

The Human Economy



The social democratic path to decent livelihoods and development in digital capitalism

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July 2017

- Short of dystopian visions of a world without work, the real challenge of the digital transformation is the speed of automation. Can the skills of the workforces be upgraded fast enough to avoid large scale unemployment? How are the productivity gains distributed? How to tackle the structural demand crisis? These are no technical, but genuine political questions.
- The Human Economy, composed of two interwoven economies, puts the creation of income-generating livelihoods front and centre. The digital capitalist economy generates the surplus needed to remunerate work for the common good. And the human commons produce the consumption demand needed to keep the market economy going.
- Digital capitalism is reshuffling political fortunes, and progressives should go out of their way to build coalitions around the need to boost demand. After half a century of supply-side economics and cost-cutting politics, putting incomes back into the centre of economic thinking is an opportunity progressives must not miss.
- The Human Economy transcends the conflict between capital and labour by making human capital the engine of the economy. For capital, a solution to the threat of collapsing consumption demand is proposed. For workers, the spectre of mass unemployment is relieved. And for political decision makers, the risk of social unrest is addressed.
- The social democratic path to development creates the demand to sustain the digital economy, the social security people need to embrace permanent change, and the political stability required for disruptive reforms. The social contract for the digital society is to provide full capabilities to everyone willing to contribute to the common good.

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Why the old models no longer work

For decades, capitalism has faced a demand crisis

Ever since the Second Industrial Revolution started to peter out, global capitalism has faced a demand crisis.¹ At least in the saturated consumer markets, the sale of cars, refrigerators and computers no longer generates the profits expected by shareholders. As Robert Gordon observed, the new wave of technological innovation associated with computerisation and electronics, often dubbed as the Third Industrial Revolution, did not generate the same boost to productivity and consumer demand as its predecessors.² After 2008, observers started to worry that advanced economies suffered from more than a hangover of the financial crisis.³ Larry Summers reintroduced Alvin Hansen's gloomy prediction of a secular stagnation. Weak, jobless growth, it was argued, could be the new normal for developed countries.⁴ The reasons for the demand crisis in the old industrial countries are manifold and include slower population growth as well as higher inequality, in effect driving up savings and slowing down consumer spending.⁵ The start-ups of the "New Economy" need very little seed money to get off the ground, eroding investment demand. Most worryingly, even the global champions from the Silicon Valley create very little employment.⁶ Capitalism has an aggregate demand problem, and not even the combination of fiscal stimulus and historically low interest rates seems to be able to fix it.⁷

Ironically, the strategies put in place over the past decades to restore profitability are largely aimed at the supply side: 1) the rationalisation of production through technological automation aimed at increasing efficiency;⁸ from this perspective, digital revolution can be interpreted as an attempt to tackle the consumption crisis by rationalising

the consumptive and distributive apparatus. 2) the globalisation of production by offshoring, profiting from cheap labour cost in developing economies; 3) the Neoliberal approach to free the supply side from any "political cost" by lowering taxes, cutting back welfare, and depressing wages; 4) financialisation as a strategy to sidestep the crisis by looking for profits in the financial markets. It should not come as a surprise that these supply-side approaches succeeded in resolving the underlying demand crisis. In Western countries, automation and deindustrialisation have contributed to the right-wing populist revolt against globalism.⁹ In emerging and developing economies, the next wave of automation contributes to premature deindustrialisation.¹⁰ Neoclassical supply side economics have run out of recipes of how to address this demand crisis.

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Progressives usually call for the end of austerity, and use some kind of stimulus to spend our way out of the demand crisis. These hopes for a Keynesian revival are equally misguided. Over the past few decades, developed economies were kept alive through artificially created demand. The inflation of the 1970s, the public debt of the 1980s, the private debt of the 1990s and the quantitative easing of the 2000s were all strategies to inject future resources for consumption at present.¹¹ No matter how the debt crisis in China plays out, stimulating its slowing economy with even more debt seems out of the question.¹² Simply injecting more virtual capital into the system won't solve the underlying structural demand crisis.

Hopes for a Keynesian revival are equally misguided

Today, digital transformation deepens and widens the crisis

The digital revolution also makes a return to Fordism impossible. Higher productivity means

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that fewer workers can produce the same output. If no new tasks are created, this will lead to job cuts. If these workers cannot find new sources of income, the resulting

consumption demand crisis threatens the very survival of the capitalist economy.¹³

The impact of digital automation on industrial economies

What will be the impact of digital automation on employment? Beyond doubt, learning machines are taking over tasks, which used to be performed by humans. But what happens to these human workers is hotly debated. Dystopians warn against a “world without work”. Utopians welcome the age of abundance and leisure. In fact, fears that automation would eliminate human work are as old as technological innovation itself. David Ricardo was the first to criticise this “Luddite fallacy”. Karl Marx, on the other hand, believed automation would bring the end of capitalism, and free humans to explore new forms of social cooperation beyond wage labour.¹⁴ John Maynard Keynes saw “technological unemployment” as a temporary problem, which could be managed by policy intervention.¹⁵ Ironically, all sides point to the experience of previous industrial revolutions to underscore their arguments. Doomsayers worry about what would happen if employment in the manufacturing sector now follows the path agricultural jobs have taken in developed economies. Sceptics admit

that past waves of automation have disrupted the labour markets, but ascertain that the net effect has been more and better employment. Pessimists object that in the past, workers affected by automation could find routine work in other sectors or industries. Today, however, learning machines are replacing humans across all sectors at the same time. Martin Ford gloomily predicts that once the machines have learned to do everything humans can do, we are looking at a “jobless future”¹⁶. Technology sociologist Judy Wajcman rejects this Silicon Valley futurist discourse as hyperbole.¹⁷ The replacement in one sector or industry, techno-optimists argue, does not say much about the aggregate demand for human labour.

Conclusive evidence for either side, however, is scarce. In one of the few comprehensive empirical studies, Daron Acemoglu and Pascual Restrepo have found large and robust negative effects of robots on employment and wages.¹⁸ David Autor and Anna Salomons’s long-term study, on the other hand, shows that employment losses in one industry are being compensated by net gains at the aggregate level.¹⁹ Looking towards the future, Economists Carl Benedikt Frey and Michael A. Osborne predict that about half of the United States labour force is at risk of being automated.²⁰ The methodology of this study, however, has been heavily criticised²¹. Technological disruption, it seems, moves with such speed that forecasts about its social impact cannot be made with absolute certainty.

Can replaced workers, like in the past, move to another sector to find new work? At least in economies with high labour cost, it may be reasonable to assume that the times when the manufacturing sector created mass employment are over.²² Advocates of service-led growth have been promising that displaced workers will find jobs in the service industries.²³ Until now, development in the

labour market seemed to support this claim. So far, the flexible and decentralised nature of many low-skill service jobs made them relatively resistant to automation. Frey and Osborne, however, believe that this resistance to rationalisation may end in the current wave of digital automation.²⁴ Machine learning, big data and vast computing power have made it possible to automate many tasks that were until a few years ago considered out of reach for technological substitution.²⁵ Machines are likely to replace service sector employees with highly repetitive tasks like back office workers, bank clerks, accountants, tax consultants, travel agents, legal clerks, salespeople, business administrators, postmen or call service providers. Susskind and Susskind believe that even the middle and high-skilled workers such as doctors, teachers, architects, the clergy and lawyers will be replaced by Artificial Intelligence.²⁶ Wajcman counters that such a narrow technical perspective fails to grasp the emotional and social character of skills and expertise.²⁷ A judgement is hard to make, because we cannot know if machines will continue to expand their abilities exponentially, or eventually hit some kind of final frontier.

To better understand what is behind these contradictory projections, we need to take a look at the way automation works. Until recently, human made machines could only do what their human programmers told them to do. To automate a task, the programmer must break down the working process into repetitive steps, and then instruct the machine to follow them precisely. Therefore, so far, machines could only perform routine tasks, while those jobs which deal with unpredictable situations were out of their reach. Simply put, drawing files and filing motions are routine tasks which can be automated, while negotiating a plea bargain is not. Hence, the probability of a human worker being substituted by a machine

depends on the ability of a human programmer to break down his job into a series of routine tasks. Ford, believing that this is possible for most jobs, predicts a gloomy future without work. Autor, on the other hand, believes that most jobs are combinations of routine and non-routine tasks.²⁸

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Once machine take over the routine part, the human worker can concentrate on other aspects of his work. As a result, labour productivity goes up, the price per unit of the performed task goes down, and in response, at least more often than not, demand for the service goes up. This is why Autor argues that workers are not being replaced, but displaced to different tasks which allows them to use their time more productively. And indeed, past evidence shows that in those industries, where technology optimised the work process, employment numbers went up, not down.²⁹

A real game changer could be when machines acquire the ability to substitute non-routine tasks. This has been notoriously difficult because, as Michael Polanyi has pointed out, in many cases humans are only tacitly aware of how they do what they do.³⁰ So far, the inability to formalise certain tasks sets limits to automation. What cannot be coded cannot be performed by a machine. There is, however, two ways to circumvent this “Polanyi’s paradox”: environmental control and machine learning³¹. Similar to the way we levelled and covered the natural environment to facilitate automobiles, today Amazon carefully designs warehouses

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for the operation of logistical robots, and Google uses detailed, hand-curated maps to enable self-driving cars. Machine learning, commonly known as the brute force technique behind search engines, uses big data and statistical models to allow computers to make a “best guess” on how to solve a task. It seems reasonable to assume that these technological innovations will disrupt the labour markets for truck and taxi drivers, logistical workers and back offices, where currently the bulk of low to mid-level skilled workforce is employed. Machines, in other words, are eating their way up the skill food chain. What still cannot be concluded from this is whether these workers will be replaced or displaced.

In sum, we cannot be entirely certain when we dismiss Cassandra’s warnings. As far as available evidence goes, it is reasonable to expect that digital automation will cause significant disruption, but will stop short of the dystopian vision of a “world without work”. David Autor sums up this uncertainty nicely: “‘Robocalypse Now’ is not happening, but this does not rule out ‘Robocalypse Later’”³².

Our attention should then be directed to the question - what kind of disruption digital automation will bring. How exactly will it impact the labour markets? What kind of new jobs will emerge, and how well or badly will they be paid?

Digital automation will cause significant disruption, but will stop short of the dystopian vision of a “world without work”

While it is unclear how much digital automation has contributed to un- and underemployment, it has evidentially contributed to polarisation of the workforce.³³ At the top of the skill ladder, the managers, professionals and experts have benefitted greatly from computerisation and information technologies. Performing

abstract tasks, which require problem-solving capabilities, intuition, creativity and persuasion, their skills are complemented by the nearly unlimited access to information and analysis. Lucky to find increased demand for their services at a time when not enough university graduates were available to fill their ranks, rising numbers of high-skilled employees enjoyed increasing wages. At the bottom of the skill ladder, employment numbers also went up. This is because manual skills, such as motoric finesse, situational adaptability, visual and language recognition, and in-person interactions are still hard to automate. Many of these tasks need to be performed on site, or in person, and are, therefore, immune to offshoring. However, a flood of new entrants into the cheap labour market, especially in the service sector, has kept wages low. Contrary to the expanding top and bottom, it was jobs at the middle of the skills and wage scale, which took the biggest hit from automation. The retrieving, sorting and storing of structured information typical for clerical work in the back offices, as well as repetitive physical operations in unchanging environments in production were substituted by machines. The results are polarised labour markets in which the top and the bottom ranks are swelling, while the middle is being eroded. This does not, however, translate directly into wage structure trends. Here, those at the top enjoyed significant gains, while both the middle and the bottom suffered. One explanation for this may be that replaced workers from the middle had to look for new income at the bottom of the skill hierarchy. Accelerated by unskilled immigration, this flood of supply into the cheap labour market kept wages low.

Will this polarising trend, with all the negative implications for social inequality, continue into the future? Martin Ford predicts that with learning machines reaching parity with human cognitive skills, they will continue

their way up the skill ladder. Randall Collins expects automation to hit middle range skilled jobs, while suggesting that new forms of low skilled tasks will emerge.³⁴ David Autor, on the other hand, believes the trend of labour market polarisation has peaked and will peter out.³⁵ Machines, Autor claims, will never replicate human traits like common sense and empathy.³⁶ By executing routine tasks much more efficiently, machines will rather complement human workers than replace them entirely. Humans, in turn, bring in problem solving, interpersonal interaction, flexibility and adaptability to the human-machine collaboration. Autor believes that the resulting increase in productivity will spur aggregate demand, and create more employment for middle skilled jobs in the process.

Rather than replacing human workers, automation displaces them, changing the character of their work in the process. When the level of qualification of the workforce continues to rise steadily,³⁷ the employee of the

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future may no longer be a machine operator, but an experienced expert, decision-maker, communicator and coordinator.³⁸ Accordingly, the challenge will be to upgrade human skills to empower workers to collaborate with ever more sophisticated machines.

The impact on emerging and developing economies

How will digital automation play out in emerging economies? The World Bank President shocked policymakers in Asia with his gloomy prediction that 77% of jobs in China, and 69% of jobs in India could

potentially be automated³⁹. The International Labour Organisation (ILO) estimates that 56% of jobs are at risk of being automated in the Association of Southeast Asian Nations (ASEAN)-5 countries⁴⁰. If automation is driven by the profit logic of capitalism, what matters, in the end, is the bottom line. Fears that digital automation will directly replace millions of workers in cheap labour economies, therefore, seem premature. Automation is mainly driven by Multinational Companies (MNCs), as well as domestic suppliers and exporters. This means automation is so far largely a formalised sector phenomenon. At least in countries with large consumer markets, MNCs are likely to continue to produce locally to secure access. In the short run, the direct effects of digital automation on emerging economies will be limited to the pockets already integrated into the global supply chains. For the low tech informal sector, at least for the time being, the effects will remain limited.

What is interesting, nonetheless, about the automation processes underway is their main motivation: not so much to cut labour cost, but to improve quality and supply chain management. This points to the real danger of the digital revolution for emerging economies: automation

The real danger is that the end of the export- and manufacturing-led growth model is kicking away the ladder for late industrialisers

makes manufacturers in the old industrial countries competitive again. Already today, total manufacturing costs in some emerging economies are approaching the level of the United States.⁴¹ When the comparative advantage of cheap labour no longer drives labour arbitrage, other factors like long shipping times, lack of skills and local governance weigh heavier in investors' minds.⁴² Highly

demanding consumers seem to convince some brands to re-shore production facilities to their home markets to be more flexible.⁴³ Even without the protectionist measures called for by trade critics, decreasing cost differentials may slow down the offshoring trend, which has been at the core of globalisation over the past decades.⁴⁴ Some even argue that this de-

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globalisation trend can already be seen in stagnating trade and capital investment numbers.⁴⁵ Be this as it may, the real danger for emerging economies is that the end of the export- and manufacturing-led growth model is kicking away the ladder for late industrialisers, who seek to climb up the global value chain.⁴⁶ Over the past years, the global race to the bottom for wages and labour standards has already fuelled premature deindustrialisation.⁴⁷ Already today, many economies are experiencing jobless growth.⁴⁸ Digital automation may exacerbate this challenge. If emerging economies chose to suppress wages or focus on employment in low-productivity or low-tech sectors, they risk being decoupled from the global economy. The need to stay competitive may lead late industrialisers into a low or middle-income trap.⁴⁹

In a world where the free movement of goods and people may be more restricted, the gig economy may open up new opportunities for workers in developing countries to benefit from the global market. Major industry leaders have invested in crowdsourcing platforms, which allow the outsourcing of tasks globally. By putting in place the infrastructure for a global division of labour in real time, the digital revolution allows workers from developing economies to compete individually with their peers in developed countries. Aneesh Aneesh sees opportunities in research and development

of software, engineering and design, animation, geographic information systems, processing of insurance claims, accounting, data entry and conversion, transcription and translation services, interactive customer services, finance and credit analysis, market analysis, archive administration and website development and maintenance.⁵⁰ Highly educated workers with certificates in medicine, business, law, and data analysis have good chances in business process outsourcing.⁵¹ In the old industrial countries, the global gig economy is seen as fuelling a race to the bottom, putting increasing pressure on wages, social security and labour stands⁵². On the other hand, in developing countries, where wages are low and social security systems rudimentary, crowd-working platforms are welcomed as an opportunity to participate in the global economy.

The real challenge is not technical, but political

When capital increasingly replaces labour, major challenges will arise. Even if the dystopian vision of a world without work seems far-fetched, workers' waning consumer power can no longer fuel growth. The spectre of mass un- and underemployment could intensify the demand problem to a point where the world economy implodes.⁵³

Industrial revolutions, like any man-made activity, are not solely determined by technological advances, but shaped by economical, social, cultural, and political considerations. In a capitalist system, what drives large scale transformation is the bottom line. Only because it is technically feasible to substitute human labour with machines, it does not necessarily make business sense to do so. Looking back at the history of automation, for instance, one may assume that the candidates most likely to be substituted by machines would be low-skilled workers. Economically, however, it makes little sense to replace minimum wage

labourers. What actually happened over the past decades is that skilled labour has been replaced by technologies operated by semi-skilled and unskilled workers.⁵⁴ By embedding human skills into equipment, capital does not

The real challenge, is not technology, but distribution

as much replace labour but human capital, such as the stock of competences, knowledge and personality embodied in human workers. The economic rationale, however, works both ways. Those who dismiss “automation anxiety” should consider that the quest for profit is a powerful incentive to aggressively pursue an automation path.⁵⁵ Digital automation is not a fad which could be corrected, but a structural trend driven by the very logic of capitalism.⁵⁶ If it makes business sense, everything that can be automated, will be. Automation, on the other hand, is only one of the many factors driving macro-economic development. Over the past decades, rising labour productivity translated into higher incomes, while falling prices kindled increased aggregate demand. The net sum has been more, not less, employment. In recent years, however, this relationship between higher labour productivity and higher wages has been broken by anti-labour policies. The real challenge, therefore, is not technology, but distribution.

Combined with the deindustrialising effects of offshoring, automation has contributed

Digital automation is not a technical, but a political problem

to the widening social inequality in developed societies. Anger and frustration over real social decline and the perceived lack of cultural recognition drive social unrest and political

instability. The current revolt against globalism in the West will only be a small taste of what is to come if digital automation continues to threaten the livelihoods, security, and dignity of the majority population.⁵⁷ Translated into protectionist policies, these political calls to “take back control” and “bring our jobs back” can accelerate the techno-economic trend of de-globalisation. Digital automation, in sum, is not a technical, but a political challenge.

This points to the core challenge of the digital transformation. Be it through provision of public services or redistribution of income and wealth, past industrial revolutions were only made socially acceptable through mitigating and adapting policy interventions.⁵⁸ If social disruption by technological change is not new, the speed and scope of the digital revolution may be. The question then is whether our existing governance structures, originally built for the industrial age, will be able to react quickly and adequately. The slow response to previous technological disruptions, or the recent collective action problems in tackling climate change problems do not give cause for optimism. In the political economy of change, policy responses are always the result of struggles between winners and losers of social change. Given the fact that both capital owners and high skilled employees are benefitting greatly from digital automation, we may have reason to doubt that policy responses will be swift and comprehensive enough to meet the challenge.

We need a new model for the Economy of Tomorrow

So, if the digital transformation is poised to aggravate the structural crisis of capitalism, what can be done to tackle its root causes?

More supply side solutions to the rescue?

The most radical approach to overhaul the economy comes from the digital disruptors themselves. Echoing Schumpeter, digital capitalists seek to boost innovation-driven growth by permanent creative destruction. The real reason for the seemingly unstoppable march of digital capitalism, however, lies in the shift from atoms to bits.⁵⁹ Compared to the production of material goods, the creation of immaterial value reduces the marginal cost.⁶⁰ In other words, after the initial investment in the “prototype”, the cost to duplicate digital products is approaching zero. Jeremy Rifkin calls this new accumulation regime the zero-marginal cost society. This has two profound consequences. First, less labour is needed to produce in the core of the digital economy.⁶¹ Second, the abundance of nearly-free goods and services is likely to overwhelm demand, depressing prices and profits.⁶² Digital platforms tackle this dilemma with the strategy to corner the global market with a near monopoly.⁶³ Whether this business model can be replicated widely, however, remains to be seen. Too many start-ups look like gigantic pyramid schemes which burn an endless supply of venture capital in their chase for market shares. On a structural level, the business model of “cutting out the middle man” further rationalises the distribution and consumption sectors.⁶⁴ This may, however, translate into the

loss of jobs and income in the service sector. In essence, the Silicon Valley capitalism, being yet another supply-side model, seems not only unable to solve the consumption demand problem, but on the contrary may be destined to further aggravate it.

How to create demand and livelihoods in the digital age?

To tackle the challenges posed by digital automation, a new development model is needed. In a global economy, rejecting technological innovation is not an option. But the new technologies should also be embraced in their own right. If we want to heal cancer and tackle climate change, they are our best chance. In the world of work, the automation of dirty, dangerous, physically demanding tasks is set to improve workplace safety and satisfaction. Accordingly, the new model should not aim to stop, but rather shape the social transformation unleashed by this new wave of technological innovation.

The new model, however, must go beyond the normative rhetoric of “sustainable development” and seek to shape the political economy of digital capitalism. To have any real impact, it must offer a solution to the accelerating demand crisis crippling the global economy. This means the new paradigm must put the creation of income-generating livelihoods front and centre.

To tackle the demand crisis, the new paradigm must put livelihoods front and centre

Some promising ideas to create new sources of incomes, and, therefore, consumption demand have already been introduced. Inclusive growth models seek to boost consumption demand through a fairer distribution of profits.⁶⁵ Other approaches seek to distribute work more widely. The European Charter of Digital Fundamental Rights postulates a Right to Work.⁶⁶ Social and economic rights, however, do not amount to much if no income generating work is available for large parts, or even most of the population.

The Green New Deal uses the transition to a low-carbon economy as a source of growth.⁶⁷ The International Renewable Energy Agency estimates that renewable energy employed 8.1 million people around the world in 2015.⁶⁸ Green growth, in other words, promises to create green jobs.⁶⁹ Similarly, the blue ocean economy hopes to create blue jobs in coastal areas by tapping into the potential of blue water farming, offshore harvesting of mineral resources, and pharmaceutical and cosmetic industries⁷⁰. While the opportunities to create green and blue jobs should be fully explored, it needs to be kept in mind these jobs are not immune to automation either. From a jobs perspective, the green and blue economies may offer too little, too late.

What is needed are holistic models that puts human capital front and centre.⁷¹ Amartya Sen's capabilities approach is built around the potential of humans to unleash waves of innovation and productivity⁷². The United Nations Human Development Index (HDI) has put investment into human capital at the centre of the international development agenda. Richard Florida also points to the critical role of the "creative class" to turn cities into the urban hubs connecting them with the global economy.⁷³ Michael Spence and Joseph Stiglitz, on the other hand, have cautioned against a mechanical understanding of the relationship between education and human capabilities.⁷⁴

Pointing to the emergence of the creative commons sector interconnected to the capitalist market, the Peer to Peer movement has put forward an innovative approach. In the current regime of informational capitalism, Arvidsson and Petersen argue, value is no longer primarily produced by material production, but the immaterial production of a social world through communication and interaction. Value, the argument goes, shifts from things to the ability to enable people to create cohesion among things. The brand, the quintessential example of immaterial value generation is about appropriating and extracting value from social communications.⁷⁵ Symbolic, creative, aesthetic, cognitive value, however, are primarily produced in the collaborative commons, such as outside of the capitalist market. Peer production can operate more easily in the sphere of immaterial goods, where the input is free time and the available surplus of computing resources⁷⁶. This is why theorist Michel Bauwens believes that the cooperative commons are generally better suited for the zero margins society, and are therefore overtaking the market as the dominant mode of production in the digital age.⁷⁷ In the current political economy, however, the commons are prone to extraction by the capitalist market. As long as creative and care workers are dependent on the market and state to make a living, commoners' livelihoods are likely to remain precarious.⁷⁸

In sum, all these models make important contributions, but are not enough to solve the fundamental demand problem of digital capitalism. What we need is a new development model for the digital age. At the heart of this new model must be the need to create decent livelihoods.

The Human Economy

Our best chance to create decent livelihoods

The Human Economy is composed of two interwoven economies. The digital capitalist economy, which generates the surplus needed to remunerate work for the common good. And the human commons, which creates the consumption demand needed to keep the digital capitalist economy going

demand needed to keep the digital capitalist economy going.

Decent jobs: Make the workforce fit for the digital economy

In the digital economy, there will be continued demand for human labour. The skillsets required from human workers, however, will be different from the past. After the first waves of automation replaced physical labour, learning machines are now rivalling or even surpassing human cognitive skills. Artificial intelligence is even starting to be creative. The jobs of the future will, therefore, concentrate on tasks, which cannot be performed by machines. Some of these tasks are ancient, and have to do with humans interacting with humans, or operating under unpredictable conditions. People prefer people as teachers,

nurses and personal trainers. And no robot in the foreseeable future can do what plumbers, electricians or carpenters do. Others tasks will be created through innovative modes of production and in emerging industries. At the core of the digital capitalist economy, many of these new jobs will be collaborations between humans and machines⁷⁹.

What makes humans valuable in the digital economy are social and super-creative skills.

Humans are essentially social beings. The division of labour that made our species so successful is rooted in the human ability to feel empathy, compassion, and

to act altruistically and cooperate in teams.⁸⁰

The ethical ability to open up and share with others, the precondition for cooperation, has become the main productive force of the sharing economy.⁸¹ Accordingly, the jobs least likely to be automated involve those managing and developing people, where expertise is applied to decision-making, planning, or creative work, or interacting with customers, suppliers, and other stakeholders.⁸²

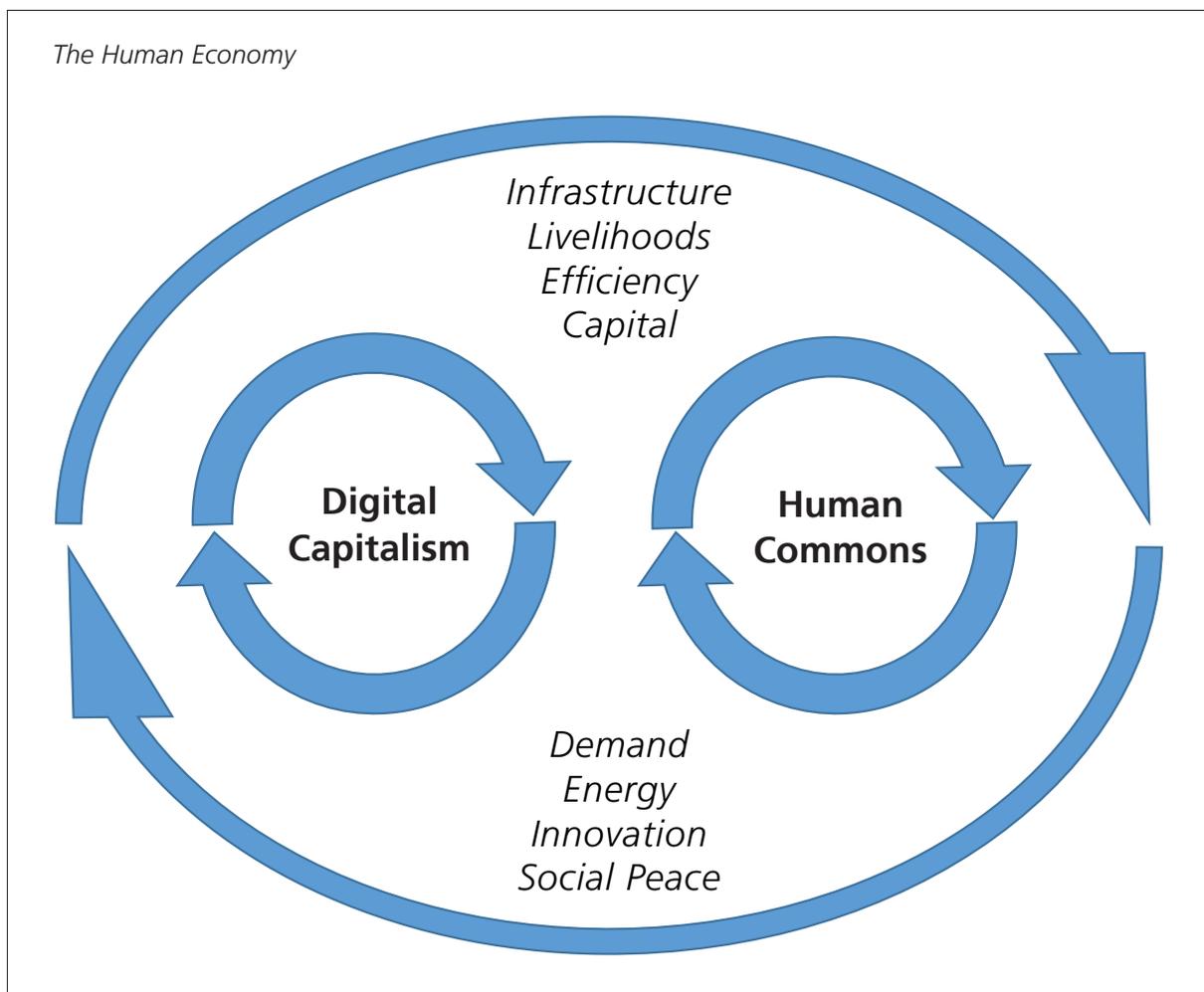
Humans will always be needed for the one thing machines cannot do: write the source code, which includes the basic assumptions, values and objectives machines are designed to adhere to. Simply put, machines can only optimise the world as we know it, because their source code has been written by humans.

To tackle the crippling demand crisis, economies can no longer afford not to remunerate all contributions to the common good

Humans, on the other hand, have the unique ability to reimagine the world and adapt their objectives to changing circumstances.⁸³ This human super-creativity will be in high demand in the labour markets of tomorrow.

What humans really excel in is communication and social interaction, creativity and innovation, experience and judgment, leadership and foresight, flexibility, and learning. These skills will be in demand in the service industries, from personal fitness to entertainment, from

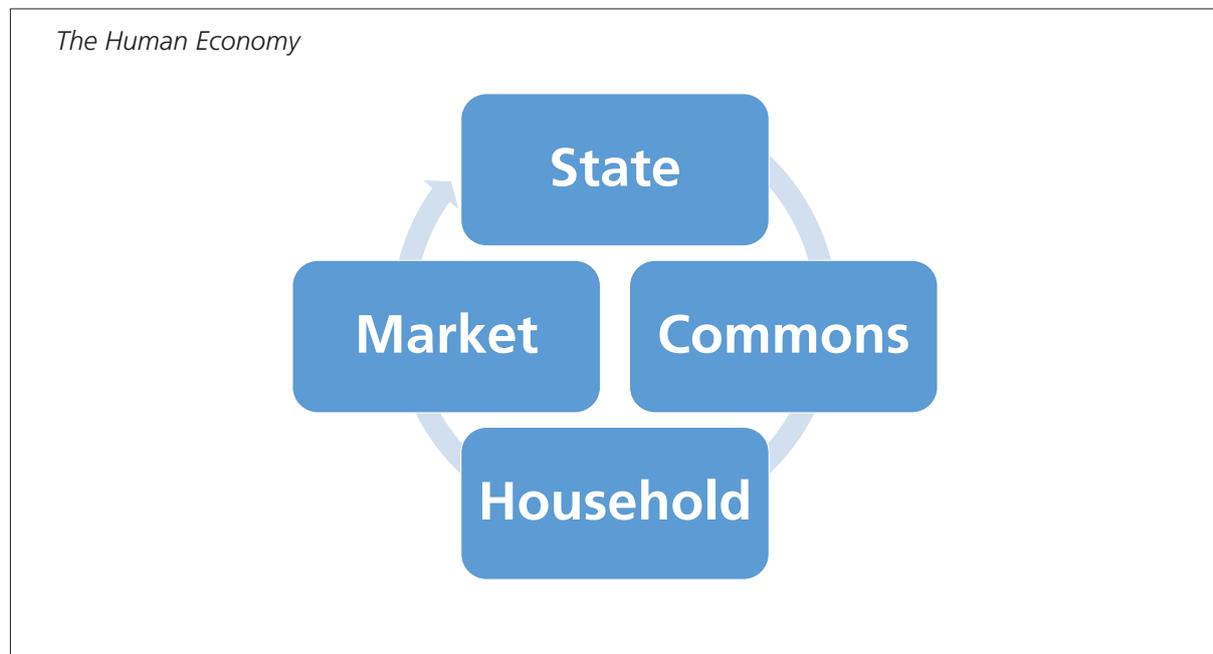
design to fashion, from food to arts and crafts and from research to development. In recent decades, cultural commodities already outgrew the trade in physical objects.⁸⁴ French sociologists Luc Boltanski and Arnaud Esquires observed that the “Enrichissement”, such as the use of existing cultural resources from food to language, from monuments to traditions, is what fuels the fastest growing economic sector of the cultural industries from luxury goods to art, from tourism to hospitality.⁸⁵ To realise this potential for decent human jobs, human skills will have to be continually upgraded.



Decent livelihoods: Remunerate work for the human commons

At the heart of the human economy are the hopes and needs of humans. The human economy needs to be built around the recognition of human contributions to the common good. Even in the digital age, there is a need for nurses and doctors, academics and researchers, social workers, and teachers. Millions of livelihoods could be generated in the human commons, from child raising to education, from sick to elderly care, from providing security to generating knowledge. However, many of these tasks, which are beneficial for society, do not generate enough income in the capitalist economy. To tackle the crippling demand crisis, economies can no longer afford not to remunerate these tasks. The demand management policy of the Human Economy, hence, is to remunerate every contribution to the common good.

Digital capitalism and the human commons are interdependent. Market and state are best suited to delivering the infrastructure for the digital age. Driven by profit and competition, the market introduces resource efficiency. Most importantly, the market can create income, and therefore livelihoods for commoners. The collaborative commons, on the other hand, would be better suited to govern common resources like energy or water.⁸⁶ Commons are spaces of experimentation, and can provide innovation and creativity. Already today, the commons are important producers of immaterial goods. If incomes can be generated from these contributions to the common good, the commons will fuel the capitalist market with consumer demand.



Policies to create the Human Economy

In the following section, policies to bring about the Human Economy are proposed. Right from the outset, this model needs to avoid generalisations. The opportunity structures in developed and developing countries vary greatly, and so must the policy advice. As a rule of thumb, it is assumed that developing countries have lesser fiscal room and governance capacity to implement the policies needed to bring about the Human Economy. On the other hand, cheap labour economies may have more time to adapt to the new global environment. To give a better impression of how, and if, these policies could be adapted to work under the specific conditions of developing or emerging countries, this paper will briefly discuss the case of India.

Near Term: Shaping the digital transformation

1. Level the playing field for human work

Under fair conditions, there will be ample opportunities for humans to work together with Artificial Intelligence, robots, and algorithms. Even low-skilled human labour will be needed to perform tasks that are difficult to automate, in particular, those which require high motorial skills⁸⁷.

Today, however, the playing field is tilted in favour of the robots. Once installed, robots work tirelessly around the clock. Humans need to sleep, take sick leave, make mistakes, go on strike, and depend on decent wages to feed their families. Now that technology puts ever more tasks within the reach of automation, any additional burden on human labour cost needs to be avoided. Many

Today, the playing field is tilted in favour of the robots. Now that technology puts ever more tasks within the reach of automation, any additional burden on human labour cost needs to be avoided

countries, however, use labour income as the base to finance the state as well as the social security system. If digital automation erodes incomes, income tax, sales tax and property taxes will tumble in unison.⁸⁸ Digital automation, in other words, creates a revenue problem for the state at the very moment when public goods are most needed.

With labour income as a source of taxation out of the question, new ways to finance public goods need to be found. To slow down the march of the robots, we need to shift the base of our taxes from labour to capital.⁸⁹ Taxing the main resources of the digital economy, technology and data can be a solution. Taxing capital, resources, robots, or data can also be an option.

To slow down the march of the robots, we need to shift the base of our taxes from labour to capital

Member of the European Parliament Mady Delvaux has introduced a tax on robots as an innovative instrument to buy time, and generate the revenue needed for upskilling the workforce. We need to explore how robot taxes can be designed with a view to delaying the rationalisation of work without slowing down the speed of innovation. To avoid harm to international competitiveness, regulatory instruments need to be smart. Sectors competing in the global market, for instance, face much higher pressures to automate than shielded domestic sectors, especially the service sector. While there is little social benefit in automating the tasks of a domestic worker, for instance, increasing the efficiency of the back office can be critical for those sectors facing stiff international competition.

Mitigating the impact of the digital revolution is a tight rope to walk. Without some kind of policy buffer, the speed and scope of the transformation could lead to serious social disruptions. Too much protection for dying industries and obsolete jobs, on the other hand, can jeopardise the future for the sake of the past. There is a role for the state in saving and creating jobs. Re-allocating the remaining work by capping weekly working hours could help to redistribute income.⁹⁰ For instance, it could be made mandatory to hire security and care workers (e.g. attendant at public pools, kindergarten nurse in shopping malls, safety providers around primary schools etc.). Henning Meyer proposes to install the state as 'employer of last resort'.⁹¹ The DiEM25 movement for a European New Deal proposes that every European state give every European citizen a job guarantee in their home country⁹².

In emerging economies like India, where work guarantee schemes (such as the Mahatma Gandhi National Rural Employment Guarantee Act) regularly disappoint, experts are sceptical

about the capacity of the often weak and revenue-deprived state to provide work for all.⁹³ How population giants like India could provide jobs for the ten million annual entrants to the labour market in an environment of jobless growth and deindustrialisation, is an open question.⁹⁴ Once automation increases productivity in the formal manufacturing and in the agricultural sector, they cease to be the job engines they once were.⁹⁵ For the time being, India's cheap labour economy is an international investor's darling. In the future, however, it is hard to see how social and political stability could be upheld without some sort of state support for the working poor.

2. Invest in full capabilities for all

Humans excel at communication and social interaction, creativity and innovation, experience and judgment, leadership and foresight, flexibility, and learning. Investing in the skills of the workforce is the industrial policy of the Human Economy. This is why proponents of Work 4.0 seek to create jobs in the digital economy by upgrading the skill set of the workforce.⁹⁶

Investing in the skills of the workforce is the industrial policy of the Human Economy

Martin Ford cautions not to overestimate the employment effects generated by additional investment into education.⁹⁷ What is needed, however, is not more of the same, but a fundamentally different education system. In the age of Google and Wikipedia, there is little value in rote learning. When permanent technological disruption quickly renders skills obsolete, it makes little sense to invest in a long college education to vie for a lifelong position with the same employer. In the digital economy, those who have the ability to adapt

to rapidly shifting environments through lifelong learning will prosper. What is needed are the skills to attain this information and turn it into knowledge.

To prepare the workforce for the Economy of Tomorrow, we need a life-long learning system guided by a new ideal of the citizen

Ken Robinson suggests shifting the education paradigm from industrial standardisation to a culture of collaboration.⁹⁸

Digital literacy needs to be strengthened. To prepare the workforce for the Economy of Tomorrow, we need a life-long learning system guided by a new ideal of the citizen.⁹⁹ The educational goal should be to strengthen creative, communicative, analytical, intercultural, and social skills.

To facilitate periods of transition and qualification, innovative policy instruments are needed. Germany plans to turn unemployment insurance into employment insurance, with a view to encouraging innovative risk taking and individual up-skilling.¹⁰⁰ A personalised employee account could provide employees with public seed money to invest in their qualification, for instance through sabbaticals.¹⁰¹

To allow for the necessary investment in these life-long learning systems, austerity must be stopped. Ending austerity means to reverse the neoliberal paradigm of suppressing the social cost of health care, social security, and public goods. To tackle the demand crisis and make the workforce fit for the Human Economy, the state needs to invest more in public goods.

In developing countries, the fiscal space for these investments is notoriously tight. The reversal of the structural adjustment paradigm by the International Monetary Fund is a step into the right direction.¹⁰² The Modi government has fervently pushed forward a reform agenda which uses digital technologies

to give identity cards and basic bank accounts to every one of India's 1.2 billion citizens. In the long run, this digital infrastructure will make India's shadow economy transparent, hence taxable, finally creating the income needed to build a modern state. In the short run, it can be used to circumvent the bureaucracy and make payments to every citizen. As long as millions continue to live below the poverty line, India will be hard-pressed to fund the public services needed to make the workforce fit for the digital economy. Given these fiscal restraint, and emphasis could be put on modernising the curriculum and restraining teachers.

3. Boost consumption demand through income support

As the world is slowly waking up from the spell of austerity, quick fixes to the demand problem are being discussed. A broad variety of policies to top up incomes has been proposed. None of these proposals has captured the public imagination as much as the basic income schemes. In a sense, the debate over universal basic income has sparked the first political battle of the digital age. The opposing camps run counter to the left-right formation characteristic of the industrial society¹⁰³. On the one side are Silicon Valley techies who seek to boost consumption

demand, Davos billionaires who fear the coming of the pitchforks, neoliberals who want to cut back the welfare state, corruption fighters who seek to cut out the

middleman, and Marxists who dream of the end of alienating work in the leisure society. To its proponents, the advantages are clear: by putting money into the pockets of consumers, economic growth will be stimulated, extreme poverty may be eradicated, and the social

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fears that the replacement of solidarity based welfare with naked redistribution will result in cut-throat competition between native and immigrant have-nots over the remaining slices of the cake.¹⁰⁹ The toxic conflicts over immigration show how quickly the competition between native and migrant recipients can turn xenophobic or even violent. Nathan Keeble dismisses the argument that UBI could cure disincentives to work. Essentially being a redistributive mechanism which needs to be financed by those who earn more than others, the disincentives inherent to existing welfare system are only moved to the tax system.¹¹⁰

The debate over UBI is particularly challenging for the labour movement. Wary that libertarian siren may lead to the final dismantling of the welfare state, many trade unions and their political allies stick to their traditional agenda of

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full employment, decent wages, and social security. Having fought for labour rights for over a century, the labour movement is not ready to give up any of the hard-won institutions. “No questions asked” flat-rate benefits also irk its moral compass, which embraces values of reciprocity, solidarity and contributing to society.¹¹¹ On the other hand, analysts are well aware that when capital increasingly replaces labour, secondary distribution of income through taxes, welfare, minimum wages, and other redistribution schemes comes under pressure. In response to atypical forms of employment, unstable career patterns and decreased collective bargaining power, the unions have revised their long-standing opposition to minimum wages.

Currently, experiments with basic income schemes are being conducted in Finland, Namibia, Kenya, and the US state Alaska. National conversations and feasibility studies are undertaken in France, India, Mongolia, the Netherlands, Switzerland, Canada’s Ontario and Québec province, and the German State of Schleswig-Holstein.¹¹² These schemes differ in many ways, and aim at different goals. The Finnish experiment seeks to change the incentive structures to promote work and eradicate poverty. The Dutch probe the effectiveness of labour market participation tools. And Canada’s provinces seek to eradicate poverty, reduce inequality and promote public health.¹¹³ The Swiss debate was all about individual freedom.

Income support schemes differ widely around the questions of who is entitled (e.g. everyone including the rich, only the working poor, or also struggling middle class families), where to set the outer boundaries (e.g. are European Union citizens included? Are immigrants entitled?), if there is some kind of conditionality (e.g. only for those who actively seek work?), how to design the incentive structures (e.g. how to avoid poverty traps) and how it could be financed (e.g. through taxes or special funds). Some proposals, like the “Citizen’s Income” are neither universal nor unconditional, but in essence negative income taxes. The Institute for the Future calls for Universal Basic Assets, e.g. entitlements to open source assets such as housing, healthcare, education, and financial security.¹¹⁴ The German Ministry of Labour and Social Affairs believes there is no need, or support within society, for such a fundamental change of system¹¹⁵. Modelled after the French concept of a Personal Activation Account, the German Work 4.0 model proposes a Personal Activity Account, provided with a one-off sum which the state would make available to all young people. This initial credit “could be used for various clearly defined purposes over the course of an individual’s working life: to fund, for example, continuing vocational education and training not paid for by employers, the process of starting a business or making the

transition into self-employment, reductions in working time or sabbaticals to raise children or care for a family member, or a flexible transition into retirement”¹¹⁶. The vast differences between these designs make the public debate confusing. Before it has been clarified whether, or to what extent, these schemes are supposed to replace existent welfare and social security schemes or are complementary top-ups, it is illusionary to believe that any consensus could emerge.

Several studies have been conducted to assess both the effect on poverty reduction as well as the projected costs of a variety of tools.¹¹⁷ A recent OECD study pointed out that a budget-neutral UBI spread across the entire qualifying population adds up to very low monthly payments.¹¹⁸ Also, as those already receiving social benefits may end up getting less under a universal flat-rate, a budget-neutral reform can have counterproductive effects on poverty. If poverty eradication is the social and political objective, additional funding would be needed. Political scientist Charles Murray proposed that

Making benefits targeted at the bottom of the income ladder universally available effectively means to redistribute upwards. Spreading scarce resources thin could increase poverty and inequality

every US citizen of 21 and above should receive USD 13,000 per year¹¹⁹. Robert Greenstein calculated that such a scheme would cost USD 3 trillion per year, roughly equal to the entire amount of revenue the federal government collects.¹²⁰ Greenstein also dismisses the argument that such a replacement would result in substantive saving for administrative cost. This means such a scheme could only be financed by replacing the current welfare state.¹²¹ Making benefits targeted at the bottom of the income ladder universally available effectively means to redistribute upwards. Spreading scarce resources thin could

increase poverty and inequality.¹²² Preliminary evidence therefore seems to support claims by critics that universal schemes are forbiddenly expensive, have limited impact, and that in times of austerity, this money could be spent better to address social ills¹²³. If pessimistic scenarios materialise and indeed more and more people drop out of the workforce or end up in precarious working positions, some form of income support scheme may become inevitable. How these schemes will look like will be the result of political struggles. It is in the enlightened interest of the labour movement to pro-actively shape these debates.

In developing countries, the debate over basic income schemes revolves around entirely different coordinates.¹²⁴ Highly imperfect information and limited administrative capabilities makes it very difficult to target the poor.¹²⁵ The poor performance of targeting in many developing countries makes UBI appealing.¹²⁶ In India, where the benefits of more than 1200 different subsidies and welfare schemes end up in the pockets of corrupt bureaucrats and their cronies, UBI is seen as a big bang reform.¹²⁷ Some observers estimate that for the same cost of existing welfare schemes, an efficiently delivered UBI could reduce poverty levels from 22 percent to seven percent of the population.¹²⁸ In other words, a broad societal alliance for UBI is forming between those who seek to eradicate poverty and corruption, and those who want to build a modern state and a market economy. For oil rich rentier states, Shanta Devajan argues that a transfer of revenues (e.g. from oil) directly into citizen’s pockets would not only reduce poverty, but also strengthen transparency and accountability for government waste.¹²⁹

The debate over UBI shows three things. First, the ideological and political conflict lines of the digital age will be different from industrial capitalism, offering opportunities to form new alliances and renegotiate the social contract.¹³⁰

Second, it shows a glimpse of the complexity of the distributional conflicts to come once robots start to automate middle-class jobs. Finally, it also shows that tinkering with the symptoms of the crisis is not enough. To address the crisis of redistributive welfare systems and boost consumption demand, some sort of income support tool needs to be added to the toolbox.

Long Term: Building the Human Economy

4. *Distribute sources of wealth more evenly*

When wealth is almost exclusively linked to the return on capital, the redistribution of income will be ever more difficult to organise. This means the primary distribution must be put back on the agenda. Bluntly put, in a world run by robots, the question is who owns the robots. Distributing the sources of wealth creation, from land to resources and intellectual property, as widely as possible is therefore a crucial element of creating livelihoods in the digital age.

Progressives need to fight for the principle that everyone who contributes to the creation of surplus value also profits from it.¹³¹ American economist Richard Freeman suggests a ‘workers share’ could spread the ownership of companies among its employees to make them less dependent on

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wage income.¹³² Henning Meyer proposes sovereign investment funds to re-socialise capital returns and creates new public revenue streams to fund job guarantee schemes.¹³³ Vanis Varoufakis calls for a Universal Basic Dividend, financed by a Commons Capital Depository to which every initial public offering has to contribute a share of its capital stock.¹³⁴

Whatever the model, the result needs to be a democratisation of capital ownership.

5. *Remunerate all socially beneficial work*

Two imperatives flow from the digital transformation. In a world where more and more people struggle to find decent work, social security needs to be decoupled from employment. And to tackle the crippling demand crisis, as many income-generating livelihoods as possible must be created. This goes beyond lifting people above the poverty line through income support. The Human Economy needs to create decent livelihoods for everyone who contributes to the common good.

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What may sound utopian now could look much more realistic in the future. In the wake of the digital transformation, the creative commons sectors have grown significantly. Creative commons produce the immaterial goods that drive the economy.¹³⁵ Open source and collaborative work processes have spread far beyond the free software movement. The maker movement uses 3D technologies to rejuvenate the artisanal approach to manufacturing.¹³⁶ From the first community experiments with alternative currencies, the global market cap for cryptocurrencies has grown to USD 106 billion.¹³⁷ Localists and urban farmers have created organic farming cooperatives. Local communities have de-commodified water and energy. The human commons are broader than this, and include all contributions to the common good. Domestic workers who give care to children, the sick

and the elderly, as well as rural workers, who look after the soil, water, natural resources, renewable energy, and biodiversity. This also includes social workers who strengthen social cohesion, preserve cultural heritage, and build peace. All of these contributions are socially beneficial. Today, however, commoners find it difficult to make a living. While they create value, this value is often extracted by the market, and livelihoods remain precarious. In an environment of demand scarcity, societies can no longer afford not remunerate these tasks.

In a data economy, giving the producers of the data, a cut of the created immaterial value could be a mechanism to create both demand for digital capitalism as well as livelihoods for the commoners. This would include the clickworkers, who produce online traffic. But it would also include each and everyone, who provides personal data which will be used for profit. For a few years already, pilot projects are testing a free market approach to personal data. The idea is simple - consumers are given control over their personal data, but the right to sell them on the free market works as an incentive to consent to their commercial use.¹³⁸ Labour theorist Maurizio Lazzarato goes one step further and calls for recognition of immaterial labour which produces the informational and cultural content of the commodity.¹³⁹ Immaterial labour includes activities that are not normally recognised as “work”, such as the defining and fixing cultural and artistic standards, fashions, tastes, consumer norms, and public opinion. When digital capitalism depends more and more on immaterial value, then immaterial labour needs to be remunerated for its contribution.

Several policies to create decent livelihoods for commoners have been proposed. Michel Bauwens suggests a strategy that channels capital from the state and market sector into the commons to grow them, but uses safeguards to protect the value created from

being extracted by the markets.¹⁴⁰ One way to ‘reverse co-opt’ capital from the capitalist or state system, and subsume it to the logic of the commons is ‘transvestment’, such as a business model that uses ‘capped returns’ to make sure that this capital does not compromise the common good orientation of the cooperative. Commoners, in other words, should negotiate for buy-back options at a fixed price, a strategy that guarantees that private sector capital can be replaced anytime, and thereby disciplined to support the statutory cause.¹⁴¹ To make sure that the value produced by the commons is not extracted, the commons need protection. This means state regulation is needed to ensure commoners are receiving a fair compensation for their contributions.

Whether transvestment and protection are enough to create livelihoods in the human commons remains to be seen. In all likelihood, the commons need to be subsidized through a redistributive mechanism. In the long run, basic income support schemes lifting people above the poverty line will not suffice. To shore up consumption demand and generate decent livelihoods, a remuneration system for all socially beneficial contributions is needed. The idea is to create a two-tier system, with a targeted basic income to guarantee the subsistence minimum at the bottom, and a top-up mechanism to incentivise contributions to the common good. The targeted basic income needs to be high

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enough to boost consumption demand, but low enough to avoid acting as a disincentive to work and education. Cuts to existing cash transfers and tax allowances to finance such a scheme aside, these objectives can only be achieved when the basic income benefits do not replace, but complement the welfare state.

On top of that, additional remuneration could be given for socially beneficial activities. For political reasons, it may be easier to justify moneyed incentives for entrepreneurship, education, or community work than simply handouts for doing nothing. Anthony Atkinson has proposed a “Participation Income”, which would be conditioned around any kind of contribution to the common good.¹⁴² This would in effect create another incentive system to encourage socially beneficial behaviour next to the taxation system. At a time when social cohesion is low and the confidence in the ability of the state to effectively govern is diminished, this new set of nudging tools may prove particularly helpful.

This again is perfectly in line with the need to create decent livelihoods out of activities beyond the capitalist core of the economy.

Millions of livelihoods, for instance, could be created in the care economy. Today, however, care is primarily provided by female family members, and remains largely unpaid. The same

The Participation Income could mitigate risks, and turn livelihoods into consumption engines for the wider economy

logic applies to other activities which benefit the community, but are not remunerated in the capitalist economy. Artists, creative workers, and freelance journalists already work under informal conditions characterised by power asymmetries, with negative effects on their income, benefits, and security. If the standard labour contract, lifelong employment

and constant income generation is no longer the norm for the majority of employees, the contributions-based European social security system comes under pressure. If more and more people join the ranks of these informal workers, insufficient social protection, and weak bargaining power become systemic. The Participation Income could mitigate such risks, and turn these livelihoods into consumption engines for the wider economy.

There are, of course, dangers. For one, paying commoners could further monetise social relationships. Second, determining what exactly constitutes a socially beneficial contribution may open the door for new harassment by overbearing and even corrupt bureaucracies. Third, as the Chinese experiment with social nudging app “Sesame Credit” shows, it opens the door to authoritarian monitoring of citizens financial, social, political, and moral behaviour.¹⁴³ Finally, within the existing paradigm, such a two-tier remuneration system will be difficult to finance. A major reform of the tax system, hence, needs to be part of the reform agenda.¹⁴⁴ All things considered, the real question is political feasibility¹⁴⁵.

In developing countries, informality has long been the norm, not the exception. The state is, in most cases, too weak to provide social protection for all citizens. World Bank lead economist Ejaz Ghani is calling to embrace informality not as hindrance to development, but as an opportunity to create livelihoods through local entrepreneurship.¹⁴⁶ In the rapidly growing cities, the energy, mobility, and housing infrastructure for the next decades needs to be build. Investing in human and physical infrastructure encourages entrepreneurship in local communities, which is in turn linked to stronger job growth. Investing in roads, railways bridges and schools, hence, is part of the livelihoods agenda.¹⁴⁷

6. *The gardener state*

All things considered, what is needed to shape the digital transformation calls for a new role of the state. The sclerotic neoliberal state, barely able to provide good governance today, will be hopelessly overstretched by the challenge of the next Great Transformation.¹⁴⁸ But in the lateral, flexible, informal, pluralistic, and distributed society of tomorrow, the bureaucratic commando state will not be acceptable, either. The Weberian state was built to govern the industrial society with its vertical, hierarchical, formalised and centralised structures.¹⁴⁹ Until today, the industrial logic of production is reflected in our notion of policy-making as the universalisation of standards. To tackle the challenges of the digital transformation, the tired old state versus market conflict needs

Opposed to the minimalist guardian state, and the overbearing commando state, the digital state should act like a Gardener

to be transcended. Effective governance for the digital society needs to be participatory, inclusive, flexible, and differentiated. Opposed to the minimalist guardian state, and the overbearing commando state, the digital state should act like a Gardener. To produce a blossoming garden, the gardener needs to employ a smart mix of hands-on and hands-off approaches. The Gardener works the soil, plants new seeds, protects and nurtures the infant crop, and crops uncontrolled growth. Accordingly, the Gardener State needs to level the playing field for humans, provide a social protection floor, invest in human talent, provide full capabilities for all, protect the commons, and bust platform monopolies.

The gardener state sows by investing in research, education, and infrastructure. It plants and raises new industries, from developing technologies to jumpstarting markets. It crops distortive elements with regulation, tax incentives, targeted (dis-) investment and competition policies. And it harvests the revenue needed by closing tax havens and sovereign investment funds.

In developing countries with chronically weak governance capabilities, this will be a challenge. Proponents of decentralised and community driven governance should note that in patronage systems, localised state structures often favour feudal landlords, political dynasties and even mafia organisations. On the other hand, local communities have a long tradition of governing the commons. Strengthening such cooperative communities would make governance more context specific, efficient and legitimate.

How to bring about the Human Economy?

The Challenge: Political Economy of Digital Transformation

The Human Economy can only shape the digital transformation when it is able to shift the economic paradigm. Thus, we need to have a closer look at the political economy of change.

First, the policy shifts needed to bring about the Human Economy will face resistance from those who believe they benefit from the status quo. Levelling the playing field for human workers with regulations and taxes is likely to invite opposition from market fundamentalists. Similarly, empowering domestic care workers could draw the wrath of social conservatives. Creating decent livelihoods in the digital age will

The middle classes, feeling abused by the “self-serving elites” and the “entitled poor” are in open revolt. This is the political reason why the tax burden must be shifted from labour to capital

require massive investment into public goods. Generating the revenue to pay for these investments is not an easy political task. While the rich too often find ways to dodge taxes, the poor cannot afford to pay them. The middle classes, feeling abused by the “self-serving elites” and the “entitled poor” are in open revolt. In addition to the economic rationale, this is the political reason why the tax burden must be shifted from labour to capital.

Second, implementing the Human Economy may be even more challenging in societies, where some people are considered more deserving than others. In the Protestant United States, a Caste-conscious Hindu India, and Theravada Buddhist Thailand, for instance, those at the top are widely believed to be of higher morality than those at the bottom.¹⁵⁰ In patronage systems, those at the top are

treated as more important than those at the bottom.¹⁵¹ Finally, neoliberal regimes consider those at the top to be more useful than those at the bottom. Where these anti-egalitarian ideologies frame the political economy, any initiative promoting full capabilities for all will face an uphill battle.

Third, implementing the needed policy shifts is notoriously difficult amidst the myriads of conflicts characteristic of a social transformation. Transformations undermine old certainties, erode traditional communities, and undermine social security. Social change fuels conflict between winners and losers. In such situations, social solidarity is at a low. This mix gets even more volatile when migration is added. David Goodhart points to the tension between diversity and solidarity.¹⁵² As the toxic political conflicts over immigration and refugees show, the solidarity between members of the human species is not without its limits. Individuals tend to be supportive only of those “others” they accept as fellow members of a community of solidarity. The sociologist Robert Putnam observed that a higher proportion of immigrants lowers the level of trust in a society, not only between the indigenous and immigrant population, but also within these groups.¹⁵³ In a welfare state, belonging to the community of solidarity, or not, equates to having drawing rights for public goods. The economist Paul Collier argues that the precondition for redistributive taxing is the “mutual regard” for fellow citizens.¹⁵⁴ The political economist David Rueda has shown that the higher the share of immigrants, the lower is the willingness of the wealthy to pay redistributive taxes.¹⁵⁵ If solidarity is low and mistrust is high, it is difficult to provide full capabilities for all.

For developing countries, the political economy of global capitalism is a daunting challenge. Unilaterally taxing capital to finance public

goods may trigger a slowdown of foreign direct investment or even cause capital flight. To compete with 3D printers in developed economies, manufacturers could be forced

If solidarity is low and mistrust is high, it is difficult to provide full capabilities for all

to race down to the bottom of wages and labour standards. When reshoring opens a current account deficit, policy makers could be tempted to shore up competitiveness through currency depreciation. This would, however, worsen the living standards and contribute to the middle-class revolts raging in many emerging countries around the globe¹⁵⁶. Unable to resolve these social and political challenges, developing economies can get stuck in a transformation trap¹⁵⁷.

In the West, the political playing field is no less challenging. After decades of deindustrialisation and austerity, conflicts over identity, distribution and sovereignty have triggered a revolt against globalism. Fear, anger, and resentment are fertile soil for right-wing populists. Their battle cry of “taking back control” points to a central strategic dilemma. While redistribution works better between members of tightly-knit communities, the resources to be redistributed must be won in the struggle with capitalism, which operates on a global plane. This means economic logic alone cannot convince people who seek refuge in the past to embrace something new.

In sum, the political economy of today is a challenging playing field for the Human Economy. Whether the political economy of tomorrow will be more conducive is an open question. On the one hand, the distributed nature of digital technologies, from 3D printers to smart grids, give rise to a distributed

network economy where every household becomes a micro-factory, micro-power plant and micro-broadcaster.¹⁵⁸ In other words, digital technologies

have the potential to democratise the means of production. On the other hand, the unprecedented concentration of power in the hands of digital platform companies like Google, Facebook, and Amazon points

Digital technologies have the potential to democratize the means of production. The unprecedented concentration of power in the hands of digital platform companies points to the opposite direction

to the opposite direction.¹⁵⁹ The emerging ecosystem of maker networks and cooperatives may end up being de-facto centralised by capital the same way this happened to sharing platforms like Airbnb and Uber not long ago¹⁶⁰.

Finally, who will be the change agents that can bring about the Human Economy? The strength of the labour movement has been waning for decades. If automation continues to drive deskilling, easily replaceable unskilled workers will end up more dependent on capital, and the bargaining power of the divided and unorganised workforce will decrease further. If we assume that the hierarchical, bureaucratic, formalised political organisations of the labour movement are not likely to thrive in the distributed, lateral, informal, and flexible digital society, their future may not look much rosier.¹⁶¹ The labour movement on its own will not have the political muscle to implement the policies needed to bring about the Human Economy. In a time when the majority of activists focuses on identity issues, there are not too many movements out there with a clear focus on the struggle for a new economic regime.

The Strategy: Build a Transformative Alliance around a Narrative

Given the circumstances, building the Human Economy is not a technical task, but the outcome of political struggles. In the current political economy, only a broad societal alliance will be able to mobilise the political muscle to shift the development path. To build this transformative alliance, we need a platform onto which as many communities as possible can come together.

Building broad alliances, however, is notoriously difficult because social groups have

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different interests and priorities. This means the alliance cannot be built around a smorgasbord of policies. Instead, social groups need to be convinced to redefine their interests.

How can this be done? Actors do not define their interests in isolation, but within the echo-chambers of discourse communities. Members of discourse communities share a particular set of beliefs of what is happening, and what needs to be done. If their imagination about the future changes, so will their expectations about how the future will unfold. Different expectations about the future lead to fresh calculations of risks and opportunities.¹⁶² In other words, when actors reimagine the future, they start to redefine their interests. And when they redefine their interests, they can come together in an alliance to work

towards an alternative vision of tomorrow.¹⁶³ All of this means the key to alliance building is to shift the frame of reference within which actors define their interests. This, however, is just another way of saying the paradigm needs to be shifted. In practical terms, this means alliances are easier to build around an emotionally arresting, normatively imperative narrative.

A good change narrative has five elements: a threat (“What is the danger of continuing with the status quo?”), hope (“What is the vision for a better future where the interests of key constituencies converge?”), opportunity (“What game changers will create a window of opportunity to achieve the alternative vision?”), confidence (“What gives us the confidence to say: it has been done before, we can do it again?”) and an ethical imperative (“Why is the economically smart thing also the morally right thing to do?”).¹⁶⁴

Important elements of this new narrative have already been formulated. The threat of high employment now enters the mainstream discourse. Without hope for the future, however, it will be difficult to break the anxious inertia of our time, and mobilise people to organise a struggle for a better tomorrow.¹⁶⁵ Contrary to the critics, who warn against “idealistic utopianism”, it is imperative for a good change narrative to lay out a vision for a better tomorrow. To give confidence, German philosopher Richard David Precht suggests that rather than staring at the potentially devastating impact of the digital revolution, we should focus on mind-boggling opportunities these new technologies have to offer.¹⁶⁶ The historical experience that every industrial revolution has created more jobs than it has destroyed can convey confidence.

What is not entirely clear is how to make an emotionally powerful, normative claim. Bill Gates recommends to “humanise” the robots.¹⁶⁷ The Nobel laureate economist Robert J. Shiller, on the contrary, suggests that “blaming the robots” will be a more effective strategy than “scapegoating the rich”.¹⁶⁸ What is interesting about these approaches is the emotionalisation of this rather technical debate. Building on this, it may be helpful to contrast the cold, inhuman robot economy with something warm and humane: The Human Economy.

Important groundwork in developing a normative narrative has been laid by Amartya Sen. In “Development as Freedom”, Sen re-frames equal opportunities as the precondition to freedom. Both progressives, as well as liberals, can agree with that. By establishing human capital as the main source of future development, he reframes the conflict between capital and labour as two sides of the same coin. This approach resonates both with the Silicon Valley vision of the digital capitalism, as well as its main rival, the peer-to-peer commons economy.¹⁶⁹

Bringing together all these elements, the Human Economy can be the narrative around which a broad societal transformative alliance can be built. It sternly warns against rising unemployment, social unrest, and the eventual collapse of the global economy, should the livelihood and demand crisis not be addressed. But the Human Economy also gives hope for a better tomorrow where alienating work is done by machines, and humans can focus their efforts on making the world better for everyone. By democratising the means of production, the digital transformation can be a game changer. Past experiences, from industrial revolutions to the New Deal, give us

confidence that this Great Transformation can be shaped too. Normatively, by putting human capital at the centre of the Human Economy, we can promote equity and freedom.

The moral outrage and cultural fears fuelling middle class revolts around the globe are a reminder that an economic narrative alone will not suffice. Neither will the libertarian Californian ideology of “every man for himself” be able to moderate the distributional conflicts typical for social transformations. To provide an anchor in the vertigo of change, a collective identity frame is needed. How such a Progressive Patriotism could look like, however, is subject to heated debates.¹⁷⁰ The point remains that only a holistic political approach can lay the social foundation for the re-distributional policies needed to bring about the Human Economy. In other words, it is time to define a social democracy for the digital age.

The Platform: The Social Democratic Path to the Human Economy

Looking at this complex web of conflicts and repercussions, it should become clear that the problem of the digital revolution is not the machines. The real issue is the distribution of ownership, and with it wealth, income, opportunities, and control. In other words, to shape the digital transformation, it is once again necessary to tame capitalism.

The challenge of the digital revolution is not the machines, but the distribution of ownership, wealth, income, opportunities, and control. To shape the digital transformation, it is once again necessary to tame capitalism

Digital automation presents a political window of opportunity to do so. Not in the sense of some arcane structural driver, but as an

Digital capitalism is reshuffling political fortunes, and progressives should go out of their way to build coalitions around the need to boost demand. After half a century of supply-side economics and cost-cutting politics, putting incomes back into the centre of economic thinking is an opportunity progressives must not miss

opening to form new alliances and change the status quo. This opportunity is the aggravating demand crisis of capitalism. To paraphrase Henry Ford, smartphones don't buy smartphones. With automation eating into labour income, those at the commanding heights seem to wake up to the danger of collapsing consumption demand. The bizarre alliance around basic income schemes indicates that a new political formation is emerging. Digital capitalism is reshuffling political fortunes, and progressives should go out of their way to build coalitions around the need to boost demand. After half a century of supply-side economics and cost-cutting politics, putting incomes back into the centre of economic thinking is an opportunity progressives must not miss.

Amidst the conflicts over sovereignty, identity, and distribution transformation, we need to strengthen the foundation of solidarity between all members of the society. This can only be done through a new social contract for the digital society. This social contract needs to be brokered around a compromise between all stakeholders.

The Human Economy offers such an inclusive compromise. In essence, it is the New-New Deal¹⁷¹ that transcends the conflict between capital and labour by making human capital the engine of the economy. For capital, the Human Economy offers a solution to the existential threat of collapsing consumption demand. For the working population, the risk of mass unemployment is relieved through decent livelihoods. And for political decision makers, the looming danger of social unrest is addressed.

The Human Economy offers a New-New Deal that transcends the conflict between capital and labour by making human capital the engine of the economy

The social democratic path to development, in other words, creates the necessary demand to sustain the digital economy, the social security people need to embrace permanent change, and the political stability required for the implementation of disruptive reforms. The social contract for the digital society, in a nutshell, is to provide full capabilities to everyone, who is willing to contribute to the common good. The Human Economy narrative explains how we can make the digital transformation work for everyone.

The social contract for the digital society is to provide full capabilities to everyone willing to contribute to the common good

Endnotes

1. Arrighi, Giovanni. *The long twentieth century: Money, Power and the Origins of Our Times*, Verso, (London), 1994; Strobeck, Wolfgang. *Buying Time: The Delayed Crisis of Democratic Capitalism*, Verso, (London), 2014.
2. Gordon, Robert J. *Does the "New Economy" Measure up to the Great Inventions of the Past?* NBER Working Paper No. 7833, August 2000, <http://www.nber.org/papers/w7833.pdf> accessed 4.7.2017; Paepke, C. Owen. *The Evolution of Progress: The End of Economic Growth and the Beginning of Human Transformation*, Random House, (New York), 1992.
3. Eichengreen, Barry. *Secular Stagnation: A review of the issues*. in Teulings, Coen and Baldwin, Richard. *Secular Stagnation: Facts, causes and Cures*, eds., Vox ebook, (London), 2014. <http://voxeu.org/article/secular-stagnation-facts-causes-and-cures-new-vox-ebook> accessed 4.7.2017.
4. Hansen, Alvin. *Full Recovery or Stagnation*, 1938; Magdoff, Harry and Sweezy, Paul. *Stagnation and the Financial Explosion*, Monthly Review Press, (New York), 1987, Summers, Larry. *U.S. Economic Prospects: Secular Stagnation, Hysteresis, and the Zero Lower Bound*. Keynote Address at the NABE Conference 2014, <http://larrysummers.com/wp-content/uploads/2014/06/NABE-speech-Lawrence-H.-Summers1.pdf> accessed 4.7.2017.
5. Bewley, Truman. *The Optimum Quantity of Money*, in John H. Kareken and Neil Wallace, eds., *Models of Monetary Economies*, Federal Reserve Bank of Minneapolis, (Minneapolis), 1980, pp. 169–210; Huggett, Mark. *The Risk-Free Rate in Heterogeneous-Agent Incomplete-Insurance Economies*, *Journal of Economic Dynamics and Control*, (Illinois), September 1993, 17 (5–6), 953–969; Aiyagari, S. Rao. *Uninsured Idiosyncratic Risk and Aggregate Saving*, *Quarterly Journal of Economics*, August 1994, 109 (3), 659–684; Piketty, Thomas. *Capital in the Twenty-First Century*, Belknap Press, (Cambridge), 2014; Auclert, Adrien and Matthew Rognlie. *Inequality and Aggregate Demand*, *Yale Economics*, 16.9.2016, <http://economics.yale.edu/sites/default/files/inequads.pdf> ; Berg, Andrew G. and Jonathan D. Ostry. *Warning! Inequality May Be Hazardous to Your Growth*, IMF Blog, 8.4.2011, <https://blogs.imf.org/2011/04/08/inequality-and-growth/> all accessed 4.7.2017.
6. Frey, Carl Benedikt. *The End of Economic Growth? How the Digital Economy Could Lead to Secular Stagnation*, *Scientific American*, Vol. 312, No. 1, 2015, <https://www.scientificamerican.com/article/how-to-prevent-the-end-of-economic-growth/> accessed 4.7.2017.
7. Summers, Larry. Keynote Speech, *IMF Fourteenth Annual Research Conference in Honor of Stanley Fischer*, (Washington, DC), November 8, 2013.
8. Philipp Staub, *Falsche Versprechen: Wachstum im digitalen Kapitalismus*, Hamburger Edition, (Hamburg), 2016.

9. Staab, *ibid*; Piketty, 2014, *ibid*; Claire Cain Miller, *The Long-Term Jobs Killer Is Not China. It's Automation*, The New York Times, December 21, 2016, <http://www.nytimes.com/2016/12/21/upshot/the-long-term-jobs-killer-is-not-china-its-automation.html>; Saxer, Marc. *The Revolt Against Globalism*, Social Europe, 11.11.2016, <https://www.socialeurope.eu/2016/11/the-revolt-against-globalism/> both accessed 27.3.2017.
10. WTO: 2016 Press Release 779, Trade Statistics and Outlook, 27. 9. 2016, https://www.wto.org/english/news_e/pres16_e/pr779_e.htm; Paul Donovan, UBS Global Research, *Global Economic Perspectives. The continued collapse of globalisation*, 24 February 2016, <http://www.thebondbeat.com/bondbeat/wp-content/uploads/2016/02/ubs-GEP.pdf>; *In retreat: the multinational company is in trouble*", The Economist, 28.1.2017, <http://www.economist.com/news/leaders/21715660-global-firms-are-surprisingly-vulnerable-attack-multinational-company-trouble> accessed 27.2.2017; Dani Rodrik, *Premature Deindustrialization*, NBER Working Paper No. 20935, February 2015, <http://www.nber.org/papers/w20935> accessed 26.6.2017.
11. Wolfgang Streeck, *Buying Time: The Delayed Crisis of Democratic Capitalism* (London: Verso, 2014).
12. Farrer, Martin. *China Risks Another Downgrade If Debt Bubble Not Fixed, Says Moody's*. The Guardian, 26.06.2017. <https://www.theguardian.com/business/2017/may/26/china-risks-another-downgrade-if-debt-bubble-not-fixed-says-moodys>; Schneider, Henrique. *China's Coming Debt Crisis*. Asia Sentinel, 27.06.2017. <http://www.asiasentinel.com/econ-business/china-debt-crisis>; Brown, Andrew. *China Can Deflate the World's Largest Credit Bubble in an Orderly Fashion*. South China Morning Post, 05.05.2017. <http://www.scmp.com/business/companies/article/2093137/why-china-can-deflate-worlds-largest-credit-bubble-orderly> all accessed 28.06.2017.
13. Brynjolfsson, Erik and Andrew McAfee. *Race against the Machine: How the Digital Revolution is Accelerating Innovation, Driving Productivity, and Irreversibly Transforming Employment and the Economy*, Digital Frontier Press, 2011.
14. Marx, Karl. *The Fragment on Machines*, in: Grundrisse, 1858, 1939.
15. Keynes, John Maynard, *Economic Possibilities for our Grandchildren*, 1930; Woiool, Gregory R. *The Technological Unemployment and Structural Unemployment Debates*, Praeger, 1996; *Automation and anxiety. Will smarter machines cause mass unemployment?*, The Economist Special Report, 25.6.2016, <https://www.economist.com/news/special-report/21700758-will-smarter-machines-cause-mass-unemployment-automation-and-anxiety> accessed 8.7.2017.
16. Noble, David F. *Progress Without People: In Defence of Luddism*, Chicago, Illinois, US: Charles H. Kerr, 1993; Rifkin, Jeremy, *The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era*, New York, Tarcher–G.P. Putnam's Sons, 1995, Ford, Martin. *Rise of the Robots: Technology and the Threat of a Jobless Future*, Basic Books, 2015.

17. Wajcman, Judy. *Automation: is it really different this time?*, British Journal of Sociology, Volume 68, Issue 1, March 2017, Pages 119–127, <http://onlinelibrary.wiley.com/doi/10.1111/1468-4446.12239/full> accessed 4.7.2017.
18. Acemoglu, Daron and Pascual Restrepo. *Robots and Jobs: Evidence from the US Labour Market*. NBER Working Paper No. 23285, March 2017. <http://www.nber.org/papers/w23285> accessed 26.6.2017.
19. Autor, David and Anna Salomons. *Does Productivity Growth Threaten Employment?* Paper prepared for the ECB Forum on Central Banking, 19.6.2017, https://www.ecbforum.eu/uploads/originals/2017/speakers/Speech/D_Autor_A_Salomons_Does_productivity_growth_threaten_employment_Final_Draft_20170619.pdf accessed 30.6.2017.
20. Frey, Card B. and Michael Osborne. *The Future of Employment*, Oxford Martin Programme on Technology and Employment working paper, 2013.
21. Arntz, Melanie, Terry Gregory and Ulrich Zierahn. *The Risk of Automation for Jobs in OECD Countries: A Comparative Analysis*, OECD Social, Employment and Migration Working Papers, No. 189, OECD Publishing, Paris, 2016, <http://dx.doi.org/10.1787/5jlz9h56dvq7-en> accessed 4.7.2017.
22. *The manufacturing jobs delusion. Manufacturing jobs have disappeared and they are not coming back in significant numbers*, The Economist, 4.1.2017, <http://www.economist.com/blogs/buttonwood/2017/01/economics-and-finance> accessed 26.6.2017; Krugman, Paul. *Demonetisation impact not as bad as some of us thought*, Economic Times; 6.7.2017, <http://timesofindia.indiatimes.com/business/india-business/demonetisation-impact-not-as-bad-as-some-of-us-thought-paul-krugman-nobel-laureate/articleshow/59467531.cms> all accessed 9.7.2017.
23. Fourastie, Jean and Andre Siegfried. *Le Grand Espoir du XXe siècle: Progrès technique, progrès économique, progrès social*, Presses Universitaires de France, (Paris), 1949; Gershuny, Jonathan Gershuny. *After industrial society? The Emerging Self-service Economy*, Macmillan, (London), 1978; Baethge, Martin and Ingrid Wilkens. *Die große Hoffnung für das 21. Jahrhundert. Perspektiven und Strategien für die Entwicklung der Dienstleistungsbeschäftigung*. Leske + Budrich, Opladen 2001; Noland, Marcus, Donghyun Park, and Gemma B. Estrada. *Developing the Service Sector as Engine of Growth for Asia: An Overview ADB Economics*, Working Paper Series No. 320, November 2012.
24. Card B. Frey and Michael Osborne, *ibid.*
25. Staab, *Falsche Versprechen*.

26. Susskind, Richard and Daniel Susskind. *The Future of the Professions: How Technology Will Transform the Work of Human Experts*, Oxford University Press, 2015.
27. Wajcman, *ibid.*
28. Autor, David H. *Why Are There Still So Many Jobs? The History and Future of Workplace Automation*, *Journal of Economic Perspectives*, 29(3): 3-30, 2015, <https://www.aeaweb.org/articles?id=10.1257/jep.29.3.3> accessed 8.7.2017. Autor, 2015, *ibid.*
29. Autor, 2015, *ibid.*; Wajcman, *ibid.*
30. Polanyi, Michael. *The tacit dimension*. Doubleday, (New York), 1966.
31. Autor, 2015, *ibid.*
32. Ewing, Jack. *Robocalypse Now? Central Bankers Argue Whether Automation Will Kill Jobs*, *New York Times*, 28.6.2017, <https://www.nytimes.com/2017/06/28/business/economy/ecb-automation-robotics-economy-jobs.html?mcubz=0> accessed 30.6.2017.
33. Autor, 2015, *ibid.*
34. Collins, Randall. *The End of Middle Class Work: No More Escapes*, in: Immanuel Wallerstein; Collins, R. et al. (eds.): *Does Capitalism Have a Future?*, Oxford, New York, 2013, pp. 37 – 70.
35. Autor, 2015, *ibid.*
36. Cain Miller, Claire. *Evidence that Robots are Winning the Race for American Jobs*. *New York Time*, 28.3.2017. https://www.nytimes.com/2017/03/28/upshot/evidence-that-robots-are-winning-the-race-for-american-jobs.html?_r=0 accessed 26.6.2017.
37. Hirsch-Kreinsen, Hartmut. *Digitalisation And Low-Skilled Work*, Friedrich-Ebert-Stiftung WISO Diskurs 19 /2016, <http://library.fes.de/pdf-files/wiso/12864.pdf> accessed 26.6.2017.
38. Henning Kagermann, *Chancen von Industrie 4.0 nutzen*, in: T. Bauernhansl et al. (eds.): *Industrie 4.0 in Produktion, Automatisierung und Logistik. Anwendung, Technologien, Migration*, Wiesbaden, 2014, pp. 603–14.
39. "Speech by World Bank President Jim Yong Kim: *The World Bank Group's Mission: To End Extreme Poverty*", WB, October 3, 2016, <http://www.worldbank.org/en/news/speech/2016/10/03/speech-by-world-bank-president-jim-yong-kim-the-world-bank-groups-mission-to-end-extreme-poverty> accessed 26.6.2017.

40. Chang, Jae-Hee et al., "ASEAN in Transformation: How Technology is Changing Jobs and Enterprises," ILO Bureau for Employers' Activities Working Paper No. 10, July 7, 2016, http://www.ilo.org/public/english/dialogue/actemp/downloads/publications/2016/asean_in_transf_2016_r1_techn.pdf accessed 26.6.2017.
41. "The Rising Cost of Manufacturing", The New York Times, July 2015, https://www.nytimes.com/interactive/2015/07/31/business/international/rising-cost-of-manufacturing.html?_r=0, accessed on 26.6.2017. Sirkin, Harold L., Michael Zinser, and Justin R. Rose, "The Shifting Economics of Global Manufacturing: how cost competitiveness is changing worldwide", August 2014, BCG Perspectives, https://www.bcgperspectives.com/content/articles/lean_manufacturing_globalization_shifting_economics_global_manufacturing/?chapter=3 accessed on 03.03.2017. Dumaine, Brian. "U.S. Manufacturing costs are almost as low as China's, and that's a very big deal," Fortune, June 26, 2015, <http://fortune.com/2015/06/26/fracking-manufacturing-costs> accessed 26.6.2017.
42. Harari, Yuval Noah. *Universal Basic Income is Neither Universal Nor Basic*. Bloomberg, 4.6.2017, <https://www.bloomberg.com/view/articles/2017-06-04/universal-basic-income-is-neither-universal-nor-basic> accessed 28.06.2017.
43. "Reshoring Initiative Goals and Accomplishments," Reshoring Initiative, November 2016, <http://www.reshorennow.org/blog/reshoring-initiative-goals-and-accomplishments/> accessed 26.6.2017.
44. Snower, Dennis. *The Dangerous Decoupling G20 Insights*, 5.6.2017, http://www.g20-insights.org/policy_briefs/the-dangerous-decoupling/ accessed 30.6.2017.
45. WTO: 2016 Press Release 779, Trade Statistics and Outlook, 27. 9. 2016, https://www.wto.org/english/news_e/pres16_e/pr779_e.htm, Paul Donovan, UBS Global Research, "Global Economic Perspectives. The continued collapse of globalisation", 24 February 2016, <http://www.thebondbeat.com/bondbeat/wpcontent/uploads/2016/02/ubs-GEP.pdf> accessed 27.2.2017, "The multinational company is in trouble", The Economist, 28.1.2017, <http://www.economist.com/news/leaders/21715660-global-firms-are-surprisingly-vulnerable-attack-multinational-company-trouble> ; Saval, Nikil. Globalisation: the rise and fall of an idea that swept the world, The Guardian, 14. 7.2017, <https://www.theguardian.com/world/2017/jul/14/globalisation-the-rise-and-fall-of-an-idea-that-swept-the-world> all accessed 14.7.2017.
46. Chang, Ha-Joon. *Kicking Away the Ladder Development Strategy in Historical Perspective*, Anthem Press, (London), 2003.
47. Rodrik, *ibid.*

48. Khan, Azizur Rahman. *Asian Experience on Growth, Employment and Poverty*, UNDP and ILO, 2007; http://www.ilo.org/wcmsp5/groups/public/---asia/---ro-bangkok/documents/publication/wcms_bk_pb_142_en.pdf ; Samuel, Vineet John. *No Jobs, And No Skills. What the dissolving of Skill India's ambitious targets says about India's tryst with jobless growth*, Huffington Post India, 16.6.2017. http://www.huffingtonpost.in/vineet-john-samuel/no-jobs-and-now-no-skills_a_22278983/ ; Mehta, Pradeep S. and Marc Saxer. *Digital society's many disruptions. The digital revolution will go well beyond the disruption of industries; the entire social contract will have to be renegotiated*. Live Mint, 22.2.2017, <http://www.livemint.com/Opinion/e5U08XG3HyoOkP7zukBA6J/Digital-societys-many-disruptions.html> all accessed 26.6.2017.
49. Hamlin, Kevin and Dexter Roberts. *This Economic Model Organized Asia for Decades. Now It's Broken*, Bloomberg Business Week, 22.6.2017, <https://www.bloomberg.com/news/features/2017-06-21/this-economic-model-organized-asia-for-decades-now-it-s-broken> accessed 26.6.2017; Saxer, Marc. *The future of work in Asia. How can India create livelihoods in the digital age?*, Friedrich-Ebert-Stiftung India, March 2017.
50. Aneesh Aneesh, *Global Labor: Algoratic Modes of Organization in Sociological Theory* 27, no. 4 (December 2009): 347–370.
51. Chang, Jae-Hee et al., *ASEAN in Transformation: How Technology is Changing Jobs and Enterprises*, ILO Bureau for Employers' Activities Working Paper No. 10, July 7, 2016, http://www.ilo.org/public/english/dialogue/actemp/downloads/publications/2016/asean_in_transf_2016_r1_techn.pdf accessed 26.6.2017.
52. Pearson, Jordan. *The Future of Robot Labor Is the Future of Capitalism*, Motherboard, 1.9.2014 https://motherboard.vice.com/en_us/article/vvbz7y/the-future-of-robot-labour-has-everything-to-do-with-capitalism accessed 8.7.2017.
53. Brynjolfsson, *ibid.* Mason, *ibid.*
54. Braverman, Harry. *Labor and Monopoly Capital*. New York: Monthly Review, 1974; Lerner, Sally. *The future of work in North America: Good jobs, bad jobs, beyond jobs*, Futures, 26(2):185-196, 1994
55. Autor, 2015, *ibid.* Wajman, *ibid.*
56. Ford, *ibid.*
57. Jonathan Haidt. *When and Why Nationalism beats Globalism. And how moral psychology can help explain and reduce tensions between the two*. The American Interest, Vol. 12, No 1 10-7-2016; Bussemer, Thymian and Christian Krell, Henning Meyer. *Social Democratic Values in the Digital Society*, Social Europe Occasional Paper, January 2016 http://www.feslondon.org.uk/cms/files/fes/img/news/SEJ_FES_Social%20Democratic%20Values%20in%20the%20Digital%20Society.pdf accessed 26.6.2017.

58. *The onrushing wave. Previous technological innovation has always delivered more long-run employment, not less. But things can change.* The Economist, 18.4.2014, <https://www.economist.com/news/briefing/21594264-previous-technological-innovation-has-always-delivered-more-long-run-employment-not-less> accessed 8.7.2017, Brynjolfsson and McAfee, *ibid*; Wajcman, *ibid*.
59. Brynjolfsson, Erik and Andrew McAfee. *The Second Machine Age. Work, Progress, and Prosperity in a time of Brilliant Technologies.* Norton, 2014; Rifkin, Jeremy. *The Third Industrial Revolution. How Lateral Power is Transforming Energy, the Economy, and the World.* Palgrave, 2011.
60. Rifkin, Jeremy. *The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism,* St. Martin's Griffin, 2015.
61. Mason, Paul. *Postcapitalism. A Guide to Our Future,* Allen Lane 2015.
62. Rifkin, 2015, *ibid*.
63. Assheuer, Thomas. *Die Hippies sind schuld.* Die Zeit, 23.3.2017.
64. Staab, *ibid*.
65. Ianchovichina, Elena and Susanna Lundstrom. *What is Inclusive Growth?*, The World Bank, February 10, 2009, <http://siteresources.worldbank.org/INTDEBTDEPT/Resources/468980-1218567884549/WhatIsInclusiveGrowth20081230.pdf> accessed 26.6.2017.
66. *Charta der Digitalen Grundrechte der Europäischen Union.* <https://digitalcharta.eu/> English translation <https://digitalcharta.eu/wp-content/uploads/2016/12/Digital-Charta-EN.pdf> both accessed 26.6.2017.
67. Friedman, Thomas. *The Power of Green.* The New York Times Magazine, 15.4.2007. <http://www.nytimes.com/2007/04/15/magazine/15green.t.html> accessed 26.6.2017.
68. IRENA, *Renewable Energy and Jobs – Annual Review 2016*, http://www.irena.org/DocumentDownloads/Publications/IRENA_RE_Jobs_Annual_Review_2016.pdf . accessed 26.6.2017.
69. In 2008 the United Nations Environment Programme (UNEP), the International Labour Organization (ILO), the International Trade Union Confederation (ITUC), and the International Employers Organization (IEO) jointly launched the Green Jobs Initiative. Bulgarelli, Aviana et al. *Future Skill Needs for the Green Economy*, Publications Office of the European Union, Luxembourg, 2009.

70. Indian Ocean Rim Association. *Blue Economy*. <http://www.iora.net/blue-economy/blue-economy.aspx>; UNEP, 2015, *Blue Economy: Sharing Success Stories to Inspire Change*; UNEP Regional Seas Report and Studies No. 195, 2015 https://wedocs.unep.org/bitstream/handle/20.500.11822/9844/-Blue_economy_sharing_success_stories_to_inspire_change-2015blue_economy_sharing_success_stories.pdf?sequence=3&isAllowed=y both accessed 26.6.2017
71. Becker, Gary. *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education*, National Bureau of Economic Research, 1964.
72. Sen, Amartya. *Development as Freedom*, Oxford University Press, 1999.
73. Florida, Richard. *The rise of the creative class*. Basic Books, 2002.
74. Spence, Michael. *Job Market Signaling*. Quarterly Journal of Economics. The MIT Press. 87 (3): 355–374. 1973.
75. Arvidsson, Adam and Nicolai Peitersen, *The Ethical Economy: Rebuilding Value After the Crisis*, Columbia University Press, 2013.
76. Bauwens, 2005, *ibid*.
77. Rifkin, 2015, *ibid*; Bauwens, Michel and Vasilis Niaros. *Value in the Commons Economy: Developments in Open and Contributory Value Accounting*. Heinrich-Böll Stiftung, 2017.
78. Berardi, Franco "Bifo". *Precarious Rhapsody Semiocapitalism and the pathologies of the post-alpha generation*, (London) 2009; Bauwens, 2005, *ibid*, Bauwens and Niaros, 2015, *ibid*.
79. Brynjolfsson and McAfee, *ibid*.
80. Kelly, Colm, and Blair Sheppard. *Realigning Business, Economies and Society*. G20 Insights, 18.5.2017, http://www.g20-insights.org/policy_briefs/realigning-business-economies-society/ accessed 30.6.2017.; Snower, *ibid*.
81. Arvidsson, *ibid*.
82. Manyika, James, Mehdi Miremadi and Michael Chui, *These Are the Jobs Least Likely to Go to Robots*. Fortune, 11.7.2016, <http://fortune.com/2016/07/11/skills-gap-automation/> accessed 26.6.2017.
83. Snower, *ibid*; Krell, Christian. *World Wide Web of Equal Freedom*, Neue Gesellschaft/ Frankfurter Hefte, 6/2017. <http://www.fes-connect.org/trending/world-wide-web-of-equal-freedom/> accessed 30.6.2017.

84. Hart, Keith, Jean-Louis Laville and Antonio David Cattani. *The Human Economy*, Polity Press, 2010.
85. Boltanski, Luc and Arnaud Esquerre. *Enrichissement: Une critique de la marchandise*, Gallimard, 2017
86. Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*, Cambridge University Press, 1990.
87. Erik Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (New York: W. W. Norton & Company, 2014).
88. Simon, Matt. *Who Will Pay for the Future If Not The Robots?*, The Wire, 5.3.2017, <https://www.wired.com/2017/05/will-pay-future-not-robots> accessed 28.06.2017.
89. Ford, *ibid*, 2015.
90. Meyer, *ibid*.
91. Meyer, *ibid*.
92. *European New Deal, A comprehensive economic & social policy framework for Europe's stabilisation, sustainable recovery and democratisation*, DiEM25, 2017, <https://diem25.org/wp-content/uploads/2017/03/European-New-Deal-Complete-Policy-Paper.pdf> accessed 13.7.2017.
93. Ravi, Shamika. *Why India Is Ready for a Universal Basic Income. How it could cut Poverty and Bureaucracy*, Foreign Affairs, 6.4.2017, <https://www.foreignaffairs.com/articles/india/2017-04-06/why-india-ready-universal-basic-income> accessed 26.6.2017.
94. Arvind Subramanian, *Reversing premature de-industrialisation in India*, Ideas for India, 26.5.2014 http://www.ideasforindia.in/article.aspx?article_id=293 ; Meira, Arun, *Focus on Humans rather than Robots*, The Hindu, 9.5.2017 <http://www.thehindubusinessline.com/opinion/focus-on-humans-rather-than-robots/article9689164.ece> ; Mehta, Pradeep and Amol Kulkarni, *"It Is Time to Address India's Abysmal Job Creation Record,"* The Wire, 25.11.2016, <http://thewire.in/82017/indiaabysmal-job-creation-record/> all accessed 28.6.2017.
95. Saxer, Marc. *The future of work in Asia. How can India create livelihoods in the digital age?*, Friedrich-Ebert-Stiftung India, March 2017, <http://library.fes.de/pdf-files/bueros/indien/13226.pdf> accessed 28.6.2017.
96. German Federal Ministry of Labour and Social Affairs, *White Paper Work 4.0*. November 2016, http://www.bmas.de/SharedDocs/Downloads/EN/PDF-Publikationen/a883-white-paper.pdf?__blob=publicationFile&v=3 accessed 13.7.2017.

97. Ford, *ibid.*
98. Robinson, Ken. *Changing Education Paradigms*, Speech at the Royal Science Academy. 16.6.2008. <https://www.thersa.org/discover/publications-and-articles/rsa-comment/2010/10/rsa-animate---changing-education-paradigms> accessed 26.6.2017.
99. OECD, *Skills Matter: Further Results from the Survey of Adult Skills*, OECD Skills Studies, OECD Publishing, Paris, 2016, <http://dx.doi.org/10.1787/9789264258051-en> accessed 26.6.2017.
100. White Paper Work 4.0, *ibid.*
101. White Paper Work 4.0, *ibid.*
102. Blanchard, Olivier, Giovanni Dell'Ariccia, and Paolo Mauro. *Rethinking Macroeconomic Policy*. IMF Staff Position Note SPN/10/03, International Monetary Fund, 12.2.2010, <https://www.imf.org/external/pubs/ft/spn/2010/spn1003.pdf>
103. Murray, Charles. *A Guaranteed Income for Every American*, Wall Street Journal, 3.6.2016, <https://www.wsj.com/articles/a-guaranteed-income-for-every-american-1464969586> accessed 13.7.2017.
104. The Next Era, *Everything You Ever Wanted to Know About Universal Basic Income*, Demos Helsinki, 5.7.2017, <https://futurism.com/everything-you-ever-wanted-to-know-about-universal-basic-income/> accessed 14.7.2017.
105. Varoufakis, Yanis. *The Universal Right to Capital Income*. Project Syndicate, 31.10.2016. <https://www.yanisvaroufakis.eu/2016/10/31/the-universal-right-to-capital-income-project-syndicate-op-ed/>; Chollet, Mona. *Financing A Basic Income*, Le Monde Diplomatique, March 2017, <http://mondediplo.com/2017/03/05income> ; Harari, *ibid*; Galeon, Dom. *Mark Zuckerberg: The U.S. Should Learn From This State's Basic Income Program*, Futurism, 5.7.2017, <https://futurism.com/mark-zuckerberg-the-u-s-should-learn-from-this-states-basic-income-program/> ; McGahey, Rick. *Robots, Universal Basic Income, and the Welfare State*, Institute for New Economic Thinking, 5.1.2017, <https://www.ineteconomics.org/perspectives/blog/robots-universal-basic-income-welfare-state> all accessed 13.7.2017.
106. Chapman, Ben. *Finnish Citizens Given Universal Basic Income Report Lower Stress Levels and Greater Incentive to Work*, The Independent, 22.6.2017, <http://www.independent.co.uk/news/business/news/finland-universal-basic-income-lower-stress-better-motivation-work-wages-salary-a7800741.html> accessed 9.7.2017.

107. Meyer, Henning. No Need for Basic Income: Five Policies To Deal With The Threat Of Technological Unemployment, Social Europe, 24.3.2017, <https://www.socialeurope.eu/2017/03/no-need-basic-income-five-policies-deal-threat-technological-unemployment/> accessed 26.6.2017; Mendonca, Lenny. If UBI is the Answer, What is the Question?, NewCo Shift, 3.1.2017, <https://shift.newco.co/if-ubi-is-the-answer-what-is-the-question-8c5ed951668f> accessed 9.7.2017.
108. Hassel, Anke. *Unconditional Basic Income Is A Dead End*, Social Europe, 1.3.2017, <https://www.socialeurope.eu/2017/03/unconditional-basic-income-is-a-dead-end/> accessed 26.6.2017.
109. De Ugarte, David. *Varoufakis se equivoca: la renta básica es una marcha atrás*. Las Indias blog, 22.5.2016. English translation: <https://lasindias.blog/varoufakis-is-wrong-a-basic-income-would-be-a-step-in-the-wrong-direction> accessed 26.6.2017.
110. Keeble, Nathan. *The Dangers of a "Universal Basic Income*, Mises Institute, 16.1.2017, <https://mises.org/blog/dangers-universal-basic-income> accessed 13.1.2017.
111. Varoufakis, *ibid*.
112. Kingma, Luke, *Universal Basic Income: The Answer to Automation?* <https://futurism.com/images/universal-basic-income-answer-automation/> accessed 4.7.2017.
113. Browne, James and Herwig Immervoll. *Basic Income as a Policy Option: Can It Add Up?* Policy Brief on the Future of Work, OECD, 2017, <http://www.oecd.org/employment/emp/Basic-Income-Policy-Option-2017.pdf> accessed 13.7.2017.
114. Ward, Tom. *There is a Solution to Our Broken Economy Besides Universal Basic Income*, Futurism, 10.5.2017, <https://futurism.com/there-is-a-solution-to-our-broken-economy-besides-universal-basic-income/> accessed 9.7.2017.
115. Federal Ministry of Labour and Social Affairs, *ibid*.
116. Federal Ministry of Labour and Social Affairs, *ibid*.
117. Merler, Silvia. *The Universal Basic Income discussion*, Bruegel Blog Post, <http://bruegel.org/2017/06/the-universal-basic-income-discussion/> accessed 13.7.2017.
118. Browne, James and Herwig Immervoll. *Basic Income as a Policy Option: Can It Add Up?* Policy Brief on the Future of Work, OECD, 2017, <http://www.oecd.org/employment/emp/Basic-Income-Policy-Option-2017.pdf> accessed 13.7.2017.
119. Murray, Charles. *In Our Hands: A Plan to Replace the Welfare State*, American Enterprise Institute, 2006; Murray, *ibid*.
120. Greenstein, Robert. *Universal Basic Income May Sound Attractive But, If It Occurred, Would Likelier Increase Poverty Than Reduce It*, Center on Budget and Policy Priorities, 31.5.2016, <https://www.cbpp.org/poverty-and-opportunity/commentary-universal-basic-income-may-sound-attractive-but-if-it-occurred> accessed 13.7.2017.

121. Merler, *ibid.*
122. Greenstein, *ibid.*
123. Hassel, *ibid.*
124. Roy, Rathin. *Universal Basic Income: A Disturbing Admission*, Business Standard, 2.3.2017, http://www.business-standard.com/article/opinion/universal-basic-income-a-disturbing-admission-117030201279_1.html accessed 9.7.2017. Ghatak, Maitreesh. Combating poverty in developing countries with a universal basic income, VoxDev, 17.7.2017.
125. Brown, Caitlin, Martin Ravallion and Dominique van de Walle. *A Poor Means Test? Econometric Targeting in Africa*. NBER Working Paper 22919, 2016, <http://www.nber.org/papers/w22919>, accessed 13.7.2017.
126. Ozler, Berk. *World Bank Impact Evaluations*, 27.2.2017, <https://blogs.worldbank.org/impactevaluations/fact-checking-universal-basic-income-can-we-transfer-our-way-out-poverty> accessed 13.7.2017.
127. Ministry of Finance, Economic Survey 2016-17, Government of India, Oxford University Press, Delhi, 2017.
128. Ravi, *ibid.*
129. Devarajan, Shanta. *Three reasons for universal basic income*, Brookings, 15.2.2017, <https://www.brookings.edu/blog/future-development/2017/02/15/three-reasons-for-universal-basic-income/> accessed 13.7.2017.
130. Broy, Manfred and Richard David Precht. *Daten essen Seele auf*. Die Zeit, 9.2.2017. <http://www.zeit.de/2017/05/digitalisierung-revolution-technik-seele-menschen-grundrechte> accessed 26.6.2017.
131. Raworth, Kate. *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*, Chelsea Green Publishing, 2017.
132. Freeman, Richard. *Why In The Digital Economy Workers Should Own More Company Shares*, Social Europe, 17.9.2015. <https://www.socialeurope.eu/2015/09/why-in-the-digital-economy-workers-should-own-more-company-shares/> accessed 26.6.2017, Meyer, *ibid.*
133. Meyer, *ibid.*
134. Varoufakis, *ibid.*
135. Bauwens, 2015, *ibid.*
136. Anderson, Chris, *Makers. The New Industrial Revolution*, Crown Business, 2012.

137. CryptoCurrency Market Capitalizations, <https://coinmarketcap.com/> accessed 26.6.2017.
138. Pearson, Jordan. *A Major ISP Wants to Give Consumers a Cut of the Online Data Market*, Motherboard, 18.7.2014. https://motherboard.vice.com/en_us/article/jp5gmk/a-major-isp-wants-to-give-consumers-a-cut-of-the-online-data-market accessed 8.7.2017.
139. Lazzarato, Maurizio. *Immaterial Labor*, in: from Paolo Virno and Michael Hardy (eds.). *Radical Thought In Italy: A Potential Politics*, University Of Minnesota Press, 2006.
140. Bauwens, 2015, *ibid.*
141. Bauwens. 2015, *ibid.*
142. Atkinson, A.B. *The Case for a Participation Income*, The Political Quarterly, 1996, <http://onlinelibrary.wiley.com/doi/10.1111/j.1467-923X.1996.tb01568.x/abstract> accessed 9.7.2017.
143. Stanley, Jay. *China's Nightmarish Citizen Scores Are a Warning for Americans*. American Civil Liberties Union, 5.10.2015. <https://www.aclu.org/blog/free-future/chinas-nightmarish-citizen-scores-are-warning-americans> ; Falkvingeall, Rick. *In China, Your Credit Score Is Now Affected By Your Political Opinions – And Your Friends' Political Opinions*. Privacy News Online, 3.10.2015. <https://www.privateinternetaccess.com/blog/2015/10/in-china-your-credit-score-is-now-affected-by-your-political-opinions-and-your-friends-political-opinions/> all accessed 26.6.2017.
144. Browne and Immervoll, *ibid.*
145. Atkinson, *ibid.*
146. Ghani, Ejaz, William R. Kerr, and Stephen D. O'Connell. *Who Creates Jobs?* World Bank Economic Premise N°70, November 2010. <http://siteresources.worldbank.org/INTPREMNET/Resources/EP70.pdf> accessed 30.6.2017, Meira, Arun, *ibid.*
147. Ghani, *ibid.*
148. Polanyi, Karl. *The Great Transformation: The Political and Economic Origins of Our Time*, Beacon Press, 1944.
149. Weber, Max. *Rationalism and Modern Society*, Edited and Translated by Tony Waters and Dagmar Waters, New York: Palgrave Macmillan, 2015. Dusza, Karl. *Max Weber's Conception of the State*, International Journal of Politics, Culture, and Society Vol. 3, No. 1 (Autumn, 1989), pp. 71-105, <http://www.jstor.org/stable/20006938> accessed 26.6.2017.

150. Weber, Max. *The Protestant Ethic and the Spirit of Capitalism*, 1905; Apornsuwan, Thanet. *Buddhist Cosmology and the Genesis of the Tai Political Discourse*. In: Yusuf, Imtiyas and Canan Atilgan. *Religion and Democracy in Thailand*, Konrad Adenauer Stiftung, 2008.
151. Fukuyama, Francis. *The Origins of Political Order: From Prehuman Times to the French Revolution*, Farrar Straus & Giroux, 2011.
152. Goodhart, David. *Discomfort of strangers*. The Prospect, 24.2.2004. <https://www.theguardian.com/politics/2004/feb/24/race.eu> accessed 2.7.2017.
153. Putnam, Robert. *Bowling Alone: The Collapse and Revival of American Community*, Simon & Schuster, 2001.
154. Collier, Paul. *Exodus: How Migration Is Changing Our World*. Oxford University Press, 2015.
155. Dimick, Matthew, David Rueda, and Daniel Stegmüller. *The Altruistic Rich? Inequality and Other-Regarding Preferences for Redistribution in the US*, Quarterly Journal of Political Science, 11(4), 2016 http://www.daniel-stegmueller.com/files/DimickRuedaStegmuellerAltruismUS_R2.pdf ; Hopkins, Daniel J. *The Diversity Discount: When Increasing Ethnic and Racial Diversity Prevents Tax Increases*, The Journal of Politics, Volume 71, Number 1 | January 2009, <http://www.journals.uchicago.edu/doi/abs/10.1017/S0022381608090105> all accessed 2.7.2017.
156. Saxer, Marc. Saxer, *The Ambivalent Role of Middle Classes in Transformation Conflicts*, in: Roth, Michèle, Cornelia Ulbert and Tobias Debiel (eds.) *Global Trends 2015*. Fischer Taschenbuch Verlag, Frankfurt am Main, 2015. <http://goo.gl/mZqwFi> ; Saxer, Marc. *Conflicts over Transformation erupt around the Globe*, NGFH International Quarterly, 1/2015, http://www.frankfurter-hefte.de/upload/International_Edition/NGFH_International-Quarterly_2015-1.pdf all accessed 12.7.2017.
157. Saxer, Marc. *Mind the Transformation Trap. Laying the Political Foundation for Sustainable Development*, Friedrich-Ebert-Stiftung India Office, November 2015, <http://library.fes.de/pdf-files/bueros/indien/12073.pdf> accessed 12.7.2017.
158. Rifkin, 2011, *ibid*.
159. Wajcman, *ibid*.
160. Johar, Indy. *Democratic Making*. Medium, 16.3.2017, <https://provocations.darkmatterlabs.org/democratic-making-c5ada37db594> accessed 27.3.2017.
161. Saxer, Marc. *Transformative Platform Politics for The Digital Society*. Social Europe, 25.5.2016, <https://www.socialeurope.eu/2016/05/transformative-platform-politics-digital-society/> accessed 30.3.2017.

162. Urry, John. *What is the Future?*, Polity Press, 2016.
163. Saxer, Marc. *Practical Guide to Transformative Change Making, Version 2.0*, Friedrich-Ebert-Stiftung India, June 2017, <http://library.fes.de/pdf-files/bueros/indien/13477.pdf> accessed 26.6.2017.
164. Saxer, 2017, *ibid.*
165. Saxer, Marc. *Good Society: What Needs To Be Done*, Social Europe, 31.3.2017. <https://www.socialeurope.eu/2017/03/good-society-needs-done/> accessed 26.6.2017. Saxer, Marc. *Utopia, Technocracy and Struggle: Ways out of the Crisis of Social Democracy*, Social Europe, 4.11.2013. <https://www.socialeurope.eu/2013/11/utopia-technocracy-and-struggle-ways-out-of-the-crisis-of-social-democracy/> accessed 26.6.2017; Negt, Oskar. *Nur noch Utopien sind realistisch. Politische Interventionen*. Steidl. Göttingen, 2012; Levitas, Ruth. *Utopia as Method. The Imaginary Reconstitution of Society*. Palgrave Macmillan, 2013; Kunkel, Benjamin. *Utopia or Bust. A Guide to the Present Crisis*. Verso, 2014; Jour fixe Initiative Berlin. „Etwas Fehlt“. *Utopie, Kritik und Glücksversprechen*. Edition Assemblage, 2013.
166. Broy, *ibid.*
167. *The robot that takes your job should pay taxes, says Bill Gates*, Quartz, 17.2.2017. <https://qz.com/911968/bill-gates-the-robot-that-takes-your-job-should-pay-taxes/> accessed 26.6.2017.
168. Shiller, Robert J. *Robotization Without Taxation?* Project Syndicate, 22.3.2017. <https://www.project-syndicate.org/commentary/temporary-robot-tax-finances-adjustment-by-robert-j--shiller-2017-03?barrier=accessreg> accessed 26.6.2017.
169. Bauwens, *ibid.*
170. Saxer, Marc. *In search of a Progressive Patriotism. Overview of debates over collective identity and their strategic implications*, Medium, 15.4.2017, https://medium.com/@marc_saxer/in-search-of-a-progressive-patriotism-9fe0ebaac8e4 accessed 12.7.2017.
171. Grunwald, Michael. *The New New Deal: The Hidden Story of Change in the Obama Era*, Simon & Schuster, 2012; Fricke, Thomas. *Der neue New Deal*. Der Spiegel, 20/2017. https://magazin.spiegel.de/SP/2017/20/151139742/index.html?utm_source=spon&utm_campaign=centerpage accessed 26.6.2017.

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Imprint

© 2017 Friedrich-Ebert-Stiftung India Office
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