Reinventing Capitalism
The Transition to the Knowledge Economy

By Torben Iversen

Should we blame capitalism for the challenges rich democracies have been facing over the past thirty years—from growing inequality to the rise of populism? According to Torben Iversen, the opposite is true: it was democracy that transformed capitalism to take full advantage of new technologies.

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During the past three decades rich democracies have been in upheaval: the information and communication technologies (ICT) revolution, growing inequality, the Great Recession, and the rise of rightwing populism. The turmoil is often attributed to a broad range of “neoliberal” reforms in the 1980s and 90s, first launched by Thatcher in the UK and Reagan in the US, which in turn reflected the rising power of global capital (Blyth 2002; Glyn 2007). Because it pits capital against democracy this poses an existential crisis for advanced capitalist democracies. In this article we argue that this diagnosis gets cause and effect backwards. It was democracy that transformed
capitalism to take full advantage of new technology, and this transformation in turn laid the foundation for unprecedented prosperity, even if it also gave rise to inequality and new political fault lines.¹

Origins

On March 12, 1984 a major strike broke out in the East Midlands coal mines, UK. Nearly 200,000 striking miners sought to stop mining closures and preserve what had once been the backbone of British industry. It was not the first time. Miners had also gone on strike in 1972 and in 1974, and the massive loss of mining jobs was only an extreme example of what was happening to British industry in general. And it was not just a British problem: throughout Europe and North America (and East Asia with a delay) manufacturing jobs vanished at an alarming rate. Between 1960 and 1990 employment in industry, the largest sector of the economy at the start of the period, was cut in half.

Deindustrialization precipitated, and was in turn accelerated by, major economic and institutional reforms of the 1980s and 1990s. Financialization, capital market liberalization, strengthening of competition policies (including privatization of state enterprises), opening to global trade and foreign direct investment, and a shift towards non-accommodating macroeconomic policies with independent central banks and inflation-targeting—all these reforms were adopted across advanced democracies. We discuss them further below (in addition to a sixth change: massive investment in higher education).

In the established literature these reforms (minus education) are collectively referred to as the “neoliberal revolution” because the changes were seen to strengthen the market and placate the interests of increasingly footloose capital (Blyth 2002; Streeck 2011). From this perspective, neoliberalism explains the subsequent rise in inequality and why governments did not respond by raising redistribution—business interests ruled the day and politicians bought into the neoliberal paradigm (Piketty 2014). The narrative gains plausibility by the fact that the reforms started in two

countries, Britain and the US, where governments were controlled by right parties under the leadership of anti-union, free-market ideologues: Thatcher and Reagan.

Yet, the notion that business got what it wanted would have met with disbelief by major industrial firms at the time. Except for a small luxury car segment, the British car industry was virtually wiped out in the transition, and the American counterpart went from a leading sector to a struggling behemoth, desperate to downsize and to get relief from “unfair” competition from Japan and Germany. In fact, nearly all major industrial sectors at the time, from steel to automobiles to electronics to shipbuilding went into decline. This was patently evident from a rust and gloom that that could be witnessed by walking through any major city in Europe and North America at the time.

In fact, most industries and companies that were dominant at the time of the great reforms of the 1980s and 1990s either vanished or lost their position. In 1960 the five largest US companies by market capitalization (excluding oil companies) were AT&T, GM, DuPont, GE, and IBM. In 2018 the top-5 were Apple, Alphabet (Google’s parent company), Microsoft, Amazon, and Facebook (not counting Berkshire Hathaway, a holding company). Of the Fortune-500 companies in 1955, less than 11 percent remain on the list today. If reforms were driven by big business, big business was suicidal.

The decline of dominant firms was not an inevitable fate. If democratic governments had truly been “the executive committees of capital” (to paraphrase Marx) they would have provided protection against domestic and foreign competition, offered massive infusion of capital through a regulated banking system, cut spending on education, and committed themselves to macroeconomic expansion. They did the opposite: pushed for more competition and free trade, liberalized capital markets, increased spending on education, and prioritized price stability over full employment. Not surprisingly, and against the standard narrative, the reforms were for the most part opposed by business.
The Nation State is Strong

It is commonplace to argue that globalization has undermined the capacity of the state to regulate and redistribute. Even if business does not have direct control over politics, it may impose its will by simply making optimal business decisions in a global economy and flee countries that regulate and spend too much. Footloose capital has “structural power” in the terminology of Marxist analysis. Prominent political economists such as Wolfgang Streeck (2011), Thomas Piketty (2014), and Dani Rodrik (2018) have made arguments along these lines, and they imply that this explains the rise in inequality and welfare state retrenchment. Seen through this lens, democratic politics is increasingly reduced to symbolic politics: the real driver of economic outcomes is capitalism.

We argue that the opposite is true. Over time the advanced capitalist democratic state has paradoxically become strengthened through globalization. Drawing on a wide literature in economic geography, in innovation studies, and in management, we explain how knowledge-based advanced companies, often multinational enterprises (MNEs) or subsidiaries of MNEs, are increasingly immobile because they are tied to skill clusters in successful cities, with their value-added embedded in largely immobile, highly educated workforces. In our perspective, which reflects our research program of recent decades, knowledge is geographically embedded—in advanced nations, in regions, cities and towns—typically in clusters of skilled workers, engineers, professionals and researchers. Also geographically embedded are institutions, public and private. Assets are location co-specific.

As is increasingly understood in contemporary economic geography, the topographical distribution of knowledge competences is of hills and peaks rather than of a flat earth (as in Friedman’s famous but misleading metaphor). This reflects the combination of the importance of tacit knowledge (even if partly codifiable), and of the need for colocation in the generation of tacit knowledge. Educated workers collocate in skill-clustered networks (which for them is valuable social capital) and therefore cannot be transported abroad, and companies cannot typically find alternative specialized knowledge competences elsewhere; thus in business school jargon “capital chases skills.” In the modern literature on knowledge-based MNEs (e.g., Rugman 2012; Iammarino and McCann 2013), MNEs are seen as networks of increasingly autonomous companies, which get their value from the colocation with geographically differentiated skill clusters; and the payoff to the MNE derives from
the complementarities which may be generated across the network from access to these differentiated knowledge competences.

In turn, skilled employees benefit both from this increased demand from foreign direct investment from abroad and also as a result of the knowledge complementarities of domestic knowledge-based MNEs investing abroad. An even more profound benefit from globalization comes from specialization in advanced goods and services in the knowledge economy: the ICT revolution both decentralizes the level and multiplies up the number of groups capable of autonomous projects. This is the basis of specialization manifested in the great expansion of varieties traded across the advanced world.

The value-added of advanced companies is geographically embedded in their skilled workforces, via skill clusters, social networks, the need for colocation of workforces, and skills co-specific across workers and—given their limited codifiability—the implicit nature of a large proportion of skills. The nature and pattern of industrial organization has changed substantially through the century but the insight of economic geographers that competences are geographically embedded has not (Storper and Venables 2004). Thus, while advanced companies may be powerful in the marketplace, advanced capitalism is politically weak and the democratic state is strong.

**Democratic governments reinvent capitalism**

A distinctive feature of advanced capitalist democracies is that they rely heavily on skilled workers who generally prosper when the advanced sectors expands. Governments therefore seek to promote the advanced sectors and this has been enabled by the series of reforms listed above:

*Financialization* in order to facilitate a much more decentralized and globalized production structure where hedging against uncertainty is essential (as opposed to huge vertically integrated “Chandlerian” companies of the Fordist era where risks were largely internalized); this also permits educated workers easier access to credit as they pursue increasingly “nonlinear” careers with more frequent changes in jobs,

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2 The economic historian Alfred Chandler explained the emergence of these giant corporations in his classic 1977 book *The Visible Hand: The Managerial Revolution in American Business.*
time off for retraining and additional schooling, and moves back and forth between work and family (especially as child birth is delayed among high-educated women), as well as complex retirement and partial retirement choices.

Strong competition policies to promote innovation and efficient allocation of resources, especially in a context with strong network externalities. The proper balance between allowing network externalities to be fully realized and preventing market concentration is hotly debated, but the key for us is that governments are committed to maximize the incentives of firms to innovate. This commitment has also been linked to across-the-board trade liberalization, which makes it harder for companies to establish entrenched monopolistic or oligopolistic market positions.

Lifting or easing of capital controls and restrictions on foreign direct investment, which has facilitated radical geographical specialization of goods and services, thereby reinforcing and expanding local knowledge clusters. The organizational vehicle for this specialization has been multinational enterprises, contrary to the notion that multinationals represent footloose capital (although they may in developing countries).

Macroeconomic stability through central bank independence, inflation targeting (or membership of the Eurozone) and de facto delegation of budget-setting power to a finance ministry with veto power over individual spending ministries. This has again facilitated a more decentralized and globalized production structure in which centralized wage coordination is hard to achieve.

Massive investment in higher education. In 1960, universities were the domain of a very select elite; today a majority of young people go through a university education. The gains among women—who now graduate at higher rates than men—is indeed one of the most remarkable policy achievements of the past half-century; no one would have predicted it in 1960.

The symbiotic relationship

Very broadly, and over long periods of time, democracy and advanced capitalism have been in a symbiotic relationship across advanced nation states. Democracies positively reinforce advanced capitalism, and well-functioning advanced capitalism reinforces democratic support. In our framework, advanced capitalism is
driven by the democratic nation state through the institutional reforms discussed above: democracy continuously reinvents capitalism. And in this process the autonomy of the advanced nation state has increased even as globalization and mutual international dependence have risen.

One way to think of the relationship between government policies and middle-class voting is in the form of an implicit social contract: the government invests in education and in the broader institutional infrastructure of the advanced sectors while individuals delay consumption in order to acquire skills, and then work in relatively well-paid occupations. This is an inter-generational contract—in addition to an intra-generational contract—because many will vote for economically transformative policies if they believe that these will help their children gain a foothold in the new economy. Such “aspirational voters” support parties that implement tough reforms as long as they open up opportunities for their children. Mobility within and across generations is a hallmark of the implicit social contract, and indeed of all advanced capitalist democracies.

Again, a key characteristic of advanced capitalist democracies is that they are human-capital intensive and cultivate a majority electorate, which sees it in its interest to support policies that promote the advanced sectors, even when such policies may be disruptive and create considerable short-term uncertainty. Democratic parties and politicians that successfully promote the prosperity and welfare of a majority will be rewarded by winning elections, and by expanding the advanced sectors they ensure a future constituency for the continuation of policies that advance prosperity among the middle classes. Voters of course do not understand the intricacies of institutional reforms or economic policies, but they do not have to when democracy works. They only need to keep the government accountable for economic outcomes that are fairly easy to observe (what the electoral politics literature calls “economic voting”).

These are not only policies of economic expansion and educational opportunity—although these are important—but also policies of social protection and transfers. Transfers to the middle class have been remarkably stable over time, and in terms of net income the middle class has by and large retained its relative position in the economy, measured as a share of average income. This is true even in the period of the most rapid rise in inequality from the early 1980s to the 2010s. Furthermore,  

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3 For detailed evidence, see Elkjær, Mads and Torben Iversen, “The Political Representation of Economic Interests: Subversion of Democracy or Middle-Class Supremacy?”, *World Politics* 72 (2), 2020.
despite the emphasis on rising inequality and welfare state retrenchment in current literature (e.g., Huber and Stephens 2010; Hacker and Pierson 2010; advanced capitalist democracies remain far more redistributive and egalitarian than all other countries, whether they are less prosperous democracies or non-democracies.

**A new cleavage**

Yet, the transition to the knowledge economy has also produced many losers, and it is important to understand that democracy is not a guarantee of equality. Relative wages and job prospects for many of those who acquired their skills in the industrial economy have deteriorated. In the Fordist economy medium-skilled workers did quite well, in large part because the Fordist assembly-line logic made them strong complements in production to skilled workers. Such complementarities extended to peripheral areas, which often served as “feeder towns” for the urban industrial machine. While cities were the hubs for the industrial economy, smaller towns were the spokes. In the new knowledge economy these types of complementarities have collapsed, creating strong tendencies for dualization (see Emmenegger, Häusermann, Palier, and Seeleib-Kaiser 2012). Semi-skilled workers are now segregated into low-paid services with few linkages to skilled workers; and geographical agglomeration effects are increasingly confined to the urban centers.

In this transition, many industrial workers who lived in relatively inexpensive housing in the cities have been pushed into the exurbs or rural areas as rents and living costs in the cities soared. Those already residing in smaller towns have seen urban demand for consumer goods and intermediate manufacturing inputs decline. It is therefore in the small towns, exurbs and rural areas where we observe most directly the dark side of economic renewal. This is where we find a widespread sense of political betrayal, which has in turn fueled the fire of right populism.

On the other side of the new divide are workers with college degrees who live in the cities and are integrated into the knowledge clusters that underpin growth in the new economy. These workers are often members of professional associations, not traditional unions, and their welfare depends more on their ability to move around in local production networks than on collective bargaining or guaranteed jobs. Social networks complement these decentralized production networks by disseminating
information about opportunities in different parts of the network. Here we find the new middle classes.

The lifestyles of the urban middle class are largely disconnected from the periphery, economically and culturally. Much consumption is satisfied through imports, and basic services—from convenience stores to dry-cleaning to maid services—are provided on-location by mostly immigrants who are willing to work for low wages and endure long commutes (most live in segregated exurbs). High-end services—culture, entertainment, cuisine, and shopping—that meet the discriminating tastes of the highly-educated are themselves part of the knowledge economy, and for many rising housing prices have been a source of newfound wealth. Parks and treelined city squares complement an urban lifestyle that has very few connections to the dirty urban wastelands of yesteryear; and inner-city decay has been replaced by gentrification.

Modern successful cities are now the engines of prosperity and of cultural diversity and tolerance. Immigrants are welcomed for their labor, cuisine, and working-hour flexibility, and open-mindedness among the “creative classes” (Florida 2014) can be seen as a complement to the decentralized modern economy Cultural, sexual, and ethnic diversity is not “postmaterialist”; it is part and parcel of the new economy. Sexist, racist or homophobic attitudes that may once have been met by approval in straight, all-white male boardrooms and production halls now signal inability to work with, and learn from, others—undermining teamwork and commercial success. There are of course many exceptions, but open-mindedness is to the knowledge economy what conformity was to the Fordist economy.

But for people shut out of the new economy, and therefore usually also the cities, the negation of the old economy is felt as a rejection of their own skills, values, and life-styles—of their very identity. When Hillary Clinton used the term “deplorables” for Trump supporters it perfectly captured the arrogance that many perceived in the political elite. The sidelining of the old middle classes is indeed perceived as a broken social contract: they upheld their part of the bargain by acquiring the necessary skills, working hard, and being law-abiding citizens; the state broke its commitment by setting in motion the changes that left the old middle classes and their children behind.

This, then, is the new cultural-political divide that defines advanced capitalist democracies. It recalls divisions between workers and the bourgeoisie, and center and periphery, in 19th century Europe, which gave rise to the party systems of the 20th.
century as recounted by Stein Rokkan (see Lipset and Rokkan 1967). We therefore refer to it as a Rokkanian cleavage: it reflects a structural division; it shapes social identities; and it has led to the formation of new political parties.

**The Rise (and Demise?) of Rightwing Populism**

Unlike labor politics in the middle of the previous century, the left is no longer mainly representing the industrial working class. The left grew strong in the urban centers of the industrial revolution, but as workers fled of the cities, left parties adapted by becoming exponents of the new educated middle classes—committed to environmental improvement, cosmopolitan values, and a range of “upscale” public goods such as quality daycare, good schools, green spaces, and rapid public transit. The conventional right largely supported the shift to the new economy, while retaining a more critical view of taxation, also had little to offer the losers.

Right populist parties stepped into this vacuum with their anti-immigrant and often anti-gay and anti-feminist messages. Why did this opposition to the mainstream parties take the form of cultural backlash, especially against immigrants? After all, low-skill immigrants hardly pose much of a threat to the material welfare of the old middle classes: most settle on the outskirts of the cities and take up jobs that whites do not want. Women have of course entered the labor market in massive numbers, but they have moved into social and other services that men avoid, and they bring home much needed income. So why not focus on material interests instead of getting bogged down in “culture wars”?

The explanation is probably simple. To be effective, populist elites had to clearly distance themselves from mainstream parties, left and right, and to that end expressions of xenophobia, anti-cosmopolitanism, homophobia—anything in opposition to the values represented by the rising cities—sent clear and credible signals to those who felt left out. If there was a sense of a broken social contract among the old middle classes, new right parties said so loud and clear: these “other” people are cutting in line and the established parties do not care; we do!

It is however true that the emphasis on “symbolic politics” has left a gap between right populist economic policies and what might reasonably be taken as the economic interests of the old middle classes. Many populist right parties started out
opposing the welfare state, on which the conventional left and right had converged. But that is changing. Where right populist parties have been around for a long time, mainly in continental western Europe and parts of Scandinavia, they have increasingly adopted an old-fashioned “social democratic” economic policy platform of basic pensions, public healthcare, and education—while of course excluding non-citizens (“welfare chauvinism”). This shift is quite consistent with the economic concerns of their supporters. They have also increasingly sought to address economic grievances through the democratic parliamentary processes, supporting rather than opposing governments. They are, in short, becoming mainstreamed.

We see such mainstreaming as a healthy development because democracy is more likely to thrive when no large minority is excluded from the fruits of economic progress. Indeed, countries in which quality education is accessible to most, and mobility is correspondingly high, populist values are less widespread. There is a direct relationship between economic opportunity, the size of the aspirational voting bloc, and the prevalence of populist sentiments. Yet, the new middle classes are not always keen to use public funds for expanding opportunity and redistributing to the old middle classes, and nor are the old middle classes keen on redistributing to the poor, who were never seen as part of the social contract. The knowledge economy has created segmentation of income, risk, and opportunity, and it is difficult to get majority support for effective policy responses to left-behind communities. And when you reduce mobility and opportunity, the size of the class of aspirational voters shrinks.

These are reasons for concern, but we do not see the rise of a massive anti-systemic movement. There are of course illiberal elements on the new right, but populism is not a bridge to either communism or fascism—as it was in the 1930s—and nor are populist voters Luddites or anti-growth. Rather, they seek to restore their loss of economic and social status, and they believe (correctly) that the state has the capacity to address their grievances. The logic of their voting behavior is ultimately not too different from that of the new middle classes: they see when the economy is not working for them and vote against incumbents. This is a democratic reaction, even if we disapprove of the form it takes.
Are Advanced Capitalist Democracies Still Resilient?

We have argued that governments in the developed world pursue policies to expand the advanced capitalist sectors, including tough competition policies, which force capitalists to compete and take risks rather than guaranteeing them safe and high returns on their capital. The resulting national frameworks (in different forms) both supply the public goods required for innovation and impose the competitive incentives to generate innovation. The political basis for these policies is educated workers and aspirational constituencies who vote for parties with a reputation for expanding the advanced sectors while acquiring skills needed for these sectors to succeed. This generates what we have labelled a symbiosis between advanced democracy and advanced capitalism (which does not extend to many less developed states).

What makes advanced democratic capitalism so resilient to change also gives rise to notable institutional and policy variation across countries and over time. Precisely because advanced capital is tied down by its high-skill employees—which we have called location cospecific assets—governments have considerable freedom to redistribute and design institutions as they see fit in response to democratic demands.

The series of reforms in the 1980s and 1990s that gave rise to the knowledge economy also produced rising inequality and populism, but democracy has a built-in mechanism to limit anti-systemic sentiments. Parties need to build majority coalitions to govern, and they consequently need to extend opportunities to a majority through education and social policies. The fact that populist values are less pervasive in countries with more equal access to the educational system is a testament to this logic. The capacity of the state to address grievances through the welfare state has also not waned. But this does not imply that the bottom automatically benefits. Indeed, the rising educated middle classes may have little interest in redistribution to those below them because they are themselves relatively secure.

We thus insists on the primacy of politics. The huge transformation from a Fordist to the knowledge economy was induced by democratic governments responding to an electorate demanding more prosperity and better opportunities for their children. New ICT enabled the transition, but nothing about the technology itself ensured that it would succeed the way it did. It is easy to forget that the reforms led to an unprecedented expansion of higher education, empowerment of women, as well as greater prosperity for more people than ever before—all achievements that were
unimaginable in the 1960s and 1970s. Somehow this huge success story has been forgotten in the contemporary debate, which tends to cast global capital and “neo-liberal” reforms as villains in a gloomy story about decline.

Yet, it is important to underscore that we see the reinvention of capitalism as ongoing, dynamic process. It may well be that three decades after the initial reforms, a reassessment of them is starting to take place. There is little desire to turn back to the status quo ante, but there is concern with the extreme use of shareholder-value maximization; with the over-reliance on independent monetary policy to the exclusion of fiscal policy; with an overuse of markets at the expense of more direct state involvement (say, in R&D); with partially successful attempts by big business to circumvent competitive pressures through the courts and by buying up innovative startups. From the perspective of our argument it illustrates the way governments and political parties both shape and respond to democratic concerns for the economy to function effectively. It is an ongoing multi-faceted reassessment, in some cases a correction, but it is not a reversal.

References


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