

## Jean Tirole: Regulating the Disrupters

The scale and scope of leading tech giants represents a marvellous opportunity, but one thing is clear - this small cohort now guards the door to the modern economy. There is nothing abnormal about how highly concentrated these digital markets are, but there are grounds for concern about whether competition is functioning properly writes **Jean Tirole**



Source: Shutterstock

The leading tech giants – such as Apple, Amazon, Facebook, and Google – explicitly set out to disrupt much of the world’s industrial and social *status quo*. They have now succeeded (I suspect) beyond their own wildest dreams, and probably beyond what some of their founders would have wished, considering the baneful effects that social media have had on democratic elections.

Given the scale and scope of these firms’ impact on our societies, it is no surprise that they inspire both hope and fear in the public consciousness. But one thing is clear: A small cohort of technology firms now guards the door to the modern economy.

That today’s information-technology markets are highly concentrated is beyond dispute. In most cases, a single company dominates a given market. There is nothing abnormal about this, as users are prone to flocking to just one or two platforms, depending on the service. But there are still legitimate grounds for concern about whether competition is functioning properly.

## Network Defects

There are two reasons why digital markets are so concentrated. The first is a network externality: We need to be on the same network as the person with whom we want to interact. That is Facebook's business model, and no one can doubt its success, at least insofar as the company's interests are concerned. If our friends are on Facebook, we need to be there, too, even if we would really prefer another social network.

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When the telephone was invented, competition among (non-interconnected) networks in every country with a phone system ended with a monopoly. Again, this was not abnormal. Users wanted to be able to call one another easily, so they naturally congregated on a single platform. When competition was reintroduced into the telephone industry in the 1980s and 1990s, it was necessary that the networks be interconnected, so that a user on one had access to them all. Without regulation, incumbent operators would not have granted such access to new, smaller entrants. While it is cheaper and easier to patronize several social networks (to "multihome") than multiple phone companies, it still requires coordination.

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Network externalities can be direct, as in Facebook's case, or indirect, as in the case of platforms for which many apps or games have been created. The more users there are on the platform, the more apps there will be, and vice versa. In other cases, the volume of users may determine the quality of the service, by allowing for better-crowdsourced predictions. This is how both Google's search engine and the navigation app Waze work. While competing search engines can match Google's results for the most common queries, they do not have access to enough data to do so for more unusual search requests. Moreover, new services often require data, which users of existing services supply.

Thus, users on the dominant digital platforms benefit from the presence of other users on the same platform, even if there is no direct interaction among them. The same is true for city dwellers. Though they are almost all strangers to one another, the presence of other city dwellers means more employment opportunities and easier job mobility – not to mention more bars, cinemas, and other amenities – than in less densely populated locations.

## A Problem of Scale

The second reason for the high level of concentration in digital markets is that the dominant firms benefit from economies of scale. Some services require large technological investments, and if that

service is a search engine, then designing it will cost roughly the same regardless of whether it attracts two thousand or two trillion search requests per year. What will not be the same is the value of the user data that is generated. The search engine that receives two trillion requests can charge advertisers far more, and scale up far more quickly.

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Hence, by dint of network effects and economies of scale, the digital economy almost inexorably creates “natural monopolies.” The online economy follows a winner-takes-all logic, albeit with different winners across sectors and time. The Internet browser market was dominated first by Netscape Navigator, then by Microsoft’s Internet Explorer, and now by Google Chrome.

There are exceptions, of course. Economies of scale and network externalities have not played a paramount role in the markets for digital music and movies, where there are a number of platforms, including Amazon Prime, Apple’s iTunes, Deezer, Spotify, Pandora, and Netflix. But these services are differentiated by their degree of interaction with the user.

## Adapting Policy to New Business Models

Policymakers and regulators around the world must face the fact that the reasoning behind traditional competition measures is no longer valid. It is now common for a platform like Google or Facebook to set very low prices – or provide a service for free – on one side of the market and very high prices on the other side. This naturally creates suspicion among competition authorities. In traditional markets, such practices could well be regarded as a form of market predation that is meant to weaken or kill off a smaller competitor. By the same token, a very high price on the other side of the market could mean that monopoly power has been brought to bear.

And yet, even small digital firms and start-ups now practice this kind of asymmetric pricing: consider, for example, free online newspapers that are funded wholly by advertising. Two-sided markets are prevalent in the digital economy, and a regulator who does not adequately account for this unusual business model could incorrectly declare low pricing to be predatory, or high pricing to be excessive, even though such price structures have also been adopted by the smallest platforms entering the market. Regulators, then, will need to refrain from mechanically applying traditional principles of competition policy. When it comes to multi-sided platforms, these principles simply are not applicable in many cases.

New guidelines for adapting competition policy to two-sided markets would require that both sides of the market be considered together, rather than analyzed independently, as competition authorities still sometimes do. This will require care and a new analytical approach. But that is better than misapplying traditional principles or simply treating these sectors as legal no-go zones for competition authorities.

## Rethinking Regulation

More broadly, there are four clear areas for regulation in the digital economy: competition, labor law, privacy, and taxation.

When one company has a dominant position, there is a serious risk that high prices and a lack of innovation will follow. A new enterprise that is more efficient or more innovative than an established monopoly must be permitted to enter the market; or, in the economic jargon, the market in question must be “contestable.” If vigorous competition between companies at a discrete point in time is not possible, then we must at least allow for dynamic competition, in which a once-dominant firm is replaced by an upstart that has superior technology or commercial strategy.

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New entrants into online markets often begin with a niche product; if it proves successful, they expand to offer a much wider range of products and services. Google began with only its search engine before it became the company we know today; Amazon started by selling books.

So what matters is whether new entrants can access the market in the first place. If a newcomer has a single original product that is better than what the incumbent offers, the incumbent might want to block it from gaining even a partial foothold in the market. The incumbent will do so not to improve its short-term profits, but to prevent the newcomer from later competing in areas where the incumbent occupies a monopoly position, or to stop the newcomer from allying with the dominant firm's competitors.

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This is why “tie-in sales” are a particularly pernicious anticompetitive practice. By requiring purchasers of one of its products to also buy a suite of other products, a monopoly firm can deny market access to new entrants across a range of areas. And yet it is impossible to formulate a one-size-fits-all policy for this problem. Whether competition authorities should forbid a dominant company from using tie-in sales or similar gambits (loyalty rebates, for example) will depend on their motive and rationale.

At the end of the day, the only valid way to ensure productive competition in the digital sector is to approach these questions on a case-by-case basis. Regulators must deploy rigorous analysis, and they must do so with alacrity to keep up with the pace of change

## The Pursuit of the Buyout

Complicating the competition picture further is the natural incentive new market entrants have to sell themselves to the dominant firm. This incentive is so strong that new entrants may be motivated more by the desire to extract monopoly rent from the incumbent than by an interest in delivering a new or superior service to the consumer.

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But preventing such behavior is easier said than done. Antitrust law, especially in the US, requires authorities to bring evidence that a merger would reduce competition and harm consumers. This is understandable, but such a standard makes it impossible to invalidate the many acquisitions that occur before any real competition has actually taken place, such as Facebook's acquisition of the platforms WhatsApp and Instagram. Given this, the effectiveness of antitrust law ultimately depends on competition authorities' competency and neutrality.

## Ad Hoc Antitrust

With rapidly changing technologies and globalization, traditional regulatory tools have become less effective, causing competition policy to lag. Breaking up monopolies or regulating public utilities requires identifying a stable competitive bottleneck or essential facility (the counterpart of the local loop in telecoms, the tracks and station for railroads, or the transmission grid for electricity). Regulation demands detailed accounting in a world of global companies without any supranational regulator. And it requires following firms over their lifecycles to measure the profitability of capital – an impossible task.

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We must develop more agile policies, such as business review letters (giving limited legal certainty to firms for a practice, subject to conditions set by the authorities) or regulatory sandboxes where new business models can be tested in a “safe” environment. Regulators and economists must be humble; they will learn by doing, and their policies should not be cast in stone.

## Work-Gig Balance

As for labor law, it is clear that current approaches are ill-suited for the digital age. Most labor codes in the developed world were conceived decades ago with factory workers in mind. As such, they give little attention to fixed-term labor contracts, and still less to teleworkers, independent contractors, freelancers, or students and retirees working part-time as Uber drivers.

We need to move from a culture focused on monitoring workers' presence to one focused on workers' results. This is already the case for many salaried employees, especially professionals, whose physical presence in a workplace is becoming a secondary consideration – and whose effort is, in any case, hard to monitor.

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When confronted with current labor-market trends, legislators often try to fit new forms of employment into existing boxes. Is an Uber driver an “employee” or not? Some people say yes, because a driver is not free to negotiate prices, and is subject to various training requirements and vehicle specifications, including cleanliness. Perhaps most important, Uber reserves the right to terminate drivers with poor ratings.

Others argue that Uber drivers are not employees. After all, they are free to decide when, where, and how much they work. Some drivers derive all of their income from their Uber activity; others may drive for other ride-hailing platforms, or may draw income from working part-time in a restaurant as well. And, like independent contractors, they bear their own economic risks.

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Moreover, various restrictions also apply to many self-employed workers, who are limited in their freedom of choice by the need to protect a collective reputation – such as that of a profession or brand. In many countries, independent physicians are not employees, yet they cannot set their own prices, and they must follow specific rules or risk losing their accreditation. Even an independent winemaker must respect regional certification rules.

Unfortunately, while the status of Uber drivers and other platform workers is debatable, the debate is going nowhere. Any classification that we settle on will be arbitrary, and will no doubt be interpreted positively or negatively depending on one's personal prejudices or ideological predisposition toward new forms of work. At any rate, the debate loses sight of why we classify work in the first place: to provide for workers' wellbeing.

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Looking ahead, the priority should be to ensure competitive neutrality: the dice must not be loaded in favor of either salaried employment or self-employment. The state must promote the health-care, and social-security rights of gig workers like, say, Uber drivers. At the same time, it

should avoid policies that would make the digital platforms unviable, even if they are unfamiliar and disruptive.

## Rescuing Privacy

Progress is also needed when it comes to stopping firms and governments from intruding in consumers' private lives. It is well – though not universally – known that these entities collect large amounts of information about us. Yet, even if we are aware of this, we often fail to recognize the true scale of these processes or their consequences.

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For one thing, we have less control over what firms and governments collect than we may think. For example, a company acquires and stores information about us that is shared by others (through e-mails, photos, or social networks), without us ever using its platform or even the Internet. Platforms also underinvest in security, as they internalize the consequences of a breach for their profit but not fully those for their customers.

We should worry that we no longer seem to have the right to oblivion, a basic tenet of many legal systems. We should worry about the possible breakdown of health-care solidarity, and the disclosure of potentially sensitive information about us (religion, politics, sexuality) in divisive domains. And we should worry about far-reaching state surveillance.

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The European Union's General Data Protection Regulation amounts to only a small first step toward protecting us from such threats. Further steps should include the creation of a set of standardized policies that everyone understands (state regulation is consistent with "libertarian paternalism").

## Keeping the Lights on

Lastly, because the Internet has no borders (which is generally a good thing), countries will increasingly need to cooperate on taxation, both to prevent tax competition and simply to derive some revenues from a huge swath of the economy. To that end, the 2015 agreement within the European Union to end tax competition on online purchases offers a promising model.

Specifically, the EU policy authorizes a purchaser's country to apply its value-added tax to any online purchase, whereas the previous regime levied the tax on the supplier. The result is that companies have less incentive to locate in countries with low VAT rates or to seek out consumers in countries with high VAT rates.

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The new system has proven to be a satisfactory regulatory response for business models such as that of Amazon, which bills the individual consumer. But it does not resolve the problem of platforms like Google, which technically does not sell anything to individual British, Danish, French, or German consumers, but rather charges the advertisers who do. Regulators across developed economies are discussing this problem because the tax base in Google's case is much less clear than in the case of book or music sales.

All told, digitization represents a marvelous opportunity for our societies; but it also introduces new dangers, while amplifying others. To achieve an economics for the common good in this new world, we will have to address a wide range of challenges, from public trust and social solidarity to the ownership of data and the effects of technological diffusion. Success will depend, in particular, on whether we can develop viable new approaches to antitrust, labor law, privacy, and taxation.

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