Professor Richard N. Langlois—Written evidence (OPL0073)

1. There is a lot of innovation and competition in many of the markets online platforms operate in. At the same time, there are sometimes very high levels of market concentration and dominance. One of the terms that has been used to explain these market dynamics is ‘dynamic competition’. Can you explain what it means and how it applies to these markets?

Dynamic competition is not a kind of competition. It is a way of understanding what competition is and how it operates. From at least the time of Adam Smith through Alfred Marshall, economists saw competition in much the same way that non-economists do: as an active striving to outdo others and to capture economic rents. With the formalization of price theory in the early twentieth century, economists became fixated on the static benchmark of “perfect” competition, which privileges a world of many small competitors and comes with a number of unrealistic assumptions like perfect information and undifferentiated products. This construct was invented for purely technical theoretical purposes, but because it lent itself to mathematical formalization, it came to push aside the older and more commonsensical meaning. The result is that economist began looking at what are essentially static snapshots of the dynamic economy, which they mistook for the fluid reality of competition.

In the snapshot view, “competitive” means not active striving but rather raising price above marginal cost, and the ability of firms to do this is inversely related to the number of firms in the market (appropriately defined). There are important insights here. But what this misses is that competitive forces operate not just, or even primarily, within existing market structures but also to change markets structures – not only by introducing new players but also by completely redefining products and relationships with customers: in short, through innovation, both incremental and fundamental. The early twentieth century economist Joseph Schumpeter argued that the dynamic benefits of competition are so large as to render irrelevant any static efficiency losses; moreover, he argued, those static inefficiencies – raising price above marginal cost – may actually be crucial in generating the dynamic benefits of innovation and long-run lower cost, since the rents involved attract innovative entrants and can provide existing firms with the upfront resources needed for innovation. In other words, there may be a tradeoff: enforcing static efficiency may often come at the expense of dynamic efficiency. One hardly needs to add that the threat of innovative competition, very real in the minds of most executives, also serves directly to reduce static inefficiencies, since firms will want to keep prices low enough to discourage even as-yet-unseen competitors.
Dynamic competition is far from new: during the era of the large enterprises in the late nineteenth-century U.S. – the era that gave rise to American antitrust legislation – prices were in fact falling, output was expanding rapidly, and the rate of aggregate productivity growth was the highest in American history. But with the prominence today of competition among platforms – systems of institutions, including technical standards, that enable cooperation among myriad transactors – the reality of dynamic competition has made itself highly visible. In many cases, platforms are controlled by a single firm or small number of firms, yet often prices do not diverge from marginal cost much if at all. Amazon dominates online retail, but its prices are lower than those of its competitors, not higher. The marginal cost of an internet search on Google is essentially zero, and zero is what Google charges. This is an apparent paradox that not even economists can ignore.

No doubt almost everyone who has submitted testimony has noted that platforms partake of network effects. The desirability of a platform depends not only on the characteristics of the product considered in isolation (what some authors call the autarky value of the product) but also on the number of other customers who use, or are expected to use, the product (its synchronization value). As a result, we seldom see competition in the static sense of multiple platforms providing essentially the same service; consumers will gravitate to whichever platform has the highest synchronization value (assuming similar autarky values), and it is in fact efficient for a single platform to serve the entire (narrowly defined) market. From a static point of view there is “monopoly.” From a dynamic point of view, however, the locus of competition has simply shifted. In platform markets with network effects, competition within the market (again, narrowly defined) has given way to competition for the market. Existing successful platforms are disciplined by the threat from potential new platforms. Sometimes this threat comes in the form of competitors who improve the autarky value of their product, often starting out as niche players catering to first users who appreciate the autarky characteristics of the competitor and then expanding as new users provide synchronization value. Most significantly, platforms face the challenge of competitors that provide a similar or improved service in a wholly different and often unexpected way.

2. Do you think ‘dynamic competition’ is broadly consistent across these markets, or can some platforms (through network effects, scale, etc) achieve a position where the competitive pressure is lessened?

In the static view, it is precisely the point that possessing synchronization value provides an opportunity for the owner of a platform to raise price above the marginal cost of providing the autarky value of the platform (or to lower cost by
degrading that autarky value). To what extent and for how long a platform owner can get away with this will depend on the strength of dynamic competition, which in turn depends on the nature of the product but especially and most fundamentally on the larger institutional structure, including regulation and intellectual property protection.

There are only two ways that a platform can maintain prices above marginal costs. One is to be more efficient that one’s competitors – to have lower costs, for example. Such a situation would not be “policy relevant,” in the sense that taking regulatory or antitrust action against the more-efficient competitor would make society worse off. The other way to maintain price durably above marginal cost is to have a *barrier to entry*.

The static and dynamic views are in agreement that competition requires free entry. Taking a static view often leads to intellectual confusions about the nature of barriers to entry (that they can arise from the shape of cost curves, for example); but in the dynamic view it is clear that barriers to entry are always property rights – legal rights to exclude others.¹ For example, one can have a monopoly on newly-mined diamonds if one owns all the known underground reserves of diamonds. More typically, especially in the case of platforms, the property rights involved are government-created rights of exclusion, either in the form of intellectual property or regulatory barriers.

In many cases, a set of institutions and technical standards that partakes of network effects can be unowned (in the public domain) or owned by not-for-profit or club-like organization. In such a case, the static inefficiencies are likely to be less, since no entity can raise prices above marginal cost by restricting access. But there is a tradeoff. If no one can pursue rents by restricting access, the incentives to invest in and improve the platform are attenuated. Moreover, systemic change of the platform institutions and standards – that is, change that requires the collaboration of many existing stakeholder – is difficult because of the high transaction costs of coordination. By contrast, if the platform is owned – through intellectual property protection, for example, including the *de facto* protection of trade secrecy – the owner will have a greater incentive to invest in and improve the platform and can more easily effect necessary systemic changes. Prices will be higher because of the exclusion, but the product will be better, so the result may in fact be efficient.

In the lingo, a platform that is well maintained by an owner is a *walled garden*. Apple is a notorious example of a firm that cultivates a walled garden: it has long refused to make its products compatible with other standards, but as a result has

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created products that are higher quality and more systemically innovative than those of more open-standard platforms like Android. (Indeed, improvements in the Android universe have come mostly from imitating Apple.) Users who are highly technically competent often complain loudly about walled gardens, since they do not benefit as much from the cultivation, whereas they chafe at the incompatibilities involved. But the broad appeal of Apple products is testimony that the dynamic benefits of ownership often outweigh the static costs.

3. In what ways does excessive market power and its abuse manifest itself in these markets? Evidence that we have received suggests that the bulk of concerns relate to Search (particularly Google), Social Networks (Facebook), e-Commerce (Amazon), and Online Travel Agencies (Booking.com and others).

We should note first of all that complaints emanating from competitors are almost always an indication that the object of the complaints is more efficient than the complainers. If a firm, especially one with significant market share, raises its price above marginal cost, this should be a benefit to its rivals—a “price umbrella” that attenuates competition—and the rivals should have no grounds for complaint. However, if a (large) firm behaves competitively by lowering price and increasing output, rivals are indeed hurt, and they may see a sympathetic regulator or antitrust authority as their best hope. Companies like Amazon and Wal-Mart are examples of fierce competitors who have generated complaints by putting great pressure on their rivals.

What if it is customers who complain about the “abuse” of market power? To an economist, the problem with market power is the (static) inefficiency it creates. There is no such thing as the “abuse” of market power. Economists have understood for some time that a firm possessing market power cannot by its own actions increase that market power. The only way a firm can get market power (apart from being more efficient) is to possess a barrier to entry. What many see as “abuses” are usually what modern-day economists have come to call non-standard contracts: contractual practices beyond the simple calling out of prices in a market, practices that seem “restrictive.” These practices are often solutions to a much more complicated problem of production and sales than is contemplated in the simplified models of market power. They are very frequently an effort to overcome problems created by high transaction costs.²

Particular customers can sometimes be hurt by non-standard practices even when those practices are on the whole efficiency enhancing. An example is price discrimination—charging different prices to different customers for what is essentially the same service. In most circumstances, price discrimination is

economically efficient, since it encourages sellers to serve customers they would not otherwise be willing to serve; but those who are charged a higher price because they have a higher willingness to pay are seldom pleased to see others pay less. Price discrimination is common and important in platform markets, because the services platform provide often require high fixed costs but yield low (or even zero) marginal costs. Price discrimination, often in the form of multi-par tariffs, is a way to pay those fixed costs, and thus to provide a platform service that would not otherwise be profitable. A related practice is congestion pricing – charging a higher price at times of high congestion or charging a higher price to those customers most desirous of avoiding congestion.

4. There is a perception that competition authorities do not move quickly enough to allay public concerns about dominant platforms. Do competition agencies have sufficient tools and resources to handle complaints regarding large online platforms? Would you recommend any changes?

Unlike the static model of competition, which posits the absurd assumption of “perfect information,” dynamic competition places the limitations of our knowledge at the forefront. In a rapidly and unpredictably changing world, even highly knowledgeable market players with their ears to the ground notoriously misunderstand the market and fail to forecast the shape of the future. Imagine then the difficulties faced by a regulatory agency, even one that can somehow avoid acting on grounds of politics rather than in light of economic efficiency.

Regulation through complaint is an institutional alternative to the market for allocating resources. There is no reason to think that such a mechanism will create the right incentives, especially the incentive to innovate. Even if such a mechanism were to point competitors in the direction of efficiency (however defined), there is no reason to think that it could do so faster or at less cost than simply allowing the gales of creative destruction to blow.

5. What should be the objective of competition agencies and policymakers in these markets?

The objective should be dynamic efficacy – formally speaking, the discounted future stream of total social (producer and consumer) surplus. This is as against goals that competition agencies and policy makers are often thought to seek, like the protection of existing competitors, the maximization of the number of competitors, or even the maximization of consumer surplus alone. And, again, dynamic efficiency stands in contrast to static efficiency, which pays attention to present-day prices and costs without worrying about the incentives for innovation.

6. Is any form of regulatory change required to achieve these objectives? Broadly speaking, what type of approach do you advocate?
First, do no harm. Regulation should be not so much minimalist as abstract. It should not rely on the rule of experts, whose knowledge of the industry let alone vision of the future is likely to be inferior to that of market participants. Regulation should focus on the rules of the game: who has which rights, and how those rights are acquired and traded.

7. Does regulatory intervention risk chilling investment and innovation? Is it possible to mitigate this risk?

People normally think of the costs of regulation in terms of red tape. But red tape is something that competitors can often invent around. The real costs of regulation are two: freezing the landscape and creating policy uncertainty.

Regulation can freeze the landscape by instantiating the current structure of the market in legal rules. Platform services have many of the characteristics of old-fashioned public utilities. They have high fixed costs and low marginal costs; more significantly, their technical standards can often operate as a “bottleneck” through which all participants must pass.\(^3\) It is therefore tempting to regulate platforms as if they were public utilities, controlling rates and terms of access. This kind of regulation may improve static efficiency over the very short term, but it would have the effect of locking in an institutional structure and of deterring efforts to change the fundamental ways in which the platform operates – even of precluding alternatives that might replace the platform entirely.

Policy uncertainty is the opposite problem. When innovators (and potential investors) cannot predict what regulators will do, it lowers the expected profitability of all investment and adds an extra dimension of uncertainty to the innovator’s problem. This is one reason why abstract rule-based regulation is preferable to the rule of experts.

8. Should the Commission seek to reduce ‘lock-in’ and the costs associated with ‘switching’ platform for both consumers and suppliers, for example by mandating data portability, interoperability, or specifying technical standards?

Sometimes yes, sometimes no. The problem is that, in a world of dynamic change, it’s hard to tell and easy to get it wrong. Sometimes walled gardens are preferable to fully open-standard platforms. If regulators had somehow required Apple to make all of its services interoperable with various other platforms, the invention and perfection of devices like iPads and iPhones would have been delayed for years. On the other side of the ledger, there are cases in

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which open standards – like the mostly open standards of the Intel-based PC –
created much more value than a competition among incompatible standards
would have generated.

Given that we cannot easily and reliably predict when open fields are preferable
to walled gardens, it may be best to let markets decide. Walled gardens are
useful for innovation along the margin of quality and performance; they are
better for systemic innovation, the architectural recombination of elements.\(^4\)
By contrast, standardized open systems are useful for cost-reducing innovation;
they are better for modular innovation, the constant improvement of the
components of the system.\(^5\)

Without property-rights barriers to entry, systems
of standards tend to open up under pressure from what theorists have called the
“option value” of a standards-based technology.\(^6\) Deliberate compatibility can
be as much a competitive weapon as deliberate incompatibility: Apple thrived on
the latter, Dell on the former. The economy needs both kinds of experiments to
proceed.

If all other things are equal – as the seldom are – then it does make sense for
regulation to lean in the direction of open systems, instantiated in abstract rules.
Rather than affirmatively requiring openness when the market doesn’t want it,
however, this bias might best be a matter of leaning against artificial barriers to
openness like intellectual property rights. Regulatory agencies and legislatures
should resist calls to “strengthen” intellectual property rights.

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\(^4\) Christensen, Clayton M., Matt Verlinden and George Westerman. 2002. "Disruption, Disintegration and the Dissipation of
