The Scottish Parliament
Pàrlamaid na h-Alba

Scotland's
Futures Forum
Fòram Alba air Thoiseach

SCOTLAND 2030 PROGRAMME

Tuesday 3 October, the Scottish Parliament

SCOTLAND 2030

Our Economy

Adam Tomkins MSP (Director, Scotland's Futures Forum) welcomed guests to the third debate of the Futures Forum's Scotland 2030 Programme, which explored the question of how Scotland will make its living in 2030.

The questions considered were:

- Where could and should Scotland's economy be in 2030?
- Where are our current economic strengths and weaknesses?
- What do we need to do to exploit the former and mitigate the latter?
- What kind of technology will affect our economy and the jobs in it?
- Finally, how environmentally and socially sustainable can our economy become?

To frame the debate, Jamie Coleman, the co-founder and chairman of CodeBase, and Katherine Trebeck, Senior Researcher at Oxfam, were invited to share their views.

Jamie Coleman (Chair and Co-Founder, CodeBase)

> "Digital is the key to the growth of all sectors"

I have a short period of time to attempt to melt your minds with data, so I hope that you will enjoy the ride.

CodeBase is in the big, horrendously ugly, brutalist building next door to Edinburgh Castle. It is where people used to sign on for the dole, but we are now building young technology companies there. We started CodeBase in 2014 and we are now the largest such company in the UK, with 98 companies within the building. We have created 660 net new jobs and the companies that we have incubated have raised just over half a billion dollars in capital to build their companies. We structure those businesses and grow them appropriately.

As we know already, the world is changing dramatically and, as we would say, software is eating the world. I do not care any more about sectors in the traditional sense. Digital, or software, is the key to the growth of all sectors, bar none: it is the core of everything.

> "We will all have to learn again and again at faster paces"

We used to think that there were a lot of people on the internet back in 1995. We have now reached the position at which nearly every adult human being on earth has access to the internet. A lot of those people in the third world use feature phones rather than smartphones—they use your old Nokia with text-based internet—but, nonetheless, they have access to the internet. Technology normally used to be sold to rich white guys, but now it is for everyone, and that changes absolutely everything. It changes the market and the access to information.

Adoption of technology

Let us look at the adoption of technology, from 1900 until today. On one axis, we have when we can consider our technology to be adopted. We say that, when about 9% of the population have the technology, it is starting to be a thing. It is fully adopted not at 100%, but at 91%, because there are always some who do not take it up.

Let us look at the line for electricity—you can do the same for the phone, the car and so on. The line runs from 1904, through the depression, the war years and so on, all the way up until 1976 – it takes more than 70 years for that technology to be fully adopted. If we think about the life expectancy throughout that time, a person in that period could grow up, go to school and learn about electricity. They might have been lucky enough to have gone to college and learned about electricity, and they could have got a job in the electricity industry, gone all the way through and retired with a nice gold watch.

Let us contrast that with the smartphone: it is already fully adopted. If a person has gone to school and learned that touching a piece of glass as a user interface is a thing, they will not have even got to university by the time that Alexa voice control has taken over. There are big existential questions. For example, what the hell do we teach our kids in school?

That is where we are living, and the important take-home measure is probably that, if there is one thing that we could give our children, it should be the ability to continue to learn, because we will all have to learn again and again at faster paces.

Disruptive innovation

At the same time, companies are dying off faster. Back in 1960, the average lifespan of a company on Standard & Poor's 500 Index was 60 years; now, the average lifespan of those companies is about 12 years.

As new companies take over and are themselves destroyed, we see disruption. This stuff may be trite and many of you have seen it before, but it is worth repeating: Airbnb, which is the world's biggest hotel company, owns no hotels, and Uber, which is the world's biggest taxi company, owns no taxis. When was the last time you paid for a long-distance phone call? Does anyone remember Kodak? WhatsApp now sends double the number of messages that SMS does.

Let us think about companies doing their forward planning and the classic turkey problem. If you were a turkey and your keystone metric of success was body mass, you would love the farmer, because every day the farmer would give you more food and your body mass would get bigger. The farmer would be a great guy. If you were doing your financial or body mass predictions for next year in quarter 1 and quarter 2, there would be really good certainty and a nice R-squared measure.

Essentially, you would have a pretty straight line with some variables around it. However, there is a single piece of information that that turkey would not know about – Christmas.

The question is: what is the turkey moment for traditional SMEs – I hate that term, and we should never use it – or traditional businesses in Scotland? What happens when a company such as Xero comes along and becomes the Facebook for accountancy? It might not destroy the top end of what the best accountants do for you, but it might rip out all the bread-and-butter stuff by automating it and it might destroy every local accountancy firm in Scotland. The same is possible for law and so on.

That is what we are dealing with. Companies will be thinking about their growth and how next year they might hire another person or maybe open an office in Dundee, but the chance of those companies being killed off is real. It is something that we are facing all the time.

We know that not every country will succeed. I have a lot of stuff to talk about and this talk ends up with a very positive message, so bear with me.

Technology in the economy

It is fascinating to compare the US and British stock markets in 1900 and 2015. In the 1900s, you could take the railways as a proxy for innovation, and back then the UK was highly exposed to that form of technological innovation. In 2015, compared with the tech on NASDAQ, there is a tiny sliver on the London stock exchange.

> Of all Scottish companies, 98% are small, 1% are medium, and 1% are large

It is worse now because, since then, ARM has been sold to the Japanese and is therefore gone. The tiny sliver also includes BT, which is plumbing – it is nice plumbing, but it is plumbing. This is shocking underexposure to the thing that we are all aware is changing our lives completely.

It gets worse if we consider the relative size of those stock markets. Back in 1899, the UK dealt with a quarter of all stocks and shares sold. Today, it deals with 6.2%, so that tiny sliver is even smaller.

I used to go around the world trying to do my PT Barnum bit for Scottish start-ups and saying how awesome it was to build businesses in Scotland. I would say "We like to think that we invented everything but it is not true – we invented nearly everything". That is a good thing to talk about and I used to do it, but the truth is it is all in the past. When you map out all the inventions, they are incredibly clustered a couple of hundred years ago. We are living on these past glories.

Scotland's economy

What have we been doing recently? The GERS data shows that Scotland spends 325% more money on enterprise and economic development than the rest of the UK for no results. In Scotland, the spend is £52 per capita, with one company created for every 12 people; in the rest of the UK, the spend is £16 per capita, with one company for every 10 people. It is worse than that because it is difficult to tease apart the Scottish bits of the UK stats so the Scottish bits are included there. It is staggeringly bad.

With all of those hundreds of millions of pounds wasted on comedy nonsense, what does that mean we get? Of all Scottish companies, 98% are small, 1% are medium, and 1% are large. We all know that the 0 to 49 employees figure for small businesses is a bit of a ruse – there are not 49 employees in all those businesses. Almost all – 76% – are zero employee businesses. When you take the same data and add on employment and turnover, these small businesses are not even paying corporation tax. Most of them will survive on little grants here and there, but that is not going to keep the NHS and the roads going.

In medium companies, the tiny little increase in turnover – the tiny slice at the top between turnover and employment – is the bit that the boss gets. Even for the 1% of large businesses, the ratio of turnover to employment tells you instantly that they are not fast-growth companies. A fast-growth, scaling digital business has a very different ratio.

We know that competitive advantage goes to nations that focus on not creating companies but scaling them into proper companies. More recently, Scotland has focused on service businesses. When Microsoft, Oracle and so on came in the 1990s to sell their products, we were not building the products; we were building people who would start service companies to service the products, or companies such as Royal Bank of Scotland, which are in essence service businesses.

> **Today, more than half the world's population live in urban areas and, by 2050, that will be 70%**

Those service businesses have linear growth, but the companies that we need to build – those that we are building in Codebase – are exponential-growth companies. They are companies that can go from one to 1 million users online because of the thing called the internet.

Key trends: urbanisation

I want to talk about some of the key trends and the opportunities that we have with regard to the future of a sustainable Scotland. In thinking about future cities and cities getting bigger, I thought back to when I was young and had hair. I used to read the comic 2000AD about the horrific fascist Judge Dredd, who lived in Mega-City One, which was science fiction. There was Mega-City One on the eastern seaboard and there was Cursed Earth where the nuclear war had happened. That pattern is now happening: successful cities are growing faster than ever before. Today, more than half the world's population live in urban areas and, by 2050, that will be 70%.

It is fascinating to look at the number of people added to a city per hour. London has 9 people moving to it per hour, which is a staggering amount when you think about it. For Bombay, that number is 51 people per hour; for Lagos, it is 85; and for Delhi, it is 79 people.

With scale comes the good and the bad. With scale comes more crime, but also all the good stuff, such as economic development. The laws of scaling are such that we get a 15% efficiency saving as we scale a city. Cities are also where all the innovation happens, as such companies exist in clusters where people come together.

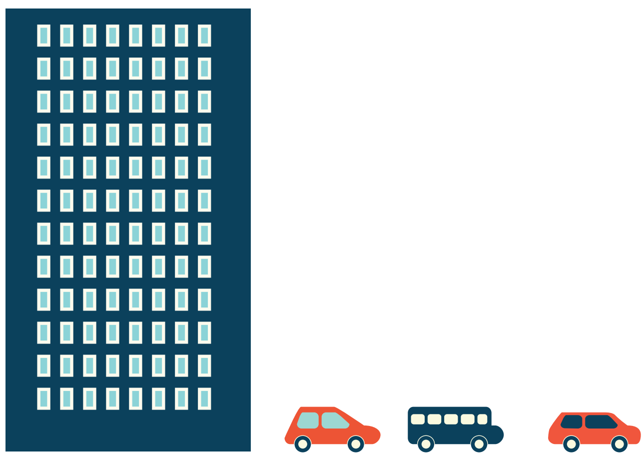
Key trends: technology

Technology has given us superpowers that outpace science fiction. Wikipedia has given us the power to know anything; Google Maps give the power to never be lost.

I want to show you a letter to the Glasgow Herald about horseless carriages in 1895. Mr Joseph Wright, who had applied for and was refused permission by the Glasgow Town Council to experiment with a horseless carriage on Glasgow streets wrote:

"allow me to say that those in authority in our city might as well try to beat back the waves of the sea with a broom as try to stem the tide of horseless carriages, which are looming in the distance. They are surely coming, and ere long they will be running in thousands along our streets."

Now, we have the looming prospect of driverless cars; we know that that is happening.



It is easy to predict driverless cars, but it is much harder to predict the second-order and third-order effects. In the previous century, it was easy to predict highways, but it was harder to predict the business models of Walmart and McDonald's, which came from highways. The questions that we have to face are about what the second-order and third-order effects will be when driverless cars happen. For example, when no one needs to park any more, will that re-enliven city centres? Will all out-of-town shopping malls die? What happens to all the spare land that we will have? What can we do with that? All those questions are real and rapidly looming.

Key trends: artificial intelligence

When we are talking about a lot of that stuff and productivity, we hear the worries about artificial intelligence such as, "Are robots eating your job?" We have a number of AI companies at Codebase just now and what they can do is staggering.

I will show you a picture from the amazing 1960s movie *The Apartment* with Jack Lemmon. Every single bit of the job that he did in it is now done in a single cell on a single Excel sheet. That whole floor of workers is basically one sheet of Excel, the floor below is the next sheet, the floor above is another sheet and, at some point, the boss presses 'Enter'. Those jobs have all gone – but they have been replaced by new ones.

The doom-and-gloom bit is that it is easy to predict the jobs that will go and it is harder to imagine the jobs that will come.

I will make a couple of points on machine learning. Those among you who are more scared of flying than others may know that, currently, pilots fly the plane for about seven minutes per flight and that that is dropping by about 20 seconds a year. The rest of the flight is handled by machine-learning algorithms – that is what is flying a plane. You have medical diagnosis more that is more effective than a doctor; the AlphaGo DeepMind win; self-driving cars that are safer than humans.

A positive future for Scotland

Bearing all of that in mind, how do we build a positive future for Scotland when so many of these jobs will go? How do we build a future that will allow cities to grow efficiently so that we can make those great companies and allow the countryside to re-grow appropriately?

We have to build more product companies. To avoid the turkey problem, we cannot be building these service companies that Scotland has relied on for the past few decades. We need to leap on the energy that came out of Skyscanner and build more of that, not more of the same. We need more scale-ups and more companies at the front of the global stage to drive inward investment and job opportunities.

The companies in Codebase that go well double in size every six or seven months – the two become four, but the 40 become 80. That level of growth is extraordinary. We must have that to have a future of jobs here.

We can be an innovative nation again, selling to the world. We must do that, and bring everyone else along.

Dr Katherine Trebeck (Senior Researcher, Oxfam)

> Despite all the wisdom, all the knowledge, all the ingenuity and all the passion and compassion in Scotland, we are still chasing after the wrong goals

We have just heard how much our economy is going to change. I want to talk about who it is going to work for, within all that change, and whether it will be sustainable or whether we will have an economic model that will make it harder for our friends and cousins in other parts of the world to have even a fighting chance at a good life.

I will take as a given that we all share a broad vision of a socially just and sustainable world. When I am in Oxfam offices in other parts of the world, it is easy to be proud and to tell colleagues to look at what is happening in Scotland and that they need to learn from this or that initiative. However, despite all the amazing work that is happening in Scotland, the incredible businesses doing wonderful things, the amazing community projects and the really exciting policy innovation, when you come closer and start to look at the detail, you see that there are some gaps and inconsistencies.

Therefore, what I want to suggest is that, although we share a vision of how the world can be better, we are like the folks who do the right thing and go to the gym for 45 minutes every morning but do not fundamentally change their diet or their lifestyle. We are dabbling in some good initiatives, but we are not really linking everything together and adding it up to create the structural change that will address the deep-rooted causes and enable us to create good lives on a sustainable planet.

I want to raise a few concepts that are burning in my mind at the moment: defensive expenditures, failure demand – which anyone who remembers the Christie Commission five years ago will be familiar with – and consolation goods. To a great extent, many of our current initiatives are helping people to survive, which is extremely important, but they are also, ultimately, preserving the current system that is doing so much harm. Can we imagine an economy that does things differently?

Defensive expenditure

Why are we having to do so much defence to engage in all of this consolation effort? Why are we failing so much? It is because our economy externalises a great deal of its impact. Many of our economic actors are structured in a way that causes them to turn a blind eye to a lot of their impacts. That is the case in a negative sense, but also in relation to the ability to think positively, which means that there is an under-delivery of a lot of the positive impacts that could be possible – I am thinking in particular about a lot of business initiatives.

A lot of our economic measures are profoundly misaligned to the sort of communities, economy, jobs and country that we need to see. Basically, despite all the wisdom, all the knowledge, all the ingenuity and all the passion and compassion in Scotland, we are still chasing after the wrong goals. That has created an economic model in which wealth, far from trickling down, is actually rushing up to those at the top.

Some of the externalities involved are costing our earth dearly. You do not need to look far to see examples of that this year, when we have had record heat levels, when the bushfire season in places such as Australia, where I come from, is starting earlier and lasting longer, when we have massive spiders and wasps invading our kitchens, when we have Hurricane Harvey, Hurricane Irma and now Hurricane Maria.

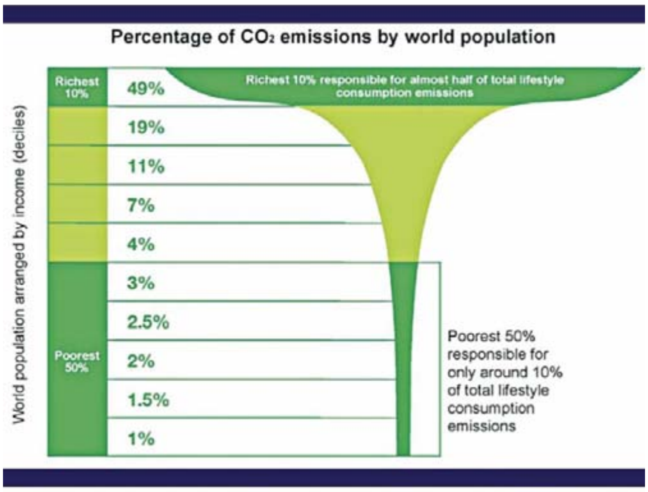
I heard a story the other day about kids from rich families in Delhi who are driven to school and have to wear gas masks to get from the car to the classroom – they do not play outside because the air is so polluted. When they are driven home in those cars, kids in Delhi who are not from such rich families polish their tinted windscreens at traffic lights, and those kids are starting to show signs of what miners in Scotland 100 years ago would have referred to as black lung.

The pressures on the planet are causing earth systems scientists and folks at the Stockholm Resilience Centre to warn that we are pushing beyond four of the nine planetary boundaries. Partly, that is because many actors in our economy are turning a blind eye to the impacts of what we are doing. The cartoon below is wheeled out a lot. It shows three little folk sitting around a campfire, with someone telling them, "Yes, the planet got destroyed but for a beautiful moment in time we created a lot of value for shareholders." That is a sad way of talking about the fact that the measures that we use are wrong. Governance systems in many of our businesses are making good people do bad stuff.

> **It is, front and centre, our lifestyles and economic models that are doing the damage**

Environmental impact

Every time I talk about the impact on the environment, I want to show folks this chart just to remind them who is putting most pressure on the planet.



The chart shows some numbers that Oxfam calculated a few years ago in time for the Paris conference of the parties. We looked at, globally by income deciles, the people who were causing the most carbon emissions; crucially, we looked at consumption emissions, which means that we took into account actual consumption, not the production that had essentially been offshored. Please bear that in mind when you hear claims of decoupling.

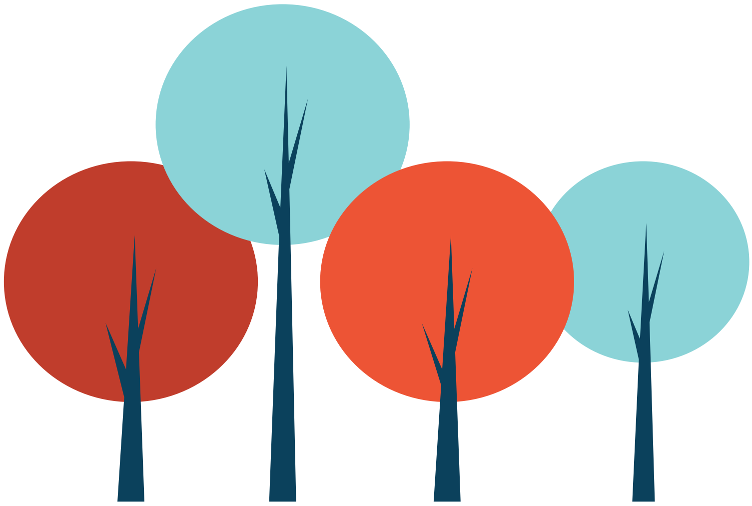
Taking into account people's consumption emissions yielded, rather ironically, a champagne glass shape, showing that the richest 10% of people around the world – those folks in Delhi who own the cars that I was just talking about as well as people in the UK, the United Arab Emirates or wherever – are responsible for almost half of all the climate emissions, while the bottom half of the world's population emit less than 10%. We need to remember that when we talk about who is putting the most pressure on the planet: it is, front and centre, our lifestyles and economic models that are doing the damage.

Gross domestic problem?

We have this economic model that is geared to the idea of more and more growth, but there are profound incentives built into the notion of GDP. The point has been summed up beautifully by a Canadian, Mark Anielski, whom I have been quoting for years and who says it so much better than I can.

I could give a lecture of the problems and flaws of GDP as a measure of progress, but according to this economist, the hero in GDP terms is a chain-smoking terminal cancer patient going through a divorce who crashes his car while eating a takeaway burger and texting at the same time – oh, and he is also an arms dealer.

All of those activities will increase GDP, but this is not the sort of person who we want to make the decisions on how our economy should be structured and how our communities should operate. They are certainly not the sort of person we want to work with. The example profoundly epitomises the perverse incentives in GDP, and there are all sorts of other reasons why we want to critique GDP.



The folks at the Social Progress Imperative have created something called the social progress index. It comprises 53 different measures of what they define as social progress, including things like human rights, opportunities and fundamental determinants of wellbeing. They have mapped all that on the Y-axis and put countries by GDP per capita along the X-axis.

Do not worry about the detail. The key thing to notice is that, although having more GDP per capita really matters at the beginning stages of economic development – there is a very sharp increase up the social progress index, and you get more social progress for marginal increases in GDP per capita – at fairly modest levels, the increase and improvement start to tail off.

This is the notion of diminishing marginal returns that I learned in first-year economics; we are getting diminishing marginal returns in terms of GDP growth to social progress. I can highlight that by comparing plucky old Costa Rica, which is doing extraordinarily well in social progress, with South Korea, which has very similar levels of social progress but a gap in GDP per capita of about US$20,000.

Another way of looking at that is the genuine progress indicator, which has been calculated since the 1970s. It subtracts from GDP all the bad stuff such as pollution, defensive expenditure such as that for cleaning up environmental harm or paying for bottled water because tap water is polluted, inequality and so on. It then adds in a lot of the good things such as volunteering, provision of green space and so on. Colleagues of mine based at the Australia National University – Bob Costanza and others – have been calculating the genuine progress of various countries around the world for many years, and you can see a fairly consistent increase in GDP per capita whereas genuine progress as measured by the GPI has been largely flat. The gap that they point to started in 1978, and we can have a conversation about the economic policies put in place then that caused that situation.

Inequality

One of the big things causing genuine progress to flatline is the level of inequality. Oxfam has been looking at levels of extreme wealth for the past few years now, and we have started to calculate the number of billionaires it takes to have as much wealth as the poorer half of the world's population. When we first released this report – it was at Davos in 2014; we are very strategic with these sorts of things – the figure was 85. In other words, 85 people had as much wealth as the poorest half of the population. That figure went viral – it went around the world – and we were completely staggered by it.

> **When we add up the number of billionaires whose wealth it takes to account for the poorest half of the world's population, we find that it is eight men, which is extraordinary**

When we recalculated the figure the next year, it had come down to 80. When we recalculated it last year – 2016 – it had come down to 62. We said in internal conversations, "My goodness! It can't come down any further, can it?", but when we got updated and better figures from Credit Suisse, whose material we use, we found that we knew more about folks living in poverty in India and China than we did using the previous figures. What is dire is that the situation is worse, so when we add up the number of billionaires whose wealth it takes to account for the poorest half of the world's population, we find that it is eight men, which is extraordinary.

Poverty

That is a global figure, but we cannot sit back and feel too smug that Scotland is in a better situation. The level of income that goes to the 1% has been increasing in recent years, and one in five people are still in poverty. Of course, that is a relative poverty line, and you might think that poverty in Scotland isn't really bad, but poverty in Scotland is a life of food banks, of shame and stigma, and of not being able to participate in school. A life of poverty in Scotland is an extraordinarily bad life, and it is completely unacceptable and avoidable. We cannot sit back and feel that Scotland is not too bad. The Palma ratio for Scotland, which is calculated by dividing the share of wealth of the top 10% by the share of the bottom 40%, is about 9.4, which is dire.

With inequality comes people hiding away from one another. When I was in South Africa recently, I saw some pictures that staggered me. They showed the extent to which people are hiding away behind barbed wire, laser fences and higher walls. That is what inequality does – it causes people to retreat into their enclaves, whether their online enclaves, such as their Twitter feed, or their gated communities behind barbed wire. That is just one example of what Richard Wilkinson and Kate Pickett documented a few years ago in their book, "The Spirit Level". It includes an index of social problems and health problems that shows that the situation becomes dramatically worse the more unequal a country is.

I am sure that you will all be familiar with the work of Gerry McCartney at NHS Health Scotland. He has mapped the changes in life expectancy as you move from the west end to the east end of Glasgow and has shown that, for every train station that you move to the east, men lose two years in life expectancy. There is a gap of 14 years in a very short space of time. I live out near the university, and I could run that distance in about 90 minutes. Even though the distance is not that great, there is a gap of 14 years in life expectancy, which is just staggering.

Community alientation

In addition to those high levels of inequality and the dire impact on the planet, there is a sense of community alienation. People feel that their jobs do not meet their fundamental human needs and that theirs is a life of precariousness that is lacking in meaning. We are extraordinarily lucky to come to events like these in our suits and to have these conversations as part of our work and professional lives, because most people are just struggling to scrape by.

An effort is being made to heal and preserve and humanise the current system. There is the resilience agenda, whereby people are told, "Do some mindfulness," "Change your thinking," "Be more present," or "Change how you respond to the situation." We do too much of that and not enough thinking about what the structures are that are keeping people in bad lives. It is extraordinarily ironic that in Scots Gaelic the same word is used for "resilient" as is used for "long-suffering". Therefore, we need to be very careful when people talk about the resilience agenda as a coping agenda instead of thinking about how we can create a better economy.

What we are doing is what the wonderful Chilean economist Manfred Max Neef would say is reaching for pseudo-satisfiers. We are trying to satisfy our need for security with barbed wire and gated communities. We are trying to satisfy our need for identity with shopping and consumerism. We are trying to satisfy our need for happiness and meaning with pills and drugs. However, we know that adjusting to this sort of economy is a case of coping or surviving from day to day. Not enough attention is being turned to the structures of the economy.

Uneconomic growth

Herman Daly used to work for the World Bank, so he is not a crazy radical economist. He would say that the notion of diminishing marginal returns that we looked at earlier in the context of the social progress indicator – I am putting words in his mouth – is a benign take on things. What we need to do is have a conversation about uneconomic growth – about how much of what we spend is healing and preserving and cleaning up and consoling because of the nature of the economic model that we have.

The social democratic consensus that we have had over the past few decades is about getting the economy to grow bigger but turning a blind eye to a lot of the damage that is done along the way. The idea is to just get it to grow bigger and faster because then you can take some of the growth in the economic resources back from that through taxes and you can use them to heal and defend and console against some of the damage that was done along the way.

> Poverty costs the UK almost £80 billion a year

The problem is that this economic model is extraordinarily expensive. It is putting avoidable demands on the state when the state should be on the front foot, embracing the things that Jamie Coleman has been talking about, creating this flourishing tech sector and helping us to adjust to this brave new world of technology.

It is inefficient and it depends on a growing economy but if we take the science of planetary boundaries seriously, we have to get our heads around redistributing rather than just growing the economic pie. There is a litany of figures that give some illustration of the notion of uneconomic growth.

I will start with the Christie commission. Back in 2012, it estimated that well over 40% of what local authorities spend is due to failure demand because of our uneconomic model. We have the Joseph Rowntree Foundation estimating that in the UK, poverty costs the UK almost £80 billion a year. We have Jules Pretty and his colleagues talking about the "negative consumption externalities" that cost the NHS £62 billion a year, which are driven by things such as ill health, including mental ill health, diabetes, loneliness, and cardiovascular disease. These are things that we could avoid if we had an economy that looked after people.

In the US, there is the rise of a concept called "guard labour". There is an estimate that almost 5 million people in the US work in "guard labour" sectors, such as security guards, a lot of police officers, and people who work in the defence industry.

We could look at any list of numbers to put a pound sign on the damage that we are doing to the environment. I have a figure from UNEP that says that the cost of environmental damage because of human activity is almost $7 trillion. Bill McKibben tweeted during the week that the US has spent $2 billion on fighting wildfires just this year. We are spending extraordinary amounts of money because we are doing so much harm to the planet and so much harm to people.

A human economy

How can we do things differently? I have mentioned Manfred Max Neef already. I turn to him a lot because I think he nails so profoundly what development should be about – it should not just be about incremental increases in GDP; we need to really go back to basics about meeting fundamental human needs.

We have the vision laid out by countries in September 2015, when world leaders signed up to the United Nations sustainable development goals. The goals are not perfect, but in their totality and with that beautiful underlying mantra of "Leave no one behind" they point to a different vision of the future by 2030 than what we can imagine. It is extraordinarily wonderful that Scotland was one of the first nations to sign up to the SDGs.

I often visualise the issue as a doughnut. My colleague Kate Raworth took the idea of planetary boundaries to create the outer layer of an environmental ceiling and added the inner layer of social foundation, which it is unjust to allow human beings to fall below. That yields this doughnut shape that we need the economy to operate inside: in there, it is safe and just.

Oxfam is increasingly talking about something called the human economy, which we might come back to. We even have folk such as the World Economic Forum, in a big chunk of their website, talking about how GDP is a poor measure of the health of our economies, let alone the prosperity of our society. There is a litany of literature on the flaws of GDP, yet we hang on to it.

Oxfam ran the Humankind project in Scotland a few years ago. It articulated a different measure of progress based on what people really need to live well and what they themselves say. There is some really great work going on around the national performance framework here in Scotland to make it correlate more closely with the fundamental human needs of people and the needs of the planet.

Changing what we measure is really important but we also need look at things at the micro level – at companies. Jack Welch, the former CEO of General Electric, apparently coined the term "shareholder value" but now he is warning us that "Shareholder value is the dumbest idea in the world".

I do not think that profit and being a successful, viable business are bad things. What worries me is when profit and shareholder value are the pure ends in themselves. That puts blinkers on decision makers because those internal governance systems are geared up to deliver profit. We should reconceptualise businesses so that profit is a vehicle to another end. There are benefit corporations, for example. We have a flourishing of different models of business that suggest we could just put equivalent priorities for businesses on social objectives and environmental objectives. Co-operatives are a great example, such as Mondragon in the Basque region of Spain.

It is fantastic in Scotland that these sorts of initiatives are flourishing, such as SCIOs – Scottish charitable incorporated organisations. It was announced in the Programme for Government that there would be more investment in supporting these sorts of pro-social business models. This is the sort of economy that we need by 2030 – a lot more of these guys and fewer of the original Jack Welch characters.

We have to think about how we do work, how we design jobs, and how we share the pretty unhappy elements of work – how we share those tasks and how we remunerate. We can have remuneration correlated to social value rather than just market power. We have to think about how we share work in terms of time. There are simple things that we can do, such as detaxing labour. We can shift the tax base to wealth. That would change the incentives that people who are designing jobs ultimately face.

> Wouldn’t it be great if, by 2030, the mining companies operating in Scotland were mining piles of waste rather than the ground itself?

There is also the circular economy, another where Scotland is wonderfully on the front foot. We need to really move from the take, make, waste model to the circular economy, where we cherish things. Wouldn’t it be great if, by 2030, the mining companies operating in Scotland were mining piles of waste rather than the ground itself – getting all that ore that is in piles of discarded mobile phones? This is what the circular economy is about.

It is about how we think about the products we need, and there have been some really nice hints towards that. We have the drink bottle deposit scheme, and there was an article in The Herald at the weekend saying that Scotland is becoming a nation of car sharers. That epitomises that we do not need to own a car all the time; if we share one with each other, we still get to our destination but we make much better use of the sunk cost in building that car.

By way of finishing, I just want to go back to the idea of getting it right upstream. The social democratic consensus that we have had is based on the idea of heal and preserve: grow the economy faster, tax money out of it and channel it into using building blocks to close the gap, using our transfers and our welfare system to try to lift people up because big gaps have been created by the economy.

That is of course important – I would not want to suggest otherwise. I work for a humanitarian-focused organisation, and that work helps people to survive. However, I also think that we can do better by not letting those gaps open up in the first place.

Rhetoric and reality in Scotland

There are challenges. It is not an easy task. Although there is plenty of amazing stuff happening in Scotland, with amazing businesses, amazing community organisations and amazing policies – I have already listed a couple of them – there is a big gap between rhetoric and reality and even between the policies themselves and their implementation. We have selective short term, long-termism. We are good on infrastructure building but we are not so good at thinking about other really upstream root causes. There is incoherence in terms of having great ambition around climate change and then talking about reducing air passenger tax and getting every last drop of oil out of the North Sea.

There is too much parroting and groupthink around economic orthodoxy. The next time you are in a meeting, you should play bingo every time someone says, “We need more productivity,” without thinking what that productivity is about and who is getting it. In a world of planetary boundaries, do we need to create more and more stuff? Redefining productivity – and of course the grasp of growth – would be a great start.

We have a lot of enlightened policy makers here who have cottoned on to the fact that faster GDP growth is dangerous and unjust because it is not doing the job that we wanted it to do, so we are putting some nice adjectives in front of growth. We have inclusive growth, green growth, shared growth, low-carbon growth, sustainable growth and balanced growth. It is almost getting to the point of low-fat, organic growth.

But we still cannot get ourselves to conceptualise sharing things better and doing things better upstream where we do not need all that growth to heal, console and defend against.

Scotland's priority sectors

I was asked to think about some of the priority sectors that Scotland is focused on and whether they are the right ones. I suggest that it is not so much about which are the right sectors as about how they operate and who they work for.

Will the food and drink sector be one in which we are talking about flourishing, small local businesses, or will we be looking at a situation where we have massive multinational companies that kill off small farmers and throw their weight around on health bodies operated by the Government, as happens in other constituencies? We have to be really careful about how these sectors operate.

Will creative industries be industries that enable everyone to find their niche, rather than just churning out these little worker bees and identi-clones from our universities? Scotland has a good record on that, so I am optimistic there.

Will our sustainable tourism and energy sectors really be serious about sustainability? Will we talk about a frequent flyer levy? Will we talk about recognising that social justice and climate justice demand that we cannot take every ounce of oil out of the North Sea?

Will our financial and business services be structured in a way that serves the local economy, the small farmers who we talked about and small businesses? Will they incentivise those pro-social business models rather than just seeing investment as an opportunity to harness some money and suck it up for the owners of capital?

Will the life sciences be at the forefront of driving the transition to a circular economy? Will they use the knowledge that they create for prevention rather than just healing?

Finally – I am really optimistic about this – will our universities teach people to question, challenge and adapt to the sort of economy that Jamie Coleman laid out in terms of protecting the person rather than the possession and not holding on to brownfield industries but helping people see that they will have secure livelihoods and that they will be able to move into new sectors? It is about compassionate individuality rather than just homo economicus.

Discussion

Change

The importance of change was noted – the change coming with technological and environmental developments and the change required to manage the necessary transitions in society. This linked to how people think and, crucially, change their views and behaviour. The question was asked whether the required change should be revolutionary or incremental, with one suggestion being that the depth of the change was more important than its pace. The point was also made that disruptive innovation is already altering our lives and will continue to do so.

Technology

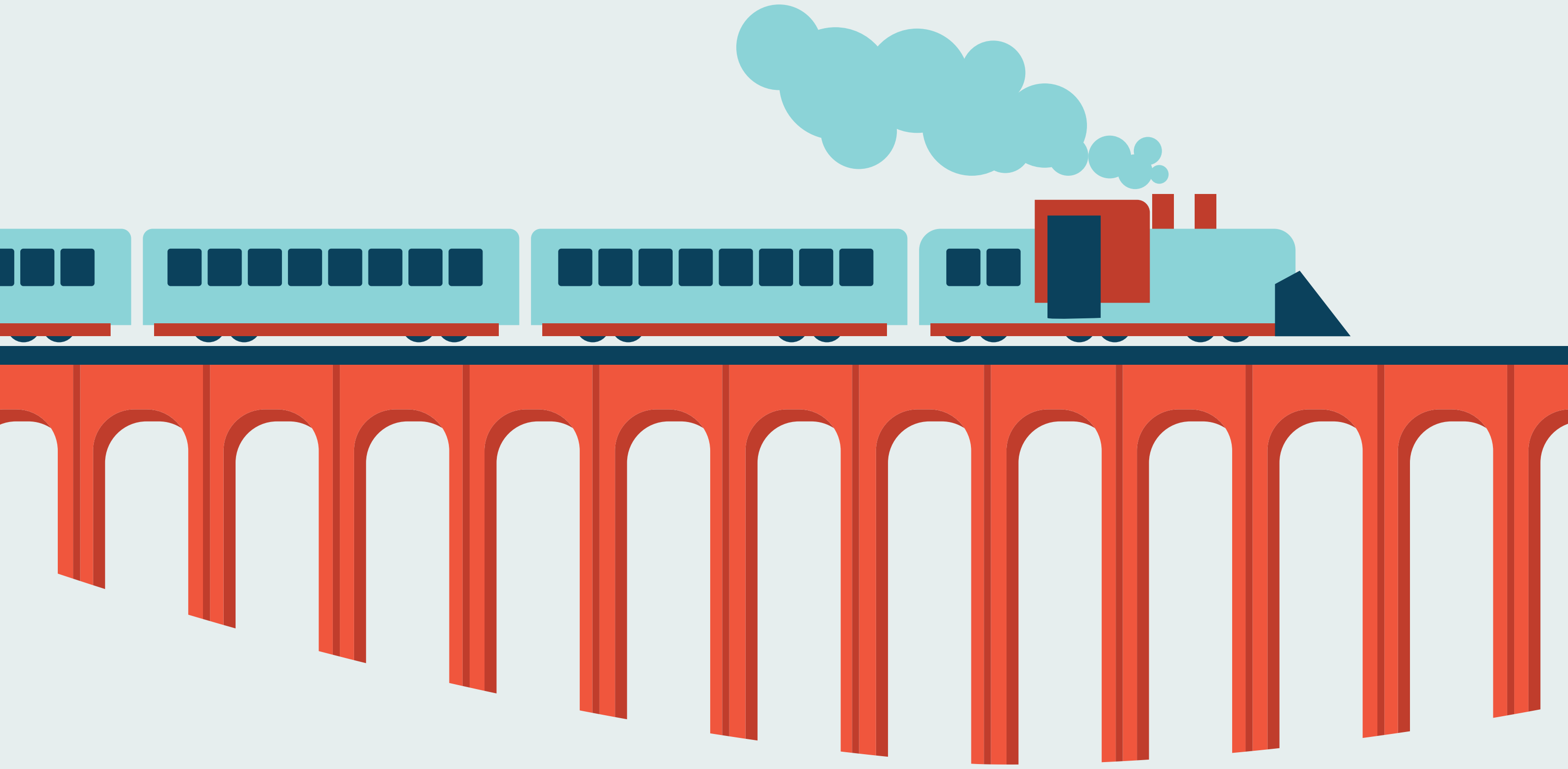
The question was asked whether technology is the villain or hero. Examples were shared of where digital technology is helping deal with problems and find solutions both in Scotland and abroad. It was suggested that the ethos of technology comes from the company that develops the code and that there is an opportunity for Scottish and other European companies to work on the ethical application of new technology. It was also suggested that technology can never be the only answer to society's problems.

Universal Basic Income

It was noted that the idea of the Universal Basic Income had not been mentioned despite its popularity with equality campaigners and tech entrepreneurs. Different studies on UBI were mentioned, including in Germany and Canada, which seemed to suggest different results. The point was made that, if a UBI was introduced, it should encompass everybody, including asylum seekers and refugees. It was also suggested that it should be a participation income to recognise different contributions to society.

Future economy

The question was asked whether it is possible to blend the visions provided by the two presenters, with innovative companies that grow and employ lots of people while still being socially conscious and motivated. The point was made that different models can prevent value going to a small number of people. Equally, the context in which businesses grow can be redesigned to incentivise different business structures.



Next Steps

Adam Tomkins MSP closed the debate by thanking the speakers and the audience for their contributions. The next event in the Scotland 2030 Programme will be on the theme of ethics, morals and human rights in 2030. It will take place on Wednesday 29 November and will be chaired by Richard Holloway as a director of Scotland's Futures Forum.

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