Transaction Cost Economics, Labor Law, and the Gig Economy

Seth Oranburg and Liya Palagashvili

ABSTRACT

The rapid growth of technology not only is creating innovative goods and services, but it is also altering the workplace and the traditional understanding of relationships between employee and employer. This can be seen today with the rise of the gig economy and alternative work arrangements. Our paper seeks to explain how technology has reduced the transaction costs of contracting in the market. In particular, we identify the innovations that have led to reductions in triangulation, transfer, trust, and measurement costs. These costs are relevant for creating greater exchanges between consumers and labor suppliers and, hence, more work for contractors and freelancers. Innovations that reduce measurement costs also reduce the firm's costs of outsourcing contract work relative to employing. We conclude with a discussion of the radical implications for labor law.

> You will never get to perfection because transaction costs are always positive, but they can be reduced. (Epstein 2015a, p. 791)

1. INTRODUCTION

Richard Epstein's scholarship connects a broad range of topics including law, economics, and society. In particular, Epstein has written extensively on labor regulations, with an emphasis on the virtues of contract-at-will employment. In his seminal work on the topic, he argued that parties

SETH ORANBURG is Assistant Professor at Duquesne University School of Law and a Program Affiliate Scholar at the Classical Liberal Institute at New York University School of Law. LIYA PALAGASHVILI is Assistant Professor of Economics at State University of New York, Purchase College, and a Research Fellow at the Classical Liberal Institute at New York University School of Law. We thank Richard Epstein, Michael Munger, two reviewers, the Coase-Sandor Institute for Law and Economics, and the participants and organizers of the conference honoring Richard Epstein at the University of Chicago. We also thank the John Templeton Foundation for its support through a grant. The opinions expressed in this article are those of the authors and do not necessarily reflect the views of the John Templeton Foundation.

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should be permitted as of right to adopt the contract-at-will form if they so desire because such freedom of contract advances both individual autonomy and efficient operation of labor markets (Epstein 1984). Epstein's earlier work laid the foundation for his defense of the contract at will by arguing that workers' compensation should be the outgrowth of a voluntary arrangement (Epstein 1982).

Now we find ourselves in a period of rapid change in labor markets as the traditional relationship between employee and employer is being disrupted by technological advancements, and the relevance of these labor laws are coming under scrutiny. Most notably, this change can be seen in the rise of the gig economy and the freelance movement. One estimate is that 15.8 percent of workers in the current labor force engage in gig, contractor, or freelance work as their main source of income, which is a more than 50 percent increase of workers in alternative work arrangements as their main job from 2005 to 2015 (Katz and Krueger 2016). Other measures indicate that there were 57.3 million freelancers in 2017—which means that close to 36 percent of the US labor force engaged in freelancing, as either a main or side source of income (Edelman Intelligence 2017). When measuring the number of 1099-MISC (contractor) versus W-2 (employee) tax forms, Dourado and Koopman (2015) find that there has been a 22 percent increase in the use of 1099-MISC forms since 2000, and over that same period there was a decline of 3.5 percent in W-2 form usage. Over the last few years, freelance work has grown three times more than the growth of the US workforce (Edelman Intelligence 2017). However one measures it, there seem to be unprecedented changes to the nature of work in the United States that appear to be accelerating.[1] Why might this be happening? Can we expect it to continue? What does this mean for labor law?

To answer these questions, this paper draws on the transaction costs framework to understand how technological innovations have led to changes in transaction costs—in particular, reductions in triangulation, transfer, trust, and measurement costs. The fall in these transaction costs creates increased direct exchanges between consumers and labor suppliers (hereafter, CLS exchanges) and hence more independent contractor types of work. Innovations that reduce measurement costs also reduce the firm's costs of outsourcing contract work relative to employing. These factors can help explain the rise of freelancing, contracting, and gig work today. If technological changes continue to lower these transaction costs,

1. For more on the growth of work for freelancers and contractors, see also Manyika et al. (2016) and MBO Partners (2017).

there will be even greater growth in the number of contractors as CLS networks expand and firms rely less on indefinite long-term employment contracts for labor and instead substitute usage of the market. At the outset, we acknowledge that the various reductions in transaction costs that we identify in this paper are not the only factors leading to the transformation of work today.

Accordingly, the law needs to recognize that these formerly alternative forms of work may soon predominate in the labor market, and labor laws written in the 1930s may be outdated and inapplicable to the new type of jobs that are emerging today. It is time to revisit the Epsteinian insights on labor and discuss whether Epstein's arguments for reforming labor law are more or less merited given technological change and the growth of the gig and freelance economy. In particular, laws based on hours worked may not be applicable to a new economy where input measures (hours worked) may no longer be the relevant units (Epstein 2019). Labor laws regarding health, retirement, and other benefits will also lose relevance as the employee-employer relationship dissipates, and a move toward a portable benefits regime may be the best solution.

The paper proceeds as follows: Section 2 introduces the framework and identifies the specific transaction cost mechanisms relevant for our analysis. Section 3 applies the transaction costs framework to understanding the technological innovations related to the growth of gig and contracting work. Section 4 discusses what these workplace changes mean for labor and employment law, and Section 5 concludes.

2. THE TRANSACTION COSTS FRAMEWORK

Much of the literature on the study of alternative labor arrangements and firms' decisions to contract out labor has focused on identifying the characteristics of firms that will predict a preference for contracting out or staffing up (Davis-Blake and Uzzi 1993; Kalleberg and Schmidt 1996; Uzzi and Barsness 1998). Other scholars have focused on the characteristics of workers who prefer to be contractors instead of employees (Howe 1986; Williams 1989; Cohen and Haberfeld 1993). Yet others have explored market conditions that could predict more or less long-term employment (Abraham and Taylor 1996; Weil 2014).

One important theoretical framework for the contracting versus employing decision has its underpinnings in the transaction costs economics literature, which has its beginnings in Ronald Coase's seminal paper

"The Nature of the Firm" (Coase 1937). Transaction costs refer to all costs associated with carrying out an exchange, which includes the costs of originating, negotiating, consummating, monitoring, and enforcing a contract for any given exchange. Coase explains how positive transaction costs are responsible for the creation and growth of firms. This is because it may be less costly for firms to set up and create one contract (an employment contract) when a job has to be done repeatedly instead of creating an infinite series of potentially costly contracts in the market.[2]

In other words, transaction costs make the use of the market system somewhat costly for ongoing exchanges. From this, it follows that the higher the cost of transacting across markets, the greater the advantage of organizing within the firm. Or the corollary: as transaction costs decrease, there will be a tendency for greater use of the market system rather than the firm. Coase's foundational work is ambiguous about the specifics of transaction costs, but subsequent scholars investigated their particulars, identifying concepts such as search, bargaining, and monitoring costs, among others (Alchian and Demsetz 1972; Williamson 1981; Cheung 1983; Grossman and Hart 1986; Holmström and Milgrom 1991).

The relevance of transaction costs for the gig economy is as follows: if technological advancements can reduce the costs of transacting outside the firm (in the market) rather than inside the firm, this cost reduction can help explain the rise of contractor work. Munger (2015, 2018) is one of the first to apply the transaction costs approach to one sector of the new economy, the sharing economy (such as Uber and Airbnb), and specifically on the product and service side. We extend Munger's discussions to analyzing the labor market, and in doing so, we identify the mechanisms and types of transaction costs relevant for understanding the increase in contractor, freelance, and gig work. In the following sections, we explain how changes in the costs of triangulation, transfer, and trust impact direct CLS transactions (referred to as a peer-to-peer relationship) and how changes in measurement costs impact the market between firms and labor suppliers, although these costs are generally applicable to both markets.[3]

2. Coase (1937, p. 391) explains that the owner "does not have to make a series of contracts with the factors with whom he is co-operating within the firm, as would be necessary of course, if this cooperation were a direct result of the working of the price mechanism."

3. Changes in triangulation, transfer, and trust costs are most clearly illustrated by peer-to-peer transactions, because they can be quite high in the sort of one-off exchanges that are now facilitated by technology platforms, although they likewise impact a firm's decision to hire or contract out for services.

2.1. Triangulation Costs

Triangulation costs are a category of transaction costs coined by Munger (2018) to encompass both search and information costs (Dahlam 1979) and bargaining costs (Alchian and Demsetz 1972; Dahlam 1979). Search and information costs refer to costs in determining what is available on the market, including information about the ability and location of each counterparty. Bargaining costs are the costs of coming to an agreement between the parties. For example, when buying a home, the search costs are the costs associated with finding and determining the home's condition. Bargaining costs are the costs of negotiating a price and the conditions of the transaction with the seller. Munger groups these two categories of search and information costs and bargaining into one, calling it triangulation costs. We follow suit to simplify the discussion. Taken together, triangulation costs include the costs of finding the counterparty and agreeing to the terms of the transaction.[4]

We provide an illustration of how triangulation costs are relevant for peer-to-peer exchanges: person A wants to have a painting hung in his or her apartment, but the costs of finding person B, who is nearby and willing to hang the painting and has the ability to do so, and then negotiating the terms of agreement may be too high. If triangulation costs are too high, the exchange may not occur. In general, if the cost of discovering buyers and suppliers of a particular service and coming to an agreement for each transaction is high, then there will be fewer opportunities for exchange and thus fewer peer-to-peer transactions. Thus, our hypothesis incorporating technological change is as follows: if technology can reduce the costs of both discovering one another and coming to an agreement, then there will be more peer-to-peer transactions, and thus more contracting of labor, in which a consumer directly pays a labor supplier for providing a particular good or service.

2.2. Transfer Costs

Transfer costs are the costs of "transferring payment and goods that [are] immediate and as invisible as possible" (Munger 2018, p. 9). Where triangulation costs refer to the ability to get information about each party and to come to an agreement, transfer costs refer to the ability to process payments and to physically provide the good or service. This includes

4. We follow the use of Munger's triangulation costs to simplify the discussion, but the conclusion would be the same even if these costs were analyzed separately.

handling and storage costs, direct transport costs, costs of money transfer or verification processes, and the legal constraints that further impact the transfer of payments and goods and services. For example, person A knows that person B is willing and able to provide the service of hanging the painting, but person B does not have the ability to receive credit card payments. If person A has only a credit card, they may not be able to transact, because transfer costs are too high. Similarly, if person B needs to employ costly transport to perform this service, that increases transfer costs, and again the parties will not transact if such costs are too high. In general, transfer costs rise inversely to the ease of transfer of payments and goods or services, so if the process of providing the goods or services and paying for them is less costly, then there will be more peer-to-peer contracting.

2.3. Trust Costs

Even if person A and person B are easily able to find each other and come to an agreement for hanging a painting, and they have few problems with transferring the service and the payment, there may still be significant concerns with having a stranger visit one's home or with the quality of the service rendered. These are trust costs, and if they are too high, then the peer-to-peer transaction may not occur. Trust refers to the ability to outsource "assurance of honesty and performance" (Munger 2018, p. 9). Person A could find out whether person B is skilled in hanging a painting and can be trusted to enter his or her home, but it could involve a costly process of calling neighbors, finding someone who might know someone who might know person B, and so forth. Person B might likewise be concerned that person A will fail to make the payment once services are rendered. When assuring trust is costly, parties may decide not to exchange. But if trust becomes easier to assess with less costly information, then parties to a transaction will be more likely to exchange, thus expanding opportunities for buyers and sellers to contract with each other. In other words, if the costs of finding that each party can be trusted are lower, this further increases peer-to-peer transactions.

2.4. Measurement Costs

Important to the firm's decision to hire or contract is the ability of employers to measure the performance of the worker or the output he or she produces. These are measurement costs, and they can be higher when multiple workers are engaged in a single project. Alchian and Demsetz

(1972) discuss the theory of team production and explain how firms solve the difficulty of ascertaining individual contributions. Cheung (1983) explains that since some components of a particular good or service are assembled in a way that makes the separation of workers' contributions costly, firms hire employees.

In other words, if an individual worker's contributions are perfectly definable and measureable, then firms could directly buy his or her output in the marketplace. But many outputs require joint or team production, in which it is difficult to ascertain individual contributions. In these cases, it is easier to employ workers and measure and monitor individual inputs (for example, hours worked) as a proxy for outputs. For example, it is easier to commission a writer to produce a screenplay or a manuscript than it is to contract separately with many lawyers to structure an acquisition. Screenwriting is an individual task, so a firm can simply pay a screenwriter for a finished product. Structuring an acquisition requires many workers' efforts because it may require several thousand person-hours of work to be completed in a few weeks' time, and it is hard to correlate an individual lawyer's effort with a successful result, so the acquirer will hire a law firm, and the firm will monitor the workers' inputs (for example, billable hours).

Thus, when measurement costs are lower, firms will tend to contract out rather than staff up (employ). If technology can lead to the performance of individual workers being more definable and measureable, then firms are more likely to contract out the labor than to hire an employee. Williamson (1981, p. 564) similarly refers to this type of transaction cost but calls it "the ease with which the productivity of human assets can be evaluated."[5]

3. APPLICATION TO THE GIG ECONOMY

Before we begin to apply the mechanisms and specific transaction costs to understanding the labor market side and the gig economy, we provide a description of how the sale of goods and services and the type of trans-

5. In the transaction costs literature, monitoring costs are a type of transaction cost that, if decreased, would lead to greater usage of contract labor. It is important to note, however, that if technology reduces the input-monitoring costs, this can lead to greater usage of employees rather than contractors, given other factors for why the firms are relying on the proxy measure of inputs rather than outputs. Cheung (1983) elaborates on this analysis.

actions have changed with new technologies. Such changes have created new sets of economic activities, for example, the sharing economy and the on-demand economy.

3.1. Descriptions of New Economies

To contrast the new economies, consider how goods are created in a traditional manufacturing economy. For a car, first, coal and ore are mined and smelted to make steel. The steel has more value than the coal and ore did in the ground. Second, the steel is transported to an automotive factory, where it has more value as a car door panel. Third, the door panel is incorporated with inputs from other upstream producers such as glass windshields and electronic components to create a functional car. A completed car that can drive is worth more than the sum of its static parts. Fourth, the finished product (the new car) is transported from a centralized manufacturing facility in, say, Indiana, to retail auto dealers all over America, where it is more convenient for prospective buyers to test and acquire it. Fifth, salespeople at the dealerships inform buyers about the car's features, help them secure financing, and teach them to use the technical features of the vehicle. Sixth, independent aftermarket maintenance and repair service providers help keep the car running. Each step in this process, which can be visualized as a river on which inputs flow from upstream supply to downstream sales, adds value to the product.

In contrast, the sharing economy is based on resource reallocation. The resources that were extracted and sold in the traditional economy may be underutilized. For example, consider a vacant home. The home is built from materials extracted via the traditional economy. It is sold to someone who later no longer has as much use for it, but it is not a good candidate for resale because of tax or other reasons. The vacant home is an underutilized asset. The sharing economy provides technological solutions to make better use of this asset: the Airbnb platform connects individuals who have vacant homes with individuals who will pay to stay in them.

Cars are also underutilized assets when they sit in driveways and parking garages. GetAround is a peer-to-peer car-sharing platform in which individuals borrow an idle car, and car owners place a piece of technology on their car that tracks its location and locks and unlocks it. With the tap of an app, owners can indicate when they want to make their car available or when they are taking it off the market. A borrower uses the app to find available cars and unlocks them. When the borrower is

finished, the app finds a new parking spot for the car, under a set of conditions for how far the owner would like it to be from the original location. The platform also processes payments and insurance information and provides users' ratings.

These are examples of the on-demand economy, a digital marketplace that matches consumers' wants with providers to immediately deliver those goods and services.[6] It includes companies such as InstaCart, Handy, and Postmates; these platforms connect buyers and sellers to all types of goods and services to be rendered on demand. Typically, on-demand economies utilize contract work precisely because the on-demand business models necessitate a flexible labor supply (Palagashvili 2017).

A decade ago, these types of exchanges would have been too costly to facilitate, and it would have been easier to buy or rent a car in the traditional manner. But with new technologies—especially Web platform technology—peer-to-peer bike sharing, clothes sharing, and a host of other assets are now proliferating in the market.

3.2. Transaction Costs and the Gig Economy

As technology is reducing transaction costs and allowing for the emergence of the sharing economy, peer-to-peer networks, and on-demand goods and services, it is also altering labor markets. Epstein recognized that this is precisely how the gig economy platforms work: "The network is live, and thus able to make instantaneous adjustments in price to reflect changes in supply and demand. The apps are easy to use, and sign-up is costless" (Epstein 2015a). This remarkable reduction in transaction costs has sweeping implications for labor and its regulation.

With the reduction in transaction costs, it is becoming more common for firms to rent workers rather than create long-term contracts with them (in a sense, to buy them). Meanwhile, consumers are increasingly buying labor directly—via Web platforms—thus leading to the emergence of the gig economy. For example, Amazon Mechanical Turk (MTurk) is a Web platform that operates "a crowdsourcing marketplace that makes it easier for individuals and businesses to outsource the processes and jobs to a distributed workforce who can perform these tasks virtually."[7] The MTurk platform facilitates posting job ads and offering services, which makes it easier and cheaper for buyers and sellers of labor to find each

6. The on-demand economy is defined as the "economic activity created by technology of other companies or providers that fulfill consumer demand via the immediate and flexible provisioning of goods and services" (International Bar Association 2011, p. 6).

7. Amazon Mechanical Turk, Overview (https://www.mturk.com).

other. Amazon supports MTurk with a highly advanced Web payment system, and it incorporates a robust bilateral rating system that informs people about the trustworthiness of market participants. In general, performance of work via MTurk is cheap to observe: for example, a worker might be paid $1 to watch a 1-minute video and write the first five words that come to mind. It is easy to determine whether the video was played and words were entered.

While the tasks currently performed on MTurk are generally mundane, they may become more complex as technology continues to reduce transaction costs of contracting in the market. In Oranburg and Palagashvili (2020), we point to how blockchain technology and smart contracts can further reduce transaction costs and can lead to further dissipation of the employee-employer relationship. Munger predicts this as well; as technology continues to reduce transaction costs, "the very notion of a firm may start to be eroded. A group of people, each of whom has developed a set of specialized skills and a reputation based on ratings on software such as LinkedIn, would be hired for a project" (Munger 2015, p. 206).

3.2.1. Triangulation Costs in the Gig Economy. Thanks to the Internet and specific software platforms and agreements, the costs of discovering buyers and sellers have become so low that it has enabled opportunities for suppliers of labor to directly contract with consumers. This reduction in triangulation costs not only facilitates the peer-to-peer economy perspective; it also in some cases diminishes the necessity of firms. Platform technology has driven down triangulation costs, making a broader range of work suitable for contracting arrangements.

Software used on these platforms includes such features as advanced global positioning systems (GPS) techniques to easily locate consumers who want a particular service with suppliers who are willing to provide it. The software also allows for users to easily indicate preferences, including the willingness to buy and/or sell at particular price points, which thus enables the algorithm to instantly find a match between two parties. Quick and simple search functions, internal messaging systems, and dashboards to keep track of interested parties significantly increase the ability and reduce the cost to search and find a particular buyer or seller. In this way, the technology reduces search costs and thus the ability for two parties to find and match with one another.

Furthermore, the platform is a formal channel for standard provision

of services. Contracting costs are reduced as terms are essentially crowdsourced from the feedback of millions of platform users, so that users converge to a focal contract based on reasonable expectations. Furthermore, in some cases, such as with Uber, the price is set by the platform, and that further reduces the bargaining costs, which could be significantly high if a user incurred them every time he or she took an Uber ride.

3.2.2. Transfer Costs in the Gig Economy. With the innovations in credit cards, online payment systems such as Paypal and Venmo, and payment verification technologies, the transfer costs of payment have fallen. This allows for companies to hold funds in escrow. In the case of Uber, the platform holds the rider's payment in escrow for the driver until the ride is completed, and the funds are automatically released when the destination is reached. Drivers no longer have to worry that a rider will have insufficient funds to pay when the ride is over.

Furthermore, the transfer of physical goods or services is made easier with location tracking and GPS technologies that can reduce the costs of moving the particular good or service. For example, the process of receiving and providing a ride on Uber is simple: riders do not need to give directions to drivers to pick them up or to drop them off at their designated locations. The software provides everything and includes information about traffic or construction problems that may get in the way of delivering the service of a ride. These new technologies reduce the transfer costs, thus allowing more exchanges between consumers and suppliers of the service, hence the emergence of gig economy work.

3.2.3. Trust Costs in the Gig Economy. Gig economy platforms employ rating and review systems that make it much easier to learn about the honesty and probable performance of a potential counterparty via information on the Internet. Depending on the software, there are personal profiles of users where one can observe relevant information that is a proxy for trust. Information about both buyers and suppliers is crowdsourced and up-to-date, which means that if a particular driver is rated poorly at any given moment, that rating is automatically updated on the driver's profile. Drivers can also rate riders, so if a rider harasses a driver, that information is added to the rider's profile. This robust two-way rating system employed by most gig economy platforms provides valuable trust information that would be unavailable or too costly in a traditional economy, where phone calls or personal knowledge is needed to ensure trust. Thus, with this technology, both parties have better infor-

mation about the counterparty before they agree to the transaction. In the example discussed above, in which person A would like a stranger to come into his or her home to hang a painting, TaskRabbit, the platform that enables this type of transaction, utilizes software to provide vetting and rating systems for both buyers and suppliers. Thus, new technology reduces the problem of trust, allowing for greater CLS transactions and hence more gig type of work.

3.2.4. Measurement Costs in the Gig Economy. Technology enables the creation of discrete outputs that can be separated into individual contributions and hence reduces the problem of measurement costs faced by employers. Innovations in software for automated surveys, aggregation of reviews, and big data also provide low-cost methods of measuring, thus allowing workers to be compensated directly for their performance. This can be best illustrated by innovations in software developing, which is the largest process that firms have outsourced in the form of contractor labor.

High-level decomposition of a software design technique called modular programming, in which code is written in a set of discrete, independent, interchangeable modules, allows for the separation of individual contributions. Each module contains everything necessary to perform just one aspect of the overall program's function. This is distinguishable from a monolithic application in terms of both code structure and industrial organization. With modular programming, no one person or team is responsible for creating the whole program. Instead, the program is broken down into discrete projects. Each project can be completed by a small team or even one person. The success or failure of each project can be easily evaluated by determining whether the module performs its discrete function. In other words, because of modular programming, software coding is much less of a team production exercise. Instead of the entire code either functioning or not (which would make it hard to determine which programmer broke the code), modules—the output—can easily be measured and attributed to individual efforts.

4. CONSIDERATIONS FOR LABOR LAW

Does the emergence of the gig and freelance economy have radical implications for labor law? Labor law is predicated on people working as employees. But the rise of platform technology that facilitates people work-

ing together flexibly in independent-contractor arrangements challenges the relevance of labor law as currently defined. The nature of the firm as first articulated by Coase and built on by other scholars predicts that reductions in the transaction costs identified in this paper will lead to greater utilization of market arrangements for labor (that is, contracting out). We discussed the specific technologies that are leading to the reduction of those transaction costs and the theoretical reason why the technologies are creating more contract work and decentralizing labor markets. These factors, according to Coase, will result in a shrinking of the firm and more contracting on the market for labor. This means fewer employees and more independent contractors. And that, in turn, means fewer firms and people who are subject to labor law.

Although we predict an expansion of the labor contract at will in this new economy, the Fair Labor Standards Act of 1935 and other labor laws and regulations do not accommodate a world in which most workers are legally defined as independent contractors. In fact, those laws have the perverse effect of discouraging employers from hiring employees and encouraging them to instead use contract labor. This issue is especially pressing now that gig economy workers such as Uber drivers, who contractually agreed to be classified as independent contractors at the inception of their work arrangement, are suing to retroactively be classified as employees and to receive employment benefits. A judicial fiat against the use of independent contractors thus threatens to destroy the labor innovation that is the gig economy. As Epstein claims, "Now that labor markets are extensively regulated, the private evolution [of the relationship between employees and employers] has been brought to a halt" (Epstein 2015b). If courts cast doubt on the enforceability of independent contractor and at-will work agreements, the entire gig economy could disappear.

Moreover, in addition to the general distortions to labor markets caused by labor regulation, some of these labor laws, such as minimum-wage laws and overtime regulations, may not even be applicable to a new economy in which input measures (for example, hours worked) are no longer the units for payment. Epstein (2019) discusses how recent minimum-pay laws in New York City impacting for-hire vehicle drivers are causing challenges for gig economy ride-sharing workers who drive with multiple platforms at any given hour; such workers receive pay per ride rather than per hour to better align incentives for shorter trips. Moreover, hourly pay arrangements misalign incentives, as Epstein (2018, p. 51) argues: "The only possible chance of making this scheme

work for people who work for a single company is to work exclusively off the time reported for each, which of course gives drivers a perverse incentive to slow down their trips." Since the nature of the gig economy often involves per-output rather than per-hour pay (for reasons that also include working with multiple platforms in any given hour), Epstein (2018, p. 51) rightfully argues that "[t]he difficulty of converting piece rate into hourly wage is a thousand times more difficult in this context than it is on the factory floor."

Harris and Krueger (2015) also discuss this problem of immeasurability of work hours, as many freelance and gig workers do not have standard work hours and the boundary between work and nonwork has dissolved. In some sense, these jobs look more like those of academics (with no real boundaries between work and nonwork) than of manufacturing workers clocking in for a clear 9–5 pm work shift, which makes it even more difficult to apply traditional overtime-pay regulations. Harris and Krueger also point to further challenges for labor regulations of "for whom?" work, since freelancers and contractors already work for many different institutions and individuals simultaneously. In their proposal for reforming labor laws for gig economy workers, Harris and Krueger (similar to Epstein) argue that it makes little sense to apply hour-based rules such as the minimum-wage and overtime regulations to contractors, freelancers, and gig economy workers. In theory, though, minimum-wage regulations could be updated as minimum price per output that workers could be forced to charge. However, this would be counterproductive for the new economy because it would interfere with the process of how underutilized resources have become increasingly utilized in the gig economy. In the above example of GetAround, if regulations required that all car owners charge above a certain price, then many of them will be priced out of the market, and their cars will continue to sit idly in their driveways.

As more workers and employers effectively opt out of labor law by engaging in alternative work arrangements, the force of labor law does seem to be coming to an end. The efforts thus far to force workers and employers to be in an employment relationship and to retroactively recategorize independent contractors as employees has resulted in turmoil in the courts and the markets, but little good has come from trying to force the square peg of how people work today into the round hole of 1930s-era labor law (Palagashvili 2017). Efforts to apply hours-based la-

bor regulations to contractor-type work, which is often based on pay per output, can create further problems for the new economy.

Instead, there should be radical reforms to labor law that focus on developing a regime that works for the workers who are voluntarily deciding to participate in this new economy. This requires divorcing the benefits that workers receive from employment from any one employer. Presently, many if not all of the benefits associated with work are tied to a specific employer. This can be problematic as more work becomes contract-based and the legal structure continues to encourage employer-provided benefits; more workers may be faced with less health insurance coverage and fewer other employment benefits. Labor regulations need to move toward allowing and encouraging portable benefits plans. The move toward a portable benefits solution will be facilitated if employment benefits are unbundled (Oranburg 2018). Presently, employment comes with a rigid bundle of benefits—including health insurance, life insurance, disability insurance, personal days, sick days, retirement plan contributions, and more—which are expensive and redundant when a worker has multiple jobs. As more workers turn to gig work on multiple platforms, flexible and portable employment benefit packages will become necessary.

Interestingly, private portable benefits are already beginning to appear among retirement benefits. Companies such as Honest Dollar are providing competitive individualized 401(k) benefits plans to contractors and freelancers. This evidences some market demand for the legal change that we recommend.

We have suggested a flexible approach to labor unions (Oranburg and Palagashvili 2020) and a new classification of shared worker that unbundles the rights and responsibilities of employment (Oranburg 2018). Further research is needed to investigate the specifics of how a portable benefits regime can be implemented for workers in the new economy.

5. CONCLUSION

In the spring 1988 special issue of the *Journal of Law, Economics, and Organization* celebrating 50 years of Coase's "Nature of the Firm," Rosen (1999, p. 53) posits that if factors such as monitoring costs, joint production, or transport costs did not exist, then it would be "difficult

to imagine why complete decentralization of labor markets would fail to achieve efficient allocations. Most workers would be, in some sense, self-employed." Thirty years after that publication, are we beginning to see the onset of just that type of decentralized world created by the broader reduction in transactions costs due to technological change? While firms may not completely dissipate, they may shrink, and there may be a general shift away from staffing up and toward contracting out as technology continues to reduce transaction costs.

We do not claim that technological change will cause traditional employment to dissipate completely, as there are a number of countervailing factors. Of course, there are also factors beyond transaction costs that would encourage firms to contract out instead of staff up.[8] Epstein in particular has extensively elaborated on the regulatory costs of employment. Use of the state regulatory apparatus to cause a wealth transfer from employers to employees, Epstein argues, will inevitably fail because private actors will prefer to engage in regulatory arbitrage. Indeed, the legal risks associated with terminating an employee, the mandatory benefits that must be provided to employees, and the statutory rights of employees to collectively bargain are all costs that firms must bear when they staff up instead of contracting out. The decision to contract out may thus be understood as a type of regulatory arbitrage in which it pays to avoid the state's regulatory apparatus. To the extent that regulatory arbitrage is more efficient for private actors than compliance with the regulation, private actors will do otherwise than comply.

The rise of the gig and freelance economy has some drawbacks as well. Epstein once argued that the mechanisms in contract-at-will employment are self-enforcing and thus labor law is not necessary because "[g]etting a new employee is difficult, as is finding a job, so that both parties have an incentive to preserve the relationship" (Epstein 2015a, p. 795). This argument is less true today than when he wrote those words. The gig economy has made both getting a new employee and finding a new job easier. As a result, parties have fewer incentives to preserve their relationship now than previously. Indeed, employers are struggling with employees ghosting, in which they simply fail to show up for work, never to be heard from again. Moreover, the cost of getting a worker or finding a job is likely to continue to decline as the gig economy grows, while the employment market may become more anonymous. Therefore, to the extent

8. For example, there are sociological factors such as changing attitudes toward the nature of work with the rise of the creative class (Florida 2012).

that we found comfort in informal constraints on employers' and workers' behavior when imposing labor regulations on the traditional economy, our comfort level may decline as transaction costs decline and lead to more gig work.

Nevertheless, the implications for the law is that formerly alternative forms of work may soon predominate in the labor market, and labor laws written in the 1930s may be outdated and inapplicable to the new type of jobs that are emerging today. As innovation disrupts goods and services as well as labor markets, it may also exert pressure to disrupt age-old labor regulations and reform them for a new economy.

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