The Role of Technology and Innovation in Shaping Democratic Capitalist Economies

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A Global Perspective on Technology’s Role: Introduction and Overview

Generally speaking, politics and governance are in a great state of disorganization and uncertainty. There have been significant changes shaping democratic capitalist economies as a result of the invention of personal computers and modern information and communication technologies. Additionally, the globalization of trade and offshoring of production has amplified the impact of the various technological advances on the workplace as well as on the overall structure of the labor market. These major changes have all shaped democratic capitalist economies.

There is no evidence to suggest that these economic transformations or political confusion will stop in the near future. If anything, it seems likely that the pace of technological and employment changes may accelerate in the next few decades. Consequently, this piece will examine how technological change shapes democratic capitalist economies and the necessary role of technology in economic growth.

Historical Perspective: Technological Advances in Early Capitalism and their Impacts on the Economic System

In understanding the historical context of innovation’s impact on democratic capitalism, reference will be made to the Industrial Revolution. The Industrial Revolution was a period of significant economic, technological, and social change that occurred in the late 18th and early 19th centuries. Through this revolution, there was a major transition from an agrarian and craft-based economy to a manufacturing and industrial based society.

The Industrial Revolution led to a higher rate of economic growth than had been enjoyed by the old agrarian societies it replaced.¹ This shift towards industrialization led to increased production and economic growth, and generated new wealth. Additionally, inequality grew as labor and owner’s industrial capital was locked in a prolonged economic and political conflict. This first industrial revolution was characterized by the mechanization of production processes, the use of steam engines, and the growth of factories.

In addition to industrialization and technological change, the Industrial Revolution was a time of social change. During the Industrial Revolution, inequality made elites fear the redistribution of wealth, income, and privilege that might follow should the poor gain the right to vote.² Major issues such as racial and ethnic disparities, reform movements, and universal suffrage, were large factors driving both social change and elites’ fears. These issues regarding the right to vote were a central aspect of the broader struggle for democratic reforms. Coupled with the extension of political rights to a larger portion of the population, the struggles for reform marked a period of significant change in the composition of voting populations and the principles of democratic representation. Accordingly, the

² In the late 1840s, less than 10% of adult men in the industrial west could vote except in countries like Switzerland, the United Kingdom and the United States (Boixpp. 44-45).
The twentieth century witnessed a triumph of democratic capitalism in the industrial west, with widespread support emerging for both free market economies and representative elections.

Similar social and political effects occurred in the early 1900s, as another technological and economic revolution emerged in Detroit. This era was characterized by the rise of companies like Ford, General Motors, and Chrysler, who used mass production techniques and assembly lines to produce affordable automobiles and transform American transportation and industry. During this phase, new technologies meant less demand for unskilled workers and more for the semi-skilled workers needed to create and maintain the machines. Widespread schooling and literacy, another shift of the era, prepared people to enter the increasingly skilled workforce. This era brought industrialization and economic growth, the rise of the middle class, social mobility, political movements, labor movements, social and political reforms, protection against policies and unfair practices, as well as innovation and technological advancements. Additionally, the growth of wealth and income brought economic opportunities and prosperity to a much broader range of people. Consequently, both democracy and capitalism had widespread support across all classes.

A third era of technological advance began in the mid-20th century and continues through the present day, as a result of the rapid innovation centered in Silicon Valley, California (the mid-20th century until present). The technological advances of this era have centered on the development of semiconductors, personal computers, and the internet. The economic growth and technological expansion has included automation beyond manufacturing plants as well as the emergence of information and communication technologies that have replaced a number of traditional white-collar jobs.3

Furthermore, technological innovation has also encouraged an increasing number of companies to unbundle their production operations across the world, thereby moving low wage jobs to developing countries. These political and economic transformations started as a form of political realignment called globalization. Though the government enacted some labor laws and regulations in response to pressure from the labor movement and public opinion, workers continued to struggle with poor working conditions, long hours, and low wages. Their dissatisfaction sparked more labor movements and strikes. Thus, in the early 2000s, a new brand of political enterprise gained traction, promising to undo the globalization of trade, reduce immigration, and challenge the political consensus that had prevailed around the principles of democratic capitalism.4 As in the 1980s, political satisfaction and trust in government are falling as the economy fails to deliver on the public’s expectations. Growing inequality, dissatisfaction with major democratic institutions, and the rise of populism are undercutting support for capitalism.

The Silicon Valley technological revolution evolved from the impact of remarkable innovations in computation power. This computation power had a dramatic impact on employment, as automation replaced many jobs from the assembly line to bookkeeping on a global scale. The automation coming out of Silicon Valley's technological innovations was accompanied by globalization, both of which greatly affected the international division of labor. A declining production sector led to a shrinking working class, causing center left parties to embrace the middle-class and the service sector, and bolstering support for globalization.5 Another major factor that influenced the Silicon Valley era is the reemergence of tension between democracy and capitalism, as inequality put intense pressure on democratic institutions to cope with the profound economic shift.

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4 Boix, p. 5.
Technology’s Role in Democratic Capitalism

Technology has always been a driver for economic growth, and in the realm of democratic capitalism, economic growth has always been a linchpin which helps sustain prosperity, fuel innovation and improve the living standards of citizens. There have been a series of extraordinary technological developments over the past decades, which have significantly expanded the human capacity to store, exchange, and process information. Digital networks have been celebrated for empowering and sharing new forms of creative production.​6

Despite the numerous advantages that come with technology, evidence has shown that innovation can create new risks. For example, click driven social media may have polarizing effects on politics, employers can use digital technologies to surveil and manipulate workers, algorithms can perpetuate biases leading to discriminatory hiring or lending practices, and some technologies have negative environmental consequences through issues like energy consumption and e-waste. In addition to these risks, others are concerned about how technologies are influencing social interactions. People are spending more time online and less time engaging face-to-face leading to growing social isolation. This is worrisome as these new capabilities are changing who we are, our relationships, ability to rest and concentrate; even our conception of what it means to be human is being influenced by our compulsive relationship to computer applications and social media platforms.​7

Moreover, one can question how companies like Uber and Airbnb, which are considered “asset-less” wonders, are able to generate profits. Uber is a ride-sharing service that connects people who need rides with drivers who use their own cars to provide those rides, while Airbnb is a platform that allows people to rent out their homes or apartments to travelers. These companies rely on laws that have been transformed to enable the creation and accumulation of trivial capital. However, both companies have faced regulatory challenges and legal battles in various cities and countries. Uber has been criticized for classifying its drivers as independent contractors rather than employees, as well as for raising data privacy concerns through the handling and sharing of customer information. This process has led to changes across a wide range of fields, such as trade secrets, contracts, and privacy. Historians of capitalism and neoliberalism have emphasized that both systems have enacted laws that not only enable markets but also protect them from democratic majorities that might seek to change them.

There is also the issue of internet governance in which principles such as decentralization, user empowerment, and interoperability have made the internet an unrivaled medium for modern innovation. It is essential to note that internet governance is an effective tool for ensuring an open, accessible, and secure space that supports the principles of democratic capitalism, enables global markets, and fosters innovation thereby protecting the rights and interests of businesses and consumers in the digital age. This remarkable growth has forced policymakers and legal scholars generally to put these principles above all others in their approach to internet governance. Other legal scholars have also further identified these engineering principles of decentralization, user empowerment, and interoperability to be the major economic approaches to broadband policymaking.​8

In her recent book, author Zuboff Shoshana cautions that we have now entered an era of surveillance capitalism. Shoshana contends that surveillance capitalism operates by "unilaterally claiming human experience as free raw material for translation into behavioral data," and processing that data to

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8 Sylvain, O. Internet Governance and Democratic Legitimacy. 62 FED. COMM. L.J.205 (2010).
"anticipate what you will do now, soon, and later." However, according to Amy Kapczynski, Shoshana has little to say about the monopoly power of new platforms or about their role in reshaping the labor markets and intensifying the various forms of inequality. This further emphasizes the role technology has and is still playing in shaping and enhancing the democratic capitalist space, enhancing the quality of market competition through economic growth, job creation, political engagements and more.

**Technological Transformation and Shaping Democratic Capitalism in the Digital Age**

Technology plays a significant role in shaping and enhancing democratic capitalism, a system that combines free-market principles with democratic governance. With the natural consequences of the capitalism of the late twentieth and early twenty-first centuries, the information revolution of the last decades has again transformed the structure of production processes, the economy in general, and the demand for skilled and managerial jobs. This synergy has been observed in various aspects:

1. **Economic Efficiency and Innovation:**

   Efficiency and innovation have been achieved through devices such as the automation and productivity technology, particularly in the form of automation and artificial intelligence (AI), which have assisted in improving productivity in industries thereby reducing costs and enabling economic growth. For example, the use of robotics in manufacturing has streamlined production processes, benefiting companies like Tesla, Microsoft and Facebook, amongst others.

   Furthermore, companies like Amazon, Ebay, Temu, etc. have leveraged technology to create efficient online marketplaces through e-commerce, providing consumers with more choices and driving competition, which is a hallmark of democratic capitalism. In addition, the rise of automation and AI technologies are reshaping the job market and the nature of the work. Controversies center around job displacement, the need for workforce reskilling, and ethical concerns related to AI decision-making.

2. **Access to Information and Transparency:**

   Through digital media and various social media platforms, the internet has democratized access to information and facilitated political engagement. Platforms like Twitter and Facebook have played pivotal roles in political movements and campaigns, fostering transparency and citizen participation. Political campaigns and businesses use data analytics to target audiences more effectively, making their operations more efficient and competitive.

3. **Financial Markets:**

   Technology has transformed the financial sector with the rise of fintech companies such as PayPal, Venmo, Cash-app, Square, etc. These companies have made financial services more accessible to a broader population. Additionally, financial services companies have integrated the use of technology into their offerings to improve service delivery to consumers and their product’s user experience.

4. **Democratic Governance:**

   Through the use of e-government applications, technology has enabled more transparent and efficient governance through initiatives such as online voting systems and open data platforms. For example,

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USdata.gov, a U.S government initiative that provides access to a vast amount of government data, promotes transparency and enables citizens to analyze government information.

5. **Education and Workforce Development:**

Through online education, technology has expanded access to education, with platforms like Courser, Udemy, Futurelearn, and EdX offering courses to a global audience. A well-educated workforce is vital for a thriving democratic capitalist system.

6. **Globalization**

Technological advances in transportation and communication facilitated globalization. While globalization expanded markets and economic opportunities, it also raised concerns about the outsourcing of jobs, the impact on local industries, and income inequality at the global scale.

**Conclusion and Recommendations**

Overall, these technological changes and controversies in democratic capitalism continue to shape the landscape of democratic capitalism by influencing political debates, economic policies, and societal reforms. They also raise challenges such as income inequality, privacy concerns, and the potential for monopolistic behavior by tech giants. Striking a balance between technological progress and safeguarding democratic and capitalist principles remains an ongoing challenge for society. We therefore are required to ask ourselves the necessary questions that will put us in a better position to address issues regarding the impact of economic inequalities on democratic institutions and the consequent ability of democratic institutions to respond to these inequalities.

In providing solutions to these problems, countries should bolster electoral participation and reform campaign finance policies to encourage responsive institutions. Responsive and representative democratic institutions are especially important as the ultimate impact of Silicon Valley capitalism will depend on policy responses to automation, which necessarily will be piecemeal and reactive. There is also the problem of social media disinformation in which the proliferation of the social media platforms has transformed the way people consume information and interact with one another. These challenges require countries to consider policies to address the spread of false information.

Furthermore, we should also consider the political consequences of the computing revolution, as contrary to some claims, there is very little support of the idea that it will jeopardize democracy automatically. Nevertheless, it is important for us to identify a potential decline in the level of electoral accountability and suggest a set of institutional interventions to prevent it. Investment in human capital through education is a good way to allow a greater percentage of people to benefit from the new economy; it is also necessary, but not likely to be sufficient, particularly if automation not only continues to eliminate jobs in the developed world but also significantly cuts labor participation in the developing countries. Accordingly, the key to navigating the course ahead depends on effective democratic decision-making.

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10 Boix, p. 204.
12 Id.