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The Keys of the Collaborative Business Model

The Mechanisms that Matter

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THE MECHANISMS THAT MATTER

The Keys of the Collaborative Business Model

By ALEJANDRO LAGO and SANDRA SIEBER

Is Uber the solution for cheaper, better quality taxi services, or is it just a new private operator squeezing cheaper salaries out of part-time drivers? Should Airbnb be allowed to rent unused rooms in private homes, or should it be stopped for creating unfair, unregulated competition with hotels? Is Zopa peer-to-peer lending the future of loan banking, or will it collapse out of bad credit control?

Call it the sharing, collaborative or peer-to-peer (P2P) economy, a new business paradigm is gradually taking shape. Following the success of Wikipedia, Uber, Airbnb and Zopa, to name a

few of the most famous examples, we are currently witnessing the rise of new business ventures in everything from transportation and accommodation to freelance work, food delivery and financial services. To some, these ventures are, and will continue to be, the most disruptive trend to happen in the business world for years. And as with any disruptive business paradigm, this one comes with controversy and debate.

There is no doubt that the collaborative economy provides advantages for customers, but there are significant questions about their long-term efficiency and social sustainability.



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Supporters say that people are able to avail themselves of more services at cheaper prices through improved access, democratized supply and the efficient sharing of underutilized assets. This will have a positive impact on economic growth and welfare by stimulating consumption, raising productivity and catalyzing individual innovation and entrepreneurship.

Critics, on the other hand, argue that the new paradigm makes labor arrangements more precarious. Fixed contracts are replaced with serial, part-time work. And by taking advantage of weak regulation in this area, new breeds of tech giants are gaining monopoly power.

For the purposes of this article, we want to re-examine the key levers of the new business models, in order to understand the good and bad effects of the sharing economy. In particular, we will analyze the market-access mechanisms, the resource-allocation models, and the approach to governance, monitoring and control. In doing so, we will see that only a fraction of the sharing models out there are genuinely collaborative. By highlighting the differences, we may help academics, practitioners and policymakers better understand the potential advantages and shortcomings of the different modalities of the collaborative economy.

Toward a Shared Definition

Many of the touted advantages – value creation, lower prices, efficient use of resources, democratization of supply and inclusive access to work – are not unique to the collaborative economy. Indeed, under the term “collaborative,” many behaviors are lumped together that may have very different outcomes, leading many to search for a shared definition.

EXECUTIVE SUMMARY

Call it the sharing, collaborative or peer-to-peer (P2P) economy, a new business paradigm is gradually taking shape. And as with any disruptive business paradigm, this one comes with controversy and debate. This article examines the key levers of several well-known business models, in particular, the

market-access mechanisms, the resource-allocation models, and the approach to governance, monitoring and control. Highlighting the differences may help academics, practitioners and policymakers better understand the potential advantages and shortcomings of the collaborative economy.

Some seek to classify the main customer, supplier and environmental factors that favor the rise of the collaborative economy, while others, such as Jeremiah Owyang’s “collaborative honeycomb,” use a taxonomy based on industries. Most focus on understanding the phenomenon purely from the value-offering side, but this fails to consider what these new models offer in terms of efficiency and sustainability, both of which are under scrutiny by various stakeholders, including regulators.

To bridge this gap, we propose analyzing the sharing economy from a business-process perspective. In this article, we detail three key aspects of the collaborative business model that mark genuine changes in the mechanisms for (1) market access, (2) resource allocation and (3) governance. Using various collaboration scenarios, we will try to identify the advantages in terms of demand creation as well as efficiency gains (see **Exhibit 1**).

1 MARKET ACCESS: REINTERMEDIATION OR EXPANSION?

The first advantage that commentators frequently highlight about the sharing economy is that it enhances access to the market by an extended network of customers and suppliers, thanks to a reduction in transaction costs afforded by new technologies. Efficient online communication, quick comparison and filtering tools reduce both search and information costs. In addition, improved access to real-time information allows for a better matching of supply and demand.

However, these oft-cited advantages do not always translate into market creation or expansion. What we definitely see is a **market substitution or reintermediation effect**. This would be the case with the UberX low-cost ride-hailing app. The supply options (taxi drivers or Uber freelancers with a car) are not fundamentally different, and the demand segments affected are small (a city customer hailing a short ride is a narrowly defined segment unlikely to change much because of Uber). Uber may potentially improve the way supply and demand are matched, but what it mainly does is substitute the supply options for an existing market.

Contrast this with a **market-expanding collaborative model** like Elance (now part of Upwork). In this case, customers gain access to a global pool of freelance professionals over

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A Business Model Framework

EXHIBIT 1

ANALYZING THE COLLABORATIVE DIMENSIONS AND THEIR IMPACT.

Dimension	MARKET ACCESS		RESOURCE ALLOCATION			GOVERNANCE
	Reintermediation	Expansion	Redistribution	Matching	Real Sharing	Collaborative Control
Potential changes	<ul style="list-style-type: none"> Substitution of the type of suppliers 	<ul style="list-style-type: none"> Increased accessibility and capillarity Local to global reach 	<ul style="list-style-type: none"> Redistribution of labor (from full-time to part-time workers) 	<ul style="list-style-type: none"> Better matching of supply and demand over time 	<ul style="list-style-type: none"> Access to underutilized physical assets Pooling of demand under same resource Tasks split across multiple resources (crowdsourcing) 	<ul style="list-style-type: none"> Distributed quality control and enforcement Efficient search of options
Demand-side advantages	<ul style="list-style-type: none"> Competitive pricing Reduced search costs 	<ul style="list-style-type: none"> Reduced access (distance) costs Reduced search and information costs Competitive pricing Better availability 	<ul style="list-style-type: none"> Market substitution 	<ul style="list-style-type: none"> Better level of service (availability) Reduced bargaining costs (price transparency) 	<ul style="list-style-type: none"> Better level of service (availability) Cheaper prices 	<ul style="list-style-type: none"> Improved competitive landscape (incentives to compete in customer service) Reduced search and information costs Reduced bargaining costs (transparency)
Supply-side advantages (drivers of efficiency)	<ul style="list-style-type: none"> Reduced input unit cost 	<ul style="list-style-type: none"> Reduced access (distance) costs Reduced search and information costs Increase in resource utilization 	<ul style="list-style-type: none"> Lower input unit cost (marginal cost allocation) 	<ul style="list-style-type: none"> Increase in resource utilization Labor productivity 	<ul style="list-style-type: none"> Increase in resource utilization Allocation to the most productive resources (real efficiency) 	<ul style="list-style-type: none"> Reduced policing and enforcing costs (regulation)
Side effects and risks	<ul style="list-style-type: none"> Market power of new entrant (two-sided network effect) 	<ul style="list-style-type: none"> Potential market power of new market maker (two-sided network effect) Transfer of activities to low-cost economies 	<ul style="list-style-type: none"> Guarantee sustainability (provision based on marginal cost) Miscalculation of long-term social insurance systems for part-time workers 	<ul style="list-style-type: none"> Efficient allocation vs. public service offering (core problem) 	<ul style="list-style-type: none"> Sustainability of incumbent (sunk costs of previous capacity investments) 	<ul style="list-style-type: none"> Market power of information consolidator (regulation of the new regulator) Information privacy Miscalculation of social externalities in the normative control Cost of previous regulation for incumbent (licenses)



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the internet, when before they had to rely on local providers. By being able to check the prices charged historically for similar jobs, users can negotiate better terms. And with the use of collaborative tools, they can instantly chat and supervise the progression of their work.

The new availability of global freelancers via crowdsourcing may push some small and medium-sized firms to outsource some administrative or creative activities that they could not do before because of the high costs associated with having to use large established firms to do such work. Similarly, crowdfunding platforms like Zopa or Funding Circle allow people and companies to access and offer funding that was not available before, since they match funding sources in ways that are different from traditional banks.

With these business models, the availability and capillarity of market options are made substantially larger, broadening supply and, in turn, demand. Ideally, when new segments of latent demand materialize as a result of new supply options, a whole new market may be created. Our IESE colleague Evgeny Káganer and other researchers have studied the phenomenon of “human clouds” in depth. They believe that human cloud platforms are opening up completely new forms of business process outsourcing, and it is only a matter of time before they reshape sourcing on a global scale.

Admittedly, examples of genuinely new market creation are hard to come by. Even revolutionary eBay essentially expanded on the existing market of classifieds. Yet some collaborative models, like Munchery, do open up new possibilities. Although food delivery to your

door is not entirely new, Munchery’s delivery of high-end meals cooked to order by chefs from Michelin-starred restaurants does present an attractive new option.

Certainly, there is a continuum between market substitution and market expansion, with gray zones in between. Airbnb enables a partial market expansion, since it offers access to a new supply of private rooms beyond the traditional hotel or hostel options, but it also re-intermediates, since a non-negligible segment of hotel customers may shift from hotels to Airbnb. Similarly, UberX will incentivize some new demand in the form of users who were not using taxis before.

The key point here is **the greater the market expansion, the greater the economic advantage of the new model**, as this will foster economic activity and ideally redistribute wealth across a larger number of actors.

So, Elance may help small freelancers get jobs without the overhead or margins of big corporations. But if the effect is only reintermediation, then the economic gains will depend on the ability to match the existing supply and demand more efficiently, in order to generate some economic surplus that can be fed back to customers or suppliers.

Likewise, UberX may provide better availability of taxis via dynamic pricing and higher driver utilization rates and revenues. However, these efficiencies have to be weighed against the redistribution effects across actors. We will come back to this point later when we discuss collaborative governance.

2 RESOURCE ALLOCATION: REDISTRIBUTION, MATCHING OR REAL SHARING?

The second important feature relates to how resources are used to deliver services. Again, it is widely understood that the new collaborative models allow a large pool of individuals to access services using underutilized assets (empty rooms for rent) or labor (people running errands for others in their free time), thereby substituting corporations, which offered similar services using full-time labor and dedicated assets. Thanks to the “democratization of supply,” customers will theoretically benefit from an enlarged pool of providers and lower prices. But, as with the market effects of the collaborative model, we need to drill down further to understand the effects on resource allocation.

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The greatest advantage of the collaborative model arises when there is real resource-sharing. A resource previously used individually or idle during certain times is now shared across customers.

REDISTRIBUTION. With most collaborative models, the tasks and the consumption of resource time are similar to traditional offerings, the only change being that a different resource or person performs the activity. We say “person” since most services require human labor as the main resource. So, you may choose to use a freelance designer or driver instead of a corporate or “official” one, but the time and effort devoted to the execution of the task is roughly the same.

If there is just straight resource substitution, the advantage of the new model is limited in terms of efficiency. The only effect is a reduction of input unit cost – that is, the price or cost per hour accepted by the new resource. So, freelancers may be willing to accept lower fees and part-time drivers may accept lower rates, based on the assumption that their participation contributes marginally to their other main professional activity.

MATCHING. Linked to the use of an expanded network of flexible labor (in the form of part-timers) and the use of better real-time information, many collaborative models are also able to provide a better matching of resources.

For instance, UberX famously uses a dynamic pricing algorithm that adapts prices to high and low demand, surging prices and hence enticing more drivers at precisely the peak times when the supply of cars needs to match the greater demand for rides. This matching effect may result in better resource availability for customers as well as better resource utilization (less idle time) for providers. In fact, this superior matching effect is often cited when affected incumbents (like taxi drivers) complain about collaborative platforms (like Uber).

Nevertheless, this matching capability depends on two conditions: (1) that demand patterns can be anticipated or that customers behave in predictable ways; and (2) that we,

as citizens, tolerate price discrimination according to different customer types or times of use, and that we partly let go of the concept of universal, equal access to public services, like transport.

More important, society needs to balance the short-term improvements brought about by the better matching of resources with the long-term repercussions of transferring full-time, professional resources to part-time freelancers. In much the same way that labor-intensive tasks, like call centers and textile manufacturing, were outsourced to low-cost countries in the name of efficiency, we need to calculate the true costs of such resource shifts.

REAL SHARING. The greatest advantage of the collaborative model arises when there is real resource-sharing. In other words, a resource that was previously used individually or was completely idle during certain times is now shared across customers.

This is the case of BlaBlaCar, where a private driver who was making the trip anyway now shares the ride and its cost with other customers and may even earn a bit extra. Alternatively, unused resources, such as empty rooms in private homes or storage space, can be placed on the open market.

We see this as the true sharing economy: there are net efficiency gains in the form of higher utilization of otherwise underutilized resources, because people are willing to share something that before they owned.

While this type of sharing is mostly associated with the use of physical or financial assets, Wikipedia proves that intellectual or knowledge-based assets can also be shared. Here, the sharing of resources increases the efficacy of the outcome through a process of collaborative filtering.

As with the market considerations discussed in the earlier section, the boundaries between the redistribution, matching and



The greater the improved matching and sharing elements, the more there will be net efficiency gains, and the more justifiable the advantage to customers and society as a whole.

sharing of resources can be blurry. For example, when Airbnb started out, most individuals were sharing extra rooms in their homes; now it is not unusual to hear about people making a living by buying up apartments to rent them out, like a full-time job. This puts the offer on a similar footing with hotels, and works against the sharing element. From society's point of view, what is the difference between having real estate dedicated full-time to hotels and having real estate dedicated full-time to vacation apartments? In effect, this is not real resource-sharing but rather mere resource substitution.

Any collaborative model will entail some resource-substitution effect. There will be winners (the new freelancers) and losers (the incumbents). The key point to remember with resources is that **the greater the improved matching and sharing elements, the more there will be net efficiency gains**, thanks to a more sustainable use of the resources – and, hence, the more justifiable the advantage to customers and society as a whole.

3 GOVERNANCE: TRUE COLLABORATIVE CONTROL?

The third element to consider is governance. To what extent do collaborative models: (1) improve the monitoring of quality; (2) enforce a proper functioning of the market in which they operate; and (3) facilitate a fair allocation of the economic and social benefits generated? The thesis here is that collaborative models can avoid market failures and self-regulate, without the need for costly regulation, thanks to:

- the collaborative knowledge of thousands of users, who themselves monitor each other's behavior and exchange opinions.
- access to big data that can be filtered, analyzed statistically and communicated.

The pioneering example was eBay's review system in which customers rated the sellers, and users could judge for themselves who was reliable. Most collaborative economy companies

have adapted a similar type of rating or reputation system.

We agree that the use of new technologies enables a substantial reduction in the search, bargaining and enforcing costs on most markets, and, if used properly, believe it could be the strongest structural advantage of the model.

Consider traditional taxi regulation and Uber. To control access to the profession and to guarantee some quality standards, taxi companies have long required the issuing of special licenses. While some car safety and insurance controls may still be necessary, the continuous opinions of customers may serve as a better control of driver behavior than any license or routine law enforcement. Also, taxis have always been painted a certain color to facilitate quick identification in the street by both customers and law enforcers. Now, a location app that links the car's make and plate number with the service purchased makes the colored taxi superfluous.

Still, there is conflicting evidence as to whether the new models can meet the same minimum standards of the current regulation in force in most cities today, such as relates to the consistent availability of taxis and background checks on drivers. As such, we do need to distinguish in which situations and under which conditions collaborative monitoring does and does not work.

When the activity is repeated in a similar manner over time and the risks to customers are well known or transparent, then the collaborative logic tends to work. Uber drivers fall into this category. Granted, the volume of reviews or control points has to be large enough to be statistically significant, and there should be no important externalities, except for car availability at certain times.

When each instance of execution varies or carries different risks, the efficacy of the collaborative model becomes less clear. Consider a BlaBlaCar driver who wants to share a



Although the more open and transparent nature of the collaborative model puts more power in the hands of individuals versus corporations, the benefits will vary according to the profit-allocation model.

road trip between Barcelona and Madrid (a distance of 500 kilometers or 300 miles). Even if this driver has a history of good driving reviews, he or she may never have made this particular journey before. Moreover, there are substantially higher risks of having an accident on the highway than when giving someone a ride in the city, and customers may not fully appreciate those added risks when making the decision to share the ride. Or consider a Zopa crowdlending investment on each unique borrower situation. Or the veracity of a crowdsourced entry about an unfamiliar topic on Wikipedia.

In these cases, collaborative quality control may not work so well. For the market to function without external regulation, customers would have to accept shared risks. As such, Zopa lenders may accept higher individual default risks because the amount invested is small and spread across many users. And Wikipedia users may accept a few inconsistencies, so long as the overall quality of the entries is okay.

Another important consideration concerns the redistribution of wealth brought about by the governance mechanism. Although the more open and transparent nature of the collaborative model generally puts more power in the hands of individuals versus corporations, the benefits of this democratization will vary according to the profit-allocation model.

Businesses such as Airbnb, eBay and Upwork are primarily marketplaces where customers and suppliers interact, with eBay, in particular, exercising little direct control over prices, profits and conditions. Businesses such as Uber, on the other hand, are market makers that control prices and mimic company/employee relationships. This positions them farther away from the classic self-regulating concept that we normally think about when discussing the collaborative economy, begging questions about the efficacy of their governance mechanisms vis-à-vis traditional regulation. (See the related article on this topic by Sofia Ranchordás in this *IESE Insight*.)

Of course, we are not saying that Uber will not be successful. But we do believe that, over the long term, Uber (in its traditional form) may have to work harder to convince us of the real differences and social benefits it provides over traditional offerings. This changes when we look at UberPool, a new offering that takes your ride and opens it up to others going in the same direction, lowering the cost for everyone by turning a single ride into a carpool. Here, the pooling of resources constitutes a new element that makes the difference in terms of both efficiency and social desirability.

Changes, Risks & Implications

So far, we have dissected the key elements of the collaborative business model. Since many of the perceived advantages are theoretical, we must continuously monitor the capabilities of the various emerging models in terms of the three key dimensions, anticipating potential changes and the associated risks.

Exhibit 2 plots the previously discussed collaborative dimensions in a matrix, depicting where some of the companies mentioned in this article might fall at the time of writing. Basically, the more market expansion, matching, real sharing of resources and collaborative control there is, the more disruptive the business will be in the future.

In light of all these considerations, we might anticipate the following in each of the three areas:

1. MARKET ACCESS: GROWING POWER FOR COLLABORATIVE PLATFORMS. As collaborative platforms expand markets by connecting individual suppliers and customers, they become hubs in two-sided networks – two distinct user groups mediated by a platform that reaps exponentially greater “network benefits.” This may lead to a situation of “winner takes all,” where the new intermediaries enjoy a de facto monopoly, as has happened with Facebook.

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While some would claim this is the nature of business, regulators will need to monitor the potentially detrimental effects of too much market expansion.

2. RESOURCE ALLOCATION: "PRECARIZATION" CAUSED BY UNCONTROLLED SUPPLY. As mentioned before, the new collaborative models entail a fundamentally different contractual relationship between the company offering the service and the network of individuals providing the resources. Particularly when the collaborative model proposes a labor-resource substitution, the new relationship may imply less secure labor conditions, including more part-time work and lack of social insurance. Some argue that the growing number of collaborative models may be leading to a society of serial part-time workers, requiring a completely different approach to labor relationships.

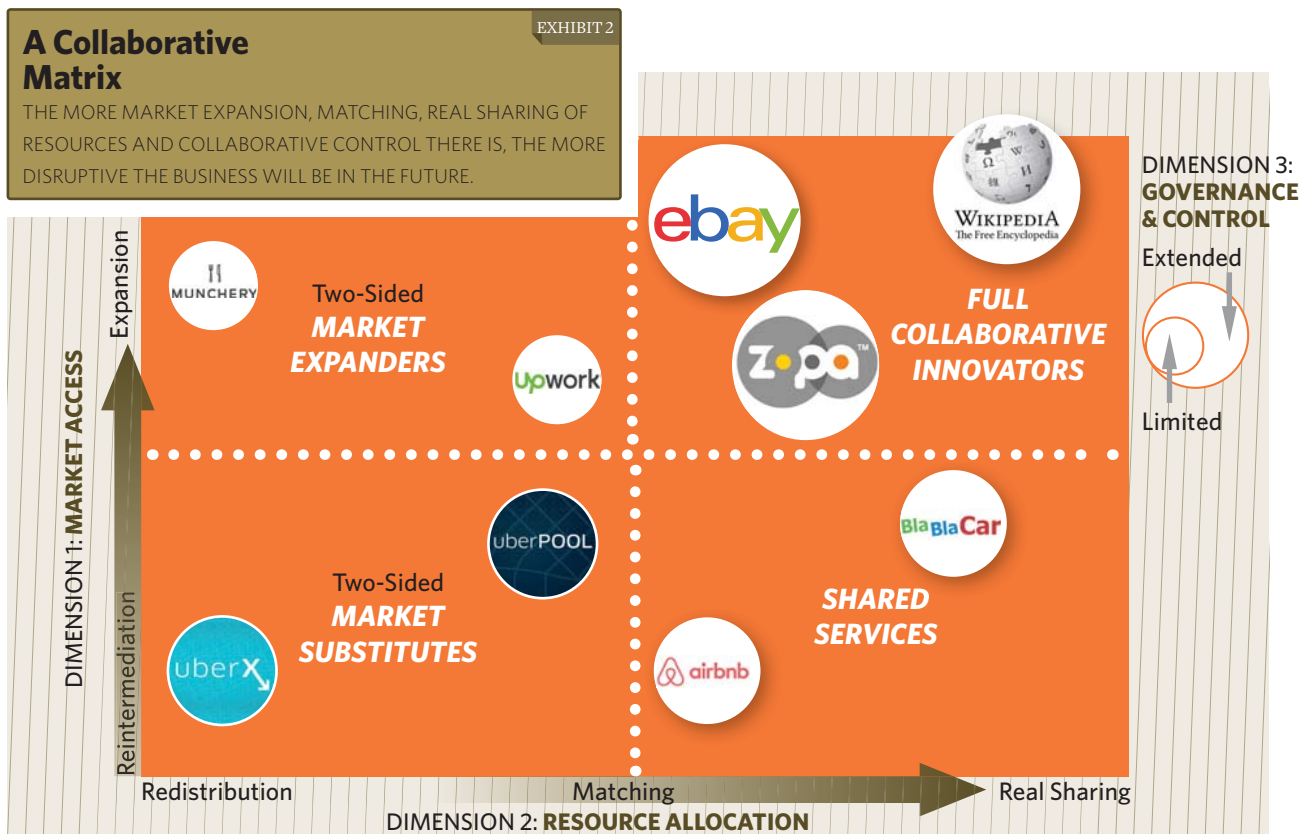
Moreover, an uncontrolled increase in capacity caused by the entrance of previously unused, but now shared resources will affect incumbents who made investment decisions based on prior resource allocations. Cities that

strictly control the total number of hotel rooms available are already grappling with this issue, trying to make sure resources are allocated fairly and in a more controlled fashion.

3. GOVERNANCE: REGULATING THE NEW REGULATORS. The big data held by the new intermediaries on customers and suppliers gives them huge power and capabilities. Airbnb, for instance, is able to detect tourist demand patterns in cities around the world. Uber, with its driver feedback and pricing algorithms, could arguably regulate a city's taxi networks better than the city itself.

Having this wealth of knowledge may reinforce these companies' monopoly power, which they may use to their advantage when setting prices or pushing conditions on suppliers. Again, you might say this is the nature of business.

But some of these companies' services are linked to sectors traditionally considered public services or that have been subject to strict regulation because of their potential negative externalities: tourist accommodation and transport are prime examples. This raises profound questions about the extent to which the information held by these companies should





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be, or needs to be, made openly available or more transparent to public authorities. In other words, how to regulate the new regulators?

With all of the above in mind, we would make the following recommendations for businesses and policymakers:

EXAMINE THE TRUE POTENTIAL OF THE BUSINESS MODEL. The danger of many collaborative models is that they really do not create or expand new markets, but simply substitute existing ones.

For entrepreneurs, this will set you on a collision course with incumbents and, in some cases, existing regulation. As long as your business model competes on terms of substitution, rather than increasing the number and variety of options available, the fight will be tough.

For policymakers, this point is relevant, too. As long as the market is expanding, and customers and suppliers are perceiving real advantages, regulation can afford to be more experimental and lenient. But if the expansion effect is limited, then the role of new market entrants will have to be regulated more carefully.

FOCUS ON MODELS THAT SHARE PHYSICAL ASSETS - BUT NOT ONLY LABOR. As stated before, the greater the resource-sharing element, the more justifiable the advantage to customers, providers and society as a whole. The sharing element is stronger when underutilized physical assets make up the bulk of the sharing. But it is best not to treat people as “underutilized physical assets.”

People require leisure, as well as labor, to live and feel human. As such, a collaborative model based solely on people sharing numerous part-time occupations is unlikely to be sustainable over the long term. Even if you really offered people more revenue per time worked, the model would then not be cheaper – and providing a cheaper alternative is usually one source of these models’ competitive advantage.

For policymakers, models based on collaborative labor raise serious challenges. Labor relations for a serial part-time worker will require a major reevaluation of current regulations.

LEVERAGE THE UNTAPPED POTENTIAL VALUE OF THE COLLABORATIVE ELEMENTS. The collaborative capabilities offer untold advantages to circumvent outmoded quality-control mechanisms and regulations. The value of these models could be creatively tapped not only for customers but for

various other stakeholders. Airbnb, for instance, could expand its tax collection powers on behalf of local authorities. And instead of constantly fighting against Uber, local cab companies and transport authorities could stand to learn from Uber’s matching and feedback algorithms to provide a better service. One could even conceive of current licensed taxi drivers being managed by Uber as a concessionaire, for a global fee.

FOR LONG-TERM GAIN, DON'T DISCOUNT THE SHORT-TERM PAIN. Finally, while there may be no problem with a collaborative business exploiting the value and efficiency gains of these new models, one has to be mindful of the very real effects on incumbents. Exploiting the gains is only fair if the competitive conditions are fair for all players. Many times, however, the new services affect industries where legacies of labor and regulation are important, such as transportation, hospitality or financial services. These legacies cannot be taken for granted and must be managed.

That said, these legacies should not become roadblocks to progress, either. Sure, there may be the problem of, say, taxi drivers who overpaid for licenses, as that was what was required for the sector to function in the past. Now, it is down to policymakers to address the new environment and help redefine the playing field in everyone’s interests. In this regard, the interplay between industry managers and regulators will be key. □

■ TO KNOW MORE

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