

## IFA 2021 Berlin CONGRESS

### *BIG DATA AND TAX - DOMESTIC AND INTERNATIONAL TAXATION OF DATA DRIVEN BUSINESS*

#### **Introduction**

The topic of Big Data and Tax - Domestic and International Taxation of Data Driven Businesses presents an unusual context for a comparative law analysis of the tax treatment of transactions described by the topic title. The frame of reference for this topic is not a type of transaction (e.g., Sharing and Shifting Losses - the "New" Profit Shifting?; Cancun 2022 Main Topic 1), or a tax policy issue (e.g., Group Approach and Separate Entity Approach in Domestic and International Tax Law; Berlin 2021 Main Topic 1).

Instead, the context for this topic is the growth of technology which both enables new business models and enhances business functionality across many sectors and businesses. This technology enables businesses to access and analyze large amounts of data to develop and offer new goods and services on the market, improve their decision making, and in general capitalize on information technology tools to create value and capture business efficiencies.

The General reporter is not aware of past IFA main topics or seminars on the specific issue of "big data", although presentations on software, e-commerce and digital transactions have raised many of the same areas of inquiry, such as the characterization of transactions for both domestic law and treaty purposes.

"Big data" is not a legal or fiscal term in its own right. Rather, the term "big data" usually refers to projects, software, services or business functions that involve collecting, aggregating, structuring, and analyzing large information sets, often unstructured data or information that was originally collected for different purposes, which can lead to direct or indirect commercialization. A critical element of big data commercialization is the development and deployment of sophisticated data analytics tools, including algorithms, which allow the business to determine relationships and tendencies within very large data sets and derive insights therefrom. This topic addresses tax issues arising from commercial transactions in which businesses aggregate, process, and analyze large data sets in order to create and provide new forms of goods or services or to improve the utility of goods or services already existing in the market.

Using data analytics to collect, aggregate, structure, and analyze large data sets has become an increasingly significant business function in the global marketplace. A large variety of businesses—not merely pure internet companies—make use of big data techniques. Businesses currently implement big data analytics to boost customer acquisition and retention, identify potential business risks early, develop risk management solutions, innovate and develop new products, and manage supply chains.

Some business models which are based on big data analytics are very visible in the public eye, most notably those businesses which are able to aggregate and structure personal data. Those business models also have received the most attention from regulators, as governments around the world have moved to protect personal privacy through regulatory limits on the use of personally identifiable data.<sup>1</sup>

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<sup>1</sup> See, e.g., the General Data Protection Regulation in the EU (Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016), and the California Consumer Privacy Act of 2018 (Cal. Civ. Code §§ 1798.100 - 1798.199.100).

Those business models also have attracted the most attention in the international tax arena, as the original impetus for the digital services tax initially proposed by the European Commission was based at least in part on the concept that companies which are able to collect and structure data from individual users for commercial benefit should be subject to tax in the user jurisdiction on revenues connected to that user data.

Big data business applications, however, extend far beyond the transactions that are subject to the digital services taxes. Other emerging and foreseeable business applications of big data technologies include the following: connected and autonomous vehicles; medical research; remote equipment monitoring; machine learning; predictive and prescriptive analytics; and an increasingly interconnected "Internet of Things." co

The relationship between big data and taxation involves both domestic and international aspects. Branch reporters were encouraged to consider tax issues that may arise across the larger spectrum of data enhanced businesses. In particular, Branch reporters were asked to consider how their jurisdictions treat payments to nonresident firms that use big data to provide goods or services to their residents.

Thirty-seven IFA Branches submitted branch reports on the topic.<sup>2</sup> In all cases, the reports were of high quality, and reflected thoughtful Consideration of these challenging issues. The General reporter was gratified to see many contributions from younger IFA members; clearly the topic resonated with those who have grown up in an intensely digital environment.

## **Legal Framework**

Many of the issues arising from transactions involving big data require a consideration of the relevant property or commercial law aspects of data themselves and of transactions in which data are used or conveyed. The legal framework relating to collection of, use of, and transactions in data is highly undeveloped around the world and the application of general legal principles to big data and related transactions may vary from jurisdiction to jurisdiction. Generally speaking, in most jurisdictions a copyright or intellectual property right does not exist in raw data, on the basis that data is equivalent to information. However, some jurisdictions are considering the creation of *sui generis* ownership rights in data, in some cases drawing fine distinctions between various types of data, including raw data, personal data, machine data, etc. The EU has for some time had a *sui generis* database right, which does not create property in the data itself, but in the economic investment in collecting and organizing it in the database. In most jurisdictions, however, there is no specific legal framework applicable to the data itself, other than in the area of regulating data privacy.

In order to provide the Branch reporters with a background of generally applicable legal principles that determine rights in data, the General reporter provided a summary of prevailing academic commentary relating to legal principles that normally apply to the collection of or transactions in data.<sup>3</sup> Branch reporters also were asked to consider their country's legal framework in order to confirm or elaborate on this general description.

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<sup>2</sup> The following Branches submitted reports: Argentina, Australia, Austria, Belgium, Brazil, Canada, Chile, Chinese Taipei, Colombia, Czech Republic, Denmark, Finland, France, Germany, India, Italy, Japan, Korea, Liechtenstein, Luxembourg, Malaysia, Mauritius, Mexico, Netherlands, Norway, Peru, Poland, Portugal, Russia, Singapore, South Africa, Spain, Sweden, Switzerland, Turkey, United States, and Uruguay. The General reporter thanks all of the Branch reporters for their hard work and insightful observations.

<sup>3</sup> I would like to express my appreciation to Lothar Determann, partner in the Baker McKenzie Palo Alto office, for his assistance in preparing this summary.

### General Property Law:

- In general, academics tend to agree that there is no property right in data *per se*, even when that data has been aggregated in a database.
- The General reporter is not aware of any general "data property statute" providing for a generalized property right in data.
- Various property law concepts might apply to protect against access to data and information by third parties. For example, data sets might be subject to access rights and restrictions.

### Copyright:

- There is a general consensus among academics that there can be no copyright protection in data, as data are not the expression of an original creation—data exist separately from works of authorship, databases, and media.
- However, jurisdictions differ in the copyright protection given to databases.
  - U.S. copyright law distinguishes between the substance of the data or information and the particular form or collection of words in which the writer communicates that data or information. *See Int'l News Serv. v. Associated Press*, 248 U.S. 215, 234 (1918).
  - U.S. law does provide copyright ownership rights for compilations of data, so long as that compilation of data is creative in nature. *See Feist Publ'ns, Inc. v. Rural Tel. Serv. Co., Inc.*, 499 U.S. 340, (1991).
  - EU copyright law recognizes that copyright can exist in a database if the database meets the subsistence requirements of copyright at the member state level. Such rights would exist independent of the EU's *sui generis* database right.

### Sui Generis Rights:

- Some jurisdictions afford limited *sui generis* protection for collections of valuable data sets.
- For example, European database laws offer copyright-like protection to creators of valuable databases. *See Directive 96/9/EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Databases*, 1996 O.J. (L 77) 20.

### Trade Secret / Confidential Information:

- The law of trade secret / confidential information can protect information that is held secret, has value due to that secrecy, and steps are taken to maintain secrecy.
- These principles can apply to transactions in data depending on the circumstances.
- Device manufacturers generally cannot claim trade secret ownership rights in data and information collected by the devices they sell to customers.

- Similarly, consumers typically cannot claim trade secret rights in the data collected by the devices they own because normally consumers cannot claim a competitive advantage from keeping such data secret.

#### Contract Law:

- Parties are free to regulate the use of data provided under contract per the terms of the contract.
- Contract law creates rights and obligations between the contracting parties and named beneficiaries, i.e., these agreements bind the other contracting parties but do not convey actual property rights.

#### Regulatory Restrictions:

- Government regulation could impose obligations on those who acquire and process data, particularly personal data.
- For example, EU lawmakers have taken broad action to promote data privacy with the General Data Protection Regulation, which prohibits companies from processing any personal data unless there is a statutory exception.

#### Control:

- The fact of unique control over specific data sets may allow some enterprises to commercialize that data as a practical matter.
- Control may be exercised by not allowing others to access the data, or by transferring data only under limitations provided by contract.

### **Case Studies**

Given the variety of transactions that could involve the use, transfer or other commercial exploitation of big data and big data analytics tools, the Branch reporters were given a set of four representative case studies, which were designed to illustrate different tax issues that could arise in the very broad category of "big data transactions". In some cases, Branch reporters provided a specific analysis for each of the case studies; in others the Branch report referred to a subset.

In most cases, the Branch reports did not reproduce the facts of the case studies. Accordingly, the case studies are reproduced here, to assist the reader of those Branch reports which included an analysis of the case study, but only referenced the particular case rather than describing the assumed facts.

#### 1.1 Data Brokers / Information Resellers

An enterprise is in the business of gathering data from various sources in order to build profiles of consumer behavior ("Broker Co."). Broker Co gathers some information through application program interfaces ("APIs") which a website owner ("Website Co.") may allow to provide access to information generated through traffic on Website Co.'s website. Broker Co. also may separately contract with other suppliers to acquire information through loyalty cards, user-contributed data from social media websites, and various other sources. Broker Co. makes an annual payment to Website Co. for access to user generated data through the API.

Broker Co. invests in engineering personnel who develop data analytics software which organizes and structures the data. Data retained in Broker Co.'s structured database may persist for several years. Broker Co. sells copies of data sets to Customers. Customers may set parameters to define the data sets they purchase. Customers may purchase the data sets for purposes of targeted advertising, fraud detection, marketing analysis, insurance risk analysis, or similar purposes. Broker Co. charges Customer fees based on the size of data sets supplied and the degree of analytics which it had applied to that data set. Broker Co. by contract prohibits Customers from on-selling the data. Customers may use the purchased data sets for as long as they wish, although the value of a static data set decreases rapidly over time.

Most Customers are located outside Broker Co.'s country of residence, and typically will download the data sets from Broker Co.'s servers. The data relates to persons resident inside and outside the residence jurisdictions of Website Co., Broker Co., and Customer.

### 1.15 Issues Raised

This example was designed to raise the following issues.

- i. character: this example describes two payments that must be characterized for tax purposes, payments (i) by Customer to Broker Co., and (ii) by Broker Co. to Website Co. Does the character of these payments depend on the nature of data or Broker Co.'s structured database as property under applicable law? Does the lack of ownership of a property interest in the data itself signify something other than a sale? Under what circumstances could these transactions be characterized as a lease or license? If the data transferred is not property, should the transaction be characterized as a provision of service? Do the differences in the commercial relationships between Website Co. and Broker Co., and between Broker Co. and Customer, indicate a different character of the two transactions?
- ii. source: should the source of the income be at the place of business of Website Co., Broker Co., Customer, or the location of the persons who are the **data objects**? Does the source differ between the two transactions? Does it differ depending on the character of the transactions? How does the determination of source affect the tax treatment of the relevant income item?
- iii. nexus: could direct tax nexus exist for Website Co. or Broker Co. outside their countries of residence?
- iv. transfer pricing: assume that Website Co. and Broker Co. are related parties. What would be the most appropriate transfer pricing method to determine the price paid by Broker Co. to Website Co. for access to the user generated data? What facts particular to this business arrangement are most significant in making that determination? How would the different contributions to value of Website Co. and Broker Co. be evaluated?
- v. deduction vs capitalization and amortization: are Broker Co.'s data acquisition costs and software development expenses currently deductible expenses? If they must be capitalized, can those costs be deducted through amortization expenses? Over what period?
- vi. DST: if the jurisdiction has imposed a DST, could the DST apply to the revenue of Website Co., Broker Co. or both derived from selling the data sets?

## 1.2 Data Feeds

An enterprise is in the business of predicting animal migration ("Animal Data Co."). The enterprise gathers data on weather forecasts, food supply, predator density, urban development, climate change, and other elements. The enterprise has developed data analytics tools which it uses to create maps of predicted animal density at various future points of time. Another enterprise operates a website whose viewers would be interested in animal migration information ("Information Site Co."). Information Site Co. contracts with Animal Data Co. to provide a continuous feed showing migration patterns and predictions for a monthly fee. For the fee, Information Site Co. receives the data feed and is entitled to display the information to all viewers on its website. Information Site Co. receives no rights to use Animal Data Co.'s data analytics software and algorithms, except as may be necessary to allow display of the output on Information Site Co.'s website. Information Site Co. does not charge its users a fee to view the information. Information Site Co. is located in a different jurisdiction than Animal Data Co.

As an alternative, Animal Data Co. is a not for profit NGO formed for the purpose of supporting wildlife conservation. Animal Data Co. does not charge Information Site Co. a fee for the data feed, but it requires Information Site Co. to prominently indicate on its website that Animal Data Co. is the source of the information and to include a link to Animal Data Co.'s website. Information Site Co. supplies Animal Data Co. with personally identifiable data relating to visitors to the website who view the animal migration information. The NGO actively solicits donations from users who click through to its website using data received from Information Site Co. to target solicitation requests.

## 1.25 Issues Raised

This example was designed to raise the following issues.

- i. character: in contrast to the data broker case, Information Site Co. does not sell the information received from Animal Data Co. Animal Data Co. does not transfer the underlying data items; it transfers the output produced through application of its data analytics software to the underlying data. Do these differences affect the character of the payments by Information Site Co. to Animal Data Co.?
- ii. source: the data is gathered from many places on earth. The data analytics tools are developed in Animal Data Co.'s jurisdiction, while Information Site Co. makes the information available to viewers throughout the world via its website. Is source of income determined by the location of the origin of the data, the place of operations of Animal Data Co., the place of operations of Information Site Co., the location of viewers of Information Site Co.'s website, or some other place?
- iii. nexus: Animal Data Co. is willing to sell access to its data feed to any person. Animal Data Co.'s sales model is based on advertising the availability of contracts through its website and then entering into contracts online. Assuming that Animal Data Co. has no physical presence outside its jurisdiction of operation, could this remote sales model give Animal Data Co. nexus in the Information Site Co. jurisdiction under the Branch reporter jurisdiction's law?
- iv. treaty application: should these payments be treated as business profits? Under what circumstances might they be treated as payments for know-how, for the use of industrial, commercial or scientific equipment, or for services of a technical, managerial or consultancy nature?

- v. VAT: could the exchange of access to the data feed for personal data generated from click-throughs be seen as an exchange for value between Animal Data Co. and Information Site Co.? If so, should that barter exchange be recognized as a transaction subject to VAT? Similarly, a viewer of Information Site Co.'s website allows its data to be transferred to Animal Data Co. in exchange for viewing the information feeds on animal migration. Should that exchange be treated as a barter exchange and recognized for VAT purposes (or any other tax purpose)?
- vi. DST: if the jurisdiction has imposed a DST, could the DST apply to the revenue of Animal Data Co. if the viewers of Information Site Co.'s website are located in the taxing jurisdiction?

### 1.3 Performance Data Analytics

An enterprise is engaged in the business of designing, selling, and servicing complex equipment ("Equipment Co."). An affiliate of Equipment Co. resident in a different jurisdiction ("Service Co.") enters into after-sales service contracts with equipment purchasers. An important part of the service contract is the provision of performance monitoring and failure prediction services to equipment users. Service Co. performs those monitoring and prediction services by obtaining real time performance data from the manufacturer's equipment over time, both the equipment purchased by the customer which has entered into the service contract and equipment purchased by other equipment owners. Service Co. has developed data analytics tools which are essential to its ability to perform these services. Those tools analyze data received from the equipment while in operation in combination with data derived from other machines over time to provide information to the equipment owner and Service Co. employees relating to early warnings of failure, risk prediction, suggested preventive maintenance, and needed repairs.

For a heavy equipment product line, Equipment Co. installs sensors in the equipment which it sells to customers. Equipment normally is sold on a bundled basis with a one year service contract. Data collected by the sensors is used to develop performance analytics which enhance the services provided to all equipment owners purchasing a service contract. Most, but not all, equipment purchasers also purchase additional terms of the service contract after the first year.

For a consumer appliance product line, Service Co. provides sensor equipment for free to consumers who purchase an after-sales service contract. Some of this equipment is located at consumer locations outside of Service Co.'s jurisdiction of residence. Service Co. uses data derived from the sensors as well as accumulated data to remotely adjust the equipment and to recommend preventive maintenance.

The remote monitoring and failure prediction services are provided through a data center located outside the jurisdiction of the customer. The data center equipment hosts the data base that stores the historic data and captures real time performance data, and hosts the analytics software that predicts failures and proposes remedies. In many cases, the repair services consist of adjustments to software or other equipment controls which can be implemented through communications from the data center without human participation. The data center assets might be owned by Service Co. directly, or through a separately incorporated affiliate. Data centers are located in several jurisdictions in order to reduce latency between the equipment being monitored and the data center.

Service Co. also provides consumer behavior consulting services to third parties for a fee based on information received from the consumer appliance user data. The data itself is not transferred to the consulting contract customer.

### 1.35 Issues Raised

This example was designed to raise the following issues.

- i. character: in all three of these cases, a large part of the value provided by Service Co. derives from Service Co.'s data collection and data analytics capabilities. The automatic software corrections happen without human involvement at the time of delivery. Do these facts affect the characterization analysis?
- ii. source: this case includes a remote delivery of automated services from a data center without direct human involvement in the service delivery at the time of delivery. What is the source of services income in this case? Should the source determination be different if Service Co.'s analytics software is hosted on equipment owned by a third party cloud service hosting provider?
- iii. nexus - sensors: in both the heavy equipment and consumer appliance cases, data is captured through sensors installed on equipment operating outside the residence state of Service Co. In the case of the heavy equipment, the sensor is installed by Equipment Co. as original equipment, and therefore is owned by the equipment owner. In contrast, the sensors installed on consumer appliances are acquired only by those customers desiring to purchase a service contract, and the sensors remain the property of Service Co. Could those equipment items in either case create direct tax nexus or a PE in the jurisdiction where the equipment is located?
- iv. nexus - data centers: the data centers which host the software necessary to provide the remote diagnostics and repair services are located near customers, outside the country of residence of Service Co. Under what circumstances could those data centers create taxable nexus for Service Co. in the other state? The data center assets alternatively could be owned directly by Service Co., by a separately incorporated affiliate of Service Co., or an unrelated party cloud hosting services provider.
- v. treaty application: should these payments be treated as business profits? Under what circumstances might they be treated as payments for know-how, for the use of industrial, commercial or scientific equipment, or for services of a technical, managerial or consultancy nature?
- vi. transfer pricing: in any of these cases, is there a transaction between Equipment Co. and Service Co. which must be assessed under the arm's length principle? If so, what factors in this transaction determine which method is the most appropriate method? How would the different contributions to value of Equipment Co. and Service Co. be valued?

### 1.4 Analytics Based Consultancies

An enterprise is engaged in the business of providing consulting services to educational institutions to improve student results ("Consultant Co."). Consultant Co. has accumulated a database designed to capture and analyze data that predicts educational performance, career choice, and earnings potential. The database includes data spanning many years of student test scores, personal background including socio-economic background, residence addresses, ethnicity, language capabilities, parents' education levels and occupations, and similar factors, and post-graduation employment history. The data subjects are located throughout the world. Consultant Co. uses that database to support its consultancy work with educational institutions to improve the likelihood of successful career outcomes through improved educational methods. Consultant Co. charges fees on a negotiated project basis for its consulting services.



Consultant Co. also allows third party researchers to access its database for a fee to engage in their own research projects. The access agreement does not allow the researcher to further disseminate the data, but does allow the researcher to commercialize the results of its research.

#### 1.45 Issues Raised

This example was designed to raise the following issues.

- i. character: Consultant Co. commercializes its structured database through different commercialization models. Are the two revenue streams characterized differently, and if so, why?
- ii. treaty application: should these payments be treated as business profits? Under what circumstances might they be treated as payments for know-how, for the use of industrial, commercial or scientific equipment, or for services of a technical, managerial or consultancy nature?
- iii. deduction vs capitalization and amortization: how should the costs of data acquisition, software development, and creation and maintenance of the searchable database be treated?
- iv. DST: if the jurisdiction has imposed a DST, could the DST apply to either type of revenue derived from commercializing the student information database?

#### **Outline of Topics**

The Branch reporters were requested to address the following topics, to the extent relevant in their jurisdiction, as applied to specific or generalized big data transactions:

1. Basic principles: character, source and nexus
2. Application of tax treaty principles
3. Transfer pricing
4. Special regimes, including digital services taxes (DSTs), incentives, and barter reporting regimes
5. Indirect tax
6. Tax accounting

In general, the Branch reports follow that outline, which will assist the reader to compare discussions of those topics across jurisdictions.

#### **Synthesis of Branch Reports**

This General report addresses those technical issues which received the most attention in the Branch reports, and which posed the most challenging technical analyses. No Branch reporter described a tax statute or regulation that directly addresses data transfer transactions, except for noting cases where the jurisdiction has imposed a DST or similar tax. Further, very little judicial or administrative guidance exists addressing

directly data transfer transactions, or applying a technical analysis to "big data" transactions where the nature of the transaction as involving big data was an element in the case. Accordingly, in all cases, the Branch reports principally operated from the basis that the technical analysis of a big data transaction would proceed by applying general principles of domestic law. In many cases, the reports illustrated the application of those general principles by applying those principles to the facts of the representative case studies.

Indirect tax and tax accounting are not discussed in the General report; readers interested in those topics can consult the branch reports directly.

## **Property Law**

Several branch reports provided detailed statements of legal principles in their jurisdiction relevant to big data transactions.<sup>4</sup> Readers are referred to the reports themselves for the detail. Readers who appreciate the long view of legal history will note the Czech Republic report which connects current property rights relevant to data transactions with Roman law antecedents.

## **Character**

By far the topic that engendered the most discussion in the Branch reports was the characterization of the transaction under domestic law or by reference to the terms of tax treaties. This section reviews the analysis conducted for direct tax purposes. Several of the reports include additional descriptions of the distinction between a transfer of goods or a service for purposes of VAT law.<sup>5</sup> Given that the indirect tax characterization distinction creates fewer classification issues, this General report does not summarize the indirect tax analyses.

The most challenging transactions, and the ones which gave rise to the greatest divergence of views among the Branch reports, were transactions in which data alone is made available by one party to another. The case studies of the "data broker" and the "data feed" present those transactions. Those two case studies present different facts relating to the party in the transaction chain which applies data analytics tools to organize and structure the data in a way that would be useful to the person acquiring the data. In the data broker case, the entity which acquires raw data supplies the data to another enterprise which applies data analytics tools to structure and organize the data for further sale, while in the data feed case, the enterprise which collects the data also organizes and structures the data through its own tools in order to provide that data output to the recipient enterprise which displays the results on its website. Accordingly, the two examples gave the Branch reporters an opportunity to compare an acquisition of raw data prior to the application of big data analytics tools to an acquisition of processed data which is an output of the application of those tools.

The Branch reports show a significant divergence of analysis. It is not possible to harmonize all of the reports into a single framework. It is possible to draw some general conclusions about tendencies, but it is clear that due to the undeveloped state of national law on this issue, individual circumstances in the national context may result in different analytical approaches and conclusions.

In the cross-border context, the most significant consequence of the characterization analysis is whether a payment by a resident of the state to a nonresident supplier could be subject to withholding tax. In very

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<sup>4</sup> See, in particular, Branch reports from Czech Republic, Finland, Japan, Korea, Lichtenstein, Mauritius, Netherlands, Portugal, Spain, Switzerland, Turkey, and the United States.

<sup>5</sup> See, e.g., Korean report.

broad terms, many jurisdictions approach that characterization issue by endeavoring to apply familiar classification categories: a purchase of property (i.e. the data), provision of a service, license of intangible property, lease of property, or transfer of know-how. Many jurisdictions do not have all of those distinctions in their domestic law, so that a jurisdiction which distinguishes only between "professional income" and "moveable income", for example, would not need under domestic law to distinguish sales of property from the provision of a service.<sup>6</sup> The laws of many jurisdictions which have emphasized source-based taxation provide for source based taxation on various categories of technical service fees.<sup>7</sup> In a few jurisdictions, special categories which apply to digital transactions of various sorts also might apply to "big data" transactions.<sup>8</sup>

In most cases, the Branch reports commenced the characterization analysis by reviewing the copyright and property law treatment of the transaction. The reports confirmed that most national copyright and property laws conform to the general statement of law above on the point that there is no property right in data *per se*, and that copyright is not granted in the data itself. In many of the reports, the authors concluded that the absence of a property right in data suggested that a transaction in which data is transferred could not be characterized as a transfer of property. In the absence of a transfer of property, that analytical approach suggested that most appropriate classification would be that of providing a service or other relevant form of business income.<sup>9</sup> This was the most common conclusion.

This conclusion was most widely adopted for transactions in unprocessed data. Where the provider had structured and analyzed the data, and then granted access to that data for a fee, there was more room to consider whether that transaction involved the grant of a right to use an intangible asset. Even in that case, however, the more common conclusion was that the nature of that data provision transaction is a service.

In other cases, the Branch reports concluded that even if no ownership interest exists in the data under property law, that tax law still might recognize an asset for tax purposes.<sup>10</sup> In that case, a classification analysis analogous to transfers of other assets might apply, leading to the possibility that the data could be sold or leased for tax purposes. **In a similar approach, one Branch reporter concluded that the fact that data generally would be transferred under contractual restrictions on its further use gave the transaction a character much like that of a transfer of property, allowing property analogues to be used.**

In some cases, the reports suggested that a classification distinction could be based on a multi-factor analysis of economic or commercial elements of the transaction, including factors such as the payment structure, whether confidentiality restrictions were imposed on the user, the legal form of the transaction, and other circumstances.<sup>11</sup>

Those jurisdictions which concluded that any of the data transfer transactions was subject to withholding tax generally did so on the basis that domestic law would classify the transaction as a royalty for the use of intangible property, a payment for the transfer of know-how, or a technical service fee.

There was no commonly used point of reference for analogous transactions. The most promising analogy

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<sup>6</sup> See, e.g., Belgium Report.

<sup>7</sup> See, e.g., India; Colombia Reports.

<sup>8</sup> See, e.g., Chinese Taipei Report.

<sup>9</sup> See, e.g., Italy, Lichtenstein Reports.

<sup>10</sup> See, e.g., Denmark Report.

<sup>11</sup> See, e.g., Mexico Report.

was to national guidance and OECD treaty interpretation regarding the classification of software transactions.<sup>12</sup> While these analogous sources of guidance were not necessarily controlling authority (the U.S. regulations, for example, are expressly limited to transfers of computer programs), the software guidance referred to in the Branch reports all endeavor to distinguish between a software transaction which is analogous to an article of property passing in commerce with a transaction that provides to the transferee the rights to exploit the software copyright on the market. For those jurisdictions which are inclined to regard a data transfer transaction as at least analogous to a property transaction, the software precedents could be useful in both the data broker and the data feed case studies to support the view that the data itself is more like a copyrighted article passing in commerce, so that its on-sale is not the exploitation of a protected right on the market. Even for those jurisdictions which regard the provisions of data as a service rather than a transfer of property, the software authorities may be useful to demonstrate by analogy that a data transfer transaction does not constitute the transfer of a commercial exploitation right to the purchaser.

#### Example of analysis starting with property law

For many Branch reports, an important first step in the characterization analysis was to address the nature of data under local property law. For example, the Australian branch report described the general classification analysis as follows:

The key differentiating characteristic is that royalties are connected to an underlying capital asset (eg., property or rights), whereas sales and services are not. ... In differentiating sales transactions from royalty transactions, it is important to recall that raw data cannot, without more, be described as property. Therefore, payments for the granting of a licence which allows only simple access to raw data is likely to be characterized as ordinary business income (ie., a sale). Similarly, where a taxpayer is in the business of providing access to aggregated data for a fee (and the aggregated data does not amount to knowhow), the transaction is likely to be characterized as ordinary business income (ie., a sale). This is the case regardless of whether the transaction is described as a 'sale', a 'licence', or otherwise.

The Australian report considered that existing domestic principles that distinguish sales from royalty transactions could be applied to data transfer transactions:

In differentiating services transactions from royalty transactions, the Commissioner has provided helpful guidance. Key differentiating characteristics of a service transaction include the following:<sup>13</sup>

- The contractor performs services (that may result in the creation, development or bringing into existence of property);
- The contractor applies existing knowledge, skill and expertise (ie, there is not a transfer of pre-existing property, but a use by the contractor of the pre-existing property); and
- Any property created by the service belongs to the buyer without having to obtain any further rights in respect of the property.

One factor emphasized by the Australian report is the cost to provide the service:<sup>14</sup>

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<sup>12</sup> Commentary to OECD MTC Art. 12, paras 12 - 17.4; Germany, Norway and United States Reports.

<sup>13</sup> IT 2660, [29].

<sup>14</sup> This factor was not unique to the Australian report.

Although not conclusive, a common differentiating characteristic is cost. Whereas the provision of access to intellectual property (ie, a royalty transaction) is unlikely to involve much beyond the copying of existing material, the provision of services is likely to involve a much greater level of expenditure.<sup>15</sup> Big data analytics, such as the interpretation or interpolation of big data or the identification or analysis of trends in datasets, would likely be treated as services. However, each case will be determined on its facts and, in certain cases, apportionment may be required.

#### Examples of analysis supporting services classification

The French Branch report presented an analytical framework that placed the services classification category as a residual, if none of the other alternatives based on property concepts was more appropriate. Like most jurisdictions, the French Branch report first analyzed whether a data transfer would constitute a property transaction:

As the French tax law does not provide for any specific definitions, French legal definitions should be used. In this respect, the transfer of data could be considered as a sale of intangibles when there is a transfer of ownership of the data. When there is no transfer of ownership but a right to use the intellectual property rights, the remuneration of such right should be considered as a royalty. Finally, if none of the previous characterizations is retained, the transfer of data should be considered as a provision of service.

Applying that construct to the data broker case study, the French report concluded that at least the sale of processed data leg of the transaction might be characterized differently depending on the commercial terms with the customer. Under applicable law, it seems that it is possible to transfer ownership of anonymized and structured data. In that case, the transaction in which the customer acquires a data set from the broker could be regarded as a sale of property. The report notes that if the data sets transferred had been structured in accordance with needs of a specific customer, that factor supports sale characterization. In contrast, the transaction between Animal Data Co. and Information Site Co. in the second case study does not transfer the ownership of data, but instead entitles Information Site Co. to display the data structured by data analytics tools developed by Animal Data Co. Applying the French principles, the “transfer of data” by Animal Data Co. to Information Site Co. should be considered as a provision of service.

The German Branch report notes that relevant guidance exists for the classification of some data transfer arrangements in guidelines issued principally to address software transactions, but which also cover some data access transactions. In the German context, the most significant distinction for purposes of the case studies is between transactions where the taxpayer is being paid to perform a certain activity, which would be characterized as a service fee, compared to a payment for a transfer of rights, which could be characterized as a royalty subject to withholding tax. For purposes of determining when a royalty may exist, relevant guidance is provided by a Federal Ministry of Finance circular issued in 2017 that concludes that a tax liability is triggered only if the transferee is granted the right to commercially exploit the copyright. This approach is based on domestic copyright law and is largely consistent with OECD Commentary on Art. 12, which also differentiates between the mere use of a copyrighted article by an end user and the right to commercially exploit a copyright.<sup>16</sup>

The analytical focus on whether the transferee has obtained rights to exploit the protected database thus

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<sup>15</sup> IT 2660, [30]-[32].

<sup>16</sup> OECD MTC Art. 12 Commentary, paras. 13, 14.1 and 17.1 through 17.5.

produces the following results. Payments for access to and retrieval of data by end users from a database operated by a foreign taxpayer should not constitute an exploitation royalty subject to withholding tax, even if the customer uses the retrieved data in its domestic business. In contrast, granting the right to reproduce the database for distribution or the right to make the database publicly available for download would trigger a tax liability for the foreign licensor.

The German report was one of the few to expressly address streaming transactions in the framework of a copyright law based analysis. On that business model, the report notes:

The guidelines do not mention the supply of streaming data for display on a customer's website. While it could be argued that the customer has been granted a right to publicly display the content of the database, which might trigger a tax liability (similar to a license to show a movie to an audience in a cinema), the customer neither reproduces nor sublicenses the data. In addition, the data streaming contract may be classified as a "data delivery contract", under which the database owner is required to perform services which include frequent updates and reliable transmission of the data to the customer.<sup>17</sup>

Applying these principles to the case studies, this copyright law influenced approach would conclude that neither payment in the Data Broker case study would qualify as a royalty. Payments by customers of Data Broker Co. do not constitute royalties on the basis that the users do not obtain the right to commercially exploit the data sets. The payment by Data Broker Co. to Website Co. would be more properly characterized a payment for permission to collect user data on its website, apparently on the basis that Data Broker Co. is not obtaining the use of a copyright protected database nor is acquiring know-how from Website Co.

The payment received by Animal Data Co. in the second case study presents a more challenging characterization analysis under this copyright law oriented approach. One view of the transaction is that the payment is subject to withholding tax on the basis that Information Site Co. is entitled to publicly display major parts of a database owned by Animal Data Co. and protected by copyright. The opposite view would be that the payment is not subject to withholding tax on the basis that Animal Data Co. is merely providing a service to Information Site Co. consisting of the timely and uninterrupted delivery of animal migration data and forecasts of migration patterns. An important part of the analysis would be a close review of the copyright law aspects of the transaction, raising questions of which copyright law would be the controlling reference. Relevant points would be whether Animal Data Co. in fact holds copyright protection over its data or the way its reports are formatted, and if so, whether Information Site Co. commercially exploits that copyright.

The United States Branch reporters note that there is no explicit guidance under US tax law as to the classification of data transfer transactions, but also point to two regulatory frameworks that could provide points of reference. The first set of regulations applies to transfers of software programs. Those regulations generally apply a copyright law based analysis to distinguish between transactions in copyright rights and transactions in copyrighted articles.<sup>18</sup> While the regulation is limited by its terms to transfers of computer software programs, like the German Circular referenced above they provide useful analogous guidance by distinguishing between transactions in digital items that are treated as sales of goods versus the grant of a right of a commercial exploitation right in IP. Those regulations do not provide an analytical framework to distinguish services from property transactions.

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<sup>17</sup> FG Niedersachsen, 6 December 2018, BeckRS 2018, 42909.

<sup>18</sup> Treas. Reg. § 1.861-18.

The second possible source of guidance is a set of proposed regulations which distinguish service from lease characterization for cloud “cloud transactions”, defined as “obtaining on-demand network access to computer hardware, digital content or other similar resources”.<sup>19</sup> In contrast to the software characterization regulations, the cloud regulations do distinguish between transactions in services (providing a hosted computing environment) from transactions in property (leasing the computer infrastructure or the digital content), by applying rules traditionally applied in the equipment leasing context to distinguish leasing arrangements from services arrangements.<sup>20</sup> Notably, the preamble to the cloud regulations explains that the drafters intended for the regulation to apply to transactions that “share characteristics of on-demand network access to technological resources such as *access to information in certain databases*”.<sup>21</sup> There is no indication, however, whether the Treasury intended this reference to apply to data transfer transactions, as opposed to just transactions where users may access data but not acquire control over the data as in the case studies discussed here.

Ultimately, the United States report concluded that services classification would be something of a residual category, likely to apply if the transaction did not constitute a transaction in property that could be addressed as either a sale or lease of that property:

As noted, in a variety of contexts in the Code, the taxpayer must determine whether an item of income is considered compensation for personal services, or some other form of income. There is no specific test for this inquiry, and so general principles of U.S. federal taxation apply. Stated simply, personal services income exists when the income is not better treated as another kind of income; in this sense, to characterize income as arising from services is in essence to prove a negative. Given the extent to which the Code defines intangible property by reference to statutory property rights,<sup>22</sup> and the general inapplicability of property rights to data, it seems that many data transactions (particularly, some aggregated data and most, if not all data analytics transactions), could give rise to services income, at least under existing rules.

Several reports expressed at a high level the distinction between a services and a property transaction as the difference between the obligation to do something vs. the obligation to give something.<sup>23</sup> The concept of a service characterization being something of a residual category in the absence of a clear property transaction was not a commonly expressed approach, but it does provide a clear dividing line in principle.

#### Example of a several factor analysis

The Mexican Branch report describes a jurisdiction where several factors may be relevant for determining the character of a transaction. The reporters note that while Mexico has enacted a data protection law, that law imposes responsibilities on persons which collect personal data from users and provides users with several protection rights, that law doesn’t create legal ownership rights *per se* over the data. Further, under Mexican law even aggregated data generally would not be protected by copyright law, as the collection and aggregation does not constitute an original creation as understood by the copyright law.

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<sup>19</sup> Prop. Treas. Reg. § 1.861-19(b).

<sup>20</sup> Prop. Treas. Reg. § 1.861-19(c)(2), listing the factors to distinguish provision of services from a lease of property. See also I.R.C. § 7701(e).

<sup>21</sup> Fed. Reg. Vol. 84, No. 157 (emphasis added).

<sup>22</sup> But see the catch-all provisions in the definitions in section 367(d) and Treas. Reg. § 1.482-4.

<sup>23</sup> See, e.g., Brazil Report.

With that as the property law background, the report notes that possible characterization categories:

In our view, raw data, structured data and big data analytics transactions can be characterized in three different types of transactions: (i) the sale or exchange of property, (ii) granting the temporary use of intangible property or, (iii) the provision of a service. Since each data transaction is unique there isn't a rule of thumb to characterize them and the determination would greatly depend on the specific facts and circumstances.

The report then mentions several facts and circumstances which could be relevant. One interesting factor which could distinguish between a property transaction and a services transaction is the relative value created by the data itself as opposed to by the work to aggregate and structure that data.

Under the sale of property construct, the consideration would need to be determined on the value of the data itself and not by any added value that may be created by the provider by aggregating data through an algorithm. This construct would be particularly difficult to sustain in the case of structured data and big data analytics transactions, as most of the value paid by customers in these cases derives from the aggregation and analysis performed rather than the data itself. This is strengthened by the fact that the value of raw data from each individual user is substantially less than the value of the data once it has been aggregated and analyzed by the provider.

Another important factor is based on the property law status, in particular that under applicable data privacy law persons collecting and aggregating data generally are not considered to have legal ownership in the data and the data itself generally would not be protected under copyright law. That consideration would support characterizing the data transfer transactions as service transactions for tax purposes, and not as sales of the data or a license of intangible property.

The Mexican report lists other factors that could be relevant to classify the transaction:

- whether even in the absence of a property right under commercial or property law, the aggregated data is akin to a self-created intangible, like a customer list, goodwill on ongoing concern;
- whether the provider's participation is limited to providing access to data as opposed to aggregating and analyzing the data it then transfers (this consideration could create characterization distinctions between a raw data transfer and a processed data transaction);
- whether consideration is based on a fixed or a periodic fee, the amount of work performed, the value of the data, or some other factor (payment based on the amount of work performed is considered to indicate a service, while a fee paid simply as a matter of passage of time indicates a property transaction);
- whether the purchaser is restricted from further transferring the data (which would preclude a sale of property characterization); and
- the legal form of the commercialization agreement.

#### Possible theory of payment for use of equipment

The Austrian Branch report raised the possibility that payments for the use of data could be regarded as payments for the use of "industrial, commercial or scientific equipment." The Austrian tax authorities take



the view that "equipment" is not necessarily limited to tangible assets, but may also include intangibles, such as software. Applying such a broad interpretation of the term "equipment" could allow withholding tax on payments for access to data under treaties that allow withholding on payment for the use of equipment, such as those which follow the UN Model.

That said, the Austrian report nevertheless concludes that both the payment of Broker Co. to Website Co. for access to information gathered through traffic on its website and payments by customers to Broker Co. for acquisition of specific data sets would not be regarded as a royalty on the basis that in neither case does the transaction constitute the use of or a right to use a copyright. Whether the payments could be regarded as for the right to use equipment is left as an open question.

The Italian Branch report, in contrast, disagreed with the suggestion that payments for data or access to a database could be regarded as a lease of equipment. That position is based on the view that data or a database cannot constitute equipment. Web hosting is seen as an analogous case. The provision web hosting services normally would constitute the provision of a service, where the service provider simply makes space available on a server. That analogy supports the conclusion that data transfer transactions cannot be regarded as a lease of equipment.

#### Theories supporting royalty treatment for license or know-how transfer

Several of the Branch reporters concluded that one or more of the case study transactions should be characterized as a license, giving rise to royalties, rather than as a form of business profits. The theories differed for that conclusion. The most commonly expressed theory was that the data being transferred was an intangible asset, and the payment was made to acquire the use of that asset. In some cases, the payment was conceptualized as akin to a payment for the use of copyright.

The Korean Branch report, for example, notes that under domestic law applicable to cross-border transactions, data likely would be treated as an intangible asset. Data is analogous to other assets similarly treated as intangible property, such as copyrights, trade secrets, customer information and customer networks. Accordingly, data transactions could be characterized as the provision of services, the license of intangible assets, the leasing of information, or the sale or exchange of property. One published guidance from the Korean National Tax Service distinguishes personal services income from a know-how royalty as follows:

According to the Korean National Tax Service's authoritative interpretation, 'consideration for information that a foreign corporation provides to a domestic corporation by collecting and compiling publicly available data constitutes personal service income, whereas it constitutes royalty income if it is consideration for provision of unpublished technical information related to industrial, commercial or scientific knowledge and experience'.<sup>24</sup>

Another report which addresses the circumstances in which the payment might be regarded as a payment for know-how is the Finnish Branch report. As is the case in most countries, the Finnish report first notes that when there is payment for the use or the right to use a copyright, that payment is classified as royalty. For the payment to be considered as compensation for the use or the right to use a copyright, it must be, in private law terms, remuneration for partial alienation of the copyright. Partial alienation of copyright means giving the other party a permit (license) to reproduce copies of the copyrighted work, for example a software master copy, or to make the copyrighted content available to public either in the original form or in an altered form.

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<sup>24</sup> Written/Internet/Onsite Counseling Team II-1547, 27 September 2005.

The same analysis should apply to payments made for the use of the *sui generis* right protecting databases or the similar right protecting certain catalogues. A distinction would be drawn here between payments for the right to reproduce or make available to the public a *sui generis* protected database, or substantial parts of the database, either as such or in modified form, which would constitute a payment of royalties, compared to a payment only for the use of the database in the customer's own business operations, in which case the payment is not royalty but business income.

For the case of know-how, the Finnish report points out a different distinction between payments which constitute royalties from those which constitute business income, and applies that distinction to data transactions.

Different from products that are protected by copyright or a copyright-like property right, a payment for the right to use information or material that is not subject to any such right may constitute royalties even if it is simply for the acquiror's own use. This is because ... [the Finnish law on nonresident taxation] covers also remuneration for the use of technical and commercial information or know-how. In the context of big data this means that also a payment for the right to use an undisclosed algorithm or a programming technique, for example, may be classified as royalty. However, for such payment to qualify as royalty the information must be provided with the condition that the customer will not disclose it without authorisation.

Applying these principles to the reference case studies, the Finnish reporter apparently inclines towards business income (i.e. not a royalty) for all payments in the data broker and data feed case studies, but noting that with respect to payments by customers to Data Broker Co., it would have to be explored whether the structured database created by Broker Co. constitutes protectable property under the relevant *sui generis* right, and if the agreement with the customer includes a confidentiality agreement, that provision might indicate the presence of a know-how transfer.

The Liechtenstein Branch report draws several distinctions between types of data as relevant for the characterization question. Based on the fundamental principle that there is no right of ownership in raw data, raw data can neither be leased nor sold. In contrast, structured or aggregated data, as well as analytics based on that data, are regarded as imbued with sufficient property rights so as to enable persons creating those works to sell or exchange the property rights. In the case of access to the data of a weather forecast for a periodic payment, however, the nature of that delivery of data possibly could be regarded as a license of intangible property.

While the Italian Branch reporter concluded that a services characterization would be more appropriate in the data broker and data feed case studies, the report addresses in detail the circumstances under which a data transaction could be regarded as a transfer of know-how, thereby giving rise to royalty income. Know-how, along with use of copyright, were regarded as the possible bases for data transfer payments to be characterized as royalties under Italian law.

Know-how is defined in Italian law as follows:

Know-how is defined in the law as “information concerning industrial, commercial or scientific experience”. In line with international consensus, Tax Authorities defined know-how as an “undivulged complex of technical information, that may be patented or not, needed for the industrial reproduction of a product or a process, which constitutes a complement of what a manufacturer cannot know through the analysis of a product or the general knowledge of the progress of a technique”.

In applying this concept to the cases of data transfers, the Italian report emphasizes the distinction between using one's own know-how in the business versus transferring that know-how to another. As applied to data transfer transactions, the Italian report commented as follows:

As to know-how, while certain skills constituting know-how are certainly applied in order to collect, organize and analyze data, the output of these actions does not appear to constitute know-how in itself, in light of the fact that the skills needed to provide such output are not transferred; also, a specific activity may be put in place to provide structured data or data analytics targeted for the client, which confirms the application of skills which are already available and are not transferred.

As for the question of whether a data access payment could be regarded as a copyright royalty, the report noted that copyright does not apply to the data *per se*, but only to the relational model of a database. Under these principles, the report concluded that the payments in both the data broker case study and the data feed case study should be characterized as service fees.

#### Examples of other classification categories

The classification analysis in some countries is based on categories other than the sale of property, provision of services or license of rights or know-how as generally described above. In these other jurisdictions, complex questions of classification can arise, with little possible recourse to precedents from other jurisdictions because the relevant classification categories are unusual.

In Colombia, for example, the most relevant classification categories are technical assistance, technical services, consultancy, and royalties. Of these categories, technical services and royalties appear to be the most likely categories to classify big data transactions.

The tax system of Chinese Taipei largely relies on source concepts to determine what payments to nonresidents without a fixed place of business in the country are subject to withholding tax. Different withholding rates apply to different types of payments, so a determination of the character of the payment is necessary to conclude whether the payment is subject to tax, and at what rate. The four relevant categories are licensing activity, provision of e-services, provision of (other) services, and provision of goods.

The distinction between a license and a service is not clear. Intangible assets are defined broadly and while the definition does not expressly refer to data, the number of similar intangible assets such as "client information" suggests that data could be treated as an intangible asset. While there are no prescribed factors to distinguish data transfers which are characterized as a license of an intangible asset from those that are treated as services, factors likely will include whether the service is tailor-made (a service factor) and whether the price is structured as a periodic payment (a license factor). Thus, the provider of access to a data feed likely is granting access to that data under a licensing arrangement, while if the provider tailor makes the data transfer for the customer, that transaction is more like a service.

Chinese Taipei law also includes a special category of "e-services", which are subject to their own withholding tax. This law is more recent, so its classification categories exist in parallel with the normal classification rules. This category was designed to address a much wider range of digital transactions than data transfers, such as digital deliveries of content, online games, and the like. The definition is based more on delivery methods than the type of value being transferred, but its scope apparently can encompass big data transactions such a weather prediction, mapping services, and the like. Transactions falling in this category are subject to withholding tax (at different rates) even if the service is carried out entirely outside Taiwan. The withholding tax rate levied on payments for e-services is lower than the 20% rate applied to

royalties.

Applying these principles to the reference case studies, sales of data sets by the data broker in the first case study likely would be characterized as a royalty. The data broker might be able to avoid royalty classification and qualify the payment as for services if it customized the data sets for each user. Similarly, payment for the data feed provided by Animal Data Co. likely would be classified as a royalty based on the periodic nature of the payment.

Whether the offering is customized for the user is a critical character determinant. The services provided in the Performance Data Analytics and Analytics Based Consultancies case studies both should be characterized as services despite the fact that the value of the service is greatly enhanced by reliance on big data collection, aggregation and analytics capabilities. Payments for those services would not be subject to withholding tax if the service is performed entirely outside of the jurisdiction. In contrast, if the same taxpayer in the Analytics Based Consultancy offers access rights to its database, the lack of customization for that user likely will cause those payments to be classified as a royalty.

#### Characterization aspects of the other case studies

The other two case studies, namely the Performance Data Analytics case and the Analytics Based Consultancies case, raised far fewer characterization issues. While the value of both businesses was considerably enhanced by big data inputs of capturing, structuring and analyzing information, the commercial transaction in both cases generally was regarded as the provision of a service. Even if classified as the provision of a service, different tax treatments could arise if the service were regarded as a technical service or a transaction which conveyed know-how, or if the service was deemed performed in the taxing jurisdiction.

The more common view was that the service provided in these two cases studies did not constitute the transfer of know-how. While valuable business information undoubtedly was used to perform the service, the output of the service did not constitute a transfer of that proprietary information to the customer. In contrast, for those jurisdictions whose domestic law or treaties allowed for source based taxation of technical service fees, these transactions were potentially subject to withholding tax on the basis that the service constituted a technical service.

For example, the Peru Branch report noted that the principal classification distinction in these two cases would be between technical assistance and digital services. In either case, the payment abroad would be subject to withholding tax, although at a lower rate for technical assistance.

#### Summary of characterization discussions

The variety of approaches and conclusions expressed in the Branch reports raises the question of whether a novel, unique technical analysis needs to be applied to transactions in data, or whether existing principles are adequate to supply sensible and economically rational results. In general, at least for those jurisdictions which need to distinguish among the more common categories of sales of property, services, license of intangible property, or transfers of know-how, existing analytical approaches can work.

The most common approach among the Branch reports was to commence the analysis with an application of the copyright or other property law to the data transaction. The absence of copyright or property law protection for data *per se* generally should preclude treatment of pure data transfer transactions as licenses of intangible property rights.

In some transactions, there may be uses of statutorily protected rights which are ancillary to the main

purpose of the transaction. In those cases, a *de minimis* transfer of rights should not preclude the classification of the main transaction as a sale of property or a service. This concept forms a critical part of the OECD Art. 12 Commentary on software and the US regulations classifying software transactions. A *de minimis* rule will prevent incidental uses of IP rights to improperly characterize a transaction as a license when the main purpose is the provision of services or a transaction analogous to the sale of copyrighted articles.

A data transfer transaction should be classified as a know-how transfer only in rare circumstances. The element that makes the provision of structured and analyzed data valuable to the purchaser is the software and algorithms which the enterprise uses to create the valuable structured database. In the case where the purchaser acquires only access to the structured data, the proprietary know-how embedded in that software or algorithms is not transferred to the purchaser, even if the user is willing to pay a high price for access to structured or even customized data. Accordingly, existing principles that distinguish between the transfer of know-how versus the use of proprietary techniques to provide technology enabled services should be sufficient in the normal case to conclude that data transfer transactions do not constitute the transfer of know-how.<sup>25</sup>

The more challenging cases are those which involve payments for access to or transfer of structured and analyzed data. On balance, what the purchaser is paying for is the work to acquire and structure the data to make the output useful to the purchaser in its business. The absence of distinct statutory property rights even in the structured data, however, would point to a classification as either a sale of property or a service, but not as a license.

Even if a data transfer transaction would be regarded as giving rise to business profits rather than a royalty, it may be necessary under domestic law to distinguish between sales of property or the provision of services. This distinction is perhaps the most challenging of all, as the purchaser normally will acquire the data under a contract which allows the purchaser to possess the data and to use that data as long as it wishes. The object of many data acquisition transactions, however, is to obtain current business information, such that in many cases the whole value of the acquired data set will not retain its value for a significant period of time, and the principal business activity of the provider to continuously enhance the database. These factors, and the point that there is no property right in the data itself, would suggest that economically the most rational classification for data transfer transactions of the types described in the case studies should be that of providing a service.

As a tax policy matter, many, if not most, jurisdictions reserve the right to tax at source certain payments, such as dividends, interest, rents and royalties. The policy justifications for imposing those taxes, or taxes on a wider scope of payments such as technical services fees, have been explored in previous IFA sessions. Looking at the classification analysis for data transactions through the policy lens of when withholding at source is justified, it can be noted that payments for data transfers are not akin to payments for the use of capital such as dividends or interest, as enterprises which generate revenue from the transfer of data normally will be operating a business such that the revenue is burdened by all the normal development and operating expenses of other businesses. A comparable industry would be enterprises that produce and distribute digital content, the value of whose output does not depend on its tangible elements.

Policy considerations in many countries, of course, dictate that source based taxation should exist on a wider variety of cross-border payments, such as payments for technical services. In those cases, withholding tax could be imposed on payments for the transfer of data even if the underlying nature of the transaction is that of the provision of a service.

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<sup>25</sup> See, e.g., definition of know-how in OECD MTC. Art. 12 Commentary, paras [xx].

An appendix to this General report presents the income characterization conclusions from the Branch reporters on the four transactions described in the Data Broker and Data feed case studies. The conclusions were based solely on the facts as stated on the reference case studies, and thus would need to be reexamined in the context of any different case.

### **Tax Treaty Principles - Permanent Establishment**

All data is collected and stored through physical apparatus of some sort. The Performance Data Analytics case study gave the Branch reporters an opportunity to comment on whether either the collection devices or the data centers which store the data could create income tax nexus for the supplier of the service resident in a different jurisdiction. While not every Branch report addressed the issue, several did include useful discussions as to whether the sensors or data center could constitute a permanent establishment ("PE") of the nonresident.

The Performance Data Analytics case study presented three different scenarios:

- i. sensors installed on equipment which then is sold (including the sensor) to the customer; the sensors collect and transmit data to be used by a separate entity providing services which are enhanced by access to that data;
- ii. sensors delivered separately to consumers who purchase an after sales service contract for their connected device; ownership of the sensor is retained by the service provider; and
- iii. data centers located outside the residence state of the service provider; the data center equipment hosts the database that stores historic data and captures real time performance data, and hosts the analytics software that provides remote services to customers; the data center assets could be owned by the nonresident service provider or a separately incorporated affiliate.

The Denmark Branch report provided the most complete exposition of these issues, as both factual scenarios have been addressed recently by the Danish Tax Assessment Board.

The first ruling addressed an equipment manufacturer which installed certain hardware and software in all equipment that it sold into Denmark.<sup>26</sup> The purchaser could activate certain services which were delivered through the hardware and software installed on the equipment. Noting that the basic test was whether the nonresident had the equipment at its disposal, the Board concluded that the nonresident taxpayer did not have a PE in Denmark as the equipment was at the disposal of the equipment owner, and the equipment owner is the one who could activate and deactivate the features.<sup>27</sup>

In a separate ruling, the Board also addressed the question of whether a nonresident could have a "fixed place of business" PE if the nonresident contracted with a related Danish entity for data center hosting services.<sup>28</sup> The Danish entity owned the data center equipment, and its employees were responsible for maintaining the equipment. As with the equipment manufacturer case, the technical issue was whether the nonresident had the equipment located in the data center "at its disposal" within the meaning of the PE

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<sup>26</sup> Tax Assessment Board, SKM 2019.643.SR.

<sup>27</sup> The Board also concluded that the payments for the features did not constitute a royalty, on the basis that the equipment owner paid for the use of the features, but not any right to use patents, trademarks or other assets included in the royalty definition.

<sup>28</sup> Tax Assessment Board, SKM2016.188.SR.

Article of the relevant treaty. The Board concluded that the use of the data center by the nonresident did not create a PE, while expressly addressing the practical realities of how groups manage their software and data from remote locations. The Board came to its conclusion while recognizing the following facts:

The parent company and a small group of its employees would be granted permission to visit the datacenter but only if accompanied by employees of the Danish subsidiary. The parent company's own employees – located outside Denmark – would handle the webpage through remote access. Such employees would have the possibility to monitor the efficiency of the hardware and software installed in the datacenter as well as to install and uninstall applications, to carry out maintenance of the hosted applications and finally to handle the software and data stored on the servers. In case a server would not work correctly (or in other situation of emergencies), this server could be shut down using the remote access, which also enabled redirecting the data to other servers.

This ruling provides a compelling analysis to reach its conclusion under a PE provision conforming to OECD MTC Art. 5. As this case dealt with a related party owning the data center assets, profits arising from the data center activity itself would be allocated to the host jurisdiction pursuant to the intercompany services fee paid to the associated enterprise. The opposite conclusion would have produced a burdensome result for groups which endeavor to reduce latency and improve the user experience by locating hardware to host their websites and data at locations close to users.

The Canadian Branch report also observes that for both the sensor and data center cases, the issue is whether the nonresident has control over the equipment, whether it is legal or physical control.<sup>29</sup> This is regarded as consistent with the OECD MTC Art. 5 Commentary which mandates that the nonresident must have the premises or equipment "at its disposal". The Canadian report distinguishes between the cases of data center equipment owned directly by the nonresident versus equipment owned by a separate Canadian entity, even if a related party. In the former case, the principal issue regarding PE status would be whether the activity conducted through the data center assets could be regarded as preparatory or auxiliary. This necessarily would be a factual exercise based on the nature of the information gathering or hosting process and the relationship of that activity to the core business of the enterprise. In the case of data center assets owned by a related entity, the Canadian Revenue Authority has issued a technical interpretation in a case very similar to the Danish ruling that the provision of data hosting services to a nonresident does not create a PE, even when personnel of the nonresident have the ability to monitor traffic through the data center from remote locations.<sup>30</sup> With respect to sensors installed on equipment owned by third parties, as in the Performance Data Analytics case study, the Canadian reporter concluded "it is difficult to argue that the non-resident has control over the sensors."

The Indian Branch report presents a different view on both the sensors and the data center assets. For the sensors, the Indian reporters conclude that there is little doubt that the sensors installed by the manufacturer on the equipment or acquired by the consumer and installed on the user's consumer appliance constitute a fixed place of business, meaning that the analysis as to whether those sensors create a PE will be determined by whether they are at the disposal of the nonresident. Based on the facts stated in the Performance Data Analytics case, the Indian reporters concluded that the sensors create a fixed place of business for the nonresident.<sup>31</sup> On the data center case, the reporters conclude that whether the assets are owned by the

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<sup>29</sup> CRA, Income Tax Technical News #22, November 1, 2002 and CRA, Income Tax Technical News #33, September 16, 2005.

<sup>30</sup> CRA, Technical Interpretation 2012-0432141R3, 2012.

<sup>31</sup> Citing to the Authority for Advance Rulings, in the case of MasterCard Asia Pacific Pte Limited (2018) 406 ITR 0043.

nonresident or not is not important. Under the facts as presented in the Performance Data Analytics case study, it appears that the data center assets are at the disposal of the nonresident, and thus create nexus for the nonresident at the data center location.

Several Branch reports addressed the case of server equipment located in the country and directly owned by the nonresident.<sup>32</sup> In these cases, the reporters generally referred to the relevant OECD MTC Commentary relating to electronic commerce for guidance, in particular the guidance when activity conducted through servers can be regarded as preparatory or auxiliary.<sup>33</sup> In practice, however, the more common issue arises when the data center assets are owned by an associated enterprise, which makes the Danish and Canadian rulings described above the more significant interpretative statements in this area.

The Swiss Branch report emphasized that several analytical steps may be required to determine whether sensors could constitute a PE. Under Swiss domestic law, whether a sensor could be regarded as a fixed place of business mainly depends on its nature and purpose. Sensors attached to mobile equipment would not create a PE as they lack the requirement of being fixed. Fixed sensors, however, may constitute a PE if the data extracted from them is part of the core business of the enterprise and not just of an insignificant nature. In the treaty content, the issue arises whether the activity conducted through the sensor is solely for the purpose of collecting information for the enterprise, or is otherwise preparatory or auxiliary. As the Swiss reporter explained:

Whether or not collection of data qualifies as a preparatory or auxiliary activity needs to be determined taking the specific corporate purpose and business model into account. For data-driven corporations whose core purpose consists of collecting and selling raw data, data collection normally will not qualify as preparatory or auxiliary. A different view may be taken if a company collects data in its raw form so that it can convert or process them into a more readable format. If data processing is the main business purpose, collection of raw data may qualify as preparatory. In this writer's opinion, collection of data should qualify as an auxiliary activity if a company's value chain is mainly a physical one and data analytics are used as a tool to improve efficiency or reduce costs. In such a case, the captured information will be integrated in a physical value chain, which makes the data as a supporting element. The same holds true for corporations collecting data through a fixed place for the purpose of market research or the like. In this context, it may make sense to distinguish between external and internal data. External data provided to data consumers may indicate that the data themselves are the business asset and, thus, collecting them is not only a preparatory activity as long as they do not need to be significantly processed further (directly consumable information). These data are the service. When leveraging internal data, however, often another product or service is in the foreground. The question is, therefore, whether the business is built around data or data around the business.

Even if the sensors did constitute a fixed place of business PE, there would be a question whether any material income could be attributable to that PE, given the absence of personnel activity at the sensor location. This point would be particularly relevant for those jurisdictions which follow the Authorized OECD Approach for attributing profits to a PE.

## **Transfer Pricing**

By far the most frequent response from the Branch reporters on the transfer pricing topic is that there is

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<sup>32</sup> See, e.g., Luxembourg report.

<sup>33</sup> OECD MTC Art. 5 Commentary, paras. 122-131.



little or no precedent in their local jurisprudence applying the applicable transfer pricing principles to transactions involving big data. In general, most Branch reports pointed to the relevant principles, such as the OECD Transfer Pricing Guidelines, or domestic legislation, and observed that those principles appeared to be sufficiently robust to apply to big data transactions.

The Performance Data Analytics case study was designed to present an opportunity for transfer pricing analysis. In that case, one member of the group designed, manufactured and sold equipment (Equipment Co.), while a different member of the group entered into after-sale service contracts with equipment purchasers (Service Co.). Equipment Co. installs sensors on the equipment at the time of sale, which transmit data to Service Co. Service Co. developed the data analytics tools which aggregated the performance history of the equipment, monitored current performance, and used that analyzed data to provide after sales service. Service Co. also made the benefit of its analytics available to Equipment Co. to allow Equipment Co. to improve its designs and manufacturing techniques. The principal issues raised by this case study is the division of value between the entity that control the acquisition of the data (Equipment Co.) and the one which creates the data analytics (Service Co.), plus the valuation issue of pricing the transfer of the results of structured and analyzed data.

The facts and circumstances nature of transfer pricing analysis presumably inhibited the Branch reporters from analyzing this case in detail. Nevertheless, the reports did include several interesting observations on aspects of the transfer pricing analysis that would apply to data intensive transactions generally, including the relative value of data compared to the analytics process, the application of a DEMPE analysis to data intensive businesses, and the possible application of the residual profit split analysis to data intensive transactions.

Perhaps the first question is how to place data into the transfer pricing analytical framework, given that data themselves are not property under legal concepts. The Netherlands Branch report addresses this issue. The report first notes in the legal discussion that ownership of data is not possible in Dutch property law, as data are not tangible assets. Software which is used to process data can be protected by copyright law, and the report further notes that "[d]ata of a commercial value, which has been processed by means of having been subject to reasonable steps to keep it secret, may be protected as a trade secret under the Netherlands Trade Secrets Act (*Wet bescherming bedrijfsgeheimen* 2018)." That said, the Netherlands report concludes that "it seems to be generally accepted in international literature and at the OECD level that data may, given the circumstances, qualify as an intangible asset within the notion of chapter 6 OECD Guidelines 2017." Indeed, after the revisions introduced as part of the BEPS project, the definition of "intangible" in the OECD Transfer Pricing Guidelines ("TPG") does not limit the scope of possible intangibles to items protected by property law. The TPG defines intangibles as follows:

In these Guidelines, therefore, the word "intangible" is intended to address something which is not a physical asset or a financial asset, which is capable of being owned or controlled for use in commercial activities, and whose use or transfer would be compensated had it occurred in a transaction between independent parties in comparable circumstances. Rather than focusing on accounting or legal definitions, the thrust of a transfer pricing analysis in a case involving intangibles should be the determination of the conditions that would be agreed upon between independent parties for a comparable transaction.<sup>34</sup>

The TPG include as an example of a use of intangibles in connection with a controlled transaction, the case of an exploration company that "has acquired or developed valuable geological data and analysis, and

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<sup>34</sup> TPG, para 6.6.

sophisticated exploratory software and know-how", all of which it uses to provide exploration services to an associated enterprise.<sup>35</sup>

Accepting that data could fall within the TPG definition of "intangible", it clear that the values which could be ascribed to data varies widely, in particular when comparing raw data to data which has been structured and analysed. Continuing from the Netherlands report, the authors address those distinctions as follows:

An additional item to consider is how any additional value and hence profits generated by digitalising business models can be allocated to the different members of a multinational enterprise. As per chapters 1-3 OECD Guidelines 2017, functions performed, risks assumed, and assets used by the involved members of a multinational enterprise remain pivotal for any transfer pricing analysis; hence also in relation to big data transactions. Against this background, it could be argued that data collection and storage could be considered low-value activities, especially if no (substantial) risks are being borne in this respect and any assets used are of (comparatively) low value. Further processing of the data, such as the interpretation and analysis thereof, and the control over the development and maintenance of relevant data processing software and other technology, are more likely to contribute to unfolding the value of data. It is therefore the member(s) of the multinational enterprise that perform these activities that would typically be allocated the largest portion of the profits.

Several reports emphasized the contributions of the analytics functions to the creation of value in any big data asset. The Singapore Branch report analysed typical group functions which could create value in a big data intangible in terms of a DEMPE analysis:

Using the DEMPE analysis one can factor in the role of multiple group entities in the creation of an intangible. In the context of big data, the key functions may include design of the database, software platform, algorithms and APIs, ongoing research and development including enhancements to the platform, strategic decisions and creative direction in relation to the database and product offering, decisions and actions to protect the intangible and ensure quality control, marketing functions that enhance the brand value of the intangible product, routine functions such as maintenance of server, troubleshooting and customer support. All these functions and services provided by related entities in the group can be compensated on an arm's length basis.

Similarly, the Switzerland Branch report presented a useful classification of functions relating to the collection, structuring and exploitation of big data assets through the lens of DEMPE functions. The conclusions are presented in the following chart:

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<sup>35</sup> TPG, para. 6.106.

Functions	Activities
Development	<ul style="list-style-type: none"> <li>• Research activities, such as: <ul style="list-style-type: none"> <li>• Definition of big data strategy</li> <li>• Analysis how to digitalize value chain</li> <li>• Search for data sources and systems for data collection</li> <li>• Drafts in connection with IT architecture or cloud computing</li> </ul> </li> <li>• Development activities, such as: <ul style="list-style-type: none"> <li>• Implementation of big data strategy including cloud computing services</li> <li>• Construction of IT architecture</li> <li>• Data collection</li> </ul> </li> </ul>
Enhancement	<ul style="list-style-type: none"> <li>• Test runs in connection with IT architecture and data processing</li> <li>• Search for alternatives</li> </ul>
Maintenance	<ul style="list-style-type: none"> <li>• Measures for keeping data pool up to date</li> <li>• Application management</li> </ul>
Protection	<ul style="list-style-type: none"> <li>• Draft and implementation IT security concept</li> <li>• Implementation of data security measures</li> <li>• Licensing or accessing rights</li> </ul>
Exploitation	<ul style="list-style-type: none"> <li>• Decision making process regarding data exploitation (e.g., sale, licensing, processing data)</li> </ul>

This analysis emphasizes that the value is created where these business functions are performed, as opposed to the location of origin of the data or the location of the customer for the data-enhanced service.

A significantly different view is reported in the Italy Branch report. The reporter notes a view that the value attributable to processing activity conducted through software operating on a hardware platform could be compensated according to a cost-plus mark-up, with the data itself being attributed the residual value. This view would become significant, for example, if in the case of a significant economic presence PE, the user contributed data were to be treated as an asset allocated to the PE.

The German reporter surveyed recent scholarly literature on the transfer pricing implications of data transactions in the context of value creation, who appear to take the opposite view regarding the value of the data itself. Conclusions expressed in the literature included the following:

- It is very difficult to tie income from data transactions to a geographical location.
- Raw data as such has only little value because monetization requires the data to be processed first. As a result, there is virtually no value creation in the country of residence of users.
- Data from clinical trials is different in that it is considered to be quite valuable within the pharmaceutical industry. However, value creation is attributable to the companies that generate the data and not to the patients.
- Traditional TP methods can also be applied to digital transactions, but there should be a re-evaluation of the transactional profit split method.
- Profit splits should not be based on sales but on R&D expenses.

The German report also noted a debate over the relative value contribution of the data collection function as contrasted to the aggregation or processing function. As expressed in that report:

Some practitioners have argued that collection of data could be treated as a routine function of an associated enterprise, whereas the associated enterprise that aggregates or processes the data into a database should be entitled to residual profits. [footnote omitted] ... No

official guidance has been published by the German tax authorities on this issue, but high-ranking members of the federal tax administration have indicated that they do not agree with this analysis. [footnote omitted] In their view, an enterprise that collects data and then transfers it to another enterprise within the group should receive compensation that reflects its value (as opposed to merely being compensated for the performance of collection services to the transferee).

In the view of the German reporter, however, the data collection function does not appear to be more than a routine activity. At least in the case of non-personal data, the mere collection of data does not result in the creation of anything new or unique. A different result might arise where personal data subject to GDPR is collected, due to the greater legal liability risks assumed and control responsibilities performed by the entity acting as data controller.

The view that the principal value creation in a data intensive business happens through the development and application of the software and hardware tools that perform the structuring and analytics function is clearly the majority view of Branch reporters who commented on the point. On the point whether the data collection function relating to personal data might contribute more value due to the assumption of GDPR risks and responsibilities, it also could be argued that such activity should be regarded simply as managing legal risk by properly complying with legal restrictions as opposed to creating value. Under that view, the entrepreneurial value of the enterprise arises through the subsequent stages of the data analytics process, namely the aggregation, structuring and analytics which turn the collected data into a valuable resource for the enterprise.

While the performance analytics case study presented a relatively simple two-party arrangement, the Norway Branch report notes that data can be shared within groups in many more complex ways. In many cases, including the performance analytics example, the data themselves are not shared outside the group in either raw or processed form. Accordingly, there likely will be no market benchmarks for transactions in the data itself. The report emphasizes that the variety of possible uses of data within the group leads to the possibility of many different ways that the group could organize its intragroup relationships regarding the development and use of data, including in relationships without cash consideration:

Accordingly, we would expect to see arrangements that range from bartering arrangements to cost contribution arrangements with shared ownership, to licensing arrangements with one owner of the data, with many internal users. For the latter we can expect that some companies will charge a license fee, while others may provide the data for free. ...

If we look at the example of sharing of data within a group, this can be organized in many ways as described above, and will most likely depend on the underlying nature of the data, how it is collected, the use and application of the data, and the perceived benefit of the data to all users. Typically, many companies, by sharing data within the group, will perceive that the benefit of accessing global data from all other group companies outweighs the value of their own contribution of data, and as such see that it is commercially rational to share the data for free as long as they receive access to the global data. Whether this perception is correct, will have to be considered from situation to situation, as it will be very fact specific.

It is also easy to see that you can have situations where you can organize the ownership of data in one or a couple of legal entities, for gathering, processing and analytics, and where processed data or analytics are provided to group entities. That use of the data needs to be compensated.

As an intangible under tax law, even if not property under property law, concepts special to the taxation of transfer of intangibles will need to be considered. For example, in the case of a transfer of a database of aggregated and processed data itself, the TPG treatment of hard-to-value intangibles conceivably could be relevant.<sup>36</sup> In practice, however, the much larger number of intercompany transactions involving the use of valuable data arise in the context of the provision of services or the sale of goods by entities which use data to enhance the value of their commercial activities. For those cases, the TPG note that data held by the tested party enterprise may be a comparability factor which must be considered in performing a comparability analysis with uncontrolled entities engaging in similar transactions.<sup>37</sup>

Even though transfer pricing analysis is intensely fact dependent, the Poland Branch report did make some useful observations on how normal transfer pricing principles would apply in some of the case studies. In the Data Broker case study, if Website Co. and Data Broker Co. were related parties, Website Co. likely would be regarded as the tested party, with a cost plus method as the most reliable transfer pricing method. The report noted the reasons for that conclusion as follows:

Key assumptions and pricing method determination factors are: the key value driver is the data analytics software developed by Broker Co and that the big data collected by Website Co is rapidly losing its value for the Customers, depending on the nature of the big data collected. Also, the GDPR should be taken into account, limiting the time and scope of data usability.

Under the same logic, Information Site Co. would be the tested party in the Data Feeds case, as it has very little access to the software and algorithms which create the animal migration data feed. Animal Data Co. in that case is the enterprise that not only collected the data, but processes it to create a feed that is useful for Information Site Co. to display.

The Poland report also analyzes the Performance Analytics case, pointing out that in an affiliated group, the delineation of the value adding components of data may not be easily separated and valued:

Both Equipment Co and Service Co give access to the other party to big data – Equipment Co shares their client database with Service Co, whereas Service Co may share the data with Equipment Co from sensors and data analytics tools for analysis of the raw data from the sensors installed in the equipment. Both sides benefit from the big data selected from the sensors – Service Co optimizes their costs of providing the services, whereas Equipment Co is able to improve their products. Depending on how other transactions between Equipment Co and Service Co are set (if any), and the mutual benefits from the big data extracted from the sensors, there might be a transaction set between the two parties. There are, however, too many variables to determine the most appropriate method based on the background set in the case.

## **Data Specific Taxes - DSTs and the Significant Economic Presence PE**

### DST

The most high profile special regime designed to apply to some (but only some) of the big data transactions described in the case studies is the digital services tax (DST), as originally proposed by the European Commission for introduction as an EU Directive. Several reports noted the fact that a DST or similar tax

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<sup>36</sup> TPG, para 6.186 et seq.

<sup>37</sup> TPG, para 6.199 and 6.200.

(like the Equalisation Levy in India) had been introduced or was under consideration in that jurisdiction.

In the form originally proposed by the European Commission, the DST would apply a 3% tax on gross revenue derived by groups exceeding certain revenue thresholds for three specifically defined categories of transactions. The policy basis for specifying the three categories of transactions was to isolate those commercial transactions characterized by “user value creation”. As explained by the Commission, the proposed tax rests on the proposition that “the input obtained by a business from users ... actually constitutes the creation of value for the company.”<sup>38</sup> The explanation posits that this requires a new taxation right because: (i) current tax rules do not create jurisdiction to tax based on this value creation theory; and (ii) even if a permanent establishment is found and tax jurisdiction exists over an enterprise with such a business model, the value created by user participation is not taken into account when profits are allocated to the PE and taxed.<sup>39</sup> The stated justification for the tax is that there is a gap between the place where profits are taxed and the place where value is created.

The original proposal stated that the revenues resulting from the provision of each of the following services by an entity qualify as ‘taxable revenues’ for the purposes of the Directive: <sup>40</sup>

- (a) the placing on a digital interface of advertising targeted at users of that interface;
- (b) the making available to users of a multi-sided digital interface which allows users to find other users and to interact with them, and which may also facilitate the provision of underlying supplies of goods or services directly between users;
- (c) the transmission of data collected about users and generated from users’ activities on digital interfaces.

In large part, the DST seeks to tax certain transactions which capitalize on big data technologies. The first category is based on the assumption that the advertising service provider aggregates and organizes data in order to target digital advertising. The third category directly describes data transfer transactions. The second category, relating to multi-sided user interfaces, is focused more on digitally enabled businesses which are able to provide certain intermediation services across borders, but the underlying features of those platforms also utilize big data technologies.

The explanatory materials were not clear as to what businesses are meant to be covered under the “transmission of data” category. The explanatory materials regarding revenues arising from the transmission of data expressly excludes from its scope data generated by sensors or other means, and only includes data generated from users’ activities on digital interfaces.<sup>41</sup>

Several branch reports note that the jurisdiction has either introduced a DST (France, Italy, Spain, Turkey) or have the tax under consideration (Czech Republic). In these cases, the tax has been modeled on the original EC proposal, although with some national variants. The Turkish DST, for example, encompasses a notably wider scope of transactions than the (e.g.) French DST. The Equalisation Levy (“EL”) in India,

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<sup>38</sup> European Commission, *Proposal on the Common system of a digital services tax on revenues resulting from the provision of certain digital services*, COM (2018) 148 final, 21 March, 2018, 2. Documents relating to the EC Directives on digital taxation can be found here: [https://ec.europa.eu/taxation\\_customs/business/Company-tax/fair-taxation-digital-economy\\_en](https://ec.europa.eu/taxation_customs/business/Company-tax/fair-taxation-digital-economy_en).

<sup>39</sup> *Id.*

<sup>40</sup> DST Proposal, 24.

<sup>41</sup> DST Proposal, 18, para. 12.

as recently expanded in 2020, applies to a notably broader scope of transactions than the DST. In the case of the Indian EL, the scope is not defined by reference to three specified type of commercial transactions, but by more general references to transactions conducted through internet communications.

Of the four case studies, the DST is of most direct relevance for the data broker case study, as in that case an enterprise operating a website sells access to data generated from user traffic on the website. That data is transferred to Broker Co. which creates its own structured data sets, and then Broker Co. sells copies of customized data sets to customers. It would seem that both transactions could be considered a "transmission of data" collected about users.

The data feed supplied by Animal Data Co. related to data about animal behavior, and thus presumably would be out of scope on the basis that the data transferred to Information Site Co. dealt with animals, not users on an interface. In the variation where Animal Data Co. is an NGO, however, Information Site Co. expressly transfers personally identifiable information about visitors to its site which the NGO then uses to target solicitations to support Animal Data Co.'s wildlife prevention activity. That transaction would seem to raise interesting issues involving both the DST and the application of barter concepts; if Information Site Co. is regarded as a digital interface, its collection and transfer of information about its users could fall within the category of data transmission for DST purposes. If so, could the provision of the data feed on animal migration which Animal Data Co. provides to Information Site Co. in exchange for that personally identifiable information be regarded under barter principles as a payment for the data and therefore subject to DST.

The other two case studies regarding performance data analytics and analytics based consultancies both describe situations where a significant part of the value of the business derives from the acquisition and structuring of data regarding activity and even personal characteristics of individual users. Nevertheless, the transactions as described fall outside the three defined transactions and therefore are not subject to DST.

The DST, by its nature, applies unique principles in substitution for the traditional character, nexus, source, and profit allocation concepts. In scope revenues are defined according to a type of business activity, not according to a classification of an item of income. Nexus thresholds are replaced by the concept that the location of users of a digital interface give the state the right to tax. The number of users in the country generally acts as the source determinant through an allocation of in scope revenue to the jurisdiction based on relative presence of users. There is an asserted connection to the concept of value creation, in that one element of the policy argument justifying a DST is that enterprises create value through the interaction of users with the platform. There is no element of a transfer pricing type analysis which would assess the amount of such value creation, however, as the tax is a flat percentage of revenue, without regard to what actual value might be generated through user engagement.

The European national DSTs enacted to date have generally followed the EC model in terms of their definition of data transfer transactions that would be in scope of the tax. The French Branch report, for example, provides a detailed description of the terms of the French DST.<sup>42</sup> The Czech Republic Branch report describes some of the policy reasons for imposing a DST, and also notes some of the practical implementation challenges, such as possible inaccuracies created in relying on IP addresses to determine user location. The Czech DST is still under review in Parliament.

The Italian Branch report illustrates the complexities which can arise in applying the "transmission of data" category to transactions in the "big data" ecosystem. With reference to the first case study dealing with Broker Co., the Italian report noted that it would need to be carefully examined whether the source of the

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<sup>42</sup> The French DST was the first to be enacted, effective January 1, 2019.

data constituted a "digital interface". Accordingly, if the data collected through Website Co. did not constitute data from users of a digital interface, then neither the payment by Broker Co. to Website Co. nor the payment by customers to Broker Co. would be subject to DST. On the other hand, if the source of the data, i.e. Website Co., did constitute a social media website, the transfer by that social media website operator would be subject to the DST, but in that case the onward transfer by Broker Co. would be outside scope of the Italian DST.

Of the countries with an enacted or proposed DST discussed in their reports, the Spanish Branch report contains the most detailed analysis of the "transmission of data" category of in-scope transactions. The report points out that the tax seems to be focused on the transfer of raw data, while the higher value transactions in the "big data" ecosystem relate to commercial exploitation of aggregated, structured or processed data. To that point, the Spanish report comments:

[For the DST,] the taxable event is the transfer of data collected, once that they have been generated by the users' activities on digital interfaces. There is a potential problem with the wording, as it is intended to cover only the transmission of user data, i.e. raw data. These data are often of scarce value if compared to the ones available after refining processes. Consequently, the most lucrative options (e.g. the analysis and exploitation, or obtaining any conclusions drawn from those data) are excluded. The new tax does not impose a levy on the real economic benefit arising from the exploitation of refined data.

The Spanish report also contains a description of some of the political issues which have affected the timing of the introduction of the DST in Spain, along with some of the technical issues created by this unique tax, such as the issue whether this tax is compatible with Spain's double tax conventions.

The Turkish DST imposes the tax on a wider scope of digital services, including audio, visual or digital content streaming services. The Turkish DST came into effect March 1, 2020, at 7.5% is imposed at the highest rate of any of the enacted DSTs, and includes the unique enforcement mechanism that a digital service provider which does not comply with its DST obligations can suffer the sanction of having access to its site blocked in Turkey.

The Equalisation Levy in India was the first DST-type tax to be focused on digital services transactions. The original EL was brought into law in the Finance Act 2016, and imposed a 6% tax on payments for online advertisements. The Finance Act 2020 considerably expanded the scope of the EL effective April 1, 2020. As described in the Indian report, the transactions subject to the expanded EL are as follows:

The expanded levy is @ 2% of the consideration received or receivable by an e commerce operator from e commerce supply of goods or services made or provided or facilitated by it to an Indian resident, or to a nonresident in specified circumstances, or to a person who buys such goods or services or both using IP address located in India.

In a recent development, the Finance Bill 2021 proposes to amend the EL to expand coverage to include any transaction if any of the following take place on-line: (i) acceptance of offer for sale; (ii) placing the purchase order; (iii) acceptance of the purchase order; (iv) payment of consideration; or (v) supply of goods or provision of services, partly or wholly.

These amendments will take effect retrospectively from April 1, 2020, i.e. the date from which the original provisions were introduced.

Due to the extremely broad scope of the expanded EL, it is not surprising to note that many of the transactions described in the case studies would be subject to the EL. In the first reference case study



involving the data broker, the Indian report observes that under Indian domestic law, customized data is included in the definition of computer software, so payments by customers to the data broker would be subject to the higher withholding tax on royalties for software as opposed to the lower 2% EL. The Indian report was prepared prior to the recent decision of the Indian Supreme Court in *Engineering Analysis Centre of Excellence Pvt. Limited v. CIT*.<sup>43</sup> In that case, decided March 2, 2021, the Court held that payments for licensing and distributing computer software are not subject to tax as royalties in India under India's various tax treaties. If that decision were to apply to a payment to the data broker by the customer, then presumably the EL would apply to that transaction if the data was transferred in digital form, or the transaction otherwise fits within the scope of the EL. Interestingly, the Indian report also noted that the EL could also apply in that case study to the payment by Broker Co. to Website Co. for access to the traffic running across Website Co.'s site:

As regards Equalisation Levy, the same is to be paid on consideration received or receivable by an e commerce operator from e commerce supply of or services made or provided or facilitated by it, inter alia, to a nonresident in the specified circumstances. These circumstances include sale of data collected from a person who is resident in India or from a person who uses internet protocol address located in India. If there is a customer resident in India who is buying data from B, one would assume that the said data is in the nature of data collected from Indian residents, or from a person who uses internet protocol address located in India. On that basis, if the total payment for the same exceeds the threshold of INR 20 million, equalization levy @ 2% would be payable.

With respect to the information supplied by Animal Data Co. to Information Site Co., the payment would be subject to EL if Information Site Co. were a resident of India, but not if it were a nonresident. While the EL can apply in certain circumstances to payments between two nonresidents, in particular payments for the provision of advertising services targeting Indian users, or users with Indian IP addresses, those circumstances do not exist in this case.

The analysis of all four case studies is made more complex in the case of India since India also imposes tax at source on fees for technical services and for the provision of know-how. As alluded to in the reference above to the litigation over the characterization of software payments, Indian domestic law also takes an expansive view of what payments related to software can be taxed at source as copyright royalties. The Indian report analyses each of the possible bases to impose tax at source in the context of the reference case studies, along with the possible application of the EL where any of the payment by an Indian customer fall outside the scope of the other charging provisions.

### Significant Economic Presence

The proposals to create a new nexus for a "significant digital presence" or a "significant economic presence" also have a policy foundation in part as an effort to tax big data transactions as commercialized through cross-border remote sales. The proposed EC Directive regarding the DST was intended to be a temporary first step in advance of a Directive establishing a "significant digital presence" nexus threshold in the EU. Of the Branches responding to this topic, only India and Italy reported on the actual enactment of such a standard (the Italian standard was effective from 2018 and the Indian one from April 1, 2020). The Branch reports do not, however, address the question of how income would be attributed to those deemed PEs.

The concept of deemed a PE through a "significant economic presence" as enacted by India has a significant component which focuses on transactions in data. In summary, the new law expands the concept of

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<sup>43</sup> Civil Appeal No. 8733 of 2018; Civil Appeal No. 8734 of 2018.

"business connection" under Indian domestic law by inserting the following "Explanation" to cause the nonresident to have an Indian tax nexus if the nonresident supplies certain services:

*Explanation 2A.—For the removal of doubts, it is hereby declared that the significant economic presence of a non-resident in India shall constitute "business connection" in India and "significant economic presence" for this purpose, shall mean—*

*(a) transaction in respect of any goods, services or property carried out by a non-resident with any person in India including provision of download of data or software in India, if the aggregate of payments arising from such transaction or transactions during the previous year exceeds such amount as may be prescribed;*

The Explanation also causes a business connection to arise if the nonresident engages in sufficient solicitation or engages in interactions with sufficient users in India. Further, the law notes that several types of income are expressly include as income attributable to the SEP PE, which also emphasize commercialization of data:

*Explanation 3A.—For the removal of doubts, it is hereby declared that the income attributable to the operations carried out in India, as referred to in Explanation 1, shall include income from—*

*(i) such advertisement which targets a customer who resides in India or a customer who accesses the advertisement through internet protocol address located in India;*

*(ii) sale of data collected from a person who resides in India or from a person who uses internet protocol address located in India; and*

*(iii) sale of goods or services using data collected from a person who resides in India or from a person who uses internet protocol address located in India.*

The Indian Branch reporters point out that this tax will have considerable extraterritorial effect. Income attributable to the SEP PE includes income from targeted advertisements and sale of data even though the actually business activities may have happened outside India. The reference to data apparently is intended to include all data, whether raw, aggregated or analyzed. Prior to this expansion of the "business connection" concept, only income which could be attributed to operations carried out in India was deemed to accrue or arise in India. This expansion of the business connection rule creates domestic tax liability expressly tied to data of Indian residents, or from persons using Indian IP address. Transactions between two non-residents that fall in these categories will still be attributed to the SEP PE.

As part of domestic taxing provisions, the SEP PE could not be asserted against a supplier resident in a treaty county unless the treaty had been amended to allow the tax.

## **Barter**

A number of the Branch reports addressed the challenging question of whether barter principles should be applied to big data transactions of the sort reflected in the representative case studies. Several Branch reports indicated that a barter theory of income and expense recognition might in principle apply, in particular for VAT purposes, but there was no reported case of this theory applying in practice. Many Branch reports commented on the perhaps practical impossibility of administering this theory, especially where individuals were involved on one end of the transaction.

The Data Feed case study raises the issue of a possible barter transaction between two businesses. In that

case study, Animal Data Co., as an NGO, agreed to provide a data feed showing animal migration patterns to Information Site Co., in exchange for Information Site Co. linking to Animal Data Co. on its site and providing user data to Animal Site Co. which the latter enterprise then uses to solicit contributions.

The issue of applying barter treatment to data transactions apparently first arose in Germany in the VAT context. The German report notes that two members of the tax authorities, acting in their individual capacities, published two articles in 2015 claiming that advertising business models such as internet search engines and social media platforms are not free of charge for the users but, rather, are based on barter transactions between the platform operator and their users. That view of the transaction led to the conclusion that the provider had made a taxable supply of services within the meaning of the VAT law, and the tax base should be determined by looking at the expenses the platform operator incurs for obtaining consent from each user.

This issue also has appeared in court litigation in Germany, but there has been no clear resolution on the merits. The German Branch report describes the litigation as follows:

The same argument was put forward by the local tax office in a recent court case which was decided by the Federal Tax Court on 16 January 2020.<sup>44</sup> However, the court was able to dodge the contested barter issue based on the specific facts of the case. The court analyzed the taxpayer's terms of service and found that even though obtaining user data clearly was one of the taxpayer's motives for offering the services, there was no language in the terms of service that would have created a contractual link between a user's permission to use the data and the supply of services by the taxpayer to this user. The lack of specific contractual provisions on personal data can be explained by the fact that the case dates back to 2008 when businesses used much simpler terms of service and did not have to comply with the GDPR. Today's environment is entirely different, also taking into account that supply of services to a consumer is treated as a barter transaction under private law if the consumer has to consent to the processing of his data if he wants to receive the service "for free". It remains to be seen how the tax courts will decide similar cases that involve more up-to-date terms of service. Finally, it should be mentioned that the German Ministry of Finance also submitted several questions to the EU VAT Committee under art. 398 VAT Directive aiming to clarify the application of the VAT Directive to possible barter transactions between platform operators and internet users. While the EU VAT Committee laid down some useful guidelines on 3 November 2018, the German tax authorities do not feel bound by these guidelines as the EU VAT Committee has a strictly advisory function.

The German reporter expects that there will more litigation in the future on this issue, and that the controversy likely will ultimately come before the ECJ.

The Netherlands Branch report provides some more detail on guidance on this issue at the EU level:

The EU Value Added Tax ("VAT") Committee unanimously agreed that there is no taxable transaction for VAT purposes when internet services are provided in exchange of user data, without requesting monetary consideration, as long as those services are offered under the same conditions to all users of the internet, irrespective of the quantity and quality of the

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<sup>44</sup> BFH, DStR 2020, 713.

personal data they provide individually, in such a way that no direct link can be established between the services provided and the consideration in the form of personal data received.<sup>45</sup>

The current state of this issue, therefore, seems to be that in principle a VAT obligation might arise, but only if there is a direct link between a supply and the consideration, which implies an agreed reciprocal performance based on a legal relationship, and the consideration must be capable of being expressed in money terms. It would seem that in cases where under GDPR or similar regulations, a user can decline to share certain information yet still receive the service, an argument exists that no such contractual link between the supply and the consideration exists. In any event, the requirement that a monetary value be set on the value of the service received will be extremely challenging.

The fact that the valuation issue may be challenging, however, may not put this issue to rest in the case of data transfers. In a case decided after the VAT Committee guidelines were issued, the EU Court of Justice addressed a case in which a demolition company, in addition to receiving monetary payment from its client for carrying out demolition works, acquired, pursuant to the demolition contract, recyclable scrap metal that it could then sell to third parties.<sup>46</sup> The Court concluded that the taxable base of the supply of demolition services must include both the price actually paid and "the value attributed by the service provider to the recyclable scrap metal, as reflected in the amount of the reduction of the price charged for the supply of services." Importantly for the data exchange context, the Court addressed the value of the scrap metal from the perspective of the service provider (i.e. the enterprise collecting the data) and not from the party asking for demolition (i.e. the user). The CJEU also noted that "any technical difficulties which exist in determining the amount of the consideration cannot by themselves justify the conclusion that no consideration exists".

There are some obvious distinctions between this case and the case of data transfers, in particular on the basis that data is non-rivalrous, i.e. that a person may acquire or consume the data without precluding others from possessing or consuming that same data. That said, on the basis of the "direct link" argument and the barter conclusions of the ECJ as mentioned above, it is possible that this theory may emerge again in the future.

The Austrian Branch reporter notes that an "intensive academic discussion" is underway in Austria on this issue, with the opponents of recognizing a taxable supply for VAT purposes arguing that from the user's perspective, the user does not regard the transmission of data as in exchange for a service, taxation of this transaction would be at odds of the VAT as a general consumption tax, and analogous business models such as loyalty programs do not trigger VAT consequences.

The issue of indirect tax being imposed on a barter exchange involving data is not limited to the European reporters. The Branch reporters in Canada, Chinese Taipei and Mauritius all concluded that indirect tax could apply to the exchange of animal migration data for user data in the Data Feeds case study. The Canadian reporter expressly notes that in the Data Feed case, there are two distinct supplies of data, so that each party to that transaction could be required to collect and remit GST/HST.

The concept of a barter exchange exists not only in the VAT law, but also for income tax purposes generally. In the case described above where individual users exchange data for "free" services, the natural consequence of applying a barter theory for income tax purposes is that the individual user must recognize income in the value of the services received. For that reason, it can be safely assumed that popular

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<sup>45</sup> VAT Committee Guidelines of the 111th meeting of 30 November 2018, Document B – taxud.c.1(2019)3722302 – 967.

<sup>46</sup> A Oy (Judgment of 10 January 2019, A Oy, C-410/17, ECLI:EU:C:2019:12).

satisfaction with free internet services will constrain tax administrations from pursuing the barter exchange theory for individual income tax purposes.

A few Branch reports discussed the possible application of the barter theory for income tax purposes, even between taxable parties. The India Branch report, in addressing the Animal Data Co. case, concluded that if Animal Data Co. supplies the information on animal migration not for a fee, but in exchange for information on visitors visiting the Information Site Co. website, that exchange will result in income imputation as a payment in kind. The Uruguay Branch report noted the extreme complexity that would arise in valuing data transfers in relationships such as the Data Feed case.

Given that in transactions between taxable persons, a deemed income recognition on a barter transaction would be followed at some point with an expense deduction, either an operating expense or a cost of goods sold deduction, there seems to be little practical purpose for a tax administration to pursue the barter theory in most cases. A different case may arise in jurisdictions which classify the data transaction as the acquisition of a license to use an intangible asset, as in that case the imputed value of the consideration could be subject to withholding tax.

In the big data ecosystem, one can expect that numerous examples exist where data exchanges are common. The Belgian reporter noted that uncompensated (at least not compensated with money) data exchanges might exist in the Performance Data Analytics case, as Service Co. and Equipment Co. exchange data with each other to improve the performance of their particular business activities. As the Austrian reporter noted, this issue has inspired an intense "academic" discussion, probably in no small part because the issue is intrinsically interesting to academics. From a practical perspective, however, there would seem to be little benefit to efficient tax administration to apply this theory to the myriad instances of uncompensated data transmission in the data enabled economy. One hopes that this does not become an area of controversy in the future.

### **Special Incentive Regimes**

Many Branch reports described special regimes related to investment incentives which in principle are available to "big data" enterprises, in particular R&D credit or deduction allowances, and in many cases patent or innovation boxes. These incentives are available in a remarkable number of jurisdictions contributing Branch reports, which shows the persistence of national efforts to provide a tax benefit for home grown innovators and well as to provide an incentive for groups to locate innovative activity in the jurisdiction.

In general, there is no inherent barrier for big data business enterprises to qualify for the various incentives. The issue in most cases is whether the definition of qualifying activity will encompass the development or other innovative work necessary to create the product or service offered by the taxpayer. In many cases, the incentives are fairly narrowly tailored to particular types of activity, raising questions as to what part of the R&D investment would be eligible.

As an example, a 150% deduction is allowed in Russia for R&D activities appearing on a list published by the government, which includes "development of technology of storing, providing and processing of information on computer systems." Poland offers two incentives, an enhanced deduction of R&D activity and an innovation box which allows a 5% corporate income tax rate on qualified income derived from qualified rights. Private rulings have been issued confirming that some data processing activity has qualified for the enhanced deduction. The United States, in contrast, allows a credit for certain research or experimental expenditures. Innovative work to design and develop the software and algorithms to perform big data analytics would be the sort of activity that normally qualifies for the US R&D credit.

Given the variety of approaches and the different qualification standards in each country, an investor seeking the most attractive regime for their circumstances will need to read each of the Branch reports.

## **Conclusion**

The volume of cross-border "big data" transactions inevitably will increase. Creative entrepreneurs also will devise business models that may pose even greater challenges to apply the appropriate tax treatment to novel transaction than the four case studies presented here. At the moment, at least, there doesn't appear to be a need to create a bespoke tax regime applicable to big data transactions. While normal classification principles may be difficult to apply in some cases, the tools and concepts available dealing with transactions in copyrighted articles, IP rights and know-how transfers seem to be adequate to the task. Transfer pricing analysis always depends on the facts and circumstances of the particular case, but a focus on the relative value creation activity of the development and deployment of the software and algorithms necessary to capture and structure the data in a way that creates the valuable data based offering would seem to be the important first step in the required functional analysis. Overall, the principal effect of big data technologies will be to improve business efficiencies across the global economy, contributing to overall economic growth.

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