

IFA 2022 Berlin CONGRESS

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

Directives for Branch reports

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INTRODUCTION

This topic was chosen due to the increasing relevance of big data collection and analytics to many sectors of the economy. This topic is unusual since it address a technological and business development, as opposed to a specific tax issue. It also is anticipated that the technical analysis of the tax issues described in the report may depend heavily on the relevant commercial law regime as applicable to big data transactions. Accordingly, Branch reporters are encouraged to collaborate with commercial law specialists in your jurisdiction to provide a brief description of the relevant property, copyright, trade secret, contract, or other applicable law as may be relevant to the tax analysis of the various issues.

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 the same areas of inquiry.

GENERAL INFORMATION

The General reporter is Gary Sprague. Branch reporters who wish to contact the General reporter are invited to do so using the following email address: Gary.Sprague@bakermckenzie.com

Two specific tasks should be completed by each Branch reporter:

- First, and most importantly, Branch reporters need to draft a Branch report for the jurisdiction that they represent. The report should be prepared on the basis of the present directives and, as explained below, should focus on the relevant legislation, tax treaty provisions and guidance produced, in that jurisdiction, by courts, administrative organs and tax administrations as regards the topic of the tax aspects of big data transactions. The report should be preceded by a **1,000** words "Summary and conclusions" section that will constitute a short "executive summary" of the report.
- Second, as indicated in Annex 2, Branch reporters are invited to provide to the General reporter a copy of the relevant legislation, court decisions and administrative pronouncements that are referred to in their Branch report. Preferably, such guidance should be available in English and in electronic form. Where, however, the information is not available in English, it should be provided in its original language.

Language and format of the Branch reports

While IFA rules allow the Branch reports to be submitted in English, French or German, it is clear that Branch reports that are in English will reach a much larger audience as Branch reports in French and German will not be translated. If a report is submitted in either French or German, the Branch reporter must provide summaries/conclusions in English.

Each Branch report should be readable on its own without reference to these directives, which will not be reproduced in the Cahiers. The Branch reports do not need to address all the issues included in these directives since these issues are merely illustrative of issues that may be covered under each subsection. In order to facilitate comparison and to make sure that the same topics are covered, however, Branch reports should follow the general structure of these directives as per the format of the Table of Contents attached hereto as Annex 1.

The maximum length for a Branch report is **10,000** words (including footnotes, appendices and bibliography). This, however, does not include the Summary and conclusions section and the text of court decisions and administrative pronouncements that Branch reporters are invited to provide (as indicated above). Branch reporters should allocate that overall limit based on the guidance that is available, in their jurisdiction, on the various topics covered in these directives since it is unlikely that, in any jurisdiction, there will be guidance on all the issues raised in these directives.

In order to facilitate the comparison between the different jurisdictions, the General reporter would appreciate it very much if Branch reporters could follow the various headings and the section numbering found in the Table of Contents attached to these directives as Annex 1. Headings under which a Branch reporter has little to contribute should still appear in the Branch report, if only to report that there is no guidance on the topic in that jurisdiction.

The Branch report should not contain references to page numbers of the report itself.

Relationship between Description of the Subject and Annex 1: The Description of the Subject that follows the general information part of these directives provides Branch reporters with an overview of the Subject. Annex 1 contains the table of contents and the text in italics that follows each heading in Annex 1 purports to give specific guidelines with respect to the information that the Branch reporters are requested to give under that heading, all within the context of the subject as described in the description of the subject.

Timetable

The final deadline for submission of the Branch reports to the General reporter and the IFA General Secretariat is **15 November 2020**. The deadline date must be strictly adhered to, in view of publication schedules. The Cahiers must be printed in time to be mailed to all IFA members well in advance of the congress, and be made available electronically. Furthermore, the deadline is important to the General reporter to allow him/her sufficient time to write his/her General report for submission by 15 March 2021. It would also be appreciated if first drafts, or at least outlines, could be sent to the General reporter by the **end of August 2020** so as to allow the General reporter to offer comments before a final draft is submitted and to allow discussion of possible common issues during the Cancun (upcoming) congress.

Addendum

If a Branch reporter expects radical changes in his/her domestic legislation relating to the subject between the date of submission of the report and the publication date thereof, she/he may, following prior consultation with the General Secretariat, supply an additional one-page Addendum to the report, for publication in the Cahiers, explaining such changes in legislation, but not subsequent to the 1st of February.

Reporters' biographies

The Branch reporters are requested to include an abstract with a maximum of 400 words together with a half page biography with a maximum of 300 words and a color photo in portrait style and high resolution, which shall be included in the digital publication of the Cahiers. Full personal biographies will not be printed, but shortened at IFA's discretion.

DESCRIPTION OF THE SUBJECT

"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 will address 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.

Big data also has a number of emerging and foreseeable commercial applications: connected and autonomous vehicles; medical research; remote equipment monitoring; machine learning; predictive and prescriptive analytics; and an increasingly interconnected "Internet of Things."

The relationship between big data and taxation involves both domestic and international aspects. Branch reporters should consider their country's legal framework as regards the development and commercialization of big data by domestic firms. Equally important, Branch reporters should consider how their jurisdictions treat nonresident firms that use big data to provide goods or services to their residents. Similar issues should be addressed under both domestic tax law and international tax treaties: What are the appropriate income categories for income derived from transactions made possible through big data analytics? Is income from the use of data income from the provision of services, royalty income, or another type of business income? How are the sales of access to or ownership of data sets treated in cross-border situations?

Given the variety of commercial transactions that might involve big data, it may be necessary to distinguish the treatment of raw data from the treatment of structured data or big data business methods, such as analytics algorithms. Legal protection may vary between countries for raw data compared to

structured data, and different protections may exist for proprietary business solutions relying on big data. Branch reporters should carefully consider how their jurisdiction identifies and allocates value between different, but connected, factors within a single firm that combine to generate revenue. Depending on domestic tax laws, there could be different outcomes depending on the identification of assets and the characterization of income streams.

Finally, at the core of many tax and legal issues surrounding big data are fundamental questions about the nature of data themselves. Generally speaking, most jurisdictions do not provide a copyright or intellectual property right in raw data, on the basis that data are understood broadly as 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. If data are capable of ownership, it will be important to strike a balance between the rights of data "owners" and the public interest in access to, and use of, data. We invite Branch reporters to consider these fundamental issues in relation to their jurisdiction's domestic and international tax laws and policies.

Legal Background

This section provides a general statement of legal principles that may apply to data in a particular jurisdiction. 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 greatly from jurisdiction to jurisdiction. The following description reflects prevailing academic commentary relating to legal principles that normally apply to the collection of or transactions in data. Please review these principles and discuss whether they are applicable in your jurisdiction.

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.

Other:

- If your jurisdiction applies or is likely to apply legal principles to the collection of, use of, or transactions in data that differ from the description above, please augment this list with a detailed description of the principle(s) and an explanation of their application in practice.

Examples

The following are examples of common data transactions. This list of examples is not exhaustive, and other forms of transacting in data through big data techniques are likely to become more prevalent in the international marketplace in the near future. Please consider these examples as well as other forms of data transactions that currently occur, or you believe are likely to occur in the future, in your jurisdiction.

Transfer of Raw Data

- Data brokers / information resellers: an enterprise may collect and aggregate personal information through the use of big data technologies and transfer that information for a fee to other organizations. This information may be gathered from cookies, loyalty cards, user-contributed data from social media websites, and similar sources. Customers may use the data for various purposes, such as targeted advertising, identity verification, or fraud detection. The contract normally defines the allowable use parameters for the data.
- Data feeds: enterprises with access to current streams of user data may allow access to or transfer some portion of that data to third parties for consideration, which may apply their own analytics tools to the data.

Transfer of or Access to Aggregated Data

- Provision of aggregated data: enterprises with access to volumes of data collected and organized through big data technologies such as automobile companies, large retailers, financial services providers, etc. may aggregate and structure the data to use internally or to provide to other enterprises in exchange for consideration. The recipients may use the data for purpose of advertising, insurance underwriting, advisory or other services. The data supplied may differ in terms of degree of aggregation or categorization.
- Access to large data sets: researchers in various fields need access to large data sets to perform their research. For example, the human genome project requires sequencing a set of individuals and then assembling a complete sequence of each chromosome. Other researchers may be given access to the data base for a fee to support research endeavors, including for commercial enterprises such as new drug development.
- Formatted data: an enterprise may display data on its website which is supplied by other organizations, such as weather predictions, travel conditions, news feeds, etc. The data typically is not static, but is updated constantly. In cases such as the provision of weather forecasts, the data analytics are performed by the supplier. The organization which seeks to display this data on its website normally pays consideration to the formatted data provider.

Big Data Analytics

- **Autonomous vehicles:** autonomous vehicles will rely on an infrastructure based on big data analytics. The automobile manufacturer may develop the technologies itself to embed in its products or pay consideration to other parties for various technology inputs.
- **Performance data:** real time monitoring and analysis of equipment performance data supports future product design, early warning of failure, risk prediction, preventive maintenance, and repair. The data analytics work may be performed within the equipment manufacturing enterprise, or by a third party provider for a fee.
- **Geographical mapping:** through the use of internet connected vehicles, smartphones, and other GPS-enabled devices, organizations are able to create detailed maps of human movement for a variety of applications. Organizations aggregate these data and use predictive algorithms to provide services such as traffic directions. Enterprises may seek to commercialize those algorithms either directly by incorporating the algorithm in their own products or indirectly by making available the algorithm or the data output to other enterprises for consideration.
- **Weather prediction:** gathering and processing data with respect to the large number of variables involved in weather prediction allows weather forecasters to predict the timing and severity of various weather events, such as hurricanes, floods, and snowstorms. The forecasts may be supplied to others for consideration.
- **Consumer choice:** enterprises may develop predictive algorithms which rely on big data technologies to assist consumer choice. These algorithms may be developed by the enterprise itself, or by third parties which provide access to the technology for a fee.

ANNEX 1

TABLE OF CONTENTS OF THE BRANCH REPORTS

1. Summary and conclusions

The report should be preceded by a "Summary and conclusions" section that will constitute a short "executive summary" of the report. This summary should not exceed 1,000 words and should logically be prepared after the report has been completed.

2. Introduction: Legal Background

Branch reporters are invited to comment on the relevant legal background applicable to big data transactions in your jurisdiction. Reference can be made to the general summary stated above. Ideally, the Branch reporter should request a contribution by a local commercial law expert to briefly describe those legal principles applicable to big data transactions as may be relevant to the tax analysis described in the report.

3. Part One: Basic Principles: Character, Source and Nexus

In the list of technical issues below, we refer to "data transactions" to mean any of the types of transactions described above. In your responses, please indicate as necessary what type or types of transactions you are addressing to ensure that the reader can relate the analysis to particular types of transactions. Ideally, the Branch report could address these issues with reference to the types of transactions noted above as "raw data transactions", "aggregated data transactions", and "big data analytics".

3.1 General overview

In this section, please note whether there are specific laws relating to data transactions, and if not, what areas of law normally would apply.

3.2 Character

What principles are applicable to characterize data transactions for tax purposes? Please describe the relevant factors for determining the tax character of a data transaction. In particular, identify the conditions under which a data transaction should be treated as the provision of a service, license of intangible property, lease of property, a sale or exchange of property, or some other category of transaction? Is there a different analysis for transfers of raw data vs. transfers of aggregated or structured data vs. transfers of analyses of aggregated data?

3.3 Source

How does your jurisdiction's tax laws determine the source of income derived from data transactions? You may need to address this question by reference to transactions which have different characters as discussed above. As needed (and in coordination with the next section), please describe what role the source determination plays in establishing nexus to tax data transactions.

3.4 Nexus

Please describe the relevant elements of your jurisdiction's tax laws that may determine tax nexus for data transactions. If your jurisdiction has a special nexus rule that applies to data transactions—for

example, a significant digital presence tax nexus —please describe that regime and its technical and policy foundations.

4. Part Two: Application of Treaty Principles

4.1 General overview

Please provide any general observation as to how typical treaty provisions in your jurisdiction might modify the taxation of data transactions as described above.

4.2 Detailed comments

Please consider how data transactions would be treated under a typical tax treaty analysis for your jurisdiction. Please note situations in which data transactions would give rise to business profits, royalties, or other types of income under a treaty analysis. Please consider the application of other less common treaty provisions if they are included in your jurisdiction's treaties, including payments for the use of industrial, commercial or scientific equipment, fees for services of a technical, managerial or consultancy nature, or a services PE.

5. Part Three: Transfer Pricing

5.1 Application of transfer pricing principles

Please describe how your jurisdiction's transfer pricing rules account for data in cross-border transactions. In many cases this will not involve the transfer of data per se, but the provision of goods or services where the value or efficiency has been enhanced by the enterprise's use of big data. Please consider intragroup activity which does not have an external analogue, e.g., the sharing of data or data analytics within a single firm. Comments on what functions constitute DEMPE functions in the development and exploitation of big data transactions would be welcome.

6. Part Four: Special Regimes

6.1 General overview

Please identify any special regimes that might apply to the development and sale of big data enabled goods or services. The text below would be modified to address whatever specific regimes exist in your country.

6.2 DST

If your jurisdiction has enacted a digital services tax or similar tax which has as a component the acquisition or use of data, please describe the scope of the tax. Please describe the policy foundations for the tax, and whether that policy foundation may suggest future extensions of the tax to cover other transactions. Please comment on practical experience in administering this tax.

6.3 Incentives

Please describe any tax incentives your jurisdiction provides for big data development or exploitation. For example, does your jurisdiction provide research and development tax credits or a "patent box" regime that would be applicable to typical big data development and exploitation?

6.4 Barter treatment

In some jurisdictions, it has been discussed that a user's enjoyment of free digital services in cases where the provider is able to collect user data constitutes a barter transaction that could be recognized for VAT or other purposes. Please address this argument if this theory has been raised in your jurisdiction.

7. Part Five: Indirect Tax

Please discuss any indirect tax regimes that could apply to data transactions, e.g., VAT, GST, consumption tax, etc. In particular, please focus on any areas of material uncertainty or anomalous results.

8. Part Six: Tax Accounting

This section should be completed only if there are areas of material uncertainty or anomalous results for big data transactions.

8.1 Recognition of transactions

Please describe the law of revenue and expense recognition as it would relate to data transactions.

8.2 Capitalization and amortization:

Please describe the relevant law and regulations that would relate to the capitalization and amortization of expense to collect and maintain data sets, and to develop and maintain databases or data analytics tools.

9. Part Seven: Other

Please identify any other relevant tax issues that might arise for data transactions within your jurisdiction.

10. Reference Case Studies

The following case studies are provided for the use of the Branch reporters as points of reference for their technical analysis of the issues listed above. Branch reporters are not necessarily requested to provide specific responses to each of these examples, but Branch reporters are encouraged to refer to these case studies to illustrate the application of domestic law principles discussed in their Branch reports. Branch reporters are encouraged to discuss any variants of these examples or to propose new examples that would provide a platform for a discussion and understanding of the tax consequences of Big Data transactions.

10.1 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.

Possible issues to address:

(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 your jurisdiction has or is contemplating a DST, could the DST apply to the revenue of Website Co or Broker Co derived from selling the data sets?

10.2 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.

Possible issues to address:

(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 your 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 your jurisdiction has or is contemplating 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 your jurisdiction?

10.3 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.

Possible issues to address:

(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? Please consider the possibilities that the data center assets are owned directly by Service Co, that the assets are owned by a separately incorporated affiliate of Service Co, and that they are owned by 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?

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 objects 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.

Possible issues to address:

(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 your jurisdiction has or is contemplating a DST, could the DST apply to either type of revenue derived from commercializing the student information database?

ANNEX 2

DOCUMENTS TO BE PROVIDED

Branch reporters are invited to provide to the General reporters a copy of any of the following documents which are referred to in their Branch report.

- interpretative provisions found in a treaty itself, in a protocol to a treaty, in a memorandum or letter of understanding between the Contracting States or in any other instrument prepared in connection with a treaty, including an instrument prepared by one Contracting State and endorsed by another Contracting State;
- court decisions;
- publicly available mutual agreements;
- publicly available decisions by any administrative review board that may be part of or independent from a tax administration (e.g. assessment board or appeal board that would not constitute a court);
- legislative texts, such as an interpretative provision found in a statute, regulation or decree;
- circulars, rulings or other official administrative pronouncements by the tax authorities;
- any other similar document that can be considered to be an official statement with respect to the subject of this report originating from that jurisdiction.

Preferably, these documents should be provided in English and in electronic form as the objective is to make such information available on the IFA website. Where, however, the information is not available in English, it should be provided in its original language.

The documents provided should not exceed 200 pages (in print form). Branch reporters of jurisdictions where documents referred to in the Branch report would greatly exceed that limit are invited to exercise discretion in choosing which documents to provide and to send what they consider as likely to be the most useful and influential documents for other countries (e.g. for judicial decisions, those that are most recent or rendered by the highest courts).

ANNEX 3, ANNEX 4, etc.

Any document considered of use for the Branch reporters (for example, extracts of the OECD Model Convention Commentary).