

## **Inequality and the Green Economy**

*Summary of an event held under the Chatham House Rule on 6 June 2016 at St Paul's Chapter House*

This roundtable session began a series of three events held in partnership between St Paul's Institute and Tearfund that aims to explore the connection between inequality and the green economy, particularly with a view towards notions of circular economy and how they might be implemented.

This series emerges from the *Restorative Economy* publication by Tearfund, looking at how to 'green' the economy, but also the notion of the circular economy where we reuse, recycle, repair, mend and disassemble to rebuild. The process of optimising under constraints, in economics terminology, means that we are trying to do this while simultaneously reducing economic inequality.

*The text below is a summary of the discussion that took place, not all references have been checked for validity.*

The **Circular Economy** has many different aspects, including:

- Using a synthesis of a number of systemic approaches to the world: biomimicry, cradle to cradle, industrial ecology and more, the circular economy takes these examples of feedback loops to consider how we can look beyond make and dispose.
- Influential thinkers include Frederick Soddy, Amory Lovins, Braungart and McDonough, Janine Benyus, Walter Stahel, John Fullerton amongst others.
- The enlightenment was based upon a mechanistic view of the world, world as machine, but we are well passed that now. The modern development of the systems approach was brought about by increased computing power.
- The circular economy goes beyond 'do less harm' - it is trying to imagine a regenerative economy.
- It is attractive in part because it creates new business and economic opportunities.
- One of the big elements of the ICT revolution is giving people access to the tools with which they can improve their own well-being.
- It is about abundance not scarcity.
- Policy elements such as:
  - Prices should reflect full costs, including externalities. Prices need to tell the truth.
  - Stop taxing people and start taxing non-renewables.
  - Looking at finance, money creation and deployment is a big part of the picture.
- Urban planning creates the structure for energy demand over 20/50/100 years. The concept of a circular economy is foundational in the same way.
- It's a way of working with products, materials, energy flows which addresses core business concerns about revenue, returns and market position. It does not start with the ideas of having to be green.
- McKinsey say that a transition to a circular economy would increase GDP, increase employment and half European carbon emissions by 2030<sup>1</sup>.
- We are starting from the 'how do you use less stuff?' point of view; but maybe if we started from a 'how do you build more equal societies?' point of view and then look at what opportunities this agenda brings, it might be more fruitful.

**See Appendix I for Examples of the Circular Economy**

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<sup>1</sup> [\*Growth Within: A Circular Economy Vision for a Competitive Europe\*](#), McKinsey & Company, 2015

## Poverty & Inequality

- Looking back over the last fifty years, we see tremendous improvements in driving down extreme levels of poverty thanks to the expansion of the global economy. The flipside is that if we continue to do this without factoring in environmental destruction, we are going to run out of road.
- We've got to reduce extreme poverty; stay within safe environmental limits; and do that without resulting in extreme levels of inequality.
- The World Bank estimates that if we don't tackle climate change we are going to have another 100,000,000 people by 2030 falling back into poverty<sup>2</sup>.
- We can only tackle poverty if we also address climate change and start valuing natural resources and assets properly.
- Poor communities are more exposed to shock. Data from Nigeria shows that poor people there are 50% more likely to be flooded and 100% more likely to be affected by drought.
- Consumption of the bottom 40% in the distribution needs to grow 2%+ over the average growth in such poor countries to achieve an overall reduction of the poverty rate. What kind of consumption, and what kind of growth, do we want?
- If you just replace an unfair, unequal capitalist economy with a circular, unfair, unequal capitalist economy then you're not really helping.
- If you look at the UK government aid strategy that was published last year, it's predominately about resilient and inclusive economic growth. It's saying that economic growth needs to be resilient, sustainable and able to withstand shocks – oil prices, a flood or a drought, local shocks – as well as inclusive.
- In the developed world you are talking about ripping out systems that exist and redesigning systems; in the developing world in many cases you can build those systems from scratch – often referred to as leapfrogging. We have seen that take place in Africa with mobile phones.
- If you look demographics – in Uganda at the moment, there are 98 under-15 year olds for everyone 100 over-18 year olds. The key is creating jobs for these young people, something to do and be part of or you will get significant instability and political upheaval.

## Measures of Growth

- You cannot have a green economy and have economic growth in the way we would perceive economic growth to be, in terms of GDP and GNP.
- Using GDP as a measure of growth is an ineffective, inaccurate and dangerous starting point – as it includes 'environmental bads' in the modelling – currently this is no useful alternative.
- Currently growth is talked about in terms of the old mechanistic, linear take-make-dispose model. This does not take into account improvements in quality and utility which aren't about more, but about better.
- We are looking towards an economy that grows differently and would hopefully have more jobs. It could even have more production and consumption because the unintended consequences of consumption would be much more benign, particularly from an environmental perspective.
- Currently, economic growth is closely linked to energy as the driving force behind the economy, because the energy is inextricably linked to food production, water consumption etc.
- The traditional measure of GDP is going to break down faster than some might think, as it is already having difficulty coping with changes in productivity and the free and sharing economy. There increasing segments of the economy that aren't being captured by the data.
- Without effective new measures of what success looks like, it's difficult to know if we succeed.
- There is an issue about how we define what taking someone out of poverty is: is it a need for economic growth or access to things they don't currently have. What are we trying to deliver to the places of the world that we say most need growth?

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<sup>2</sup> [Shock Waves: Managing the Impacts of Climate Change on Poverty](#), World Bank Group, 2016

## Energy & Natural Resources

- Energy is often the driving and binding constraint in many countries, so there's a lot of talk around renewables and feed-in tariffs, permitting households to add to the grid. Particularly, there is real potential in off-grid and solar households/mini-grids.
- There's a campaign called *Energy Africa* which is all about trying to get universal access to electricity in Africa, bringing that date forward from 2080 to 2030 by rolling out solar household packs. It is working in partnership with the private sector to try and unlock some of the regulatory and policy barriers.
  - To date, there has been little thought spent about how to get the equipment and batteries back at the end of life stage. There is the issue of batteries because these off grid systems need storage and there is evidence that these are being disposed of in not very environmentally friendly ways.
- By bringing households onto the grid and enabling reliable energy sources they can generate their own income, become part of the market and increase their education and health.
- It's important to think about fossil fuel subsidies and how we can reduce those. There are a significant number of countries that have taken advantage of the lower oil prices to shift some subsidies, to cash transfers in particular, and thinking about wholesale welfare reform programmes which there is now a real window of opportunity to take on.
- Natural capital and accounting is also very important, thinking about how you value natural resources.
- By structurally reducing the amount of energy needed in an economy, the renewables and other carbon challenges become much simpler.
- Recycling is brilliant, but we ought not to do it if we can avoid it. A mobile phone, bought second hand for £200, if sold today would be worth £100. If sent to the best recycler in the world to get all the raw materials possible out of it, it would be worth 72p. Keeping items in their state is much more valuable.
  - Rather than recycling batteries, first we should probably take them and put them into projects like the off grid battery storage for street lighting in places that are unable to access the centralised grid.

## Capacity Building / Local vs Global

- Distributed repair is much more efficient in a world where you don't have hyper-efficient supply chains than in a wealthy world context.
- Food waste is a fundamentally local thing. You are never going to move it very far because it is wet and heavy; energy intensive to move around.
- There is a difference of view on the locus of power: bigger firms want to control the supply chain and the customer, where some like Paul Mason want to ensure that people have got the tools and materials to do things for themselves.
- Stop thinking about lowering costs and start thinking about the value of what exists locally help build the economy from the bottom up.
- It's important that the debate is framed starting from the local context and the existing industrial or development ambitions. We need local capacity building to put emerging economies in the position to influence their domestic policy and climate finance in locally appropriate ways.
- This allows for the difference in indigenous resource bases and indigenous labour forces and all the things that you need to take into account to get the project working correctly as opposed to placing something that works one place in another where it won't work at all.
- There's a disincentive to move from the informal to formal economy, because you have to register and pay tax. It's perhaps better to tax resource usage rather than taxing labour – turning around the taxation system.

## Product vs Service

- With the right IT and the right feedback in the system– the right data – we can provide better services at lower resource cost by getting rid of the idea that we have to sell everything.
- If you keep a washing machine in use a long time but don't own it, it becomes easier to cut the cost. It is cheaper for the user, not the consumer, and it provides more profit for the firm if you can devise a model which essentially you don't own.
- A service contract, rather than product sale, incentivises the company to make their product more durable and built to last.
- What really struck people in the flooded Lakes District, as they have wandered around talking to people about how to get back up on their feet, came back to basics. Provision of services rather than owning possessions suddenly comes to mean more to people.
- Part of the shift is thinking how can large durable goods become a service rather than a product? You can get all the advantages of monitoring, seeing how they are going and actually extracting more value for finance people as well.
- We could also open source this model, so that anybody could do it and this is the tension that Paul Mason points out between the hierarchical and devolved economy. Will all of these advantages be captured by additional economic rent, just short circuited, or will the devolved economy really show up?
- The higher the value, the more complex the system and the more likely the circular notion is to work.
- You can imagine with a kind of products service system, you might end up with the situation where people who feel they can't change or can't shift...are subsidising people who are rapid switchers. We know that people who are poorer tend to switch [energy] less, so there's a net equality loss or driver towards inequality.
- The reason business wants to shift to a product service model is because they can guarantee a revenue stream over a longer period of time. Selling more durable is not in my interest, this whole planned obsolescence thing. I want people to come back and buy another one. The only way I can really justify being durable and long term is if I prevent them owning it, because otherwise I am losing in value. I'm losing revenue.
- What is the role of consumer protection laws in this?
- You can see this becoming attractive as an investor proposition when it is developed enough for them to start hearing about [service contracts over product delivery]. It sounds like they will stand a better chance of retaining their customers than someone else.
- To the extent the circular model increases profitability and customer loyalty, investors will accept it.

## Green Economy & Policy

- A circular economy process which is demonstrably causing some negative environmental impacts is problematic.
- If we get to the circular economy in 2080, but we have busted the climate then that's not okay. We need it on a timescale which makes the material contribution important and keep the green bit in the conversation.
- If we are going to meet the Sustainable Development Goals (SDGs) on a 14-year time horizon, we need to think about every step. This should have an effect on how we prioritise our support for circular economy projects, whether we are private sector or government actors.
- It is fair to say that the government can't pull all of the levers but the playing field is so stacked already due to government policy that push economic incentives in a particular direction, it means that you simply can't avoid talking about policy and policy frameworks.

- Are there specific sets of incentives, policy levers or frameworks on the development side which change depending on whether we are focused on low-carbon development or focused on some of the other opportunities?
- There is a complementarity between a green economy, and a circular economy as a model and a concept which will help us reduce environmental damage while at the same time as addressing extreme poverty and inequality.
- The circular economy, automation, plus the need to tackle inequality could arguably be seen as chipping away at the structural things that capitalism fundamentally needs to make money.
- Waste management is a problem that needs to be solved from a public health perspective. If you can create jobs in doing that, at the same time as environmental and climate benefits that's the model to follow.
- The ICT revolution is making the testing of plastics and their composition cheaper and cheaper. It begins to make it easier for people to make a price for waste.
- The eco-design directive tries to make products more durable and certainly tries to make them more energy efficient. This could provide a template for government action and we ought to employ an eco-design type regulation to require durability and repairability, so that we don't end up with an inequality problem of cheap goods equal poor quality.
- European regulations often get standardised across the world because it's too expensive to create multiple product units. If you are going to make for 500,000,000+ people you may as well make it for the world. If we regulate well in the wealthy world then the benefits might accrue to people in the developing world, sharing the benefits on the social side.
- The policy issues we work on need multiple actors and they come at different stages and are affected by different things. You do need to be working at all different levels. Not just because of the vocabulary and the interests of the people you are talking to, but also because you need to be able to experiment. You need the petri dish where you try something and, if it doesn't work, you fail small. You don't fail big. You need to be able to experiment, but you also need people and organisations working on rethinking the whole model.
- We are trying to design out resource waste and if we create extra people waste, extra economic sub-optimal activity that would be counterproductive.

## Relevance to Investors

- These topics are rarely discussed in investor circles. It needs to be translated into terms that investors can understand so that it begins to resonate with investors in the same way as sustainability, development and inclusivity more generally do.
- A lot of things resonate because they are smart business ideas – such as waste to energy. You can invest in that and make very attractive returns.
- A lot of the language at the moment is going to put people off that really have the chance to engage with interesting thinking, such as technological revolution. It's hard even getting mainstream investment managers to think that climate change may be relevant to them.
- This is a very slow path. It's only the 10-year anniversary next week for the *Principles for Responsible Investment*<sup>3</sup>, which made the connection that Environmental, Social and Governance factors have financial impacts. There are still 25-30% of investors that are not engaged even in that topic.
- Investment managers very much fit within the sustainability camp, they understand sustainability as a thematic and opportunity set that is tapping into new businesses and technologies. They understand innovation and investment opportunity.
- Asset owners are still mostly working on models that are dependent on GDP. Asset allocation models are all about what classes are going to do over what period of time based on an economist's view/guess.

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<sup>3</sup> [The Six Principles](#), Principles for Responsible Investment

- How do we take account of risk factors that are not captured in those models at the moment? That will get attention from investors.
- Might it be better to be working inside the system to reform it from the inside, rather than try and take it on from outside?
  - Maybe both are needed. You need to have people working on how the system can actually adapt or change, but then you need people inside the system selling that incremental change and people who can translate between the two.
- Investors understand Environment and Governance pretty well – but the Social side is only seen as having a financial impact when consumers and/or government create a reputation impact or direct financial impact.
- Investors are not a homogenous group. There are very different stories from a pension fund foundation perspective than from other particular fund managers. However, fund managers are dealing with actual companies and infrastructure projects – agricultural opportunities, timber etc. – and are face-to-face with ESG issues and how they affect particular companies.
- It doesn't take the majority of the investors. It takes enough for some fund managers to see a new product opportunity, or a way to differentiate themselves.
- Investors talk about two things: risks and opportunities. That's the way to kind of get to investors. What are the risks, in terms of resource scarcity; what are the threats to businesses? And then what are the opportunities for new business? That's worked very well on climate change and could work very well with this issue as well.
- There is a role for investors and the private sector, but there is also going to be a role for co-operatives and community-owned energy, things that are not something that is investable, and there is certainly a role for government. It's going to be a mixture.
- The capitalist system has to evolve, at the very least, because normal sources of income derived from being able to sell and get a margin are fundamentally shifting. If you are in control of assets – during asset inflation – that's a good place to be, but in terms of production what are you going to make money out of unless you've got some new models in play?

## Global Supply Chains

- The role of global supply chains in implementing circular economy ideas might be a good place to start.
- Whether it's working out who owns the forests, working all the way back through supply chains in Europe in particular; who is buying and all the kind of intermediate steps in the chain. It's incredibly powerful when it comes about through this whole source to market.
- The World Economic Forum has started to focus on palm oil as the thing that you see on all your household products and all the shelves. Then soy, beef – all of these products that are really shifting and really effecting deforestation and use of land.
- The intervention point is often consumer pressure in markets like the EU and UK. It's putting pressure on those companies to having a more sustainable narrative and being able to tell the story about where the products came from and who verified it. You follow it all the way back and it's then a complicated development intervention at a local level around governance, conflict and resource management.
- Following all the way through the global supply chain is totally consistent with circular economy or green economy – it's coming through the lens of who cares about it, and why.
- Manufacturing of electronics and technology is a globalised industry. We will need to intervene at policy level to create the opportunities for repair, refurbishment, and upgrades, so that people are empowered to apply circular economy strategies.
- We have to start re-envisioning the way that economies think about the value chain.

## Automation

- Although this doesn't translate straight into the developing world it is perhaps significant that most threat from automation in the developing world is in manufacturing.
- It is rather hard to think about income tax when there is going to be a world devoid of work, or at least work is going to split between the small elite who have got full-time jobs and the rest working on *Task Rabbit*, for *Uber*, *Air BnB* and similar platforms/organisations.
- Sheer scale of change in ITC and technology automation means that policy designs might not be very effective. How do you deal with guaranteed access to services, guaranteed minimum wages? What do you do when far fewer people are even earning in the first place?
- When you say productivity to a standard economist they think labour productivity optimised to reduce the amount of time it takes a person to do something. We've switched over to robots and are going to do that in the future. We're running out of jobs that robots can't do.
- If information is a valuable thing, if resources are more valuable than people's labour, what do you do then about making money? How do you make money out of that, and who is making the money? Who is benefiting from it?
- Not only might there be no jobs – where are the customers for the businesses? It's alright lowering costs, but if you don't have money to buy the lovely stuff then what's the point?
- If wages are falling, or stagnate or getting more part time and labour participation is falling, you have a real problem keeping the system going unless you reimagine where people are going to get income from. They are not going to get it from a standard firm.
- Whether it is here or in the developing world, people want to be able to participate and for that they need income. Hence these experiments around Universal Basic Income, it's a real economic problem – it's not a gift, it's not a welfare thing – it's part of making sure the system hangs together.

## Appendix I Examples of the Circular Economy in Practice

- In Brazil there is a company called *ProComposter*, targeting major contributors to the 94,000 tonnes of organic municipal waste a day: restaurants, supermarkets and apartment blocks. They are composting that waste and turning it into fertiliser, enabling it to go back into the soil and increasing the amount of CO<sub>2</sub> going back into the soil.
- In Ghana there is a group called the *Kumasi Industrial Cluster*, which consists of over 12,000 companies and 200,000 workers focusing on vehicle repair and manufacture. It has created jobs, is preventing waste, reducing emissions and is also helping with a lot of the challenge in middle-income and low-income countries as they begin to generate their own waste mountains and the problems and health issues of that.
- Another example in Brazil are co-operatives and associates of waste pickers emerging out of the informal sector and being given protections in terms of safety, salary and income. Over a third of all recyclable waste is now collected by informal waste pickers who have been formalised and they operate over half of the sorting facilities in the country.
- The Dutch are looking at how to take steel girders out of buildings and reuse them as a steel girder rather than re-melting them. This will use approx. 1% of the amount of energy.
- India has a large market for remanufactured mobile phones, particularly *iPhones*, because they are almost as functional as a brand new one. It allows us to expand the lifetime of these devices at much less energy use and much less cost to people.
  - If you are in the product services of a large corporation in the developing world you may not have the ability to do this sort of bottom up repair and keep things going.
- There are some pretty big players out there: *Unilever*, *Google*, *Phillips*, *Nike* and others. The nub of it is the information and communications technology revolution, with the additional feedback in the resource loops – if you like – is interesting them because they think they can see additional revenues in this.
- Through remanufacturing *Renault* saves huge amounts of energy and cost, they can put a white van engine back out there after it's been used for a 100,000 miles for half the cost and 80% less energy. They are really happy at their plant to expand their manufacturing because they see more gains from it. I think they've even bought some recycling firms so that they can get other people's gearboxes and steering gear.
- *Rolls Royce* will do power by the hour. You buy the power by how many hours you use it, and they also monitor all the engines in flight so they will know before the pilot does if something is going out of specification.
- *Schiphol Airport* has lighting as a service. They don't own their light bulbs anymore – a company buys x-amount of lumens...and it enables an offshoot of *Phillips* to sign a performance contract to guarantee this much lighting at 99% of the time over this area. The firm provides the light bulbs, so they can always reinvest in the very latest lightbulbs because they lower their cost while keeping the fees they are charging the same.

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