

Overarching Visions

G20 Germany 

Technological Change, Inequality and The Collapse of the Liberal Order

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We are witnessing the start of a deep and prolonged political convulsion. This convulsion is caused by the impact of technological change on how wealth is generated and distributed in our societies. Since the 1970s advanced economies have seen a strong productivity increases and stagnant labor income. We believe this should be described as a major breach of our social contract. It is leading to the stagnation of income of the Middle Class, growing inequality and, ultimately, a radicalization of our politics. Unless the cause of this is properly diagnosed and the underlying drivers addressed head on we are bound to see a worsening of the convulsion.

Challenge

Technology and displacement

1. Stagnation of the Middle Class and Inequality: An American born in the 1940s had a probability of over 90% of accumulating more wealth during his lifetime than his parents. That probability was only 50% in the case of Americans born in the 1980s. For 90% of the population in the United States, income has grown less than 0.5% per year on average between 1979 and 2013 (MGI 2016). **In every country in the OECD, inequality levels have risen since 1980** (Bivens et al. 2014). This growing inequality has some dramatic real implications. Unemployment levels in Southern European countries hover around 20% and are higher for the youth. Contrary to what one would expect, middle-aged whites in the United States have seen their mortality increase in the period 1999-2013 (Case and Deaton, 2016). By contrast, in developing countries (notably China) the pattern for the last 20 years has been one of striking reduction in poverty levels and this has contributed to an overall reduction in worldwide inequality (Milanovic 2016). However, much of our diagnostic is likely to affect these countries as they reach their peak of industrialization.
2. The fundamental cause for such stagnation and inequality is technological change The increase in automatization explains the secular decline in manufacturing and extractive industries employment since the 1950s. Other phenomena such as offshoring and increases in the returns to financial activities have been much more recent. China did not become a manufacturing powerhouse, for instance, until the 1990s. While so far automation has affected middle-skilled jobs the most, we see more and more evidence of computer proficiency at tasks that are not "routine". This will only increase with more computing power and the use of advanced artificial intelligence. Estimates are that **47% of all occupations will be automatable within one or two decades** (Frey and Osborne 2017). Jobs **that most benefited from increased computing power, such as software engineers, will likely be substituted eventually**. At the lower end of the skills distribution, there is increasing pressure to automate service occupations and we see examples of fully automated restaurants, hair

skills distribution, there is increasing pressure to automate service occupations and we see examples of fully automated restaurants, hair salons and robots substituting health aides. Already, the hollowing out of the middle manifests itself in the disappearance of jobs such as machine operators, secretarial jobs, cashiers, archivists, bank clerks and tellers, etc. The emerging new service professions are often part of a new „precariat“: part-time or of short length, unprotected by labor unions and with few benefits.

The social contract and political ramifications

3. A Breach of the Social Contract: The process of automation of skilled jobs has led to a decoupling of productivity and hourly wages. From 1973 to 2013 productivity of goods and services in the US grew by over 240% while labor wages remained stagnant. This constitutes a true breach of our social contract. For the last several generations our growth model has been built on the assumption that with increments in productivity came increases in labor wages, and ultimately the growth of a middle class. This no longer occurs.
4. The Anti Elite Era, The Barbarians at the Gates of the Political System and the Erosion of support for democracy: This process has already manifested itself through majorities in the US and Europe have expressed **mistrust in the academic, political and business elites that have sustained the system they see as failing**. The collectives with lowest levels of trust in political elites are precisely those that belong to the „precariat“. In the United States, the counties where routine level occupations are highest were more likely to vote Republican in the 2016 presidential election (by a margin of +35%) (Kolko 2016). By contrast, unemployment levels explain little of the variation in voting patterns. More worryingly still, **levels of support for democracy** as a system of government also seem to be declining in Western countries. Today only a little over 25% of US or British citizens born in the 1980s consider it “essential” to live in a democracy (Foa and Mounk, 2016). We live, therefore, through a period of strong questioning of the overarching political framework within which we live.

Proposal

We believe that what is needed is a substantial effort to change the course of the tendencies of material decline of a large group of the population, the middle classes, through renewed efforts to provide them with opportunities to pre-empt or remedy dislocation. In addition, this should be coupled with a re-think of the role of taxation and redistribution within the state, to re-adjust the prevailing social contract to this new reality. Corporations will also have to adjust the way they define their relations with their shareholders and workers as well as the broader society.

Investing in the right kind of education

The European Commission has estimated that **there are at least 2 million jobs in the EU that cannot be filled because employers cannot find candidates with the rights skills**. So irrespective of the automation process we are failing at managing the transition to the new economy. There is value to be claimed through better educational policies.

While a lot of investment in education has been misguided and seen limited returns, we now know how to design reforms and target efforts to increase performance. **Investments in early childhood education have societal rates of return that are up to 10x the amount money invested** through the opening of opportunities for young children, making them some of the best investments a government can make (Heckman). The **quality of teachers** also constitutes one of the biggest drivers of educational performance that can in part be solved through the provision of the right incentives. A recent Harvard study (Chetty et al. 2014) shows that even doubling the salary of the teacher workforce would self-finance through increased future tax revenues. These investments and policy changes in basic education may close the tragic gap between those who are already disadvantaged by an inadequate education system. However, they will not propel challenged developed economies to new levels of productivity.

New vocational training models should be targeted to those dislocated and for the new waves of jobs demanded

In the labor force, the tendencies described above have resulted in the polarization of the labor force, with middle skilled workers suffering the most (see Autor, D. and Dorn, D. 2013). It should be those groups that constitute a new focus. Groups that formerly included manufacturing or clerical workers have an opportunity to train and re-train into the new emerging professions that will mostly be focused in services.

Vocational education has, overall, not been very successful in achieving more employable graduates in the services sector. The German apprenticeship model seems to be effective in training a workforce for the manufacturing sector but it is doubtful it could serve as a viable template for other countries or for other sectors of the economy. Extant training programs have, collectively no effect on levels of employment in the "knowledge economy". **New or revamped sector-based programs targeted at growing professions should balance close collaboration with employers and a deep understanding of their needs with not being captured by the immediate employer-specific needs, but a platform for trainees to grow.** Fifty-nine percent of hiring managers state that soft skills are "difficult" to find, and 58 percent say the lack of soft skills among candidates is "limiting their company's productivity. Training programs should thus also include a training component in general skills (such as project management, negotiation, ideation, complex communication and other social skills) needed in a more volatile environment in which they will have to switch occupations.

Higher education institutions should also be better at matching their graduate pool to the job market. This will involve, first, continuously adapting their programs to market developments. Second, becoming better at matching graduates with opportunities. Serious efforts will require cross-institution collaboration or government intervention in developing platforms for matching applicants to programs, and students to employment opportunities

Higher Education should enable students to contribute to the expansion of the economic and productivity frontier

This will need the upgrade of curricula to shorter programs accessible to a broad base that are focused on a cross-section of subjects that includes a modern evolution to the traditional liberal arts curricula, as well as a minimum of technical competency in digital skills such as coding and social skills developed through projects, group work, communications and leadership opportunities. At the same time, universities should become a hub for **lifelong learning and the continuous upgrading of skills of students.** For that to happen, new delivery models through online courses of high quality will need to be developed. The experience of the online expansion of quality Master's courses in Georgia Tech has allowed for the reach to large numbers of middle-age professionals at relatively low cost, who would not have undertaken a 2-year Master's residential program (Goodman et al., 2016).

Changing the shape of the State

Changes to how the State procures income

We believe that taxation of all sources of income should continue to be a central priority for governments and that the increase in inequality of income generation calls for progressive taxation. But as the importance of labor income declines so does the ability of our States to collect taxes. Income tax remains the main source of revenue for advanced economies. This means that new ways of collecting taxes should be found, and, in particular, ways of having some form of fiscal traction over capital. Here two options emerge. **The first seeks to increase capital tax (particularly capital gains tax)** but these measures are difficult to implement in a global economy where capital can move freely and, in many instances, avoid taxation. A possible solution to this would be a global tax on capital but, again, implementation should prove difficult. A coordinated fight against tax havens and international tax evasion would be a good place to start.

A second option is to follow the participatory route and "democratize capital" This could be done through the **creation of large public venture capital funds that hold stakes in major innovation companies.** Over time the state would procure itself with a large portfolio of capital holdings in profitable companies. This would enable the public sector to profit from the concentration of wealth in capital and ultimately design mechanism to distribute through tools different to labor wages.

Changes to how the State disburses income to ensure funding of public services and distributes adequately

Having procured the necessary income the State should proceed in two directions. First, it should **guarantee the proper funding of public services**. Public services are themselves major distributive mechanisms and they are facing major budgetary constraints in most developed economies. So investment in public education, public health care, and infrastructure should be a priority moving forward.

Second, governments around the world should **design new ways to distribute wealth to non-capital holders**. Any expansion in the transfer system will require a fair amount of experimentation, as successful models have not been fully developed for the new era we describe. While universal income programs should be explored, the greatest successes in welfare over the last decade have come from **conditional transfer programs**. We can foresee a conditional program that, like traditional unemployment insurance, ties a steady income stream to particular activities. However, these activities need not be job search and, given that a lot of the new opportunities for employment will be due to innovation and new jobs. It may, for example, **involve the development of new businesses, creative activities or their commercialization in new contexts or contributions to the strengthening of communities through mentorship or other non-commercially viable programs**. Unconditional transfers may be politically problematic as well as counter-productive if they incentivize dependence and disincentivize the pursuit of innovative and entrepreneurial activities.

There is also an opportunity to revamp job-seeker support through the use of a combination of new models and better-targeted casework. Some encouraging evidence from innovative programs in this field comes from France. It has since 2002 provided the unemployed with insurance against unsuccessful entrepreneurship. Through those incentives, it increased the creation of companies in the economy by one third. Separately, some experimental reforms there have enabled private firms to compete in providing employment support services (training and casework), and linked payments to those firms to the success of finding employment. This doubled the success rate of the jobseekers in finding employment.

A New Role for the Corporation

The decoupling of productivity and hourly wages **makes the concept of maximizing shareholder value an insufficient** one for corporations. Unless corporations want to operate in extremely hostile social and political environments they need to find ways to distribute income through means that are different to labor wages. **The concept of sustainability of business needs, therefore, to be expanded to include ideas of social sustainability and the continuous examination of the duties of the corporations to their workers.** This will require private companies to expand their philanthropic and social responsibility activities in the communities where they operate or serve. There is here a real opportunity for social entrepreneurship to take root and have meaningful impact on people's lives.

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Existing Initiatives & Analysis

Implementation Overview (1)

Overview

The implementation of early childhood and the attraction and retainment of good teachers are must-haves that countries will need to implement as quickly as they can. In vocational and higher education, no clear model has emerged. Therefore, ongoing experimentation and reassessment of the models of delivery is needed. New delivery forms should be explored, tried, evaluated, in close collaboration with the private sector. As we learn to identify successful models, they should be expanded. We also propose reforms to taxation and corporate modes. These will need to be coordinated across nations given the realities of capital movements across borders. In addition, they will require substantial debate and the investment of political capital within countries in order to achieve the major changes required to stabilize the social contract that has been eroded over the last decades.

Existing Agreements (1)

G20 Policy Priorities on Labour Income Share and Inequalities

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