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The politics of Uber: Infrastructural power in the United States and Europe

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Abstract

Platform firms have been depicted as having structural and instrumental power and being able to prevail in regulatory battles. This article, in contrast, documents how they have often adapted to regulations and provide different services across locales. I show that platform firms have a specific type of power, infrastructural power, that stems from their position as mediators across a variety of actors. This power, I argue, is shaped by pre-existing regulations and the firms' strategic response, that I call "contentious compliance": a double movement of adapting to existing regulations, while continuing to challenge them. I apply this framework to the expansion and regulation of Uber in New York City (US), Madrid (Spain), and Berlin (Germany).

Keywords: business power, platform economy, regulation, state, Uber.

1. INTRODUCTION

This article examines the influence that platform firms exercise over the state, and the regulatory conditions under which they operate. Platform firms are digital infrastructures that enable two or more groups to interact, and they create and capture value by recording and exploiting the interactions in the ecosystems that emerge around them (Kenney & Zysman, 2016; Parker et al., 2016; Srnicek, 2016). With a new business model based on information technology and a lean workforce (Weil, 2017), as well as enormous amounts of outside capital (Davis, 2015b), these firms are manifestly influential. However, while these firms were initially able to take advantage of loose regulations in the American service industry, expanding and achieving further deregulation (Rahman & Thelen, 2019), in actuality their success has been uneven as they have had to adapt to different regulatory settings. Variation in how the platform economy operates across locales highlights the need for further theory development. Additional analysis is especially important given that the conventional wisdom concerning the power of capital and its effect on policymakers does not adequately account for these cases.

This article elaborates a theoretical framework for understanding the politics of platform firms. Moving away from traditional conceptualizations of business power, such as structural and instrumental power, I argue that these firms have, above all, a specific type of power, "infrastructural power." This power is tied to their normal operation—that is, the provision of their services—and stems from the specific position these firms occupy in the economy. These firms *mediate* between producers and consumers of goods, services, and information; in so doing, they create an ecosystem that depends on them. In this way, platform firms become increasingly relevant in our economies. This is the source of their power.

The extent of infrastructural power is shaped by first, pre-existing regulations, and second, the firm's response that I call "contentious compliance." Pre-existing rules constrain the extension of services of these firms and their ability to create an ecosystem. Contentious compliance, in turn, refers to a strategy of simultaneously adapting to regulations while continuing to fight them with the goal of extending that ecosystem. Platform firms generally enter the corresponding markets either disregarding existing laws or exploiting legal grey areas (Pollman & Barry, 2017). Firms then adapt to existing regulations only as much as necessary to be in the relevant market, while continuing to contend regulation as aggressively as possible. That is, firms accept existing rules only because

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they take every opportunity to expand and display their services, to build the power necessary to push for favorable regulatory change. This process is reinforced by firms' investment in lobbying and coalition-building with politicians, drivers, consumers, and the public.

This article contributes to our understanding of platform firms in two ways. First, it challenges established concepts by bringing the case of the platform economy into conversation with the larger scholarship on the power of capital. Drawing on a theoretical discussion of the "privileged position" of businesses in market economies and its structural power (C. E. Lindblom, 1977), I discuss the specificities of platform firms and how this leads to a particular type of power, infrastructural power, and their strategies to accumulate it. Further, by conceptualizing a "contentious compliance" strategy I show that regulation is not the end of the story, as platform firms continue to undermine and fight the rules. Second, it shows that there is substantial variation in regulatory outcomes, that hinge on initial regulatory conditions—that is, there are institutional path dependencies. Governments deal with disrupting innovations by trying to fit them into the existing legal structures and are thus able to shape firms' expansion. Rather than giving in to big business, the state does attempt to maintain control.

This article applies the infrastructural power framework to the emergence and expansion of the app-based ride-sharing company Uber in three cities: New York City (NYC, US), Madrid (Spain), and Berlin (Germany). As Uber entered the market of private transportation of passengers, it grew to be the most valued venture-backed company in the world, and developed beyond the US.[1] Uber claimed to be a technology company rather than a transportation company, with the company itself only providing the platform.[2,3] With this justification, it ignored extensive pre-existing regulations in the taxi sector, and terms like "Uber for X" and "Uberization" have since become linguistic shorthand for new platform businesses and how they attempt to bypass the regulation of the corresponding established industries. However, the regulatory landscapes to which Uber had to adapt differed across locations—something we do not necessarily see in other global platforms. Thus, I leverage variation in the pre-existing regulatory conditions that Uber faced in these three cities and I detail the firm's response to show how this shaped its ability to display its services and, consequently, its power.

I choose Uber because it constitutes a crucial case of the "least-likely" type (Eckstein, 2000). These cases are particularly fertile to prove hypotheses. While Uber has been considered a radical disruptor, I show that the firm has lost many regulatory battles and has, to a certain extent, adapted to the law. As a first mover, Uber has been present for enough years to study not only the firm's initial actions, but also government' responses to the firm and the interaction between the two parts. There has also been a certain "normalization" of these platform firms, that have abandoned their "move fast and break things" motto[4] for a more legalistic and negotiated approach.[5]

Using a mostly qualitative analysis based on several sources of evidence—including judicial regulations, court cases, and press reports—I examine the politics of Uber's expansion in each of the three cities, detailing how Uber constructed its power through contentious compliance. I use the city as the level of analysis because that is the focus of Uber's expansion. Moreover, there is subnational variation in regulations, and though regulatory battles are fought at many levels, it is at the city level where the ultimate decisions are made. To carry out my analysis, I chose these three countries' most important cities, that also vary in pre-existing regulations—something that had an influence in the capacity of the firm to create an ecosystem around it.

The three case studies show the importance of examining specific firm-state interactions when advancing theories on the power of business. Despite rapid growth, in its different locations, Uber has been forced to adapt to different rules, provide different services and negotiate different regulatory frameworks. Thus, this article contributes to a new way of conceptualizing the power of these firms, and how it evolves in relation to state control. I do not argue, however, that this is the only source of power of the firm, or that the outcome is pre-determined. My work highlights that pre-existing institutions matter, and influence outcomes. It also underlines the strategies these firms deploy, unable to exit jurisdictions where they want to operate. These are not, however, the only strategies, as the description of cases will show.

In the following section, I review traditional conceptualizations of business influence and how they are unable to account for the emergence and expansion of platform firms. In the third section, I trace how scholars in economics and law have defined these firms' services and power as infrastructural, and I present my argument regarding the specific type of power these firms have and how it relates to regulation. In the fourth section, I explain my case selection and the methodology. The fifth section shows my case evidence: Uber in NYC, Madrid, and Berlin. In the conclusions, I outline the implications of this work for future research on the platform economy and the literature on regulation.

2. The power of capital

How well do traditional conceptualizations of business influence apply to platform firms? Original understandings of business power took it to be "structural," meaning that capitalists, as investors, individually determine levels of economic activity and in so doing constrain policymakers from pursuing policies against their will (Block, 1977). However, as it became clear that business did not always prevail, this notion was challenged. Research then focused on variables that interact with the power of business and shape it (Hacker & Pierson, 2002), restoring capacity and agency to the regulatory state. While platform firms appeared to challenge this nuanced perspective, as they seemingly concentrate an enormous amount of economic influence that would allow them to get their way, a closer look reveals that platform firms also face a variation of regulatory outcomes, casting doubt on the usefulness of existing ways of understanding their power.

In the 1970s, business was considered to have a "privileged position" in market economies and thus its power was understood to be structural (Block, 1977; Lindblom, 1977). Firms and holders of capital could influence governments by withdrawing investment—that is, using the "exit option"—upon which the state depended for economic growth and jobs. Further, globalization and the capacity for "slicing up the value chain" into geographically distributed production lines (Feenstra, 1998; Krugman, 1995) enhanced this power (Ohmae, 1995; Strange, 1996). In this context, government was considered to be a prisoner of capital (Lindblom, 1982), and more globalization could only lead to further deregulation across countries.

However, since it was first developed, this account has been widely disputed. In fact, there has been no such global convergence around deregulation (Guillén, 2001; Vogel, 1996). Moreover, several studies have shown that the structural power of business is not a constant, but is variable across countries, sectors, and time (Culpepper, 2015; Fairfield, 2015; Hacker & Pierson, 2002). Indeed, the exit options of firms change as they interact with political institutions (Hacker & Pierson, 2002), actors, and their political strategies (Farrell & Newman, 2015; Mahon, 1996), asset specificity (Frieden, 1991) and mobility (Winters, 1996), sunk costs (Frieden, 1991; Jensen, 2006), and more.[6] Moreover, while the state depends on the decision to invest of holders of capital, holders of capital depend on regulatory conditions to be able to profit. Thus, a more productive and less deterministic way of thinking about structural power emerged that was to conceptualize it as a set of "mutual dependencies" between the two political actors involved, business and the state, that affected the strategies of both (Culpepper, 2015).

This relational lens broadened the focus, from the "automatic and apolitical" power of business (Hacker & Pierson, 2002) to include business' deliberate actions to influence policy—something conceptualized as "instrumental power." Research showed how business purposedly builds relationships with policymakers, such as partisan linkages and institutionalized consultation, and utilizes resources such as cohesion, expertise, media access, and money, to obtain more favorable policy outcomes (Fairfield, 2015).

As the platform economy emerged and a handful of corporations concentrated enormous amounts of influence (Davis, 2015a; Moore & Tambini, 2018) and appeared to have, independently and without coordinating with each other, an enormous impact on policy-making (Culpepper & Thelen, 2019), these concepts were applied to understand their influence. Indeed, Uber was highlighted for achieving deregulation in the US (Borkholder et al., 2018; Tzur, 2017) thanks to the firm's use of both instrumental power and structural power—the latter derived from the firm's threat to exit and the government's fears of losing economic benefits, jobs and a high-tech reputation (Collier et al. (2018).

However, these conceptualizations of power do not really apply to the platform economy. While these firms' structural power is low—because of an exit option that is neither *relevant*, nor *credible*—their instrumental power seems to be an additional resource, but not the main in their pursuit towards their desired regulation.

First, platform firms' structural power is low, because of a comparatively weak exit option. On the one hand, that exit option as originally conceptualized—that is, in terms of the consequences on growth and jobs—is not *relevant*, since it does not have those consequences or not to the same extent as other economic sectors (Culpepper & Thelen, 2019). In fact, the technology sector in the US contributes less than 7% of GDP and employs less than 3% of the labor force, while manufacturing employs four times that amount (Klein, 2016). On the other hand, that exit option is not *credible*. At first glance, these firms, with their scarce physical infrastructure and slim structure, would appear to be fully mobile and thus have great negotiating power *vis-à-vis* the government. Yet since the final product these firms provide is a local service, in order to meet the demand of a certain market, they need to be in that market—that is, they cannot dislocate production, or not to the same extent that other firms in other sectors. They can certainly relocate some fragments of their business—for example, Uber's main headquarters is in the Netherlands, where corporate taxes are lower than in most European countries—but not all of them. Moreover, these firms not only want to reign locally, but become global players. These firms' growth is based on network effects—the more people use it, the more valuable the platform becomes for its participants, attracting even more users (Srnicek, 2016)—that are not only local, but also global. An Uber user in the US travels to Spain and opens the app, hoping to get a ride and have the same experience. In this way, being in *every* local market reinforces use in *each* local market. Therefore, at least to some extent, they must adapt to local rules to continue to grow globally.[7]

Second, these firms' instrumental power, while it helps them advance their interests, is not the decisive feature in these firms' ability to achieve better regulations (Culpepper & Thelen, 2019). In fact, the data shows that there may be an inverse relation, since tech firms deploy more resources as regulators become harsher and regulations more stringent. This is visible in the case of the European Union (EU). While in recent years tech companies have multiplied their spending and lobbying activities in Brussels (Google and Facebook, e.g., have increased their spending by 240% and 150% since 2014, according to data provided by Transparency International EU, 2018), the EU's supra-national institutions have become the global leaders in tech regulation. Thus, lobbying does not seem to have very promising outcomes.

While the notions of structural and instrumental power are the ones that have been applied to the study of the platform economy, there are other conceptualizations about business influence, most notably ideational and informational power. Ideational power highlights the perceptions and interpretations of state actors regarding the influence of business, and how these ideas mediate the structural power of capital (Bell, 2012). This approach highlights agency and shows that ideas can shape power. Informational power, in turn, shapes human behavior by manipulating the informational bases of other types of power (Braman, 2007). This type of power alters the nature of the effects of other type of powers, like structural and instrumental. In line with the literature, I take these to be mediating and not central factors. In addition, more recently, a new type of business influence has been conceptualized as "institutional business power" to understand the effects of private provision of public goods and services (Busemeyer & Thelen, 2020). While Uber is eager to integrate itself into public transportation, this is not significant yet and thus this type of power does not apply to what constitutes the private provision of a private service.

A sign that traditional conceptualizations were found faltering, is that cross-national comparative research advanced in other directions—mainly two. One was to abandon the study of business power and focus on other explanatory variables. For example, to account for the variety of regulatory responses that Uber confronted beyond the US (including defense by the government of existing regulations in Germany; and two-way adaptation in Sweden), Thelen (2018) pointed at the different conflicts that the firm created across countries, and the different alliances that were formed against and in favor. Others focused on the degree of institutionalization of different countries, together with the level of the regulatory authority (Uzunca et al., 2018). While interesting and informative, the specificities of the platform economy and its enormous influence suggest a business power approach may be particularly illuminating to understand regulatory dynamics.

Indeed, the other route was to sustain the business influence framework but innovate conceptually and give the platform economy its own type of power. Culpepper and Thelen (2019) argued that consumers' dependence on the goods and services that these firms provide grant these firms a distinct type of power—"platform power." Platform firms' uniquely unmediated link with users and users' appreciation for these platforms tilts the terrain in the firms' favor, as no politician wants to be the one that impedes consumers' access to Amazon's next-day shipping, or Facebook's information flow. In addition, platforms direct link with users reduces the transaction costs of collective action, and companies can mobilize them as grass-roots activists (Seidl, 2020). In their argument, different regulatory outcomes depend on consumers' trust. When firms lose this trust, the costs to politicians of interfering with consumer access are lowered, and firms are more likely to be regulated.

Still, there are two weaknesses in this analysis. First, the authors only look at cases where these firms have been allowed to flourish and have thus already accumulated power. Second, these authors only analyze these firms' relationships with consumers, but these firms create dependence also among producers, workers, and, crucially, the public sector.[8] Nevertheless, there is no analysis of how those groups react to the regulation of those firms.

In what follows I present my argument about the specific type of power these firms have.

3. Explaining regulatory outcomes: Infrastructural power

Infrastructural power shapes regulatory outcomes. This power varies according to pre-existing levels of regulation in the for-hire sector and the strategy of "contentious compliance" that these firms adopt. Pre-existing levels of regulation constrain the provision of services by these firms, and these firms adapt to existing regulations to be able to offer their services, while continuing to push for deregulation. Given that these firms occupy a position of intermediaries, they create an ecosystem around them. As platform firms extend their reach to more and more actors, they accumulate more power and are more able to shape regulation.

In the economic study of technological companies "Platform Capitalism," Srnicek defines the digital economy as "increasingly pervasive *infrastructure* for the contemporary economy," in a way that is systematically important and even essential (Srnicek, 2016, p. 5). Platform firms' core service is to mediate between producers and consumers of goods, services, and information (Langley & Leyshon, 2016). As mediators, these firms "orchestrate the activities of various participants, and (…) determine the operation of the far more numerous ecosystem complementors" (Kenney & Zysman, 2016, p. 9). They shape those interactions and collect data on them, that in turn use to provide better services, as well as to expand to a wider variety of economic activities—involving even more actors (Srnicek, 2016). In other words, platform firms become the infrastructure of society, providing services intended to be as essential and "as reliable as running water."[9]

As platforms own the infrastructure that is required for society to function, they situate themselves in an immensely powerful and profitable position (Srnicek, 2016). Law scholars have addressed this in terms of the need (and so far, absence) of an adequate regulatory response on the side of the state. In a seminal study on Amazon, Khan (2017) points at this firm's control of "key critical infrastructure for the Internet economy" (p. 755), and the concentration of economic power this entails. Khan claims that because regulators are focusing on consumer' prices, instead of market structures, they fail to notice the monopolistic position this firm has reached and its dangerous anti-competitive effects on the economy. Rahman (2018a, 2018b, 2018c) similarly considers Amazon and Google to comprise "the basic infrastructure of modern society" (p. 1641) and points at the dangers of private control. Private power exercised over an infrastructural firm or sector (something the author refers to indistinguishably as "corporate power," "platform power" and "infrastructural power") allows for the exercise of preferential treatment, the imposition of higher prices, or the enactment of discrimination and exclusion (Rahman, 2018a). The author then suggests a series of regulatory tools to curb this power. In the following article, Rahman (2018b) expands on three specific forms of "infrastructural power" these firms exercise: gatekeeping power (control over entry and exit to the platform), transmission power (the organization and manipulation of flows of information and activity of users of the platform), and scoring power (the construction of scores that shape other actors' decisions). However, these authors have not focused on how the power of these firms varies and where that variation comes from.

I follow existing definitions and consider these firms' services as infrastructural[10] and, as such, ubiquitous. This is, I argue, the key source of their influence *vis-à-vis* the government: by becoming central to the functioning of an ecosystem of economic actors they make their exit option *relevant* and actively construct their power—that I will call, in line with conceptualizations in economics and law, as well as Rahman's work, "infrastructural power." In other words, platform firms' power stems not from the economic growth or jobs they provide (as in structural power), or the specific lobbying activities they undertake (as in instrumental power). Instead, platform firms' power comes from their role as key intermediaries that influence the rest of economic actors—consumers, but also producers, workers, and the public sector.

Most industries today require the digital economy for the execution of their normal functions. Beyond sellers on Amazon or stores listed in Google, firms now need technology and the services of the digital economy in some or every stage of the process of production. Workers, in turn, need only to log in to these apps, wherever and whenever, to earn money. Finally, the public sector is increasingly incorporating these firms' services, either using them for their own activities (e.g., transport agencies using data provided by Uber,[11] or US intelligence agencies storing its data in the Amazon cloud),[12] or outsourcing services (e.g., the Washington Metropolitan Area Transit Authority subsidizing Uber and Lyft to provide late-night transportation).[13] Thus, infrastructural power will be higher when these firms are more relevant to the economies of these other actors.

How does infrastructural power vary? Pre-existing regulations constrain the provision of services by these firms, and firms respond with a strategy of contentious compliance. This shapes the extension of the services that platforms provide and thus its power. Depending on the extent of power, firms are in turn more or less able to shape regulation.

When pre-existing regulations are low, firms will be able to offer their services and expand. As explained, the provision of services by these firms is key to create an ecosystem around them that allows them to gain more data. These data, in turn, are used to provide more tailored services and forge a larger and more loyal network of actors around the platform. This means more power. When pre-existing regulations are high, firms are severely curtailed not only to offer their services, but, crucially, to create that ecosystem that would allow them to become central to other economic actors. Thus, they do not gain much power.

However, even when firms face strict conditions and are unable to change regulations, they will not exit. These firms seek to be global players, and this requires local presence and growth. Therefore, firms cannot make their exit option *credible*. Instead, firms will engage in what I call a strategy of contentious compliance: adapt to existing regulations only as much as necessary to enter the relevant market and start providing services, while contending regulation as aggressively as possible.[14]

I explain these variables in more detail in the following section.

3.1. Previous restrictions in the for-hire sector

Lower levels of regulation in the for-hire vehicles sector should initially allow for a smoother entrance and a larger expansion of Uber in that market; likewise, higher levels of regulation should create a more difficult entrance and prevent Uber from growing as successfully. In turn, the expansion of Uber into a market amplifies its opportunities to provide its services. The provision of services increases its infrastructural power, which it can then use to achieve more favorable regulations.

Existing regulations in the market of transportation of private passengers are usually organized around two types of vehicles: taxis and non-taxis. In general, there were no regulations explicitly allowing or prohibiting the transportation of passengers in non-registered cars driven by citizens without a professional license, which is Uber's preferred model, UberPop.

Most countries and/or localities allow and regulate the existence of an alternative to taxi transportation: the hire of an insured, unmarked car with a licensed driver. The taxi sector generally consists of registered taxi drivers in vehicles marked as taxis, which passengers can hail on the street and pay a fee that the taximeter in the car will determine. The for-hire sector is mostly composed of registered drivers in standard or luxury vehicles that passengers can hire for a pre-arranged fee. This was a service traditionally used only by tourist agencies, hotels, or specific groups for specific events.

In general, until the emergence of Uber and other similar companies, the market of private cars with drivers for hire was not significant and not an object of regulators' concern. While the taxi market was and continues to be heavily regulated—typically there are special licenses issued by the government and numerous vehicle specifications, as well as caps to the number of licenses and vehicles on the street (Dempsey, 1996)—the for-hire sector has varied in levels of regulation. Higher levels of regulation in this market can include specific licenses for drivers and vehicles, caps on the number of licenses and/or vehicles, a series of vehicle requirements, geographic restrictions for licenses, and specific rules (e.g., that drivers can only take trips from their base, or that vehicles must return to their base after each trip). Lower levels of regulation would merely mandate professional licenses for drivers and vehicles, as well as some insurance requirements.

To code the level of existing regulations in the for-hire market I consider first, the limits to the number of vehicles and, second, qualitative restrictions to the service (that can be an indirect way of limiting the number of cars). I examine these restrictions in absolute terms but also in relation to the regulations of the taxi industry. I code the level of existing regulations as "low" when there are no limits to the number of cars and there are fewer qualitative restrictions to the for-hire service compared to those of the taxi. I code them as "medium" when there are limits to the number of cars, and several qualitative restrictions to the for-hire service, though still less than in the taxi industry. Finally, I code them as "high" when there are strict limits to the number of cars, and the qualitative restrictions in the for-hire service are equal or superior to those in the taxi.

3.2. Contentious compliance

In response to regulations, firms adopt a contentious compliance strategy: adapt to existing regulations, while pushing for further changes.

Platform firms enter markets either exploiting grey areas of the law or directly breaking it. They have been defined as "regulatory entrepreneurs" as they make changing the laws a "material part of the business plan:" tech firms are "built around and based upon a plan to change the law—and, in some instances, to simply break the law in the meantime" (Pollman & Barry, 2017, p. 386). This is different from traditional corporations, whose lobbying efforts formed a small part of their overall operations, with the goal of influencing the law that applies to established and legal activities to increase profits and growth. In other words, while regular firms may contest some aspects of regulatory policy, tech firms demand a change in the core regulatory principles and mostly subsist at the edge of legality—even more in recent times.[15,16]

Thus, platform firms are at odds with regulation. However, these firms cannot leave the territory if they want to provide their services and generate an ecosystem—the very thing that allows them to accumulate infrastructural power. Thus, the response from firms is that of contentious compliance. Platform firms ignore the law for as long as possible and even break it,[17] but also change—even if minimally—in the face of regulatory threats. Firms are able to do these minimal changes without incurring in too many costs because of the inherent flexibility of their business model. Those changes, in turn, allow the firms to offer their services with the hope of becoming ubiquitous. Still, these firms never cease to push for deregulation to be able to offer their preferred version of the service—one that further penetrates the lives of consumers, the economic activities of producers, the subsistence of workers, and the functioning of the state, making the firm even more essential.

An observable implication of this strategy is that these firms rarely leave jurisdictions when faced with regulations they do not prefer. Instead, they stay, do minimum changes if necessary and continue disputing existing regulations. Indeed, from Facebook in Australia when the government issued a new law that forced platforms to pay traditional media for their content, to Uber in California when Proposition 22, a new regulation of labor relations, was passed, we have witnessed these companies staying, adapting minimally, and continuing the fight for their preferred regulation.

In addition to their infrastructural power, platform firms also use the more standard strategies of lobbying and coalition building with relevant actors. The use of instrumental power is less dependent on the expansion of the firm, as the resources come not from the (so far non-existent) profits, but from outside capital. Regarding lobbying in the US, Uber has continued to increase the amount of money it spends, the number of issues it is concerned about, and the agencies it interacts with.[18] In Europe, Uber has spent a large sum of money, and has invested in creating effective links to relevant officials (Kergueno, 2017). Regarding coalition building, Uber has attempted to build bridges with governments, consumers, and even drivers. To gain the government's goodwill, it has produced several reports highlighting its contributions to the economy, traffic, and environment. Regarding consumers, Uber brands itself as always prioritizing their comfort and satisfaction with the service. Finally, it has employed a series of strategies to get the political support of drivers by offering training and financial assistance, among others. Regarding traditional taxi drivers, Uber has encouraged and facilitated their transition to becoming Uber drivers, as well as, in rare occasions, offering to compensate them.

4. Uber across cities

Uber launched in the US in 2009 and expanded to Europe in 2012. Table 1 displays a typology of Uber's services in relation to its preferences and its *ex ante* legal status.

TABLE 1 Uber basic typology

Service	Description	Uber's preference	Ex-ante legality
UberPop	citizens in their own vehicles	1	Illegal
UberX	professional drivers in a licensed vehicle	2	Legal
UberTaxi	professional taxi drivers in a taxi vehicle	3	Legal

Outside of the US, and in some cases after substantial regulatory defeats, Uber mostly abandoned its preferred service, UberPop, a ride-sharing app to book rides with regular citizens in their cars. In most countries, this service was illegal and contested by taxi companies, and Uber transitioned to the provision of legally allowed services. The existing "for hire" sector, discussed earlier, constituted a legal way for Uber to provide its UberX service—a ride-sharing app to book rides with professional drivers in licensed vehicles. However, in the cases where this sector had too-constraining regulations around it, Uber was not able to offer its UberX service and could only offer UberTaxi—a ride-hailing app to book rides with existing taxi companies.

While adapting to existing regulations and taking advantage of every opportunity to expand its business and gain the support of consumers and other actors, Uber never ceased to push to alter the legal framework in favor of its preferred UberPop model, the one with fewer barriers to entry and exit. This is explicitly acknowledged by Uber executives, who emphasize that Uber operates according to existing regulations while insisting that those regulations are old and outdated.[19] Moreover, they admit that they have an ideal service in mind and that they will continue to push in that direction.

4.1. Methodology

I study Uber as a crucial case of the "least-likely" type (Eckstein, 2000). These are useful cases to prove a hypothesis, since although background conditions would predict otherwise, "the hypothesized relationship between X and Y holds" (Gerring & Cojocaru, 2016, p. 404). Uber has been taken to be all-powerful and able to achieve its preferred regulation, yet my cases demonstrate that this firm has lost many regulatory battles and works in ways that are not their preferred one. Similarly, this firm has been considered a total disruptor, a company that disregards the law when not directly breaking it, yet I show that even that type of firm adapts to the law to a certain extent.

My analysis focuses on three rich and cosmopolitan democracies that exhibit variation in pre-existing regulations, that shaped Uber's growth and the extension and ubiquity in its provision of services. Although I compare three countries, I focus on a large, important city in each case. There are three reasons for this decision. First, large cities were the focus of Uber's expansion. Second, there is subnational variation in regulations, thus cities constitute the right unit of analysis. Finally, while the three chosen cities have different levels of autonomy from national governments, the regulatory battles were ultimately defined at the local level—either because of local transportation authorities, local court cases, or decisions from local governments.

I draw on several sources of evidence. To measure regulation, I rely on written laws and rules, court cases, and press reports. To get at contentious compliance, I trace how the firm adapts to provide legal services, while also continuing to try to provide services that are at the edge of legality, if not directly illegal. I approach infrastructural power in two ways. First, I review the way this app works in each city and the services that are offered, detailing how they create an ecosystem composed of other actors—consumers, workers, producers, and the public sector. Second, I use figures for market share as a proxy for the size of that ecosystem, and I show the relationship between the share of Uber *vis-à-vis* that of the taxi industry.

Table 2 displays the levels of previous regulations and the contentious compliance response that will influence Uber's expansion. Pre-existing regulations shape the initial extent to which these firms can provide their services, and thereby construct their power. Thus, the firm's expansion and power are inversely related to the strictness of regulations. The last column shows the expected outcome in each case, which maintains the same rank ordering of initial levels of regulation.

I code the level of existing regulations as low when they allow for the private hire of vehicles to compete with the taxi, in a way that makes it possible for Uber to enter the market legally with its UberX model. This is the

TABLE 2 Infrastructural power and regulation

Case	Previous regulations	Contentious compliance	IV: Infrastructural power	DV: Regulatory outcome
NYC	Low	Yes	High	Temporary re-regulation against Uber
Madrid	Middle	Yes	Middle	Permanent and restricting re-regulation against Uber
Berlin	High	Yes	Low	Maintenance of strict regulations against Uber

case of NYC. The level of regulations is coded as medium when the city allows for the private hire of vehicles but has restrictions to the service. This is the case of Madrid, where private-hire services were capped—1 license for every 30 taxi licenses. The level of regulations is coded as high when they make it practically impossible for any other type of private transportation of passengers to exist and compete with the taxi. This is the case of Berlin, where Uber was not allowed to offer UberX and transitioned to work as an app to book rides with licensed taxis companies; thus, it was no longer a ride-sharing app, and was the farthest from Uber's preferred model, UberPop.

In all three cases, Uber engaged in contentious compliance, adapting to regulations in order to grow, while pushing for deregulation. Still, this is not a deterministic process. Expanding and increasing its infrastructural power does not imply that a firm will not be regulated. However, as the firm grows and becomes ubiquitous, there are more actors involved and thus more stakes in regulating it. Arguably, there are also more stakes in *not* regulating it, as a private company has enormous influence over the rest of actors. Therefore, the outcome of the process is not set.

5. Case study analysis

In what follows, I analyze the emergence and development of Uber in three cities, NYC, Madrid, and Berlin. I show that the firm constructed infrastructural power, shaped by pre-existing regulations and the strategy of contentious compliance, and how this power impacted regulatory outcomes.

5.1. New York City, US

Pre-existing regulations in the for-hire sector of NYC, as well as Uber's ongoing challenges to them under the strategy of contentious compliance, shaped the firm's expansion and its construction of infrastructural power in this city. Low levels of previous regulations allowed Uber to expand and create an ecosystem around it, displaying its innovative new services in ways that sometimes conflicted with regulations. The firm also invested heavily in lobbying and coalition building. This increased Uber's infrastructural power and prevented any meaningful regulation against it. NYC constitutes the largest North American market for Uber, with an annual revenue of $2 billion—of which the firm retains about $375 million in commissions and fees (Parrot & Reich, 2018).

Uber entered the city of New York in May of 2011 complying with the rules of the for-hire sector. Uber never tried to provide its preferred model, UberPop. Instead, it initially provided its high-end for-hire service, UberBlack, and in July of 2012, started to also offer its cheaper for-hire service, UberX, geared towards mass consumption. The former was a luxury service that supplied professional drivers in black luxury sedans and could cost up to three times more than a regular taxi;[20] the latter also involved professional drivers with private car services, but the vehicles were standard, and the ride cost only slightly more than a taxi.

For both services, Uber relied on the existing legal framework of licensed for-hire vehicles. The rules for these vehicles were very similar to those for taxis, except for two crucial differences: the number of taxi vehicles was capped, and the number of for-hire cars was not, and taxi fares were controlled while those of for-hire vehicles were not.

These low levels of regulation allowed Uber to expand and accumulate infrastructural power. Its expansion was based fundamentally on its lower prices and innovative and tailored services, that contributed to the creation of an ecosystem of actors around the firm. The firm lowered fares of its UberX service by 20% and made it cheaper than a yellow-taxi ride. It also started offering UberPool, a carpooling service that is cheaper and arguably decreases traffic congestion in crowded cities; UberWAV, a wheelchair-accessible service; and UberCarSeat, equipped with a seat for an infant. All these services are tailored to specific needs and/or preferences of consumers—and therefore have an even greater possibility of becoming ubiquitous. Uber's technology also allowed passengers in under-served outer boroughs of NYC to use this service and won Uber an unexpected ally: civil rights' organizations.[21] Because of a combination of lower and dispersed demand, as well as class and racial bias, yellow taxis rarely took passengers outside of Manhattan; instead, Uber drivers did—because they had to respond to most requests, and they did so without knowing the location and the passenger.[22] Serving these distant areas was appreciated by those consumers, as well as by the government, pressured by those underserved communities to care about the issue.

Despite the low levels of regulations that allowed for the rapid expansion of the service, Uber followed a strategy of what I call "contentious compliance" and continued to push the limits of existing rules. In September of 2012 Uber created an app to hail traditional yellow taxis that the Taxi & Limousine Commission (TLC) soon banned, alleging that existing "contractual agreements between the TLC and payment processors restrict the use of apps" and reminding drivers and operators that the use of phones while driving was not allowed. In April of 2014, Uber's dynamic fare system was under scrutiny. While this system plays to the advantage of riders in times of low demand, it goes against them in others—in particular during natural disasters or emergencies. After negotiations with Uber, the TLC ruled that the passengers should receive fare estimates and itemized receipts.[23]

Meanwhile, the company grew. Between 2011 and 2015, the for-hire market expanded by 63%,[24] with 25,000 new cars carrying passengers,[25] 20,000 of which were Uber vehicles.[26] The city council became increasingly concerned until, in 2015, it attempted to re-regulate the market and cap the number of for-hire vehicles.[27]

However, the firm fought back strongly, displaying its infrastructural power. The company showed how regulations would create difficulties for the ecosystem that had already been created—that is, the myriad of actors that relied on the service. Indeed, Uber added a "De Blasio tab" to the app that showed what would result if the new regulation passed: fewer cars and longer wait times for passengers.[28] That extra tab precisely highlighted how limiting the firm would upset the rest of actors that rely on it. Uber also issued media ads to get consumers' support[29] and sent its top operatives to lobby. The strategy was successful, and the council dropped the plan.

The firm continued to expand. In July of 2017 ridership in Uber surpassed that of taxis—289,000 Uber trips each day compared with 277,000 taxi rides. By February 2018, there were 100,000 for-hire vehicles in NYC, two-thirds of them affiliated with Uber,[30] versus 13,500 yellow taxis—that is, over seven times more for-hire vehicles than taxis.

Uber was now at the center of the economic activity of a multitude of actors and the city moved again to regulate. In July of 2018, the city introduced a proposal to limit the number of new licenses destined to for-hire vehicles, without regulating or restricting the display of services and the use of technology by Uber. The city government focused its campaign on the working and living situation of drivers (Seidl, 2020); that is, on the conditions of a portion of the actors that compose the ecosystem around Uber. Although Uber spent almost $1 million in lobbying and fought aggressively, it lost.

Why was Uber not able to stop the new regulations? Because the regulators were using Uber's infrastructural power against it. While in 2015 Uber had argued that regulations would hurt the ecosystem, this time the city highlighted that it was the absence of new rules what was actually harming the actors that relied on Uber. The new legislation established a year-long cap on vehicles while the city studied the company's economic and environmental impact, as well as the obligation for Uber to report relevant details about the trips, such as duration, cost, driver earnings, and Uber's commission. The city also established a minimum pay rate of about $17 an hour for drivers (TLC, 2018)—a 22.5% increase on average (Parrot & Reich, 2018). With the new legislation, New York became the first major city in the US to limit ride-hailing service vehicles (the cap has been extended since), as well as the first to establish minimum rates for drivers.

Here too Uber responded with the strategy of contentious compliance. Rather than abandoning the NYC market, Uber begrudgingly accepted the new rules, while, again, fighting to change them in courts and in practice. Since then, it has employed a number of tactics to continue to grow in this more adverse environment. First, it rushed to register new drivers before the new legislation went into effect.[31] Second, it planned to take advantage of a loophole in the new legislation that would allow it to request more vehicle permits if that was necessary to serve certain under-served neighborhoods.[32] Third, it started to recruit already licensed professional drivers not yet working for them.[33] Fourth, with the goal of undercutting the minimum wage floor for drivers, the company changed its algorithm and created a new tiered quota system that restricts the number of drivers that can be logged on at any given time.[34] In addition, Uber announced it would give $10 million and share its data with governments to help develop better transportation policies,[35] as well as possibly support a fee to help drivers in financial straits.[36]

The NYC case demonstrates Uber's expansion and accumulation of infrastructural power based on pre-existing regulations and a strategy of contentious compliance. Initially abiding by the weak pre-existing regulations, it was able to grow rapidly and display a series of its innovative services, while also using traditional lobbying tactics and building coalitions with relevant actors to protect its business. As was to be expected, Uber built infrastructural power, displacing taxis, and setting the conditions of the market—in particular regarding to prices, wages, and vehicle availability. By the end of 2018, the government had re-regulated the for-hire sector, but only lightly.

5.2. Madrid, Spain

Pre-existing regulations in the for-hire sector of Madrid, and Uber's ongoing challenges to them under the strategy of contentious compliance, shaped Uber's expansion in this city and its construction of infrastructural power. A moderate regulatory environment allowed Uber to enter the market but limited its expansion and its ability to become ubiquitous. Here too Uber engaged in contentious compliance, while also investing heavily in lobbying, and attempting to build coalitions with relevant actors. However, Uber was able to capture only less than 10 percent of the market for private transportation of passengers—measured as number of trips.[37] Thus, its limited infrastructural power was not enough to stop re-regulation against the firm.

Uber arrived in April of 2014 in the city of Barcelona and in September to Madrid under the UberPop form and started operating without a legal framework. This service contradicted the Spanish Law for Road Transport, the main piece of legislation that regulates this market, which requires drivers and companies providing transportation services for a fee to possess a specific license. The government, rather than adapting regulations to allow Uber to provide its service, did mostly nothing, while taxi associations moved on to strikes and judicial filings. In particular, the Madrid Taxi Association filed a lawsuit against the company for infringing transportation regulations. Uber threatened to leave if it obtained an unfavorable ruling, but that threat had no effect—probably hinting at the fact that when the exit option is not *credible* or *relevant*, the firm's threat to leave does not force deregulation. On December 9, the Commercial Court No. 2 of Madrid ruled that Uber was not abiding by the Spanish Law for Road Transport (in particular, with that established in Art. 22, 42, and 91) and rendered the application inaccessible at the national level—effectively, as riders could no longer access the application or pay with credit card.

After the company was banned, Uber announced it was ceasing its service and left Spain in December 2014. However, it came back to Madrid in March 2016, adapting to existing rules and providing a different, legal, service—illustrating that Uber returns to important markets. The law had not changed, but Uber had, as it abandoned the illegal service and transitioned to UberX, providing licensed and insured vehicles with professional drivers. The company studied the existing regulatory framework of transportation in the country and found its way in through licenses of the type "tourism vehicles with a driver" (VTC by its wording in Spanish). This type of license has existed since 1987 and authorizes professional drivers of licensed vehicles that are not taxis to take passengers and charge them for the ride.

Uber then adapted its business model and took the opportunity to provide a service that was not its preferred choice, but that would allow Uber to expand and create an ecosystem around it. The middle levels of regulation allowed Uber to expand and accumulate power. The service provided by Uber was cheaper, faster, and arguably more comfortable than that of taxis, and Uber grew. However, existing regulations not only made the process of acquiring a VTC license costly and burdensome, but also restricted the type of services the firm could offer. Uber was never able to provide UberPop or any other services such as UberGreen, intended to foster environmental sustainability or UberPool. The inexistence of these services restricted the creation of an ecosystem around the firm.

Still, Uber deployed the contentious compliance strategy: having adapted to some of the regulations to provide a legal service, it continued to fight for deregulation. The management was vocal in its desire to change the rules and presented an "unapologetic apology" for their prior behavior, admitting that breaking the law had been a mistake, only to then criticize existing legislation and push for changes. Carles Lloret, the CEO for Southern Europe, acknowledged that "it was a mistake to replicate the American model—more liberal—without taking into consideration the Spanish context,"[38] yet he also stated that "the Spanish model of mobility is obsolete and unsustainable"[39] and that their goal was "to change the Transportation Law."[40] Indeed, Uber fought regulations at the courts. Together with other companies (such as Cabify) and the Business Association of Tourism Vehicles with a Driver (Unauto), as well as the National Commission of Markets and Competition (an independent authority on competition), Uber sought the elimination of several restrictions to VTC licenses and lobbied to eliminate caps to licenses and further deregulate the market. This latter goal had the support of the competition authority, but not of any other private actors or politicians involved. Moreover, between January 2017 and May of 2018, and in disregard of existing legislation that capped the number of VTC licenses at 1 for every 30 taxis, the number of these licenses increased by 80%. In addition, Uber used a variety of lobbying strategies, at both the national and the European level, highlighting the company's accomplishments in terms of jobs, wealth, and traffic reduction at different venues,[41] as well as issuing media advertisements. They also made several attempts at coalition building, with politicians,[42] consumers,[43] and drivers.[44]

However, Uber's infrastructural power was limited and therefore so was its power to achieve deregulation. Uber's expansion was restricted, in the number of cars—in 2018, there were 3,541 Uber vehicles, still just over a fifth of the number of taxis—and in terms of the variety of services offered. Thus, the ecosystem that would be affected by government regulations was still comparatively small. In this context, and despite all of Uber's efforts, the government did not liberalize the sector, but actually enforced and strengthened existing restrictions. In April of 2018, the government turned the decree that established the 30 to 1 proportion between taxis and VTC licenses (among other restrictions) into a law, making it harder to fight. The Supreme Court later upheld the government's decision. While other regional governments introduced further restrictions, the government of Madrid did nothing, limiting itself to following the national ruling.

The Madrid case demonstrates Uber's expansion and accumulation of infrastructural power based on pre-existing regulations and a strategy of contentious compliance. After entering legally and complying with pre-existing regulations of medium severity, it was able to expand somewhat and push the limits of existing rules, while also using traditional lobbying and coalition-building tactics to further grow its business. However, its limited growth conditioned its capacity to increase its infrastructural power, and soon the government strengthened existing regulations in the for-hire sector against Uber.

5.3. Berlin, Germany

Pre-existing regulations in the for-hire sector of Berlin, and Uber's ongoing challenges to them, shaped Uber's expansion in this city. Strict regulations in Berlin limited Uber's expansion and its ability to operate. Thus, its construction of infrastructural power has been severely restricted. Still, Uber has continued to fight for deregulation mostly through lobbying, while trying to learn which approaches could succeed in the country in order to gain allies and become a relevant interlocutor for the government. The German transportation market is large ($5 billion a year) and thus very attractive to Uber.

Uber entered the city of Berlin in April 2014 ignoring the existing legal framework and providing the UberPop and UberBlack services. These two services were in direct violation of the country's Passenger Transportation Act and the Unfair Competition Act, the two main pieces of regulatory legislation affecting the transport market. Although Uber threatened to abandon the territory if there was no deregulation, what followed was not government's accommodation to let Uber operate, but a national ban issued by the judiciary that forced Uber to leave. The first case against Uber was brought to a Frankfurt court by Taxi Deutschland (a cooperative of taxi companies) arguing that Uber presented unfair competition. In late August 2014, the court banned UberPop nationally in an "urgent decision." Later, courts in Hamburg and Berlin prohibited UberPop services locally, and the Berlin court also banned UberBlack. Finally, on March 18, 2015, the Superior Administrative Court of Frankfurt banned Uber from providing any service to drivers without a passenger transport permit.

After the company's services were declared illegal and banned, Uber decided not to appeal and left the country. However, it returned to Berlin and Munich in 2016 and transitioned to legal services in order to remain in the market—showing again that Uber returns to relevant markets to offer its services, even if not under its favored conditions. Uber abandoned the original and preferred services, and instead teamed up with existing car rental companies and taxi operators—whose drivers and vehicles hold all corresponding licenses—to provide UberX and UberTaxi. Christoph Weigler, Uber's general manager in Germany, admitted that the previous strategy "clearly did not work," but highlighted Uber's compliance with the law and said that the new services were "tailor-made for the market."[45,46]

Uber had thus adapted to enter the market and was ready to offer the UberX service, which was not its preferred service, but would let Uber grow and construct infrastructural power in the face of restrictive regulations. Uber partnered with an existing rental-car company, the Berlin limousine service RocVin, to take advantage of the latter's history and expertise, and to combine it with its own pricing advantage (UberX was around 20% cheaper than a taxi). Yet the red tape in the sector severely restricted the expansion of the service. To become a driver for UberX, individuals required licenses issued by the Chamber of Commerce, a process that was costly, difficult, time-consuming, and limited to a few slots per year. Beyond regulations for drivers and their cars, there were additional business regulations that precisely affected the core advantages of Uber's service. A crucial one was the requirement that drivers return to their company's headquarters after each trip to be considered for the next ride, something that offsets Uber's advantages both for consumers (requesting a vehicle and starting a trip almost immediately) and for drivers (transporting passengers almost continuously). An additional restriction is that cars could only be rented as a whole, thus prohibiting vehicles from taking multiple passengers—that is, the UberPool service. In this context, Uber's growth was constrained in the number of cars, and especially in the variety of services offered. Its UberX service never really took off and Uber ended up mostly providing UberTaxi, a service that has no competitive advantage over the taxi, and thus no disruptive infrastructural potential. While there are no numbers for its UberX service, Uber said that of 8,000 taxi drivers in Berlin, only 1,500 work with Uber—meaning that the ecosystem the firm managed to create is severely limited.[47]

The firm then turned to contentious compliance, deploying strategies to get around existing regulations and provide the service anyway. For example, UberX drivers did not always follow the obligation to return to their base between trips.[48] In addition, Uber invested heavily in lobbying, with efforts to build bridges with policymakers and regulators—who have said they are open to revising the rules. In 2017 Uber devoted almost 900,000 euros to lobbying at the EU level.[49] Uber's new CEO, Dara Khosrowshahi, visited Germany twice in 2018 and admitted that Uber's approach had backfired in this country,[50] yet he also pushed for regulatory changes, calling the requirement for cars to return to headquarters "senseless."[51] Since then, the company has extended its for-hire services to other German cities, such as Cologne, in compliance with existing regulations. In addition, the firm showcased its investment in e-bikes and e-cars for Berlin as a strong commitment to the German market.

Still, these low levels of infrastructural power have shown very limited capacity to achieve deregulation. Thus, in this context, and despite Uber's efforts, there has been little change in regulations, beyond some very minor tweaks in the requirements to become a rental car driver.

The Berlin case shows Uber's expansion based on pre-existing rules and the firm's response to contentious compliance. After being banned from the country, Uber transitioned to complying with strict pre-existing regulations. The very constraining framework of the for-hire sector limited its expansion and ability to construct power, obtaining no deregulation. Yet Uber has not stood still, using the strategy of contentious compliance, and lobbying for change, albeit thus far without a relevant favorable response from the government.

6. CONCLUSION

Uber's adaptation in NYC, Madrid, and Berlin lend support to a business power theoretical framework for explaining regulatory outcomes across cities. Pre-existing regulations in the for-hire vehicles sector and the firm's "contentious compliance" response shape Uber's capacity to expand in the market, provide its services and create an ecosystem of actors around it—that is, its ability to create infrastructural power. Contentious compliance is a push–pull process between firms and governments, in which the firm—in this case, Uber—adapts to existing rules in order to expand, while continuing to advocate deregulation or re-regulation around its preferences. However, because its power depends crucially on the services it can provide and the dependency it is able to create, the regulatory outcomes hinge on the pre-existing regulatory conditions: the stricter the pre-existing regulations, the less a firm is able to grow to the point of achieving the infrastructural power that would allow it to strongly influence regulation. It is important to note that, despite variation in regulatory landscapes, overall Uber has already succeeded as it has become a relevant and legitimate player in the transportation market—one that initially did not allow for its existence.

Two main implications for future research on platform economy emerge from my analysis. First, rethinking the power of capital in light of these new platform firms seems essential. These firms are influential in a way that seems to go beyond traditional conceptions of structural and instrumental power. This article examined how these firms, through conflict and negotiation with the state, construct their infrastructural power. To become powerful, these firms need to expand in markets and provide their services, that have the potential of becoming ubiquitous among consumers, workers, and government.

Second, this article framework highlights the importance of simultaneously analyzing institutional settings and platform firms' strategies. A crucial point made here is that the ability to accumulate infrastructural power is not a predetermined natural outcome, but deeply contextual. The capacity to become the infrastructure of the economy depends on a specific business model and a way to deploy technology, and both certainly require the permission (if not assistance) of governments, as well as citizens. This challenges the inexorability that is sometimes tied to these new business models and their corresponding economic and labor relations.

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DATA AVAILABILITY STATEMENT

Research data are not shared.

ENDNOTES

1 Uber was founded in 2009 in San Francisco as a mobile app to request a black-car service. Due to the simplicity of the process (button-ordered service, GPS-located ride, no cash involved) it grew rapidly, especially since transitioning in 2012 to a low-cost service ("The history of how Uber went from the most feared startup in the world to its massive IPO," *Business Insider*, 18 May 2019).

2 "Uber and Lyft Won't Admit What They Are," *Forbes*, 20 March 2019.

3 Similarly, it has argued that drivers are not employees but private contractors ("Uber argues its drivers aren't core to its business, will not reclassify them as employees," *The Verge*, 11 September 2019).

4 This was Facebook's initial internal motto. In 2014, its founder and current CEO Mark Zuckerberg announced that the company would replace it by "Move fast with stable infrastructure" ("Mark Zuckerberg Explains Why Facebook Does not 'Move Fast and Break Things' Anymore," *Business Insider*, 2 May 2014).

5 "The Era of "Move Fast and Break Things" Is Over," *Harvard Business Review*, 22 January 2019

6 Crucially, these factors may act simultaneously and/or interact, and have contradictory effects. In other words, structural power is highly context-specific (Fairfield, 2015).

7 Indeed, Collier et al. (2018) note that after Uber threatened to leave both Austin and Houston to prevent unfriendly legislation, it only followed through in the former—which has half of the population of the latter—because "Uber calculates strategically, and in its largest markets, it has ultimately accepted even the regulations it most opposes" (p. 12). Moreover,

the power of the exit option is not established when they actually exit, but when the exit threat yields any results. That is, the fact that Uber was unable to achieve more accommodating regulations and eventually decided to leave the city does not necessarily show power but may actually be a sign of its absence.

8 An additional problem in this argument is the equivalence between business and the electorate' preferences: are governments deferring to business power or just trying to satisfy the electorate?

9 This is a quote from Uber's founder and former CEO Travis Kalanick and, indeed, some argue that Facebook, for example, has become a utility like water or electricity (Boyd, 2010).

10 The term "infrastructural power" has most famously been utilized by Michael Mann, to refer to the state's "capacity to actually penetrate society and to implement logistically political decisions" (Mann 2012, 170). The state exercises control over the territory and regulates social relations, yet it does not do it directly, but through a set of "political relations [that] radiate outward" (Mann 2012, 37). The concept travels with ease to platform firms, centralized devices that exercise control over a myriad of actors and regulate their relations. In both cases, capillarity is key to power.

11 "Uber Makes Peace with Cities by Spilling Its Secrets," *Wired*, 16 April 2018.

12 "Amazon launches new cloud storage service for U.S. spy agencies." *The Washington Post*, 20 November 2017.

13 "Metro plan would subsidize Uber and Lyft fares to fill late-night service gap." *The Washington Post*, 13 February 2019.

14 I thank Reviewer 1 for a refinement of the definition of contentious compliance.

15 As mentioned, Uber claims to not be part of the transportation industry and thus not subject to that regulatory regime. Thus, while a traditional transportation company would be fighting for less restrictions to conduct its business (as the taxi industry indeed does when seeking less conditions for obtaining drivers' licenses), Uber ("the country's most famous regulatory entrepreneur" according to Pollman and Barry) is challenging the market itself, the definition of its activity and the rules that apply (Collier et al., 2018). This, among other reasons, make these authors conclude that no existing model of the politics of regulation applies to the case of Uber.

16 Of course, these differences among firms fighting regulations create a question about boundaries and I follow Pollman and Barry (2017) in thinking about regulatory entrepreneurship as a matter of degree.

17 While Uber broke the law in many instances, a particularly resounding occasion was that of Greyball. This is a technology that allowed the firm to identify regulatory officials and prevent them from hailing an Uber. They could log in to the app and order a car, but no car would arrive to pick them up. This meant they could not check how the company was working, or fine it. ("How Uber Deceives the Authorities Worldwide," *New York Times*, 3 March 2017). The company defended it claiming that it was simply denying service to "fraudulent users who are violating our terms of service." ("Greyball: how Uber used secret software to dodge the law," *The Guardian*, 4 March 2017).

18 "Uber Beefs Up Lobbying in Pre-IPO Makeover: The Influence Game," *Bloomberg*, 4 April 2019.

19 Pierre-Dimitri Gore-Coty, the head of Uber's operations in Europe, claimed that "there are still aspects of the [transportation] regulation that we think could be tweaked to make our model slightly more scalable." ("Needing Growth, Uber Returns to Germany. This Time on Best Behavior," *The New York Times*, 19 November 2018). Similarly, Yuri Fernández, Uber's Communications Director for Spain and Portugal, stated that "If we are talking about changing the law, of course we are working on it. We believe that the Spanish transportation law is costing all of us a lot of money, while having enormous environmental costs." ("Uber: 'En España, Uber no es economía colaborativa'," *Público*, 23 May 2017 (my translation)).

20 "The Push to Make Cab Rides Smarter," *The New York Times*, 11 May 2012.

21 "Uber Gains Civil Rights Allies Against New York's Proposed Freeze: 'It's a Racial Issue'," *The New York Times*, 29 July 2018.

22 "Uber Is Serving New York's Outer Boroughs More Than Taxis Are," *FiveThirtyEight*, 10 August 2015

23 "New York Taxi Agency Passes Rules on Price Estimates for Ride-Hailing Apps," *The New York Times*, 22 June 2015.

24 "Uber Says Proposed Freeze on Licenses in New York City Would Limit Competition," *The New York Times*, 30 June 2015.

25 "New York City Wants to Study the Effects of For-Hire Car Industry's Expansion," *The New York Times*, 23 June 2015.

26 "The State of Uber: How It Operates in the U.S.," *The New York Times*, 23 July 2015

27 New York City Wants to Study the Effects of For-Hire Car Industry's Expansion," *The New York Times*, 23 June 2015.

28 "City Hall and Uber Clash in Struggle Over New York Streets," *The New York Times*, 16 July 2015.

29 See Seidl (2020) for a detailed analysis of the NY case that highlights the narratives Uber deployed to form coalitions against regulations, and the distinctive role its close relation to consumers played.

[30] “A Driver’s Suicide Reveals the Dark Side of the Gig Economy,” *The New York Times*, 6 February 2016.

[31] “Uber and Lyft Drivers Rush to Register Cars Ahead of City’s New Cap,” *The New York Times*, 13 August 2018.

[32] “Meet the Man Tasked with Expanding Uber’s Business in New York, With a Smile,” *The New York Times*, 30 November 2018.

[33] Ibid.

[34] “The Lockout: Why Uber Drivers in NYC Are Sleeping in Their Cars,” *Vice*, 19 March 2020.

[35] “Uber Will Spend $10 Million to Solve a Problem It Helped Create,” *The New York Times*, 26 September 2018.

[36] “Uber CEO Backs Ride Surcharge in NYC to Help Struggling Taxi Owners,” *Bloomberg*, 12 June 2018.

[37] “Uber y Cabify ganan cuota de mercado tras la guerra con el taxi,” *La Vanguardia*, 9 November 2019.

[38] “Carles Lloret: ‘Desde Uber pedimos perdón por haber hecho cosas mal’,” *El Mundo*, 20 April 2017 (my translation).

[39] “Carles Lloret (Uber): ‘No fue buena idea imitar el modelo de EE.UU. en España’,” *ABC*, 13 February 2017 (my translation).

[40] “Uber entona el ‘mea culpa’, pero pide una regulación justa,” *Cinco Días*, 13 November 2015 (my translation).

[41] “Uber replantea su estrategia en Europa,” *Hipertextual*, 19 January 2015.

[42] To get politicians’ support, they issued several reports informing of the benefits of liberalizing the sector. While in 2014 Lloret had presented drivers’ activity as one that was not for profit, but simply cost-sharing; in 2015 Uber instead highlighted its capacity for employment creation (Uber., 2015)—in a country where unemployment was over 20%. In a 2017 report, Uber stated that the liberalization of the sector would decrease the cost of the average ride by 35%, while introducing UberPool would reduce it by an additional 30%. In addition, the report advertised the positive environmental results this service would have (Analistas Financieros Internacionales, 2017).

43 To gain the appreciation of consumers, they offered free rides on September 26 of 2018, 2 days before the government was going to discuss regulatory issues (“Uber y Cabify ofrecerán un servicio gratis a los usuarios el 26 de septiembre,” *El País*, 24 September 2018).

[44] They made an agreement with an autonomous workers’ union to provide assistance to those that wanted to become Uber drivers (“Uber regresa a Madrid con licencias de vehículos con conductor,” El País, 28 March 2016). Uber also had a plan to reward taxi drivers who became Uber drivers.

[45] “Needing Growth, Uber Returns to Germany. This Time on Best Behavior,” *The New York Times*, 19 November 2018.

[46] Indeed, the website advertises services as being “only communicated to a licensed carrier,” highlighting that cars comply with existing laws, that each trip is insured and that cashless transactions also assure the safety of the driver. See more here: https://www.uber.com/de/de/ (Accessed May 28, 2018).

[47] “Taxi-Rivale Uber versucht es erneut in Frankfurt,” *hessenschau.de*, 5 December 2018.

[48] “Uber Undertaking: Driving in a Gray Zone,” *Handelsblatt*. 13 July 2015.

[49] “Chauffeurservice: Und trotzdem fährt ein Uber,” *Die Zeit*, 13 December 2018; LobbyFacts Database, 2018.

[50] “Uber CEO slams founders’ ‘pirate’ culture, pledges to grow ‘responsibly’,” *VentureBeat*, 22 January 2018.

[51] “Uber macht Deutschland zur Chefsache,” *Handelsblatt*, 10 June 2018.

REFERENCES

Analistas Financieros Internacionales. (2017). Impacto Socioeconómico de La Modernización de Los Servicios VTC. Retrieved from http://afi.es/afi/libre/pdfs/grupo/documentos/completo%20170510_informe.pdf.

Block, F. (1977). The ruling class does not rule: Notes on the Marxist theory of the state. In F. Block (Ed.), *Revising state theory: Essays in politics and post-industrialism*. Temple University Press.

Borkholder, J., Montgomery, M., Chen, M. S., & Smith, R. (2018). How transportation network companies buy, bully, and bamboozle their way to deregulation. The National Employment Law Project and the Partnership for Working Families. Retrieved from http://www.nelp.org/content/uploads/Uber-State-Interference-How-Transportation-Network-Companies-Buy-Bully-Bamboozle-Their-Way-to-Deregulation.pdf.

Boyd, D. (2010). Facebook is a utility; Utilities Get Regulated. *Apophenia* (blog). May 15, 2010. Retrieved from http://www.zephoria.org/thoughts/archives/2010/05/15/facebook-is-a-utility-utilities-get-regulated.html.

Braman, S. (2007). *Change of state: Information, policy, and power*. MIT Press.

Busemeyer, M. R., & Thelen, K. (2020). Institutional sources of business power. *World Politics*, 72(3), 448–480. https://doi.org/10.1017/S004388712000009X

Collier, R. B., Dubal, V. B., & Carter, C. L. (2018). Disrupting regulation, regulating disruption: The politics of Uber in the United States. *Perspectives on Politics*, 16(4), 919–937.

Culpepper, P. D. (2015). Structural power and political science in the post-crisis era. *Business and Politics*, 17(3), 391–409.
Culpepper, P. D., & Thelen, K. (2019). Are we all Amazon primed? Consumers and the politics of platform power. *Comparative Political Studies*, 53(2), 288–318.
Davis, G. F. (2015a). Corporate power in the twenty-first century. In S. Rangan (Ed.), *Performance and Progress. Essays on capitalism, business, and society*. Oxford University Press.
Davis, G. F. (2015b). What might replace the modern corporation? Uberization and the web page Enterprise. *Seattle University Law Review*, 39(2), 501–515.
Dempsey, P. S. (1996). Taxi industry regulation, deregulation, and reregulation: The paradox of market failure. *Transportation Law Journal*, 24(1), 73–120.
Eckstein, H. (2000). Case study and theory in political science. In R. Gomm, M. Hammersley, & P. Foster (Eds.), *Case study method: Key issues, key texts* (1st ed.). SAGE Publications Ltd.
Fairfield, T. (2015). *Private wealth and public revenue in Latin America*. Cambridge University Press.
Farrell, H., & Newman, A. L. (2015). Structuring power: Business and authority beyond the nation state. *Business and Politics*, 17(3), 527–552.
Feenstra, R. C. (1998). Integration of trade and disintegration of production in the global economy. *Journal of Economic Perspectives*, 12(4), 31–50.
Frieden, J. (1991). *Debt, development, and democracy*. Princeton University Press.
Gerring, J., & Cojocaru, L. (2016). Selecting cases for intensive analysis: A diversity of goals and methods. *Sociological Methods & Research*, 45(3), 392–423. https://doi.org/10.1177/0049124116631692
Guillén, M. F. (2001). Is globalization civilizing, destructive or feeble? A critique of five key debates in the social science literature. *Annual Review of Sociology*, 27(1), 235–260.
Hacker, J. S., & Pierson, P. (2002). Business power and social policy: Employers and the formation of the American welfare state. *Politics and Society*, 30(2), 277–325.
Jensen, N. M. (2006). *Nation-states and the multinational corporation*. Princeton University Press.
Kenney, M., & Zysman, J. (2016). The rise of the platform economy. *Issues in Science and Technology*, XXXII(3), 61–69.
Kergueno, R. (2017). *The Über-lobbyists: How Silicon Valley is changing Brussels lobbying*. Transparency International EU.
Khan, L. M. (2017). Amazon's Antitrust Paradox. *Yale Law Journal*, 126(3), 97.
Klein, M. C. 2016. The US tech sector is really small. *Financial Times*. Retrieved from http://ftalphaville.ft.com/2016/01/08/2149557/the-us-tech-sector-is-really-small/.
Krugman, P. (1995). Growing world trade: Causes and consequences. *Brookings Papers on Economic Activity*, 1, 51.
Langley, P., & Leyshon, A. (2016). Platform capitalism: The intermediation and capitalisation of digital economic circulation. *Finance and Society*, 1(21), 11–31.
Lindblom, C. (1982). The market as prison. *The Journal of Politics*, 44(2), 324–336.
Lindblom, C. E. (1977). *Politics and markets: The World's political economic systems*. Basic Books.
LobbyFacts Database. (2018). Retrieved from https://lobbyfacts.eu/representative/d7380c54e2704c88b49b17b0b16590da/uber.
Mahon, J. E. (1996). *Mobile capital and Latin American development*. Penn State University Press. Retrieved from. http://www.psupress.org/books/titles/0-271-01525-X.html
Mann, M. (2012). *The sources of social power* (Vol. 1, 2nd ed.). Cambridge University Press.
Moore, M., & Tambini, D. (Eds.). (2018). *Digital dominance: The power of Google, Amazon, Facebook, and Apple*. Oxford University Press.
Ohmae, K. (1995). *The end of the nation state: The rise of regional economies*. Simon and Schuster.
Parker, G. G., Van Alstyne, M. W., & Choudary, S. P. (2016). *Platform revolution: How networked markets are transforming the economy and how to make them work for you*. W. W. Norton & Company.
Parrot, J. A., & Reich, M. (2018). *An earnings standard for new York City's app-based drivers: Economic analysis and policy assessment. Report for the New York City Taxi and Limousine Commission*. Center for New York City Affairs.
Pollman, E., & Barry, J. M. (2017). Regulatory entrepreneurship. *Southern California Law Review*, 90(3), 383–447.
Rahman, K. S. (2018a). Infrastructural regulation and the new utilities. *Yale Journal on Regulation*, 35(3), 911–939.
Rahman, K. S. (2018b). Regulating informational infrastructure: Internet platforms as the new public utilities. *Georgetown Law and Technology Review*, 2(2), 18.
Rahman, K. S. (2018c). The new utilities: Private power, social infrastructure, and the revival of the public utility concept. *Cardozo Law Review*, 39, 1621.
Rahman, K. S., & Thelen, K. (2019). The rise of the platform business model and the transformation of twenty-first-century capitalism. *Politics and Society*, 47(2), 177–204.
Seidl, T. (2020). The politics of platform capitalism: A case study on the regulation of Uber in New York. *Regulation & Governance*. https://doi.org/10.1111/rego.12353
Srnicek, N. (2016). *Platform capitalism*. Polity Press.
Strange, S. (1996). *The retreat of the state*. Cambridge University Press.
Thelen, K. (2018). Regulating Uber: The politics of the platform economy in Europe and the United States. *Perspectives on Politics*, 16(4), 938–953.
Transparency International EU. (2018). *It's always sunny in Silicon Valley: How big tech dominates digital lobbying*. Transparency International EU. Retrieved from. https://transparency.eu/sunny-silicon-vallley
Tzur, A. (2017). Uber Über regulation? Regulatory change following the emergence of new technologies in the taxi market. *Regulation & Governance*, 13, 340–361. https://doi.org/10.1111/rego.12170
Uber. (2015). *La Revolución Del Smartphone: Nuevas Alternativas de Transporte y Oportunidades de Empleo*. Uber Retrieved from. http://cd00.epimg.net/descargables/2015/11/12/eb705642e167824422e4125df3de39fa.pdf

Uzunca, B., Coen Rigtering, J. P., & Ozcan, P. (2018). Sharing and shaping: A cross-country comparison of how sharing economy firms shape their institutional environment to gain legitimacy. *Academy of Management Discoveries*, 4(3), 248–272. https://doi.org/10.5465/amd.2016.0153

Vogel, S. K. (1996). *Freer markets, more rules: regulatory reform in advanced industrial countries*. Cornell University Press.

Weil, D. (2017). *The fissured workplace: Why work became so bad for so many and what can be done to improve it*. Harvard University Press.

Winters, J. A. (1996). *Power in motion: Capital mobility and the Indonesian state*. Cornell University Press.

