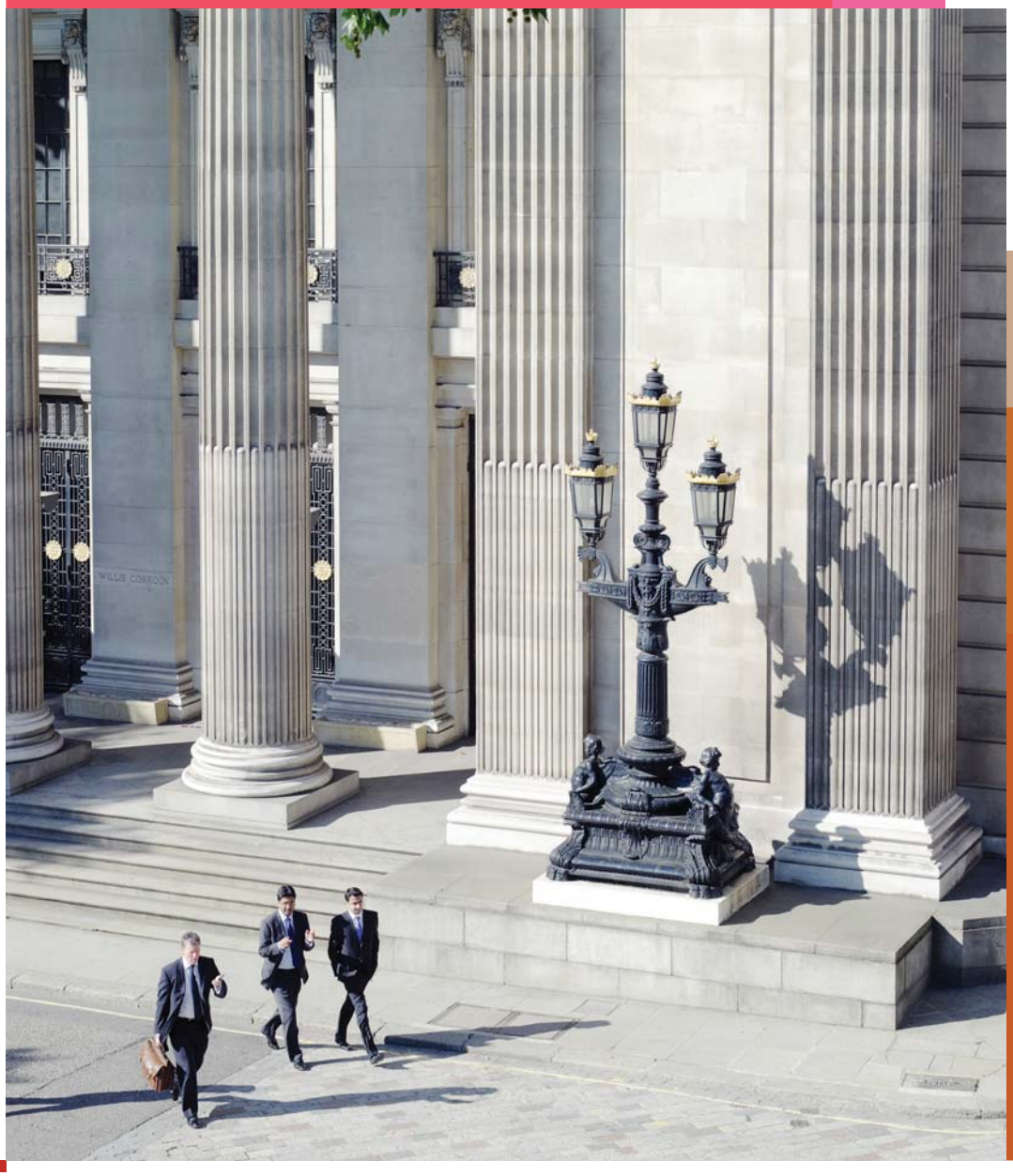
www.pwc.in

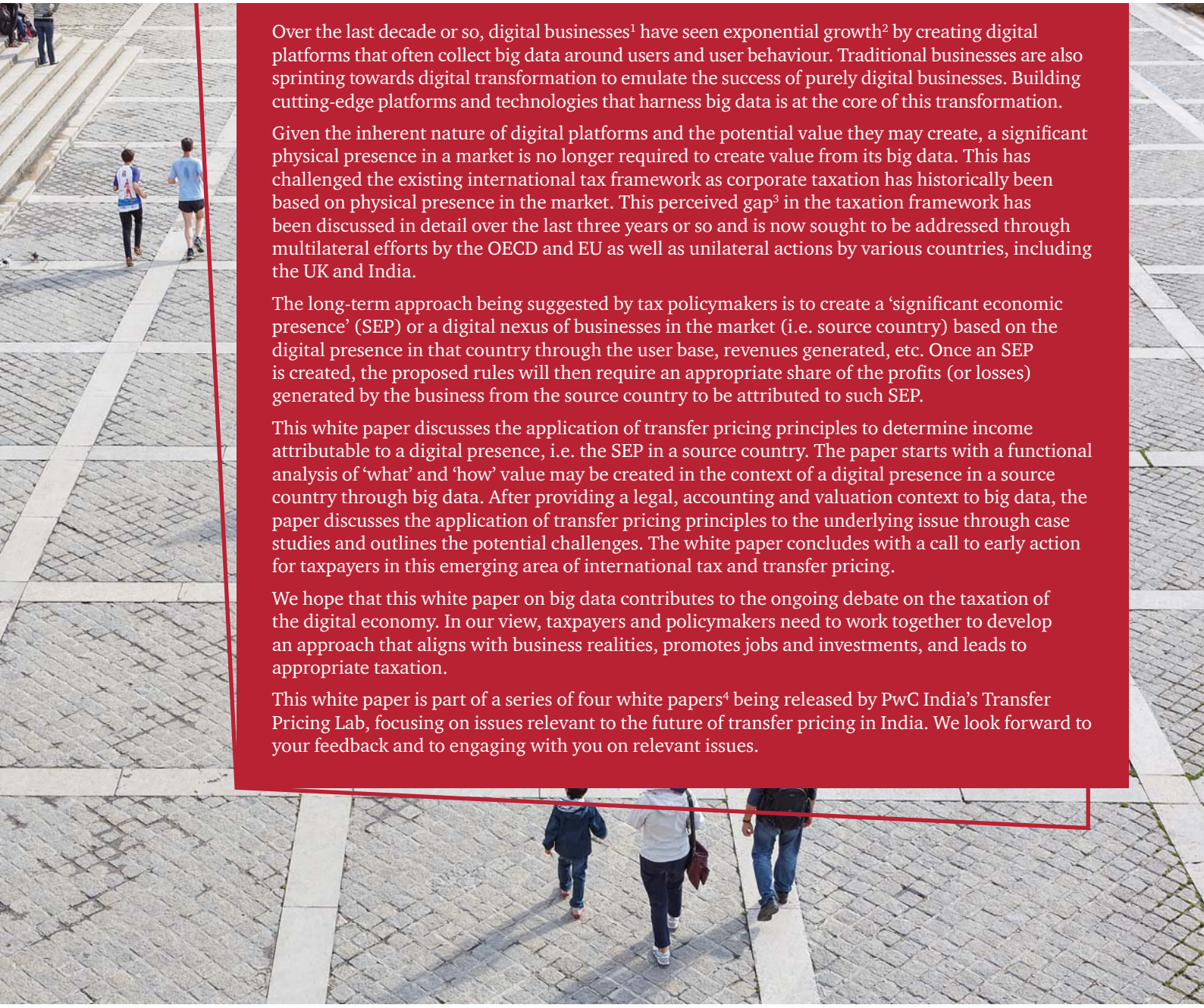
Big data: A transfer pricing perspective



pwc

Contents

1 Setting the context



Over the last decade or so, digital businesses[1] have seen exponential growth[2] by creating digital platforms that often collect big data around users and user behaviour. Traditional businesses are also sprinting towards digital transformation to emulate the success of purely digital businesses. Building cutting-edge platforms and technologies that harness big data is at the core of this transformation.

Given the inherent nature of digital platforms and the potential value they may create, a significant physical presence in a market is no longer required to create value from its big data. This has challenged the existing international tax framework as corporate taxation has historically been based on physical presence in the market. This perceived gap[3] in the taxation framework has been discussed in detail over the last three years or so and is now sought to be addressed through multilateral efforts by the OECD and EU as well as unilateral actions by various countries, including the UK and India.

The long-term approach being suggested by tax policymakers is to create a 'significant economic presence' (SEP) or a digital nexus of businesses in the market (i.e. source country) based on the digital presence in that country through the user base, revenues generated, etc. Once an SEP is created, the proposed rules will then require an appropriate share of the profits (or losses) generated by the business from the source country to be attributed to such SEP.

This white paper discusses the application of transfer pricing principles to determine income attributable to a digital presence, i.e. the SEP in a source country. The paper starts with a functional analysis of 'what' and 'how' value may be created in the context of a digital presence in a source country through big data. After providing a legal, accounting and valuation context to big data, the paper discusses the application of transfer pricing principles to the underlying issue through case studies and outlines the potential challenges. The white paper concludes with a call to early action for taxpayers in this emerging area of international tax and transfer pricing.

We hope that this white paper on big data contributes to the ongoing debate on the taxation of the digital economy. In our view, taxpayers and policymakers need to work together to develop an approach that aligns with business realities, promotes jobs and investments, and leads to appropriate taxation.

This white paper is part of a series of four white papers[4] being released by PwC India's Transfer Pricing Lab, focusing on issues relevant to the future of transfer pricing in India. We look forward to your feedback and to engaging with you on relevant issues.

1. In this paper, digital businesses refer to technology companies in the social media, e-commerce and search engine domain, etc., whereas traditional brick-and-mortar companies are referred to as traditional businesses.
2. Over a 10-year period from 2007 to 2017, technology companies increased their share of overall market capitalisation by around 8 times from 7% to 54%.
   European Commission. (2017). A fair and efficient tax system in the European Union for the digital single market. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/communication_taxation_digital_single_market_en.pdf (last accessed on 13 June 2018)
3. '[T]he failure of the international tax rules to take account of this user-created value is leading to outcomes that are inconsistent with the objectives of those rules, through the creation of a mismatch between the location in which business profits are taxed and the location in which business value is created.'
   HM Treasury. (2018). Corporate tax and the digital economy: position paper. Retrieved from https://www.gov.uk/government/consultations/corporate-tax-and-the-digital-economy-position-paper (last accessed on 13 June 2018)
4. Blockchain: Transfer pricing use cases, Profit split method: A transfer pricing evolution, Business transformations: Adapting transfer pricing are the other three white papers in this series.

2 How big data may create value

This section explains the concept of big data and the value it may create, and presents a functional analysis of the steps taken to generate value using big data.

2.1 Understanding big data

Users and user behaviour (i.e. demographic and psychographic information about consumers, product reviews and commentary, blogs, content on social media sites) lead to the creation of big data. In digital businesses, a user may be present in the form of a user account on various applications by registering with her/his email account. Such a user provides basic information such as name, age or location in order to access various digital applications. User behaviour refers to information produced as a result of actions of users on digital platforms such as clicks, photos, likes, browsing history, views, demography and comments. An increased number of users can drive an overall network effect as users want to interact with another group of users. For example, social networks may use data regarding user preferences for target advertising to maximise revenue. If the number of users are low, then the application may be no longer be valuable to people, which leads to a steep decline in usage rate. Even traditional businesses harness data on their customers, vendors as well as real-time information generated from sensors on machines to create big data.

Essentially, big data –

- Encompasses structured, semi-structured and unstructured information
- Which has volume (hundreds of petabytes), encompasses velocity (very high speed of storage and analysis), variety (multiple types and sources) and veracity (high quality and trustworthiness)
- And can be transformed into intelligence
- Through use of powerful analytics, technology tools and skills, including artificial intelligence (AI) and machine learning (ML)
- To create value in various ways, including interacting with customers, building new products, improving customer service

2.2 Value created using big data

Understanding the value created using big data in the business model of digital businesses as well as traditional businesses is fundamental to any transfer pricing analysis.

In the case of digital businesses, tax authorities around the world are increasingly contending that user participation plays a large role in their value creation. In this context, the impact assessment[5] undertaken by the European Commission as part of their proposal to tax digital businesses suggests the following qualitative assessment of user-based features such as network effects and big data for some of the digital business models:

Table (8): Qualitative assessment of users' role in the value creation in digital business models

Business Model	Revenue model	USER-BASED FEATURES	
		Network effects	Big Data Relevance
1 Marketplace / Intermediaries	Subscription or transaction-based fees paid to platforms	• • •	Reliance: • • • Source: user behaviour on platform, reviews (both sides). Use: matching, reputation/trust building
2 Advertising model	Sales of advertisement space; Sales/transmission of data	• • • (including from users to advertisers)	Reliance: • • • Source: user behaviour on platform, websites Use: targeted advertising
3 Digital content/solutions: i) media/content ii) gaming iii) electronic payment iv) cloud computing services v) other digital solutions / software	Pay-per-use, subscription or transaction-based fees.	•	Reliance: • • This category covers many services with a wide range of use of consumer data in the value creation Source: from customers' behaviour to generation of content Use: improve quality of service, pricing or sales policy, development of new products

Source: European Commission services

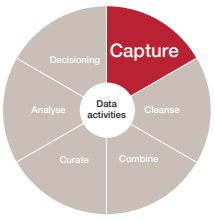
*Legend: • **Moderate; • • Strong; • • • Very Strong***

5. European Commission. (2018). Impact assessment. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/fair_taxation_digital_economy_ia_21032018.pdf (last accessed on 23 July 2018)

It may be noted that mere collection of data from users may not lead to value creation in all digital businesses. It is relevant for those businesses for whom collection of user data is central to how they create value for the business. Even traditional businesses such as aviation, manufacturing, rail, power and mining are increasingly leveraging big data of their consumers and machines. They are seeking to build platforms to capture this data and apply analytical techniques to transform every aspect of their organisation, from strategy and business model design to marketing, product development, HR, operations, etc., to either increase revenues or optimise costs. For example, a study of the top 1,000+ public companies in the US[6] saw a direct correlation between their digital strength (i.e. companies which invest more in digital transformation) and future revenue growth and share price performance.

2.3 A functional analysis of the big data life cycle

From a functional analysis perspective, the activities required to be performed to create value from big data are discussed below in more detail, although platform and analytical tool development and other stages are often a precursor. Each of the steps in the life cycle, starting with **capture**, has its own relative importance with an underlying objective to enhance value.



Capture

Data in the form of user or user behaviour can be captured by online platforms such as social media websites, online applications and messaging services. The various types of user behaviour on online platforms providing different services are depicted below:

Digital platform	Online messaging, social media	Online banking	Online shopping, music, food	Cab-hailing services
User data	Status, name, gender, birthdate, photos, likes, comments, location	Aadhaar details, PAN details, shopping trends, nominations, purchasing capacity	Location, delivery preferences, customer review, ratings, buying habits, payment mode	Address, location, payment mode, class and frequency of travel

The data captured and collated can be saved on local drives or servers, thus indicating that data generation and data saving may not happen within the same jurisdiction. Data collected at this stage is the raw data and is not usable as is.

The next step towards extracting usable information is to clean and sanitise the raw data captured.

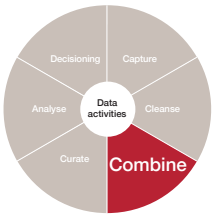
6. Johnson, N. (13 February 2018). Digital transformation drives future revenue growth: The Isobar Digital Strength Index. Retrieved from https://www.salesforce.com/blog/2018/02/isobar-digital-strength-index.html (last accessed on 23 July 2018)

Cleanse

This step involves removal of errors and transformation of data into a unified format. In order to clean data, it is important to define the underlying objective of conducting data analysis. It involves working backwards by first defining the objective, based on which raw data is then sanitised.

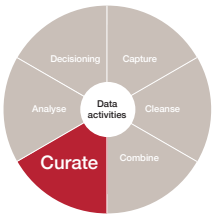
The more accurate information is, the more useful and valuable it will be. The level of accuracy depends on the type of information. For example, 100% accuracy may be required in the case of aircraft maintenance data, while 70 to 80% accuracy may work in the case of customer preference data.

Combine



This stage involves aggregating data points and converting them into a common format. This can be done by collating data from multiple sources (sensors, mobile devices, network traffic, web servers, GPS systems, etc.) or combining multiple dimensions of a data set. The value of data increases when it is combined and compared with other information. It is important to aggregate data points in order to have a wider and broader universe of data. For example, banks collectively analyse credit card transactions on both the customer and merchant side in order to identify trends and information on cardholder spending.

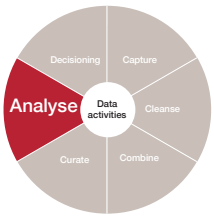
Curate



Data curation is the process of converting various data sources into unified data sets ready for further analytics. The main purpose of data curation is to make data more versatile and flexible while still maintaining a high degree of quality. Though much of cleaning is done at the data cleansing stage, data curation helps the organisation to get properly annotated, enhanced, tagged and organised data, which can be more usable for analytics.

The volume of data plays an important role in determining its effectiveness. Once a universe of data points is created, it is crucial to decide whether the whole universe will be processed or a sample indicative of the whole universe can be processed.

Analyse



This step is a critical aspect of the data life cycle as it leads to decision making. Data analysis is the process of examining data sets to uncover trends, patterns, correlations and customer preferences, and help the organisation make more informed business decisions. In the digital era, data is analysed by using AI and ML, driven by codes and algorithms. Also, it is important to note that analysis of data through AI and ML might still need human intervention, in order to decide which data is useful and needs processing and which data should be scrapped. Data analysis can be simple or complex depending upon the volume of input data and the desired result out of that input data. For example, a group providing energy systems and solutions analyses complex data patterns for the identification of energy theft, the identification of vulnerable or overloaded devices and plants in the distribution network, and the creation of load forecasts for different levels in the distribution grid based on finely granulated meter data.

Decision making

By using advanced analytical techniques such as ML, data mining and statistics, businesses can analyse data sources independently of or together with their existing data to gain new insights, resulting in better and faster decisions. For example, if a particular topic is trending on social media, the sentiment behind that can be analysed as positive or negative. Depending on analytics, a politician can decide what action needs to be taken. Similar analytics can be used for comments posted on media sites and elsewhere.

Similar to digital business, analysis of machine data is important in order to reap the benefit of data in traditional businesses. For example, a leading elevator company is increasing its operations by providing less downtime compared to its competitors by connecting all the elevators to the cloud in order to gather data from sensors and systems. It transforms that data into valuable business intelligence to determine the need for maintenance operations, thereby decreasing elevator downtime.

Sharing, usage and interaction

Beyond the above activities, sharing, usage and interaction of data amplify the value created. Data can sometimes be shared with an unlimited number of people without loss in value. In fact, sharing of information tends to multiply its value—the more the people use it, the greater are the economic benefits can be extracted from it. In addition to usage and sharing of data, interaction of data with other digital platforms helps drive its efficiency and enhance multidimensional analysis. The more data is integrated with other digital platforms, the greater is its capability for analysing a broader problem statement. For example, in case employee salary data is purchased from outside firms, once this data is integrated with internal data, an organisation can perform detailed analysis by doing comparisons, alignment and improvements.

2.4 Key takeaways

To summarise:

- The first step of capturing or collecting data is a necessary input into the value chain, but it is a relatively **low-value** activity since raw information has no real value on its own.
- What you 'do' with the data creates 'incremental' value, as one moves from step to step.
- The later steps around analytics and decision making and their interaction with other factors create the most significant value.
- Depending upon the business model, big data interacts with various other value drivers such as brand, network, technology, significant people functions and other intellectual property (IP) to create overall value for the business.

As summarized above, one of the key takeaways from our discussions with businesses is that data, in most cases, needs to be combined with platform, people (who analyse and make decisions) or algorithms to create value and amplify value. Data may have standalone value only if it is a proprietary or a highly curated dataset that can train algorithms/ artificial intelligence or can be sold. Thus, user data cannot generally be considered valuable on a standalone basis.

Having discussed the functional analysis of the big data value chain, it is important to understand the accounting, legal and valuation dimensions and their relevance from a transfer pricing perspective before we proceed to discuss the application of transfer pricing principles to the big data value chain.

3 The accounting, legal and valuation context

3.1 Accounting

As per applicable accounting standards and principles,[7] an intangible asset is an identifiable/non-monetary asset without physical substance. An asset is a resource which is controlled by an entity as a result of past events, and from which future economic benefits are expected to flow to the entity.

An asset is identifiable if it either:

- Is separable, i.e. is capable of being separated or divided from the entity and sold, transferred, licensed, rented or exchanged, regardless of whether the entity intends to do so; or
- Arises from contractual or other legal rights, regardless of whether those rights are transferable or separable from the entity or from other rights and obligations.

Further, an intangible asset can be recognised in the financial statements only if:

- It is probable that the expected future economic benefits that are attributable to the asset will flow to the entity; and
- The cost of the asset can be measured reliably.

Let's analyse whether big data can be considered an intangible asset:

Is big data an intangible asset?	
	**Is it an identifiable non-physical asset?** Can the entity's big data be separated and sold individually?
	**Can future economic benefits be attributed to big data?** Will exploitation of the entity's big data bring significant incremental revenues or costs savings?
	**Is it capable of being controlled?** Is the entity in a position to control the future benefits from its big data, subject also to evolving data privacy laws?
	**Can costs be reliably measured?** To what extent are costs of big data attributable to its acquisition from third parties or through business combinations, or otherwise measurable?

From a transfer pricing perspective, valuation and recognition of big data as a separate, identifiable and intangible asset might sometimes be a useful reference point for further transfer pricing analysis. For example, a purchase price allocation exercise would typically be undertaken by a buyer of a digital business on a purchase from an unrelated seller and a separate value may be attributed to big data, i.e. users on the platform. This data will help glean what percentage of the overall acquisition value is being attributed to big data and can be a useful data point for any transfer pricing analysis.

7. For instance, refer to IAS 38 (Intangible Assets) of the International Financial Reporting Standards, the corresponding Ind AS 38 of the Indian Accounting Standards and ASC 350 (Intangibles – Goodwill and Other) of US GAAP.

3.2 Legal

User behaviour captured by social media platforms includes personal data of the users to a large extent. Several jurisdictions[8] have now introduced or propose to introduce data localisation or data residency laws. Such laws typically require data about a nation's citizens or residents to be collected, processed and/or stored inside the country, and usually transferred only after meeting local privacy or data protection laws.

The General Data Protection Regulations (GDPR) introduced by the EU require that the primary owner of data agree to share its data. As per the GDPR, broadly, EU users will have the right to access, correct, restrict or seek to delete their personal information stored by businesses. Following the EU, Australia's 2018 Budget includes proposals for the creation of 'personal digital identities' which would allow users to collate all their data in one place and decide centrally which companies can access it and for what purpose. From an Indian perspective, two recent legal developments are noteworthy:

- While India has not yet formally introduced data privacy and protection laws on the lines of the EU GDPR, with the Indian Supreme Court considering the 'right to privacy' as a fundamental right in a recent judgement, India is expected to introduce a strong data privacy regime as well.
- Recently, the Reserve Bank of India ushered in data localisation laws directing all digital payment system providers to ensure that all data relating to payment systems operated by them is stored only in a system in India.[9]

From a transfer pricing perspective, regulations like the EU GDPR or the Australia proposals which give back control of personal data from digital companies to users themselves raise the following interesting questions:

- ***Firstly, in acknowledging that user data or raw information is being exploited by digital businesses and now needs to be controlled by users themselves, they recognise that user data or raw information is essentially a free resource available to all and the cost of capturing the same (which is the first step in the big data life cycle) is limited to the cost incurred to gather it.***
- ***Secondly, these legal developments can create a future scenario where having gained control of their information, users may start selling access to the same to a willing third party, which again establishes a market value for the raw information. This is a relevant proxy from a transfer pricing perspective.***
- ***Lastly, due to data localisation laws, the present scenario where the only activity that can be performed in the source country is capturing of data may change rapidly to include more and more activities in the big data life cycle. This will impact the overall attribution to the source country.***

8. They include Germany, Switzerland, the Netherlands, China, Russia, and now the EU under its GDPR law.
9. RBI. (2018). Storage of payment system data. Retrieved from *https://www.rbi.org.in/Scripts/NotificationUser.aspx?Id=11244&Mode=0* (last accessed on 8 June 2018)

3.3 Valuation

Several economists have shared their opinion on the value of information/data to a business and the potential approaches to value such data. Some of these suggested approaches are discussed in the table below:[10]

Intrinsic value of information (IVI)	• This is the presumptive value of information. • IVI would depend on how good and easy is it to use data versus how likely others outside the organisation are to have such data? • IVI = Completeness * accuracy * availability/ubiquity (prevalence)
Business value of information (BVI)	• This is the value of information for the business process. • BVI would depend on how relevant the data is to the business or a particular business process • BVI = Accuracy (trueness) * completeness (integrity) * relevance/delay (waiting time)
Loss value of information (LVI)	• This is the cost of not having information. • LVI is a function of the cost to be incurred to replace lost data and the financial impact to the business if the data were lost over a period of time. • LVI = Data acquisition cost + loss of income for the period the data was lost
Performance value of information (PVI)	• Value of information to business objectives, represented as key performance indicator (KPI) targets. • PVI is measured by assessing how much having a unit of information incrementally contributes towards the KPI targets over a given period of time.
Economic value of information (EVI)	• This represents the final financial value of informaton. • EVI = PVI for a revenue metric – data acquisition, administration and application costs
Market value of information (MVI)	• Income that can be received by sale, leasing or sharing information • MVI is the price a business partner is willing to pay for access to the information.

From a transfer pricing perspective, applying a valuation approach relevant to the appropriate set of facts and assumptions (with careful attention to any subjective assumptions) may help to determine the overall value of data to the business at a given point of time. The transfer pricing exercise discussed in the subsequent section can then allocate this value to the different steps in the big data life cycle and any other relevant activities.

10. Garifova, L. F. (2015). Infonomics and the value of information in the digital economy. Procedia Economics and Finance, 23(2015), 738–743. Retrieved from *https://core.ac.uk/download/pdf/82100027.pdf* (last accessed on 12 June 2018)

4 The transfer pricing dimension

4.1 Approach for transfer pricing analysis

In our view, the concept of an SEP can be seen as an expansion of the existing permanent establishment (PE) concept to digital businesses that seek to create a taxable presence in a source country on the basis of factors that evidence a purposeful and sustained interaction with the economy of that country via technology and other automated tools. These threshold factors, as per recent tax policy developments, could include a revenue-based factor (i.e. revenues earned from customers/users in a country), digital factors (such as a local domain name, digital platform or payment options), user-based factors (such as monthly active users, online contract conclusion, volume of data collected) or a combination of all such factors.

Once an SEP is deemed to be constituted, the next question is what portion of the overall profits earned by the digital business should be attributed to the SEP(s). In this regard, the authors are of the view that the existing Organisation for Economic Co-operation and Development (OECD) transfer pricing principles applicable for attributing profits to a PE[11] can be potentially applied to determine profits attributable to the SEP—that is, the profits attributable to the SEP should be those it would have earned at arm's length if it were a separate and independent enterprise engaged in similar activities, taking into account the functions performed, assets used and risks assumed (FAR) by the SEP and other parts of the enterprise.

To apply the above principles, the following approach may be adopted:

a. Functional analysis of an SEP

The first step would be to conduct a detailed functional analysis of an SEP created in the source country by understanding which part of the big data life cycle (and its precursor steps) is being carried out in the source country and outside the source country. This would help ascertain the significant people functions associated with that activity in order to attribute the economic ownership of assets and risks to the SEP. As discussed in the earlier sections, a big data life cycle entails several activities starting from the capture of data and up to the point of decision making with respect to such data.

b. Economic analysis

As a next step, one would need to undertake an economic analysis to identify the most appropriate transfer pricing methodology to determine the profits attributable to an SEP. Where only routine functions of data collection and the economic ownership of the raw data are attributed to an SEP, traditional methods such as the comparable uncontrolled price method or the cost plus method may be appropriate to attribute profits to the SEP. However, where the SEP is engaged in the entire big data life cycle (and any precursor steps), including decision making to convert data analytics insights to actionable plans to drive business value, given that the SEP is engaged in significant non-routine functions, a profit split approach may be more appropriate to attribute profits to the SEP.

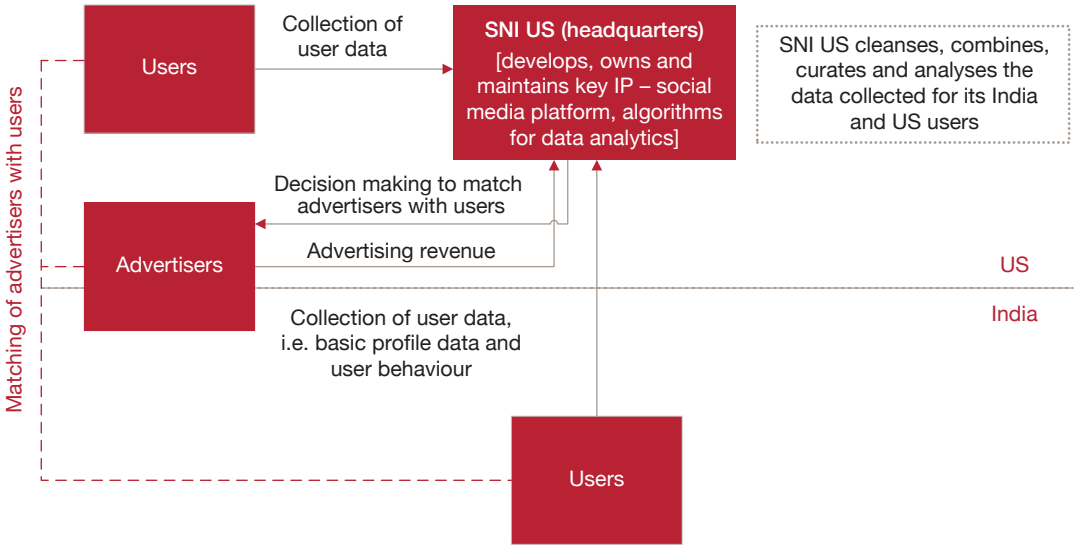
11. India has expressed its reservations on the application of the authorised OECD approach for attribution of profits to a PE. However, the Indian tax administration has not provided any specific guidance on their preferred approach, though they have been known to adopt formulary apportionment in several cases.

4.2 Case studies

Case study 1 – an SEP in India is restricted to functions of capturing raw data

Social Network Inc. (SNI) is a social network platform (including a website and servers) developed and operated out of the US. For a better understanding, let's assume that the platform has user bases in the US and India. SNI does not have any physical presence in India but creates an SEP in India on account of exceeding the prescribed threshold of users in India or revenue generated from advertisers in India.

The data life cycle of SNI's business



Functional analysis: Based on a detailed functional analysis of the big data life cycle (and precursor steps) of SNI, it was determined that all the value-adding activities of the big data value chain for both the US and Indian user bases are carried out by personnel based in SNI, US, with only the data-capturing activity for the Indian user base being attributed to the Indian SEP. Accordingly, the economic ownership of the raw data generated by the Indian user base is attributed to the SEP. Given the above, it was determined that routine returns ought to be attributed to the SEP considering its functional profile.

Economic analysis: The following approaches may then be considered for determining return attributable to raw data:

a. Where market prices for raw data are available

Prices charged by companies engaged in the business of collecting and selling data (for instance, price charged by data brokers) could act as a potential source of market price of raw data.

b. Where market prices for raw data are not available

Given that the SEP's functions around raw data are considered routine in nature, one could determine the costs incurred by the business to acquire and maintain the user base and user data and apply a routine mark-up commensurate with those earned by data brokers in that jurisdiction typically engaged in collecting and selling data.

Case study 2 – an SEP in India undertakes all activities in the big data value chain

Functional analysis: Extrapolating the above case study, let's assume that all activities in the big data value chain, including data analytics and decision making, with respect to the Indian user base are undertaken in India and attributable to India. These activities could be undertaken either by the employees of SNI, US, based in India or through employees based in an Indian subsidiary of SNI, US, which provides big data-related services to SNI, US.

Economic analysis: Assuming that the big data related functions undertaken in India lead to unique and valuable contributions in the value chain of the business, a profit split method may be considered appropriate. In determining the appropriateness of the method, the role of the precursor steps in developing the platform, tools, etc., and where the functions related to the same have been undertaken should be given due consideration. Further, the application of the profit split method would depend on specific facts and circumstances and the contribution of big data as a value driver (along with other value drivers such as capital and other IP [brand, technology platform, etc.]).

4.3 Potential issues

Some of the operational issues that need to be addressed during the course of a transfer pricing analysis for big data are summarised below:

Even where market prices for similar raw data as gathered by an SEP are available from third-party data brokers for a particular jurisdiction, some of the issues that need to be addressed are:

(a) Allocation of an appropriate return to the head office for funding the acquisition of raw data

(b) Raw data acquired in a prior year should not get additional attribution in the subsequent years and attribution should only be for the incremental raw data gathered in the subsequent years

(c) Preference of internal comparability, if an SEP has acquired raw data from third-party brokers in a particular jurisdiction

---

Where a profit split approach is sought to be applied to determine the residual profit allocable to the big data value chain, some of the key issues that need to be addressed are:

(a) Profit splits would be dependent on management assessment supported by industry and empirical analysis of the share of value contributed by big data as a value driver for a particular digital business.

(b) Key people functions associated with the big data value chain may be housed in more than one entity and the overall profit attributable to big data would need to be allocated amongst these entities using appropriate allocation keys.

(c) While revenues generated from each jurisdiction would be typically available for digital businesses as a starting point for any attribution analysis, determining the profit would need consideration of appropriate allocation keys to allocate common costs. The alternative allocation keys that have been put forward are revenues, users or average revenue per users. For example, employing a user as an allocation key takes into account the size of the user base in a jurisdiction rather than the real value generated by them since the value generated by individual users in different markets would vary depending on their level of activity, the consequent traffic generated by them to the platform and the extent to which their engagement with a particular digital business can be monetised. However, average revenue per user, may be a better approach to allocate profits to a jurisdiction proportionate to the average revenue per user from that jurisdiction. The selection of the most appropriate allocation key would ultimately depend on the unique characteristics of the business model of a digital business and thus could vary depending on the facts and circumstances of each case.

At a more fundamental level, beyond the operational issues, the key issue that arises is developing a consensus amongst countries on application of fundamental transfer pricing principles to the attribution exercise. In this regard, it is relevant to consider the preliminary positions articulated in the UK and EU:

UK: The position of the UK tax administration (Her Majesty's Revenue and Customs [HMRC]) is that active user participation creates value for certain digital businesses, and that jurisdictions in which users are located should be entitled to tax a proportion of those businesses' profits. It is of the view that that some reallocation of the profits currently recorded by principal/parent entities to user jurisdictions is justified and achievable in a way that minimises the impact on the current approach by respecting the arm's length reward for activities in the group where comparables are available.[12] The HMRC suggests that profits can be allocated to the respective jurisdictions by:

- Determining the value that users create for the business by considering a percentage share of the residual profits of the principal companies after routine functions have been remunerated with an arm's length return. The percentage share could vary for different categories of digital businesses depending upon the different materiality of user participation.
- Apportioning the above value to a jurisdiction based on a metric such as active users or revenue attributable to users in a jurisdiction.

EU: While the EU believes that the authorised OECD approach (AOA) remains the underlying principle for attributing profits to a significant digital presence, the following measures suggested by it seek to go beyond traditional transfer pricing principles:[13]

- Activities related to data and users undertaken by the enterprise through a digital interface should be considered economically significant functions for attribution of economic ownership of assets and risks to the significant digital presence.
- The attribution of profits should take into account DEMPE functions[14] performed by the digital presence even if these are not linked to people functions in the same member state.

The EU has suggested the profit split method to be the most appropriate method to attribute profits. Possible splitting factors could include expenses incurred for research, development and marketing (attributable to the significant digital presence vis-à-vis the expenses attributable to the head office and/or any other significant digital presences in other member states), as well as the number of users in a member state and data collected per member state.

4.4 Key takeaways

The key question that arises in the transfer pricing analysis of the big data value chain is whether the entire value created by user data/participation should be allocated to the jurisdiction where such a user base is located, ignoring the place of performance and the location of the significant people functions and IP around the non-routine functions of the big data value chain.

The approach articulated in this section seeks to apply fundamental transfer pricing principles to allocate an appropriate level of profit (either routine or non-routine), depending upon the activities around big data undertaken in the jurisdiction. While some of the preliminary observations of the UK and EU seem to stretch the application of transfer pricing principles discussed above, the authors recognise that a broad consensus around the most appropriate approach needs to evolve amongst the jurisdictions, including India, to ensure appropriate taxation of digital businesses.

12. HM Treasury. (2018). Corporate tax and the digital economy: position paper update. Retrieved from *https://www.gov.uk/government/consultations/corporate-tax-and-the-digital-economy-position-paper* (last accessed on 13 June 2018)
13. European Commission. (2017). A fair and efficient tax system in the European Union for the digital single market. Retrieved from *https://ec.europa.eu/taxation_customs/sites/taxation/files/communication_taxation_digital_single_market_en.pdf* (last accessed on 13 June 2018)
14. DEMPE functions denote the functions performed by an enterprise/group for the development, enhancement, maintenance, protection and exploitation of an intangible.

5 Concluding remarks

As mentioned earlier, India has set the ball rolling to tax foreign companies by enacting legislation to attribute profits to their SEP in India. While the EU and UK have proposed interim measures to tax revenues of digital companies, their long-term proposal includes taxing profits of digital companies as attributable to the value created by the user base in their jurisdictions.

India expects to operationalise the legislation by negotiating similar clauses in its tax treaty network in the near future. Other jurisdictions are expected to adopt similar action plans in the near future, given the developments in the EU and UK.

Given the above, global digital companies as well as traditional companies having part of their data value chain in India (or other countries) need to start preparing themselves to address the complex task of determining what portions of their profits (or losses) are attributable to India and other such jurisdictions where they would be deemed to constitute a significant economic/digital presence, and assess the associated tax risks that may arise on account of the same.

In this regard, taxpayers need to take the following immediate actions:

- Get involved in policy discussions to help Indian tax authorities understand the principles and framework around attributing value to data.
- Make a 'digital inventory' by understanding the role of data in their business model, how the data value chain drives value and its nexus with India.
- Align substance, structure and the associated transfer pricing policies to allocate appropriate profits to relevant data value generating activities in India.

The above actions will allow taxpayers to undertake a proactive assessment of the tax risks, including double taxation associated with these recent developments, and evaluate opportunities (including advance pricing agreements) to address such risks.

6 Appendix

Taxation in the digital economy: Summary of recent developments

The 2015 OECD BEPS Action Plan 1 on 'Addressing the Tax Challenges of the Digital Economy' comprehensively discussed the various direct and indirect tax challenges of the digital economy and the potential measures to address these challenges. Since then, there have been significant multilateral and unilateral developments in this area. The same have been summarised below.

OECD

The 2015 OECD BEPS Action 1 report[15] identified three potential options to address the corporate tax challenges of the digital economy:

- A new nexus based on the concept of significant economic presence
- Withholding tax on digital transactions
- An 'equalisation levy'

The report did not recommend adoption of any of the above options, noting that these would require substantial changes to key international tax standards and would require further work.

In 2018, the OECD released an interim report on the developments in this area across the world.[16] It has noted that further work is required to be done on the following areas to come up with a consensus-based solution:

Refining analysis of value contribution of certain characteristics of highly digitalised business models, including data and user participation

Assessing the impact of the above on the nexus and profit allocation rules

The OECD would be providing an update on the above work in 2019, and expects to provide a consensus-based solution by 2020.

EU

The EU's proposal for taxing digital businesses[17] proposes a three-factor test for constituting a significant digital presence: revenues from supplying digital services, the number of users of digital services or the number of contracts for a digital service subject to applicable thresholds for the respective criteria.

The EU has also proposed interim measures to tax revenues from digital businesses until the development of appropriate nexus-based profit attribution and taxation principles. Large digital companies are proposed to be taxed at 3% on revenues earned by them from the following services, where the main value is created through user participation:

- Online placement of advertising
- Sale of collected user data
- Digital platforms that facilitate interaction between users

15. OECD. (2015). Addressing the tax challenges of the digital economy, Action 1 - 2015 Final Report. Retrieved from http://dx.doi.org/10.1787/9789264241046-en (last accessed on 12 June 2018)
16. OECD. (2018). Tax challenges arising from digitalisation – interim report 2018. Retrieved from http://dx.doi.org/10.1787/9789264293083-en (last accessed on 12 June 2018)
17. European Commission. (2018). Proposal for a council directive laying down rules relating to the corporate taxation of a significant digital presence. Retrieved from https://ec.europa.eu/taxation_customs/sites/taxation/files/proposal_significant_digital_presence_21032018_en.pdf (last accessed on 12 June 2018)

India

In 2016, India introduced an equalisation levy in the form of a levy on payments made by residents to a non-resident for online advertisement, provision of digital advertising space or any other facility or service for online advertisement.

In 2018, India introduced the nexus-based taxation approach in its domestic tax law, deeming an SEP for non-residents (to which appropriate income would be attributed) in the following scenarios:

- Payments made to a non-resident for goods, services or property, including download of data and software exceeding a prescribed threshold, or
- Soliciting of business activities or interaction with a prescribed number of users using digital means

The relevant thresholds and the number of users are yet to be prescribed by the Indian tax administration.

India will now seek to have similar changes introduced in its bilateral treaties.

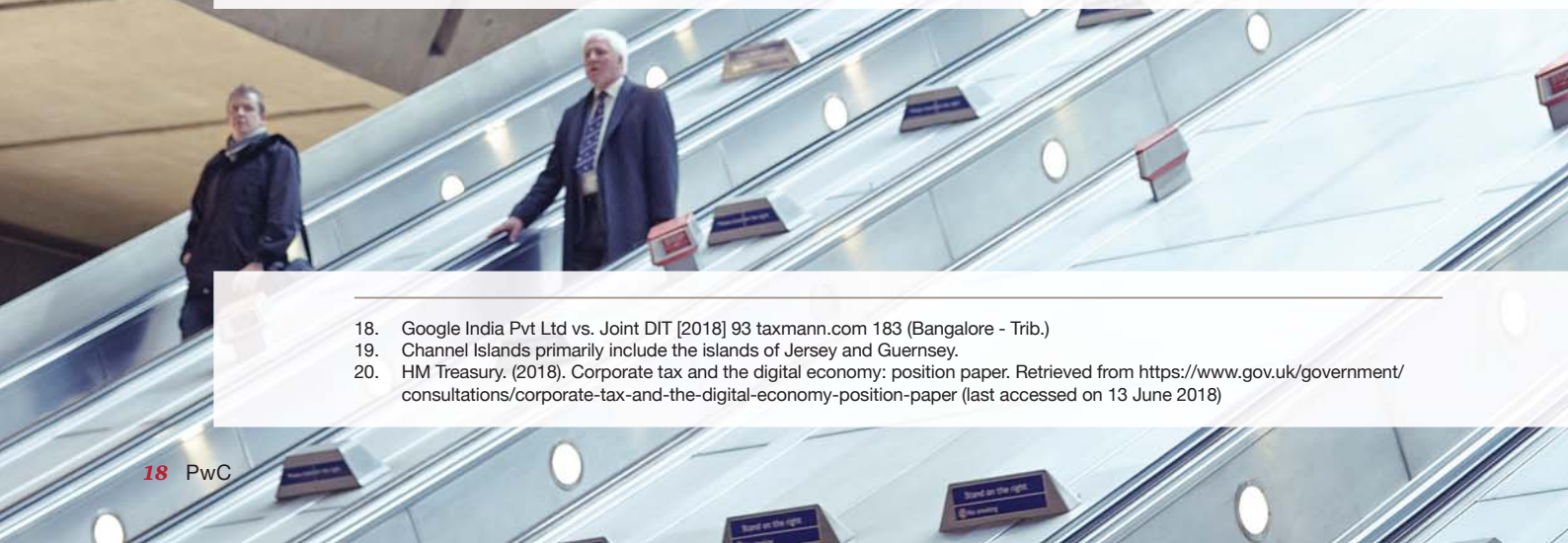
In a recent landmark ruling, an Indian tax tribunal[18] upheld the application of the profit split method to determine the arm's length profits attributable to Google India. This was on the basis that Google India contributed intangibles in the form of the Indian customer base and also performed marketing services connected with such a customer base. This ruling is likely to provide a fillip to Indian tax authorities to seek a higher profit attribution for the Indian user base and user data created therefrom, independent of the emerging developments on an SEP and profit attribution thereon.

Other unilateral measures (illustrative)

Several other countries have either adopted or proposed to adopt unilateral measures to tax digital companies. Some of these measures are discussed below:

- **UK:** While not specifically targeted at digital companies, in 2015, the UK introduced Diverted Profits Tax wherein a tax of 25% is levied on Channel Island[19] companies making sales in the UK with little or no tax payable in the UK. The HMRC has recently proposed a PE based on the scale of a UK user base and the revenues that a business generates from that user base.[20] The position paper also proposes an interim measure to tax revenues of digital businesses deriving significant value from UK user participation.
- **Italy:** In 2017, Italy introduced a 'levy on digital transactions' (LDT), similar to an equalisation levy, proposing to tax the electronic provision of digital services to Italian residents at the rate of 3% of the amount of consideration charged for such services. These provisions will be effective from 1 January 2019.

It is relevant to note that presently each of the above multilateral or unilateral efforts are only focused on user data in the context of digital businesses, which exploit such data to generate revenues. As discussed in the above sections, industrial or machine data is captured and processed in much the same way as user data. It remains to be seen whether (or rather when) tax policymakers shift their focus to value being created by some of the traditional businesses through exploitation of industrial or machine data collected from jurisdictions where such value is not currently being taxed.



18. Google India Pvt Ltd vs. Joint DIT [2018] 93 taxmann.com 183 (Bangalore - Trib.)
19. Channel Islands primarily include the islands of Jersey and Guernsey.
20. HM Treasury. (2018). Corporate tax and the digital economy: position paper. Retrieved from https://www.gov.uk/government/consultations/corporate-tax-and-the-digital-economy-position-paper (last accessed on 13 June 2018)

About PwC

At PwC, our purpose is to build trust in society and solve important problems. We're a network of firms in 158 countries with more than 2,36,000 people who are committed to delivering quality in assurance, advisory and tax services. Find out more and tell us what matters to you by visiting us at www.pwc.com

In India, PwC has offices in these cities: Ahmedabad, Bengaluru, Chennai, Delhi NCR, Hyderabad, Kolkata, Mumbai and Pune. For more information about PwC India's service offerings, visit www.pwc.com/in

PwC refers to the PwC International network and/or one or more of its member firms, each of which is a separate, independent and distinct legal entity. Please see www.pwc.com/structure for further details.

Contact us

Gautam Mehra
Leader, India Tax and Regulatory
PricewaterhouseCoopers Private Limited
+91 9867033822
gautam.mehra@pwc.com

Kunj Vaidya
National Leader, Transfer Pricing
PricewaterhouseCoopers Private Limited
+91 9962095555
kunj.vaidya@pwc.com

pwc.in

Data Classification: DC0

SUB/June2018-13357