

Institution: University of Surrey
Unit of Assessment: UOA 15 General Engineering
Title of case study: Prosperity without Growth: the key to a sustainable future?
<p>1. Summary of the impact</p> <p>Surrey's research programme on the environmental, social and technological dimensions of sustainable development has generated widespread societal debate about the nature of the relationship between prosperity and sustainability. This has influenced national and international responses to the financial crisis, shaped long term international development plans and influenced industrial strategy. The best-selling book Prosperity without Growth has been translated into numerous foreign languages; Professor Jackson's TEDtalk has been viewed over a million times and has subtitles in 26 languages. The research continues to influence business leaders, policy-makers and civil society organisations globally.</p>
<p>2. Underpinning research</p> <p>Surrey's research in this field has comprised the following projects and programmes:</p> <ul style="list-style-type: none"> • ESRC-funded programme RESOLVE (2006-2011) on lifestyles, values and the environment. Through collaboration of CES in Engineering (Jackson, Druckman) with Economics (Hunt), Psychology & Sociology, RESOLVE examined the relationship between consumption and environmental impacts, motivations for sustainable living and barriers to lifestyle changes, and the relationships between consumption, economic growth and sustainability [1] • Within the multi-disciplinary RESOLVE programme, projects have used theoretical and empirical methods to explore the links between consumption and production and with welfare and prosperity. These include work on detailed econometric modelling of the carbon footprint of household consumption [2], on the environmental values, lifestyles and prospects of children, and on the rebound effect in the interplay between consumption trends and advances in energy and resource efficiency of products [3]. • Prosperity without Growth (PwG) [4] and related studies also draw on and contribute to the wider programme of work in CES over the past two decades on industrial ecology, systems analysis for sustainability, and cleaner production systems. • A research and policy deliberation programme, Redefining Prosperity, for the UK Sustainable Development Commission (SDC), in 2008-09, comprising expert seminars engaging academics, policymakers, NGOs and other practitioners in framing issues and policy implications of the analysis later elaborated in PwG [4] and in projects of RESOLVE. <p>The key research insights that underpin the impact of this overall programme are:</p> <ul style="list-style-type: none"> • The need for absolute decoupling of material and fossil energy use from economic growth on a scale not seen for any technological paradigm shift to date; • The importance of rebound and scale effects in limiting the benefits from energy and material efficiency gains in engineering of products; • The impact of cultural, social and behavioural factors on changes in household consumption and consequent dynamics in production systems; • The need not only for radical advances in clean technology but also for systemic changes in consumption systems, values & behaviours, notably in the developed world; • The need to model the macro-economy under conditions of ecological constraint and with low or zero growth rates, in order to identify ways to achieve decarbonisation and sustainable resource use while maintaining quality of life and employment. <p>The core economic analysis of PwG is being further developed by Prof. Jackson with Prof. Peter Victor from York University in Toronto in a new macro-economic model (GEMMA), which integrates ecological constraints into a stock-flow consistent model of a national economy [5,6]. Initial illustrative outputs from GEMMA have been presented at two academic conferences in Rio,</p>

alongside the June 2012 Rio+20 Global Summit on environment and development. During 2012, this work also attracted funding from the influential Institute for New Economic Thinking established by George Soros. Further development of this work is funded via an ESRC Professorial Fellowship on Prosperity and Sustainability in a Green Economy (PASSAGE) and two EU research grants.

3. References to the research

1. Jackson, T and Papathanasopoulou, E (2008). Luxury or Lock-in? An examination of unsustainable consumption in the UK 1968-2000. *Ecological Economics*. 68 (1-2): 80-95
2. Druckman, A and Jackson, T (2009). The carbon footprint of UK households 1990-2004: a socio-economically disaggregated, quasi-multi-regional input-output model. *Ecological Economics* 68 (7): 2066–2077.
3. Druckman, A, M Chitnis, S Sorrell and T Jackson (2011). Missing carbon reductions? Exploring rebound and backfire effects in UK households. *Energy Policy* 39: 3572-3581.
4. Jackson, T (2009). *Prosperity without Growth*, Earthscan: London.
5. Jackson, T and P Victor (2011). Productivity and Work in the New Economy – Some Theoretical Reflections and Empirical Tests, *Environmental Innovation and Societal Transitions*, Vol.1, No.1, 101-108.
6. Victor, P and T Jackson 2012. A commentary on the UNEP green economy scenarios. *Ecological Economics* 77:11-15.

4. Details of the impact

Surrey's research has had numerous significant influences on the public and policy understanding of sustainable growth and has influenced corporate and policy response. In considering the impact of the work we focus below on a major public-facing output, the 2009 book *Prosperity without Growth (PwG)*[4] which synthesises many of the findings of the wider research programme.

Impacts on society, culture and creativity

Addressing the complex relationship between production, consumption, technical innovation, economic growth and sustainable development, PwG has become a touchstone for debates on economic crisis, recovery and the transition to sustainability, both in the UK and worldwide. Since the financial crash of 2007-08, these issues have held wide appeal across a huge range of constituencies, including poverty action groups, environmental groups, financial sector organisations, business leaders, religious groups and policy communities.

- The Sustainable Development Commission report authored by Surrey researchers "Redefining Prosperity" became the most downloaded publication by the Commission: over 125,000 downloads from the SDC website alone. 10 Downing St wrote "*Your work...has done a great deal to advance thinking in this area*" [a];
- PwG was a bestseller: reprinted within 6 weeks of publication; translated into 17 languages (including Chinese) and sold over 50,000 copies;
- it briefly occupied 4th place in the Amazon best-sellers list, after Ed Miliband, Leader of the Opposition, was photographed taking the book on holiday for 'summer reading' [b]
- Prof. Jackson's 2010 TEDtalk – based on PwG – has been viewed over a million times worldwide and has subtitles in 26 languages [c].

Important to its influence, the work has received awards and highly positive reviews:

- three international prizes and nominated for more (Bild der Wissenschaft, Knowledge Book of the Year; Association of Professional Futurists, Most Significant Futures award 2012; Treehugger, Best of Green: Business and Politics)
- it was named as one of the '*best books of the year*' by the Financial Times
- and was reviewed favourably by broadsheets around the world [d] including the New York Times, Le Monde, La Vanguardia, and Die Zeit. Le Monde stated "*PwG is one of the most outstanding pieces of environmental economics literature in recent years*" [d]

- George Monbiot in the Guardian: “*It’s a revolutionary text...whose time has come*” [e]

The research has stimulated public discourse on growth and sustainability.

- The German Government initiated a wide-ranging inquiry into prosperity and sustainability: The Enquête Commission on Growth, Wellbeing and Quality of Life. A Member of the German Bundestag and Enquête Commission subcommittee Chair described PwG as ‘*having had an enormous impact here in Germany... highly influential in framing a lively debate about economic growth in Germany...the best book on the issue*’ [f]. The German translation has been reprinted three times, including a government-sponsored popular edition, to make it accessible for educational purposes.
- The impact of PwG extends far beyond Western Europe: there are two separate Chinese translations of the book. In South America, Jackson gave numerous talks, including one for the banking giant Santander, and collaborated with local institutions in public discussions on the green economy during the Rio+20 conference in Brazil in June 2012. In Eastern Europe, Jackson waived royalties to allow the Lithuanian government to sponsor a book translation.

Impacts on public policy and services

The book has been read and commented on by leading politicians and policymakers:

- the former French President Nicolas Sarkozy drew attention while in office to the significance of the work, describing it as a ‘*brilliant thesis*’ that makes a ‘*substantial contribution to the reflection on a reform of our economic system*’ [g];
- in summer 2011 there was much media discussion of inclusion of PwG in reading material for Ed Miliband, Labour Party leader and former Secretary of State for Energy & Climate [b]
- the work is referred to in the Parliamentary Office of Science and Technology’s PostNote 408 “Seeking Sustainability”, March 2012, supplied to all Parliamentarians [h];

Prof. Jackson has given over 120 keynote lectures worldwide to audiences of policymakers, academics, NGOs and business leaders on the issues covered in the book and related research programme. Documented evidence of policy debate and impact on policy includes:

- Prof. Jackson gave a keynote speech at the Prince of Wales’ annual Accounting for Sustainability conference in 2009, followed up by an invitation-only meeting about the book hosted by Clarence House, involving leading UK economists; an outcome was an initiative for an integrated emissions reporting framework for companies, later presented to the Rio+20 conference and formally accepted in the Rio Conference output ‘The Future We Want’.
- Prof. Jackson addressed the UN 64th General Assembly in New York on the green economy; he was subsequently invited to contribute a background paper for the UN Division on Economic and Social Affairs’ preparation for the Rio+20 conference. ‘Green economy’ was one of two themes eventually chosen for the conference.
- At Rio+20 Prof. Jackson delivered numerous speeches and seminars on the green economy and engaged in a High-Level Dialogue hosted by the King and Queen of Sweden and the UN panel on Global Sustainability. The meeting presented a declaration entitled ‘The future we choose’ directly to the Executive Director of Rio+20 as an input to the formal negotiations.
- RESOLVE was a research partner in the UN Environment Programme’s Global Survey on Sustainable Lifestyles (GSSL) and Prof Jackson gave a keynote at its launch in New York in 2011. The Framework was formally adopted in the final Declaration of the Rio+20 conference: the continuance of UNEP’s programme on Sustainable Consumption and Production was one of the very few concrete outcomes from the conference.
- In the UK, the research underpinned recommendations of the Environmental Audit Committee’s twelfth report (April 2012), on the Green Economy [i]. Drawing directly on Prof Jackson’s oral evidence, they recommended that the Government should: set up a unit to examine the relationship between growth, prosperity and quality of life (paras 54/56) and; make emissions reporting mandatory for the private sector, as a key part of Government’s approach to directing consumer demand to more sustainable choices (paras 57/60/62).

Government has now acted on this latter point, and from 1 October 2013 the Companies Act 2 will require UK quoted companies to report on their greenhouse gas emissions.

Impacts on practitioners and professional services

The research has influenced businesses concerned with economic and engineering challenges of transition to sustainable capitalism and low-impact, high-value technological systems.

- The Esmée Fairbairn Foundation sponsored a 9-month project at Surrey to engage business leaders on integrating business models deriving from PwG into corporate strategy
- Prof Jackson engaged with numerous companies on the implications of his work on prosperity and growth, including Shell, Santander, United Utilities, BT, Kingfisher, Marks and Spencer, and Unilever. The Global Advocacy Director at Unilever says “(the) research...has produced some of the most original and challenging thinking on sustainable living”, “(the work) is closely aligned with Unilever’s commitment to enhance well-being” [j]. The Head of Sustainable Business at Marks & Spencer says “The work of RESOLVE and SLRG has broken new ground and established UK research leadership in the social science of sustainability. PwG has offered a narrative for sustainability that resonates increasingly widely in the wake of the financial crisis...this new reality is one that business is keen to grapple with.”[k]
- Jackson was invited to sit on Advisory Boards relating to sustainable investment by Aviva Investors and Alliance Trust; Jackson is also an advisor for the Ellen MacArthur Foundation’s Circular Economy initiative which has raised over £6 million in corporate sponsorship to work directly with businesses on improving environmental performance
- The Institution of Mechanical Engineers aims to help engineers work towards sustainability. They have proposed Tim Jackson’s definition of Prosperity as a metric for that, and invited him onto a panel to oversee this process; IMechE have 100,000 members globally, with 10,000 members specifically interested in sustainability, and the potential for impact on engineering practice is substantial.

The Royal Society published a major report on the challenges of population growth and consumption in 2012. Prof Jackson was on the Working Group, his research is widely cited, and he contributed the analysis of carbon scenarios in the report.

5. Sources to corroborate the impact

- [a] Private Secretary, 10 Downing St. Provided statement.
- [b] Coverage following Ed Miliband’s interest in Prosperity without Growth
<http://www.guardian.co.uk/commentisfree/2011/aug/22/economic-growth-environment?INTCMP=SRCH>
- [c] TED presentation by Tim Jackson:
http://www.ted.com/talks/tim_jackson_s_economic_reality_check.html
- [d] Reviews at <http://www.routledge.com/books/details/9781844078943/>
- [e] George Monbiot in the Guardian: <http://www.monbiot.com/2011/08/22/out-of-the-ashes/>
- [f] Chair of a subcommittee of the Enquête Commission. Provided statement.
- [g] Personal letter to the publisher from Sarkozy’s office. Provided statement.
- [h] POSTnote 408 Seeking Sustainability: www.parliament.uk/briefing-papers/POST-PN-408.pdf
- [i] EAC’s inquiry on the Green Economy (2012), including Prof Jackson’s evidence:
<http://www.publications.parliament.uk/pa/cm201012/cmselect/cmenvaud/1025/102506.htm#a7>
- [j] The Global Advocacy Director at Unilever. Provided statement.
- [k] The Head of Sustainable Business at Marks and Spencer. Provided statement.