Public Discussion Draft

BEPS ACTION 1: ADDRESS THE TAX CHALLENGES OF THE DIGITAL ECONOMY

24 March 2014 – 14 April 2014

OECD
BETTER POLICIES FOR BETTER LIVES

Comments on this note should be sent electronically (in Word format) by email to **CTP.BEPS@oecd.org** **before 5.00pm on 14 April 2014 at the latest**.

It is the policy of the OECD to publish all responses (including the names of the responders) on the OECD website.

This document does not necessarily reflect consensus views of either the Committee of Fiscal Affairs or of the Task Force on the Digital Economy regarding the issues it addresses. Rather it reflects preliminary consideration of the issues since the publication of the Action Plan and seeks to identify issues for public comment. It is considered that stakeholder comments are essential to advancing this work.

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I. INTRODUCTION AND BACKGROUND

1. Political leaders, media outlets, and civil society around the world have expressed growing concern about tax planning by multinational enterprises that makes use of gaps in the interaction of different tax systems to artificially reduce taxable income or shift profits to low-tax jurisdictions in which little or no economic activity is performed. In response to this concern, and at the request of the G20, the OECD published an Action Plan on Base Erosion and Profit Shifting (BEPS Action Plan) in July 2013. The BEPS Action Plan identifies 15 actions to address BEPS in a comprehensive manner, and sets deadlines to implement those actions.

2. As noted in the BEPS Action Plan, "the spread of the digital economy also poses challenges for international taxation. The digital economy is characterised by an unparalleled reliance on intangible assets, the massive use of data (notably personal data), the widespread adoption of multi-sided business models capturing value from externalities generated by free products, and the difficulty of determining the jurisdiction in which value creation occurs. This raises fundamental questions as to how enterprises in the digital economy add value and make their profits, and how the digital economy relates to the concepts of source and residence or the characterisation of income for tax purposes. At the same time, the fact that new ways of doing business may result in a relocation of core business functions and, consequently, a different distribution of taxing rights which may lead to low taxation is not per se an indicator of defects in the existing system. It is important to examine closely how enterprises of the digital economy add value and make their profits in order to determine whether and to what extent it may be necessary to adapt the current rules in order to take into account the specific features of that industry and to prevent BEPS."

3. Against this background, the BEPS Action Plan includes the following description of the work to be undertaken in relation to the digital economy:

ACTION 1 – Address the Tax Challenges of the Digital Economy

> *Identify the main difficulties that the digital economy poses for the application of existing international tax rules and develop detailed options to address these difficulties, taking a holistic approach and considering both direct and indirect taxation. Issues to be examined include, but are not limited to, the ability of a company to have a significant digital presence in the economy of another country without being liable to taxation due to the lack of nexus under current international rules, the attribution of value created from the generation of marketable location relevant data through the use of digital products and services, the characterisation of income derived from new business models, the application of related source rules, and how to ensure the effective collection of VAT/GST with respect to the cross-border supply of digital goods and services. Such work will require a thorough analysis of the various business models in this sector.*

4. At their meeting in St. Petersburg on 5-6 September 2013, the G20 leaders fully endorsed the BEPS Action Plan, and issued a declaration that included the following paragraph related to BEPS:

In a context of severe fiscal consolidation and social hardship, in many countries ensuring that all taxpayers pay their fair share of taxes is more than ever a priority. Tax avoidance, harmful practices and aggressive tax planning have to be tackled. The growth of the digital economy also poses challenges for international taxation. We fully endorse the ambitious and comprehensive Action Plan – originated in the OECD – aimed at addressing base erosion and profit shifting with mechanism to enrich the Plan as appropriate. We welcome the establishment of the G20/OECD BEPS project and we encourage all interested countries to participate. Profits should be taxed where economic activities deriving the profits are performed and where value is created. . . .

5. The Task Force on the Digital Economy, a subsidiary body of the Committee on Fiscal Affairs (CFA) was established in September 2013 to carry out the work, with the aim of developing a report identifying issues raised by the digital economy and possible actions to address them by September 2014.

6. The Task Force on the Digital Economy held its first Meeting on 29-31 October 2013 during which delegates discussed the scope of the work and heard presentations from experts on the digital economy. The Task Force also discussed the relevance of the work done in the past on this topic. In particular, the Task Force discussed the outcomes of the 1998 Ottawa Ministerial Conference on Electronic Commerce where Ministers welcomed the 1998 CFA Report "Electronic Commerce: Taxation Framework Conditions" setting out the following taxation principles that should apply to electronic commerce.

Ottawa Taxation Framework Conditions – Principles

Neutrality: Taxation should seek to be neutral and equitable between forms of electronic commerce and between conventional and electronic forms of commerce. Business decisions should be motivated by economic rather than tax considerations. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation.

Efficiency: Compliance costs for taxpayers and administrative costs for the tax authorities should be minimised as far as possible.

Certainty and Simplicity: The tax rules should be clear and simple to understand so that taxpayers can anticipate the tax consequences in advance of a transaction, including knowing when, where and how the tax is to be accounted.

Effectiveness and Fairness: Taxation should produce the right amount of tax at the right time. The potential for tax evasion and avoidance should be minimised while keeping counteracting measures proportionate to the risks involved.

Flexibility: The systems for taxation should be flexible and dynamic to ensure that they keep pace with technological and commercial developments.

7. The Task Force considers that these principles are still relevant today and, supplemented as necessary, can constitute the basis to evaluate options to address the tax challenges of the digital economy. In addition, the Task Force discussed the post -Ottawa body of work and in particular the work of the Technical Advisory Group on Business Profits relating to the attribution of profits to permanent establishments, the place of effective management concept and treaty rules in the context of e-commerce. For an overview of this prior work, please refer to Annex 1.

8. Considering the importance of stakeholders' input, the OECD issued a public request for input on 22 November 2013. Input received was discussed at the second meeting of the Task Force on the Digital Economy on 2-3 February 2014. The Task Force discussed the evolution and pervasiveness of the digital economy as well as the key features of the digital economy and tax challenges raised by them. The Task Force heard presentations from delegates outlining possible options to address the BEPS and tax challenges of the digital economy and agreed on the importance of publishing a discussion draft for public comment and input.

9. This discussion draft examines the evolution over time of information and communication technology, including emerging and possible future developments (Section II). It discusses the spread and impact of ICT across the economy, provides examples of new business models and identifies the key features of the digital economy (Section III). The Discussion Draft then provides a detailed description of the core elements of BEPS strategies in the digital economy (Section IV) and discusses how the development of the measures envisaged in the BEPS Action Plan and the OECD work on indirect taxation are expected to address them (Section V). Finally, it identifies the broader tax challenges raised by the digital economy (Section VI) and summarises the potential options to address them that have been presented to, and initially discussed by, the Task Force (Section VII).

10. **Comments are welcome on any of the issues addressed in the discussion draft and in particular on:**

- **Whether it is possible to ring-fence the digital economy from the rest of the economy, and if not, whether specific types of digital transactions could be identified and addressed through specific rules;**

- **The key features of the digital economy identified by the Task Force and whether there are other key features that should be taken into account;**

- **The examples of new business models in the digital economy and whether (and if so which) other business models should be considered;**

- **The ability of the measures developed in the course of the BEPS Project and the current work on VAT/GST to address BEPS concerns in the digital economy;**

- **Whether other measures should be developed during the course of the work on other aspects of the BEPS Action Plan to address BEPS concerns in the digital economy and if so which ones;**

- **The broader tax challenges raised by the digital economy which have been identified by the Task Force and how these challenges should be addressed, taking into account both direct and indirect taxation;**

- **The options to address these broader tax challenges discussed by the Task Force and summarised in the discussion draft;**

- **The potential cost of compliance arising from the options proposed to address the tax challenges of the digital economy and suggestions for more cost efficient alternatives;**

- **Whether the Ottawa taxation framework principles identified above are an appropriate framework for analysing options to address the tax challenges, and whether and how they should be supplemented.**

II. INFORMATION AND COMMUNICATION TECHNOLOGY AND ITS IMPACT ON THE ECONOMY

This section examines the evolution over time of information and communication technology, including emerging and possible future developments. It then provides a conceptual overview, highlighting interactions between various layers of information and communication technology.

1. The Evolution of Information and Communication Technology

11. The development of information and communication technology (ICT) has been characterised by rapid technological progress that has brought prices of ICT products down rapidly, ensuring that technology can be applied throughout the economy at low cost. In many cases, the drop in prices caused by advances in technology and the pressure for constant innovation have been bolstered by a constant cycle of commoditisation that has affected many of the key technologies that have led to the growth of the digital economy. As products become successful and reach a greater market, their features have a tendency to solidify, making it more difficult for original producers to change those features easily. When features become more stable, it becomes easier for products to be copied by competitors. This is stimulated further by the process of standardisation that is characteristic of the ICT sector, which makes components interoperable, making it more difficult for individual producers to distinguish their products from others. Unless the original producer can differentiate its product from the copies (for example, by bundling its product with services or other features that are not easily duplicated), or otherwise find a way to maintain a dominant position in the market, it will be forced to compete solely on price or move to other market segments.

12. This process tends to cause prices of the commoditised goods or services to fall, and innovation to move elsewhere in the value chain. This does not necessarily mean that every single component of the commoditised product becomes a commodity. A producer of a component of the overall product can maintain or create a proprietary advantage by enhancing some elements or subsystems of that component. This can "decommoditise" those elements or subsystems of the commoditised product, creating new opportunities at a different stage of the value chain.

1.1. Personal Computing Devices

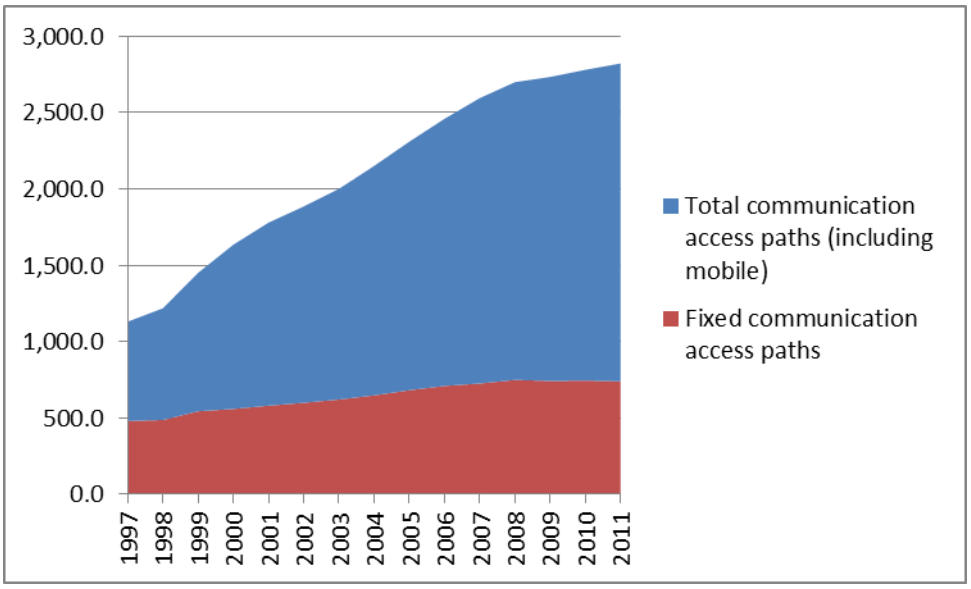
13. Early in the life of the digital economy, many manufacturers of computing hardware used proprietary hardware components, which meant that the computers of different manufacturers operated on entirely different standards. When the architecture of personal computers was largely standardised thirty years ago, however, many market participants started competing on price. That, combined with rapid technological progress, resulted in substantial drops in the price of personal computing hardware. In the period that followed, the most successful manufacturers succeeded in large part because their products integrated best with other product or because they developed the strongest marketing and distribution strategies, rather than primarily because the hardware they produced was distinguishable from those of

their competitors. As mentioned above, this cycle has been paralleled at various points throughout the evolution of the digital economy, resulting in substantial changes in the digital value chain over time.

14. A relatively recent development is the advent of innovative integrated packages of hardware and software, such as smartphones and tablets (and increasingly, connected wearable devices). Designing, manufacturing and selling these devices has allowed companies to improve their position in the value chain and on the market. There appear to be two major trends that confirm the growing importance of devices. The first trend is the diversification of devices. Consumers initially accessed the Internet almost exclusively through personal computers. Now the industry has designed a wide variety of devices providing access to the Web, such as smartphones, tablets, and connected TVs. The second trend is the growing specialisation in devices of businesses formerly specialised in software or other parts of the value chain. Several businesses have launched their own tablets or other devices. These devices allow them to establish a closer relationship with their customers, allowing them to collect more detailed information so that they may provide customised service with even more relevance and added value.

15. Over time, hardware devices have both multiplied and diversified in terms of features and technical characteristics. As shown below, the number of mobile devices connected to the Internet keeps rising, forming an interconnected infrastructure colloquially referred to as the Internet of Things (see section 6.1, below). After a long period of personal computer commoditisation, hardware has regained importance in the value chain. At the same time, the price of devices continues to fall over time. Devices connected through the Internet operate within certain standards that accelerate their commoditisation, if only because individuals own more and more devices that must be synchronised around the same set of content and data. In addition, connected objects and devices facilitate sales of intangible goods and services (for example, a connected car becomes a point of sale for services based on geo-location, including driving assistance). For this reason, a number of businesses now use hardware devices as loss leaders in their business model, aimed at expanding the market of customers for goods and services available through those devices, or at otherwise leveraging their growing network of end users. Assuming these trends continue, it appears that for many businesses, revenue from connected devices may ultimately flow primarily from the operation rather than the continued sales of these devices.

Figure 1.Total Internet Access



Source: OECD Communications Outlook 2013

1.2. Telecommunications networks

16. As the Internet turned into a major business phenomenon and adoption rates accelerated, the network component providers, infrastructure intermediaries, and ISPs that powered and operated the infrastructure of the telecommunications networks that form the Internet became central to the digital economy. The interconnection of networks initially gave birth to a specific economy organised around the status of such infrastructure providers as the primary points of contact with the ultimate end users, through peering points, data centres, and the data routes that form the Internet backbone.

17. The strength of ISPs, however, has traditionally been primarily in providing network access rather than in providing services across these networks. As a result, unless the ISPs could leverage their control of access to telecommunications networks, they had difficulty maintaining their status as the sole access point to the end user against competition from third-party businesses that provided content and services directly to users over the Internet. The providers of this content (sometimes called over-the-top (OTT) content), were able to deliver services more responsive to demand. Thus, while ISPs remain privileged points of contact with end users and have in general been able to maintain high profit margins, leveraging control of network access was not possible in most cases because ISPs were generally operating in increasingly competitive markets due to sector regulation and were essentially local in their reach (although some ISPs operated across borders, and many, such as mobile network providers, still do).

18. In contrast, OTT content providers could offer a unified experience to users at scale, since their reach was global, unlike network providers whose reach was limited to the length of their network. As a result, providers of OTT content increasingly took on a direct relationship with the end users. The development of open source software accelerated the pace of innovation on top of the networks. As a consequence, while the success of OTT content providers has increased aggregate demand for networks, in markets where there is sufficient competition, prices have declined. While a compelling hardware device or new network service can still give a particular firm a short term lead and introduce new business models (such as "app stores," for example), experience has shown that no single player in the value chain can entirely control access to customers as long as there is sufficient competition.

1.3. Software

19. The World Wide Web, initially made of websites and webpages, marked the emergence of Internet-powered software applications. Software has therefore been regarded from the beginning as an important component of the value chain. Even some software, however, is becoming commoditised. This commoditisation has, once again, been driven by standards, starting with those of the Internet: the HTTP protocol, the HTML and later XML data formats, email exchange protocols such as SMTP, POP, and IMAP. On top of these standards, communities of open source developers needed to accelerate the speed to market and constantly iterate newer versions of their software. In order to innovate at this pace, they chose to share their source code rather than redevelop it. Although some major software vendors have countered the process of commoditisation with innovation and differentiation, large-scale differentiation and advanced positions have become increasingly difficult to sustain.

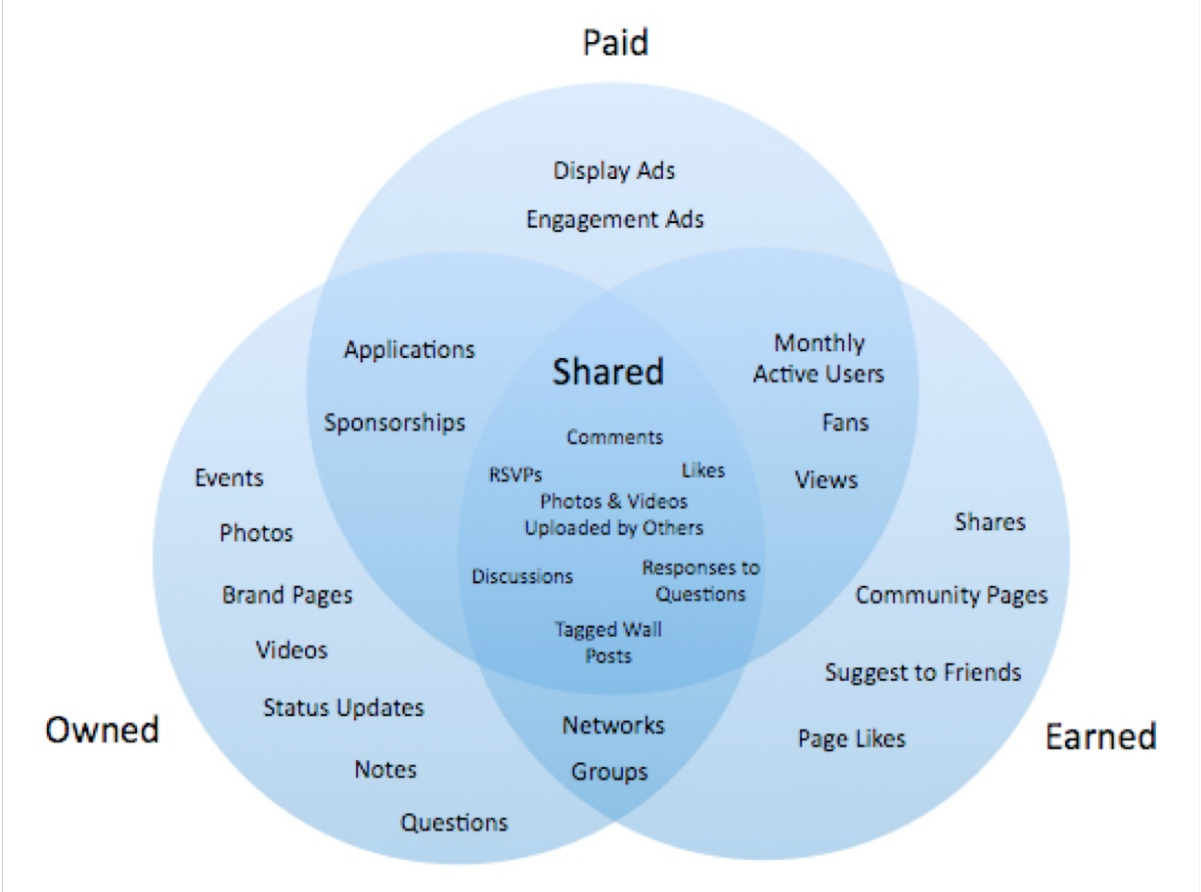
20. As growing competition in the development of operating systems, databases, web servers, and browsers reduced profits in many companies' core business, it also created new opportunities. Just as commoditisation in the hardware market cut profit margins for traditional manufacturers while creating new opportunities for low-cost low-margin manufacturers, growing competition in the software market has forced software companies to become more creative and more responsive to consumers' needs, all of which benefited the consumer.

1.4. Content

21. Content gained attention at the end of the 1990s, when content production, consumption and, above all, indexation appeared to drive the digital economy's growth. It saw the rise of first content portals and then search engines as the main gatekeepers to accessible content on the Internet. Today, many major players in the digital economy are content providers.

22. The definition of content in that regard is quite large: it includes both copyrighted content produced by professionals, enterprise-generated content, and non-copyrighted user-generated content (such as consumer reviews or comments in online forums). The importance of content flows from the fact that it is important to attract an audience and provoke interactions between users. In addition, more content updated more frequently increases a Website's visibility in search results. Content has hence been a driving force behind the advertising industry: it has become a key asset to attract an audience and monetise it with advertisers. Content has also become a way to advertise in and of itself, with classification into three categories: owned content (content distributed by the brand on its own channels), paid content (content distributed by other media in exchange of a payment by the brand), and earned content (content willingly created and shared by customers without direct payment by the brand, such as customer product reviews, videos, and social media sharing).

Figure 2.Content in Advertising



Source: Ely Rosenstock

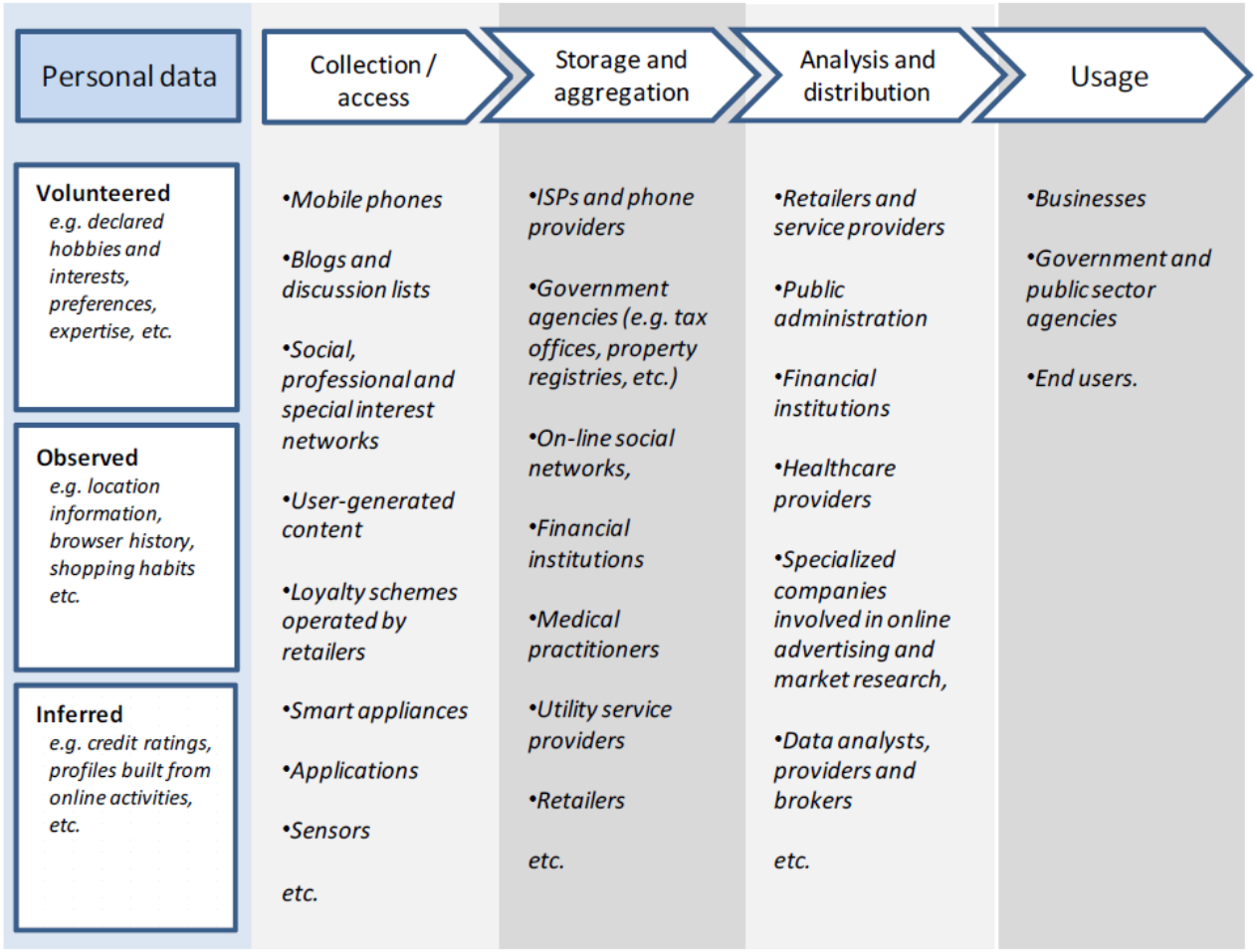
23. Content is more and more often produced by users, resulting in greater volumes of content. The success of sites predicated on massive online collaboration by users, such as Wikipedia and YouTube, has proven that an entire experience can be built around content primarily generated by individual users. Further, the emergence of the social networking phenomenon, and the success of major applications in which links and interactions between users matter more than any primary content put forward to attract an audience show the same path. Even advertising relies increasingly on user-generated content, through the concept of earned content, one of the pillars of content marketing. The sophistication of techniques designed to customise services, including cookies (technical tools used by businesses to collect user data, notably for commercial purposes such as behavioural advertising), targeting and retargeting, and collaborative filtering, is also relevant. The amount of content available online has become so vast that relatively few businesses have succeeded online by offering premium content, unless they can leverage that content through a service that prevents competition on volume.

1.5. Use of Data

24. Users of applications provide businesses with access to substantial amounts of data, which are often personal and are used in a variety of ways that continue to be developed.[1] Collected data can be used not only to customise the experience, but also to generate productivity and quality gain at scale, through controlled experimentation. Personal data is acquired in multiple ways; it can be: *provided voluntarily* by users (for example, when registering for an online service); *observed* (for example, by recording Internet browsing activities, location data, etc.); or *inferred* (for example, based on analysis of online activities). The chart below, which is non-exhaustive, provides illustrations of the ways in which data is collected, stored, analysed, and used. Capacity to collect useful data is increasing as the number of Internet-connected devices increases. Businesses of all sorts make use of user data, as it allows them to tailor their offerings to customers. As increasing amounts of potentially useful data are collected, more and more sophisticated techniques must be developed in order to collect, usefully process and analyse that data.

1 . User sensitivity has triggered waves of protest against certain features, practices or terms of service carried out by some companies with respect to personal data. In reaction, companies have often rolled back the features and even set up new ones to help their users control and protect their private information. It is worth noting as well that the collection and use of personal data is a closely regulated area across the OECD, with most legislation tracking the main elements of the OECD Privacy Guidelines.

Figure 3.Personal Data



Source: OECD, based on World Economic Forum (2011)

1.6. Cloud-based processes

25. As a result of the standardisation and commoditisation of different individual resources, such as hardware, network infrastructure, and software, some businesses have been able to combine those resources and make them available through the Internet as services.

26. Centralised hosting of software resources dates back to the 1960s, when mainframe providers conducted a service bureau business, also referred to as time-sharing or utility computing. Such services included offering computing power and database storage to banks and other large organisations from their worldwide data centres. Cloud computing at scale is the result of several trends related to both technology and business models: growing availability of high-capacity networks, low-cost computers and storage devices as well as the widespread adoption of hardware virtualisation, service-oriented architecture, and utility computing. As a result, value has migrated to new proprietary applications that are not stand-alone software products, but Internet-based applications that combine executable code, dynamically updated databases, and user participation. Although the term "cloud computing" has become commonplace, these applications have also at various points been referred to as "infoware", "computing on demand" or "pervasive computing".

27. The X-as-a Service (XaaS) acronym has been introduced to refer to the trending transformation of software products from goods to services. The Internet essentially accelerated a transition from traditional software business to XaaS models. A website is essentially a software application providing a service delivered over the Internet rather than provided locally or on-site. The service can be about providing access to content (as a portal), or about providing access to executable code performing certain features. Thus the expansion of the Internet brought a new class of centralised computing providers, called application service providers (ASP). ASPs provided businesses with the service of hosting and managing specialised business applications, with the goal of reducing costs through central administration and through the ASP's specialisation in a particular business application.

28. As of today, many B2C applications are also delivered as software as a service: search engines, social networking applications are mainly used through a Web browser, without any need to download any executable code beforehand. Although applications continue to be downloaded and installed locally, this is done primarily when there is a frequent need to use them offline. Even some locally-installed applications, however, require an Internet connection to provide full functionality. The growing popularity of smart phones and other devices that use frequently interrupted mobile internet connections, however, has made downloading applications prominent again.

29. Focusing on value created through cloud-based processes is particularly useful to analyse the ultimate development of the Internet of Things (discussed below), which refers to the Internet as a network connecting individuals, content, and things in everyday lives. At the centre of this complex network of interconnections are powerful software-powered processes whose resources can only be stored and executed in the cloud.

2. Emerging and Potential Future Developments

2.1. Internet of Things

30. The number of devices connected to the Internet is expanding rapidly, but substantial room for expansion remains. While Cisco has estimated that between 10 and 15 billion devices are currently connected to the Internet, that figure represents less than 1 percent of the total devices and things that could ultimately be connected.[2] Within the OECD area, households alone currently have approximately 1.8 billion connected devices. This figure could reach as many as 5.8 billion by 2017, and as many as 14 billion by 2022 (OECD, 2013). As increasing numbers of connected devices are developed and sold, the expansion of machine-to-machine communication appears likely to dramatically expand and improve the ability of businesses to collect and analyse relevant data.

31. A major feature of the Internet of Things is the widened ability to collect and share data through powerful information systems connected to a multitude of devices, censors, and cloud computing components. The analysis and use of the data collected and transmitted by connected devices can help individuals and organisations use their resources more accurately, make informed purchasing decisions, ramp up productivity, and respond faster to changing environments. As devices increasingly transmit more detailed data, the processing of this data can be used automatically to change the behaviour of those devices in real time. It can also make training workers for skilled positions an easier and more cost-effective process. This trend, so far primarily contained in data-intensive industries such as finance, advertising, or entertainment, is likely to penetrate more traditional industries in the future.

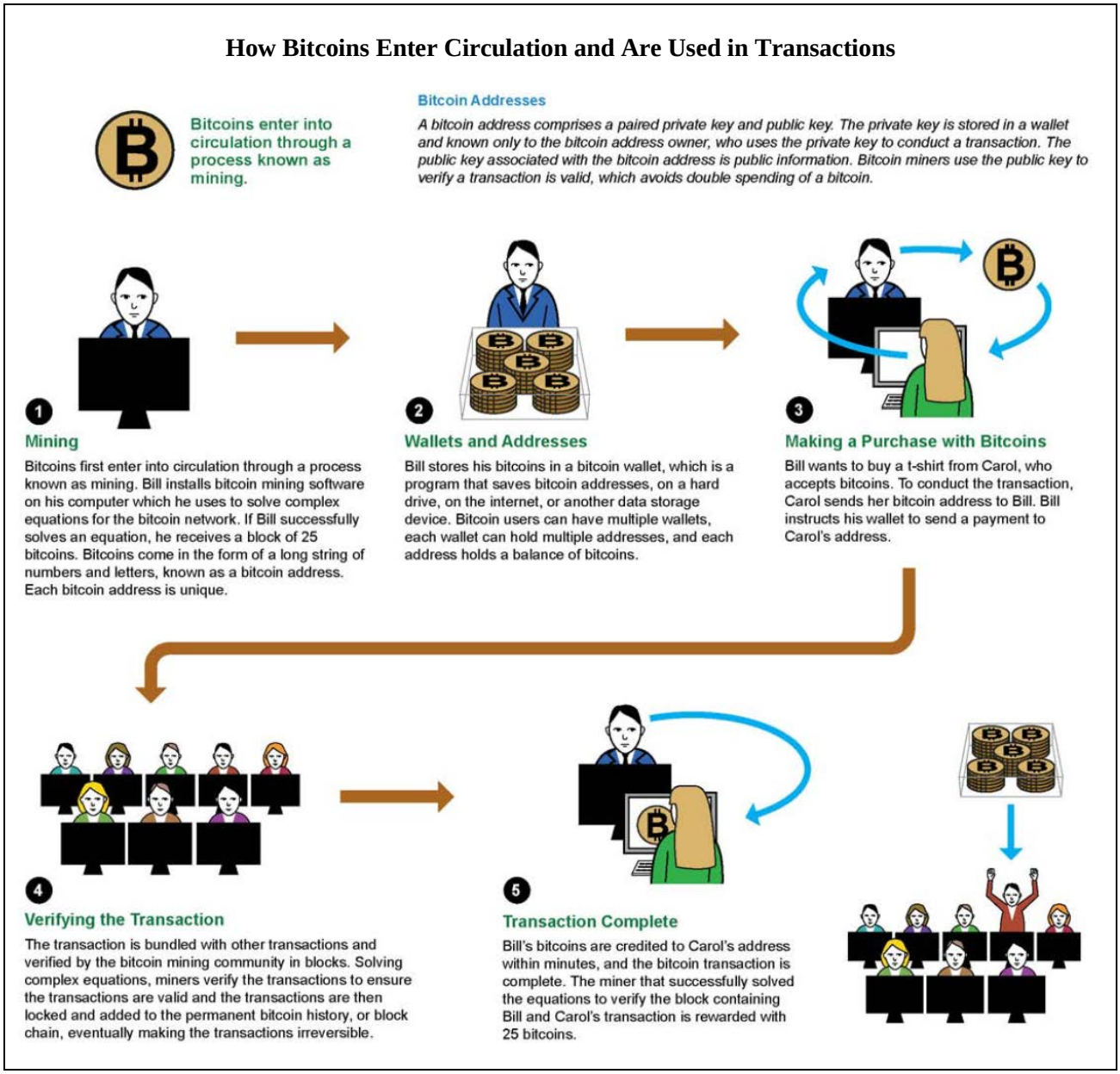
2. Cisco, 2012, "The Internet of Everything: How More Relevant and Valuable Connections Will Change the World".

2.2. Virtual Currencies

32. Recent years have been marked by the appearance and development of "virtual currencies", meaning digital units of exchange that are not backed by government-issued legal tender. These currencies have taken various forms. Some virtual currencies are specific to a single virtual economy, such as an online game, where they are used to purchase in-game assets and services. In some cases, these economy-specific virtual currencies can be exchanged for real currencies or used to purchase real goods and services, through exchanges which may be operated by the creators of the game or by third parties.

33. Other virtual currencies were developed primarily to allow the purchase of real goods and services. The most prominent example of this type are the various "cryptocurrencies", including in particular bitcoins, which rely on cryptography and peer-to-peer verification to secure and verify transactions. Many private operators have chosen to accept payment in bitcoins.

34. As virtual currencies increasingly acquire real economic value, they raise substantial policy issues. Some of these stem from the anonymous nature of transactions. In the case of bitcoins, for example, transactions can be made on an entirely anonymous basis, since no personally identifying information is required to be provided to acquire or transact in bitcoins.



Source: U.S. Government Accountability Office

2.3. Advanced Robotics

35. The development of new connected and smart robots is changing manufacturing profoundly. The increased productivity of new automated factories is already making it possible for some multinational enterprises that had previously moved manufacturing offshore to take advantage of lower labour costs to consider moving their manufacturing activities back to where most of their customers are.

36. Manufacturing will be further changed by the progress in robotics, as robots have the potential to make factories less labour intensive and force multinational enterprises to think about production and distribution at the same time. This trend has the potential to be felt particularly strongly in already machine-intensive

industries, as automation increasingly centres on artificial cognition, censors, machine learning, and distributed smart networks. It will also have a potential impact where automation has been scarce so far, especially in small factories and workshops, because software can help improve security and allow humans to work alongside automated systems. Also, as robots embed more software and are connected to cloud-based resources, it will become both easier and cheaper to program them, which could lead to lowered prices, making them more accessible to small and middle-size operations. These lower costs have the potential to bring manufacturing activities increasingly closer to the customers.

37. In the future, progress in artificial intelligence and the emergence of cognitive computing may expand the influence of robots beyond the manufacturing sector and into broader segments of the economy, as well as into household applications such as assisting the elderly or disabled with manual tasks. As robots learn to do jobs that previously were solely done by humans, they can potentially generate productivity, help lower prices for customers, contribute to scaling up operations at a global level, and create innovation opportunities which will lead to the emergence of new activities that will require new skills and potentially create new jobs.

2.4. 3D Printing

38. Advances in 3D printing have the potential to enable manufacturing closer to the customer, with direct interaction with consumers impacting the design of product features. As a result, manufacturing could gradually move away from mass production of standardised products, and instead focus on shorter product lifecycle by adopting a strategy of constant experimentation at scale. In the healthcare industry, 3D printing of custom health products such as hearing aid earpieces is already heavily used. In addition, 3D printing has the potential to reduce environmental impact relative to traditional manufacturing, by reducing the number of steps involved in production, transportation, assembly, and distribution, and can reduce the amount of material wasted as well.[3] Beyond that, it is conceivable that some manufacturers could eventually transition away from assembling products themselves, and could instead license plans and specifications to third party manufacturers or even retailers who will "print" the products on demand, closer to the customers, but at their own risks and with a very low margin. Alternatively, consumers may be able to assemble products themselves by using 3D printers, further increasing the possibility of locating business activities at a location that is physically remote from the ultimate customer.

2.5. The sharing economy

39. The sharing economy, or collaborative consumption, is another potentially significant trend within the digital economy. The "sharing economy" refers to peer-to-peer sharing of goods and services. The sharing economy is not new, but advances in technology have reduced transaction costs, increased availability of information, and provided greater reliability and security. Recent years have seen the emergence of numerous innovative sharing applications using different business models and focusing on one particular service or product, such as cars, spare rooms, food, or clothes. Most individuals who participate in the sharing economy do not do so mainly to make a living, but to entertain relationships with others, to serve a cause that inspires them, or simply to make ends meet. Because the supplementary income is a net benefit and often does not involve much quantitative cost-benefit analysis, amateur providers have a tendency to share their available resources at a lower price than what a professional might have billed, thus bringing down overall prices, including those of the professionals. Through time, as certain platforms attract substantial number of individuals, these platforms become the prime access point for customers on the online market and have the potential to provide substantial competition for traditional e-commerce applications operated by professionals, which may cut their profit margins further.

3. McKinsey Global Institute, 2013, "Disruptive technologies: Advances that will transform life, business, and the global economy."

2.6. Access to Government Data

40. Governments are making progress at making machine-readable resources, notably data, publicly available in what has been alternatively labelled as open data policy, open government or government as a platform. There are three main goals assigned to open government policies:

- **Accountability**. Making government resources available allows the public to have direct access to these resources in order to track, document, and evaluate public policy cost, efficiency, and effectiveness. When it comes to accountability, open government strategies are meant to providing tools for transparency and to improving democracy as a whole.

- **Better performance**. Opening government resources also is intended to provide the means for government agencies to better cooperate with one using cross-agency software applications.

- **Participation of third parties in government business**. When government resources are made available to others outside government, third parties can combine these resources with their own to create hybrid applications that allow better and more personalised service.

2.7. Reinforced Protection of Personal Data

41. Under most legal systems, personal data supplied by users is protected by privacy rules. Data protection rules usually specify what constitutes personal data, how it is gathered, the standards companies must comply with in terms of secure storage and the requirement to notify individuals of the personal data held and their rights of access to it. In many countries, rules require adequate data security provisions in regard to transfer of personal data to third countries. Compliance costs are usually borne by the public authorities, companies and other organisations that collect data from individuals.

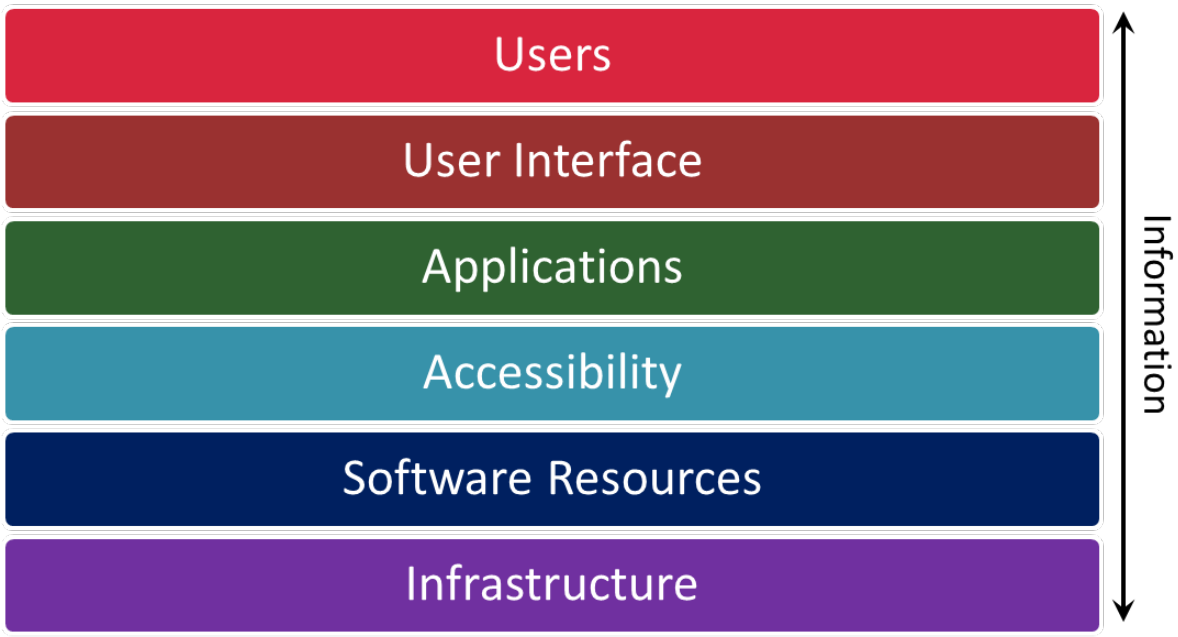
42. As individuals become more sensitive to the use of their personal data and expect their privacy to be protected, discussions are ongoing in a number of countries to strengthen applicable laws and regulate data collection and exploitation by organisations.[4] Increasingly, these rules are imposing requirements as to how and where data is stored and processed. As exemplified by the bills currently discussed in the European Union, and in several countries, this trend could lead to a significant change in business models that rely on the use of personal data. For example, the obligation to make sure an individual have expressed consent for the collection of anonymous data, notably in cookies, could affect the user experience while surfing on web pages and make it more difficult to target or retarget advertising banners or clicks.

3. The interactions between various layers of information and communication technology: a conceptual overview

43. One way to picture the ICT sector is to focus on interactions between different layers, each characterised by a mix of both hardware and software. This approach is illustrated in the chart below:

4 . See OECD (2012), "Report on Consumer Protection in Online and Mobile Payments", OECD Digital Economy papers, No. 2014, OECD Publishing; OECD (2013), Protecting and Empowering Consumers in the Purchase of Digital Content Products", OECD Digital Economy Papers, No. 219, OECD Publishing.

Figure 4.A Layered View of ICT



44. At the base lies the infrastructure of the Internet, which consists of the cables, tubes, routers, switches, and data centres that are designed and manufactured by firms specialised in network interconnection, and operated by Internet service providers (ISPs), carriers, and network operators. Content delivery network operators, whose goal is to serve content to end-users with high availability and high performance, pay ISPs, carriers, and network operators for hosting servers in their data centres. IP addresses and domain names are managed at this level.

45. Immediately above, stored in servers that are located in data centres and organisations all around the world, are the core software resources that enable organisations to create applications, which can consist of raw data, digital content, or executable code. These can include both resources produced by organisations and resources derived from individual users and collected and stored by organisations for later use.

46. On top of these core resources is a layer of tools providing the fundamental accessibility necessary to allow software resources to be combined on top of the infrastructure to create applications usable by individual or business end users. This layer effectively provides the structure necessary for software applications to take advantage of the underlying infrastructure and core software resources of the Internet. This accessibility can be provided in many forms. An operating system that makes it possible to run applications on digital devices, for example, is one of the most familiar ways in which accessibility is provided: it allows a developer to design an application to be run on a certain device. The core higher-level protocols that allow communication of data between applications, such as the Hypertext Transfer Protocol (HTTP) that forms the foundation of data communication on the World Wide Web, or the Simple Mail Transfer Protocol (SMTP) that provides a standard for email transmission, are another form of accessibility. Other ways to provide accessibility include web services, application programming interfaces (API), and software development kits (SDK), all of which provide ways for applications usable by end users to connect with the resources necessary to connect to underlying resources.

47. The accessibility layer effectively provides platforms for the creation of applications that are usable by end users, and that are able to access the core software resources on top of the infrastructure. Those applications form the fourth layer of the digital economy. An application is a combination of software resources creating value for the end user through the provision of goods or services. Applications can fit together or link to one another: for instance, a web browser is an application, and it gives access to websites that are themselves web-based applications; an app store is also an application with a value proposal that is to allow users to discover and purchase other applications. Within the application layer are applications performing a gatekeeping function, retaining user information and allowing it to be combined with other resources only when necessary and with the express consent of the end user. These gatekeeping activities include authentication of users, payment, and geolocation, all of which involve collection and use of data so sensitive that a certain level of trust is required between the organisation and the user.

48. The next conceptual layer is the machine-to-human interface layer. An interface represents the user experience. The interface is displayed through a physical point of contact that can be either a device or a whole place (such as a store). Devices are of two kinds: they are generic when they support many applications; they are non-generic when only one application can run on them. For instance, a computer, a smartphone or a tablet are generic devices. A connected thermostat is a non-generic device. Certain devices, like connected cars, were generally non-generic in the early stages of their development, but become progressively more generic as they are equipped with more accessibility features (such as an operating system).

49. At the top of the chart, above the layers of functions, sit the users, who can be either individuals acting in their personal capacity or on behalf of a business. These individuals interact directly with the interface layer to access applications, either directly or through the services of another application acting as a gatekeeper.

50. Each layer is provided with hardware resources, software resources, and network connectivity. Resources can be stored at multiple levels: in data centres at the infrastructure level; in virtual servers located in the cloud; on user devices (a computer or a tablet for instance). The business relationships between the layers are generally relationships between clients and providers: a company that operates a business in only one layer is generally paid by a company operating a business in the layer above. For instance, cloud computing operators that provide accessibility make payments to infrastructure operators and are paid by application developers. A company operating at the top layer derives payments directly from its interactions with end-users, either by charging them money or through generation of value that can then be monetised by the company to derive income from another customer or business. The organisations that are paid at the top level are those operating connected devices, gate-keeping activities or an application that is tethered neither to a device nor to a gate-keeping capacity.

51. In general terms, several business models in the digital economy can be described in terms of vertical integration between layers. For example, traditional web businesses use software resources (layer 2) and rely on open protocols (like HTTP) (layer 3) to combine those resources into a web application (layer 4). They pay operators of the bottom layer to put their application on line, and their interactions with users generate revenue either directly from the user in the form of payment (which can be received directly or through a gatekeeping operator), or indirectly through the generation of value that can then be monetised elsewhere in the business model.

52. These interactions explain why some companies consider it critical to operate at the top, especially by providing applications performing gatekeeping functions. In fact gatekeepers are able to collect data from their users, analyse them and eventually make them available for developers to power even more applications (and collect even more data), or market them to other companies (advertising). This

also explains the creation of large ecosystems based on a dominant position in the market of gatekeeping, accessibility and sometimes the operation of devices.

III. THE DIGITAL ECONOMY, ITS KEY FEATURES AND THE EMERGENCE OF NEW BUSINESS MODELS

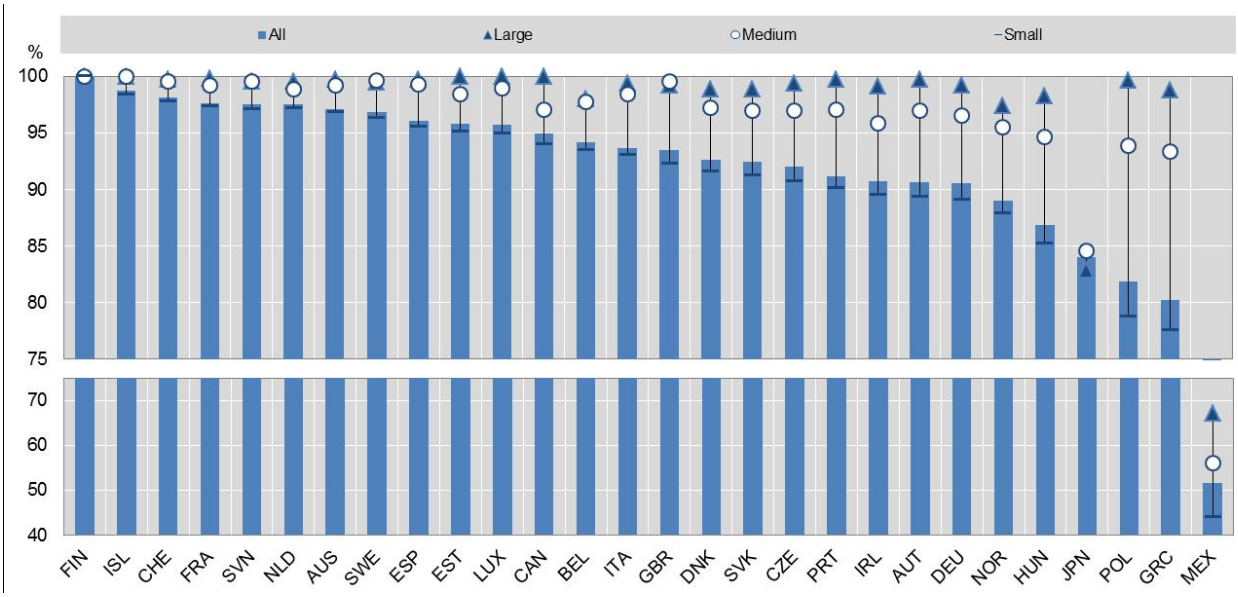
This section discusses the spread of ICT across the economy, provides examples of business models that have emerged as a consequence of the advances in ICT, and provides an overview of the key features of the digital economy that are illustrated by those business models.

1. The spread of ICT across Business Sectors: The Digital Economy

53. All sectors of the economy have adopted ICT to enhance productivity, enlarge market reach, and reduce operational costs. This adoption of ICT is illustrated by the spread of broadband connectivity in businesses, which in almost all OECD countries is universal for large enterprises and reaches 90% or more even in smaller businesses.

Figure 5.Enterprises with broadband connection, by employment size, 2012

Fixed and mobile connections, as a percentage of all enterprises



For Australia, data refer to 2010/11 (fiscal year ending 30 June 2011) instead of 2012. For Canada, medium-sized enterprises have 50-299 employees instead of 50-249 persons employed. Large enterprises have 300 or more employees instead of 250 or more persons employed. For Japan, all businesses with 100 or more persons employed instead of 10 or more, 100-299 instead of 50-249, and 300 or more instead of 250 or more. For Mexico, data refer to 2008 instead of 2012 and to businesses with 20 or more persons employed instead of 10 or more. For Switzerland, data refer to 2011 instead of 2012.

Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm based on OECD ICT Database and Eurostat.

54. The widespread adoption of ICT, combined with the rapid decline in price and increase in performance of these technologies, has contributed to the development of new activities in both the private and public sector. Together, these technologies have expanded market reach and lowered costs, and have enabled the development of new products and services. These technologies have also changed the ways in which such products and services are produced and delivered, as well as the business models used in companies ranging from MNEs to start-ups. They also support activity by individuals and consumers, and have led to the creation of new payment mechanisms including new forms of digital currencies. The advent of the Internet brought major changes first to the entertainment, news, advertising, and retail industries. In those industries, the first major digital players initially started from traditional business models, adapting them to better end-user equipment (both inside and outside organisations) and more extensive interconnection through the Internet.

55. For example, online retailers initially adapted the business model of brick-and-mortar stores by selling traditional physical goods (for example, books) digitally. Online intermediaries that allowed the discovery, sale, and purchase of goods and services such as vehicles, homes, and jobs were another early category. Other digital players specialised in the online selling of traditional services (for example, online insurance brokers). Retailers then began selling digital products and services, like downloadable and streaming music and movies, executable code, games, and services based on data processing, increasingly blurring the line between goods and services as businesses continued to develop. Online advertising similarly started from traditional advertising business models, becoming more sophisticated as the potential of digital technology became fully integrated into the industry. New online services enabling a sharing and service economy have also appeared, allowing people to rent out their homes, vehicles and skills to third parties.

56. As technology has advanced and costs of ICT have continued to fall, ICT has proven to be general-purpose technology that has become embedded in and central to the business models of firms operating across the economy. Businesses across all sectors are now able to design and build their operating models around technological capabilities, in order to improve flexibility and efficiency and extend their reach into global markets. Businesses across all sectors have changed the way their business is conducted by taking advantage of advances in communications and data processing capacity to lower transaction costs and extend their reach into global markets.

57. These advances, coupled with liberalisation of trade policy and reduction in transportation costs, have expanded the ability of businesses in all sectors to take advantage of global value chains in which production processes can be geographically dispersed in locations around the world to take advantage of the features of local markets. For example, in sectors relying heavily on technology and research and development, design and production can be managed centrally, while the assembly can be fragmented in different countries to take advantage of skilled labour and local resources.

58. Sectors as diverse as retail, logistics and education have changed and keep changing due to the spread of ICT:

i) **Retail**: The digital economy has enabled retailers to allow customers to place online orders (often fulfilled from a local store) and has made it easier for retailers to gather and analyse data on customers, to provide personalised service and advertising. It has also enabled retailers to manage logistics and supply stores with products, which has had a significant, positive impact on productivity.

ii) **Transport and Logistics**: The logistics sector has been transformed by digital economy, which enables the tracking of both vehicles and cargo across continents, the provision of information to customers and facilitates the development of new operational processes such as Just In Time delivery in the manufacturing sector. Vehicle telemetry also helps maximise fuel efficiency, ensure efficient use of the transport network and support fleet maintenance activities. The information collected by fleets can also be used to create datasets with commercial value.

iii) **Financial Services**: Banks, insurance providers and other companies, including non-traditional payment service providers, increasingly enable customers to manage their finances, conduct transactions and access new products on line, although they still continue to support branch networks for operations. Better use of data also allows growth in customer insights and associated products, such as personalised spending analysis, which can be used to generate advertising revenue. The digital economy has also made it easier to track indices and manage investment portfolios and has enabled specialist businesses such as high-frequency trading.

iv) **Manufacturing and Agriculture**: The digital economy has enhanced design and development, as well as the ability to monitor production processes in factories and control robots, which has enabled greater precision in design and development and ongoing product refinement. The products being produced are also increasingly knowledge-intensive. In the automobile industry, for example, it is estimated that 90% of new features in cars have a significant software component. On farms, systems can monitor crops and animals, and soil/environmental quality. Increasingly, routine processes and agricultural equipment can be managed through automated systems.

v) **Education:** As the digital economy spreads, universities, tutor services and other education service providers are able to provide courses remotely without the need for face to face interaction through technologies such as video conferencing and streaming and online collaboration portals, which enables them to tap into global demand and leverage brands in a way not previously possible.

vi) **Healthcare:** The digital economy is revolutionising the healthcare sector, from enabling remote diagnosis to enhancing system efficiencies and patient experience through electronic health records. It also allows opportunities for advertising, for example of drugs and other treatments.

vii) **Broadcasting and media:** The digital economy has dramatically changed the broadcasting and media industry, with increasing broadband access in particular opening new avenues for delivery of content for traditional media players, while also enabling the participation in the news media of non-traditional news sources, and expanding user participation in media through user-generated content and social networking. The digital economy has also enhanced the ability of companies to collect and use information about the viewing habits and preferences of customers, to enable them to better target programming.

59. As digital technology is adopted across the economy, segmenting the digital economy is increasingly difficult. In other words, because the digital economy is increasingly becoming the economy itself, it would be difficult, if not impossible, to ring-fence the digital economy from the rest of the economy. Attempting to isolate the digital economy as a separate sector would inevitably require arbitrary lines to be drawn between what is digital and what is not. As a result, the tax challenges and BEPS concerns raised by the digital economy are better identified and addressed by analysing existing structures adopted by MNEs together with new business models and by focusing on the key features of the digital economy and determining which of those features raise or exacerbate tax challenges or BEPS concerns, and developing approaches to address those challenges or concerns.

2. The Digital Economy and the emergence of New Business Models

60. The digital economy has given rise to a number of new business models. Although many of these models have parallels in traditional business, modern advances in ICT have made it possible to conduct many types of business at substantially greater scale and over longer distances than was previously possible. This section discusses several prominent examples of these new business models. These business models discussed are by no means exhaustive. Indeed, just as innovation in the digital economy allows the rapid development of new business models, it can also quickly cause existing businesses to become obsolete. The types of business discussed include several varieties of e-commerce, app stores, online advertising, cloud computing, participative networked platforms, high speed trading, and online payment services.

2.1. Electronic Commerce

61. Electronic commerce, or e-commerce, has been defined broadly by the OECD Working Party on Indicators for the Information Society as "the sale or purchase of goods or services, conducted over computer networks[5] by methods specifically designed for the purpose of receiving or placing of orders.[6] The goods and services are ordered by those methods, but the payment and the ultimate delivery of the good service do not necessarily have to be conducted online. An e-commerce transaction can be between enterprises, households, individuals, governments, and other public or private organisations." E-commerce can be used either to facilitate the ordering of goods or services that are then delivered through conventional channels (indirect or offline e-commerce) or to order and deliver goods or services completely electronically (direct or on-line e-commerce). Although e-commerce covers a broad array of businesses, this section provides an illustration of some of the more prominent types.

2.1.1. Business-to-business models

62. The vast majority of e-commerce consists of transactions in which a business sells products or services to another business (so-called Business-business or B2B).[7] This can include online versions of traditional transactions in which a wholesaler purchases consignments of goods online, which it then sells to consumers from retail outlets. It can also include the provision of goods or services to support other businesses, including, among others: (i) logistics services such as transportation, warehousing, and distribution; (ii) application service providers offering deployment, hosting, and management of packaged software from a central facility, (iii) outsourcing of support functions for e-commerce, such as web-hosting, security, and customer care solutions; (iv) auction solutions services for the operation and maintenance of real-time auctions via the Internet; (v) content management services, for the facilitation of website content management and delivery; and (vi) Web-based commerce enablers that provide automated online purchasing capabilities.

2.1.2. Business-to-Consumer Models

63. Business-to-consumer (B2C) models were among the earliest forms of e-commerce. A business following a B2C business model sells goods or services to individuals acting outside the scope of their profession. B2C models fall into several categories, including, for example, so-called "pureplay" online

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5 E-commerce includes orders made over the Internet, through an extranet (a network where outside business partners, supplier or customers can have limited access to a portion of enterprise intranet/network), or through an electronic data interchange (EDI - a proprietary electronic system used for exchanging business data over networks).

6 OECD (2011), OECD Guide to Measuring the Information Society 2011, OECD Publishing.

7 OECD (2011), OECD Guide to Measuring the Information Society 2011, OECD Publishing.

vendors with no physical stores or offline presence, "click-and-mortar" businesses that supplemented existing consumer-facing business with online sales, and manufacturers that use online business to allow customers to order and customise directly.

64. The goods or services sold by a B2C business can be tangible (such as a CD of music) or intangible (i.e. received by consumers in an electronic format). Through digitisation of information, including text, sound, and visual images, an increasing number of goods and services can be delivered digitally to customers increasingly remote from the location of the seller. B2C e-commerce can in many cases dramatically shorten supply chains by eliminating the need for many of the wholesalers, distributors, retailers, and other intermediaries that were traditionally used in businesses involving tangible goods. Partly because of this disintermediation, B2C businesses typically involve high investment in advertising and customer care, as well as in logistics. B2C reduces transaction costs (particularly search costs) by increasing consumer access to information. It also reduces market entry barriers, as the cost of maintaining a website is generally cheaper than installing a traditional brick-and-mortar retail shop.

2.1.3. Consumer-to-consumer models

65. Consumer-to-consumer (C2C) transactions are becoming more and more common. Businesses involved in C2C e-commerce play the role of intermediaries, helping individual consumers to sell or rent their assets (such as residential property, cars, motorcycles, etc.) by publishing their information on the website and facilitating transactions. These businesses may or may not charge the consumer for these services, depending on their revenue model. This type of e-commerce comes in several forms, including, but not limited to: (i) auctions facilitated at a portal that allows online bidding on the items being sold; (ii) peer-to-peer systems allowing sharing of files between users, and (iii) classified ads portals providing an interactive, online marketplace allowing negotiation between buyers and sellers.

2.1.4. Growth of e-commerce

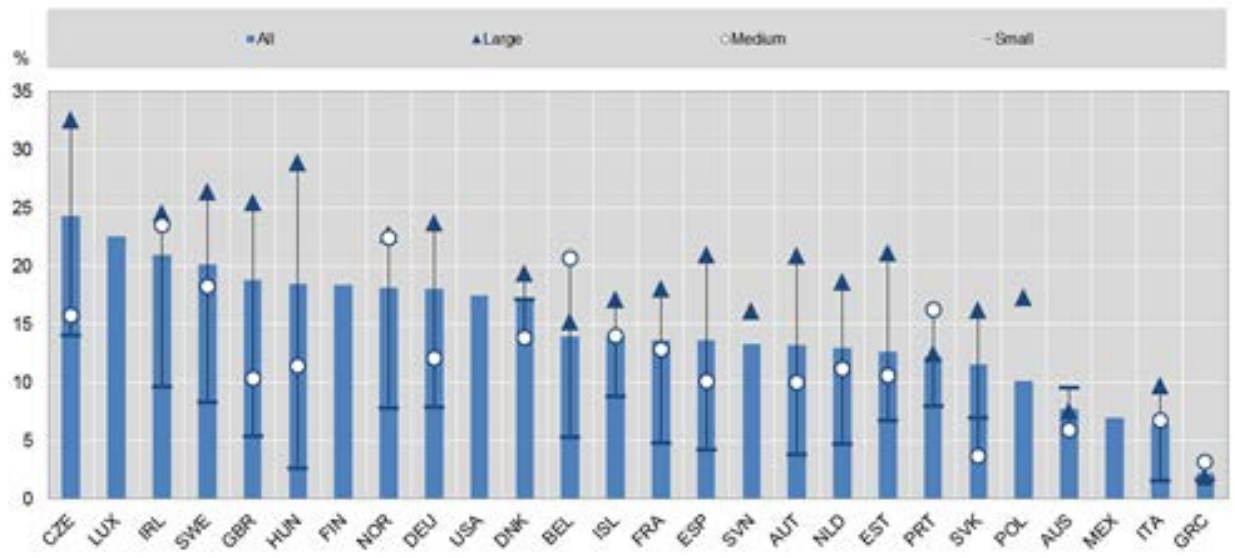
66. The Internet facilitates transactions such as ordering goods and services. This means that many transactions that would have taken place without the Internet can be conducted more efficiently and at less expense. In addition, the Internet has expanded the reach of smaller businesses, enabling them to reach markets that would not have been possible to reach without its existence. As a result, the number of firms carrying out business transactions over the internet has increased dramatically over the last decade.

67. For example, e-commerce in the Netherlands has increased as a share of total company revenue from 3.4% in 1999 to 14.1% in 2009. Similarly, between 2004 and 2011 this share increased from 2.7% to 18.5% in Norway and from 2.8% to 11% in Poland. Based on comparable data, as illustrated in the chart below, e-commerce is nearing 20% of total turnover in Finland, Hungary, and Sweden, and 25% in the Czech Republic.[8]

[8] OECD (2012) OECD Internet Economy Outlook 2012, OECD Publishing.

Figure 6.Turnover from e-commerce, by enterprise size, 2012

As a percentage of turnover in enterprises with 10 or more persons employed



Where available, firm size classes are defined as: small (from 10 to 49 persons employed), medium (50 to 249), large (250 and more). Sector coverage consists of all activities in manufacturing and non-financial market services, but for Australia (where *Agriculture, forestry and fishing* is also included) and the United States (all market services are included but *management of companies and enterprises* – NAICS 55). For Australia, data refer to the fiscal year ending 30 June 2011 (2010/11) instead of 2012; for Denmark and Germany they refer to 2010; for Mexico, data refer to 2008 and include only businesses with 20 or more persons employed.

Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm based on OECD, ICT Database; Eurostat and national sources, June 2013.

68. In 2012, B2C e-commerce sales were estimated to exceed USD 1 trillion for the first time. During 2013, they are estimated to grow an additional 18.3% to USD 1.298 trillion, with the Asia-Pacific region surpassing North America as the top market for B2C e-commerce sales.[9] It is worth mentioning that at the moment B2C e-commerce represents a small fraction of overall e-commerce, which is mainly made of B2B transactions. Global B2B e-commerce, particularly among wholesalers and distributors, was estimated to be approximately USD 12.4 trillion in 2012.[10] According to other estimates made by the International Data Corporation, the size of total worldwide e-commerce, when global business-to-business and consumer transactions are added together, equated to $16 trillion in 2013.

9 http://www.emarketer.com/Article/Ecommerce-Sales-Topped-1-Trillion-First-Time-2012/1009649

10 World Trade Organisation (2013), E-Commerce in Developing Countries: Opportunities and Challenges for Small and Medium-Sized Enterprises.

2.2. App Stores

69. The growth of Internet access through smartphones and tablets has caused an increase in the frequency of use of online services and the development of application stores, a type of digital distribution platform for software, often provided as a component of an operating system. Application stores typically take the form of central retail platforms, accessible through the consumer's device, through which the consumer can browse, view information and reviews, purchase and automatically download and install the application on his/her device.

70. Accessibility to application stores varies. Some application stores are only usable by consumers with a particular device. These stores may represent the sole way for users of that device to obtain applications, or may represent one of several possible means for users to obtain applications. Some application stores are accessible by consumers of any device using a particular operating system. Others are usable by consumers with service contracts with a particular network operator. Finally, certain others are freely accessible and are not dependent on the type of device, proprietary software, or service provider.

71. App stores will typically include both applications developed by the business operating the app store (typically, an operating system developer, device manufacturer, or telecommunications network provider), or by a third-party developer. Applications may be downloaded for free or for a fee. Free applications may be supported by advertising. In addition, applications are increasingly moving to a "freemium" model, in which basic functionality is provided for free, but customers may pay for additional content or features.

72. An application store will typically feature applications produced by developers in multiple countries. In addition, while many app stores are targeted at customers in particular geographic markets, applications are often cross listed on multiple app stores targeted at multiple geographic regions.

73. Use of application stores is growing rapidly. Gartner, Inc., an information technology research and advisory company, estimated that downloads from app stores would reach 102 billion in 2013, up from 64 billion in 2012.

74. Total revenue from app store purchases was expected to exceed $26 billion in 2013, an increase of 31% over the total in 2012. As noted above, free applications are becoming increasingly prevalent, and are expected by 2017 to account for 94.5% of total downloads, with in-app purchases accounting for 48 percent of total app store revenues.[11]

2.3. Online Advertising

75. Online advertising uses the Internet as a medium to target and deliver marketing messages to customers. Internet advertising offers a number of advantages over traditional advertising. For example, many Internet advertisers have developed sophisticated methods for segmenting consumers in order to allow more precise targeting of ads. Many Internet advertising publishers have also developed ways for clients to monitor performance of ads, tracking how users interact with their brands and learning what is of interest to current and prospective customers. Online advertising takes a number of forms, the most prominent of which are display ads, in which an advertiser pays to display ads linked to particular content or user behaviour, and search engine ads, in which an advertiser pays to appear among Internet search results.

[11] Gartner, Inc. (September 2013).

76. Online advertising involves a number of players, including web publishers, who agree to integrate advertisements into their online content in exchange for compensation, advertisers, who produce advertisements to be displayed in the web publisher's content and advertising network intermediaries, who connect web publishers with advertisers seeking to reach an online audience. Advertising network intermediaries include a range of players, including search engines, media companies, and technology vendors. These networks are supported by data exchanges, marketplaces in which advertisers bid for access to data about customers that has been collected through tracking and tracing of users' online activities. These data can be analysed, combined, and processed by specialist data analysers into a user profile.

77. In advertising-based business models, publishers of content are frequently willing to offer free or subsidised services to consumers in order to ensure a large enough audience to attract advertisers. The most successful advertising companies have been those that combine a large user base with sophisticated algorithms to collect, analyse, and process user data in order to allow targeted advertisements. While traditional advertising involved payment for display of ads for a specified period of time, with little way to monitor visibility or user response, online advertising has given rise to a number of new payment calculation methods, including cost-per-mille (CPM), in which advertisers pay per thousand displays of their message to users, cost-per-click (CPC), in which advertisers pay only when users click on their advertisements, and cost-per-action (CPA), in which advertisers only pay when a specific action (such as a purchase) is performed by a user.

78. Internet advertising is rapidly growing, both in terms of total revenues and in terms of share of the total advertising market. PwC estimates that Internet advertising reached USD $100.2 billion in 2012, which represented 17 percent growth from the previous year, and a 20 percent share of the total global advertising market. The market for internet advertising is projected to grow at a rate of 13 percent per year during the period from 2012 to 2017, reaching USD 185.4 billion in 2017. Internet advertising would by that point become the second-largest advertising medium behind television advertising, with a 29 percent share of the overall global market. Within the online advertising market, search advertisement holds the greatest share at approximately 42 percent in 2013, and is expected to continue to hold in excess of 40 percent of the market through 2017, although both mobile and video advertising are projected to grow substantially by 2017 (to 15% and 8%, respectively).[12]

2.4. Cloud Computing

79. Cloud computing is the provision of standardised, configurable, on-demand, online computer services, which can include computing, storage, software, and data management, using shared physical and virtual resources (including networks, servers, and applications).[13] Because the service is provided online

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[12] PwC, Global Entertainment and Media Outlook: 2013 – 2017, http://www.pwc.com/gx/en/global-entertainment-media-outlook/segment-insights/internet-advertising.jhtml

[13] Cloud computing is defined in the report of the US National Institute of Standards and Technology (NIST) as ''a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction.''

According to NIST, the cloud model is composed of five essential characteristics:

1. **On-demand self-service**: a user can unilaterally act without requiring human interaction with each service's provider.

2. **Broad network access**: capabilities are available over the network and accessed through standard mechanisms that promote use by heterogeneous client platforms (e.g., mobile phones, laptops, and PDA s).

using the provider's hardware, users can typically access the service using various types of devices wherever they are located, provided they have a suitable Internet connection.

80. The resources to which cloud computing customers are granted access are not stored on a single computer. Instead, they are on many networked computers that are available to everyone who has access to that "cloud" of computing resources (which, depending on the cloud, could be a single organisation, a community of organisations, the general public, or some combination thereof). The system copies each user's data and software to other servers, which allows it to allocate requests for hardware resources to whatever physical location is best able to satisfy the demand efficiently. Each user has access to a large amount of computer resources when needed, and only when needed. This redundancy ensures that the failure of one machine will not lead to loss of data or software.

81. Cloud computing often provides customers with a cost effective alternative to purchasing and maintaining their own IT infrastructure, since the cost of the consumer resources is generally shared among a wide user base. The advantages of cloud computing are largely driven by economies of scale in setting up the infrastructure and maximising server usage by sharing space among clients whose needs for space and processing power may vary on a flexible basis.

82. The most common examples of cloud computing service models are:

- Infrastructure-as-a-service – In the most basic cloud-service model, providers of infrastructure as a service (IaaS) offer computers – physical or (more often) virtual machines – and other fundamental computing resources. IaaS clouds often offer additional resources such as a virtual-machine disk image library, raw (block) and file-based storage, firewalls, load balancers, IP addresses, virtual local area networks (VLANs), and software bundles. The customer does not manage or control the underlying cloud infrastructure, but has control over the operating system, storage, and deployed applications, and may be given limited control of select networking components (e.g., host firewalls).

- Platform-as-a-service – Platform as a service is a category of cloud computing services that provides a computing platform and programming tools as a service for software developers. Software resources provided by the platform are embedded in the code of software applications meant to be used by end users. The client does not control or manage the underlying cloud infrastructure, including the network, servers, operating systems, or storage, but has control over the deployed applications.

- Software-as-a-service – A common form of cloud computing in which a provider allows the user to access an application from various devices through a client interface such as a web browser (e.g., web-based email). It can be provided either to business customers (B2B) or individual customers (B2C). Unlike in the old software vendor models, the code is executed remotely on the servers, thereby freeing the user of the necessity to upgrade when a new version is available – the executed version is always the latest, which means that new features go instantaneously to market without friction. The consumer generally does not manage or control

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3. **Resource pooling**: the provider's computing resources (e.g. storage, processing, memory, network bandwidth, and virtual machines) are pooled to serve multiple users using a multi-tenant model.

4. **Rapid elasticity**: capabilities can be rapidly and elastically provisioned.

5. **Measured Service**: resources use can be monitored, controlled, and reported providing transparency for both the provider and consumer of the utilised service.

the underlying cloud infrastructure, including the network, servers, operating systems, storage, or individual application capabilities, with the possible exception of limited user-specific application configuration settings.

83. Other XaaS concepts include content or data:

- Content-as-a-service – where rights are obtained and software is provided to allow content to be embedded by purchasers, content can be purchased as a service. This has been used particularly in the case of user-created content.

- Data-as-a-service – Data from multiple sources can be aggregated and managed by a service provider, so that controlled access to that data can be granted to entities that may be geographically and organisationally removed from each other, without each entity needing to develop or acquire the infrastructure necessary to prepare and process that data.

84. In the consumer markets, many cloud services (e.g., email, photo storage, and social networks) have been provided free of charge, with revenue generated through advertising or the sale of data on user behaviour, or on a "freemium" basis in which basic services are provided for free and expanded services require payment. Other consumer cloud services, such as web hosting or hard drive backup, are sold on a monthly subscription basis. In B2B markets, cloud services are most typically sold by subscription, although "pay as you go" models are increasingly available.

2.5. Payment Services

85. Payment for online transactions traditionally required providing some amount of financial information, such as bank account or credit card information, to a vendor, which required a high degree of trust that is not always present in the case of an unknown vendor, particularly in the case of a C2C transaction. Online payment service providers help address this concern by providing a secure way to enable payments online without requiring the parties to the transaction to share financial information with each other.

86. A payment service provider acts as an intermediary (typically using a software-as-a-service model) between online purchasers and sellers, accepting payments from purchasers through a variety of payment methods, including credit card payments or bank-based payments like direct debit or real-time bank transfers, processing those payments, and depositing the funds to the seller's account. Electronic payment systems offer a number of benefits for users, such as (i) protection against fraud, since the seller and buyer do not exchange sensitive information, (ii) faster delivery of payment compared with traditional payment methods, and (iii) in many cases, the ability to transact in multiple currencies. Payment service providers typically charge a fee for each transaction completed, which can be either a fixed charge or a percentage of the value of the transaction, though some payment service providers also charge monthly fees or setup fees for certain additional services.

87. A number of other alternative online payment options are in use as well, including:

- **Cash payment solutions**, in which a customer buys online, and pays in cash with a barcode or payment code at participating shops or settlement agencies, offering a way for customers unwilling to use other online payment methods to make online purchases in a secure manner;

- **E-wallets or cyber-wallets**, which are previously charged with credits and can be spent online as an alternative to the use of a credit card. These are often used for micropayments because the use of a credit card for frequent small payments is not economical.

- **Mobile payment solutions**, which encompass all types of technologies that enable payment using a mobile phone or smartphone, including, among others, mobile card processing using card readers connected to smartphones, in-app payments for virtual products, and near-field communications (NFC) solutions which use short-range wireless technology to exchange information.

2.6. High Frequency Trading

88. High frequency trading uses sophisticated technology, including complex computer algorithms, to trade securities at high speed. Large numbers of orders which are typically fairly small in size are sent into the markets at high speed, with round-trip execution times measured in microseconds. The parameters for the trades are set with algorithms run on powerful computers that analyse huge volumes of market data and exploit small price movements or opportunities for market arbitrage that may occur for only milliseconds. Typically, a high-frequency trader holds a position open for no more than a few seconds. In other words, high frequency trading firms profit mostly from small price changes exploited through small, but frequently executed trades.

89. Because trades are conducted entirely electronically, high frequency trading generally does not require personnel in the country where the infrastructure used to make trades is located. The implementation and execution of successful trading strategies depends on several factors, including the development of algorithms for trading, as well as writing programs to monitor losses and performance and to automatically shut down trading to avoid fast-accruing losses. In addition, high frequency trading depends on the ability to be faster than competitors, which means that it is extremely sensitive to latency. As a result, the location of the server is extremely important to the business, with servers located close to the relevant exchange providing a meaningful advantage over servers located farther away. As a result, financial institutions offer installation of trading engines directly adjacent to their own infrastructure, minimising network latency.

2.7. Participative Networked Platforms

90. A participative networked platform is an intermediary that enables users to collaborate and contribute to developing, extending, rating, commenting on and distributing user-created content. User created content (UCC) comprises various forms of media and creative works (written, audio, visual, and combined) created by users. A range of different distribution platforms have been created, including text-based collaboration formats such as blogs or wikis, group-based aggregation and social bookmarking sites, social networking sites, podcasting, and virtual worlds. Social networking applications are possibly the best known participative networked platform but the same model is also used in other areas, like fashion design, toy design, and computer games just to name a few. In general, user-created content is created without the expectation of profit. The participative platform featuring the UCC, however, may monetise the UCC in a variety of ways, including through voluntary contributions, charging viewers for access on a per-item or subscription basis, advertising-based models, licensing of content and technology to third parties, selling goods and services to the community, and selling user data to market research or other firms.

Diversity of Revenue Models

The diversity of businesses in the current digital economy is illustrated by the variety of ways in which businesses turn value into revenue. The most common revenue models include the following:

(i) *Advertising-based revenues*. One version of this model offers free or discounted digital

content to users in exchange for requiring viewing of paid-for advertisements. Other models rely on providing advertising through mobile devices based on location or other factors. A third type concerns social media websites or platforms who typically build up a large online user community before monetising their captive audience through advertising opportunities.

(ii) *Digital content purchases or rentals*. Users pay per item of download – for instance, e-books, videos, apps, games and music would fall into this category.

(iii) *Selling of goods (including virtual items)*. This category, which overlaps to a degree with (ii), would include online retailers of tangible goods but could also cover online gaming, where users are offered a free or discounted introductory product but are also offered purchasable access to additional content or virtual items to enhance the experience.

(iv) *Subscription-based revenues*. Examples include annual payments for 'premium delivery' with online retailers, monthly payments for digital content including news, music, video-streaming, etc. It could also include regular payments for software services and maintenance such as anti-virus software, data storage, customer 'help' services for operating systems, and payment for access to the internet itself.

(v) *Selling of services*. This category overlaps with (iv) but would include traditional services which can be delivered online such as legal services (e.g. e-conveyancing), financial services (e.g. brokerage), consultancy services, travel agency etc. It would also include a large range of B2B services linked to enterprises who provide core internet access and act as internet intermediaries (web hosting, domain registration, payment processing, platform access, etc.)

(vi) *Licensing content and technology*. Again, this category overlaps with (iv) and (v) but might typically include access to specialist online content (e.g. publications and journals), algorithms, software, cloud based operating systems, etc., or specialist technology such as artificial intelligence systems.

(vii) *Selling of user data and customised market research*. Examples include ISPs, data brokers, data analytics firms, telemetrics and data gained from non-personal sources.

(viii) *'Hidden' fees and loss leaders*. There may be instances in integrated businesses where profits or losses may be attributable to online operations but because of the nature of the business, cross-subsidy with physical operations occurs and it is difficult to separate and identify what should be designated as 'online revenue'. An example might include online banking, which is offered 'free' but is subsidised through other banking operations and fees.

3. Key Features of the Digital Economy

91. There are a number of features that are increasingly prominent in the digital economy and which are potentially relevant from a tax perspective. Specifically, these features include:

- *Mobility*, with respect to (i) the *intangibles* on which the digital economy relies heavily, (ii) *users*, and (iii) *business functions* as a consequence of the decreased need for local personnel to

perform certain functions as well as the flexibility in many cases to choose the location of servers and other resources;

- *Reliance on data,* including in particular the use of so-called "big data";
- *Network effects,* understood with reference to user participation, integration and synergies,
- *Use of multi-sided business models* in which the two sides of the market may be in different jurisdictions;
- *Tendency toward monopoly or oligopoly* in certain business models relying heavily on network effects; and
- *Volatility* due to low barriers to entry and rapidly evolving technology.

3.1. Mobility

3.1.1. Mobility of Intangibles

92. Development and exploitation of intangibles is a key feature of the digital economy. This investment in and development of intangibles is a core contributor to value creation and economic growth for companies in the digital economy. For example, digital companies often rely heavily on software, and will expend substantial resources on research and development to upgrade existing software or to develop new software products.

93. This heavy reliance on intangibles can be present even where technology is incorporated into a business model primarily to manage wholly tangible resources. For example, an online retailer may develop a multi-layer digital activity to manage a logistic platform including warehouses and shipping capacity. As businesses evolve, the relative importance of these intangibles frequently grows, resulting in further concentration of value in the intangibles. Under existing tax rules, the rights to those intangible assets can often be easily assigned and transferred among associated enterprises, with the result that the legal ownership of the assets may be separated from the activities that resulted in the development of those assets.

3.1.2. Mobility of Users

94. Advances in digital technology mean that users are increasingly able to carry on commercial activities remotely while traveling across borders. An individual can, for example, reside in one country, purchase an application while staying in a second country, and use the application from a third country. Challenges presented by the increasing mobility of consumers are exacerbated by the ability of many consumers to use virtual personal networks or proxy servers that may, whether intentionally or unintentionally, disguise the location at which the ultimate sale took place. The fact that many interactions on the Internet remain anonymous may add to the difficulty of the identity and location of users.

3.1.3. Mobility of Business Functions

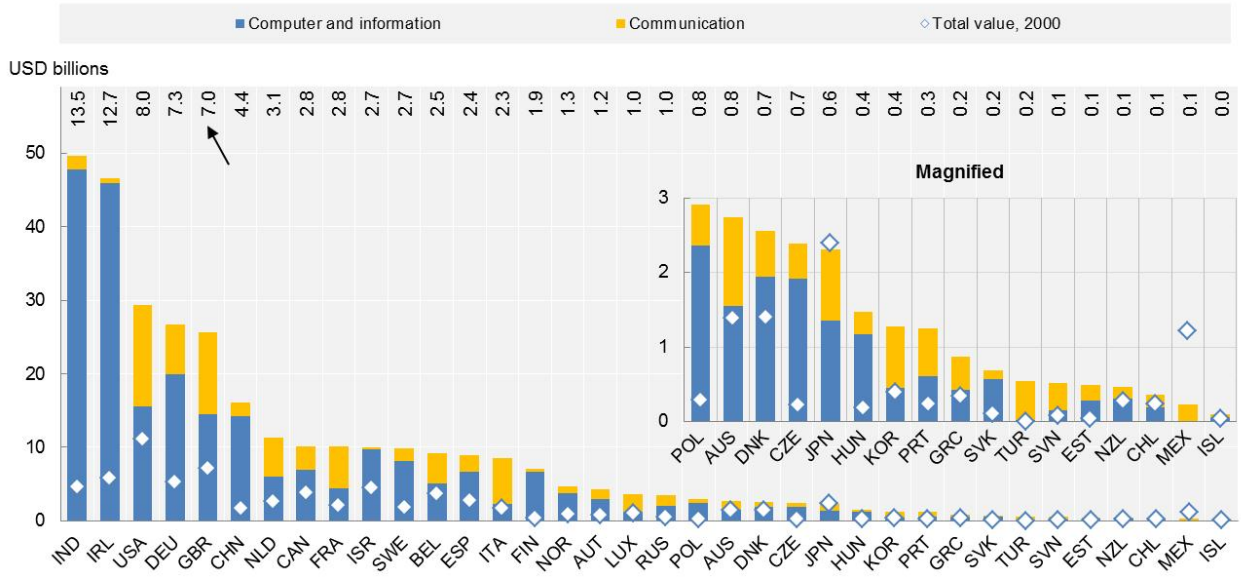
95. As noted above, improved telecommunications, information management software, and personal computing have significantly decreased the cost of organising and coordinating complex activities over long distances. As a result, businesses are increasingly able to manage their global operations on an integrated basis from a central location that may be removed geographically from the locations in which the operations are carried out, their suppliers or customers located.

96. One impact of these changes has been an expansion of the ability to access remote markets, which has substantially increased the ability to provide those goods and services across borders. This has been illustrated by the dramatic growth of international trade in ICT services in recent years. In particular, since 2000, the share of Computer and Information services on world exports of services doubled from 3% to 6%, while that of Telecommunication services increased from 2.2 to 2.3% (OECD (2013), OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth, OECD Publishing). For the OECD, the combined share of Computer and Information and Communication services rose from 5.7 to 9.0% of total service exports.

97. Several important shifts in the provision of ICT services have occurred in recent years. India has quickly become the leading exporter of ICT services, followed by Ireland, the United States, Germany, and the United Kingdom. China as well became one of the major exporters. These six countries together represent about 60% of total exports of ICT services.

Figure 7.OECD and major exporters of ICT services, 2000 and 2012

Billions of USD and percentages of total world exports of ICT services[14]



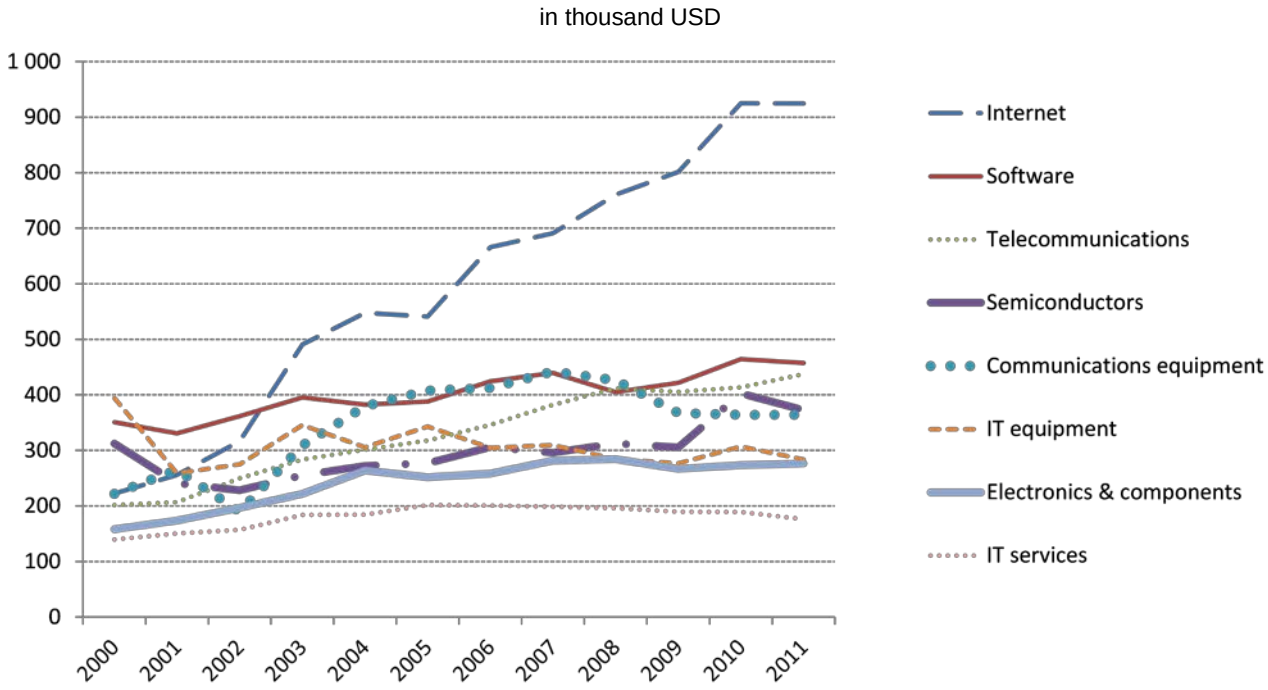
Data for Canada, Finland, Iceland, Israel, Mexico, Norway, Slovenia, Turkey and the United States refer to 2011 instead of 2012. For Luxembourg and Kuwait refer to 2002 instead of 2000, and for Denmark to 2004. Exports of computer and information services are not included for Mexico.

Source: OECD (2013), *OECD Science, Technology and Industry Scoreboard 2013: Innovation for Growth*, OECD Publishing, www.oecd.org/sti/scoreboard.htm based on UNCTAD, UNCTADstat, June 2013

[14] The statistical data for Israel are supplied by and under the responsibility of the relevant Israeli authorities or third party. The use of such data by the OECD is without prejudice to the status of the Golan Heights, East Jerusalem and Israeli settlements in the West Bank under the terms of international law.

98. In addition, technological advances increasingly make it possible for businesses to carry on economic activity with minimal need for personnel to be present. In many cases, businesses are able to increase in size and reach substantially with minimal increases in the number of personnel required to manage day-to-day operation of the businesses (so-called "scale without mass"). This has been particularly true in the case of Internet businesses, which have in many cases quickly amassed huge numbers of users while maintaining modest workforces. As a result, the average revenue per employee of top Internet firms, as shown in the figure below, is substantially higher than in other types of businesses within the ICT sector.

Figure 8.Average revenue per employee of top 250 ICT Firms



Source: OECD Internet Economy Outlook 2012

99. The ability to manage business centrally while maintaining substantial flexibility over the location of business functions has increased the ability of businesses to spread functions and assets among multiple different countries. While such globalisation of business among larger organisations is certainly not a new phenomenon, the spread of the digital economy, combined with the growing importance of the service component, as well as reductions in trade costs due to trade and investment liberalisation and regulatory reforms, have helped to remove logistical barriers and increase the pace at which such globalisation is possible. Technological advances have also permitted greater integration of worldwide businesses, which has increased the flexibility of businesses to spread their activities among several locations worldwide, even if those locations may be distant from each other and from the physical location of their ultimate customers. In addition to improving the flexibility of larger, more established organisations, advances in information and communications technology have made it more possible for even small and mid-sized businesses to reach global markets from their inception. In short, global interconnectedness has grown to unprecedented levels.

100. Advances in technology have improved access to real-time market information and business analytics, and have improved communications within and between firms. These improvements have improved the capacity of businesses to manage their global operations on an integrated basis, with individual group companies exercising their functions within a framework of group policies and strategies set by the group as a whole and monitored centrally. Improved telecommunications, information management software, and personal computing have significantly decreased the cost of organising and coordinating complex activities over long distances, and enabled the creation of new and more efficient business models. This integration has made it easier for business to adopt global business models that centralise functions at a regional or global level, rather than at a country-by-country level. Even for SMEs, it has now become possible to be "micro-multinationals" that operate and have personnel in multiple countries and continents.

101. As worldwide operations have become more integrated, production processes increasingly take place as part of global value chains in which various stages of production are spread across multiple different countries, and are performed by a mix of independent and affiliated suppliers. Businesses are increasingly able to choose the optimal location for productive activities and assets, even if that location may be distant from the location of customers or the location of other stages of production. In addition, rapid advances in information and communication technology have meant that services such as data entry, information processing, research, and consulting can increasingly be carried out remotely. These functions can be carried out by related parties, or, if a business determines that it is more advantageous to outsource the function, by an unrelated service provider.

102. There are limits to this flexibility, however. In general, fragmentation of activities among multiple locations involves trade-offs between lower costs for the activity itself and higher transaction and coordination costs. First, skills and talent remain a critical resource in the digital economy. Although many functions can be performed with limited personnel, managers, developers, software architects, and designers, among other key functions, remain instrumental. As a result, location of many of the substantial functions of a digital business must occur in locations in which these key people are willing to work. Second, although digital services can substantially expand the reach of businesses, these digital services often require a massive investment in infrastructure components. For example, cloud computing providers must build "server farms" of interconnected computers, and while there may be some flexibility as to where these resources are located, concerns like access to inexpensive and reliable sources of power and cooling may heavily influence the choice of location. In addition, in many businesses the user experience is meaningfully improved by proximity to the core infrastructure. The result is that there are often compelling reasons for businesses to ensure that infrastructure resources are placed as close as possible to where key markets of users are, so that users experience less latency, shorter lag time, and higher quality. In addition, in some businesses, the need for a tangible presence in a jurisdiction for regulatory reasons may also limit choices about where to locate infrastructure and business activities.

3.2. Reliance on Data

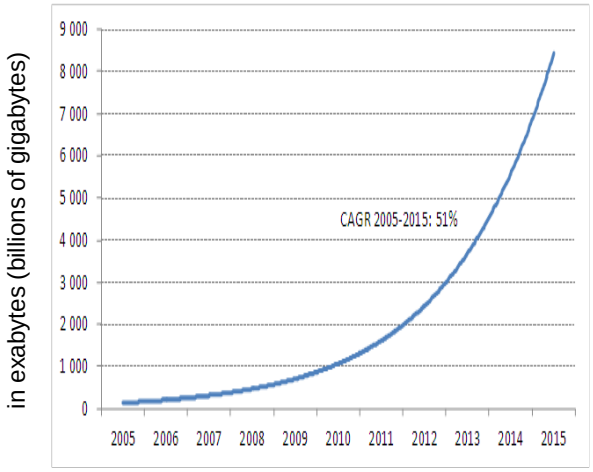
103. It is common in the digital economy for businesses to collect data about their customers, suppliers, and operations. For example, the use of a product or service by a user may provide data about the user that has value to the business as an input either in improving existing products and services or in providing products and services to another group of customers.

104. Data can include both personalised data and data that is not personalised, and can be obtained in a number of ways. In the case of personal data, as mentioned in section II, it can be obtained directly from customers (for example, when registering for an online service), observed (for example, by recording Internet browsing preferences, location data, etc.), or inferred based on analysis in combination with other data. It is estimated that sources such as online or mobile financial transactions, social media traffic, and

GPS coordinates generate in excess of 2.5 exabytes (billions of gigabytes) of data every day (World Economic Forum, 2012). The dividing line between personal and non-personal data is not always clear; however, as data obtained from multiple private and public sources will frequently be combined in order to create value. A recent study quantifies the value of the Data-Driven Marketing Economy (DDME) and looks at the revenues generated for the United States economy. The study found that the DDME added $156 billion in revenue to the United States economy in 2012 and notes that the real value of data is in its application and exchange across the DDME.[15]

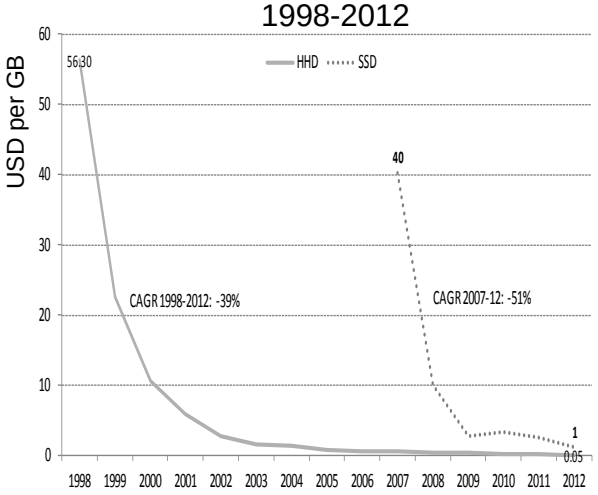
105. Although the use of data to improve products and services is not unique to the digital economy, the massive use of data has been facilitated by an increase in computing power and storage capacity and a decrease in data storage cost, as shown below, which has greatly increased the ability to collect, store, and analyse data at a greater distance and in greater quantities than was possible before. The capacity to collect and analyse data is rapidly increasing as the number of sensors embedded in devices that are networked to computing resources increases. For example, while traditional data collection for utility companies was limited to yearly measurement, coupled with random samplings throughout the year, smart metering could increase that measurement rate to 15 minute samples, a 35 000 time increase in the amount of data collected (OECD, 2013). This has manifested itself in particular in the concept of "big data", meaning datasets large enough that they cannot be managed or analysed using typical database management tools. The value of the ability to obtain and analyse data, and big data in particular, is increasingly well documented by market observers.

Estimated worldwide data storage



Source: OECD based on IDC Digital Universe research project.

Average data storage cost for consumers, 1998-2012



Source: OECD based on Pingdom (2011)

106. For example, in a 2011 report on big data, the McKinsey Global Institute estimated the value that could be created through the analysis and use of big data at 300 billion dollars in the health sector in the United States and at 250 billion euros in the general government sector in Europe. The same report estimates that use of big data could generate a total consumer surplus of 600 billion dollars. Big data has substantial application in targeting government aid and services as well. It has been used, for example, to

[15] "The Value of Data: Consequences for Insight, Innovation, and Efficiency in the U.S. Economy", A Study Commissioned by DMA's Data-Driven Marketing Institute (DDMI) - October 2013.

monitor refugee movements following natural disasters, in order to ensure that health risks could be accurately predicted and aid could be well targeted (World Economic Forum, 2012).

107. The McKinsey Global Institute report notes five broad ways in which leveraging big data can create value for businesses:

i) *Creating transparency* by making data more easily accessible in a timely manner to stakeholders with the capacity to use the data;

ii) *Managing performance* by enabling experimentation to analyse variability in performance and understand its root causes;

iii) *Segmenting populations* to customise products and services;

iv) *Improve decision making* by replacing or supporting human decision making with automated algorithms; and

v) *Improve the development of new business models, products, and services***.**

Network Effects

108. Networks effects refer to the fact that decisions of users may have a direct impact on the benefit received by other users. A simple example of this is the introduction of the fax machine. While a single fax machine had no utility by itself, users choosing to purchase a fax machine received the benefit of the decisions of earlier users to purchase a fax machine, in the form of the ability to communicate through this new technology with an existing network of potential counterparties.

109. These network effects are an important feature of many businesses in the digital economy. Network effects are seen whenever compatibility with other users is important, even where the primary purpose of a particular technology may not be to interact with others. For example, a widely-adopted operating system will generally have a larger amount of software written for it, resulting in a better user experience. These effects are known as positive externalities, meaning situations in which the welfare of a person is improved by the actions of other persons, without explicit compensation. For example, when additional people join a social network, the welfare of the existing users is increased, even though there is no explicit agreement compensation among the users for this improvement. Externalities can also be negative. For example, as an increasing number of persons use a communications network at the same time, congestion may decrease the value to each user of the network, with no compensation among the affected parties (Easley and Kleinberg, 2010).

110. Some network effects come from users' marginal utility to each other: the more users there are, the higher the value created is. A simple example is a media sharing site, in which all content is generated by users, and the experience of users is enhanced as additional users join and share content. Where a business model encourages interactivity among users, it tends to encourage these network effects. For example, in certain business models, network effects come from a competitive advantage gained from the critical mass of buyers and sellers. A retail site may develop an architecture that encourage users to review and tag products. These user reviews enhance the ability of users to make informed choices, while product tagging improves their ability to find products relevant to their interests.

111. Other network effects derive from vertical integration, relying on synergies between different layers or different applications to create added value and consolidate market position. This is particularly illustrated by the trend toward the "Internet of Things", in which companies deploy software in many devices and objects, and leverage this web of infrastructure to sell goods or services either to the owners of

those devices or to advertisers. In this model, hardware and software infrastructure becomes a privileged channel to get in touch with end users and to create value by monetising their attention (advertising-based business models), the data that flows from them, or the externalities generated through network effects, or through selling them goods or services.

3.3. Multi-Sided Business Models

112. A multi-sided business model is one that is based on a market in which multiple distinct groups of persons interact through an intermediary or platform, and the decisions of each group of persons affects the outcome for the other groups of persons through a positive or negative externality. In a multi-sided business model, the prices charged to the members of each group reflect the effects of these externalities. If the activities of one side create a positive externality for another side (for example more clicks by users on links sponsored by advertisers), then the prices to that other side can be increased.

113. An example of a multi-sided business model involving positive externalities for different sides of the market is a payment card system, which will be more valuable to merchants if more consumers use the card, and more valuable to consumers if more merchants accept the card. Similarly, an operating system is more valuable to end users if more developers write software for it, and more valuable to software developers if more potential software purchasers use the operating system.

114. A negative externality from one side for another side (e.g. displays of intrusive and unattractive advertising banners) can be offset by a lower price, or even no charge or a reward for the users. The classic case in which one side experiences negative externalities from the other side's participation is found in the media industry. In that case, a company attracts users by providing content (television or radio programming, a magazine, a trade publication, a phonebook, or a newspaper) for free or at a cost less than the cost of production. The media company displays advertisements to its readers/listeners/viewers and earns revenue from advertisers whose ads it displays. Alternatively, it might earn revenue from selling information about its readers/listeners/viewers to interested parties.

115. The rise of the digital economy made multi-sided business models more prevalent in a cross-border context. In this regard, two key characteristics of multi-sided business models in the digital economy should be noted:

- **Flexibility:** The nature of digital information and the infrastructure of the Internet greatly expand the facility to design and implement multi-sided business models. Resources such as content, user data, or executable code can be stored to create value long after they have been produced. This specific nature of digital resources makes them an asset in business models where the different sides of the market can be created then dynamically adapted based on evolving technology, the latest expression of consumer demand, and a firm's position on the market. In addition, as discussed below, digital technology has enhanced the ability to collect, analyse and manipulate user and market data, which has allowed platforms to enhance the value to one side of a market of the participation of the other side of the market.

- **Reach:** The digital economy also makes it easier to locate the different sides of the same business model in different countries. Whereas many traditional multi-sided business models such as broadcasting paid for by advertising, or shopping malls were confined to a limited perimeter due to physical constraints or to regulations, over-the-top businesses in the digital economy can more easily connect two sides that are located far from one another to maximise value on each side. For instance, resources designed to collect data can be located near individual users, whereas the infrastructure necessary to sell this data to paying customers can be located elsewhere.

116. The digital economy features two prominent categories of multi-sided business models. First, a business can operate several applications that provide complementary services. This creates two types of synergy: on the one hand, the various activities pool their resources such as executable code, content, or user data; on the other hand, the activities may be put into a package that is more attractive for users. Second, vertical platform models are used to make resources available for third-party developers so as to attract their creativity as part of open innovation strategies. A platform is often the result of the large-scale development of an application that gets commoditised. For example, a company may develop a social networking service, using internally produced applications to attract consumers and funding operations through the sale of advertising. The company may also choose to open an application programming interface (API) which allows developers to easily implement applications using the platform. Access to the API minimises the developers' initial investment and facilitates their access to the market of consumers that use the platform. The participation of the developers, in turn, enhances the user experience, thereby further strengthening the company's position in the marketplace.

3.4. Tendency toward Monopoly or Oligopoly

117. In some markets, particularly where a company is the first actor to gain traction on an immature market, network effects combined with low incremental costs may enable the company to achieve a dominant position in a very short time. This tends to be the case, for example, where companies provide a platform or market in which users on one side of the market prefer to use only a single provider, so that value to those users is enhanced when a single standard is chosen, and the price that can be charged to the other side is enhanced because the platform becomes the only means of access to those users. As a result of these network effects, some digital markets have ended up being dominated by a few major players. Although this is true in traditional business as well, ease of adoption of a new platform has meant that in some areas of the digital economy, some players are able to rise to a dominant market position extremely quickly, and leverage that market position to maintain dominance. In industries that feature this tendency, network effects are magnified. It should be noted, however, that in the digital economy, many networks operate simultaneously, with the result that in many cases competition in a monopolised market may be influenced by other markets, which combined with the reduced entry barriers discussed below, can moderate monopoly power in the first market.

3.5. Volatility

118. Technological progress has led to progress in miniaturisation and a downward trend in the cost of computing power. In addition, neither an Internet end user nor in many cases the service provider are required to pay a marginal price for using the network. These factors, combined with increased performance and capital expenditure have markedly reduced barriers to entry for new Internet-based businesses. These factors have combined to foster innovation and the constant development of new business models. As a result, in short periods of time, companies that appeared to control a substantial part of the market have found themselves rapidly losing market share to challengers that built their businesses on more powerful technology, a more attractive value proposal, or a more sustainable business model. Due to the fast pace of innovation, the few companies that have managed long-term success typically have done so by investing substantial resources in research and development and in acquiring start-ups with innovative ideas, launching new features and new products, and continually evaluating and modifying business models.

IV. IDENTIFYING OPPORTUNITIES FOR BEPS IN THE DIGITAL ECONOMY

This section provides a general discussion of the common features of tax planning structures that raise BEPS concerns. It then provides a detailed description of the core elements of BEPS strategies with respect to both direct and indirect taxation.

1. Common Features of Tax Planning Structures Raising BEPS Concerns

119. As noted in the BEPS Action Plan, BEPS concerns are raised by situations in which taxable income can be artificially segregated from the activities that generate it, or in the case of VAT, situations in which no or an inappropriately low amount of tax is collected on remote digital supplies to exempt businesses or multi-location enterprises that are engaged in exempt activities. These situations undermine the integrity of the tax system and potentially increase the difficulty of reaching revenue goals. In addition, when certain taxpayers are able to shift taxable income away from the jurisdiction in which income producing activities are conducted, other taxpayers may ultimately bear a greater share of the burden. BEPS activities also distort competition, as corporations operating only in domestic markets or refraining from BEPS activities may face a competitive disadvantage relative to MNEs that are able to avoid or reduce tax by shifting their profits across borders.[16]

120. The Task Force discussed a number of tax and legal structures that can be used to implement business models in the digital economy. These structures show existing opportunities to achieve BEPS. In many cases, the nature of the strategies used to achieve BEPS in digital businesses is similar to the nature of strategies used to achieve BEPS in more traditional businesses. Some of the key characteristics of the digital economy may, however, exacerbate risks of BEPS in some circumstances, in the context of indirect taxation in particular. Therefore, it is necessary to examine closely not only how business models may have evolved in the digital economy, but also how overall business models can be implemented in an integrated manner on an international scale from a legal and tax structuring perspective.

121. The following paragraphs consider in more detail how BEPS strategies manifest in the digital economy. The discussion below is intended to help identify the key elements of BEPS strategies in the context of direct taxation, and how those strategies take advantage of the key features of the digital economy. In addition, in the context of VAT, while there is considerable diversity in the structure of VAT systems and in how they operate in practice, the discussion below broadly illustrates ways in which the digital economy places pressure on VAT systems.

2. BEPS in the context of direct taxation

122. The February 2013 report Addressing Base Erosion and Profit Shifting (February BEPS Report) identifies a number of coordinated strategies associated with BEPS in the context of direct taxation, which can often be broken down into four elements:

16 . Such competitive disadvantages may also arise when competing enterprises are subject to different levels of taxation in their home jurisdictions, although that is beyond the concerns raised by BEPS.

- Minimisation of taxation in the market country by avoiding a taxable presence, or in the case of a taxable presence, either by shifting gross profits via trading structures or by reducing net profit by maximising deductions at the level of the payer;

- Low or no withholding tax at source;

- Low or no taxation at the level of the recipient (which can be achieved via low-tax jurisdictions, preferential regimes, or hybrid mismatch arrangements) with entitlement to substantial non-routine profits often built-up via intra-group arrangements; and

- No current taxation of the low-tax profits at the level of the ultimate parent.

2.1. Eliminating or reducing tax in the market country

2.1.1. Avoiding a Taxable Presence

123. In many digital economy business models, a non-resident company may interact with customers in a country remotely through a website or other digital means (e.g., an application on a mobile device) without maintaining a physical presence in the country. Increasing reliance on automated processes may further decrease reliance on local physical presence. The domestic laws of most countries require some degree of physical presence before business profits are subject to taxation. In addition, under Articles 5 and 7 of the OECD Model Tax Convention, a company is subject to tax on its business profits in a country of which it is a non-resident only if it has a permanent establishment (PE) in that country. Accordingly, such non-resident company may not be subject to tax in the country in which it has customers.

124. Companies in many industries have customers in a country without a permanent establishment in that country, communicating with those customers via phone, mail, and fax and through independent agents. That ability to maintain some level of business connection within a country without being subject to tax on business profits earned from sources within that country is the result of particular policy choices reflected in domestic laws and relevant double tax treaties, and is not in and of itself a BEPS issue. However, while the ability of a company to earn revenue from customers in a country without having a PE in that country is not unique to digital businesses, it is available at a greater scale in the digital economy than was previously the case. Where this ability, coupled with strategies that eliminate taxation in the State of residence, results in such revenue not being taxed anywhere, BEPS concerns are raised. In addition, under some circumstances, MNEs may attempt to artificially fragment their operations among multiple group entities to qualify for the exceptions to permanent establishment status for preparatory and auxiliary activities, or to otherwise ensure that each location through which business is conducted falls below the permanent establishment threshold. Structures of this type may permit an MNE to artificially avoid tax in the market jurisdiction, which raises BEPS concerns.

2.1.2. Minimising Functions, Assets and Risks in Market Jurisdictions

125. In many cases, an MNE group does maintain a degree of presence in countries that represent significant markets for its products. In the context of the digital economy, an enterprise may typically establish a local subsidiary or a PE, with the local activities structured in a way that generates little taxable profit. The fact that business functions needed to conduct business in a particular country may be more limited in one type of business than in another, however, is not a BEPS issue in and of itself. This is true even if tax rates are among the factors taken into account when deciding to centralise business operations in a particular location. The ability of multinational enterprises to allocate key functions in a way that minimises taxation does, however, create incentives to purport an allocation of functions for tax purposes in ways that may not correspond to actual business functions performed, and that would not be chosen in

the absence of tax considerations. In addition, assets, in particular intangibles, and risks related to the activities carried out at the local level may be allocated via contractual arrangements to other group members operating in a low tax environment in a way that does not correspond to actual risks assumed or to functions performed, assets used, or risks assumed related to the intangibles.

126. Under these structures, there is an incentive for the group member in the low tax environment to undervalue (typically at the time of the transfer) the transferred intangibles or other hard to value income-producing assets and to nonetheless claim that it is entitled to have large portions of the MNE group's income allocated to it on the basis of its economic ownership of the undervalued intangibles, as well as on the basis of the risks assumed and the financing it provides. Operations in higher tax jurisdictions often are allegedly stripped of risk, do not claim ownership of intangibles or other valuable assets, and do not hold the capital that funds the core profit making activities of the group. Economic returns are thus reduced and income is shifted into low-tax environments.

127. Typical examples of digital economy structures that minimise assets and risks in market jurisdictions include using a subsidiary or PE to perform marketing or technical support, or to maintain a mirrored server to enable faster customer access to the digital products sold by the group, with a principal company contractually bearing the risks and claiming ownership of intangibles generated by these activities. A company may, for example, limit risk at the local company level by limiting capitalisation of that entity so that it is financially unable to bear risk. In the case of businesses selling tangible products online, a local subsidiary or PE may maintain a warehouse and assist in the fulfilment of orders. These subsidiaries or PEs will be taxable in their jurisdiction on the profits attributable to services they provide, but the amount they earn may be limited. Alternatively, functions purported to be undertaken by local staff under contractual arrangements may not correspond with the substantive functions performed by the staff. For example, staff may not have formal authority to conclude contracts on behalf of a non-resident enterprise, but may perform functions that indicate effective authority to conclude those contracts. If purported allocations of assets, functions, and risks do not correspond to actual allocations, or if less-than-arm's length compensation is provided for intangible property of a principal company, these structures may present BEPS concerns.

2.1.3. Maximising Deductions in Market Jurisdictions

128. Once a taxable presence in the market country has been established, another common technique to reduce taxable income is to maximise the use of deductions for payments made to other group companies in the form of interest, royalties, service fees, etc. In many cases, MNEs engaging in BEPS practices attempt to reduce taxable income in a source country by artificially inflating the amount of deductible payments made to affiliates in other jurisdictions. For example, an affiliate in a low-tax jurisdiction may, due to a favourable credit rating, be able to borrow money at a low rate. It may then lend money to its subsidiaries in high-tax jurisdictions at a higher rate, thereby reducing the income of those subsidiaries by the amount of the deductible interest payments. Alternatively, an affiliate may take advantage of hybrid instruments to create deductible payments for a subsidiary in a source country that result in no inclusion in the country of residence of the affiliate. Payments (including underpayments) for the use of intangibles held by low-tax group companies or for services rendered by other group companies are other typical ways to reduce taxable income in the market country. Many structures put in place by digital businesses appear to make use of these techniques, with the taxable income from the local operations being reduced to extremely low amounts.

2.2. Avoiding withholding tax

129. A company may be subject to withholding tax in a country in which it is not a resident if it receives certain payments, including interest or royalties, from payers in that country. If allowed under a

treaty between the jurisdictions of the payer and recipient, however, a company in the digital economy may be entitled to reduced withholding or exemption from withholding on payments of profits to a lower-tax jurisdiction in the form of royalties or interest. Structures that involve treaty shopping by interposing shell companies located in countries with favourable treaty networks that contain insufficient protections against treaty abuse raise BEPS concerns.

2.3. Eliminating or reducing tax in the intermediate country

130. Eliminating or reducing tax in an intermediate country can be accomplished through the application of preferential domestic tax regimes, the use of hybrid mismatch arrangements, or through excessive deductible payments made to related entities in low-or no-tax jurisdictions.

131. Like companies in other industries, companies in the digital economy may locate functions, assets, or risks in low-tax jurisdictions or countries with preferential regimes, and thereby allocate income to those locations. While functions are often located in a particular jurisdiction for non-tax reasons such as access to skilled labour or necessary resources, as business functions grow increasingly mobile, taxpayers may increasingly be able to locate functions in a way that takes advantage of favourable tax regimes.

132. In the context of the digital economy, for example, the rights to intangibles and their related returns are often assigned and transferred among associated enterprises, and may be transferred, sometimes for a less-than-arm's length price,[17] to an affiliate in a jurisdiction where income subsequently earned from those intangibles is subject to unduly low or no tax due to the application of a preferential regime. This creates tax planning opportunities for multinational enterprises and presents substantial risks of base erosion. Heavy reliance in the digital economy on intangibles as a source of value may exacerbate the ability to concentrate value-producing intangibles in this way.

133. Companies may also reduce tax in an intermediate country by generating excessive deductible payments to related entities that are themselves located in low- or no-tax jurisdictions or otherwise entitled to a low rate of taxation on the income from those payments. For example, an operating company located in an intermediate jurisdiction may use intangibles held by another affiliate in a low-tax jurisdiction. The royalties for the use of these intangibles may be used to effectively eliminate taxable profits in the intermediate jurisdiction. Alternatively, an entity in an intermediate jurisdiction may make substantial payments to a holding company located in a low- or no-tax jurisdiction for management fees or head office expenses. Companies may also avoid taxes in an intermediate country by using hybrid mismatch arrangements to generate deductible payments with no corresponding inclusion in the country of the payee. Companies may also use arbitrage between the residence rules of the intermediate country and the ultimate residence country to create stateless income. In addition, companies may assert that the functions performed, assets used, and risks assumed in the intermediate country are limited.

2.4. Eliminating or reducing tax in the country of residence of the ultimate parent

134. Broadly speaking, the same techniques that are used to reduce taxation in the market country are often utilised also to reduce taxation in the country of the ultimate parent company of the group or where the headquarters are located. This can involve contractually allocating risk and legal ownership of mobile assets like intangibles to group entities in low tax jurisdictions, while group members in the jurisdiction of the headquarters are undercompensated for the important functions relating to these risks and intangibles that continue to be performed in the jurisdiction of the headquarters. In this situation it is often claimed that

17 . Even when the country from which the IP is transferred requires that transfers be made at arm's length, taxpayers may take aggressive positions that in fact result in less than an arm's length amount being recorded for tax purposes with respect to the transfer.

a marginal remuneration for the important functions is arm's length and that all the remaining profits should be attributed to the legal owner of movable assets or to the party that is contractually bearing the risk.

135. In addition, companies in the digital economy may avoid tax in the residence country of their ultimate parent if that country has an exemption or deferral system for foreign-source income and either does not have a CFC regime that applies to income earned by controlled foreign corporations of the parent, or has a regime with inadequate coverage of certain categories of passive or highly mobile income, including in particular certain income with respect to intangibles. For example, the parent company may transfer hard-to-value intangibles to a subsidiary in a low- or no-tax jurisdiction, thereby causing income earned with respect to those intangibles to be allocated to that jurisdiction without appropriate compensation to the parent company. In some cases, a CFC regime might permit the residence jurisdiction to tax income from these intangibles. Many jurisdictions, however, either do not have a CFC regime, have a regime that fails to apply to certain categories of income that are highly mobile, or have a regime that can be easily avoided using hybrid mismatch arrangements.

3. Opportunities for BEPS with respect to VAT

136. To the extent that guidelines 2 and 4 of the OECD's "Guidelines on place of taxation for B2B supplies of services and intangibles"(see paragraphs 170 and 171 below) are not implemented, under certain conditions opportunities for tax planning by businesses and corresponding BEPS concerns for governments in relation to VAT may arise with respect to (i) remote digital supplies to exempt businesses and (ii) remote digital supplies acquired by multi-location enterprises that are engaged in exempt activities.

3.1. Remote digital supplies to exempt businesses

137. VAT is generally not designed to be a tax on businesses as businesses are generally able to recover any tax they pay on their inputs. Many VAT jurisdictions using the destination principle for B2B digital supplies will generally require a business customer in their jurisdiction to self-assess VAT on acquisitions of remotely delivered services and then allow the business to claim a credit for this self-assessed VAT. The vast number of cross border supplies made between businesses (other than businesses engaged in exempt activities) do not therefore, generally create BEPS concerns. BEPS concerns in a VAT context could arise however, with respect to offshore digital supplies made to exempt businesses (e.g. the financial services industry). Where a business is engaged in VAT-exempt activities, no VAT is levied on the exempt supplies made by the business, while VAT incurred by the business on the associated inputs is not deductible.

138. For example, a business acquiring a data processing service from a non-resident supplier would be required to self-assess VAT according to the rules of the jurisdiction in which it is located and could claim an off-setting credit for this self-assessed VAT (some jurisdictions may not require the business to self-assess tax as it is entitled to an offsetting credit). If the business customer is an exempt business, it is still required to self-assess VAT in these jurisdictions but would not be able to claim a credit for the self-assessed tax. The exempt business is then "input taxed" in its residence jurisdiction, where it is assumed to use the service for making exempt supplies.

139. However, some jurisdictions currently do not require the exempt business to self-assess VAT on the services acquired from abroad. In such case, no VAT is levied on the transaction. BEPS concerns also arise if the data processing services would be subject to VAT in the jurisdiction where the supplier is resident (established, located). The VAT would then accrue to the jurisdiction in which the supplier is situated and not the jurisdiction of the exempt business. This is likely to raise concerns particularly where this jurisdiction has no VAT or a VAT rate lower than the rate in the jurisdiction of the exempt business

customer. In these cases, the exempt business customer would pay no VAT or an inappropriately low amount of VAT. The above cases illustrate how an exempt business could pay no or an inappropriately low amount of VAT when acquiring digital supplies from suppliers abroad. They also illustrate how domestic suppliers of competing services could face potential competitive pressures from non-resident suppliers. Domestic suppliers are required to collect and remit VAT on their supplies of services to domestic businesses while non-resident suppliers could structure their affairs so that they collect no or an inappropriately low amount of VAT.

3.2. Remote digital supplies to a multi-location enterprise (MLE)

140. BEPS concerns could also arise in cases where a digital supply is acquired by a multinational business that has establishments in different jurisdictions (a "multiple location entity" or MLE). It is common practice for multinational businesses to arrange for a wide scope of services to be acquired centrally to realise economies of scale. Typically, the cost of acquiring such a service is initially borne by the establishment that has acquired the service and, in line with normal business practice, is subsequently recharged to the establishments using the service. The establishments are charged for their share of the service on the basis of the internal recharge arrangements, in accordance with corporate tax, accounting and other regulatory requirements. However, many VAT jurisdictions do not currently apply VAT to transactions that occur between establishments of one single legal entity.

141. This means that where an establishment of a MLE acquires a service, for instance data processing services, for use by other establishments in other jurisdictions, no additional VAT would apply on any internal cost allocations or recharges made within the MLE for the use of these services by other establishments. On the other hand, the establishment that acquired the service will be generally entitled to recover any input-VAT on the acquisition of these services if it is a taxable business. In other words, the other establishments using the data processing services are able to acquire their portion of these services without incurring any VAT. This is generally not a great concern from a VAT perspective if all of the establishments of the MLE using the service are taxable businesses. This is because in this case they have a right to recover any input-VAT. However, where the establishments using the data processing services are exempt businesses, they are not normally entitled to recover VAT paid on their inputs.

142. Take for example processing of data relating to banking transactions: if an establishment of a multinational bank would acquire such services directly from a local supplier, it would generally incur input VAT on these services; it would not be able to deduct this input-VAT as it relates to VAT-exempt activities. Alternatively, this establishment of a multinational bank could acquire these processing services though another establishment of the same bank in another country and then reimburse this other establishment for the cost of acquiring these services on its behalf. This would allow the establishment of this bank to acquire the processing services without incurring any VAT in the jurisdiction where it is located, as no VAT is levied on the dealings between establishments of the same legal entity. If the acquiring establishment would be located in a country without a VAT, the multinational bank could acquire these services for all its establishments around the world without incurring any input-VAT at all by channelling its acquisitions through its establishment in a no VAT jurisdiction. VAT-exempt businesses can make substantial VAT-savings by using such channelling structures.

V. TACKLING BEPS IN THE DIGITAL ECONOMY

This section discusses how work on the actions of the BEPS Action Plan and in the area of indirect taxation will address BEPS issues arising in the digital economy. It also highlights the particular characteristics of the digital economy that must be taken into account to ensure that the measures developed effectively address BEPS in the digital economy.

1. Introduction

143. Many of the key features of the digital economy exacerbate opportunities for BEPS. Work on the actions of the BEPS Action Plan will take into account these key features in order to ensure that the proposed solutions fully address BEPS in the digital economy. Many of the characteristics of the digital economy, particularly those related to mobility, generate BEPS concerns in relation to both direct or indirect taxes.

144. For example, the importance of intangibles in the context of the digital economy, combined with the mobility of intangibles for tax purposes under existing tax rules, generates substantial BEPS opportunities in the area of direct taxes. The mobility of users creates substantial challenges and risks in the context of the imposition of VAT. The ability to centralise infrastructure at a distance from a market jurisdiction and conduct substantial sales into that market from a remote location, combined with increasing ability to conduct substantial activity with minimal use of personnel, generates potential opportunities to achieve BEPS by fragmenting physical operations to avoid taxation.

145. The following sections describe how the work on the implementation of the BEPS Action Plan, as well as the work on consumption taxes, is expected to address these BEPS concerns.

2. Restoring Taxation on Stateless Income

146. Structures aimed at artificially shifting profits to locations where they are taxed at more favourable rates, or not taxed at all, will be rendered ineffective by ongoing work in the context of the BEPS Project. At the same time, the work on BEPS will increase transparency between taxpayers and tax administrations and among tax administrations themselves. Risk assessment processes at the level of the competent tax administration will be enhanced by measures such as the mandatory disclosure of aggressive tax planning arrangements and uniform transfer pricing documentation requirements, coupled with a template for country-by-country reporting. The comprehensiveness of the BEPS Action Plan will ensure that, once the different measures are implemented in a coordinated manner, taxation is more aligned with where economic activities takes place. This will restore taxing rights at the level of both the market jurisdiction and the jurisdiction of the ultimate parent company, with the aim to put an end to the phenomenon of so-called stateless income.

2.1. Measures that will restore taxation in the market jurisdiction

147. A number of measures of the BEPS Action Plan will in effect restore source taxation, in particular Action 6 (Prevent Treaty Abuse) and Action 7 (Prevent the Artificial Avoidance of PE Status).

2.1.1. Prevent Treaty Abuse (Action 6)

148. Effective rules to tackle the abuse of tax treaties are under development and will be delivered by September 2014. These rules will first address treaty shopping arrangements through which companies are set up in a country in order to take advantage of the treaty network of that country rather than for carrying on business activities in that country. They will also prevent the use of structures involving the use of companies that claim to be resident of two treaty countries to achieve double non-taxation. Further, it will address unintended cases of non-taxation that result from tax treaties, in particular where countries eliminate double taxation through the exemption method.

149. The denial of treaty benefits in cases that could otherwise result in double non-taxation will ensure that the market country will be able to apply its domestic law unconstrained by treaty rules aimed at preventing double taxation. This is of relevance both in cases where the foreign company has claimed not to have a taxable presence in that country in the form of a PE or when there is indeed a taxable presence in the form of a PE or a group company, but the relevant taxable income is reduced by deductible payments. In cases where such deductible payments would be subject to a withholding tax under domestic law, the market country will be able to apply such a withholding tax without any treaty limitation.

2.1.2. Prevent the Artificial Avoidance of PE Status (Action 7)

150. The treaty definition of permanent establishment may limit the application of domestic law rules applicable to the taxation of the business profits of non-resident companies derived from sources in the market country. The work done with respect to Action 7 aims at preventing the artificial avoidance of the treaty threshold below which the market country may not tax. The objective of the work is to develop changes to the definition of permanent establishment to ensure that certain features of the definition are not circumvented through arrangements that unduly restrict the intended scope of the definition and, therefore, domestic taxing rights. This work would be delivered by September 2015.

151. That work would consider whether and under what circumstances sales of goods or services of one company in a multinational group should be treated as effectively concluded by dependent agents, and how to ensure that sales under such circumstances are taxable to the same extent as if the sales had been made by the first company. This will be relevant where, for instance, an online seller of tangible products or an online provider of advertising services uses the sales force of a local subsidiary to negotiate and effectively conclude sales with prospective large clients.

152. The work should also address the need to ensure that where essential business activities of an enterprise are carried on at a given location in a country, the enterprise cannot benefit from the list of exceptions usually found in the definition of permanent establishment (see e.g. Art. 5(4) of the OECD Model Tax Convention). It will also ensure that it is not possible to benefit from these exceptions through the fragmentation of business activities between different locations or between related entities. In this context, the work should consider whether certain activities that were previously considered auxiliary for the purposes of these exceptions may be increasingly significant components businesses in the digital economy. For example, if proximity to customers and the need for quick delivery to clients are key components of the business model of an online seller of physical products, the maintenance of a local warehouse could constitute a core activity of that seller.

2.2. Measures that will restore taxation in both market and ultimate parent jurisdictions

153. A number of measures in the BEPS Action Plan will contribute to restore taxation both at the level of the market jurisdiction and at the level of the parent company jurisdiction. These measures include the ones being developed in the course of the work on Action 2 (Neutralise the Effects of Hybrid Mismatch

Arrangements), Action 4 (Limit Base Erosion via Interest Deductions and Other Financial Payments), Action 5 (Counter Harmful Tax Practices More Effectively), and Actions 8-10 (Assure that transfer pricing outcomes are in line with value creation).

2.2.1. Neutralise the Effects of Hybrid Mismatch Arrangements (Action 2)

154. The BEPS Action Plan notes that hybrid mismatch arrangements can be used to achieve unintended double non-taxation or long-term tax deferral by, for example, creating two deductions for a single borrowing, generating deductions in one jurisdiction without corresponding income inclusions in another, or misusing foreign tax credit or participation exemption regimes. Existing structures within the digital economy take advantage of hybrid mismatch arrangements to achieve BEPS by stripping income from a market or intermediate jurisdiction or by avoiding application of CFC rules or other anti-abuse regimes. The work done with respect to Action 2, which will be delivered by September 2014, will therefore, in effect, reduce opportunities for BEPS in the digital economy.

2.2.2. Limit Base Erosion via Interest Deductions and Other Financial Payments (Action 4 and 9)

155. The innovation that is key to success in the digital economy must be financed. Many large and well-established digital economy players are cash rich and they often finance new ventures, the acquisition of start-ups, or other assets with intra-group debt. It is often the case that taxpayers will establish and capitalise entities in low-tax environments that are then able to engage in transactions with associated enterprises that have the effect of eroding the tax base. For example, an affiliate in a low-tax environment might be established to lend to high-tax operating entities or to purchase intangibles and license them to affiliates. Excessive interest deductions on such loans, or excessive deductions for royalties paid to such low tax entities can present BEPS concerns in countries where business operations take place. Where the capital contributed to the low-tax entity to fund these activities is borrowed from third party lenders, the base erosion effect of these arrangements may be exacerbated. The same effects can be created by the retention of earnings in low-tax entities that own intangibles or assume risk, where such retained earnings are loaned to other operating entities.

156. In other words, the existing rules allow affiliate entities in a low tax environment to fund the profit generating activities of the group with intercompany debt, even though the MNE group as a whole may be much less heavily leveraged. This ultimately reduces tax at the level of the market jurisdiction and at the level of the parent company jurisdiction, with the interest often going untaxed anywhere for a number of reasons (such as the availability of preferential regimes, the use of hybrid instruments, and the availability of generous deductions). Existing tax planning arrangements within the digital economy take advantage of this type of structuring to achieve BEPS.

157. The work done with respect to Action 4 will reduce opportunities for BEPS via deductibility of interest and other financial payments. In coordination with this work, the work under Action 9 of the BEPS Action Plan will consider whether these behaviours have any transfer pricing implications and, as necessary, identify mechanisms to address those implications, within or beyond the arm's length principle. Similarly, more detailed guidance on the application of transfer pricing principles to loans, guarantees, captive insurance and other financial transactions will be developed. In this respect, a formulary type of approach which ties the deductible interest payments to external debt payments may lead to results that better reflect the business reality of MNE groups. Other approaches to address excessive interest deductions will also be analysed. The output of this work will be delivered by September 2015.

2.2.3. Counter Harmful Tax Practices More Effectively (Action 5)

158. Digital economy companies heavily rely on intangible assets to create value and produce income. Intangible assets, and income arising from the exploitation of intangibles, are by definition geographically mobile. Over the last decade, a number of OECD and non-OECD countries have introduced intangible regimes which provide for a preferential tax treatment for certain income arising from the exploitation of IP, generally through a 50 to 80 percent deduction or exemption of qualified IP income.

159. The work in the context of the BEPS Action Plan examines intangible regimes of the type described to determine whether they constitute harmful preferential tax regimes within the meaning of the OECD's 1998 Report "Harmful Tax Competition: An Emerging Global Issue". Action 5 of the BEPS Action Plan specifically requires substantial activity for any preferential regime and mandates that the existing substance factor to assess regimes be elaborated in the context of BEPS. IP regimes will be assessed against the elaborated substance factor and the other factors in the 1998 Report. The work on substantial activity and its application to IP regimes, as well as other preferential regimes, is under way, and should be completed by September 2014. If any of the IP regimes under review were to be found harmful, the relevant country would be given the opportunity to abolish the regime or remove the features that create the harmful effect, as the case may be.

2.2.4. Assure that transfer pricing outcomes are in line with value creation (Actions 8-10)

160. The BEPS work on transfer pricing is intended to address BEPS issues that commonly arise among companies active in the digital economy as well as other taxpayers. Many of the structures involve separating business functions between different legal entities in the group, treating some of those entities as low-risk / low-profit entities, and others as high-risk / high-profit ones, making certain that the high risk / high-profit entities do not conduct activities that trigger taxation in high tax jurisdictions. Taken together, the overall objective of the transfer pricing actions is to bring the allocation of income within a multinational group of companies more directly in line with the location of the economic activity that gives rise to that income. This objective is pursued by focusing on key issues such as (i) intangibles, (ii) business risks, (iii) characterisation of transactions, (iv) base eroding payments, and (v) global value chains and profit splits.

(i) Intangibles, including hard-to-value intangibles, and cost contribution arrangements

161. A key feature of many BEPS structures adopted by participants in the digital economy involves the transfer of intangibles or rights to intangibles to tax advantaged locations. Digital economy companies rely heavily on intangibles in creating value and producing income. Depending on the local law, below value transfers of intangibles can be facilitated through licensing arrangements, cost contribution arrangements or tax structures that separate deductions relevant to the development of the intangible from the income associated with it. Below value transfers of intangibles can occur (i) because of difficulties in valuing transferred intangibles at the time they are transferred; (ii) because of unequal access to information relating to value between taxpayers and tax administrations; and (iii) because some arrangements result in the transfer of hidden or unidentified intangibles without payment.

162. The BEPS work on intangibles will address these issues by taking several steps. First, the work will make it clear that the term intangibles should be defined broadly and clearly, and that any intangible item for which unrelated parties would provide compensation upon transfer must be compensated in transfers between associated enterprises. This will help assure that transfers of hidden intangibles are not used to shift income. Second, the work will assure that entities within an MNE group that contribute value to intangibles either by performing or managing development functions or by bearing and controlling risks are appropriately rewarded for doing so. It will also make clear that valuation techniques can be used when

comparable transfers of intangibles cannot be identified. This first phase of the work will be delivered by September 2014. Third, in situations where partially developed intangibles or other hard to value intangibles are transferred, the work will consider whether the post-transfer profitability of intangibles should be taken into account in the valuation in specified circumstances in order to balance the availability of information between taxpayers and tax administrations. This second phase of the work on intangibles will be delivered by September 2015.

(ii) Business risks

163. BEPS structures aimed at shifting income into low-tax environments often feature a contractual allocation of business risk into a low-tax affiliate. It is then often argued that these contractual allocations, together with legal ownership of intangibles, justify large allocations of income to the entity allocated the risk. Often this is accomplished by arguing that other entities in the group are contractually insulated from risk so that a low-tax affiliate is entitled to all residual income after compensating other low risk group members for their functions. The work will address questions related to contractual risk allocation by requiring control of risk, financial capacity to bear risk, and management of risk to be more closely aligned. The guidance will also identify risks that, by their nature, are borne by the MNE group as a whole and which therefore cannot be readily assigned to a single group entity. The output of this work will be delivered by September 2015.

(iii) Characterisation of transactions

164. The existing transfer pricing guidelines require an analysis that takes as its starting point the transactions entered into by the taxpayer. The guidelines permit recharacterising or disregarding the taxpayer's transactional form in only some exceptional circumstances, the exact boundaries of which are not fully clear. Consideration is being given to whether the scope of current guidance on recharacterising taxpayer transactions should be revisited to reframe or clarify the guidance, and in what particular circumstances those rules may require modification. It is worth noting that there are significant complexities associated with disregarding taxpayer transactional forms. A broad scope for dispute and double taxation could arise if the scope for recharacterisation were expanded significantly, especially if this expansion is based on principles that cannot be limited to transactions with entities in low tax environments. This means that careful weighing is required regarding the particular circumstances where taxpayer designed transactions may make transfer pricing analyses so uncertain as to become unreliable, thereby opening opportunities for BEPS. The work will provide clearer guidance on the difference between appropriately identifying the specific nature of transactions undertaken based both on actual conduct and contracts, on the one hand, and disregarding or recharacterising a transaction on the other hand. Because an unlimited authority in the hands of tax authorities to recharacterise transactions may lead to unwanted double taxation and increased levels of controversy, guidance will make clear that understanding precisely what business activities individual entities undertake is a critical element in the process of analysing transfer pricing matters. The output of this work will be delivered by September 2015.

(iv) Base eroding payments

165. Excessive cross-border payments to related parties in low tax jurisdictions can erode the tax base of the countries from which such payments are made. While transfer pricing rules based on the arm's length principle are theoretically equipped to address the proper amount of such payments, in some circumstances a combination of inadequate data on comparable transactions, a lack of tax administration enforcement resources, complex fact patterns, and questionable assumptions about the attribution of risk can create conditions in which excessive payments are made. This can result in such payments not being subjected to tax either in the low-tax recipient country or the home country of the MNE group, while they still give rise to base eroding tax deductions in the payor country. Certain targeted measures could

potentially be helpful in addressing this type of BEPS. Depending on the way they are designed, such measures could preserve a measure of reliance on the arm's length approach but depart from a strict adherence to the arm's length principle in targeted circumstances. Examples of such approaches would include caps on certain payments, or formula based allocations. It would therefore be necessary to evaluate the effectiveness of these types of provisions, the areas in which they might be applied, whether they would ease administrative burdens, and mechanisms that could be used to avoid or relieve double taxation in situations where it might otherwise arise. The output of this work will be delivered by December 2015.

(v) Global value chains and profit methods

166. When the arm's length principle was initially devised, it was common that each country in which an MNE group did business had its own fully integrated subsidiary to carry on the group's business in that country. This structure was dictated by a number of factors, including slow communications, currency exchange rules, customs duties, and relatively high transportation costs that made integrated global supply chains difficult to operate. With the advent of the development in ICT, reductions in many currency and custom barriers, and the move to digital products and a service based economy, these barriers to integration broke down and MNE groups began to operate much more as single global firms. Corporate legal structures and individual legal entities became less important and MNE groups moved closer to the economist's conception of a single firm operating in a coordinated fashion to maximise opportunities in a global economy. Attention should therefore be devoted to the implications of this increased integration in MNEs and evaluate the need for greater reliance on value chain analyses and profit split methods. This work should also address situations where comparables are not available because of the structures designed by taxpayers and could also include simpler and clearer guidance on the use of profit splits along the lines that have been successfully applied in connection with global trading and other integrated financial services businesses. The output of this work will be delivered by September 2015.

2.3. Measures that will restore taxation in the jurisdiction of the ultimate parent

167. In addition to measures mentioned in 2.2, the work on strengthening CFC rules will also contribute to restoring taxation in the jurisdiction of the ultimate parent company. As noted in the BEPS Action Plan, one source of BEPS concerns is the possibility of creating affiliated non-resident taxpayers and routing income of resident enterprises through that non-resident affiliate. Although CFC rules have been introduced in many countries to address this, they do not always address BEPS in a comprehensive manner. The work on CFC rules will develop recommendations regarding the design of controlled foreign company rules. This measure will seek to restore residence state taxation and may also have spill-over effects and hence at the same time protect the tax base of source countries because effective CFC rules mean that taxpayers will have less of an incentive to shift profits from a source country into a third, low-tax jurisdiction.

168. To address BEPS issues within the digital economy, CFC rules must effectively address the taxation of mobile income typically earned in the digital economy. Although CFC rules vary significantly from jurisdiction to jurisdiction, income from digital products and services provided remotely is frequently not subject to current taxation under CFC rules. Accordingly, a multinational enterprise in a digital business can earn income in a CFC in a low-tax jurisdiction by locating key intangibles there and using that intangibles to sell digital goods and services without that income being subject to current tax, even without the CFC itself performing significant activities in its jurisdiction. As a result, a digital economy company may pay little or no tax in the CFC jurisdiction while also avoiding tax in the source country and the country of ultimate residence.

169. To address this situation, consideration should be given to CFC rules that target income typically earned in the digital economy, such as income earned from the remote sale of digital goods and services.

Such income may be particularly mobile due to the importance of intangibles in the provision of such goods and services and the relatively few people required to carry out online sales activities. A CFC rule along these lines could include an exception for situations where the CFC, through its own employees, makes a substantial contribution to the value of the goods and services sold. Consideration might also be given to the incorporation of a low-tax threshold into the CFC rule, such that only income of the CFC subject to a low effective tax rate in its home jurisdiction would be subject to full inclusion in the country of the ultimate parent. The work will also take into account the need to the need for anti-inversion rules and to ensure that CFC rules have appropriate provisions to prevent double taxation. The output of this work will be delivered by September 2015.

3. Addressing BEPS Issues in the Area of Consumption Taxes

170. The digitisation of the economy has greatly facilitated the ability of businesses to acquire a wide range of services from suppliers in other jurisdictions around the world and to structure their operations in a truly global manner. These developments have allowed exempt businesses to avoid and minimise the amount of unrecoverable VAT they pay on their inputs. Previous sections outlined the BEPS concerns that may arise from the opportunity for businesses to structure their affairs in such a way that no or an inappropriately low amount of VAT is borne by exempt businesses on remotely delivered services.

171. The implementation of Guidelines 2 and 4 of the OECD's "Guidelines on place of taxation for B2B supplies of services and intangibles" would minimise BEPS opportunities for supplies of remotely delivered services made to exempt businesses, including exempt businesses that operate through establishments in multiple jurisdictions (“multiple location entities”; MLEs). Guideline 2 recommends that the taxing rights on cross-border supplies of services and intangibles between businesses be allocated to the jurisdiction where the customer has located its main business establishment and that business customers be required to self-assess VAT on remotely delivered services acquired from offshore suppliers according to the rules of the jurisdiction in which they are located. Guideline 4 provides that when a supply is made to a business that is established in more than one jurisdiction, taxation should accrue to the jurisdiction where the customer's establishment using the service is located. These Guidelines set out the possible mechanisms for tax authorities to achieve the desired result in practice, which is allocation of the right to levy VAT on B2B services to the jurisdiction where these services are used for business purposes irrespective of how the supply and acquisition of these services was structured.

VI. BROADER TAX CHALLENGES RAISED BY THE DIGITAL ECONOMY

This section discusses the challenges that the digital economy raises for direct taxation, with respect to nexus, the tax treatment of data, and characterisation of payments made under new business models. It also discusses the indirect tax challenges raised by the digital economy with respect to exemptions for imports of low-valued goods, and remote digital supplies to consumers. Finally, it lists certain administrative challenges faced by tax administrations in applying the current rules.

1. The digital economy and the challenges for policy makers

172. The spread of the digital economy brings about many benefits, for example in terms of growth, employment and well-being more generally. At the same time it gives rise to a number of challenges for policy makers. These challenges extend well beyond domestic and international tax policy and touch upon areas such as international privacy law and data protection, as well as accounting and regulation.

173. From a strategic tax policy perspective, the uptake of digital technologies may potentially constrain the options available to policymakers in relation to the overall tax mix. For decades, companies have contributed to public expenses via a broad range of taxes in addition to corporate income tax. These taxes include employment taxes, environmental taxes, property and land taxes. The development of digital technologies has the potential to enable economic actors to operate in ways that avoid, remove, or significantly reduce, their tax liability within these bases. This may increase the pressure on a smaller number of taxpayers to compensate for the related loss of revenues. It also highlights the importance of designing corporate income and consumption tax systems that promote growth and investment, while reducing inequality and establishing a level playing field among economic actors.[18]

174. The following sections examine a number of the tax challenges raised by the digital economy in relation to corporate income tax and consumption taxation.

2. An overview of the tax challenges raised by the digital economy

175. The evolution of business models in general, and the growth of the digital economy in particular, have resulted in non-resident companies operating in a market jurisdiction in a fundamentally different manner today than at the time international tax rules were designed. For example, while a non-resident company has always been able to sell into a jurisdiction without a physical presence there, advances in ICT have dramatically expanded the scale at which such activity is possible. In addition, traditionally, for companies to expand opportunities in a market jurisdiction a local physical presence in the form of manufacturing, marketing, and distribution was very often required. These in-country operations would have engaged in potential high-value operations such as procurement, inventory management, local marketing, branding and other activities that earned a local return subject to tax in the market country.

18 . It should be noted that spill-over effects from economic activity spurred by the digital economy, both in terms of overall economic growth and tax revenues, may have an offsetting effect to the tax revenue loss.

Advances in business practices, coupled with advances in ICT and liberalisation of trade policy, have allowed businesses to centrally manage many functions that previously required local presence, rendering the traditional model of doing business in market economies obsolete.

176. The fact that less physical presence is required in market economies in typical business structures today — an effect that can be amplified in certain types of businesses in the ICT sector — raises challenges for international taxation. Other elements of the digital economy have also raised challenges for policy makers. As noted above, growing reliance in certain new business models on data raises tax challenges in terms of characterisation of and attribution of value from data. Further, new revenue streams adopted in particular due to the spread of multi-sided business models or the use of massive computing power and broadband connection trigger questions regarding the appropriate characterisation of certain transactions and payments for tax purposes. Finally, digital technologies make it easier to do business within and across jurisdictions, as well as enabling consumers to access products and services from anywhere in world, generating challenges in terms of collecting the appropriate amounts of consumption tax.

177. In general terms, the main policy challenges raised by the digital economy fall into four broad categories:

- **Nexus**. The continual increase in the potential of digital technologies and the reduced need in many cases for extensive physical presence in order to carry on business raises questions as to whether the current rules are appropriate.

- **Data**. The growth in sophistication of information technologies has permitted companies in the digital economy to gather and use information to an unprecedented degree. This raises the issues of how to attribute value created from the generation of data through digital products and services, and of how to characterise for tax purposes a person or entity's supply of data in a transaction, for example, as a free supply of a good, as a barter transaction, or some other way.

- **Characterisation**. The development of new digital products or means of delivering services creates uncertainties in relation to the proper characterisation of payments made in the context of new business models, particularly in relation to cloud computing.

- **VAT Collection**. Cross-border trade in both goods and services creates challenges for VAT systems, particularly where such goods and services are acquired by private consumers from suppliers abroad. This is partly due to the absence of an effective international framework that would allow economic actors, and in particular small and medium enterprises, to register and manage payments to a large number of tax authorities, as well as to the need to manage tax liabilities generated by a high volume of low value transactions, which can create a significant administrative burden but marginal revenues.

In addition to these policy challenges, which are further discussed below, the Task Force has also identified a number of administrative issues raised by the digital economy. These latter issues are outlined in the box at the end of this section.

3. Nexus and the Ability to have a Significant Presence without Being Liable to Tax

178. Advances in digital technology have not changed the fundamental nature of the core activities that businesses carry out as part of a business model to generate profits. Businesses still need to source and acquire inputs; create or add value; and sell to customers to generate income. To support their sales activities, businesses have always needed to carry out activities such as market research, marketing and

advertising, and customer support. Digital technology has, however, had significant impact on how these activities are carried out, by enhancing the ability to carry out activities remotely, increasing the speed at which information can be processed, analysed and utilised, and, because distance forms less of a barrier to trade, expanding the number of potential customers that can be targeted and reached. The growth of a customer base no longer needs the level of infrastructure that would have been needed in a 'pre-digital' age; investment in infrastructure can be leveraged to access far more customers than before.

179. This increases the flexibility of businesses to choose where substantial business activities take place, or to move existing functions to a new location, even if those locations may be removed both from the ultimate market jurisdiction and from the jurisdictions in which other related business functions may take place. As a result, it is increasingly possible for a business's personnel, IT infrastructure (e.g., servers), and customers each to be spread among multiple jurisdictions, away from the market jurisdiction. Advances in computing power have also meant that certain functions, including decision-making capabilities, can now be carried out by increasingly sophisticated software programs and algorithms. For example, contracts can in some cases be automatically accepted by software programs, so that no intervention of local staff is necessary.

180. It is worth underlining that, as noted in section IV, there are often compelling reasons for businesses to ensure that core resources are placed as close to possible to key markets. This may be because the enterprise wants to ensure a high quality of service and have a direct relationship with key client or because in certain industries regulatory constraints limit choices about where to locate key infrastructure, capital, and personnel. It is therefore important not to overstate the issue of nexus as in many cases large MNEs will indeed have a taxable presence in the country where customers are located. Nevertheless, the fact that it is possible to generate a large quantity of sales without a taxable presence should not be understated either and it raises questions about whether the current rules are fit for purpose in the digital economy.

181. These questions relate in particular to the definition of permanent establishment for treaty purposes, and the related profit attribution rules. It had already been recognised in the past that the concept of permanent establishment referred not only to a substantial physical presence in the country concerned, but also to situations where the non-resident carried on business in the country concerned via a dependent agent (hence the rules contained in paragraphs 5 and 6 of Article 5 of the OECD Model). As nowadays it is possible to be heavily involved in the economic life of another country without having a fixed place of business or a dependent agent therein, concerns are raised regarding whether the existing standard for nexus remains consistent with the underlying principles on which it was based.

182. The issue of nexus is also related to the domestic rules for the taxation of non-residents enterprises deriving profits from the jurisdiction concerned. Although it is true that tax treaties do not permit the taxation of business profits in the absence of a permanent establishment, it appears that even in the absence of the limitations imposed by tax treaties, many jurisdictions would not under their domestic laws tax income derived from non-residents from sales to customers located in the jurisdiction concerned.

4. Data and the Attribution of Value Created from the Generation of Marketable Location-Relevant Data through the Use of Digital Products and Services

183. Digital technologies enable the collection, storage and use of data, and also enable data to be gathered remotely and from a greater distance from the market than previously. Data can be gathered directly from users, consumers or other sources of information, or indirectly via third parties. Data can also be gathered through a range of transactional relationships with users, or based on other explicit or implicit forms of agreement with users. Companies collect data through different methods. These can be proactive, requesting or requiring users to provide data and using data analytics, or primarily reactive, with the

quantity and nature of the information provided largely within the control of users e.g. social networking and cloud computing.

184. As set out in Section III, data gathered from various sources is a primary input into the process of value creation in the digital economy. A key accounting and tax challenge is the attribution of value to data, and the extent of this value relative to the systems, software and people that gather, analyse and make use of these data to develop or deliver products and services. For example, data, including location-specific data, may be collected from customers or devices in one country using technology developed in a second country. It may then be processed in the second country and used to improve product offerings or target advertisements to customers in the first country. Determining the share of profit attributable to each of these functions and the appropriate allocation of that profit between the first country and the second country raises tax challenges. This challenge may be exacerbated by the fact that in practice a range of data may be gathered from different sources and for different purposes by businesses and combined in various ways to create value, making tracing the source of data challenging. In addition, while it is clear that many businesses have developed ways to collect, analyse, and ultimately monetise data, it may be challenging for purposes of an analysis of functions, assets, and risks, to assign an objective value to the raw data itself, as distinct from the processes used to collect, analyse, and use that data.[19] This issue may also raise questions about the ownership of personal data. Under most data protection and privacy legislation, this information is considered to be the property of the individual from which it is derived, rather than an asset owned by a company or a public good.

185. A key feature of two-sided business models is that companies and individuals can choose to provide data in return for access to products and services. This data can then be used by the business to generate sales to another group of customers. Where the two groups of customers are spread among multiple countries, challenges may arise in determining the appropriate allocation of profits among those countries. These challenges may include questions about the appropriate characterisation of transactions involving data, including assessing the extent to which data and transactions based on data exchange can be considered free goods or barter transactions, and how they should be treated for tax and accounting purposes.

5. Characterisation of Income Derived from New Business Models

186. Products and services can be provided to customers in new ways through digital technology. The digital economy has also enabled monetisation in new ways, as discussed in sections III and IV, and this raises questions regarding both the rationale behind existing categorisations of income and consistency of treatment of similar types of transactions.

187. Payments for cloud computing, for example, are relatively new and there is often no specific guidance on how to treat them for both domestic and treaty purposes. The question for treaty purposes is whether such payments should be treated as royalties (particularly under treaties in which the definition of royalties includes payments for rentals of commercial, industrial, or scientific equipment), fees for technical services, or business profits. More specifically, questions arise regarding whether infrastructure-as-a-service transactions should be treated as services (and hence payments characterised as business profits for treaty purposes) or as rentals of space on the cloud service provider's servers by others (and hence be characterised as royalties for purposes of treaties that include in the definition of royalties payments for rentals of commercial, industrial, or scientific equipment). Similar questions arise regarding payments for software-as-a-service or platform-as-a-service transactions. Development and increasing use

19 . See OECD (2013), "Exploring the Economics of Personal data: A Survey of Methodologies for Measuring Monetary Value."

of 3D printing may also raise character questions, as direct manufacturing for delivery could evolve into a license of designs for remote printing directly by purchasers.

188. Under most tax treaties, business profits would be taxable in a country only if attributable to a permanent establishment located therein. In contrast, royalties may be subject to withholding tax in the country of the payor, depending on the terms of any applicable treaty. Whether a transaction is characterised as business profits or as another type of income, therefore, can result in a different treatment for tax treaty purposes. When considering questions regarding the characterisation of income derived from new business models it will therefore be necessary to examine the rationale behind existing rules, in order to determine whether those rules produce appropriate results in the digital economy and whether differences in treatment of substantially similar transactions are justified in policy terms.

6. Collection of VAT in the Digital Economy

189. Cross-border trade in both goods and services (which include for VAT purposes digital downloads) creates challenges for VAT systems, particularly where such goods and services are acquired by private consumers from suppliers abroad. The digital economy magnifies these challenges, as the evolution of technology has dramatically increased the capability of private consumers to shop online and the capability of businesses to sell to consumers around the world without the need to be present physically or otherwise in the consumer's country. This often results in no VAT being levied at all on these flows, with adverse effects on countries' VAT revenues and on the level playing field between resident and non-resident vendors. The main tax challenges related to VAT in the digital economy relate to (i) imports of low value parcels from online sales which are treated as VAT-exempt in many jurisdictions, and (ii) the strong growth in the trade of services, particularly sales to private consumers, on which often no or an inappropriately low amount of VAT is levied due to the complexity of enforcing VAT-payment on such services.

6.1. Exemptions for Imports of Low Valued Goods

190. The first challenge regarding collection of VAT arises from the growth that has occurred in e-commerce and in particular, online purchases of physical goods made by consumers from suppliers in another jurisdiction. Countries with a VAT collect tax on imports of goods from the importer at the time the goods are imported using customs collection mechanisms. Many VAT jurisdictions apply an exemption from VAT for imports of low value goods as the administrative costs associated with collecting the VAT on the goods is likely to outweigh the VAT that would be paid on those goods. The value at which the exemption threshold is set varies considerably from country to country but regardless of the threshold value, many VAT countries have seen a significant growth in the volume of low value imports on which VAT is not collected.

191. Challenges arise from the ability of businesses to deliberately structure their affairs to take advantage of a country's low value thresholds and sell goods to consumers without the payment of VAT. For example, a domestic business selling low value goods online to consumers in its jurisdiction would be required to collect and remit that jurisdiction's VAT on its sales. The business could restructure its affairs so that the low value goods are instead shipped to its consumers from an offshore jurisdiction and therefore qualify under that VAT jurisdiction's exemption for low value importations. Similarly, a business starting up could structure its operations to deliberately take advantage of the low value exemption and locate offshore rather than in the jurisdiction in which its customers are located.

192. The exemption for low value imports results in decreased VAT revenues and the possibility of unfair competitive pressures on domestic retailers who are required to charge VAT on their sales to domestic consumers. As a consequence, the concern is not only this immediate loss of revenue and

potential competitive pressures on domestic suppliers, but also the incentive that is created for domestic suppliers to locate or relocate to an offshore jurisdiction in order to sell their low value goods free of VAT. It should also be noted that such relocations by domestic businesses would have added negative impacts on domestic employment and direct tax revenues.

193. The exemptions for low value imports have therefore become increasingly controversial in the context of the growing digital economy. The difficulty lies in finding the balance between the need for appropriate revenue protection and avoidance of distortions of competition, which tend to favour a lower threshold and the need to keep the cost of collection proportionate to the relatively small level of VAT collected, which favours a higher threshold. At the time when most current low value import reliefs were introduced, Internet shopping did not exist and the level of imports benefitting from the relief was relatively small. Over recent years, many VAT countries have seen a significant and rapid growth in the volume of low value imports of physical goods on which VAT is not collected resulting in decreased VAT revenues and potentially unfair competitive pressures on domestic retailers who are required to charge VAT on their sales to domestic consumers.

6.2. Remote digital supplies to consumers

194. The second challenge regarding collection of VAT arises from the strong growth in cross-border B2C supplies of remotely delivered services. The digital economy has increasingly allowed the delivery of services by businesses from a remote location to consumers around the world without any direct or indirect physical presence of the supplier in the consumer's jurisdiction. Such remotely delivered services present challenges to VAT systems, as these supplies often result in no or inappropriately low amount of VAT collected and create potential competitive pressures on domestic suppliers.

195. Compliance by non-resident suppliers is essentially voluntary as VAT jurisdictions have limited means to enforce compliance by non-resident non-established suppliers. The experience suggests that a significant number of suppliers comply by either registering in the VAT jurisdiction and collecting and remitting tax on their remotely delivered services or by choosing to establish a physical presence in the jurisdiction and effectively becoming a "domestic" supplier. It has been suggested that particularly the high-profile operators, which occupy a considerable part of the market, wish to be seen to be tax-compliant notably for reputational reasons.

196. However, it is difficult to assess compliance levels as data on the volume of taxable digital services to consumers are not readily available. Some have suggested that it is currently impossible to track the supplies by non-resident vendors to private consumers on which VAT should be paid under the vendor collection mechanisms in the consumer's jurisdiction. As a consequence, it is suggested that many non-resident suppliers are likely to fail to register and remit the VAT in the consumer's jurisdiction, without any real possibility for tax authorities to audit and sanction them (Lamensch, 2012). As a result, there is a loss of VAT revenue to these jurisdiction and potentially unfair competitive pressures on domestic suppliers.

197. It should also be noted that some countries that use the residence or the actual location of the consumer proxy to identify the place of taxation have not implemented a mechanism for collecting the VAT on services acquired by private consumers from non-resident suppliers. This has notably been based on the consideration that it would be overly burdensome on tax administrations to operate such a collection mechanism. As a result, no VAT is paid on digital supplies imported in these jurisdictions by private consumers. The strong growth of the digital economy, particularly the growing scale of B2C trade in digital products, may render this approach increasingly unsustainable.

198. Consider an example of an online supplier of streaming digital content such as movies and television shows. The supplies are made mainly to consumers who can access the digital content through their computers, mobile devices and televisions that are connected to the internet. If the supplier is resident in the same jurisdiction as its customers, it would be required to collect and remit that jurisdiction's VAT on the supplies. However, if the supplier is a non-resident in the consumer's jurisdiction, issues may arise.

199. In fact, if the supplier's residence is used as the proxy for identifying the taxing jurisdiction, VAT would apply in that jurisdiction of residence. Sales of digital content from this jurisdiction to consumers abroad will be subject to VAT at the rate that is applicable in the supplier's jurisdiction. If this jurisdiction has no VAT or a VAT with a lower rate than that of the consumer's jurisdiction, than no or an inappropriately low amount of VAT would be collected as the amount of VAT that should be collected, should be determined by the rules applicable in the jurisdiction of consumption, according to the destination principle. Moreover, any VAT that is collected would accrue to the jurisdiction in which the supplier is situated and not the jurisdiction of the consumer. On the other hand, using consumer residence as the proxy for identifying the place of taxation, with consumer self-assessment as the method for collecting the tax, would require the consumer to remit VAT in its jurisdiction at the rate applicable in this jurisdiction. This would, in principle, result in taxation in the jurisdiction of consumption.

200. However, consumer self-assessment has proven to be largely ineffective and as result, it is highly likely that no VAT would be paid by the consumer in this scenario. Alternatively, using consumer residence to identify the taxing jurisdiction with vendor collection as the mechanisms for collecting the tax would require the non-resident supplier to register, collect and remit VAT according to the rules of the jurisdiction in which the consumer is resident. This would result in the correct amount of VAT being paid in the jurisdiction of consumption. This scenario, however, is dependent on the non-resident supplier complying with the requirement to register, collect and remit the VAT. In other words, if taxing rights are allocated to the jurisdiction of consumer residence without implementing a suitable mechanism to collect the tax in this jurisdiction, no VAT would be paid.[20]

201. The example illustrates how domestic suppliers of competing services could face potential competitive pressures from non-resident suppliers. Domestic suppliers are required to collect and remit VAT on their supplies of services to their domestic consumers while the non-resident supplier, depending on the scenario, could structure its affairs so that it collects and remits no or an inappropriately low amount of tax. The example also illustrates how an incentive could arise for domestic suppliers to restructure their affairs so that their supplies of services are made from an offshore location which could allow them to make the supplies with no or an inappropriately low amount of VAT. This incentive could arise as a response to competition from non-resident suppliers who are collecting no or an inappropriately low amount of VAT or as part of a strategy to gain a potential competitive advantage over domestic suppliers who are charging VAT. Such relocations by domestic businesses is likely to have a negative impact on domestic employment and direct tax revenues,

Administrative Challenges in the Digital Economy

The borderless nature of digital economy produces specific administrative issues around identification of businesses, determination of the extent of activities, information collection and verification, and identification of customers. There is a pressing need to consider how investment in skills, technologies and data management can help tax administrations keep up with the ways in which technology is transforming

[20] While the example deals with streaming movies and TV shows, the same issues arise with most, if not all supplies of remotely delivered services to consumers, such as cloud computing, gaming, software downloads, etc.

business operations.

- **Identification**. While global business structures in the digital economy involve traditional identification challenges, these challenges are magnified in the digital economy. For example, the market jurisdiction may not require registration or other identification when overseas businesses sell remotely to customers in the jurisdiction. This may create issues for tax administrations, who will not easily be able to identify the remote seller to ascertain whether other activities are carried out in the jurisdiction and hence ensure compliance with existing rules.

- **Determining the Extent of Activities**. Even if the identity of the local entity can be determined, it may be impossible to ascertain the extent of sales or other activities without information from the offshore seller, as there may be no sales or other accounting records held in the local jurisdiction or otherwise accessible by the local revenue authority. It may be possible to obtain this information from third parties such as the customers or payment intermediaries, but this may be dependent on privacy or financial regulation laws.

- **Information collection and verification**. To verify local activity, the market jurisdiction's tax administration may need to seek information from parties that have no operations in the jurisdiction and are not subject to regulation therein. While exchange of information can be a very useful tool where the proper legal basis in place, this is predicated on knowledge of where the offshore entity is tax resident and information retained or accessible by the reciprocating tax authority. This can create challenges for a source state revenue authority seeking to independently verify any information provided by the offshore entity.

- **Identification of customers.** There are in principle a number of ways in which a business can identify the country of residence of its client and/or the country in which consumption occurs. These could include freight forwarders or other customs documentation or tracking of IP and card billing addresses. However, this could be burdensome for the business and would not work where customers are able to disguise their location.

VII. POTENTIAL OPTIONS TO ADDRESS THE BROADER TAX CHALLENGES RAISED BY THE DIGITAL ECONOMY

This section provides a brief framework for evaluating options to address the broader tax challenges raised by the digital economy. It then provides an overview of potential options that have been received by the Task Force, along with a description of some of the issues that will need to be addressed in developing and evaluating those options.

1. Introduction

202. It is anticipated that the final report on the tax challenges of the digital economy will analyse a number of potential options to address the broader tax challenges raised by the digital economy. These options will include several that have already been proposed to the Task Force, as well as options that may be proposed by stakeholders in response to this discussion draft. It is anticipated that the final report will develop the options in substantial detail and analyse the pros and cons of each.

203. The Task Force has received proposals for several potential options to address the broader tax challenges raised by the digital economy. The proposals received were focused in several areas, including modifications of the permanent establishment threshold, the potential imposition of a withholding tax on certain types of digital transactions, and the imposition of an indirect tax on digital transactions. This section provides an overview of these proposals. Although the Task Force has initially discussed the proposals, it has not yet reached any conclusions about any of these proposals, which are still in the process of being developed. It should be noted that some of these proposals were also considered in the context of the work of the BP TAG. The Task Force considers the work of the BP TAG useful and at the same time considers it important to re-evaluate those proposals in light of developments since that work was conducted.

2. Framework for evaluating options

204. For purposes of evaluating potential options, it will be necessary to develop a framework for evaluating potential options, to ensure that the analysis can be done consistently and objectively. As noted in section I, the Task Force considers that the Ottawa framework principles of neutrality, efficiency, certainty and simplicity, effectiveness and fairness, and flexibility continue to be a good starting point for such a framework. The evaluation of potential options will also need to take account of the key features of the digital economy, as outlined in section III.

205. The Ottawa framework conditions noted that taxation should seek to be neutral and equitable between forms of electronic commerce and between conventional and electronic forms of commerce. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation. This is consistent with the decision reached by the Task Force that ring-fencing the digital economy as a separate sector and applying tax rules on that basis would be neither appropriate nor feasible.

206. To ensure efficiency, it is important that the administrative burden that tax rules impose on taxpayers and administrations should be minimised as far as possible. It should be noted that many existing tax rules were based on the practical considerations that applied at the time those rules were enacted. For example, the permanent establishment threshold was based in part on the notion that a jurisdiction should claim the right to tax an enterprise only if it was sufficiently involved in the economic life of that

jurisdiction. The rules developed to determine when this threshold was passed were based on assumptions, rooted in the economic realities of the time, that a certain physical footprint was required before taxation was appropriate. Analysis of options should consider whether the considerations underlying the existing rules are still applicable, or whether advances in technology may have altered the balance of those practical constraints.

207. Disputes are minimised if the principles of certainty and simplicity are achieved. If tax rules are easily understood, taxpayers can anticipate the tax consequences of transactions in advance, and administrators can easily evaluate compliance. In addition, options should seek to promote both effectiveness and fairness, so that taxes imposed are designed to produce the right amount of tax at the right time, and avoid creating new opportunities to artificially avoid taxation. It is important to ensure that taxes are imposed on persons from whom collection will be enforceable as a practical matter. Systems for taxation should be flexible and dynamic to ensure that they are able to keep pace with new developments, and are not suited solely for the purpose of addressing the current technological and commercial environment.

208. In addition to the basic framework discussed above, it is expected that as described in section V, the development of the measures envisaged in the BEPS Action Plan will effectively address the BEPS concerns that arise in the digital economy, which may substantially impact the scope of the broader tax challenges raised by the digital economy. The results of the work on the BEPS Action Plan will ultimately need to be taken into account when analysing the challenges raised by the digital economy described in Section VI, and will inform decisions regarding the potential options to address them described in this section. In other words, if the BEPS issues outlined in section IV are fully addressed through the measures envisaged in the BEPS Action Plan, addressing the challenges described in section VI may become less pressing. On the other hand, if BEPS issues are not addressed fully in the context of the digital economy and extremely low effective tax rates continue to be norm, then addressing the broader tax challenges of the digital economy becomes a more pressing issue.

3. Options Proposed to the Task Force

209. The Task Force has held initial discussions of several options, which were received from a variety of sources, including written input, proposals from delegates, discussion at meetings of the Task Force, and discussions of other working groups. While the options are still at an early stage of development, the Task Force considers it important to receive input from the public.

210. It should be noted that although the various options may have different underlying purposes, they will overlap in impact. For example, certain structures set up for VAT purposes have income tax consequences as well. Addressing the underlying VAT issues that make those structures attractive, therefore, would also have an impact on income tax. In addition, while certain options below are framed as modifications of income taxation rules, they could also be reframed as indirect taxes. There are likely to be certain advantages and disadvantages to approaching these challenges through indirect taxation and/or direct taxation. The work of the Task Force will consider these advantages and disadvantages in evaluating potential options.

3.1. Modifications to the Exemptions from Permanent Establishment Status

211. One potential option discussed by the Task Force would modify the exceptions contained in paragraph 4 or Article 5 of the OECD Model Tax Convention. As noted above, it is possible in certain businesses that some of the activities described in subparagraphs (a) through (d) of paragraph 4 could constitute core functions of a business. In that case, the proponents of this option consider that the exception contained in paragraph 4, which was primarily intended to exempt preparatory or auxiliary

activities, should not be available. Several variations of this proposal are possible. One would eliminate paragraph 4 entirely. Another would eliminate paragraph (a) through (d), or make them subject to the overall condition that the character of the activity conducted be preparatory or auxiliary in nature, rather than one of the core activities of the enterprise in question.

3.2. A New Nexus based on Significant Digital Presence

212. Another potential option discussed by the Task Force would focus on establishing an alternative nexus to address situations in which businesses are conducted wholly digitally. Such a proposal would determine that an enterprise engaged in certain "fully dematerialised digital activities" would have a permanent establishment if it maintained a "significant digital presence" in the economy of another country.

213. Potential elements of a test for when a fully dematerialised digital activity was conducted could include the following:

- The core business of the enterprise relies completely or in a considerable part on digital goods or digital services;
- No physical elements or activities are involved in the value chain other than the existence, use, or maintenance of servers and websites or other IT tools and the collection, processing, and commercialisation of location-relevant data;
- Contracts are concluded exclusively remotely via the Internet or by telephone;
- Payments are made solely through credit cards or other electronic payments using on-line forms or platforms linked or integrated to the relative websites;
- Websites are the only means used to enter into a relationship with the enterprise; no physical stores or agencies exist for the performance of the core activities other than offices located in the parent company or operating company countries;
- All or the vast majority of profits are attributable to the provision of digital goods or services;
- The legal or tax residence and the physical location of the vendor are disregarded by the customer and do not influence its choices; or
- The actual use of the digital good or the performance of the digital service do not require physical presence or the involvement of a physical product other than the use of a computer, mobile devices or other IT tools.

214. For an enterprise engaged in a fully dematerialised business, a significant digital presence could be deemed to exist in a country when, for example:

- A significant number of contracts for the provision of fully dematerialised digital goods or services are remotely signed between the enterprise and a customer that is resident for tax purposes in the country;
- Digital goods or services of the enterprise are widely used or consumed in the country;

- Substantial payments are made from clients in the country to the enterprise in connection with contractual obligations arising from the provision of digital goods or services as part of the enterprise's core business; or

- An existing branch of the enterprise in the country offers secondary functions such as marketing and consulting functions targeted at clients resident in the country that are strongly related to the core business of the enterprise;

215. A similar option discussed by the Task Force includes an alternative to the above criteria. Specifically, a significant digital presence could be found where an enterprise engaged in a fully dematerialised digital activity does a significant business in the country using personal data obtained by regular and systematic monitoring of Internet users in that country through the use of multi-sided business models.

216. Development of such options would require evaluation of the above elements to determine which combination of factors would result in an appropriate nexus to address the tax challenges of the digital economy effectively, while providing enough clarity to minimise potential dispute. It would also require consideration of how profits would appropriately be attributed, and whether doing so would require modification of the current rules for the attribution of profits to PEs. The work would also need to consider whether such a change would require a change in the attribution rules for all enterprises, or whether changes could be limited to fully dematerialised digital businesses.

3.3. Virtual Permanent Establishment

217. Over the years, several potential options for alternative PE thresholds have been proposed. Some of these were discussed in the work of the Business Profits TAG, and are included here for the sake of completeness. The Business Profits TAG considered three broad alternatives:

- A "virtual fixed place of business PE", which would create a permanent establishment when the enterprise maintains a website on a server of another enterprise located in a jurisdiction and carries on business through that website;

- A "virtual agency PE", which would seek to extend the existing dependent agent PE concept to circumstances in which contracts are habitually concluded on behalf of an enterprise with persons located in the jurisdiction through technological means, rather than through a person; and

- An "on-site business presence PE", which would look at the economic presence of an enterprise within a jurisdiction in circumstances in which the foreign enterprise provides on-site services or other business interface at the customer's location.

3.4. Creation of a Withholding Tax on Digital Transactions

218. Another option that has been suggested would be to impose a final withholding tax on certain payments made by residents of a country for digital goods or services provided by a foreign e-commerce provider. This type of proposal is intended to address concerns that it may be possible to maintain substantial economic activity in a market without being taxable in that market under current permanent establishment rules due to lack of physical presence in that market. In considering this type of option, the Task Force will need to consider consistency with trade obligations, as well as how to address the challenges of withholding such a tax in the case of transactions with individual consumers. Since international payments for digital economy transactions are generally made using credit cards or electronic

payments, one option to be considered would be to require withholding by the financial institutions involved with those payments.

3.5. Consumption Tax Options

219. The digital economy has allowed businesses to significantly increase their ability to market and sell goods and services from remote locations to consumers in foreign jurisdictions. It has also introduced payment mechanisms that facilitate online shopping by consumers. These developments have resulted in significant growth in cross border B2C supplies which present challenges to VAT systems as these supplies often result in no or an inappropriately low amount of VAT collected and create potential competitive pressures on domestic suppliers. As the digital economy continues to evolve, new challenges may also emerge.

3.5.1. Exemptions for Imports of Low Valued Goods

220. The thresholds for these exemptions vary widely across jurisdictions. When establishing these thresholds, jurisdictions attempt to find the balance that is appropriate for their jurisdiction between the administrative and compliance costs of taxing low value imports and the revenue loss and potential competitive distortions that the exemptions may create. The thresholds in many jurisdictions were established before the advent and growth of the digital economy and may require a review to ensure that they are still appropriate.

221. If tax authorities were to make significant improvements to the efficiency of processing such low value imports and of collecting the VAT on such imports, governments would be in a position to lower these thresholds and address the issues associated with their operation. This could notably be achieved by requiring non-resident vendors of low value parcels to charge, collect and remit the tax on the imports of these goods in the importing jurisdiction. Compliance by non-resident suppliers with their tax obligations in the country of importation would need to be facilitated through simplified registration and compliance mechanisms, using the possibilities offered by new technologies (e.g. on-line registration and filing, electronic payment).

3.5.2. Remote digital supplies to consumers

222. Past work carried out by international organisations, including the OECD and the European Union (see e.g. Annex 1), and country experience indicates that the most effective and efficient approach to ensure an appropriate VAT-collection on such cross-border B2C services is to require the non-resident supplier to register and account for the VAT on these supplies in the jurisdiction of the consumer. While this vendor collection mechanism was first recommended under the OECD's 2003 E-commerce Guidelines, experience since then, notably within the European Union that has been the first to implement it, has shown that it still remains the most viable option today.

223. It is recognised that requiring non-resident suppliers to register and account for VAT in as many foreign jurisdictions as they have consumers of remotely delivered services may impose compliance burdens on these suppliers. Countries should therefore consider the use of simplified registration regimes and registration thresholds to minimise the potential compliance burden on businesses.

224. Administrations are likely to face a number of challenges in enforcing compliance from non-resident suppliers. These challenges include identifying that supplies have been made, enforcing collection and remittance of tax by the non-resident supplier and follow up enforcement actions such as accessing books and records, auditing and collection procedures for outstanding taxes. Improved international co-operation between jurisdictions is likely to be required to address these challenges. This may include enhanced exchange of information, assistance in recovery and simultaneous audits. The Convention on

Mutual Administrative Assistance in Tax Matters, which was developed jointly by the Council of Europe and the OECD, also covers VAT matters and provides a useful platform for developing such improved international co-operation.

ANNEX 1: PRIOR WORK ON THE DIGITAL ECONOMY

This annex summarises the content and output of the previous work on electronic commerce. Specifically, it presents the work that led to the 1998 Ministerial Conference on Electronic Commerce in Ottawa (Ottawa Conference) and its main outcomes. It then describes the follow-up work carried out in relation to tax treaty issues and to consumption tax issues.

1. 1996-1998: Work leading to the Ottawa Ministerial Conference on Electronic Commerce

225. At its June 1996 meeting, the CFA discussed the tax implications of the development of communications technologies. After a conference on electronic commerce organised by the OECD and the government of Finland in cooperation with the EC Commission, the government of Japan and BIAC in Turku in November 1997, the CFA adopted a series of proposals for the preparation of a Ministerial meeting on electronic commerce to be organised in Ottawa in October 1998. In preparation for that meeting, the CFA adopted the report: "Electronic Commerce: Taxation Framework Conditions", which drew the following main conclusions:

- the widely accepted general tax principles that guide governments in relation to conventional commerce should also guide them in relation to electronic commerce;
- existing taxation rules can implement these principles;
- this approach does not preclude new administrative or legislative measures, or changes to existing measures, relating to electronic commerce, provided that those measures are intended to assist in the application of the existing taxation principles, and are not intended to impose a discriminatory tax treatment of electronic commerce transactions;
- the application of these principles to electronic commerce should be structured to maintain the fiscal sovereignty of countries, to achieve a fair sharing of the tax base from electronic commerce between countries and to avoid double and unintentional non-taxation;
- the process of implementing these principles should involve an intensified dialogue with business and with non-member economies.

2. 1998: The Ottawa Ministerial Conference on Electronic Commerce

226. At the Ottawa Ministerial Conference on Electronic Commerce, leaders from governments (29 member countries and 11 non-member countries), heads of major international organisations, industry leaders, and representatives of consumer, labour and social interests discussed plans to promote the development of global electronic commerce. Ministers welcomed the 1998 CFA Report "Electronic Commerce: Taxation Framework Conditions", and endorsed the following set of taxation principles which should apply to electronic commerce:

Ottawa Taxation Framework Conditions – Principles

Neutrality: Taxation should seek to be neutral and equitable between forms of electronic commerce and between conventional and electronic forms of commerce. Business decisions should be motivated by economic rather than tax considerations. Taxpayers in similar situations carrying out similar transactions should be subject to similar levels of taxation.

Efficiency: Compliance costs for taxpayers and administrative costs for the tax authorities should be minimised as far as possible.

Certainty and Simplicity: The tax rules should be clear and simple to understand so that taxpayers can anticipate the tax consequences in advance of a transaction, including knowing when, where and how the tax is to be accounted.

Effectiveness and Fairness: Taxation should produce the right amount of tax at the right time. The potential for tax evasion and avoidance should be minimised while keeping counteracting measures proportionate to the risks involved.

Flexibility: The systems for taxation should be flexible and dynamic to ensure that they keep pace with technological and commercial developments.

3. Post-Ottawa: CFA work and technical advisory groups

227. At its January 1999 meeting, the CFA decided that the work program on electronic commerce would be taken forward by the Committee's existing subsidiary bodies, in their respective areas of responsibility. It also endorsed the establishment of the following "technical advisory groups" (TAGs), comprising representatives from OECD governments, non-OECD governments, business and science, thus comprising a broad range of interests and expertise:

- A **Consumption Tax TAG,** to advise on the practical implementation of the Ottawa principle of taxation in the place of consumption.
- A **Technology TAG,** to provide expert technological input to the other TAGs.
- A **Professional Data Assessment TAG,** to advise the feasibility and practicality of developing internationally compatible information and record-keeping requirements and tax collection arrangements.
- A **Business Profits TAG**, to advise on how the current tax treaty rules for the taxation of business profits apply in the context of electronic commerce and to examine proposals for alternative rules.
- A **Treaty Characterisation TAG,** to advise on the characterisation of various types of electronic commerce payments under tax treaties with a view to providing necessary clarifications in the Commentary.

228. Given the relevance for the current work on the tax challenges of the digital economy, the sections below describe the main output of the work conducted by the Business Profits TAG and by the Treaty Characterisation TAG.

3.1. The work of the Business Profits TAG (BP TAG)

229. The work of the Business Profits TAG produced discussion drafts on "Attribution of Profit to a Permanent Establishment Involved in Electronic Commerce Transactions", released in February 2001, and "Place of Effective Management Concept: Suggestions for Changes to the OECD Model Tax Convention", released in May 2003.

230. The TAG also produced a report, "Treaty Rules and E-Commerce: Taxing Business Profits in the New Economy", which was released in 2005. In that report, the BP TAG recognised that some aspects of existing international tax rules presented concerns. The report first examined a number of relatively restricted approaches to address those concerns in a manner that would not require fundamental changes to international tax rules, and made recommendations with respect to those alternatives. The report also discussed more fundamental changes. After summarising the existing treaty rules for taxing business profits (liability to tax, PE concept, computation of profits, allocation of the tax base between countries), the report presented a critical evaluation of these rules against a number of specific criteria, which were derived from the Ottawa framework conditions. In assessing the current principles for taxing business profits against these criteria, the report highlighted a number of pros and cons of the current rules. For example, with respect to the important question where business profits originate ("the source issue") the report concluded that business profits should be viewed as originating from the location of the factors that allow the enterprise to realise business profits. The report therefore rejected the suggestion that the mere fact that a country provides the market where an enterprise's goods and services are supplied should allow that country to consider that a share of the profits of the enterprise is derived therefrom.

231. The BP TAG could, however, not agree on the related issue whether a supplier which is not physically present in a country may be considered to be using that country's legal and economic infrastructure and, if that is the case, whether and to what extent, such use of a country's legal and economic infrastructure should be considered to be one factor which would allow that country to claim source taxing rights on a share of the enterprise's profits. In addition, since the most "traditional" of business enterprises continue to incorporate electronic commerce business models, it was found not to be appropriate, nor possible, to design one set of nexus rules for "electronic commerce" companies, and another for non-electronic commerce companies. The final report also gave an overview of the various alternatives to the current treaty rules for taxing business profits that were discussed. These alternatives ranged from relatively minor changes to the existing rules to the adoption of complete new ones.

232. The following alternatives were found to entail relatively minor changes:

- *Modification of the PE definition to exclude activities that do not involve human intervention by personnel, including dependent agents*: This option would modify the PE definition to expressly exclude the maintenance of a fixed place of business used solely for the carrying on of activities that do not involve human intervention by personnel, including dependent agents.

- *Modification of the PE definition to provide that a server cannot, in itself, constitute a PE*: According to this alternative, the PE definition would not cover situations where a fixed place of business is used merely to carry on automated functions through equipment, data and software such as a server and website.

- *Modification of the PE definition/interpretation to exclude functions attributable to software*: paragraph 4 of Article 5 of the OECD Model Tax Convention provides a list of functions that are specifically excluded from the definition of a PE (the Article 5, paragraph 4 exceptions). This option would indirectly expand this list by excluding functions attributable to software when applying the Article 5, paragraph 4 exceptions.

- *Elimination of the existing exceptions in paragraph 4 of Article 5 or making these exceptions subject to the overall condition that they be preparatory or auxiliary*: One option would be to eliminate all the exceptions included in paragraph 4 of the definition of PE. A less radical option would be to make all the activities referred to in the existing exceptions subject to the overall limitation that they be of a preparatory or auxiliary nature.

- *Elimination of the exceptions for storage, display or delivery in paragraph 4 of Article 5*: This option suggested that paragraph 4 of Article 5 be amended so that the use of facilities solely for purpose of storage, display or delivery should no longer be considered not to constitute a PE.

- *Modification of the existing rules to add a force-of-attraction rule dealing with electronic commerce*: According to this alternative, paragraph 1 of Article 7 of the OECD Model Tax Convention would be amended to include a so-called "force-of-attraction" rule which would deal with electronic commerce operations. The aim would be to ensure that a country may tax profits derived from selling in that country, through an enterprise's website, products similar to those sold through a PE that the enterprise has in the country.

- *Adopting supplementary nexus rules for purposes of taxing profits arising from the provision of services*: The option would be to modify the OECD Model to include a provision, similar to that already found in the U.N. Model, that would allow for the taxation of income from services if the enterprise that provides such services is present in the other country for that purpose during a certain period of time. The rationale for the proposal was that service providers are very mobile and that the income-producing functions take place in foreign countries without the need to set up a physical facility or use a fixed base of operations.

233. After having examined these alternatives in light of the comments received, the Report reached the following conclusions:

- The option to *modify the PE definition to exclude activities that do not involve human intervention by personnel, including dependent agents* would be unlikely to be adopted and did not need further consideration.

- As regards the options to *modify the PE definition to provide that a server cannot, in itself, constitute a PE* or to *exclude functions attributable to software when applying the preparatory or auxiliary exception*, the BP TAG concluded that while these options should not be pursued at that time, the application of the current rules to functions performed with the use of servers and software should be monitored to determine whether it raises practical difficulties or concerns, which could lead to further study of these alternatives or combinations or variants thereof.

- With respect to the option to *eliminate all the existing exceptions in paragraph 4 of Article 5*, the BP TAG concluded that this option should not be pursued.

- As regards the options to *make all the existing exceptions in paragraph 4 of Article 5 subject to the overall condition that they be preparatory or auxiliary* and to *eliminate the exceptions for storage, display and delivery in paragraph 4 of Article 5*, the BP TAG concluded the application of these exceptions should continue to be monitored to determine whether practical difficulties or concerns warrant any such changes.

- With respect to the option to *modify the existing rules to add a force-of-attraction rule dealing with electronic commerce*, the BP TAG concluded that it should not be pursued.

- As regards the option to *adopt supplementary nexus rules for purposes of taxing profits arising from the provision of services*, the BP TAG noted that this option would be examined in the context of the work that the OECD was to undertake on the application of tax treaties to services.

234. The following alternatives were found to require a fundamental modification of the existing rules:

- *Adopting rules similar to those concerning taxation of passive income to allow source taxation of payments related to some forms of electronic commerce (so as to subject them to source withholding tax)*: This alternative encompassed various approaches under which a withholding tax would be applied on all or certain cross-border payments related to electronic commerce. The discussion in the BP TAG focused on a general option under which a final withholding tax would be applied to electronic commerce payments made from a country, whether or not the recipient has personnel or electronic equipment in that country.

- *A new nexus*: *base eroding payments arising in a country*: This option contained a nexus rule that focuses only on whether the foreign enterprise is receiving a payment from an in-country payor that the payor may deduct for domestic tax purposes rather than on where the activities giving rise to the product or service are located. Under this nexus rule, the source state would be entitled to impose a withholding tax on all such cross-border payments.

- *Replacing separate entity accounting and arm's length by formulary apportionment of profits of a common group*: According to this alternative, the separate entity and arm's length principles would be replaced by a system based on formulary apportionment as the international method of allocating and measuring business profits that countries may tax. Under such formulary apportionment system, a formula would be used to divide the net profits of a company, or a group of related companies, doing business in more than one country among the countries where the corporation (or group) operates.

- *Adding a new nexus of "electronic (virtual) permanent establishment":* This concept of "virtual PE" was a suggestion of an alternative nexus that would apply to electronic commerce operations. This could be done in various ways, such as extending the definition to cover so-called "virtual fixed places of business", "virtual agencies" or "on-site business presences." All of them would require a modification of the PE definition (or the addition of a new nexus rule in treaties).

235. The report concluded that it would not be appropriate to embark on any such changes at that time. Electronic commerce and other business models resulting from new communication technologies were not perceived by the BP TAG to justify, by themselves, a dramatic departure from the current rules. There did not seem to be actual evidence that the communications efficiencies of the Internet had caused any significant decrease to the tax revenues of capital importing countries. Also, it was considered that fundamental changes should only be undertaken if there was a broad agreement that a particular alternative was clearly superior to the existing rules and none of the alternatives that had been suggested appeared to meet that condition. It was recognised, however, that there was a need to continue to monitor how direct tax revenues are affected by changes to business models resulting from new communication technologies and that some aspects of the existing international rules for taxing business profits raised concerns. More generally, the report noted that the effect of many of these alternatives would extend far beyond electronic commerce it would therefore be important to take account of their impact on all types of business activities when considering them.

3.2. CFA work in the area of tax treaties

236. In addition to the work of the TAGs, the CFA directed its Working Parties to discuss and propose solutions with respect to the issues that had been raised by the TAGs. This led to some changes to the OECD Model Tax Convention and its Commentary which were incorporated in the 2003 update. The changes related to the definition of permanent establishment and to the characterisation of payments in particular under the definition of royalties contained in the Model Tax Convention.

3.2.1. Treaty rules for taxing business profits

237. The main content of the changes to the Commentary on Article 5 was to provide that the definition of permanent establishment, which is typically defined as a "fixed place of business through which business is conducted," could, under certain conditions, cover servers. In contrast, the changes to the Commentary rejected the view that a website could be regarded as a permanent establishment. The following paragraphs were added to the OECD Commentary on Article 5 of the OECD Model Tax Convention in 2003 and are also included in the Commentary to the UN Model Tax Convention (see paragraphs 36-37 of the Commentary on Article 5 of the UN Model Tax Convention).

Commentary on Article 5 of the OECD Model Tax Convention

"*42.1 There has been some discussion as to whether the mere use in electronic commerce operations of computer equipment in a country could constitute a permanent establishment. That question raises a number of issues in relation to the provisions of the Article.*

42.2 While a location where automated equipment is operated by an enterprise may constitute a permanent establishment in the country where it is situated (see below), a distinction needs to be made between computer equipment, which may be set up at a location so as to constitute a permanent establishment under certain circumstances, and the data and software which is used by, or stored on, that equipment. For instance, an Internet website, which is a combination of software and electronic data, does not in itself constitute tangible property. It therefore does not have a location that can constitute a "place of business" as there is no "facility such as premises or, in certain instances, machinery or equipment" (see paragraph 2 above) as far as the software and data constituting that website is concerned. On the other hand, the server on which the website is stored and through which it is accessible is a piece of equipment having a physical location and such location may thus constitute a "fixed place of business" of the enterprise that operates that server.

42.3 The distinction between a website and the server on which the website is stored and used is important since the enterprise that operates the server may be different from the enterprise that carries on business through the website. For example, it is common for the website through which an enterprise carries on its business to be hosted on the server of an Internet Service Provider (ISP). Although the fees paid to the ISP under such arrangements may be based on the amount of disk space used to store the software and data required by the website, these contracts typically do not result in the server and its location being at the disposal of the enterprise (see paragraph 4 above), even if the enterprise has been able to determine that its website should be hosted on a particular server at a particular location. In such a case, the enterprise does not even have a physical presence at that location since the website is not tangible. In these cases, the enterprise cannot be considered to have acquired a place of business by virtue of that hosting arrangement. However, if the enterprise carrying on business through a website has the server at its own disposal, for example it owns (or leases) and operates the server on which the website is stored and used, the place where that server is located could constitute a permanent establishment of the

enterprise if the other requirements of the Article are met.

42.4 Computer equipment at a given location may only constitute a permanent establishment if it meets the requirement of being fixed. In the case of a server, what is relevant is not the possibility of the server being moved, but whether it is in fact moved. In order to constitute a fixed place of business, a server will need to be located at a certain place for a sufficient period of time so as to become fixed within the meaning of paragraph 1.

42.5 Another issue is whether the business of an enterprise may be said to be wholly or partly carried on at a location where the enterprise has equipment such as a server at its disposal. The question of whether the business of an enterprise is wholly or partly carried on through such equipment needs to be examined on a case-by-case basis, having regard to whether it can be said that, because of such equipment, the enterprise has facilities at its disposal where business functions of the enterprise are performed.

42.6 Where an enterprise operates computer equipment at a particular location, a permanent establishment may exist even though no personnel of that enterprise is required at that location for the operation of the equipment. The presence of personnel is not necessary to consider that an enterprise wholly or partly carries on its business at a location when no personnel are in fact required to carry on business activities at that location. This conclusion applies to electronic commerce to the same extent that it applies with respect to other activities in which equipment operates automatically, e.g. automatic pumping equipment used in the exploitation of natural resources.

42.7 Another issue relates to the fact that no permanent establishment may be considered to exist where the electronic commerce operations carried on through computer equipment at a given location in a country are restricted to the preparatory or auxiliary activities covered by paragraph 4. The question of whether particular activities performed at such a location fall within paragraph 4 needs to be examined on a case-by-case basis having regard to the various functions performed by the enterprise through that equipment. Examples of activities which would generally be regarded as preparatory or auxiliary include:

— providing a communications link — much like a telephone line — between suppliers and customers;

— advertising of goods or services;

— relaying information through a mirror server for security and efficiency purposes;

— gathering market data for the enterprise;

— supplying information.

42.8 Where, however, such functions form in themselves an essential and significant part of the business activity of the enterprise as a whole, or where other core functions of the enterprise are carried on through the computer equipment, these would go beyond the activities covered by paragraph 4 and if the equipment constituted a fixed place of business of the enterprise (as discussed in paragraphs 42.2 to 42.6 above), there would be a permanent establishment.

42.9 What constitutes core functions for a particular enterprise clearly depends on the nature of the business carried on by that enterprise. For instance, some ISPs are in the business of operating their own servers for the purpose of hosting websites or other applications for other enterprises. For these ISPs, the operation of their servers in order to provide services to customers is an essential part of their commercial activity and cannot be considered preparatory or auxiliary. A different example is that of an enterprise

(sometimes referred to as an "e-tailer") that carries on the business of selling products through the Internet. In that case, the enterprise is not in the business of operating servers and the mere fact that it may do so at a given location is not enough to conclude that activities performed at that location are more than preparatory and auxiliary. What needs to be done in such a case is to examine the nature of the activities performed at that location in light of the business carried on by the enterprise. If these activities are merely preparatory or auxiliary to the business of selling products on the Internet (for example, the location is used to operate a server that hosts a website which, as is often the case, is used exclusively for advertising, displaying a catalogue of products or providing information to potential customers), paragraph 4 will apply and the location will not constitute a permanent establishment. If, however, the typical functions related to a sale are performed at that location (for example, the conclusion of the contract with the customer, the processing of the payment and the delivery of the products are performed automatically through the equipment located there), these activities cannot be considered to be merely preparatory or auxiliary.

42.10 A last issue is whether paragraph 5 may apply to deem an ISP to constitute a permanent establishment. As already noted, it is common for ISPs to provide the service of hosting the websites of other enterprises on their own servers. The issue may then arise as to whether paragraph 5 may apply to deem such ISPs to constitute permanent establishments of the enterprises that carry on electronic commerce through websites operated through the servers owned and operated by these ISPs. While this could be the case in very unusual circumstances, paragraph 5 will generally not be applicable because the ISPs will not constitute an agent of the enterprises to which the websites belong, because they will not have authority to conclude contracts in the name of these enterprises and will not regularly conclude such contracts or because they will constitute independent agents acting in the ordinary course of their business, as evidenced by the fact that they host the websites of many different enterprises. It is also clear that since the website through which an enterprise carries on its business is not itself a "person" as defined in Article 3, paragraph 5 cannot apply to deem a permanent establishment to exist by virtue of the website being an agent of the enterprise for purposes of that paragraph."

3.2.2. Treaty characterisation issues

238. Amendments to the Commentary on Article 12 of the OECD Model Tax Convention were also made to clarify the delimitation between the application of Articles 12 and 7 in the context of new business models in electronic commerce. These clarifications were included in the 2013 update and deal with (i) payment for the use of, or the right to use, a copyright, (ii) payments for know-how, (iii) mixed payments. These paragraphs are also included in the UN Model Tax Convention (see paragraphs 12-16 of the Commentary on Article 12 of the UN Model Tax Convention), although it was noted that some members disagreed with the conclusions reached regarding the character of several types of payment.

Commentary on Article 12 - Payment for the use of, or the right to use, a copyright

The following paragraphs 17.1 to 17.4 are included immediately after paragraph 17 of the Commentary on Article 12:

"*17.1 The principles expressed above as regards software payments are also applicable as regards transactions concerning other types of digital products such as images, sounds or text. The development of electronic commerce has multiplied the number of such transactions. In deciding whether or not payments arising in these transactions constitute royalties, the main question to be addressed is the identification of*

that for which the payment is essentially made.

17.2 Under the relevant legislation of some countries, transactions which permit the customer to electronically download digital products may give rise to use of copyright by the customer, e.g. because a right to make one or more copies of the digital content is granted under the contract. Where the consideration is essentially for something other than for the use of, or right to use, rights in the copyright (such as to acquire other types of contractual rights, data or services), and the use of copyright is limited to such rights as are required to enable downloading, storage and operation on the customer's computer, network or other storage, performance or display device, such use of copyright should not affect the analysis of the character of the payment for purposes of applying the definition of "royalties".

17.3 This is the case for transactions that permit the customer (which may be an enterprise) to electronically download digital products (such as software, images, sounds or text) for that customer's own use or enjoyment. In these transactions, the payment is essentially for the acquisition of data transmitted in the form of a digital signal and therefore does not constitute royalties but falls within Article 7 or Article 13, as the case may be. To the extent that the act of copying the digital signal onto the customer's hard disk or other non-temporary media involves the use of a copyright by the customer under the relevant law and contractual arrangements, such copying is merely the means by which the digital signal is captured and stored. This use of copyright is not important for classification purposes because it does not correspond to what the payment is essentially in consideration for (i.e. to acquire data transmitted in the form of a digital signal), which is the determining factor for the purposes of the definition of royalties. There also would be no basis to classify such transactions as "royalties" if, under the relevant law and contractual arrangements, the creation of a copy is regarded as a use of copyright by the provider rather than by the customer.

17.4 By contrast, transactions where the essential consideration for the payment is the granting of the right to use a copyright in a digital product that is electronically downloaded for that purpose will give rise to royalties. This would be the case, for example, of a book publisher who would pay to acquire the right to reproduce a copyrighted picture that it would electronically download for the purposes of including it on the cover of a book that it is producing. In this transaction, the essential consideration for the payment is the acquisition of rights to use the copyright in the digital product, i.e. the right to reproduce and distribute the picture, and not merely for the acquisition of the digital content."

Change to the Commentary on Article 12- Payments for know-how

Paragraph 11 of the Commentary on Article 12 was replaced by the following paragraphs 11 to 11.5 (additions to the existing text of paragraph 11 appear ***in bold italics***):

"*11. In classifying as royalties payments received as consideration for information concerning industrial, commercial or scientific experience, paragraph 2 alludes to the concept of "know-how". Various specialist bodies and authors have formulated definitions of know-how which do not differ intrinsically. One such definition, given by the "Association des Bureaux pour la Protection de la Propriété Industrielle" (ANBPPI), states that 'know-how is all the undivulged technical information, whether capable of being patented or not, that is necessary for the industrial reproduction of a product or process, directly and under the same conditions; inasmuch as it is derived from experience, know-how represents what a manufacturer cannot know from mere examination of the product and mere knowledge*

of the progress of technique'.

11.1 In the know-how contract, one of the parties agrees to impart to the other, so that he can use them for his own account, his special knowledge and experience which remain unrevealed to the public. It is recognised that the grantor is not required to play any part himself in the application of the formulas granted to the licensee and that he does not guarantee the result thereof.

11.2** This type of contract thus differs from contracts for the provision of services, in which one of the parties undertakes to use the customary skills of his calling to execute work himself for the other party.* ***Payments made under the latter contracts generally fall under Article 7.

11.3 The need to distinguish these two types of payments, i.e. payments for the supply of know-how and payments for the provision of services, sometimes gives rise to practical difficulties. The following criteria are relevant for the purpose of making that distinction:

— Contracts for the supply of know-how concern information of the kind described in paragraph 11 that already exists or concern the supply of that type of information after its development or creation and include specific provisions concerning the confidentiality of that information.

— In the case of contracts for the provision of services, the supplier undertakes to perform services which may require the use, by that supplier, of special knowledge, skill and expertise but not the transfer of such special knowledge, skill or expertise to the other party.

— In most cases involving the supply of know-how, there would generally be very little more which needs to be done by the supplier under the contract other than to supply existing information or reproduce existing material. On the other hand, a contract for the performance of services would, in the majority of cases, involve a very much greater level of expenditure by the supplier in order to perform his contractual obligations. For instance, the supplier, depending on the nature of the services to be rendered, may have to incur salaries and wages for employees engaged in researching, designing, testing, drawing and other associated activities or payments to subcontractors for the performance of similar services.

11.4 Examples of payments which should therefore not be considered to be received as consideration for the provision of know-how but, rather, for the provision of services, include:

— payments obtained as consideration for after-sales service,

— payments for services rendered by a seller to the purchaser under a guarantee,

— payments for pure technical assistance,

— payments for an opinion given by an engineer, an advocate or an accountant, and

— payments for advice provided electronically, for electronic communications with technicians or for accessing, through computer networks, a trouble-shooting database such as a database that provides users of software with non-confidential information in response to frequently asked questions or common problems that arise frequently.

11.5 In the particular case of a contract involving the provision, by the supplier, of information concerning computer programming, as a general rule the payment will only be considered to be made in consideration for the provision of such information so as to constitute know-how where it is made to acquire information constituting ideas and principles underlying the program, such as logic, algorithms

or programming languages or techniques, where this information is provided under the condition that the customer not disclose it without authorisation and where it is subject to any available trade secret protection.

11.6 *In business practice, contracts are encountered which cover both know-how and the provision of technical assistance. One example, amongst others, of contracts of this kind is that of franchising, where the franchisor imparts his knowledge and experience to the franchisee and, in addition, provides him with varied technical assistance, which, in certain cases, is backed up with financial assistance and the supply of goods. The appropriate course to take with a mixed contract is, in principle, to break down, on the basis of the information contained in the contract or by means of a reasonable apportionment, the whole amount of the stipulated consideration according to the various parts of what is being provided under the contract, and then to apply to each part of it so determined the taxation treatment proper thereto. If, however, one part of what is being provided constitutes by far the principal purpose of the contract and the other parts stipulated therein are only of an ancillary and largely unimportant character, then it seems possible to apply to the whole amount of the consideration the treatment applicable to the principal part." [paragraph 45 below includes suggested changes to this last sentence]*

Commentary on Article 12 - Mixed payments

The last sentence of paragraph 11 of the Commentary on Article 12 was replaced by the following (deletions appear in ~~*strikethrough*~~ and additions in ***bold italics):***

"*If, however, one part of what is being provided constitutes by far the principal purpose of the contract and the other parts stipulated therein are only of an ancillary and largely unimportant character,* ***then the treatment applicable to the principal part should generally be applied to the whole amount of the consideration.*** ~~*then it seems possible to apply to the whole amount of the consideration the treatment applicable to the principal part.*~~"

3.3. CFA work in the area of consumption taxes

239. This section first looks at the elements of the 1998 *Ottawa Taxation Framework Conditions* specifically related to consumption taxes and discusses the *E-commerce Guidelines* and the *Consumption Tax Guidance* papers that were developed to implement these conditions.

240. The need for an international coordination of the application of domestic VAT-systems to international trade first became apparent following the emergence and strong growth of e-commerce. In the field of consumption taxes, the core elements of the *Taxation Framework Conditions* can be summarised as follows:

- Rules for the consumption taxation of cross-border trade should result in taxation in the jurisdiction where consumption takes place and an international consensus should be sought on the circumstances under which supplies are held to be consumed in a jurisdiction.

- For the purpose of consumption taxes, the supply of digitised products should not be treated as a supply of goods.

- Where business and other organisations within a country acquire services and intangibles from suppliers outside the country, countries should examine the use of reverse charge, self-assessment

or other equivalent mechanisms where this would give immediate protection of their revenue base and of the competitiveness of domestic suppliers.

241. These framework conditions were broad statements of general principle which required further elaboration to facilitate their practical application. As a follow-up to this work, in 2003 the CFA released its E-commerce Guidelines. The CFA also released the Consumption Tax Guidance Series along with these Guidelines, consisting of three papers providing guidance on the implementation of the Guidelines in practice. These Guidelines and Guidance papers are summarised in the following sections.

3.3.1. The E-commerce Guidelines

242. Destination based taxation of cross-border e-business was the governing principle of the E-commerce Guidelines. Under the destination principle, tax is ultimately levied only on the final consumption within the jurisdiction where such consumption is deemed to occur. Exports are not subject to tax with refund of input taxes (that is, "free of VAT" or "zero-rated"), and imports are taxed on the same basis and at the same rates as domestic supplies. The E-commerce Guidelines provide that:

- *For business-to-business transactions*, the place of consumption for cross-border supplies of services and intangibles that are capable of delivery from a remote location made to a non-resident business recipient should be the jurisdiction in which the recipient has located its business presence. This was referred to as the "main criterion". The Guidelines indicated that countries may, in certain circumstances, use a different criterion to determine the actual place of consumption, where the application of the main criterion "would lead to a distortion of competition or avoidance of tax." This was referred to as the "override criterion".

- *For business-to-consumer transactions*, the place of consumption for cross-border supplies of services and intangibles that are capable of delivery from a remote location made to a non-resident private recipient should be the jurisdiction in which the recipient has its usual residence.

243. These Guidelines were explicitly not applicable to (i) sub-national consumption taxes, (ii) suppliers who were registered or required to be registered in the customer's jurisdiction, (iii) services that are not capable of direct delivery from a remote location (such as hotel accommodation, transportation or vehicle rental), (iv) services for which the place of consumption could be readily identified, (v) services for which the place of consumption could be more appropriately determined by other criteria, (vi) specific types of services for which more specific approaches might be needed.

3.3.2. The Consumption Tax Guidance papers

244. The CFA released three *Consumption Tax Guidance* papers along with the E-commerce Guidelines, to support their implementation in practice. These Guidance papers, deal with: (i) Identifying place of taxation for business-to-business supplies by reference to the customer's business presence (OECD, 2003b); (ii) Simplified registration guidance (OECD, 2003c); (iii) Verification of customer status and jurisdiction (OECD, 2003d). These papers are briefly summarised below:

- *Guidance paper on identifying place of taxation by reference to the customer's business presence:* the *Guidelines on the Definition of Place of Consumption* (OECD, 2003a) described "business presence" as, "in principle, the establishment (for example, headquarters, registered office, or a branch of the business) of the recipient to which the supply is made." The Guidance paper on business presence underlined the importance of contracts in determining the business presence to which the supply is made. Normal commercial practices as evidenced in the terms of contracts (*e.g.* invoicing, terms of payment, use of intellectual property rights), should normally

provide sufficient indicative evidence to assist both business and revenue administrations in determining the jurisdiction of consumption. The Guidance paper also discussed the "override criterion". It considered the case where a customer with branches in several jurisdictions that are not entitled to recover the input tax on a transaction, routed this transaction through branches in jurisdictions with no or a low VAT, "thus avoiding a significant amount of tax." The Guidance Paper suggested that a pure place of consumption override could be applied in such a case, according to which a country may require "a business presence" in its jurisdiction to account for tax to the extent that the supply is used in that jurisdiction. In addition, and in order to avoid double taxation, the country of the business presence that has acquired the supply may then choose to provide a correction proportionately equivalent to the tax collected by the other country under the application of this test.

- *Guidance paper on Simplified Registration Systems*: This Guidance Paper explored the possible implementation of a system for taxing e-commerce B2C cross border transactions in the customer's jurisdiction, based on vendor collection. It considered registration and declaration procedures and record-keeping requirements and recommended the use of simplified registration regimes and registration thresholds to minimise the potential compliance burden. It suggested that governments that implement simplified registration systems consider using electronic registration and declaration and encourages tax administrations to review and develop a legal basis to allow for the use of electronic record keeping systems.

- *Guidance paper on Verification of Customer Status and Jurisdiction*: This Guidance Paper provided practical guidance on mechanisms that may be used to establish the status (business or private) and jurisdiction of customers, for low value electronic commerce transactions where vendors do not have an established relationship with the customer. It does not apply to high value B2B transactions where the vendor and the customer were assumed to have an established relationship. In these cases the supplier was assumed to be normally aware of the customer's status and jurisdiction and no additional verification process of the customer's declaration was considered necessary. The Paper concluded that the status and jurisdiction of a customer should be based on customer self-identification, supported by a range of other criteria including payment information, tracking and geo-location software, the nature of the supply and digital certificates.