# The rise of Trump and an agenda for regulatory reform[☆]

## Kaushik Basu

*Department of Economics, Cornell University, Ithaca, NY 14853, USA*

## Abstract

The arrival of Trump in the White House does not augur well for the long-run prospects of the US economy. The protectionism that is gathering steam under his presidency may yield some short-term gains, but at the detriment of the long-run. Examining the discontent among ordinary voters that brought Trump to power, this paper argues that this should be treated as an opportunity for a major regulatory reform. With the advance of digital technology, we have increasing returns to scale, and that, in turn, is making our antitrust laws backfire and hurt the well-being of ordinary people, thereby sowing discontent. The paper builds a simple model to illustrate this and makes the case for revoking the older antitrust laws and replacing them with some simple profit-sharing rules at the level of the firm, and the economy.
© 2018 The Society for Policy Modeling. Published by Elsevier Inc. All rights reserved.

*Keywords:* Protectionism; Antitrust law; Increasing returns; Price discrimination; Profit sharing

## 1. Introduction

Trump's economics is that rare subject about which we know it is extremely important for the world and have little idea what it means. Trump came into office on an economic agenda which is

---

difficult to interpret because of its inconsistencies. But we do know that his attacks on globalization have had many economists who were traditionally skeptical about the benefits of globalization running for cover and clarifying that their skepticism is different from that of President Trump. When it comes to markets and regulation he has taken a neo-conservative line, trying to banish regulation, from environmental ones to those pertaining to financial markets and products; when it comes to social welfare, he has been paternalistic, proposing that, instead of giving the poor food stamps, they be given boxes with pre-selected food. He has combined these views with, on the international front, a kind of protectionism, which I shall refer to as 'xeno-protectionism' because it is rooted in little other than xenophobia.[1]

Convoluted and conflicted though many of these prescriptions are, what is undeniable is that the rise of Donald Trump in the United States is a challenge not just for the United States but, given the size and importance of United States' economy, for the world. It is arguable that the rise of Trump symbolizes the frustration of a large segment of American population that has found their jobs dwindling and incomes stalling even while the top 1% continues to see their wealth and incomes climb. The frustration took the form of not some proper strategic action but the aimless flailing of arms that brought to power someone who will, in all likelihood, do more harm than good to the very people who voted him in. Our hope must lie in the fact that the rise of Trump creates an opportunity for radical reform that otherwise may not have been possible. Trump will pass and if in the meantime we can get some of these important reforms through, then the current political and economic chaos could, in retrospect, turn out to be a blessing in disguise.

In this paper, I briefly analyze (1) Trump's economics, that is, some of the ideas of President Trump pertaining to the economy, (2) the economic and social conditions that brought Trump to power, and then (3) sketch a radical reform agenda that can turn around some of the more pernicious forces in the economy. The reform pertains to antitrust and monopoly law and laws pertaining to profit sharing. I argue that it is time to call it a day for the antitrust regime as we have known it over the last hundred years or so, from the time of the Sherman Antitrust Act 1890 to recent times, and to bring in new laws to ensure a more equitable income distribution in society. To make this argument entails the construction of a simple industrial organization model to explain why income distribution is deteriorating and how antitrust laws are making matters worse. This is done in Section 4. But before that, the next section briefly discusses the economic implications of Trump's presidency. Section 3 argues that Trump's stoking xenophobia and chaos can be converted to an opportunity. Then, following the presentation of the model, Section 5 discusses the nature of legislative overhaul that the US needs. The paper ends with a word of caution in Section 6.

## 2. Neo-protectionism

The rapid-fire executive orders of the first weeks of Trump's presidency and later initiatives, over the last twelve months, such as the cuts in corporate tax rates, and the imposition of special taxes on imports reveal a certain moral depravity and have rightly caused indignation across America and the world. However, while the politics of Trump has attracted a lot of scrutiny, there has been less attention paid to the economic policies and plans that have been announced or proposed. Most of these have to do with erecting walls, either of taxes and tariffs or of mortar and concrete, policies that are best described as 'xeno-protectionism'.[2]

---

[1] See Stiglitz (2017b, 2017a) for a discussion of protectionism *a la* Trump.
[2] To use Rodrik's (2017) expression, what we are witnessing in the US today is "Trump's anti-trade nativism".

In criticizing xeno-protectionism one does not have to go over to the other extreme school, which advocates that, to quote Stiglitz (2017a, p. xvi), "the freer the market the better." And as for those who say they are not better off even with freer markets, Stiglitz goes on to note that, according to conservative ideologues, they "*are* better off, they just don't know it. Their discontent is a matter of psychiatrists, not economists." Taking a line similar to the one taken by Stiglitz in his book, I would argue that globalization, while it does have negative spillovers for some groups, has conferred huge benefits overall on society. The kind of protectionism being advocated by Trump will not be good for most of the trading partners of United States and certainly not for the majority of the population of United States.

Where do these ideas of xeno-protectionism come from? I believe they originate in a narrow sectarian mind-set that is innate to Trump, plus a complete misunderstanding of basic economic concepts and reasoning, which is also innate to Trump. Thus we keep hearing President Trump equate the trade deficits that the US has with Mexico and China as profits made by these nations at the expense of the United States. A deficit is virtually equated with a loot and this has led to the proposal that Mexicans ought to pay for the wall that Trump plans to build.

To see the fallacy, consider the street corner shop next to your home, from where you, every now and then, buy various goods. Clearly you run a deficit with that store (I am assuming you do not work at the store). If you buy X dollars of goods from that store, given that you do not earn any money from it, you run a trade deficit of X dollars vis-à-vis that store. By Trump's logic this money is unfairly taken away from you by the store. In fact, in case you want to give a facelift to your home, you can, by the same logic, argue that the store has to pay for the facelift since it has looted so much from you. If Trump's advice is strictly followed, we have to return to the barter system, which would, of course, bring any modern economy to a halt.

Since surpluses and deficits are an essential part of trade, Trump's aim of avoiding all deficits is basically an argument for protectionism. Trump's protectionism also comes from his narrow sectarian identity. What would be the consequence of Trump's xeno-protectionism, if he manages to get it through? There is enough historical record now to be able to make broad predictions. If the US persists with this xeno-protectionist agenda, a host of nations, rich and poor, will be negatively impacted. Mexico's trade will get bruised; Latin America will see a growth slowdown; India and the Philippines will feel the impact in their enormous back-office sector; sub-Saharan Africa that seems to be picking up on growth will see its fledging hopes dashed. But the economy that will be damaged the most (and it will not be just a short-term effect) is the United States.

Here are two historical episodes of relevance. 1987 was a remarkable year for Japan. After a period of steady, rapid growth, Japan's per capita GDP touched the US level. There was widespread expectation that the Japanese economy would outgrow the US. And it did for some years. Then it began to stall and soon there was talk of Japan's "lost decade," though the Japanese, with their greater fastidiousness, referred to this as *"ushinawareta nijunen,"* which means *two* lost decades, 1990–2010, when Japan was outstripped by the US.

There were two driving factors. There was over-lending by banks, egged on by the Bank of Japan. But, more importantly, this was a period when US productivity rose as it rejected protectionism, allowing a shift from traditional manufacturing, like textiles, to information technology. Further, this was powered by immigration, in particular, professionals trained in the US and also ones brought in from other nations under the H1B professional visa system. There was also increased efficiency achieved by outsourcing, and a steady infusion of immigrants.

The other striking example is Argentina. On the eve of World War I, Argentina was among the 10 richest countries in the world, just behind USA and UK, and ahead of France and Germany. Thereafter, it was a steady downhill journey. There were several causes for this but two of

Argentina's policies stand out —— the lack of adequate investment in education, and a heightened and poorly-designed protectionism.

There are studies documenting that while, in terms of income, USA and Argentina were very close, United States was investing far more in human capital and education than Argentina. The blunder came after 1930. There was a heightened nationalism. Tariff rates were raised sharply in several sectors. The average import tariff rose from 16.7% in 1930 to nearly 30% in 1933. Jobs in traditional sectors were saved but productivity declined and now Argentina sits squarely among emerging and developing economies, nowhere in the top 50 countries.[3]

Not just the history but the logic is clear. As we have the gift of new technology and workers from around the world are linked up, if the US goes protectionist, it will no doubt initially have more jobs in the traditional sectors. But other nations–Germany, Korea, even China–that use these resources, including labor from around the world, will become more productive and efficient and begin to out-compete the US, like the US once outcompeted Japan and, earlier, Argentina.[4] The sun would set over America and this presidency would have presided over that.

Trump has occasionally talked in terms of more specific policies to stall international competition, instead of an over-arching xeno-protectionism. One such idea is that of having a border adjustment tax. Such a tax basically treats a domestically produced good differently from an imported good on which taxes are imposed to discourage their purchase. This policy is likely to backfire in the United States. A border-adjustment tax can play a significant role in a nation with fixed exchange rate. But in a flexible exchange rate regime like in the United States, all that a border adjustment tax will do is to cause the US dollar to appreciate and thereby make it harder for the US to export (see Farhi, Gopinath, & Itskhoki, 2017).

Another specific action was the withdrawal from the Trans-Pacific (TPP) Partnership, the mega-regional trade deal involving 12 countries in the Asia-Pacific region, but not China. The TPP certainly had its flaws – not least that it would have conferred disproportionate and unfair benefits on large corporations. But it had plenty of redeeming qualities and was being celebrated in countries like Malaysia and Vietnam for the access it would give to the US market. Now that the rug beneath these countries' feet has been pulled out, China can lend a helping hand. Already, China has boosted its regional investments considerably, including through its "one belt, one road" initiative. Without the TPP facilitating capital flows among its member countries, China is likely to overtake the US as the largest source of foreign direct investment for the ASEAN countries. China is also seeking to firm up its economic ties with TPP signatories Australia and New Zealand.

Where Trump has tried to give a boost to business is with his tax plan, when last December he cut the corporate tax rate from 35% to 21%. There is no doubt that this can give a short run boost to business in the US but in the long run, it is likely to cause fiscal strain and also to increase economic inequality by boosting the incomes of the very rich. And when that happens, it will come to hurt the very segments of the voting population that supported Trump and brought him into power.

---

[3] These numbers are taken from the **Economist** magazine: https://www.economist.com/news/briefing/21596582-one-hundred-years-ago-argentina-was-future-what-went-wrong-century-decline.

[4] An interesting contrarian argument is put forward in a recent essay by Cohen (2017), who argues that Trump's executive order on border security could backfire and increase the number of undocumented immigrants coming into USA. However, as Cohen points out, since this will happen through distortionary channels, it will likely continue to handicap United States in global trade.

The rise in inequality in the US is quite alarming. It is caused by changing technology and an inadequate policy response to the change. Advances in two kinds of technology — those that save labor and those that use digital methods to link up labor in faraway places thereby allowing them to stay at home and work for corporations and customers in distant continents — are causing the share of labor income to decline in virtually all high and upper-middle income nations (see Rodriguez and Jayadev, 2012; Karabarbounis and Neiman, 2014; Basu, 2016a).[5] Thus, the share of the aggregate wage bill in the total GDP has, between 1975 and 2014, declined from 77.3% to 59.6% in the case of Japan, and from 61.4% to 57.0% for United States (see Basu, 2016a). These trends cannot continue for long without causing political strain and the rise of Trump is, in all likelihood, an outcome of this trend.[6] There is no reason to believe Trump will do anything much about this. But this churn in politics is an opportunity for radical reform and we must seize the opportunity.

I never thought I would add to the profusion of new words which are blends of 'Trump', because that gives too much salience to Trump's convoluted ideas. However, in venturing to the next section and recognizing all the opportunities for reform that are arising because of the churn caused by the rise of Trump, I have reconciled that there is no better way to describe this than

## 3. Trumportunity

The rise in within-country inequality across the world, triggered by recent digital and other technological advances, is a matter of concern.[7] It is, however, heartening to see a small section of America's super rich attacking Donald Trump's proposed tax cuts for the rich. As Jack Bogle, founder of Vanguard Group, who clearly benefits from the tax cut and is no radical, described it: the corporate tax cuts are a "moral abomination."

Given the rise in inequality some of which may get exacerbated by Trump's policies, what should we do about this? Trump's response, to build high barriers against the movement of goods and people is no solution. Before I attempt to answer the above question, I should point out there are historical episodes where new technology gave rise to similar problems and where we rose to the occasion.

The best example of positive response was to the Industrial Revolution. With the rise of labor-saving technology, the Industrial Revolution in Europe from the late 18th century threatened to change the landscape of manufacturing, with huge adverse impacts on income distribution. Those who point to the Industrial Revolution as an example of how such advances always help forget that we were helped by the Industrial Revolution only because we rose to the occasion by changing the laws pertaining to the workplace which now look routine but were quite radical at that time. The various factories act, starting with Robert Peel's Health and Morals of Apprentices Act 1802, and going all the way to the Ten Hour Act 1847, played an important role in restricting work hours for adults and children, which could till then often run to 14 h a day, and were treated by

---

[5] These changes were anticipated for quite some time, with the rise of the computer, and the shifts in demand that this was causing within the labor market, with an increased need for skill upgrading (Autor, Katz, & Krueger, 1998).

[6] An engaging analysis of the distant roots of our current predicament, in particular in economic globalization over a long period, occurs in Rodrik (2017). He argues that the backlash was predictable but its specific character was not.

[7] There is now a substantial literature which documents the rise in inequality in the context of globalization, warning us about its fall-out: see Stiglitz (2012), Piketty (2014), Atkinson (2015), Milanovic (2016), Basu (2016b) and Bourguignon (2017).

the wealthy as essential for building the character of children (other people's, needless to add), and eventually putting an end to child labor (Basu and Van, 1998; Basu, 1999).

But there are other more recent examples of the law responding to social and political challenges, similar to the Trump-era ones. A good example is the Webb-Pomerene Act 1918. The years prior to and during World War I were a time of soul-searching and questioning globalization, akin to what is happening now, and one can find statements by politicians akin to what Trump has been making about the global economy and its impact on America.

It may be recalled that the United States was a pioneer in antitrust legislation, which began with the Sherman Act 1890 and followed by the Clayton Act 1914. There were, however, dissenting voices during World War I expressing concern that the United States was unable to make enough profit out of foreign consumers, thanks to the restraining effect of these anti-monopoly laws. These were times of xenophobia and some of the concerns aired stemmed from this.

The Federal Trade Commission which took office in 1915 was entrusted with surveying the situation and coming up with policy recommendations. The outcome was the Webb-Pomerene Act 1918 (also known as the Export Trade Act). In essence, this was a law that allowed firms and corporations to collude and hike prices as long as they could show that they were doing this for foreign consumers and not the domestic ones (Diamond, 1944).

This gives rise to a natural question. Is it possible to channelize the current disenchantment with the economy and global competition to some constructive legislative and regulatory reform, instead of an inchoate anger that led to the election of Donald Trump for president? The answer is yes. It is arguable that the steady and, in recent years, sharp changes in technology, especially the rise of digital technology, is causing inequality to rise, the wages of workers to be depressed. If we do not want this to spin out of control we need to rethink our regulatory structure as deeply as we did during the Industrial Revolution.

In thinking about this I reached an interesting conclusion. The antitrust regime, which began with the Sherman Act and was followed by the Clayton and Robinson Patman acts, served reasonably well for a century; but now it is becoming a hindrance rather than aid. It is time to call it a day for antitrust legislation. In the next section I develop an industrial organization model to illustrate why our antitrust laws have become a hindrance. This immediately gives rise to questions about inequality. The original motivation behind the Sherman Act was to prevent arbitrary profiteering and to protect the small players and consumers on the market. If this law is revoked how do we ensure fairness and equity on the market? For that, I believe, we need a different set of laws, those pertaining to profit sharing, of a kind that has been widely written about and also ones that are novel and needs to be formulated and eventually enacted.

The problem is the following. Thanks to the relentless march of technology, we today have economies of scale that we never had before, though this was anticipated by Adam Smith (1776 [2011]) and later by Young (1928). A consequence of this is that if we force thousands of producers to manufacture the same product each of them will be vastly less efficient than if we had one or at least a few firms producing the good. In other words, we are coming into the age of natural monopoly, where antitrust laws are largely powerless. And if we ignore the fact that these are natural monopolies and force competition we will be doomed to huge inefficiencies.

The age we are entering is one in which there may still be thousands of firms involved in producing the same product but not because each of these firms produces the good from start to finish (like in a traditional Cournot oligopoly or competitive model) but because each firm produces some tiny part of the final product. To take the example of the car industry. A standard oligopoly is one in which there are 100 producers of cars. What I am talking about is an industry in which 100 firms are still involved, one producing all the gears, one all the ignitions, one all the

wheels and so on. To make matters worse these firms are scattered around the world. One firm in one nation may be the master wheel maker and another firm in another nation the master gear manufacturer. Protectionism of the kind that Trump is propagating can be devastating for such a market.

To get a clear understanding of how a modern industry of the kind described above works and what kinds of laws we will need to keep society equitable — the source of the dissent that brought Trump to power — we need to sketch the above description a bit more formally. The next section builds a model to show the problem being created by standard antitrust laws and the last section discusses the new kinds of laws and regulatory systems we need to accompany this changing world.

## 4. A theory of vertically serrated markets

In this section, I build a formal model to show how technological advance is changing the nature of industrial markets in ways that were unthinkable earlier and how this is leading to inequality and exploitation in novel ways. Trump's election is a response to the people, no matter how incoherent, to the pain they feel by this march of technology and the concomitant change in industrial market structure. This calls for new laws and regulations, akin to what was needed following the industrial revolution of the late eighteenth century. In this section, I explain the theory of the newly emerging market structure, which I shall refer to as 'vertically serrated markets'. The next section discusses our policy options for this new world.

Consider a standard monopoly producing, for instance, cars. Thus there is one firm producing all the cars that consumers need. As we move toward competition, the number of firms producing cars increases. In the extreme, each firm is so small as to be a price-taking agent. There is, however, another way in which we can have many firms be involved. We can, for instance, have one firm produce wheels, another produce gears, another the brakes, and another that puts all these parts together and sells. This is what I refer to as a 'vertically serrated market'.

As technology advances and economies of scale increase, it is natural that we will move toward greater and greater serrated markets. Each of the, say n, components of the final product–a car, for instance — will be produced by a monopoly and a component will be ever more finely defined. Hence, over time, this n has been increasing and will continue to so do as technology advances and we get better and better at doing more and more minor tasks. My aim here is to describe an equilibrium of vertically serrated markets. Works with similar results have been derived in the literature: see, for instance, early hints in Young (1928), and more recent models such as Amir and Gama (2013).[8] I develop the model here not for its theoretical novelty but because of the novelty of the policy prescription that emerges from it and which seems to have received little attention in the research literature and among policymakers.[9]

Let the aggregate demand for the product, henceforth, cars, be given by X, when the price of cars is P.

$$X = A - BP \tag{1}$$

---

[8] This is all a part of the strategic complementarity literature in industrial organization theory: see Singh and Vives (1984) and Vives (1990).

[9] There is another likely direction in which markets are likely to move with technological change. This is greater entry deterrence (Dixit, 1980). To reap the returns to scale firms may have to incur an even larger initial sunk cost with diminishing marginal cost. This will also cause a move toward monopoly, to thwart which will entail large inefficiencies. I shall however stay away from this argument in the present paper.

where $A > 0$ and $B > 0$, are parameters.

Suppose there are n firms producing n parts of the car or engaged in some task in producing the car. It is for instance possible to think of one of these firms, say the nth one, as assembling all the parts and retailing it. I shall make some strong symmetry assumptions purely for ease of analysis. Let us suppose the firm j, produces a certain component of the car at a cost of $c = c(n)$. Hence the final cost of producing a car is $nc(n)$.

It is natural to assume:

$$[m > n] \rightarrow [nc(n) \geq mc(m)] \tag{2}$$

I shall henceforth occasionally refer to $nc(n)$ as $k(n)$, the aggregate cost of producing each car. What I have just claimed is that $k(n)$ is a constant or decreasing function of n. The fewer and fewer task a firm does the better it becomes at doing the task.

Let us begin with n firms and assume that firm i chooses a price $p_i$ for its component. The competition, in other words, is over prices. Each firm tries to gouge out a bigger chunk of the total profit by pricing its component product suitably. In a standard Cournot oligopoly, firms compete horizontally by taking shares of the product market. Here the competition is vertical; hence the term vertically serrated market.

The final price of each car will be:

$$P = p_1 + p_2 + \ldots + p_n \tag{3}$$

Hence, the profit function of firm i is given as follows, where $\pi_I$ denotes profit earned by firm i:

$$\pi_i = [A - B(p_1 + p_2 + \ldots + p_n)](p_i - c) \tag{4}$$

A vertically serrated market is a game in which each firm chooses a price for its component. Our first task is to characterize the Nash equilibrium of this game.

Maximizing profit gives us the following first order condition for player i.

$$A - B(p_1 + p_2 + \ldots + p_n) - B(p_i - c) = 0 \tag{5}$$

Since I am working with first-order conditions, we, of course, have to be careful that we remain within a domain of behavior where $\pi_i$, defined in Eq. (4), remains non-negative.

So we have n equations like Eq. (5). Given the symmetry of the model it is obvious that when we solve all the n equations we will get:

$$p_1 = p_2 = \ldots = p_n \equiv p* \tag{6}$$

Inserting these values in Eq. (5) and using P* to denote the price of the final product ($P* \equiv np*$), we get the following expression:

$$P* = \frac{n(A + Bc)}{(n + 1)B} \tag{7}$$

It is easy to see if $n = 1$,

$$P* = \frac{A}{2B} + \frac{k}{2} \tag{8}$$

Recall k is the total cost of making a car. In this case, of course, $k = c(1)$. There are no surprises that Eq. (8) depicts the standard monopoly equilibrium. This is illustrated in Fig. 1 in which the
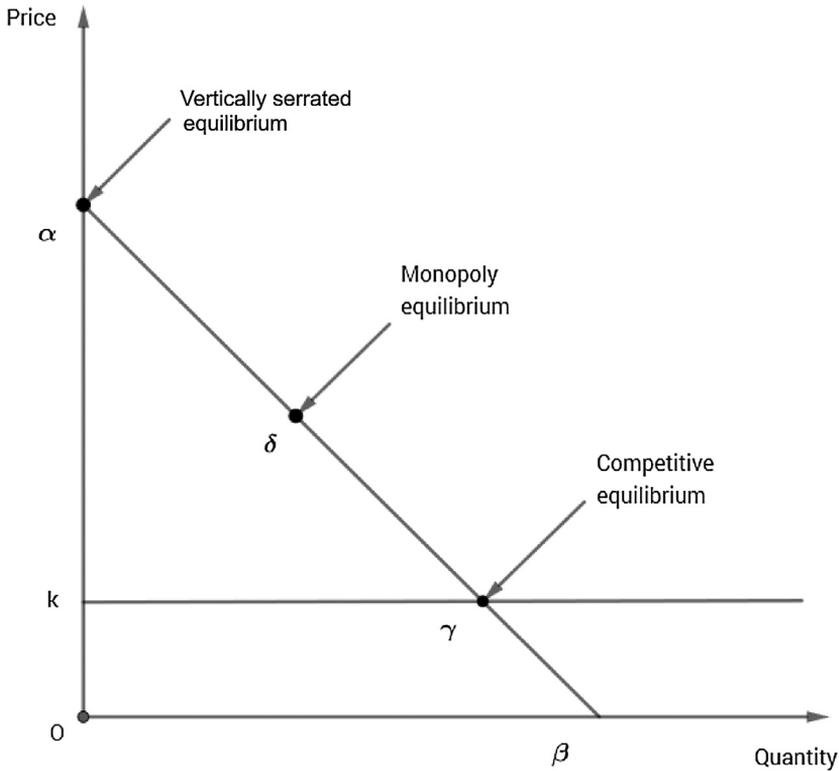
Fig. 1. Various market equilibria.

line shown as $\alpha\beta$ depicts the demand curve and k is the marginal cost of producing each car, and the equilibrium occurs at the point marked $\delta$.

Starting from monopoly if we move to a standard oligopoly and keep increasing the number of firms, in the limit, as is well known the equilibrium goes to the point marked 'competitive equilibrium.' But what happens in a vertically serrated market? It is obvious that as n increases P increases. And the equilibrium moves toward price equal to $\frac{A}{B}$, with zero demand. This is depicted by the point marked $\alpha$ in the figure. In brief, as vertical competition increases, the equilibrium moves away from the monopoly equilibrium in the opposite direction. In other words, welfare decreases.

To see this formally, recall c is a function of n. Hence, Eq. (7) can be written equivalently as:

$$P^* = \frac{nA}{(n+1)B} + \frac{Bc(n)}{(n+1)B} \tag{9}$$

From Eq. (2) we know that as $n \to \infty$, $c(n) \to 0$. Hence, as $n \to \infty$, $P^* \to \frac{A}{B}$.

Therein lies the problem for the consumer. With technological progress, there will be a tendency for markets to get ever more exclusive, with prices rising and consumption falling. One reason why this is unlikely to happen is because among the n producers it is likely that not all will be playing the game as described above, choosing a price, and sitting back. Some will no doubt put on the mantle of a standard monopolist who influences quantity along with the price.

If we assume for instance that the nth firm in the above industry is the retailer who puts it all together and covers the last mile to the consumer, it is easy to show that the equilibrium will be at the standard monopoly equilibrium, that is, at δ, half-way between where the demand curve touches the vertical axis and the cost curve. For this to be formally modeled we will need to introduce the capacity for this nth firm to use strategies which go beyond the pure choice of a price for each unit of its action, but I shall not go into this here.

Modern technology and the availability of consumer information also allows for discrimination of a kind that may not have been possible earlier. Sooner or later some of the producers will learn the art of price discrimination. Once that happens, even as n keeps increasing the number of cars produced will be the same as in the competitive equilibrium, but with one additional caveat — each consumer will be made the pay the highest price he or she is willing to pay. In other words, (assuming, purely for reasons of analytical simplicity, that the income effect of the final product is zero) the producers, one or more, will the entire triangle below the demand curve and above the line k, as profit for themselves. The consumers will have many cars but they would have paid up every penny they are willing to pay.

A formal proof of this is easy to give by assuming that the nth firm in the car industry, say the final retailer, is able of price discriminate. Hence, while other firms choose their respective prices, firm n chooses a function $\phi(q)$, which says that this firm will charge a price of $\phi(q)$ for the act of retailing the qth car that he sells. It is possible to show that in such a model, equilibrium occurs at the competitive equilibrium, marked γ in Fig. 1, with the qth consumer being charged $p_1 + p_2 + \ldots + p_{n-1} + \phi(q)$. In brief, the entire consumer surplus is picked up by the retail firm. The reader can verify that the nth firm will select:

$$\phi(q) = \frac{A}{B} - \frac{q}{B} - nc(n).$$

In brief, we have entered a world where small players — be they consumers or laborers will either see a restriction of the market with prices rising or increasing price discrimination which extracts all their consumer surplus.

## 5. Regulatory overhaul: end of the antitrust century, need for dispersed shareholding

There is some evidence that we are moving toward the kind of discriminatory equilibrium described in the above section. Price discrimination is rampant all around us. Of course, this has to be under camouflage because most nations have anti price discrimination laws. In the US, the Robinson-Patman Act is supposed to deter price discrimination. But there is wide consensus that this is one of the most poorly drafted and implemented laws. And there is good reason for this. There is a variety of ways to price discriminate across consumers without admitting to do so. We can use the traits of consumers which do not name her but picks her all the same and charges a different price. We can charge a rare air-traveler a higher price per ticket (which is called a frequent flyer program), we can travel a peak-load time traveler a higher price, we can vary the price of a taxi ride depending on what kind of phone you use to call the taxi. All these are common practices.

In labor markets also something similar is happening, salaries are varied through subtle means to extract virtually all the surplus the laborer would have got by working. So with the march of technology with greater vertical serration of the markets, we are moving to equilibria where either prices are so high that most people are excluded from buying the product or they face a price discriminatory market whereby their consumer surplus is taken out of their hand. A part of the

rise of inequality globally is caused by this. It is not a result of rising avarice or people getting more mean (though they well may) but the advance of technology changing the shape of market equilibria as described in the above section.

The big policy challenge is: what should we do about this? Using the Sherman Act and forcing markets to be horizontally competitive (that is competitive in the traditional way) is to forego all the benefits of technological advance. If for each product, we insist that there has to be thousands of producers each supplying a small fraction of the demand we would forego all the benefits of modern technology and push society back to primitive times. Also, it is arguable that the Sherman Act does not apply in such situations because this act is meant for artificially-created monopolies and not natural monopolies which occur by the very nature of technology. More specifically, a firm must control at least 70% of the market to be considered a monopoly, and to be considered guilty of monopolization, it must practice one or more "exclusionary practices." Whether something is a deliberate exclusionary practice is, of course, a questionable matter and not surprisingly the law has given rise to a lot of dispute (see Hovenkamp, 1999, for more detailed discussion). What I just showed, however, is that even if the law did apply to the kind of monopolies arising today, using it to create many competing firms would be undesirable. In brief, given the changing nature of modern industry, the Sherman Act has little role to play.

This leads me to the conclusion that some of the problems of large firms that Stiglitz (2017b) and many others have written about can no longer be solved by using our traditional antitrust laws. It is, I believe, time to call it a day for antitrust laws. It had a good century's run from 1890 but is turning out to be totally inadequate for today's world. On the Robinson-Patman Act, 1936, as already pointed out, this can be destructive and cause output to decline in vertically serrated industries which are becoming more and more common. In brief, it is time to draw the curtain on the whole gamut of antitrust and competition laws.

However, if we just leave it at that, the global GDP will keep rising but inequality will also rise in step, in fact sharply, with a few owners of firms cornering all the benefits. Hence, what we need is a different set of laws to counter that.

If monopoly or limited oligopolies will be the market structure of the modern vertically serrated industries, how can we ensure an equitable income? A natural idea that jumps out is that even if a few firms earn huge profits, there is no reason why a few persons should earn huge profits. For that, we have to have laws which compel firms to diversify their share-holding. In short, the key is to ensure that shares in each company are widely held. A monopoly of production must not mean a monopoly of income. Thus, the dismantling of antitrust laws, as suggested in this paper must be accompanied by new laws mandating a more radical dispersal of shareholding within each company. Not only will there no longer be a majority shareholder but shareholding in each company will be much more granular. How granular? How do we restrict buying and selling of shares so that they do not end up with a few individuals holding a disproportionate about of a firm or corporation? These are questions which will need careful examination and the laws will have to be drafted with attention to details. The main point here is to note that once we have such a law, we will not have to worry about the fact that monopoly profits will all go into a monopolist's hands. The profits will indeed accrue to one firm but the firm being widely held, the profit will accrue to many individuals.

One problem that can nevertheless arise is that a few individuals can hold few shares each of so many firms and corporations that with falling economy-wide wage shares and rising profits, this will result in very large profits accruing in a few hands. For this, we need a second intervention, this one at the level of the nation and not just the firm. The idea is to have some profit sharing at the national level. In brief, some fraction of profits in society should accrue to ordinary people, including workers (employed or unemployed).

The challenge is to create a blueprint for an equitable society that is viable. History is replete with systemic shifts that began with the right intentions but ended up with a few people capturing both political power and wealth. The clue is some forms of profit sharing while respecting the laws of the market. We have to recognize that the market incentive and the profit motive are important drivers and must not be stifled or centralized. What is needed is an intervention that respects this and still curtails inequality. So the suggestion is for a minimal profit-sharing within the nation, that is, to give all human beings a right to a certain fraction of the nation's profits. This idea has been around for a while and variants can be found in the writings of Weitzman (1984), Steiner (1994), Hockett (2008) and, recently, Bruenig (2018) in a **New York Times** OpEd. With the share of wages in society falling steadily, and the share of profits and rents rising, in step with advancing technology, some universal basic profit-sharing is critical.

In brief what I am proposing is the twin dispersal idea: No firm must be disproportionately owned by one or a few individuals and a fraction of the nation's shares should be widely dispersed. So as firms cut their demand for labor and profits rise, many individuals share these higher profits and further a part of these profit ends up with the workers, who own a share of the overall profits in the nation; and every time a worker is displaced by a robot, the workers' wages do not fully become the profit of the owner of the robot.

These are fledgling ideas that will have to be carefully worked out before the can be actual policy. It must be realized that human ingenuity is immense. For every law there will be action to circumvent its intents. A good drafting of the law requires anticipating what these counter actions will be and to have provisions to minimize them; and all this will have to be done making sure that market incentives do not get damaged.

To see some of the challenges that will no doubt have to be addressed consider executive pay in companies. Once profits are dispersed widely by law and the CEO is unable to take a lion's share of it a natural tendency will be to increase the salaries of the top echelons of a corporation so that a part of the profit is indirectly siphoned off as salary. Further, what I have suggested are policies to allow industries to flourish and yet not have profits heaped on a few plates. But there is a global part to this that I do not address in this paper.

## 6. Concluding remark

For all changes in regulation, there is invariably response from individuals and corporations, trying to navigate or even circumvent the new laws. I have argued in Basu (2018), that this is bound to be an inexorable process since human ingenuity is endless, with every new law provoking new, and often unexpected strategies. The best we can do is to anticipate some of the reactions. In this case, some of them are evident enough. As we try to set limits on inequality, there will be a tendency on the part of individuals to garner consumer's surplus, bypassing higher cash incomes. One way to do this is barter. If Picasso gives one of his paintings to Stravinsky and Stravinsky in turn composes a music specially for Picasso, both could be vastly better off. Indeed, even in current society, especially among the very poor and very rich, there is much more barter or exchnage of favors than the middle classes realise. I would expect this to increase with the new regulatory model suggested here.

Further, groups will form to ensure that in their locality there are better public goods — more parks, cleaner air, better street lighting, and so on. This will enhance the group's well-being without showing up as individual incomes.

A concomitant of this is inter-country differences. I have not commented on this in the present paper. Some profit-sharing and easing up of antitrust laws within each nation can, as this paper tried

to show, curb some of the social ills which brought us to our present predicament in each country. But inter-country inequality can increase, as some nations do better in solving their internal problems. This can cause migration and refugee flows, which can further fuel protectionism. In working out the details of the new regulatory framework, we will have to anticipate some of the above problems and work them into the law. In particular, the problem of inter-country policy coordination and some minimal global rules of engagement are important matters that we cannot escape in today's globalizing world (Basu, 2018). This was beyond the scope of the present paper, but should figure prominently in our future research agenda.

## References

Amir, R., & Gama, A. (2013). *On Cournot's theory of oligopoly with perfect complements*. Mimeo: University of Iowa.

Atkinson, A. (2015). *Inequality — What can be done?* Cambridge, MA: Harvard University Press.

Autor, D., Katz, L., & Krueger, A. (1998). Computing inequality: Have computers changed the labor market? *Quarterly Journal of Economics*, *113*

Basu, K. (1999). Child labor: Cause, consequence and cure, with remarks on international labor standards. *Journal of Economic Literature*, *37*.

Basu, K. (2016a). Globalization of labor markets and the growth prospects of nations. *Journal of Policy Modeling*, *38*(4).

Basu, K. (2016b). *An economist in the real world: The art of policymaking*. Cambridge, MA: MIT Press.

Basu, K. (2018). *The republic of beliefs: A new approach to law and economics*. Princeton: Princeton University Press.

Basu, K., & Van, P. H. (1998). The economics of child labor. *American Economic Review*, *88*.

Bourguignon, F. (2017). *The globalization of inequality*. Princeton: Princeton University Press.

Bruenig, M. (2018). *The massive US inequality problem*. New York Times. December 6, p. 14.

Cohen, E. (2017). *Why Trump's immigration policies will increase undocumented immigration*. The Agenda. https://www.politico.com/agenda/story/2017/03/why-trumps-immigration-policies-will-increase-undocumented-immigration-000330

Diamond, S. (1944). The Webb-Pomerene Act and Export Trade Associations. *Columbia Law Review*, *44*(6).

Dixit, A. (1980). The role of investment in entry deterrence. *Economic Journal*, *90*.

Farhi, E., Gopinath, G., & Itskhoki, I. (2017). *Tremp's tax plan and the dollar*. Project Syndicate. January 3.

Hockett, R. (2008). Toward a global shareholder society. *Journal of International Law*, *30*(1).

Hovenkamp, H. (1999). *Federal antitrust policy: The law of competition and its practice*. St. Paul, Minnesota: West Group.

Karabarbounis, L., & Neiman, B. (2014). The global decline of the labor share. *Quarterly Journal of Economics*, *129*(1).

Milanovic, B. (2016). *Global inequality: A new approach for the age of globalization*. Cambridge, MA: Harvard University Press.

Piketty, T. (2014). *Capital in the twenty-first century*. Cambridge, MA: Harvard University Press.

Rodrik, D. (2017). *Populism and the economics of globalization*. NBER Working Paper No. 23559.

Rodriguez, F., & Jayadev, A. (2012). The declining labor share of income. *Journal of Globalization and Development*, *3*.

Singh, N., & Vives, X. (1984). Price and quantity competition in a differentiated duopoly. *The RAND Journal of Economics*, *15*(4).

Smith, A. (2011). In A. S. Skinner (Ed.), *The wealth of nations*. Cambridge, England.

Steiner, H. (1994). *An essay on rights*. Oxford: Blackwell Publishers.

Stiglitz, J. (2012). *The price of inequality: How today's divided society endangers our future*. New York: Norton and Co.

Stiglitz, J. (2017b). *America has a monopoly problem — And it's huge*. The Nation., 23 October.

Stiglitz, J. (2017a). *Globalization and its discontents revisited: Anti-globalization in the age of Trump*. New York: Norton and Co.

Vives, X. (1990). Nash equilibrium with strategic complementarities. *Journal of Mathematical Economics*, *19*.

Weitzman, M. L. (1984). *The share economy: Conquering stagflation*. Cambridge, MA: Harvard University Press.

Young, A. A. (1928). Increasing returns and economic progress. *The Economic Journal*, *38*(152).