IS DEGROWTH ESSENTIAL TO PREVENT CLIMATE CHANGE AND HOW MIGHT UNIVERSAL BASIC INCOME AND UNIVERSAL BASIC SERVICES FACILITATE IT WITHIN THE NEXT 10 YEARS?

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Introduction

2021 saw mass flooding across Europe, 2020 saw wildfires across Australia and 2019 saw huge droughts over East Africa.[1,2,3] These are a handful of extreme weather events that are becoming more and more frequent. Scientists blame this on climate change, the effects of which are now more pressing and violent than ever.[4] This is causing millions of people across the world to become climate refugees, as parts of the world become uninhabitable.[5] The situation is even more dire, many scientists predicting that the effects of climate change will be disastrous at the current rate of predicted emissions over the next 10 years. If global warming is kept at a level of 1.5ºC, the climate will be somewhat inhabitable.[6] However, at the current rate of growing and declining emissions, global temperatures are on track to increase by 3.2ºC by 2100.[7] Drastic action is clearly necessary.

Degrowth presents a potential solution. It would completely turn common conventions surrounding economic success and human development on their heads. However, its major critics point towards the plurality of economies and living standards across the world. In attempting to escape a tunnel-vision that only sees climate change, this project also explores welfare schemes of Universal Basic Income and Universal Basic Services, aiming to discover how climate change can be battled whilst simultaneously raising standards of living.

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[1] 'Heavy Rainfall Which Led to Severe Flooding in Western Europe Made More Likely by Climate Change', *World Weather Attribution*, (2021), https://www.worldweatherattribution.org/heavy-rainfall-which-led-to-severe-flooding-in-western-europe-made-more-likely-by-climate-change/.

[2] L. Givetash, 'Australian Wildfires Declared Among the 'Worst Wildlife Disasters in Modern History'', *NBC News*, (2020), https://www.nbcnews.com/news/world/australian-wildfires-declared-among-worst-wildlife-disasters-modern-history-n1235071.

[3] O. Anyadike, 'Drought in Africa Leaves 45 Million In Need Across 14 Countries, *The New Humanitarian*, (2019), https://www.thenewhumanitarian.org/analysis/2019/06/10/drought-africa-2019-45-million-in-need.

[4] X. Zeng, 'Is Climate Change to Blame for Extreme Weather Events? Attribution Science Says Yes, for Some – Here's How it Works, *The Conversation*, (2021), https://theconversation.com/is-climate-change-to-blame-for-extreme-weather-events-attribution-science-says-yes-for-some-heres-how-it-works-164941.

[5] O. Long, 'Climate Refugees: A Global Crisis, *HelpRefugees*, (2019), https://helprefugees.org/news/the-plight-and-rise-of-climate-refugees/

[6] Intergovernmental Panel on Climate Change (IPCC), *Global Warming of 1.5ºC*, (2018), https://report.ipcc.ch/sr15/pdf/sr15_spm_final.pdf.

[7] J. Tolleffson, 'How Hot Will Earth Get by 2100', *Nature*, (2020), https://www.nature.com/articles/d41586-020-01125-x.

Methodology

Given that no country has employed Universal Basic Income (UBI) or Universal Basic Services (UBS) as a long-term policy, this project uses case studies to analyse said schemes. Said studies were chosen to be as diverse as possible, whilst also representative of the entire scheme. In this way, this project can build an ideal picture of what these schemes would look like in different sized economies.

Another part of this project explored sought to assess public opinion surrounding climate change and degrowth. This manifested in the form of a survey and interviews. The survey brought together questions surrounding taxation, economic growth and climate change responsibility. Their answers were input on a scale from strongly agree to strongly disagree. Participants were also asked their age to explore potential generational skews in opinion. The survey brought together over 100 respondents.

Meanwhile, the interviews were designed to explore more complex concepts surrounding UBI, UBS, deindustrialisation and more. An interview format provided more opportunity to explain these concepts, as well as go down different avenues and trains of thought – something that the rigid survey format could not do. 10 participants were interviewed.

Degrowth: Origins of the Concept and Its Relevance to Climate Change

In its contemporary form, the origins of degrowth can be traced back to the 1970s under the French term *décroissance*. French, German and Spanish academics began to doubt economic growth as a permanent macroeconomic objective, citing that its original advocates did not intend for it to be everlasting. The NGO, the *Club of Rome*, mirrored these doubts when they published *The Limits to Growth* in 1972. This report plotted exponential economic growth and population growth in the context of a finite resource supply to find that industrial output and food supply would dramatically

fall by the mid-2000s, leading to human catastrophe.[8] Broadly, they found that ever-increasing consumption and resource use from economic growth was not sustainable. Nicholas Georgescu-Roegen's 1976 *Energy and Economic Myths* essays convinced the Club to adopt a political stance against growth and he was influential among the decades of degrowthers to come.[9] Whilst causing a stir among influential economists such as Nicholas Georgescu-Roegen, the surge in neoliberalism under Thatcher and Reagan in the remaining 1970s and the 1980s repressed degrowth discourse. However, in 2002, the French magazine, *Silence*, capitalised on the loss of neoliberal momentum by releasing a special issue on degrowth that once again brough it to the attention of ecological scholarship. The establishment of the *Research and Degrowth* (R&D) organisation and the 2008 financial crash that challenged neoliberalism proliferated the idea of degrowth across Europe and eventually the rest of the world.

This project will take Jason Hickel's definition of degrowth since it is not tunnel visioned in only acknowledging quantitative environmental impact but also defines the qualitative impact it should have on people's lives. He says that degrowth should seek to reduce energy output and resource use to reform the global economy so that it works to accommodate the environment rather than maximise economic growth, which leads to climate change. In the short term, economic growth would have to decrease, unlike in a steady-state economy. In the long term, economic growth and human development would be decoupled. Qualitatively, he says that degrowth has to be fair to all and as equitable as possible.[10] This would involve decoupling economic growth and human development, degrowth advocators saying that maximising the former only temporarily increases the latter. Hickel also identifies that switching from an industry-based to services-based economy does little to decrease resource consumption. Degrowth inefficient and ecologically destructive industries and

[8] D. Meadows, D. Meadows, J. Randers, W. Behrens, *The Limits to Growth* (Potomac: 1972).
[9] N. Georgescu-Roegen, *Energy and Economic Myths: Institutional and Analytical Economic Essays*, (Oxford: 1976).
[10] J. Hickel, *Less is More: How Degrowth Will Save the World*, (London: 2020).

practices would be entirely phased out or at least scaled down. Hickel also recommends legislating against advertising to avoid irrational consumption and move the global economy away from Capitalism. Degrowth also seeks to end food and material waste, hoping to establish a more reusable material circle. Degrowth does not seek to lower standards of living, but actually would improve them through making industries more efficient. In this way emissions would decrease and dramatically slow climate change, ending the surplus that Capitalism creates.[11] This would accompany decarbonisation schemes.

However, Hickel's proposition for degrowth applies to higher-income countries rather than lower-income countries. In response to the latter, he says that economic growth is still necessary to ensure reinvestment in education and healthcare which he cites as most important to building an equitable society. Yet, under the World Bank's classification, only 80 out of more than 200 countries are higher-income countries.[12] Whilst they are certainly responsible for the largest share of greenhouse gas emissions, contributing 38% despite only being 16% of the global population, allowing all middle and lower-income countries to participate in economic growth would undermine degrowth's mission to combat climate change, especially in the short amount of time that it is necessary to do so.[13] This is because they are unlikely to have renewable resources given the capital and expenditure that is necessary for said technology. However, prohibiting advancement in these countries would make degrowth a privileged scheme that leaves behind those under the poverty line. Giorgos Kallis makes the point that peoples in the Global South such as in Bangladesh who are currently suffering the brunt of climate change are the ones calling for environmental justice the most.[14][15] However, if degrowth is

[11] Ibid., 209-219.
[12] 'World Bank Country and Lending Groups', *The World Bank*, (2021), https://datahelpdesk.worldbank.org/knowledgebase/articles/906519#High_income.
[13] H Ritchie, 'Global Inequality in Co2 Emissions, *Our World in Data*, (2018), https://ourworldindata.org/co2-by-income-region.
[14] G. Kallis, *Degrowth*, (New York: 2018), 179.
[15] T. Ida,'Climate Refugees – The World's Forgotten Victims', *World Economic Forum*, (2021), https://www.weforum.org/agenda/2021/06/climate-refugees-the-world-s-forgotten-victims/.

meant to pave the way for the next global economic system, then it must be able to accommodate prosperity for those who do not currently have it.

Hickel's argument presents a fault line that continues to divide the degrowth cause. Ecological modernists argue that economic growth can be decoupled from its environmental impact, allowing a similar Capitalist economy to continue, just tailored towards environmental concerns. For example, a circular material cycle would be environmentally sensitive but have little economic impact, meaning that GDP can be ignored. However, given the urgency of climate change, it is too soon to think about decoupling in the next 10 years and economic growth would have to decrease. Building the capital necessary for a more environmentally friendly society, such as wind turbines for renewable energy, would not solve the climate crisis in a Capitalist economy given that it would be profit motivated. Hickel makes the point that, "Capitalism is a system that's organised around exchange-value, not use-value."[16] He expresses that more efficient technologies only lead to higher resource consumption through motives of profit maximisation. Therefore, in order to transition to a greener society, macroeconomic aims first have to be thoroughly reoriented towards less resource consumption. Consequently, GDP growth rates have to be minimised in the next 10 years as in a Capitalist economy, they are profoundly intertwined with environmental degradation. Only in the long term can the GDP figure be irrelevant to climate change.

A significant criticism of degrowth is that it leaves behind those under the poverty line in lower-income countries who have traditionally been lifted above said line through economic growth. For example, the majority of the population of China became affluent through rapid economic growth proceeding the 1980s. Degrowth critics argue that it would battle climate change at the cost of further pushing down the poor of the earth. Consequently, this research project seeks to find out whether welfare

[16] Hickel, *Less is More*, (2020).

schemes could accompany degrowth, so that everyone could flourish under an economy that battles climate change. Along with whether they could work in theory, this project will also explore whether they are practically viable within the next ten years. Whether these welfare schemes would be domestically or internationally undertaken, along with their funding will be interrogated.

Universal Basic Income: A Wage for All

The first welfare scheme to be discussed is Universal Basic Income (UBI). This project will take the Stanford Basic Income Lab's definition of UBI because, unlike other definitions, it acknowledges the variability between different UBI schemes across the world.[17] UBI is the payment of a liveable wage to every citizen by the central government. The Lab appropriates Juliana Bidananure's UBI definition to determine its central characteristics.[18] Their definition delineates UBI's funding, as well as the level and frequency of payment as changeable and not set. UBI schemes are periodic, rather than one-off sums. They are also universal, meaning that they go to every citizen regardless of their income or family size rather than being means-tested. On top of this, they are unconditional, meaning that there are no prerequisites to receive the payment. This means that one can still receive UBI whilst voluntarily staying unemployed. These payments are also paid to individuals rather than an overall household.

The main question regarding UBI in this research is whether in combinations with a degrowth economy, would it reduce poverty more effectively than convention economic growth. This would mean that the scheme would work in a degrowth scenario. There are some limitations surrounding this research, centrally that no country has participated in a UBI scheme beyond a trial of a few years. However, this project has chosen three examples to be as representative of the diverse types of countries that UBI would have to be employed in to achieve degrowth as possible. The first country is Canada, which is a developed economy with a high standard of living. The second is India, which has

[17] *The Stanford Basic Income Lab*, (n.d.), https://basicincome.stanford.edu.
[18] J. Bidadanure, *The Political Theory of Universal Basic Income*, (2019).

an even larger economy, yet encompasses almost half of the world's poor. The third is Mongolia, which has a medium-sized economy relative to the rest of the world, yet had particular results to its UBI trial that could point to issues surrounding the workability and implementation of the scheme. All three of these countries participated in UBI schemes of varying length and space and they will be used to assess whether UBI could be the perfect accomplice to degrowth.

Canada is the 9th largest economy in the world and has a HDI ranking above 0.9.[19,20] Around 10% of its population is below the poverty line and its GDP per capita is just over US$43000.[21,22] Tom McDowell and Mohammed Ferdossi offer an especially useful evaluation of Canada's UBI trial in Ontario as they cross-reference it with the previous trial in Manitoba.[23] Given Ontario's population is almost 11 times the total of Manitoba's, this comparison would show how representative more localised and smaller studies are.[24] Broadly, labour market participation decreased slightly but quality of living improved. The latter was found by surveying participants on their physical health, mental health, social relations and their food, housing and financial security. In all of these variables, the majority of participants reported an increase in their standard of living after UBI payments were introduced. Regarding the slight dip in labour market participation, this would not compromise the economy in a degrowth scenario, given that there would no longer be a need for a labour force of the same size thanks to deindustrialisation, elimination of inefficient industries, as well as automation that is occurring regardless of the economic system.

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[19] 'Gross Domestic Product 2020' *World Bank Data Bank*, (2020), https://databank.worldbank.org/data/download/GDP.pdf.
[20] 'Human Development Reports: Canada', *United Nations Development Programme*, (2021), http://hdr.undp.org/en/countries/profiles/CAN.
[21] 'Just The Facts', *Canada Sans Pauvreté*, (n.d.), https://cwp-csp.ca/poverty/just-the-facts/.
[22] 'GDP Per Capita (Current US$): Canada', *The World Bank*, (n.d.), https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=CA.
[23] T. McDowell and M. Ferdosi, 'The Impacts of the Ontario Basic Income Pilot: A Comparative Analysis of the Findings from the Hamilton Region, *Basic Income Studies*, (2021).
[24] L. Jeudy, 'Population Estimates for Ontario, Canada from 2000 to 2020', *Statista*, (2021), https://www.statista.com/statistics/569874/population-estimates-ontario-canada/.

McDowell and Ferdossi attribute Ontario's success to four reasons. The first is the high level of the payment relative to previous social welfare schemes such as child credit and unemployment benefits. UBI was higher than these rates, which would allow people to take time out of work to retrain in a degrowth scenario, rather than being forced to live day-to-day whilst taking any job that is available. In an advanced economy, this is certainly possible. However, this does call into question if Less Economically Developed Countries (LEDCs) could participate in the same funding which will be explored later. The second reason is the, "50% take back rate." In this case, a take back rate is the rate of taxation that people end up paying relative to their UBI payment through progressive income tax. Effectively, this means that those working in Canada paid an average of 50% of the value of their UBI payment back through income tax. Clearly, even for an advanced economy like Canada, high rates of taxation are necessary for any UBI scheme to be successful. The third reason they identify for success is UBI's unconditionality, which is inherent to its definition according to Stanford's Basic Income Lab, rather than particular to Canada. Many participants said that the unconditional aspect freed them from the stigma surrounding seeking benefits that would usually entail extensive surveys, interviews and methods of proof. Particularly in higher-income countries where wealth is skewed higher, making poverty more evident, this could prove crucial in lifting their citizens above the poverty line in a degrowth economy. The fourth reason is the design of the welfare scheme. The Stanford Lab definition says that the value of the payment may fluctuate between countries. However, the payment was not uniform across Ontario, some individuals receiving more such as those with disabilities. The Ontario trial was successful because it did not completely replace all welfare schemes, understanding that certain peoples needed more from their central bank than others. Once again, whilst this level of funding may be achievable in an advanced economy, its viability in a developing one is a different question.

McDowell and Ferdossi found that the reasons for Ontario's success were largely the same as Manitoba's, showing that more localised studies can be effective and representative of larger areas.

Yet, Manitoba's experiment went on for five years whilst Ontario's was cut short at three due to a change in municipal government. Therefore, the former had more noticeable long-term consequences. The authors note that Manitoba saw a decrease in hospitalisation and an increase in high school graduation. This was because people were able to take more time off work without further injuring themselves, and school children were not made to work to support their family. Jason Hickel identifies healthcare and education as the most important factors in building a prosperous and stable society. In Manitoba UBI had the multiplier effect of improving education and healthcare, which can hopefully be translated to LEDCs so that peoples stay above the poverty line in the long-term and retain their social mobility. Canada's UBI experiments show that the scheme is successful in advanced economies at improving standard of living and that its slight decrease in labour participation would be compatible with a degrowth economy. However, the level of funding necessary to ensure its success is high, meaning that the scheme's viability has to be interrogated in LEDCs.

The next country is India, where a UBI trial took place between 2011 and 2012 in the northern state of Mahdya Pradesh. Despite being the 6th largest economy in the world, India has an HDI value below 0.65 (131st in the world).[25,26] The UN estimated in 2019 that around 28% of its population is under the poverty line which is 364 million people.[27] This is not even including those who would have sunk under it due to the pandemic. Despite having a large economy, India's colossal population means that it ranks at 162 in the world for GDP per capita (US$1900).[28] Clearly, funding for UBI would certainly be more of an issue here than it would be for Canada. Rasmus Schjoedt offers a useful retrospective look at this UBI scheme that also details the opinions of other scholars in how the scheme could be tweaked

[25] Gross Domestic Product 2020' *World Bank Data Bank*, (2020), https://databank.worldbank.org/data/download/GDP.pdf.
[26] 'Human Development Reports: India', *United Nations Development Programme*, (2021), http://hdr.undp.org/en/countries/profiles/IND.
[27] 'Poverty in India: Facts and Figures On The Daily Struggle For Survival', *SOS Children's Villages: Canada*, (n.d.), https://www.soschildrensvillages.ca/news/poverty-in-india-602.
[28] 'GDP Per Capita (Current US$) – India' *The World Bank*, (n.d.), https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=IN.

and bettered.[29] Broadly, this UBI scheme was a success, increasing standards of living without sabotaging labour participation – similar to Canada. The trial itself saw 8 pilot villages receive payments of 300 rupees for each adult and 150 for each child. This is nearly £3 and £1.50 respectively at today's exchange rate, which holds more weight in India than it would here. This was compared to 12 control villages that did not receive basic income. A second trial in the region gave the same UBI payments to a tribal village. The results of this experiment not only show the success of UBI, but also dispel the common criticism that payments could be misused.

Living conditions in citizens' households dramatically increased, the percentage of families having at least one bed rising by more than 100%. Mobile phone ownership rose from 9% to 61% and scooter or motorbike ownership from 3% to 30%. The multiplier effect of all of these improvements should not be underestimated, increasing health, communication and mobility. This widens opportunities for these citizens beyond their villages. However, if UBI is supposed to accompany degrowth, then surely this increase in consumption would compromise the latter. Yet, if degrowth achieves its objectives in phasing out inefficient industries, streamlining the production process and avoiding profit-motivated transitions to renewable energy - reduced consumption in higher-income countries would allow space for increased consumption in lower-income ones. Understandably, this is a tall order, but no anti-climate change plan should pretend that lifting people out of poverty without them increasing their consumption is possible. Decarbonising initiative could achieve this. It's worth noting that lavatory improvements were much lower than hoped for. Shjoedt attributes this to pre-existing attitudes surrounding latrine hygiene. Clearly, cash payments are not a catch-all when it comes to factors of poverty.

[29] R. Schoedjt, 'India's Basic Income Experiment', *Pathways' Perspectives On Social Policy In International Development* (2016).

Regarding labour, the study found that productivity actually increased for villagers on their own farms. However, the wage labour market saw a fall. 65% of villagers said that wage labour was their main occupation before the trial. This fell to below 25% after the trial. Before UBI payments, villagers did not make enough money on their own farm, meaning they had to participate in wage labour on larger farms or factories. This was particularly relevant for women, who made up the majority of this wage labour and would have to travel far to work – all alongside efforts in the household and raising their children. The UBI payments allowed women to only work on their own farms. On top of this, UBI's feature of being paid to individuals rather than families empowered women, giving some their own money for the first time, consequently awarding greater independence and influence over the household's finances. In a degrowth scenario, UBI would ensure that women were not left behind and that the gender gap would continue to narrow.

Along with more labour going to farms, UBI payments allowed families to save and buy more efficient machinery for their farms. Consequently, their harvests went up. This decreased food scarcity, both through the consumption and selling of this produce. In the tribal villages, food consumption increased by as much as 1000%. Girls benefitted particularly once again, as families did not have to prioritise which child to feed more – a decision that girls would usually lose out on.

A major criticism of UBI is that it would make participants lazy and that they would rely on the central government or misuse the funds. The previous evidence has shown that whilst labour patterns might change, families below the poverty line would actually become more productive. Schjoedt highlights alcohol consumption to show that it either stayed the same or decreased. Families noted that they did not feel the need to drink as much given their lower stress levels thanks to UBI. This shows that payments would not be wasted. In fact, much of the money was spent on sending girls to school, further empowering women. Coupled with the decrease in food scarcity, India's UBI trial benefitted Hickel's building blocks to a society – health and education. The similarity between the pilot villages

and the tribal village gives credence to UBI schemes being effective in areas not directly involved in the global economy. Overall, India's UBI scheme was a resounding success. However, if said UBI payments are made for specific aims of education, healthcare and more, surely it would make sense to directly fund these services instead. This will be discussed later with Universal Basic Services However, the question of funding persists. Evidence suggests that most welfare schemes would have to be terminated for UBI to be introduced. Given the enormous level of poverty that India experiences, perhaps UBI payments would have to be adjusted or means-tested.

The third UBI case study is Mongolia. The size of Mongolia's economy is 132nd in the world.[30] To put that in perspective, the World Bank classifies it as a lower-middle income country.[31] It has a GDP per capita of US$4007.[32] Its success was similar to Canada and India, reducing the poverty rate by more than 10% to just over 20%.[33] Despite this, Mongolia's UBI scheme turned out to be a failure and was eventually abandoned. Interrogating why it failed provides an interesting link between UBI funding and resources that would be especially pertinent in a degrowth scenario. Ying Yeung and Stephen Howes provide key insights into this and why Mongolia should be a cautionary example for future welfare schemes.[34] They said that it failed because of design and implementation, pre-emptively trying to avoid the *resources curse*. First, we must define what this actually is.

The resources curse a multi-faceted paradox which sees countries economically underperform despite being rich in resources. This occurs due to a country investing almost entirely in said resources

[30] Gross Domestic Product 2020' *World Bank Data Bank*, (2020), https://databank.worldbank.org/data/download/GDP.pdf.
[31] 'World Bank Country and Lending Groups', *The World Bank*, (2021), https://datahelpdesk.worldbank.org/knowledgebase/articles/906519-world-bank-country-and-lending-groups.
[32] 'GDP Per Capita (Current US$)', *The World Bank*, (n.d.), https://data.worldbank.org/indicator/NY.GDP.PCAP.CD?locations=MN.
[33] 'Mongolia Poverty Rate 1995-2021', *Macrotrends*, (n.d.), https://www.macrotrends.net/countries/MNG/mongolia/poverty-rate.
[34] Y. Yeung and S. Howes, 'Resources-to-Cash: A Cautionary Tale From Mongolia', *Development Policy Centre*, (2015).

industry. This both makes the country vulnerable to volatile commodity prices but also neglects its other industries and sectors, including welfare. In explaining how Mongolia's UBI scheme fell apart, Yeung and Howes focus on political participation and outline another consequence of the resource curse. In LEDCs which find large resource deposits, existing elites usually have control over them given that they are the only ones with enough money to invest in resource extraction. Due to resource revenue, there is no need for tax from citizens anymore. Consequently, citizens are less empowered and corruption becomes rife. Mongolia's UBI scheme sought to avoid the resource curse and was dubbed as *resources-to-cash* because it sourced the payments from resource revenue. Mongolia has a very large mining industry, able to take advantage of coal deposits, as well as copper and gold ore. The hope was this would make the resource industry accountable to citizens, as well as decrease inequality. Yeung and Howes also highlight that this resource-driven UBI scheme aimed to avoid rent-seeking – the idea that resource industries could increase their wealth without any productive improvement such as through government grants. Being more accountable to citizens would incentivise the government to diversify their investment portfolio rather than just focus on commodity industries.

Yeung and Howes draw similarities between Mongolia's UBI scheme and Alaska's, which doesn't pay a basic income but gives its citizens unconditional payments. Both are funded by resources. Alaska pays each resident between $1000 and $2000 every year from resource revenues and it is found to not negatively affect the labour market.[35] However, they make the comparison that Alaska is a well-established democracy whilst Mongolia is a young one, consequently prone to short-term decision making with weak institutions. Although Mongolia developed its UBI scheme from a child credit program that helped to streamline the payment process to avoid fraud, its fledgling institutions still struggled to deliver payments on time. Due to the volatility of commodity prices, the Mongolian

[35] A. Kitchenman, 'Alaska House Votes for $1,100 PFD but it's not a Done Deal', *Alaska Public Media*, (2021), https://www.alaskapublic.org/2021/08/31/alaska-house-of-representatives-passes-bill-with-goal-of-1100-pfd/.

government often delayed payments and were met with protests at every delay, especially when they tried to mitigate them with social services. On top of this, UBI payments were blamed for driving inflation as high as 15%. Therefore, despite its positive effects on inequality and poverty, Mongolian UBI transfers quickly lost political support in favour of specific poverty benefits and investment in education and jobs. By 2012, a focussed poverty benefit scheme replaced cash transfers. Mongolia's UBI failed because its funding was not secure enough, especially in the context of its infant democracy. However, many LEDCs have the same conditions of democracy and resources that Mongolia does, calling into question what the perfect fund for UBI even is. Putting Mongolia back into a degrowth scenario, the aim is that inefficient and environmentally damaging industries would be phased out. Whilst secure ones like gold may survive, fossil fuels would certainly be significantly diminished. Therefore, many LEDCs would not even have resources to raise revenue from.

These three case studies have proven that UBI is an effective welfare scheme in reducing poverty and inequality. However, the main issue that it encounters is funding. Commodity-driven revenue is too volatile for a long-term scheme, especially in young democracies with weak institutions. On top of this, if these resources are environmentally damaging, they would be incompatible with a degrowth economy. UBI certainly suits higher-income countries more than lower-income ones, perhaps calling for a blended approach. Perhaps Universal Basic Services (UBS) can provide a solution to lift up the poverty-stricken peoples in a world working against climate change.

Universal Basic Services: An Unconditional Standard of Living

The second welfare scheme this research project will explore is Universal Basic Services (UBS). The definition posed by the Institute of Global Prosperity at University College London will be used because it contextualises how UBS would manifest itself in already existing welfare systems such as the UK's

NHS.[36] UBS is the provision of seven public services by the state, which are free at the point of need. Said services are healthcare, education, shelter, food, transport, information (such as Wi-Fi and mobile service) and democracy/legal services. This project will focus on the first six services, rather than the latter one, which concerns itself too much with political formations that is far from the remit of this question. Similar to how UBI was discussed, a case study for each service will be used to show how UBS could accompany degrowth against climate change.

Healthcare is one of the few services in which there already exists a form that would fit into UBS. This is the UK's National Health Service (NHS). The NHS was founded in the post-war welfare state under Clement Attlee. Today, it accounts for 20.5% of public expenditure, which is around £164 billion.[37] The NHS funds itself through taxation – a significant amount of which comes out of income tax. It is important to note that not everything healthcare related is covered by the NHS, including eye tests and glasses. However, there are grants depending on one's level of income. Whilst it was originally the goal for everything to be free, this proved to eventually be untenable. Whilst the NHS continues to deal with funding issues, particularly in paying its doctors and nurses, it still functions incredibly well and was ranked as the best healthcare system in the world in a 2017 study by the Commonwealth Fund.[38] Clearly, a free health service is possible in a high-income country. However, this does not necessarily apply to a lower-income country given the expansive funding necessary.

A 2018 report into Nepal's healthcare system argued that public spending on it as a fraction of GDP needed to be increasing rather than declining. This report agrees with said assertion, given that a lack

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[36] A. Percy and H. Reed, 'Social Prosperity for the Future: A Proposal for Universal Basic Services', *Social Prosperity Network Report*, (2017), https://www.ucl.ac.uk/bartlett/igp/sites/bartlett/files/universal_basic_services_-_the_institute_for_global_prosperity_.pdf.

[37] 'How Public Spending Was Calculated in Your Tax Summary', *HM Treasury*, (2020), https://www.gov.uk/government/publications/how-public-spending-was-calculated-in-your-tax-summary/how-public-spending-was-calculated-in-your-tax-summary.

[38] M. Doty, D. Sarnak, E. Schneider, A. Shah, D. Squires, 'Mirror, Mirror 2017, *The Commonwealth Fund*, https://interactives.commonwealthfund.org/2017/july/mirror-mirror/.

of effective healthcare is one of the biggest limiting factors on social mobility in lower-income countries given lower life expectancies and protection against certain diseases that compromises employment and education. Despite not having the same funding as the UK, lower-income countries should reorient their finances in favour of healthcare and focus on tackling their most pressing issues for free.

When it comes to degrowth and climate change, the healthcare industry in the US is notorious for contributing to the country's greenhouse emissions – as much as 8.5%.[39] However, the US only has private healthcare. A more streamlined and nationalised health service would allow countries to take a unified approach towards a greener healthcare system that isn't as profit motivated. For example, the NHS is currently embarking on a long-term plan to become net zero in carbon emissions. Admittedly, a nationalised health service is not necessarily green, the NHS contributing a similar percentage of greenhouse emissions to its country as does the US healthcare system.[40] Therefore, beyond just facilitating degrowth, any country has to have strong green motives for their healthcare system to stop aiding climate change. Healthcare would constitute a significant part of UBS funding but it would significantly improve the living standards of lower-income countries. However, its effect on degrowth outside of this can only be hypothesised.

Education is another service that many countries already offer in the form that UBS would. Most higher-income countries, and many lower-income ones, offer primary and secondary education for free. Finland is an excellent case study given the wider case it makes for UBS. According to the OECD Better Life Index, Finland has the best education system in the world. This was tested against many

[39] M. Eckelman, K. Huang, R. Lagasse, E. Senay, R. Dubrow and J. Sherman, 'Health Care Pollution and Public Health Damage in the United StatesL An Update', *Health Affairs*, (39:12), (2020), https://www.healthaffairs.org/doi/10.1377/hlthaff.2020.01247.
[40] 'Greener NHS Campaign to Tackle Climate 'Health Emergency', *NHS,* (2020), https://www.england.nhs.uk/2020/01/greener-nhs-campaign-to-tackle-climate-health-emergency/.

variables including literacy and gender inequality.[41] There are broad differences in Finnish education and the rest of the world, such as starting later and relying much less on standardised testing. Whilst this certainly would have an effect on their success, it is not relevant to the UBS discussion.

The overwhelming majority of Finnish students go to state school. Only 2% of schools in Finland are private school which require fees from their students – this is fewer than 100 altogether.[42] Outside of their teaching techniques, Finnish success in education can be attributed to the wide range of free services they provide that accompany education. Every student is given free school meals, free taxi service, free healthcare, free counselling and more. Firstly, this removes pressure from parents, regarding both their working hours and income. Secondly, this decreases the need for students to work around their education in order to fund themselves when their parents may not be able to, allowing them to focus more on their education.

Finland's wide UBS approach to education has clearly been successful, a 2016 study by the Central Connecticut State University deeming the nation the most literate in the world. However, so has its funding. By making its state school system more centralised than other countries, every school is largely identical in its resources and teaching. By streamlining education funds, few schools are more popular or better than the others. This reduces inequality between the location of schools.

Education in Finland constituted much less of GDP than healthcare – only 5%. However, this is still 13507 million euros.[43] In scaling this down to lower-income countries, they should focus on how each service in UBS can complement each other through being publicly funded. For example, African countries crowd at the rankings table of HIV rates. This is because they are caught in a vicious cycle.

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[41] 'Education', *OECD Better Life Index*, (n.d.), https://www.oecdbetterlifeindex.org/topics/education/.
[42] 'Private Schools: Is Jeremy Corbyn Right About Bans?', *BBC News,* (2019), https://www.bbc.co.uk/news/uk-politics-49825925.
[43] J. Clausnitzer, 'Expenditure on Education as a Peercentage of GDP in Finland 2000-2019', *Statista*, (2021), https://www.statista.com/statistics/527983/finland-education-expenditure-as-a-share-of-gdp/

Students are forced to drop out of school to provide for their families, given that their parents struggle to work with their HIV, and consequent AIDs, diagnosis. As a result, students do not learn the necessary sex education to facilitate safe sex. Given the existing high viral load in the population, many of these students eventually contract HIV. Expanding education would have a positive effect on healthcare, by decreasing the need for STD treatment. On the other side, expanding healthcare would positively affect education, increasing graduation rates through more effective sex education campaigns and protective methods. This example proves that the funds for each service should not be considered in isolation. Each service has a multiplier effect on the other that would manifest itself in social mobility and consequent economic advances.

Circling back to degrowth, expanded education would inform a new generation of how they can act in a greener manner. Especially for developing countries, increased education could work in tandem with microfinance opportunities. Microfinance invests directly in grassroots businesses. Combined with education, this has the potential to make both agricultural and industrial processes in developing countries more green. Overall, education would not constitute the largest part of UBS funding. But it has the potential to significantly change developing countries in a degrowth scenario and change the lives of thousands.

Shelter is a service that has yet to have a clear UBS example that currently exists. However, Singapore's mid-20th century housing project can act as a case study on how shelter might work under UBS. Large migration into Singapore in the late 1950s led to overcrowding and squalid conditions. The government consequently invested in large flat blocks for lower-income peoples to rent. Initially, there were few applicants. But demand dramatically rose once applicants were allowed to use their Central Provident Fund contributions to pay for the housing. These contributions usually go towards pensions. The scheme has been an overwhelming success, Singapore having around 1000 homeless peoples out

of a population of more than 5.7 million.[44] However, the prices of these apartments have significantly increased since, making the housing market less accessible. This is not an example of UBS given that the properties had to be paid for and if anything, it shows that there must be at least some free form of shelter to allow people to get on the housing ladder. Singapore also had significant revenues from its port to use, something that other developing countries do not have. This case study proves that to practically work, shelter under UBS should be free at the point of need, but not after. This is no longer universal, unlike healthcare and education. The funding necessary to allow anyone free shelter would be extortionate. Singapore is also a peculiar nation. Given its small size, more than 80% of the population still lives in these government owned apartments. In other countries, many other people would likely want to upscale to their own their own house, especially if they have their own family. Therefore, providing shelter to everyone is not even necessary. Shelter calls for a more fluid form of UBS that doesn't necessarily always ascribe to predetermined rules.

Finland's recent *Housing First* scheme provides a more realistic approach to shelter under UBS. As of 2019, long-term homelessness had decreased by more than 35% and rough sleeping in the capital was virtually inexistent. The success of the scheme has been attributed to it abandoning the 'staircase model' – the idea that homeless people move through various stages of temporary housing until they are eventually rewarded with a permanent property. Instead, Finland decided to give them housing from the outset, which has encouraged homeless peoples to stay in these programs. Although Finland spent €250 million on this scheme, they were able to divert funds that would usually be spent on the judicial and healthcare services of these homeless peoples, saving as much as €15000 per homeless person per year.[45] This is another example of how each service can act symbiotically if under UBS. This gives hope to similar housing projects being used in developing countries.

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[44] 'Singapore's Hidden Homeless: Insights from a Nationwide Street Count', *Global-is-Asian*, (2019), https://lkyspp.nus.edu.sg/gia/article/singapore's-hidden-homeless-insights-from-a-nationwide-street-count.
[45] J. Henley, ''It's a Miracle': Helsinki's Radical Solution to Homelessness', *The Guardian*, (2019), https://www.theguardian.com/cities/2019/jun/03/its-a-miracle-helsinkis-radical-solution-to-homelessness.

Regarding degrowth, the construction of new shelter would likely have a carbon footprint. However, it does present the unique opportunity to test out greener construction methods, housing and lifestyles. Yet, whilst this may be possible for higher-income countries, it would likely be a step too far for lower-income countries. To conclude, shelter cannot feasibly be made free to all and would have to be needs-based. Yet it does not have to be as expensive as initially thought. But increased production could go against degrowth's battle against climate change.

Similar to shelter, food is not supplied under UBS anywhere either. However, Ireland is an interesting case study because it has one of the highest food security rates in the world, ranking second according to The Economist's Global Food Security Index.[46] Ireland is so successful because it domestically produces most of its food, rather than importing. Consequently, food is cheap because there are no import duties attached to the price. Meanwhile, Africa suffers from agricultural subsidies. These subsidies are paid to farmers to supplement their income. Developed countries pay their farmers more subsidies, encouraging said farmers to export more crops. This increased supply lowers the global price of any crop to a price that African farmers cannot compete with given that they do not have these subsidies to fall back on.[47] In this context, maybe countries should participate in economic protectionism, increasing their import duties so to encourage consumption of agriculture that is domestically grown. Similar to Ireland, food security would then increase. Despite agriculture being the backbone of many developing countries' economies, perhaps they should focus on how domestic demand can support them. In this way, farmers from lower-income countries would not be pushed out by state-supported farmers in higher-income countries.

[46] 'Rankings and Trends', *Global Food Security Index*, (n.d.), https://foodsecurityindex.eiu.com/index.
[47] R. Mshomba, 'How Northern Subsidies Hurt Africa', *Africa Renewal*, (2002), https://www.un.org/africarenewal/magazine/september-2002/how-northern-subsidies-hurt-africa.

However, in a UBS scenario, making food free at the point of need would cripple these developing countries that are dependent on agriculture. Consequently, food is a service that UBS fails to pass. Yet, in a degrowth scenario, economic protectionism would significantly decrease greenhouse emissions, thanks to reduced trade. A rethinking of trade could aid the battle against climate change. But UBS regarding food would be infeasible in lower-income countries.

The next service is transport. Luxembourg is the first country to make its public transport completely free. However, its small population and small area, especially against its comparatively high GDP, means that it would not be a very useful case study given its uniqueness to other higher-income countries and lower-income ones. Instead of using a case study, exploring the broad motives and effects of public transport could build up a picture of how it would manifest under UBS. Luxembourg's scheme aimed to reduce congestion. In 2011, the American Public Transport Association estimated that public transport had saved 865 million hours of transport time. Clearly, public transport leads to fewer cars being on the road. Similarly, public transport is more fuel efficient, saving as much as 300000 car fill-ups per day in the US.[48] Public transport would therefore do well at accompanying degrowth in the battle against climate change.

However, building an effective public transport in a developing country that does not already have one would require massive funding, but also contribute heavily to greenhouse emissions. Whilst equally important, perhaps each UBS service should be ranked in order of urgency. Despite saying they can work symbiotically, the cost of some may outweigh the benefits, at least in a degrowth scenario where a rapid reduction in greenhouse emissions is necessary within the next 10 years. Whilst more accessible transport would certainly abet occupational mobility, developing countries should

[48] 'Environmental Benefits of Public Transit, *KCATA*, (n.d.), https://www.kcata.org/about_kcata/entries/environmental_benefits_of_public_transit.

focus first on issues like healthcare, education and shelter. In this way, once more green technologies have been spread, long-lasting transport systems can be constructed.

The last service is information. Information refers to services like mobile signal and Wi-Fi. South Korea provides the most expansive 5G in the world in numbers according to their Ministry of Science and ICT.[49] Along with natural factors, such as their densely packed population, South Korea's investment of 1% of their GDP in R&D throughout the 1970s and 1980s facilitated long-term development. Government systems were gradually computerised, fibre networks were constructed and private computers eventually replaced private ones. This gradual process meant that South Korea could become a technological leader without spending large proportions of its GDP. Consequently, under UBS, it would not be too difficult to take an incremental approach to information services. Spreading out the cost over time means they could provide said services for free. This type of virtual connection could also fill the gap of physical transport connections, at least for a time.

However, these information services still generate a carbon footprint, in the form of signal and electricity towers powering and cooling.[50] Yet, the infographic by ClimateCare emphasises the green steps being taken by private companies like Microsoft and Apple in their data processing. Therefore, information services could fill a gap in UBS' portfolio, whilst not compromising the battle against climate change.

Part of this question points to the urgency of implementing action against climate change within the next ten years. However, as one package, UBS proves to be unable to meet this requirement. This extensive scheme would not be as successful in lower-income countries as it would be in higher-

[49] R. Daws, 'South Korea Boasts of Hitting Almost Four Million 5G Subscribers', *Telecom*, (2019), https://telecomstechnews.com/news/2019/dec/03/south-korea-four-million-5g-subscribers/.
[50] 'Infographic: The Carbon Footprint of the Internet, *ClimateCare*, (2021), https://www.climatecare.org/resources/news/infographic-carbon-footprint-internet/.

income ones due to issues surrounding funding and already-existing infrastructure. For example, constructing entirely new transport systems in a short time would be monetarily impossible but also fly in the face of reducing resource use in a degrowth economy. Instead, countries should seek to rank UBS' services, placing more emphasis on healthcare and education and investing in other services slowly and in the long-term. UBS does not prove to be a perfect facilitator for degrowth and the next section of this project will compare it with UBI and how a blended approach might work.

Results

Self-evident in the term 'Global Warming' is that it affects the entire world. Research into the welfare schemes of Universal Basic Income (UBI) and Universal Basic Services (UBS) concludes in the fact that they cannot act universally in a degrowth economy that seeks to rapidly thwart climate change. Both schemes are more suited to higher-income countries than they are to lower-income countries, thanks to the funding necessary, as well as the lack of pre-existing infrastructure in lower-income countries. Therefore, neither scheme offers an attainable solution to climate change, let alone a fool-proof one. However, these results don't deem both schemes redundant in the climate change conversation. A blended approach that bends the rules of both schemes could facilitate a degrowth economy that progresses the human race, rather than lowers our standard of living.

This blended approach would see higher-income countries carry out UBI. As said before, the scheme works better in these countries. In a degrowth economy that would see decreased resource use and the streamlining of inefficient and harmful industries, most of these countries would completely deindustrialise, such as mining in the UK.[51] Those who would subsequently be unemployed would be given UBI payments that would enable them to retrain without sacrificing their standard of living.

[51] 'Mining and Quarrying in the UK', *Department for Business, Energy &Industrial Strategy*, (2019), https://www.gov.uk/government/publications/extractive-industries-transparency-initiative-payments-report-2018/mining-and-quarrying-in-the-uk.

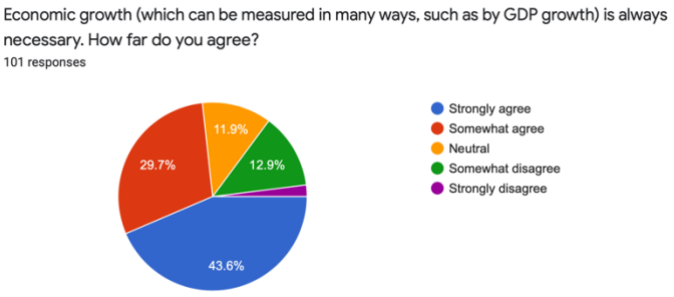
Hopefully, this would also extend upwards into local economies which are dependent on industry. By streamlining pre-existing benefits that are prevalent across higher-income countries, said countries would be able to fund UBI, allowing their citizens to survive in a degrowth economy.

When it comes to lower-income countries, they are much more suited to UBS. This is because the welfare is targeted. Whilst India's UBI trail showed that payments would be used for good rather than wasted, UBS would have the power to strengthen whole institutions such as regarding health and education, rather than enfranchising singular peoples on a case-by-case basis. However, a UBS package that includes all of its seven services is impossible due to funding purposes and construction that would fly in the face of degrowth's aim to battle climate change. Therefore, this research has determined that lower-income countries should prioritise healthcare, education and food security. These three services are integral in lifting peoples out of poverty in both the short and long-term. If possible, information services should then be prioritised, able to fill some of the gap left by the not focussing on transport and shelter services, at least in the next ten years that are necessary to implement degrowth against climate change.

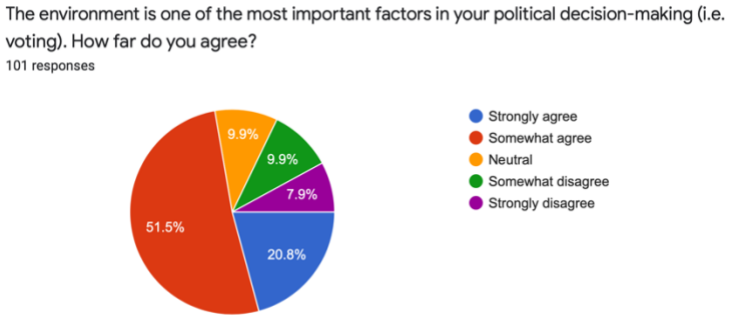
It is hoped that this blended approach would be able to facilitate degrowth, whilst also not letting the poverty-stricken sink any further. Degrowth seeks to decouple economic growth and human development. This blended UBI and UBS approach across different income countries would promulgate the latter, whilst proving there is no need for the former. However, no plan is without its faults, and in this one, it regards middle-income countries that would have to decide whether they implement UBI or a curtailed UBS, or perhaps both. This scenario, is not one that this localised research project can tackle, but hopefully one that another will explore.

This research project had two other outputs in the form of a survey and interviews. The survey consisted of nine questions surrounding the existence of climate change and its urgency to

participants, conventions surrounding economic growth and progressive taxation, as well as who is responsible for tackling climate change. Participants were asked to stipulate their age, so to assess whether there is a generational divide between opinions surrounding climate change and welfare schemes. Meanwhile, the interviews were designed to explore more complex concepts of degrowth, UBI and UBS. Interviewees were asked about what they would be prepared to do against climate change and whether they believe there is a relationship between economic growth and human development and if that is positive or negative given degrowth reasoning. Subsequently, they were asked about deindustrialisation as well as funding for welfare schemes and whether they would be willing to pay more domestic tax for foreign aid to help the global poor survive in a degrowth economy. Finally, interviewees expressed their opinion on how countries should work together, especially in the face of obstinance, as well as their optimism or pessimism regarding if climate change can even be solved. The results of both the survey and the interviewees provide a two-tiered understanding of public opinion. This is useful because if degrowth is to be applied within the next 10 years, a thorough comprehension of current public opinion is necessary to see whether this type of economy is even worth pursuing.



Whilst the sample size of the survey certainly skews more towards the upper end of the age scale, there is a clear trend of responses between different generations. Whilst the large majority, nearly 90%, agree that climate change exists, 18-29 year olds crowded out the strongly agree segment of the question that climate change is the most problem that society faces, whilst 45+ year olds ranged between somewhat agree and even strongly disagree. The age divide is even more evident on the question of if economic growth is always necessary. The lower end of the age scale generally disagreed



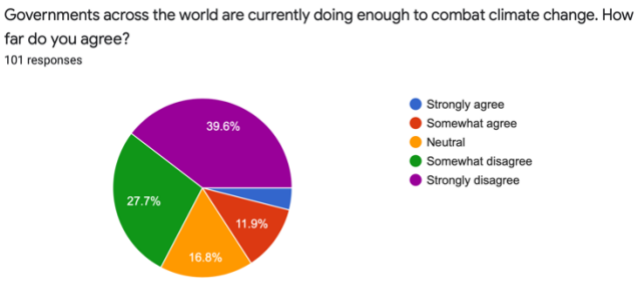
whilst the upper end agreed. This points to conventions surrounding economic growth that different generations have grown up around and why economies around the world continue to peg their success against it. The survey provided an extended insight into economic growth. On the question of whether an economy can be successful without economic growth, one interviewee pointed to different markers of success such as decreased inequality, saying that economic growth has been incorrectly normalised as the primary indicator of success. Another interviewee was evidence of this opinion, saying that an economy cannot be successful without economic growth because the latter is what constitutes economic success.

Interviewees were somewhat split on whether there is a relationship between economic growth and human development, some saying that a positive relationship exists, even if it may not be inherent. Few were convinced by the degrowth economy, many acknowledging that there may be a negative relationship between economic growth and human development in the long term, but that this negative impact has not been felt yet and that scaling back economic growth would take too long in regard to the urgency that battling climate change demands. This shows that degrowthers have a long way in changing public opinion in their favour, and perhaps have to engage more with the public, rather than just in academic discourse.

Going back to the survey, around 45% of participants strongly agreed that climate change was the most pressing problem that society currently faces. However, only around 20% strongly agreed it was one of the most important factors in their political decision-making. Whilst in both questions, the majority of responses ruled in favour of battling climate change, the disparity between these two

figures points to a difference in between theory and reality that the surveys explain. In response to what interviewees would be willing to do about climate change, many said they acknowledge they could be doing more, but are not out of inconvenience and effort. Others also pointed out that concern over climate change may be a privilege to have since those in other socio-economic backgrounds have more pressing issues. In this way, they said that individual action from higher socio-economic classes should be encouraged. Speaking of individual action, most argued that it had little impact unless directed by the government. Others argued that the individual action does have a butterfly effect, such as someone becoming vegetarian or vegan influencing others around them to do so as well. However, they did admit that this may take too long given the urgency of climate change.

Moving onto welfare schemes, the majority of participants in the survey agreed that progressive taxation was the best way to fund welfare schemes. However, many interviewees expressed that current British tax brackets should not increase. Whilst one participant advocated a tax for the super-rich, another argued that this cause an exodus of these peoples unless there was a unified global approach surrounding progressive tax. Taking this idea to lower-income countries, progressive taxation may be untenable there because the few peoples with higher-income could easily leave, leaving the country with little income or wealth to tax from. Whilst most agreed that they would be comfortable for slight increase in taxation so to fund welfare schemes abroad such as UBI and UBS, one participant was against this, arguing that we should not be funding said schemes abroad if we cannot fund them in our own country, pointing to the current struggles the UK has in funding many of the services under UBS. The contrasting results of the survey and the interviews did not solve the issue of funding UBI or UBS, perhaps only complicating it even more.



When asked in the survey whether the government was doing enough to battle climate change, nearly 18% of participants responded with neutral. This was the biggest neutral segment in the whole survey, pointing to a lack of knowledge surrounding governmental actions concerning climate change. Consequently, green pressure groups have to do better in either criticising or endorsing what the government is doing to fight climate change, because this survey signals that not enough people know. The majority of participants in the survey deemed that the government was the most responsible for climate change. In the survey, many said they believed corporations are the most responsible for climate change at the moment. However, most agreed with the survey consensus that governments are the most responsible for battling climate change, saying that they are the only ones able to direct corporations to change. Extending this idea, one participant pointed to the fact that governments of lower-income countries are less able to encourage corporation change given that many of these economies depend on these corporations. Therefore, the responsibility of battling climate change lies in the hands of higher-income governments.

Moving onto the role of higher-income countries in battling climate change, interviewees were divided over whether higher emitting countries should bear a greater brunt beyond the proportion of their economy of the cost of solving climate change. However, most said that it would be pointless to attempt this, saying it would only hinder efforts for international cooperation. They also argued this would be too difficult to quantify and perhaps unfair given the global and interlinked nature of supply chains. In the event that higher emitting countries refused to change their ways against climate change, some interviewees argued that financial penalties could be used, whilst others were unsure if anything at all could be done.

The concluding question of the interview referenced studies that climate change will be irreversible within the next years. After being asked if they think this is true, a couple of interviewees through this might be a slight exacerbation, but all agreed with the approximate timeframe these studies gave. The next part of the question pitted this statistic against the more optimistic news of the G7 recently agreeing to a new flat corporation tax rate which was an unprecedented act of international cooperation.[52] Thinking about the urgency of climate change, but also a potential new age of cooperation, interviewees were asked whether they believe climate change will be solved. All believed that hypothetically, but interviewees were divided over whether it will be solved in practice. Yet, majority of interviewees believed that we will eventually reach a breaking point and learn to live with climate change and adapt to a new normal rather than return to pre-human-oriented climate change times.

Both the survey and the interviews showed that the majority of people are eager to solve climate change. However, for many, degrowth seems too drastic a measure, especially when it comes to the question of funding UBI and UBS schemes that would help lift people out of poverty.

Conclusion

Drastic action certainly needs to be taken against climate change. This project has found that in theory, a blended approach of UBI and UBS would accompany and facilitate degrowth without pushing the global destitute further under the poverty line. However, the question of funding continues to persist, which is unavoidable in global Capitalist economy. Consequently, in reality, degrowth may not be the best solution to solve climate change, given the urgency it demands. This is further reinforced by the survey and interviews on public opinion, which show that people are not completely convinced that

[52] R. Partington, 'G7 Tax Reform: What Has Been Agreed and Which Companies Will it Affect?', *The Guardian*, (2021), https://www.theguardian.com/world/2021/jun/07/g7-tax-reform-what-has-been-agreed-and-which-companies-will-it-affect.

there is a negative relationship between economic growth and human development. Despite this, it is hoped that the findings surrounding the best applications of UBI and UBS, as well as the positives and shortcomings of degrowth can inform in the battle to beat climate change.

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