



## *Maintaining competitive conditions in the era of digitalisation*

### **OECD report to G-20 Finance Ministers and Central Bank Governors, July 2018**

*This note reviews the main changes in the competitive landscape that the digital economy may bring about. In light of these changes, ensuring that competition policies and regulations remain well adapted for both online and offline business models is key to boost innovation, technology diffusion and productivity in the digital era. Regulations creating barriers to entry or inadvertently providing an advantage to either traditional or new business models are in most urgent need for review. Priority sectors for regulatory review may differ between countries, but usually include transport and logistics, accommodation, finance, health and platforms. A set of potential principles is suggested to guide policymakers in conducting reviews of existing regulations and help regulation keep pace with rapid digitalisation.*

## **1. The digital transformation and the competitive environment**

### **1.1. Digital business models may raise competition concerns**

1. The digital transformation is changing business models, methods of production and distribution, and the way firms compete. Digital technologies have reduced the cost of entering some markets, even across borders, for instance as platforms allow small firms to sell online seamlessly to foreign customers and become “micro-multinationals”. Digitalisation has also reduced the costs of scaling up production, advertising and distribution for new entrants. For instance, the availability of cloud computing services provides smaller and newer firms with a flexible access to considerable computing power without investing in physical infrastructure. More broadly, core digital products are replicable at close to zero marginal cost. This can allow innovative start-ups to grow and gain market share rapidly once they bring a product to market, often with few employees, few tangible assets and limited geographic footprint (OECD, 2018<sup>[1]</sup>).

2. Through these channels, the digital transformation offers potential to stimulate competition and yield substantial consumer benefits. Furthermore, platform-based business models (Airbnb, Uber, Amazon, eBay, etc.) have also raised competition in some traditional markets, such as accommodation, transportation or retail services where online and offline business models compete.

3. However, some characteristics of the digital economy also create massive economies of scale and scope that may present challenges to maintain competitive conditions: first, the fact that digital production typically features significant upfront costs to develop products and near-zero marginal costs; second, the importance of intangible assets (intellectual property, algorithms, software, data) to compete effectively (OECD, 2018<sup>[2]</sup>). In particular, in an increasingly data-driven economy, platforms benefit from economies of scale and scope in collecting data; precisely as data has become a more valuable asset and as access to large amounts of data feeds into improvements in analytics and machine learning, which further help firms improve the quality of their services and target potential new users (OECD, 2016<sup>[3]</sup>).<sup>1</sup> However, a thriving market for data between firms also exists, which may contribute to alleviate the asymmetries in data collection between smaller and larger players. Platform businesses also exhibit strong network effects, which further reinforce the benefits of scale, potentially creating difficulties for new entrants to break into a range of markets where they need to compete with large established firms.

4. While temporary market power earned through new or higher quality products is well warranted to incentivise innovation, scale, network and cross-platform effects could create dynamic inefficiencies by perpetuating it, leading to new sources of concentration. This could limit the productivity benefits from new technologies by creating obstacles to the entry and innovation of new players, as well as slowing down the diffusion of innovations to potential competitors.

5. Assessing the strength of the competitive environment and its evolution requires looking at a range of different outcomes. A first, although necessarily imperfect, indicator is the evolution of mark-ups – the ratio of the price charged by a firm per unit of product and its marginal cost. Evidence points to a significant rise in mark-ups since the early 2000s in the United States and other economies (Calligaris, Criscuolo and Marcolin, 2018<sup>[4]</sup>; De Loecker and Eeckhout, 2017<sup>[5]</sup>; Andrews, Gal and Witheridge, 2018<sup>[6]</sup>). The increase has been driven by those firms that enjoy the highest levels of mark-ups: since 2001, mark-ups rose by about 20% for the top decile of the distribution, whereas the trend has been flat for the bottom half of the distribution.

6. There are several possible explanations for the observed increase in mark-ups as digitalisation has progressed. One such explanation would be that the competition faced by top firms in digitalised sectors may have declined, domestically or globally, and barriers to entry may have been rising. Other, more benign drivers may include technological factors (high fixed costs and low marginal costs in the digital economy), higher product and quality differentiation enabled by digital technologies, or continued product or process innovation repeatedly extending the temporary market power of top firms and improving their productivity. Taking into account a broader range of indicators, including profits, returns on investment, concentration ratios and firm entry and exit rates, can help disentangle these possible explanations and assess the extent to which rising mark-ups in the digital economy raise competitive concerns. These measures by and large indicate that market power appears to be increasing. The available evidence points to a moderate rise in broad measures of concentration in the US and Japan, with a more mixed picture in Europe; and a strong trend towards increased profits not only in the technology

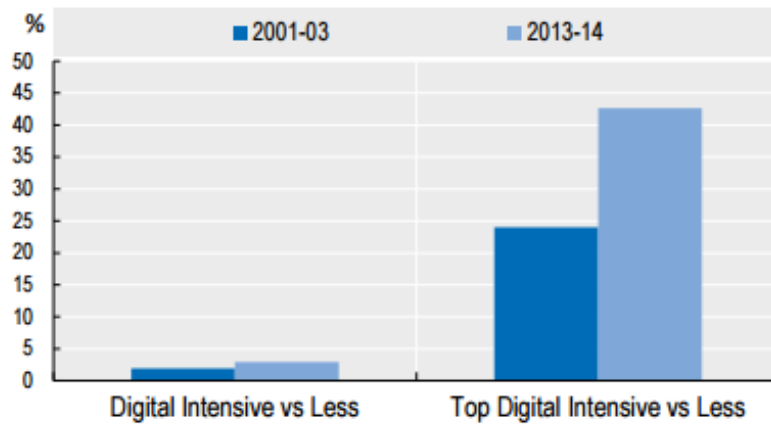
---

<sup>1</sup> The widespread use of pricing algorithms has also raised concerns of possible anti-competitive behaviour as algorithms can make tacit collusion easier to achieve and sustain without any formal agreement or human interaction (OECD, 2017<sup>[11]</sup>). There are however few known cases so far.

sector but also in financial services, healthcare and a range of other services (OECD, 2018<sub>[7]</sub>).

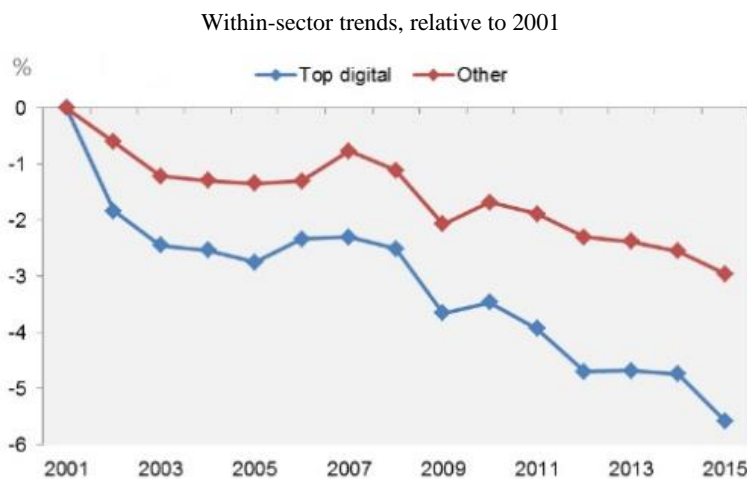
7. The fact that mark-ups are higher and have risen faster in sectors more exposed to digitalisation (Figure 1) further suggests that the digital transformation may have played a role in these developments. Moreover, business dynamism as captured by firm entry rates has also been declining at a faster pace in digitally intensive sectors than in the rest of the economy (Figure 2).

**Figure 1. Average percentage differences in mark-ups between firms in sectors of different digital intensity**



*Note:* Digital intensive sectors (resp. less digital intensive sectors) rank above (resp. below) the median sector by digital intensity, as calculated jointly over all indicators of digitalisation in Calvino et al. (2018<sub>[8]</sub>) including tangible and intangible ICT investment, use of ICT goods and services, online sales, etc. Top digital intensive sectors are in those in the top 25% of digital intensity. This graph fixes the ranking of sectors to the initial period (2001-03). The estimates are from a pooled regression explaining firm log-mark-ups in the period, on the basis of the company’s size, country-year of operation, and the sector’s digital intensity. *Source:* OECD (2018<sub>[2]</sub>).

**Figure 2. Change in entry rates by sector digital intensity**



*Note:* Country coverage: Belgium, Brazil, Costa Rica, Finland, Hungary, Italy, Netherlands, Norway, Portugal, Spain, Sweden and Turkey. Sector coverage: Manufacturing and non-financial market services. *Source:* OECD DynEmp3 database, May 2018.

## 1.2. Improving and reviewing pro-competition policies

8. Policies and regulations that maintain competitive conditions help sustain a healthy business environment and bring benefits to consumers. Adequate competition keeps rents low in product markets, with competitive pricing in turn supporting households' purchasing power. Furthermore, a competitive environment fosters stronger innovation and growth by ensuring that new entrants with superior products or more efficient processes can enter, grow and gain market share over incumbents; while inefficient firms ultimately exit the market, freeing up capital and talent for new firms to grow. Through these channels, competition feeds into higher productivity and wages.

9. The rapid digitalisation of the economy makes the need to keep regulations up to speed with changes in business models more urgent than ever (see Box 1 on tools to identify and review regulations that may create restrictions). In the EU, for example, the number of consumers who made a purchase online in the last 3 months doubled in less than a decade.<sup>2</sup> Enterprises sales through electronic networks increased from 11% of their total turnover to 18% from 2007 to 2017.<sup>3</sup>

10. As digitalisation transforms the nature of production, ensuring that an adequate regulatory environment prevails, promoting entry and competition, matters not only in digital sectors but also for the wider economy to reap the full benefits of new technologies. Policies in many countries often implicitly or explicitly favour incumbents, and do not always enable the experimentation with new ideas, technologies and business models that underpins the success of innovative firms. It is notable that the rise in mark-ups has been more pronounced in services (Andrews, Gal and Witheridge, 2018<sub>[6]</sub>), which also tend to be subject to a heavier regulatory burden on entry and operations than manufacturing industries. Administrative burdens on start-ups or barriers to entry in services are associated with a lower adoption of technologies such as cloud computing, slowing down the productivity gains from technology diffusion to the vast majority of non-frontier firms (Andrews, Nicoletti and Timiliotis, 2018<sub>[9]</sub>) and thus holding back income and wage gains throughout economies.

11. Adequate regulation to promote competition, entrepreneurship and technology diffusion can help foster more inclusive growth by strengthening the productivity gains from new technologies and ensuring workers widely share in these gains. Evidence points to a link between widening productivity dispersion between firms and widening wage dispersion between workers in a given sector, as more productive firms tend to pay better wages to their employees (Berlingieri, Blanchenay and Criscuolo, 2017<sub>[10]</sub>). Digitalisation appears to reinforce this link, resulting in even more exacerbated wage inequality within sectors more reliant on ICT technology. Competitive conditions conducive to more widespread technology and productivity diffusion could thus contribute to narrowing wage gaps and promoting more equity across workers.

12. Rapid digitalisation also raises the question of whether existing regulatory approaches and tools remain appropriate, or whether new sectors and activities would require regulators to rethink competition policy and explore new approaches. Regulators

---

<sup>2</sup> See Eurostat [http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc\\_ec\\_ibuy&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=isoc_ec_ibuy&lang=en)

<sup>3</sup> See Eurostat <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tin00110&plugin=1> and more generally, the European Commission Final report on the e-commerce sector enquiry (COM(2017) 229 final) [http://ec.europa.eu/competition/antitrust/sector\\_inquiry\\_final\\_report\\_en.pdf](http://ec.europa.eu/competition/antitrust/sector_inquiry_final_report_en.pdf).

and other officials face a challenge to catch up with the digital economy because the *status quo* presents some regulatory risks. Firstly, current regulations, which were designed for traditional products and services, may not be appropriate for the digital economy and may at times hinder development of new products and services. For instance, some existing regulation may have been introduced due to market failures resulting from information asymmetry; if the information asymmetry is reduced due to digitalisation, for instance with online customer ratings, the market failure that underlay the original regulation may be changed. Secondly, new policy measures may be needed to enable the digital transformation and achieve its economic benefits. There may be a regulatory “vacuum” in the face of the novelty of the digital economy. Uncertainty created by the absence of regulation may discourage innovation. Lack of some type of regulations, such as safety and consumer protection in online transactions, can restrain otherwise desirable new goods, services and business models.

13. Reviewing new or existing regulation is not an easy task. While the regulators are challenged by the complexity and novelty of digitalisation, they have to balance various policy concerns. In this process they can be exposed to lobbying of incumbents who seek protection from new competitors, while often arguing about more publicly acceptable concerns, such as reducing consumer risk.

14. This note develops key points of focus in reviewing regulations, identifying the types of regulatory restrictions that are most prevalent and general principles for a competition-focused review of regulations. Preliminary conclusions are:

- Guidance on competition assessment may need to better cover platforms, vertical restraints and e-commerce.
- The main types of restrictions are in (1) barriers to entry and (2) regulations creating a cost advantage for either offline or online providers.
- Prioritisation to limit digital-focused competition assessment review to specific sectors is valuable.
- Broad stakeholder consultation is needed when particular sector regulations are reviewed, particularly to ensure that potential entrants have an opportunity to express where regulatory restrictions are holding back their development, which can then be assessed in a balanced manner.
- To the extent that regulations may need to change more than once as digitalisation continues, consideration should be given to the appropriate legal form for regulations to ensure that changing them is both feasible and not excessively burdensome for legislators.

**Box 1. Designing and reviewing pro-competition regulations:  
Diagnosis and planning tools**

***OECD Competition Assessment Toolkit***

One way to ensure regulation continues to meet its goals in a changing business environment is competition assessment. Competition assessment is the evaluation of the impact on competition of laws, regulations and policies and the design of regulations that are more favourable to beneficial market forces. It can be used to review regulations before they are put in place or as an analytical framework for ex-post analysis of existing regulation. It can lead to significant consumer benefits and higher productivity and innovation by enhancing competitive markets.

In particular, the OECD Competition Assessment Toolkit provides a method for governments to identify unnecessary restraints on competition and develop alternative, less restrictive measures that still achieve government policy objectives. The process selects a policy, screens it by means of criteria embodied by the OECD's **Competition Assessment Checklist** (hereinafter 'CAC'), and where a regulation is unduly restrictive, designs and selects alternative policies. Following the CAC, further competition assessment should be conducted if the proposal has any of the following four effects:

**(A) Limits the number or range of suppliers**

This is likely to be the case if the proposal:

1. Grants exclusive rights for a supplier to provide goods or services
2. Establishes a licence, permit or authorisation process as a requirement of operation
3. Limits the ability of some types of suppliers to provide a good or service
4. Significantly raises cost of entry or exit by a supplier
5. Creates a geographical barrier to the ability of companies to supply goods services or labour, or invest capital

**(B) Limits the ability of suppliers to compete**

This is likely to be the case if the proposal:

1. Limits sellers' ability to set the prices for goods or services
2. Limits freedom of suppliers to advertise or market their goods or services
3. Sets standards for product quality that provide an advantage to some suppliers over others or that are above the level that some well-informed customers would choose
4. Significantly raises costs of production for some suppliers relative to others (especially by treating incumbents differently from new entrants)

**(C) Reduces the incentive of suppliers to compete**

This may be the case if the proposal:

1. Creates a self-regulatory or co-regulatory regime
2. Requires or encourages information on supplier outputs, prices, sales or costs to be published
3. Exempts the activity of a particular industry or group of suppliers from the operation of general competition law

**(D) Limits the choices and information available to customers**

This may be the case if the proposal:

1. Limits the ability of consumers to decide from whom they purchase
2. Reduces mobility of customers between suppliers of goods or services by increasing the explicit or implicit costs of changing suppliers
3. Fundamentally changes information required by buyers to shop effectively

In the context of new developments related to digital goods, services and business models, **G-20 Digital Ministers called for a review of the OECD Competition Assessment Toolkit** in April 2017. This review is well under way to ensure that it provides appropriate guidance to address the many complex regulatory effects on competition in light of digitalisation. An updated Competition Assessment Toolkit will help officials to make the most out of this opportunity.

***OECD Product Market Regulation Indicators***

Reforms conducive to more business dynamism, innovation and technology diffusion in a digitalised economy could provide significant benefits for consumers and households. A tool to identify such potential reforms is the OECD Product Market Regulation (PMR) Indicators<sup>4</sup>, to help assess **economy-wide and sector-specific regulatory impediments** to entry and competition. The indicators already cover 18 G-20 members and are gradually being extended to have global coverage.

The 2018 update and extension is currently underway and will provide a comprehensive picture of whether rules in place encourage entry of new firms and ideas, support healthy competition, and discourage anti-competitive behaviour. The new PMR questionnaire includes questions on regulation of the digital economy to ensure a level playing field. The information collected will help take stock of digital regulatory practices, understand where the possible obstacles to competition come from, and identify best practices.

---

<sup>4</sup> See <http://oe.cd/pmr>.

## 2. Types of regulations in special need of review due to digitalisation

15. Information on regulations on the digital economy was collected to identify areas of potential competitive restrictions (Box 2). Two types of regulatory situations arise with high frequency: entry barriers and cost-differentiating regulations. Entry barriers place constraints on the capacity of new and often small companies to successfully enter a market. Cost differentiating regulations give one type of firm a cost advantage over another, where a level playing field would be competitively neutral.

### **Box 2. Methodology to identify regulations in need of review**

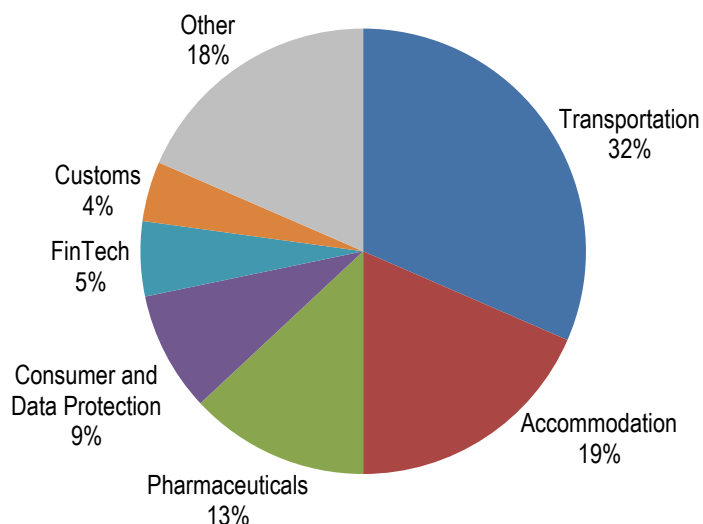
In order to understand how competition assessment performs regarding regulations relevant to the digital economy, examples of such regulations were collected through survey responses, workshops and desk research by the OECD Secretariat. The main source of the input is the submissions to the Survey on Regulations Affecting the Digital Economy which was distributed in July 2017 to the members and participants in the OECD Competition Committee, the competition authorities of G20 countries, and representatives of the business community, through the Business and Industry Advisory Committee to the OECD (BIAC).

The examples of regulation on digital economy have been classified by means of the Competition Assessment Checklist (CAC) categories. The CAC, used in the early stage of competition assessment, is a set of questions to screen regulations to identify potential competition restrictions (Box 1). Under the OECD approach, competition assessment should be continued to a full review if any of these questions are answered “yes”.

92 of the collected examples of digital economy regulation were considered potentially restrictive to competition. A large majority (more than 80%) of the restrictive regulations either limit the number or range of suppliers or the actions that suppliers can take when competing with each other. The transportation sector ranks first in terms of number of regulations with potentially restrictive effect on competition, coming up in each and every jurisdiction, followed by accommodation and pharmaceuticals (Figure 3). Additionally, horizontal regulations (consumer protection and data protection) may affect many sectors.

The bulk of the restrictions included in the present analysis were identified by competition authorities. There is a possibility that competition authorities have been more active where new services challenge regulation more directly and where incumbents have resisted more. Presumably there are also some ‘less problematic’ sectors, where policy makers and businesses have co-operated to lift barriers. The type of restrictions we have found in retail and wholesale trade could be more common than shown by the survey, though possibly addressed without competition authority involvement, e.g. over physical location requirements.



**Figure 3. Distribution of potentially restrictive regulations by sector**

Source: OECD 2017 Survey on Regulations Affecting the Digital Economy.

## 2.1. Entry barriers

16. When governments create entry barriers, they are effectively limiting the number of providers available to deliver a good or service. Regulations designed for a non-digital environment can often inadvertently create entry barriers for digital competitors or alternatively be introduced with a specific intent to restrict digital competition. Such limitations often reduce supply and create higher prices for consumers, and avoiding unnecessary barriers is particularly urgent as many new business products and models become possible.<sup>5</sup> The dividing line between a justified government requirement and an unjustified barrier can be a fine one, depending on the precise facts of the sector under analysis. The need to protect consumers is one leading argument for establishing government-enforced entry barriers. Therefore particular attention is often needed for the extent to which consumer safety and supposed prevention of fraud may unduly restrict competition.

### 2.1.1. Physical presence requirement and minimum scale requirements

17. In a number of cases, physical presence requirements exist, such as requirements for a driving school to have a physical office on the street with a minimum size of office for the manager. These types of requirements may, on the one hand, prevent “fly-by-night” operations that may have an intention to defraud customers by charging for products and services that are subsequently not provided. On the other hand, they may

<sup>5</sup> An aggregate limitation on the number of licences is an example of an entry barrier. An economic study by the Spanish competition authority shows that quantitative restrictions on taxi and PVH licences result in lower availability, longer waiting times and higher prices. It was calculated that welfare loss was EUR 324 million in 2013. [www.cnmec.es/file/107176/download](http://www.cnmec.es/file/107176/download).

also at times be deemed excessive, can have a particularly strong effect to stop entry by new digitally-enabled businesses and can stop operation of sharing-economy businesses.

- **SME/microenterprise constraints.** Rules that establish a minimum scale for financial enterprises may prevent the development of new and more competitive delivery options, for example for money transfers and currency exchanges which have historically had high margins.
- **Individual business constraints.** Increasingly, car rental may operate with one individual renting to another individual, through a platform, as personal cars are typically unused a high percentage of the time. Rules that establish a minimum size (in terms of number of vehicles owned by a car renting company) for any car rental enterprise may prevent development of the sharing economy. Note that there may be a difference between individuals performing activities (in a way that is unmonitored and without paying taxes) and small businesses that are paying taxes. Some governments may treat the two types of groups in different ways.

### *2.1.2. Definitions of enterprises that restrict small enterprises and the sharing economy*

18. When registration requirements (and tax and social contribution payments) have a minimum level of default size, very small enterprises may not make economic sense, due to the heavy cost of regulatory compliance. The cost of regulatory compliance in some industries, such as banking, can become so large as to be affordable only by firms of a very large minimum size. The minimum efficient scale for digitally-enabled enterprises can be quite small.<sup>6</sup> Establishing rules that require a large minimum efficient scale even for digital enterprises can mean that very few digital enterprises would reach such scale, effectively guaranteeing a strong position to the first movers while limiting opportunities for subsequent businesses.

### *2.1.3. Local licensing rules and limited issuance of permits*

19. Local licensing rules and requirements for permits can serve as tools for regulation of the local economy. Licensing rules may vary substantially for competitive activities depending on the technical definition of services provided. Permit issuance, in particular, can serve as a hidden barrier to digitalised platforms, goods and services, to the extent that permits are withheld for reason of lack of local presence<sup>7</sup> (as above) or for reasons of minimum years of operation (which may inherently be limited for the new business models of innovative digital start-ups).

20. The necessity of rigorous government oversight of some activities, such as hotel certification with a number of stars and extremely detailed criteria with regular inspections, may be open to review to the extent that consumers book hotels in advance over the internet by an application that allows them to see the hotel rooms, see average

---

<sup>6</sup> In Switzerland, the Swiss Federal Banking Ordinance was amended to overcome such difficulties faced by FinTech companies; a regulatory sandbox was created. Below certain thresholds a banking licence is not required. [www.lexology.com/library/detail.aspx?g=c03fbc7e-06f6-4db9-9ae0-013c23b72ed8](http://www.lexology.com/library/detail.aspx?g=c03fbc7e-06f6-4db9-9ae0-013c23b72ed8)

<sup>7</sup> For instance, in Greece “notification requirement for the trading of plant protection products also stands for the case of e-commerce sales. Therefore, the seller must also have a physical trading establishment/store, according to PD159/2013.” (OECD Competition Assessment Reviews: Greece (2017), p. 277). The requirement has now been removed.

ratings and, if interested, read reviews of experience by actual users. To the extent that the previously existing information problem for consumers that led to the hotel rating system may have changed, authorisation regimes for distinguishing quality may no longer be needed in the same way or same extent. In short, when the market failure (lack of information) is changed by digital provision of products, the regulatory response to the market failure may need to be modified as well.

## 2.2. Unequal regulatory costs

21. Some rules may lead to an unjustified and disparate regulatory cost burden for either traditional or digitally enabled companies. From a competition perspective, we can compare services that are provided by different types of companies to see whether services compete. When there are unequal regulatory burdens, it may be worth considering revising the structure of regulation to ensure that one type of business does not face unjustifiably higher regulatory burdens than another.

22. Consider two examples, one illustrating the types of regulation that create a cost advantage to one service over another, and another designed to create equal regulatory costs. In the first, personal transport services by car may be provided by ride sourcing companies or traditional taxis. The licensing rules for traditional taxis may be much stricter than for ride sourcing companies, while ride sourcing companies in particular may have many part-time workers (which help to fill peak transport needs) and lower licensing requirements. In particular, accident insurance is an area in which costs may be unequal between traditional taxis and ride sourcing services.<sup>8</sup> In some cases, ride sourcing service providers may either not have commercial personal transport insurance or may have less complete and generous insurance than taxi drivers. This may be considered a consumer safety question, particularly to the extent that insurance is not typically considered by consumers when choosing between services, but also becomes a question of competitive neutrality, to the extent that inferior insurance creates a substantial cost advantage to ride sourcing services. Reducing insurance requirements to taxis could be an option, while seeking to encourage private solutions, for example with insurers able to offer coverage according to their own criteria (e.g., number of kilometres driven per year).

23. In the second example, the rules establishing financial products that can be used for deferred-tax retirement plans can raise costs for new products. Such rules may have positive lists for the types of products covered, and thus inherently require newer products to increase their costs and change their structure to be named on the list. The UK resolved this question for peer-to-peer lending products by updating the positive list for products that are eligible to be used in deferred-tax retirement savings plans, including peer-to-peer lending products.<sup>9</sup> Unequal regulatory costs are a particular risk as new product categories are created, and as a result regulators in particular will need to pay special attention to the ongoing appropriateness of their regulatory structures.

---

<sup>8</sup> One submission to the FTC on insurance costs for ride-sourcing services is found in R Street Policy Study No. 48, “Blurred Lines: Insurance Challenges in the Ridesharing Market” October 2014, [https://www.ftc.gov/system/files/documents/public\\_comments/2015/05/01717-96147.pdf](https://www.ftc.gov/system/files/documents/public_comments/2015/05/01717-96147.pdf).

<sup>9</sup> See, for example, Financial Times “UK peer-to-peer lenders plan to raise millions from ISAs” November 26, 2017, <https://www.ft.com/content/ab5a3934-d299-11e7-8c9a-d9c0a5c8d5c9>. In order to issue Individual Savings Accounts, commonly used for retirement, peer-to-peer lenders needed regulatory authorisation and inclusion among the category of products that were eligible for such accounts.

### 3. Guiding principles for reviewing and revising regulations in light of digitalisation

24. A number of principles can help customise competition assessment reviews of regulation for the particular circumstances of greatest relevance in light of digitalisation. These points have emerged from the 2017 survey, the 2018 workshop and OECD work on potential revision of the Competition Assessment Toolkit. This approach does not address labour-related regulation, which can clearly also be important but which would be governed by different principles, but only product market regulation. The potential principles outlined in this document are intended to focus the competition assessment method on regulations that impact digital growth. Underlying these principles, policymakers need to recognise that predicting the future is particularly fraught with difficulty and as a result flexible solutions are desirable. Discovering a reasonable regulatory path forwards may require openness to new goods, services, processes and business models, as well as making sure that consumers can move their information from one provider to another, which may be important for the success of new business models.

#### 3.1. Breadth

25. **Ensure that the breadth of regulations reviewed in light of digitalisation is sufficient to address a variety of restrictions that may be present in different laws.** The breadth of review of regulations, when considering digitalisation, will often need to be broad, i.e., across a sector and potentially also including regulation that impact ancillary services for digitalisation. Rather than reviewing one regulation on its own, a proper digital competition assessment will be broad, therefore, and likely include a full variety of laws and regulations having impact on product requirements. For example, internet sale of products by households may depend very much on the consumer protection rules definition of a retailer and retailer guarantees.

#### 3.2. Prioritisation

26. **Prioritise key sectors for review in light of digitalisation and ensure that there is a live process for updating regulations to reflect technological change.** Economies will need to prioritise those sectors that are most relevant for digitalisation review. Such a prioritisation may consider factors such as key sectors for growth and job creation in each economy, as well as areas where development and growth of digitalisation is falling behind peers.<sup>10</sup> Prioritisation may also be over existing digital products or those that are, in some sense, completely prevented from operation as a result of regulation. It may be useful to establish a process for innovative, digital-oriented companies to request regulatory reviews where regulation appears to have a distortive competitive effect.

27. Sectors that are of particular interest at the moment, though the particular needs of different countries are not necessarily the same, are:

---

<sup>10</sup> For instance, in Canada, a market study regarding FinTech was conducted because of its importance to consumers and the economy, a perception that Canada lags its peers in FinTech adoption and that stakeholders in Fintech were worthy of attention. The Norwegian competition authority focused on new taxi services, accommodation market and tax issues in Official Norwegian Report (NOU) 2017:4 on sharing economy because they found to be the most prominent areas in digital economy.

- Transport and logistics
- Accommodation
- Finance
- Health and pharmaceuticals
- Platform regulations

### 3.3. Stakeholders

28. **Ensure that a competition assessment of regulations appropriately considers views of stakeholders, including potential future stakeholders.** Current stakeholders, such as sector-specific associations, are typically dominated by traditional firms and may have rules that prevent non-traditional members selling competitive products from joining. Therefore, established associations may not always represent the full spectrum of views that are worth considering when seeking stakeholder input. Moreover, established associations and companies will tend to have many more resources available for lobbying, while new entrants will have less or no resources available. Great care should be taken by policymakers to ensure that stakeholders with a full variety of interests are reached and provide input.

### 3.4. Process for review

29. **The process for review can begin by asking whether market failures that are at the origin of regulation have themselves changed prior to considering competitive implications of existing regulatory regimes.**

- Is there a market failure and, if so, has it changed?
- Are the set of possible regulatory responses to the market failure the same, or have the response options been altered by digitalisation?
- Do existing regulations in response to the current market failures unduly restrict competition?
- Are new products and services unduly excluded by the regulatory structure or given undue advantages or disadvantages?
- What options exist for ensuring new products, services and business models are not unduly excluded nor given undue advantages?

### 3.5. Competition assessment method

30. **Apply the OECD’s competition assessment checklist to regulations under review.**<sup>11</sup> The competition assessment checklist is built around four main questions. Areas of key concern are regulations that:

- Limit the number or range of suppliers;

---

<sup>11</sup> According to the Norwegian presentation at the 2018 Workshop, the Norwegian competition authority’s approach used in the report on sharing economy was based on the competitive neutrality principle and the competition assessment checklist. In the report, it is stated that “regulation should promote competition” (“i.e. by providing a level playing field (legal entities/private individuals and traditional/technology-driven industries)” and “technology neutrality”) and “should not hamper competition” by limiting the number or range of suppliers, limiting the ability of suppliers to compete, reducing the incentive of suppliers to compete and limiting the choices and information available to customers.

- Limit the actions that suppliers can take as they compete with each other;
- Reduce the incentives of suppliers to compete; and
- Limit the choices and information available to consumers.

The underlying rationale for these questions is to identify potential restrictions to competition. Whether the regulation provides an undue restriction is a further question that can be applied to the limited number of regulations that have a positive response.<sup>12</sup> These four areas of concern are not specific to digital products and services but are the same general principles that can also be used for traditional products and services. While no update of the fundamental principles of the checklist appear needed, the importance of reviewing physical presence requirements may need to be inserted into the checklist. The first two questions appear the most likely to be relevant in digitalisation reviews.

### 3.6. Competitive neutrality

31. **Ensure that regulations are competitively neutral between digital and non-digital products, while ensuring appropriate consumer protections.** Regulations may at times give substantial and undeserved advantages to one type of company over another. In particular, regulations may have been established for traditional products and services, without taking into account actual and potential new innovations in products and business methods. Care should be taken to ensure that regulations are appropriate and focused on actual risks from different products, without unduly handicapping one compared to another and at the same time not assuming the same regulation should apply to all types of companies.

### 3.7. Physical presence, minimum scale and inspection rules

32. **Particular focus is needed for rules that require physical storefronts and physical inspection of merchandise prior to purchase, as these inherently limit digital sales.** At times, regulations may require physical storefronts and pre-inspection of merchandise. Such rules can seriously handicap digital sales, including direct consumer-to-consumer sales. At the same time, consumers who have not had a chance to test a product in advance nor to review others' assessment of such a product may need a chance to return the product should it not meet their requirements.

### 3.8. Cross-border

33. **Restrictions on cross-border competition need to be assessed.** These restrictions may at times be excessive while at other times they are insufficient. The assessment will depend on the evaluation of what is necessary for ensuring that legal and safe products sold over the internet can be purchased in comparable conditions – considering all other rules – to local ones, while also ensuring that national standards are followed and that illegal products are not made available. Co-operation may be needed across borders to ensure that common standards are applied and that common information is available to regulators.

---

<sup>12</sup> For more details, see <http://www.oecd.org/daf/competition/assessment-toolkit.htm>.

### 3.9. Standards

34. **When rules are changed, due to restrictions of competition, it is better if they can be replaced by standards, that can evolve quickly, rather than by new more fixed rules that create new interest groups.** It is important to realise that technological developments will be continuing and ongoing. While rules may be needed to ensure that property rights and risk responsibilities are allocated in light of new products, rules that establish requirements over how firms operate may be outdated with further technological developments. Therefore technologically neutral regulation is needed, which may best be achieved through standards that can change as technical possibilities change, instead of rules (notably legislation) that, once established, create fixed interest groups to support them and that have bureaucratic inertia making quick updating difficult.

### 3.10. Regulatory Sandboxes

35. **Be open to creating low burden regulatory regimes for small and new entrants, or regulatory “sandboxes”.** In sectors such as the financial sector, more open and experimental approaches towards new industries are being encouraged by regulatory approaches with lower requirements for small and potentially innovative firms. Regulatory sandboxes provide a limited regulatory waiver or flexibility, where the limits are usually in terms of geographic space, duration or sector, and are negotiated or enabled by regulatory authorities to facilitate market-testing, experimentation and innovation. These approaches will increase the emergence and development of innovative technologies and business models, while maintaining the ongoing review of regulations that can be quickly adjusted should new risks arise.

## 4. Potential areas for further international co-operation

36. Different regulatory frameworks across countries can make it difficult and costly for companies to expand internationally, or conversely create scope for regulatory arbitrage. Governments may benefit from enhancing co-operation by national competition agencies to address competition issues that are increasingly transnational in scope or involve global firms.

37. Digitalised businesses often serve cross-border needs, and antitrust enforcement may face challenges where evidence is located in multiple countries. Further international co-operation would help tackle enforcement challenges from cross-border digitalisation against situations involving improper conduct or undue extension of market power. This may include reinforcing information-sharing and investigation assistance, notably to prevent businesses from taking advantage of jurisdictional differences.

## 5. Concluding remarks

38. As the digital transformation is changing the world faster than many rules and regulations have evolved, the review of existing regulations in light of digitalisation is a high priority. Such reviews are not necessarily burdensome to perform. They could play a key role in allowing economies to keep up with the frontier productivity levels and harness the full potential of digital technologies for stronger growth that benefits all.

Flexibility may be particularly appropriate during such reviews, due to the unpredictability of the future.

39. The presence of digital options first raises the question of whether the grounds for competition regulation (market failures) are still the same as before and, if so, whether the regulations in place are still the optimal ones for a global digital economy. Areas with particular need for review from a competition perspective include platform regulations, finance, transport and logistics, health (including pharmaceutical) and lodging. To be forward-looking, it is important to recognise the need for continued monitoring of how market failures and regulations may need to evolve, particularly when the sector is rapidly evolving.

40. Guidance to governments will consequently need to be updated, to take account of modern examples that may differ in type and focus from existing examples of competition assessment reviews. As a result, the OECD is revising its Competition Assessment Toolkit, in light of digitalisation, to ensure its continuing value and relevance. The revised Competition Assessment Toolkit is expected to be available in the course of 2019, ready to help governments to address many of the regulatory challenges to competition that are posed by rapid digitalisation for goods, services and business models.



## References

- Andrews, D., P. Gal and W. Witheridge (2018), “A genie in a bottle?: Globalisation, competition and inflation”, *OECD Economics Department Working Papers*, No. 1462, OECD Publishing, Paris, <http://dx.doi.org/10.1787/deda7e54-en>. [6]
- Andrews, D., G. Nicoletti and C. Timiliotis (2018), “Going digital: What determines technology diffusion among firms?”, *OECD Economics Department Working Paper*, forthcoming. [9]
- Berlingieri, G., P. Blanchenay and C. Criscuolo (2017), “The Great Divergence(s)”, *OECD Science, Technology and Innovation Policy papers*, No. 39, [https://www.oecd-ilibrary.org/science-and-technology/the-great-divergence-s\\_953f3853-en](https://www.oecd-ilibrary.org/science-and-technology/the-great-divergence-s_953f3853-en). [10]
- Calligaris, S., C. Criscuolo and L. Marcolin (2018), “Mark-ups in the digital era”, *OECD Science, Technology and Industry Working Papers*, No. 2018/10, OECD Publishing, Paris, <http://dx.doi.org/10.1787/4efe2d25-en>. [4]
- Calvino, F. et al. (2018), “A Taxonomy of Digital Sectors”, *OECD Science, Technology and Innovation Working Paper*, forthcoming. [8]
- De Loecker, J. and J. Eeckhout (2017), *The Rise of Market Power and the Macroeconomic Implications*, National Bureau of Economic Research, Cambridge, MA, <http://dx.doi.org/10.3386/w23687>. [5]
- OECD (2018), *Market concentration - Issues paper*, [https://one.oecd.org/document/DAF/COMP/WD\(2018\)46/en/pdf](https://one.oecd.org/document/DAF/COMP/WD(2018)46/en/pdf). [7]
- OECD (2018), *Towards the Implementation of the G20 Roadmap for Digitalisation: Skills, Business Dynamics and Competition; Report prepared at the request of the 2017 G20 German Presidency*, [http://www.oecd.org/g20/OECDreport\\_Implementation\\_G20\\_Roadmap.pdf](http://www.oecd.org/g20/OECDreport_Implementation_G20_Roadmap.pdf). [2]
- OECD (2018), “Vectors of Digital Transformation”, *OECD Digital Economy Policy Papers*, forthcoming. [1]
- OECD (2017), *Algorithms and Collusion: Competition policy in the digital age*, <http://ewww.oecd.org/competition/algorithms-collusion-competition-policy-in-the-digital-age.htm> (accessed on 23 May 2018). [11]
- OECD (2016), *Big Data: Bringing Competition Policy to the Digital Era*, [https://one.oecd.org/document/DAF/COMP\(2016\)14/en/pdf](https://one.oecd.org/document/DAF/COMP(2016)14/en/pdf). [3]