Creative Destruction

By John T. Dalton and Andrew J. Logan

Creative destruction is a theory about what drives economic innovation and the business cycle in a capitalist economy. The word "creative" refers to the new innovations brought to market and "destruction" to the fate of those antiquated products and processes that are replaced by the new innovation. While the term is first credited to the German economist and sociologist Werner Sombart, it is more readily identified with the Austrian economist Joseph Schumpeter, who brought it to prominence in 1942 in the book that became his magnum opus, *Capitalism, Socialism and Democracy*. Schumpeter describes creative destruction as a process "… of industrial mutation … that incessantly revolutionizes the economic structure *from within*, incessantly destroying the old one, incessantly creating a new one. This process of Creative Destruction is the essential fact about capitalism." (Schumpeter 1950, pg. 83). Although it is most commonly associated with its economic effects, creative destruction also has profound social and political consequences.

Creative destruction is important primarily because the innovation and technological change it describes is a key driver of economic growth and at the heart of the capitalist process. The Darwinian struggle for survival between firms racing to overtake their rivals through new innovations has improved the quality of products, lowered the costs of inputs and production, and boosted efficiency through the reorganization of industries. Society at large has benefitted immensely, as attested to by the magnitude in the change of real GDP per capita in capitalist economies. The so-called "hockey stick" of world real GDP per capita helps us visualize the change. Before roughly 1800, world real GDP per capita remains flat, stretching unchanged into

the distant past, forming the long shaft of the hockey stick. With the beginning of the Industrial Revolution, world real GDP per capita shoots upward, extending out like the blade. The economist Deirdre McCloskey calls this fact "The Great Enrichment," a term that not only brings to mind riches but also all that makes life beautiful. Indeed, there is a strong moral case for welcoming more creative destruction and economic growth given that these forces enable people to live longer, healthier, and more fulfilling lives.

Yet creative destruction is notable as an economic concept for also emphasizing the fate of what is made obsolete by innovation. Capitalism's dilemma is that in order to reap the benefits of new creation, it is necessary that old products, processes, firms, and even entire industries must be destroyed, with profound ancillary social and political consequences.

Schumpeter argues that understanding how central the creative destruction process is to capitalism has important implications for how we judge capitalism's performance. Firstly, creative destruction takes time to unfold; likewise, judgement of capitalism's effects should be delayed accordingly. Rather than evaluate the effectiveness of capitalism by where the business cycle stands at any particular point in time, we should look towards capitalism's long-run outcomes, determining effectiveness with respect to economic growth and improved standards of living. This is because the volatility of the capitalist business cycle is both a symptom of and a mechanism by which the creative destruction process works. Economic downturns—for which capitalism is often judged harshly—are, in the long term, valuable, for they are the means by which factors of production, like capital and labor, are reallocated towards more productive purposes thus enabling greater growth in the future. This reallocation mechanism and its benefits are as well understood by economists as they are ignored by those in charge of setting policy. As a result, the argument against government economic intervention in the business

cycle so as to reap the benefits of reallocation often goes unheard. Indeed, adherents to this belief are often derogatorily labeled as "liquidationists."

Secondly, any analysis of capitalism should focus not only on how it administers existing structures but also on how it creates and destroys them. The public debate around the income distribution is a prime example of this. While most policy analysis focuses on redistribution schemes across the existing income distribution, e.g. taking money from Amazon CEO Jeff Bezos and giving it to a poorer McDonald's worker, Schumpeter's point about the centrality of creative destruction suggests that our focus should instead be on whether the income distribution itself changes, whether a new distribution can be created, an old one destroyed. Can a poorer McDonald's worker rise to become the CEO of Amazon, as was the real life experience of Jeff Bezos? Shifting the focus away from whether and to what extent the existing income distribution is unequal towards whether and how much people are able to move up and down the distribution over time is a more appropriate way of determining whether capitalism is "succeeding" once we recognize how central the creative destruction process is to capitalism.

Finally, it is competition from innovation that matters, not just the price competition favored by instructors in introductory and intermediate Economics classes. The greatest threat many firms face is not from established competitors within their own space but rather that from smaller, nimbler upstarts possessing disruptive technology that threatens to unseat their market dominance or even drive them from the market entirely. There are many examples of how existing firms and/or technologies face existential threats from the perennial gale of creative destruction, including railroads versus the stagecoach, refrigeration versus ice harvesters, Amazon versus Walmart, Netflix versus Blockbuster, and Uber versus taxicabs.

Creative destruction flows from two primary sources: innovation and international trade. For Schumpeter, there are broadly five types of innovations which can begin the creative destruction process: the introduction of a new good or quality of good, the introduction of a new method of production, the opening of a new market, the discovery of a new source of supply, and the reorganization of an industry, such as a merger. Such innovations disrupt the existing economy, and it is the clashing of these innovations with status quo technologies and products which initiates the creative destruction process.

The other primary source of creative destruction comes from international trade. Notice that Schumpeter's five sources of innovation do not preclude international trade. The introduction of a foreign product, technology, method of industrial organization, or otherwise into the domestic market creates a similar effect to that of a domestic innovation, with the only difference being that the source of competition is now from abroad.

Capitalism is defined by change, and innovation drives change through creative destruction. Accordingly, innovation plays an outsize role in economic growth. Innovation comes from one of two sources: emerging players and existing players. Emerging players are primarily entrepreneurs—think an upstart technology firm headquartered in a garage. Existing players are primarily established firms, perhaps with large, well-endowed R&D labs to engage in capital-intensive research. Given the resource disparities of the two, how is the creative destruction initiated by emerging players able to break out at all? One answer is sociological: established firms become complacent, wedded to past processes, and are too afraid to fail to take major risks. Contrast that with smaller, nimbler entrepreneurs willing and able to challenge the status quo, whose innovations dance around cumbersome existing firms until the tottering dinosaurs collapse under their own weight.

Credit markets also play an important role. Access to credit narrows the gap in resource disparities between existing and emerging players and allows emerging players to bring their innovations to market. Further still, there is an epistemological answer: existing firms cannot know all there is to know about which innovations to pursue. Entrants into the market extend the range of knowledge available for productive use in the economy and, if they successfully innovate, can unleash new, unforeseen waves of creative destruction. Given the important role played by both new entrepreneurs and existing firms in generating innovation, policymakers have attempted to support innovation through government partnerships, subsidies, or other programs designed to help entrepreneurs and R&D labs at existing firms. These efforts have given rise to the myth of the entrepreneurial state, the idea that government aid is the primary source of innovation.

The casualty of creative destruction is the status quo, affecting its jobs, businesses, and the traditional way of life. Creative destruction is thus opposed by those who stand to lose from innovation in the short run and lobby for protections from it. While this constituency is ever-present in society, the classic example is the Luddites, a group of 19th century English textile workers who smashed textile machinery to protest the mechanization process that threatened their jobs. The Luddites' position, which has frequently been invoked by technophobes throughout history, including most recently by those who fear automation, is an example of what economists call the "lump of labor fallacy." This fallacy contends there is a fixed number of jobs in the economy, which means that every job taken by a machine is a net job loss for humans. Capitalism, however, is dynamic: there is no finite quantity of jobs that innovation draws upon; instead, creative destruction ensures that new jobs are created around innovations even as old

jobs are destroyed. In this way, society as a whole is able to reap the benefits of innovation via accompanying increases in per-capita income and standards of living.

Creative destruction is not only economic but also social and cultural. These changes occur via two mechanisms. First are the sociopolitical effects of economic changes, particularly job loss. A stark and common example is what happens when a small town loses its main employer due to creative destruction, whether through international trade or the changing product space due to innovation. Creative destruction leads to job loss, which leads to despair. Despair frays the bonds of community, as the old remain behind while the young look for better prospects elsewhere, hollowing out the town. In their newly adopted cities, these urban migrants seek employment, often for low wages. The city's natives bemoan the labor competition. Local politics take an ugly turn.

Second are the direct cultural effects of the innovations themselves, changes which are not relegated to the realm of economics. Perhaps the best example is Johannes Gutenberg's introduction of the printing press in Europe. Not only did the printing press create a new occupational class of printmakers—a direct economic effect—but it also facilitated the Protestant Reformation by allowing the cheap printing of Martin Luther's *Ninety-five Theses*, books, pamphlets, and other Protestant broadsides against the Catholic Church. The example of the printing press is reminiscent of social media today. As we are sorted into informational silos, each of us within our own personalized flows of information, the public square fractures, with the ultimate social and political consequences yet to be fully determined.

Thus, while creative destruction unleashes overwhelmingly positive results in the long run through economic growth, it is not a pleasant ride in the short run for all involved. Policymakers have grappled, to mixed effect, with how to harness the creative destruction

process in a manner that maximizes its benefits while minimizing its consequences for those displaced by innovation. Some have advocated for broad-based status-quo protections, such as banning Uber from the City of London to protect taxicab drivers. While such a response certainly protects those invested in the status quo, it also kills the goose that lays the golden eggs. In order for the benefits of creation to be realized, some destruction of the old must occur; otherwise, there is no space for the innovation which drives the fruits of capitalism.

The opposite response is to support unfettered markets, with no barriers to entry for new innovators. This solution seems like a good response to maximize long-run growth and human welfare and is often the libertarian solution. However, since the Great Depression, and more recently the Great Recession, completely unfettered markets have become unacceptable to large swathes of society because much of the public perceives the state as a guardian against the excesses of the free market. Even if the libertarian critique of these crises is correct—i.e. the government's decisive role in the contraction of the money supply during the Great Depression and its support of the subprime mortgage market in the form of Fannie Mae and Freddie Mac during the Great Recession—the general public still tends to favor such heavy-handed government interventions in the market.

As a result, we have settled into an unhappy equilibrium, an endless game of Whac-A-Mole between markets and regulators as each new innovation popping up in the market is eventually bludgeoned by the state, limiting the total dynamism of the economy. And since policymakers are often slow to respond to emerging fields, newer industries like digital technologies are often less regulated than older, well-established markets. The result is an undesirable race between innovation and regulation. As regulation creeps forward, markets

become increasingly calcified, slowing the creative destruction process and protecting existing markets from disruption.

What can policymakers do to both promote policies that enable creative destruction while mitigating the social and political backlash? It is possible that economist Milton Friedman's proposal for a Negative Income Tax or a Universal Basic Income could be a viable option. Such schemes provide a baseline of economic security that could both promote entrepreneurship by reducing the downside risks to business failure and offer provision for those who have lost their jobs due to the gale winds of creative destruction and technological change. This might increase the social palatability of the creative destruction process, enabling the golden goose to lay the eggs of progress unhindered by Luddite reaction.

Further Reading

McCraw, T. K. (2007): *Prophet of Innovation: Joseph Schumpeter and Creative Destruction.* Cambridge, MA: The Belknap Press of Harvard University Press.

Schumpeter, J. A. (1934): *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle.* Cambridge, MA: Harvard University Press

Schumpeter, J. A. (1950): *Capitalism, Socialism and Democracy.* New York, NY: Harper & Row.

Bios

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