precaution in decision-making. His view, expressed to Roy Harrod, that the practice of discounting future values is '...a polite expression for rapacity and the conquest of reason by passion' (Vercelli, 1998, p. 266) fuses both his ethical and probabilistic concerns with entrepreneurial actions being justified by economists' modelling. This provides a basis for Post Keynesians to initiate a unique effective demand and cyclical instability framework towards the sustainable development debate that is acutely absent. As Berr (2009) notes, Keynes's underestimation of natural resources and the power of vested interests to use economics to justify their actions points to Kalecki as the other pioneer who can inspire this framework for a deeper and stronger Post Keynesian sustainability analysis.

Kalecki, during World War II at the Oxford Statistical Institute, worked with E.F. (Fritz) Schumacher (of *Small is Beautiful* fame) on post-war reconstruction with emphasis on the capitalist periphery of Europe. This was a pragmatic effort in combining the theories of growth and development for a broad sustainability objective. However, they recognised the limits of capitalism when developing out of the ravages of war. Together they wrote a paper on continued draining of liquid

reserves by surplus countries under proposed US and UK international clearing regimes. Kalecki also identified limits in developed countries to full employment, and limits in less developed countries due to insufficient productive capacities. The response to these limits is demand-side perspective planning with what Sachs (1996) calls ‘variant thinking’. This is ‘...a set of procedures to promote the societal debate on the “project”, to stimulate the social imagination’ (Sachs, 1996, p. 318). Sachs co-authored a paper with Kalecki on foreign aid, and has since developed this Kaleckian approach to planning and development with ‘environmental prudence’ in many papers and books. What emerges is a ‘designing rationality’ over historical time in which the consequences of decisions taken in the recent past crucially influence future rational decisions. In this way structural transformation to an ecologically sustainable society comes from the planning and development process.

A few specific analyses and policies developed by that rare breed of Post Keynesian ‘strong sustainability’ pioneers exist, but often with no reference or linkage to the other works, and not within some broad sustainability transformation as established above. These pioneers are all working ‘in the dark’. Brief outlines of these works are described using, as the organising agenda, the Keynesian aggregate demand function of consumption, investment, government and trade (and development).

Consumption has been a significant problem for sustainability ever since J.K. Galbraith’s *The Affluent Society* (1958) and Vance Packard’s *The Waste Makers* (1960), with Mark Lavoie tying the bits together to form the Post Keynesian lexicographic ordering of consumer choice. Lavoie (2009) explores the implications of income boundaries to consuming specific class of goods and services depending on the level of need/desire. Such demand constraint limits price- and incentive-based substitution effects, opening up possibilities through income effects to adopt public

policies that can reduce certain classes of consumption goods and/or services that through designing rationality are considered unsustainable. Jespersen (2004) applies tradable work permits equally to all employed persons as a first step to sustainable development, reducing average working hours with unchanged real income. This introduces an equality-based environmental constraint limiting higher order foreign goods and replacing them with lower order domestic goods. This re-orders priorities and over time these permits can be lowered if required. Work permits has links to a standard Post Keynesian policy tool of incomes policy, when in the early 1990s Gowdy and Mathieu proposed a negative income tax linked to sustainability to limit conspicuous consumption and provide 'ecobonuses' for low carbon emissions. Reviewing this incomes policy suggestion, Ozay Mehmet shows how it can create employment and thus revoking the employment-environment trade-off. Problem is that all these articles were published in *Ecological Economics*, so no doubt missed by most Post Keynesians. A 'ghetto' problem remains in the heterodox economics communities.

Investment continues to remain, as Kalecki called it, the *pièce de résistance* of economics; and even more so when one appreciates that investment drives business cycles and the resulting capital stock delivers long-term structural change. Since the Industrial Revolution investment has powered the economically unstable and ecologically unsustainable trajectory of accumulation and growth. Galbraith in *The Affluent Society* recognised environmental degradation and identified investment in infrastructure and technology as elements in this degradation. Using a Kaleckian accumulation framework, Courvisanos (2009a) explains how investment has been the demand-based 'adaptation mechanism' that directed supply-based innovation into historically unstable path-dependent economic development, and been preserved by

monopoly capitalism's structure of production (*à la* Baran and Sweezy). This is the font of the Post Keynesian investment analysis of sustainable development. In effect, just as earlier technological revolutions (steam, electricity, energy) delivered the 'wealth of nations' through the accumulation process, so investment in 'eco-innovation' – defined as environment-informed and -driven knowledge based activities that reduce net environmental impacts – needs to deliver the entrepreneurial opportunity for a path-dependence to sustainable development. Based on the growth path analysis conducted by Adolph Lowe, Courvisanos (2009b) argues that market based economic regions or nations lack relevant ecologically-supportive physical and social infrastructure. Thus there is insufficient order and coherence to impel the creation of, and the market demand for, eco-innovation by the private sector on its own.

In the two-sided Kaleckian investment framework, profits are expected as a result of investment commitments, and the retained profits from prior investment enable future investment. Inadequate profits from eco-innovation severely limits this Kaleckian cycle. Coherence in sustainability needs large undertakings of both private and public investment in eco-innovation, both physical and knowledge-based activities. Physical investment needs to be in areas that support strong sustainability, but currently lack technological embeddedness and market niche to secure adequate funding. Knowledge (or intangible) investment needs to cover the wide gamut of activities that require patient and long-term funding, notably R&D, education, training, learning and development systems, property rights regulation. In a series of papers – the latest is Courvisanos (2009b) – an eco-sustainable framework is set out as a policy guide for a public-private sector co-operative process of innovation and investment that underpins appropriate satisficing paths to sustainable development.

The satisficing approach adopts what Vercelli (1998) calls adaptive procedural (or bounded) rationality which involves cumulative and iterative social learning with the investment commitments in the short run developing over time strong market share and effective demand for eco-innovations. Acceptable adaptive non-optimal conventions and rules are required to be incorporated in the investment decisions by both public and private organisations in a 'mixed economy' (e.g. Kalecki's lower real depreciation and better utilisation resources coefficients). Finally, Kalecki (1963)'s perspective planning allows short-term adjustments along the Lowe path of instrumental analysis.

Governments can provide current (non-capital) spending to stimulate sustainable development. Despite this quite obvious Post Keynesian instrument, this author is unaware of research conducted in this area except by researchers linked to the University of Missouri - Kansas City, led by Mathew Forstater who in a series of papers – the latest is Forstater (2006) – has explained how green jobs can be created using the counter-cyclical policy of the state as employer of last resort (discussed in other entries). Public sector jobs can be designed to support the Lowe-Kalecki eco-sustainable framework. The jobs would be designed based on functional financing to avoid structural bottlenecks in a market economy using 'appropriate technology' (e.g. recycling, reconditioning, energy saving refitting, rooftop gardening, electric van pooling) and provide skilling-up to work, consume and live in an ecologically sustainable society. This fiscal approach again discredits the mainstream employment-environment trade-off argument, and papers by Tcherneva and by Mitchell and Watts in the edited book *Environment and Employment* (previously cited for Mearman and Holt) develop this functional finance for sustainability in more detail. Also, from the alternative Kaleckian balanced budget fiscal approach, Courvisanos *et al.* (2009)

outline a tax on greenhouse gases, allied with fiscal incentives for entrepreneurs to accelerate obsolescence of existing high greenhouse gas emissions capital stock and undertake eco-innovation in new low emissions technological investment. This can have a similar counter-cyclical effect, while adopting an environmental tax to assist in structural change to sustainable development.

International trade through the balance of payments constrained growth has been a significant area of Post Keynesian research, yet the implications of this for sustainable development has not been investigated. There is potential for research in this aspect, along with Kaleckian income distribution effects, to examine international trade which is currently 'rigged against the poor' (Sachs, 2004a, p. 1809). Two Kalecki-influenced scholars have begun to develop a trade and development link to sustainable development. Lance Taylor with A.K. Dutt and J.M. Rao, in a *World Development* project on sustainable development indicate that income distributional improvements can lower import intensity in less developed economies and ease constraints on balance of payments. Ignacy Sachs (2004, p. 1803) goes further by stating that: '...import-sensitivity stems from the structure of the national economy. It does not depend on the degree of economic openness and on the relative share of foreign trade in GDP.' Sachs points to conspicuous consumption of urban elites in less developed countries supporting a public administration and state that are parasitical. Sachs develops a Kaleckian perspective planning approach for import of crucial inputs in a 'mixed economy' form to create a socially inclusive, environmentally sustainable, and economically sustained development process. This aims to create social and eco-efficient domestic industries, especially exploring competitive strengths in their country's biodiversity, such that employment elasticity

of growth becomes a variable – not a parameter – in development planning towards full employment.

At the beginning of this entry, the problem of a unified Post Keynesian sustainability approach was identified. The suggestion is that a framework around the Kaleckian elements discussed above provides a unique contribution, but only in concert with other heterodox work on sustainability. The Evolutionary School's approach to sustainability *via* innovation policies is well developed and discussed in Courvisanos (2009b). Significant pragmatic policies for fostering technological and knowledge-based innovation have been developed at the micro- and meso-economic levels, but needs incorporation into an effective demand-income distribution macroeconomic model that will counter the austerity-bound neoliberal global regime. 'Global Keynesianism' and sustainability is a world-systems perspective that Köhler (1999) deduces lends itself to integration with Post Keynesian analysis, so that globalisation processes can be tackled, beginning with exchange rate reform (which has been one area of Post Keynesian interest stemming from monetary theory). Finally, all this needs to be modelled with complex sustainability dynamics as suggested by Rosser and Rosser (2006).

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**See also:**

Balance-of-payments-constrained Economic Growth; Consumer Theory; Dynamics; Environmental Economics, Full Employment, Innovation; International Economics; Investment; Kaleckian Economics, Technology and Innovation, Unemployment

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