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B: Big data and tax – domestic and international taxation of data driven business

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Summary and conclusions

Big data and data driven businesses have not yet given rise to any specific legislation or case law in Danish law. Consequently, the below overview to a large extent expresses the view of the authors on how data will likely be treated for Danish tax purposes in an international context. However, as no authoritative sources and guidelines exist, the below is based on generally applicable tax principles, and it is needless to say that the views presented are surrounded by great uncertainty as it is the first attempt to analyze big data and data driven businesses from a Danish tax perspective.

In a legal setting over the past decades a new discipline called "IT law" has been developed, being a cross-disciplinary legal discipline covering the legal aspects related to information technology where the facts (i.e. technologies) determine the scope of the discipline and where the topics, in principle, are handled by existing well established legal disciplines, e.g. copyright law, patent law, the law of domain names, liability for intermediaries, data protection law, market law, contract law and software licensing law.

Raw data (understood as units of information) which is not part of a work, a structured database etc. is not covered by copyright protection and it is our understanding that in this respect Denmark is in line with most jurisdictions.

While data seemingly is not reflected on the balance sheet, it is relevant to consider whether data should still be considered an intangible asset for Danish tax purposes. This is primarily of relevance with respect to tax depreciation, which is inter alia available to know-how, patents, copyrights and trademarks.[3] Tax depreciation requires that the intangible asset has been acquired, i.e., not built up internally. The definition of depreciable intangible is broad and may according to the wording also include other intangible assets, "such as" the intangible assets explicitly mentioned in the provision. While there is very little guidance on how to delineate the definition, it has previously been argued in the tax literature that only intangible assets "similar" to the listed assets may be within the scope[4] but the exact scope is uncertain and could also develop over time in line with societal and technical developments.

In the context of big data transactions, we consider it most likely that tax depreciations will not be available to raw data. On the other hand, copyright protected databases should

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[3] S. 40(2) of the Danish Tax Depreciation Act [DK: Afskrivningsloven] (unofficial translation): In the case of acquisition of other intangible assets such as special manufacturing method or similar (know-how), patent right, author and artist right and the right to a design or trademark or in the case of acquisition of the right under a yield contract, lease or rental contract.

[4] Louise Fjord Kjærsgaard and Jakob Bundgaard, *Afståelsesbeskatning ved flytning af DEMPE-funktioner?* Tidskrift for skatter og afgifter, TfS 2017, 668, pp. 668-672.

be within the scope. The above uncertainty with respect to the exact scope of depreciable intangible assets is then of primary relevance in other data-driven businesses including aggregated and structured data sets not being a copyright protected database and algorithm.

If covered by the Danish tax Depreciation Act, the acquisition price of the intangible asset can be depreciated 1/7 for seven years.

The most predominant tax consequences involving big data transactions seem to be whether the income generated is considered taxable income and whether the expenses connected with big data transactions are considered deductible business expenses. We consider it likely that any income arising from business transactions involving data, may be regarded as taxable income and should be computed in accordance with the net principle. The eligibility of deduction requires that the relevant costs are incurred for the purpose of acquiring, securing or maintain taxable income. In addition, deductibility requires that the cost in question is not used to broaden the income base, including start-up costs and establishment costs.

From an international perspective, the term 'permanent establishment' under Danish domestic tax law should be interpreted according to the definition in the 2017-OECD Model Tax Convention and its Commentary.

There is no provision on imposing source taxation specifically on payments for digital product or services. However, payment classified as royalties are subject to Danish withholding tax. Notably, if comparing the domestic definition of royalty with the definition included in article 12 (2) of the 2017-OECD Model Tax Convention, the definition excludes *payments of any kind received as a consideration for the use of, or the right to use, any copyright of literary, artistic or scientific work including cinematograph films.* This is of great importance, since EDB[5] including software is categorised as literary work.[6] Therefore, if software is not protected by a patent, payments for the right to use software should *not* be classified as royalties for Danish domestic tax purposes.

Denmark has a rather extensive tax treaty network comprising more than 70 applicable tax treaties. In general, Denmark adheres to the OECD Model Convention as a basis for negotiating bilateral tax treaties and relies heavily on the OECD Commentaries when formulating and interpreting tax treaty provisions. However, approximately 40% of the Danish tax treaties provides for shared taxing rights on payments classified as royalties.

The arm's length principle is a fixed part of Danish tax law and should be interpreted in accordance with the OECD Transfer Pricing Guidelines (2017) which are considered a crucial source of interpretation guidance. Currently, no official guidance from the Danish legislator or the Danish tax authorities exists with respect to the transfer pricing treatment of data and data driven transactions.

With respect to special regimes, Denmark has currently not introduced any digital services tax regime or other taxes targeting digital business models. Similarly, no specific tax incentives with respect to data driven business models have been introduced. However, a generally applicable rule exists regarding deduction for trial and research costs beyond the scope of deductibility for ordinary business costs (due to COVID-19 temporarily increased to a 130% deduction). Despite a narrow wording of the provision, in our view, the development of software, the structuring of data and the development of algorithms could fall within the scope.

5 Danish abbreviation for a group of assets equal to those covered by "Information Technology".

6 S. 1 (3) of the Danish Copyright Act [DK: Ophavsretsloven].

Finally, the current international debate on potential barter transactions and the tax implication of such transactions has not been considered in a Danish tax law context. However, since all economic benefits, in principle, are subject to tax in Denmark, it cannot be precluded that certain data transactions could be subject to tax on this basis.

Introduction: Legal background

Over the past decades a new discipline called "IT law" has been developed, being a cross-disciplinary legal discipline covering the legal aspects related to information technology where the facts (i.e. technologies) determine the scope of the discipline and where the topics in principle are handled by existing well established legal disciplines, e.g. copyright law, patent law, the law of domain names, liability for intermediaries, data protection law, market law, contract law, and software licensing law.

The treatment of data has been considered as far back as in 1961, when the legislator (in the context of the Danish Copyright Act) acknowledged that an original selection and categorization of information (data) could be subject to copyright protection as "collected works", where the person or company by collecting other works or parts of other works could produce a new work which could obtain copyright protection. As a starting point, this protection would include works which individually were subject to copyright protection. However, it has been acknowledged that also collections of data and other elements, which on a stand-alone basis could not be subject to copyright protection, could be subject to copyright protection provided that the collection in itself is sufficiently original.[7]

Raw data (understood as units of information) which is not part of a work, a structured database, etc. is not covered by copyright protection, and it is our understanding that in this respect Denmark is in line with most jurisdictions. Raw data is not the expression of an original creation – data exists separately from works of authorship, databases, and media. However, it could be argued that an aggregated and structured data set could be considered a database – provided that this constitutes an expression of original creation that should be regarded as a collected work.

Within EU law, databases have been protected since 1996, with the implementation of Directive 96/97EC of the European Parliament and of the Council of 11 March 1996 on the Legal Protection of Database ("the Database Directive"). The purpose of the directive is to ensure a uniform and strong protection of databases throughout the EU, including the introduction of a *sui generis* protection of databases which could not be subject to protection under the existing law. However, following the above Danish treatment, databases were already covered by copyright protection prior to the transposition of the Database Directive.

According to the Database Directive, a database is defined as a collection of independent works, data or other materials arranged in a systematic or methodical way and individually accessible by electronic or other means.[8] The definition is further elaborated as the following: "[…] Whereas the term 'database' should be understood to include literary, artistic, musical or other collections of works or collections of other material such as texts, sound, images, numbers, facts, and data; whereas it should cover collections of independent works, data or

7 See Henrik Udsen: *IT-ret*, 3rd ed., Ex Tuto Publishing, 2016, p. 180.

8 Art. 1 (2) of the Database Directive.

other materials which are systematically or methodically arranged and can be individually accessed; whereas this means that a recording or an audiovisual, cinematographic, literary or musical work as such does not fall within the scope of this Directive; […]".[9]

As the protection requires originality, many databases seem to be outside the scope of the Database Directive. Similarly, most algorithms are not eligible for copyright protection, because they will be considered to be of a factual nature, and therefore not an expression of the creativity of its author. Furthermore, it seems like the majority of algorithms should not be patentable as mathematical methods, typically considered to include algorithms, is mentioned as something which in particular shall *not* be regarded as inventions which should be granted a patent within the EU even if the inventions are new, involve an inventive step and are susceptible of industrial application. Mathematical methods and thereby most algorithms are excluded as they are rather abstract phenomena, i.e., they are in themselves non-technical.[10]

In summary, from a Danish perspective it seems that most data-related products do not classify as protected intellectual properties, with the primary exception being databases that express originality and where data are systematically or methodically arranged and can be individually accessed.

According to Danish contract law the parties are free to regulate the use of data provided under the terms and conditions of the contract. Data protection is heavily regulated, inter alia due to Denmark's EU membership and thereby the application of the EU Global Data Protection Regulation.

Part One: Basic principles: Character, source and nexus

1.1. General overview

The Danish income tax system applicable to Danish tax residents is based on a principle of global taxation. Accordingly, all income (or economic benefits) realized by Danish tax residents is taxable – unless attributable to a foreign real estate or permanent establishment of Danish corporate tax residents.[11] Taxable income realized by Danish tax residents is generally taxed according to the net principle.

The Danish tax system applicable to taxpayers subject to Danish limited tax liability is of a schedular nature. Accordingly, non-Danish tax residents are only subject to Danish source taxation if the income may be classified as certain categories of income specifically listed in the relevant legislation.[12] Generally, such source taxation is imposed through a

9 Para. 17 of the preamble to the Database Directive.

10 Art. 52 (1) and (2) litra a of the European Patent Convention.

11 Danish tax residency is determined according to s. 1 of the Danish Source Taxation Act [DK: Kildeskatteloven] with respect to individual taxpayers and s. 1 of the Danish Corporate Income Tax Act [DK: Selskabsskatteloven] with respect to corporate taxpayers. The principle of global taxation is stated in s. 4 of the Danish State Tax Act [DK: Statsskatteloven] and the modified territoriality principle applicable to corporate taxpayers is stated in s. 8 (2) of the Danish Corporate Income Tax Act [DK: Selskabsskatteloven].

12 The categories of income subject to Danish limited taxation are stated in s. 2 of the Danish Source Taxation Act [DK: Kildeskatteloven] with respect to individual taxpayers and s. 2 of the Danish Corporate Income Tax [DK: Selskabsskatteloven] Act with respect to corporate taxpayers.

withholding obligation on the payer.[13]

In terms of classification of specific items of income, the relevant payment should be classified for tax purposes. In the absence of specific tax law definitions etc., private law often serves as the factual description of a phenomenon at hand. The prevailing view is that private law takes a guiding position towards tax law. In essence, this point of view implies private law prejudice and tax law respect of private law arrangements, concepts and terms etc. However, as Danish private law currently does not contain a specific definition and regulation of data, this does not offer much guidance in this specific regard.

Notably, while it is commonly acknowledged that the accounting treatment is the practical starting point for Danish tax purposes, any income or cost should be classified according to tax law principles, i.e., accounting principles and treatment of certain assets or income components are not binding for Danish tax purposes.

1.2. Character

Data as a stand-alone asset?

The characterization of data – and especially raw data – has previously not been dealt with publicly in a Danish tax law context and there seems to be no category of income or assets which would easily include data as a stand-alone asset. Consequently, companies utilizing data in a commercial setting must rely on the existing concepts and income components under Danish tax law.

No generally applicable definition of an asset exists for tax law purposes but as stated, the practical starting point for tax purposes is the accounting treatment (IFRS and IAS frameworks as well as the Danish Act on Financial Accounts). Generally, most assets categorized as assets for accounting purposes, should also be treated as an asset for Danish tax law purposes although this may not always be the case.

An asset is – for Danish accounting purposes – defined as "resources under the control of the company as a result of past events and from which future economic benefits are expected to flow to the company",[14] and accordingly, it seems difficult to argue that raw data, aggregated and structured data sets as well as algorithms should not, in principle, be considered assets provided that the company has sufficient control – not necessarily meaning the full legal ownership.

Furthermore, for accounting purposes, an asset should – and must – be recognized in the balance sheet when it is probable that future economic benefits will flow to the company and the value of the asset can be measured reliably.[15] Presumably because of the challenges of valuing raw data collected by a company, it is our understanding that this – in practice –implies that raw data collected by a company is not recognized in the balance sheet. Similarly, the challenges of valuing aggregated and structured data sets as well as algorithms internally developed by the company will – in practice – imply that such assets are not recognized on the balance sheet for Danish accounting purposes. However, subject to several conditions and detailed regulation, aggregated and structured data sets as well as

[13] The rules allowing for the withholding of tax are found in the Danish Taxation at Source Act ss. 65-65D for corporate taxpayers and in chapter V for individual taxpayers.

[14] Annex 1, litra C no. 1 of the Danish Act on Financial Accounts [DK: Årsregnskabsloven].

[15] S. 33 of the Danish Act on Financial Accounts [DK: Årsregnskabsloven].

algorithms considered a "development project" for accounting purposes, may be capitalized and hence recognized on the balance sheet.

It is possible that in some cases raw data, aggregated and structured data sets as well as algorithms to which control is acquired – and thereby provide a reliable value – may lead to a categorization as assets that should be recognized on the balance sheet for accounting purposes.

In light of the apparent accounting treatment, it is relevant to consider whether data – although typically not reflected on the balance sheet – should still be considered an intangible asset for Danish tax purposes. This is primarily of relevance with respect to tax depreciation of assets according to the Danish Tax Depreciation Act, which inter alia applies to know-how, patents, copyrights or trademarks.[16] Tax depreciation requires that the intangible asset has been acquired and not built up internally. The definition of depreciable intangible assets is broad and may according to the wording also include other intangible assets, "such as" the intangible assets explicitly mentioned in the provision. While there is very little guidance on how to delineate the definition, it has previously been argued in the tax literature that only intangible assets "similar" to the listed assets may be within the scope[17] but the exact scope is uncertain and could potentially develop over time in line with societal and technical developments.

In the context of big data transactions, we consider it most likely that raw data does not fall within the scope of the Danish Tax Depreciation Act. On the other hand, copyright protected databases should be within the scope of the Act. The above uncertainty with respect to the exact scope of depreciable intangible assets is then of primary relevance in other data-driven businesses including aggregated and structured data sets not being a copyright protected database and algorithms.

If covered by the Danish Tax Depreciation Act, the acquisition price of the intangible asset can be depreciated 1/7 for seven years.

If data should not be considered within the scope of intangible assets under the Danish Tax Depreciation Act, another option to be treated as an asset for Danish tax purposes, would be if data falls under the scope of section 5a of the Danish State Tax Act. The provision was introduced in 1903, and the wording does not even use the term asset directly but rather the term "formuegenstande", which is predominantly translated into being assets or property in the absence of better alternatives. If data is falling under the scope of said provision any gains/losses on the disposal of data would be tax exempt/ non-deductible and not subject to tax depreciations. Capital gains/losses on "assets/property" (DK: formuegenstande) are only taxable to the extent the asset is acquired for speculative purposes or acquired as part of the taxpayer's business with trade of data. Albeit a theoretical possibility exists to include data assets under the scope of section 5a of the Danish State Tax Act, we do not consider such a result very likely as the tax exemption in practice is extremely narrow.

In light of the above, those data assets not covered by the Danish Tax Depreciation Act – as well as data assets covered by the Danish Tax Depreciation Act with respect to

[16] S. 40(2) of the Danish Tax Depreciation Act [DK: Afskrivningsloven] (unofficial translation): In the case of acquisition of other intangible assets such as special manufacturing method or similar (know-how), patent right, author and artist right and the right to a design or trademark or in the case of acquisition of the right under a yield contract, lease or rental contract.

[17] Jakob Bundgaard & Louise Fjord Kjærsgaard, *Afståelsesbeskatning ved flytning af DEMPE-funktioner?* Tidsskrift for skatter og afgifter, TfS 2017, 668, pp. 668-672.

non-depreciation matters – should, in our view, be treated in accordance with the following principles.

Tax treatment of business transactions involving data

The most predominant tax consequences involving big data transactions seems to be whether the income generated is considered taxable income and whether the expenses connected with big data transactions are considered deductible business expenses. In this regard the Danish tax system for corporate tax residents is rather simple. Generally, income is considered taxable income, and generally no distinction has to be made as to the type of income in this regard. Only few income items are exempt from taxation, e.g., tax-exempt dividend distributions (participation exemption) and group contributions.

If raw data is not considered an asset/property [DK: formuegenstand] according to section 5 of the Danish State Tax Act, we consider it likely that any income arising from business transactions involving data, may be regarded as ordinary business income taxable according to section 4 of the Danish State Tax Act. The income is computed in accordance with the net principle, which implies that potential costs incurred in the context of the business, may be considered as deductible business expenses according to section 6 of the Danish State Tax Act. Deductibility requires that the relevant costs are incurred for the purpose of acquiring, securing or maintaining *taxable* income. In addition, deductibility requires that the cost in question is not used to broaden the income base, including start-up costs and establishment costs. Falling into this categorization would imply that the income is taxable, and in pure domestic transactions that there are no options to obtain tax exemption. The same tax treatment is generally applicable to income generated from intellectual property. In the context of big data transactions – including sale or access to raw data, aggregated and structured data sets as well as developed algorithms – income would also be taxed as business income.

On the buyer side, the purchase of or access to data (raw data, aggregated and structured data sets as well as algorithms) outside the scope of the Danish Tax Depreciation Act in a commercial transaction from another party, may be regarded as a business expense, which is deductible according to section 6 of the Danish State Tax Act provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income. In addition, deductibility requires that the cost in question is not used to broaden the income base, including start-up costs and establishment costs.

Cross-border issues

According to Danish domestic tax law, the term "permanent establishment" – whether a Danish or a foreign permanent establishment – should be interpreted according to the definition in 2017- version of the OECD Model Tax Convention and its Commentary. Income attributed to a permanent establishment is calculated as the income that the establishment could have obtained – including through its internal transactions with other parts of the enterprise of which the permanent establishment is a part – if it had been a separate and independent enterprise that was engaged in the same or similar activity under the same or similar conditions, taking into account the functions performed, the assets used and

the risks assumed by the undertaking concerned through the place of business.[18] Stated otherwise, according to Danish domestic tax law the attribution of income to permanent establishments follows the direct method and an *unlimited* independence fiction of the permanent establishment. However, if an applicable tax treaty provides for another attribution of profits to the permanent establishment, the method provided in the tax treaty applies.

No provision exists on imposing withholding tax specifically on payments for digital products or services. However, payments classified as royalties are subject to Danish withholding tax,[19] and in this regard royalty is defined as:

> Royalties mean payments of any kind received as a consideration for the use of, or the right to use, any patent, trademark, pattern or model, plan, secret formula or process, or payments for information concerning industrial, commercial or scientific experience."[20] (Unofficial translation)

Notably, if comparing the Danish domestic definition with the definition included in article 12 (2) of the OECD Model Tax Convention (and often implemented in Danish tax treaties), the definition excludes "payments of any kind received as a consideration for the use of, or the right to use, any copyright of literary, artistic or scientific work including cinematograph films". This is of great importance, since EDB[21] including software is categorised as literary work under Danish copyright law.[22]

Therefore, if software is not protected by a patent, payments paid as consideration for the use or the right to use software should *not* be classified as royalties for Danish domestic tax purposes.

Further, the wording "use of or right to use industrial, scientific or commercial equipment" is absent, if the Danish domestic definition of royalties is compared with the definition of royalties in article 12 (2) of older versions of the OECD Model Tax Convention (and implemented in some of the Danish tax treaties) and the definition of royalty in the Interest-/and Royalty Directive, implying that leasing fees for tangible property, such as servers, is not subject to withholding tax as a royalty.

Under Danish domestic tax law, there is no limited tax liability on capital gains from the alienation of digital products and services.

Hence, it is argued that the classification of income generated from digital products and services, including data-based products, will generally be limited to whether the payment should be classified as royalty and whether the provision of such products and services create a permanent establishment of the service provider to which the payment should be attributed. However, from a Danish domestic perspective, in the absence of a Danish permanent establishment to which the relevant payment may be attributed – only payments for the use or the right to use patented data-based products should be classified

18 S. 2 (2) and 8 (6) of the Danish Corporate Income Tax Act [DK: Selskabsskatteloven] and s. 2 (3) of the Danish Taxation at Source Act [DK: Kildeskatteloven].

19 S. 2, (1), no. 8 of the Danish Taxation at Source Act [DK: Kildeskatteloven] in respect of individuals and s. 2 (1), litra g of the Danish Corporate Income Tax Act [DK: Selskabsskatteloven].

20 S. 65C (4) of the Danish Taxation at Source Act [DK: Kildeskatteloven] which contains the general royalty definition relevant with respect to Danish limited liability taxation.

21 Danish abbreviation for a group of assets equal to those covered by "Information Technology."

22 S. 1 (3) of the Danish Copyright Act [DK: Ophavsretsloven].

as royalties and subject to taxation at source at a rate of 22% unless reduced or renounced by an applicable tax treaty or the Interest-/Royalty Directive.

Part Two: Application of treaty principles

2.1. General Overview

Denmark has a rather extensive tax treaty network comprising more than 70 applicable tax treaties. In general, Denmark generally adheres to the OECD Model Tax Convention as a basis for negotiating bilateral tax treaties and generally relies heavily on the OECD Commentaries when formulating and interpreting treaty provisions. Hence, most Danish tax treaties are based on the prevailing version of the OECD Model Tax Convention at the time of negotiation of a given tax treaty.

Denmark has however shown a willingness to rely on the UN Model Tax Convention when negotiating tax treaties with developing countries, adding emphasis to protecting the rights of the source country to tax, e.g. by allowing for source taxation on royalty payments, broadening the scope of the definition of royalties to also include technical services, technical assistance or industrial, commercial and scientific equipment as well as broadening the definition of permanent establishment to also include so-called service permanent establishments.

In approximately 40% of the Danish tax treaties payments classified as royalties may be taxed in the residence state as well as in the other state, i.e., shared taxing right.

Part Three: Transfer pricing

3.1. Application of transfer pricing principles

The arm's length principle is a fixed and well-established part of Danish taw law. Section 2 of the Danish Tax Assessment Act contains the arm's length principle regarding transactions between related parties. The arm's length principle is interpreted in accordance with article 9 of the OECD Model Tax Convention and the associated OECD Transfer Pricing Guidelines which are considered a crucial source of interpretation.

Currently, no official guidance exists with respect to the transfer pricing treatment of data and data driven transactions. Moreover, neither the Danish legislator nor the Danish tax authorities have indicated how they view data and data driven business models in the context of transfer pricing. However, we clearly expect Denmark to follow troop whenever international movements start to occur. As an example of the Danish tax authorities' reliance on the OECD Transfer Pricing Guidelines, seemingly the Danish tax authorities take the somewhat far-fetched position that DEMPE functions by themselves can be seen as an intangible asset not only for transfer pricing purposes but apparently also for domestic

substantive tax law. This positioned has been questioned in the international tax literature.[23]

Inclusion of raw data in the context of transfer pricing, requires certainty with respect to the definition of data, the valuation principles which should be applied etc. Although no public indication seems available, we consider it likely that the Danish tax authorities would consider certain data transactions as hard-to-value-intangible transactions.

Part Four: Special regimes

Currently, Denmark has not proposed, implemented or is contemplating any digital services tax regime or any other taxes specifically targeting digital business models.

No specific tax incentives exist with respect to data driven business models. However, a generally applicable rule exists regarding deduction for trial and research costs beyond the scope of deductibility of ordinary business costs (due to COVID-19 temporarily increased to a 130% deduction).[24] Despite a narrow wording of the provision, it has seemingly been intended by the legislator that also development work should be included, i.e. use of scientific or technical knowledge to produce new or significantly improved materials, mechanisms or products, processes, systems or services. In our view, the development of software, the aggregation and structuring of data sets and the development of algorithms should fall within the scope. This seems to be supported by a ruling from 2016 regarding the development of an app (SKM2016.199 SR).

Finally, the current international debate on potential barter transactions and the tax implication of such transactions has not been considered in a Danish tax law context. However, since Danish tax residents are subject to tax on all economic benefits, whether in the shape of cash or assets of monetary value and whether originating from Denmark or abroad, in principle, it cannot be precluded that certain data transactions could be subject to tax on this basis.

Reference case studies

Data brokers/Information resellers

Based on the facts provided in the Directives for branch reporters, we find the following Danish tax treatment to be the most likely.

From the perspective of Broker Co as a separate corporate entity and considered a tax resident of Denmark, we find it likely that the payment made to Website Co and other suppliers for raw data, for domestic tax purposes should be considered a deductible business expense,[25]provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income of Broker Co and that the cost is not used to broaden the income base, including start-up costs and establishment costs. On the other hand, payments received by a Danish Broker Co from customers as consideration for the access to

[23] Jakob Bundgaard & Louise Fjord Kjærsgaard, *Afståelsesbeskatning ved flytning af DEMPE-funktioner?* Tidsskrift for skatter og afgifter, TfS 2017, 668, pp. 668-672.

[24] S. 8B of the Danish Tax Assessment Act [DK: Ligningsloven].

[25] S. 6a of the Danish State Tax Act [DK: Statsskatteloven].

data sets, would most likely be considered taxable income.[26] This tax treatment does not rely on any specific classification of the payment at hand, since all business income is, generally, considered taxable income. Based on the facts of the example, we consider it unlikely that Broker Co in any event should be allowed tax depreciation for data gathered or accessed through an application program interface. Further, in a situation, where Broker Co merely purchases raw data and sells access to structured data – without physical interference – this should clearly fall outside the Danish definition of a permanent establishment.

From the perspective Website Co as a separate corporate entity considered a tax resident of Denmark, we find it likely that the payment made by Broker Co as consideration for raw data, for Danish domestic tax purposes should be considered taxable income.[27] This tax treatment does not rely on any specific classification of the payment at hand, since all business income is, generally, considered taxable income. In a situation, where Website Co only sells raw data – without physical interference – this should clearly fall outside the Danish definition of a permanent establishment.

From the perspective of Danish business customers of Broker Co, we find it likely that the payment made to Broker Co as consideration for raw data, for Danish domestic tax purposes should be considered a deductible business expense.[28] This is provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income of the customers and that the cost is not used to broaden the income base, including start-up costs and establishment costs. In a situation, where customers merely purchase access to structured data – without physical interference – this should clearly fall outside the Danish definition of a permanent establishment.

From the perspective of Danish tax treaty policy, where merely raw data is purchased/sold and access to structured data is purchased/sold – without physical interference – this should clearly fall outside the definition of a permanent establishment according to the existing Danish tax treaty practice.

In respect of classification of payments as consideration for raw data and access to structured data sets, it seems decisive whether intellectual property protection is granted according to Danish legislation on copyright protection. Insofar intellectual property protection is granted, tax treaty classification as royalty may occur in accordance with Danish tax treaty provision ad modum article 12 of the OECD Model Tax Convention. This is provided that the access acquired would have constituted an infringement of the protected rights going beyond what is necessary in order to display or download the information.

We believe that raw data would never fulfill the criteria for copyright protection, whereas in the case of aggregated and structured data set, this will depend on the specific facts and circumstances with regard to the originality of the structured data set. However, for domestic tax purposes, the narrow definition of royalty entails that such potential royalty classification could not occur, since not even payments as consideration for the right to use a copyright protected asset fall within the scope of the domestic royalty definition.[29]

Denmark has not implemented or is contemplating a digital services tax or similar taxes targeting transactions included in this example.

[26] S. 4 of the Danish State Tax Act [DK: Statsskatteloven].

[27] S. 4 of the Danish State Tax Act [DK: Statsskatteloven].

[28] S. 6a of the Danish State Tax Act [DK: Statsskatteloven].

[29] S. 65 C (4) of the Danish Taxation at Source Act [DK: Kildeskatteloven].

Data feeds

Based on the facts provided in the Directives for branch reporters, we find the following Danish tax treatment to be the most likely.

From the perspective of Animal Data Co as a separate corporate entity and considered a tax resident of Denmark, we find it likely that the payment made by Information Site Co as consideration for the provision of continuous feed showing migration patterns and predictions should most likely be considered taxable income.[30] This tax treatment does not rely on any specific classification of the payment at hand, since all business income is, generally, considered taxable income. Based on the facts of the example, we consider it most likely that Animal Data Co under no circumstances should be allowed tax depreciation for raw data gathered or maps of predicted animal density at various future points of times created through analytic tools developed internally. Further, in a situation, where Animal Data Co merely sells access to structured data – without physical interference – this should clearly fall outside the Danish definition of a permanent establishment.

From the perspective of Information Site Co as a separate corporate entity and considered a tax resident of Denmark, we find it likely that the payment made to Animal Data Co as consideration for the continuous feed showing migration patterns and predictions on the website of Information Site Co, for domestic tax purposes should be considered a deductible business expense.[31] This is provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income of Information Site Co and that the cost is not used to broaden the income base, including start-up costs and establishment costs. Accordingly, Information Site Co is not eligible for tax depreciation. Further, in a situation, where Information Site Co merely purchases news feed – without physical interference – this should clearly fall outside the Danish definition of a permanent establishment.

In a scenario where data is exchanged for the news feed, in principle, such alternate remuneration should in our view also be subject to taxation (we have not addressed special tax exception regimes for non-profit NGOs in this regard). The current international debate on potential barter transactions and the tax implication of such transactions has not been considered in a Danish tax law context; hence, it cannot be precluded that both recipients are taxable of economic benefits realized.

From the perspective of Danish tax treaty policy, where merely news feed is purchased/sold – without physical interference – this should clearly fall outside the definition of a permanent establishment according to the existing Danish tax treaty practice.

In respect of the classification of payments – whether in cash or in kind – as consideration for newsfeed continuously showing on the recipient's website, it seems unlikely that the payment should be classified as royalties for tax treaty purposes as the payment should not be considered paid for *the right to use* a protected intellectual property except as may be necessary in order to display the information. Instead, we consider it likely that the sale of news feed should be classified as the provision of a service and thereby business income in accordance with Danish tax treaty provisions ad modum article 7 of the OECD Model Tax Convention.

Since the income arising from the sale of news feed should be classified as business

30 S. 4 of the Danish State Tax Act [DK: Statsskatteloven].

31 S. 6a of the Danish State Tax Act [DK: Statsskatteloven].

income for domestic tax purposes and since there is no permanent establishment, Danish taxation would not occur unless the recipient is a Danish tax resident.

Denmark has not implemented or is contemplating a digital services tax or similar taxes targeting transactions included in this example.

Performance data analytics

With respect to the example in the Directive for branch reporters regarding performance data analytics, a rather recent Danish tax ruling from the Tax Assessment Board[32] has been issued (published as SKM 2019.643.SR). Due to the overlap in factual circumstances, we consider it relevant to explain the ruling in detail rather than considering the fictitious example.

The case concerned a company ("the taxpayer") which was a manufacturer of and sold machinery. The taxpayer was tax resident in another EU country and the machines produced were distributed through local importers (independent of the manufacturer), to resellers who were in charge of the final sale to the end-customers.

The taxpayer intended to introduce a new business model in many European markets, including the Danish market. This business model would imply that the taxpayer offered several new features that could be purchased and activated in the machines. The taxpayer referred to the functions as "x-service" and "y-service", respectively. The option for purchasing these features could be given by the reseller at the time of the sale of the machine or at a later point in time.

The taxpayer intended to install a special hardware and software in future machines produced so that it would be possible for the owner of the machine to purchase "x-service" and "y-service". All hardware components would have at least one feature at the time of delivery, whereas additional features could be activated for the hardware components when purchasing "y-service". Hence, there would be hardware and inactive software installed and transferred to the buyer in connection with the sale of the machine. In other words, the taxpayer would sell machines that contained software but would not be available to the owner until it was activated.

After purchasing the machine, the owner could choose to activate additional hardware features as well as the inactive software by purchasing one or more "x-service" and "y-service". This could happen in connection with, or immediately after, the purchase or at a predefined later time. If the owner did not purchase activation of the "x-service" and "y-service", the owner would still have ownership of the inactive hardware and software, as this would be installed in the machine from the factory. Stated otherwise, the taxpayer intended to produce and sell machines containing an "option" for activating "x-service" and "y-service".

The hardware and software would be installed in all machines of a given model, and thus it would not be possible to deselect this installation, i.e., the pre-installed inactive hardware and software was not an additional purchase but instead standard equipment for a given model.

"x-service" were features in the form of software installed in the machine that the owner

[32] The Danish Tax Assessment Board (DK: Skatterådet) is the highest tax assessment body in Denmark. The body has 19 members – six are elected by the Parliament and 13 by the Minister for Taxation. One of its most important tasks is to issue advance binding rulings to taxpayers applying for such rulings.

of the machine (with the pre-installed inactive hardware and software in the machine) would be able to activate. The "x-service" consisted of many different features such as online information and Google. This would be additional software features that the owner could purchase from the retailer and subsequently activate through the application "X-app", which was intended to be developed by the taxpayer.

"Y-service" were features in the form of hardware and software components, which were pre-installed in the machine, from which the owner could purchase activation. The functions were not available to the owner unless the owner had purchased an activation of one or more of the features. The "y-service" consisted of several different functions.

Activation of "x-service" and "y-service" could be purchased individually, so that the owner could choose to activate exactly the features that met his/her needs.

If the owner chose to purchase one or more "x-service" or "y-service", the owner acquired the right to use the pre-installed hardware and software in the machine for the feature(s) purchased. Activation of the features was subsequently done electronically. Thus, the taxpayer did not have offices or other workplaces available in Denmark. Likewise, the taxpayer had no employees in Denmark or in any other way authority to instruct representatives in Denmark, as the importers as well as the resellers were independent of the taxpayer's Group. In addition, the servers used to activate the features were located in another country.

Activation of any features purchased would follow the machine throughout its economic life, i.e., if one or more features were activated and the machine was resold, the new owner would also be able to use the features that had been purchased and activated by a previous owner. The taxpayer intended, however, that at a later point in time, it should be possible for the purchased features to follow the user rather than the machine.

The taxpayer was and remained the owner of any intellectual property rights associated with the "x-service" or "y-service". Thus, the buyer would only acquire a right to use the purchased features, whereas any patent, brand, trademark, etc. as well as the right to deploy underlying or related intellectual property rights remained exclusively with the taxpayer.

If the owner wanted to activate one or more "x-service" or "y-service", a voucher could be purchased from the reseller, which could subsequently be used to activate these features. When purchasing a "y-service", there would be an electronic "unlocking" of the hardware and software contained in the machine for use in the features.

The taxpayer asked the Danish Tax Assessment Board to confirm:

1. That the proposed business model did not create a permanent establishment of the taxpayer in Denmark?
2. That the payments paid as consideration for the activation of a software/hardware features (i.e., "x-service" or "y-service") should not be classified as royalty payments?

In answering whether a permanent establishment would be created, the Danish Tax Assessment Board first analyzed the three cumulative conditions known under article 5 (1) of the OECD Model Tax Convention.

Regarding the assessment of whether the taxpayer had a place of business at its disposal in Denmark, reference was made to the OECD Commentary from 2017 and it was stated that machinery and other equipment in some cases could constitute a place of business *if* the enterprise had the equipment at its disposal. Specifically, it was the hardware and software being a prerequisite for activating the "x-service" or "y-service". As the equipment would be at the disposal of the owner, further, that it would be the owner who could activate and

deactivate the features, the Danish Tax Assessment Board stated that the equipment could not be considered to be at the disposal of the taxpayer.

The question was then whether, when activating the features, the taxpayer could be considered to have a permanent establishment as a result of traditional E-commerce, as the purchase could take place directly through the online platform developed by the taxpayer. With reference to paragraph 123 of the OECD Commentary from 2017, the Danish Tax Assessment Board analyzed the familiar distinction between websites and servers and stated that while the website could not constitute a permanent establishment, a server could. Reference was made to administrative practice, according to which the decisive factor is whether the company exercises control over or operates a server in Denmark. Based on this, and the fact that the servers from which the activation of the features took place were located outside Denmark, they could not constitute a permanent establishment of the taxpayer in Denmark.

The second question, i.e., whether the payment paid as consideration for the activation of a software/hardware feature should be classified as a royalty payment for domestic tax purposes and thereby whether the taxpayer would be subject to Danish limited tax liability on royalty payments. The Danish Tax Assessment Board concluded that when activated, the owner of the machine would only be able to use the relevant features, i.e., the owner obtained no right to use patents, trademarks or any other assets included in the royalty definition. Thus, the owner would only be able to utilize features that were already built into the machine, but not a right to the underlying software or hardware.

With reference to paragraphs 12-14 of the Commentaries on article 12 of the OECD Model Tax Convention, it was stated that payments should be classified as business income under article 7 if the right to use software was limited to those necessary to use the program on the buyer's computers or networks and reproduction for other purposes was not permitted under the license agreement. It was the opinion of the Danish Tax Assessment Board (with reference to another advance binding ruling published as SKM 2019.223 SR), that the rights to the underlying software remained with the taxpayer, while the customer was given the right to use the functions that the software made possible. For these reasons, the payments paid as consideration for the activation of the "x-service" or "y-service" were not within the scope of the definition of royalties.

In conclusion, the Danish Tax Assessment Board decided that the taxpayer would not be subject to Danish limited tax liability in the suggested business model.

As also stated in the ruling explained above, servers and data centers may – if they are owned, controlled or operated by a non-resident company – constitute a permanent establishment. This assessment may be illustrated through another Danish case in the form of an advance binding ruling from the Danish Tax Assessment Board published as SKM2016.188.SR.

In the decision, a Danish located datacenter including servers and other equipment was owned by a Danish subsidiary of a foreign parent company. Employees of the Danish subsidiary would run, operate and maintain the server farm and according to an intragroup agreement deliver server capacity to host the webpage of the parent company on arm's length terms. All work related to the webpages and applications would be performed in a way whereby all software, add-content and all data would be stored on the servers located on different addresses. The parent company did not operate with country specific webpages, i.e., all customers would have access to one common webpage, but add-content would be directed towards specific customers based on their demographics.

The Danish subsidiary would not be granted permission to use or handle the data stored

on the servers, which was controlled by the foreign parent company, unless the Danish subsidiary acted as service provider on behalf of or under instructions from the parent company. The Danish subsidiary would not take part in any agreement, thereby allowing the company to provide any services directly to customers, advertisers or developers and would also not legally oblige or create obligations for the parent company. Personnel employed by the Danish subsidiary or working under contract for the Danish subsidiary would primarily be responsible for the daily management, including installation, operations, maintenance and reparations of the equipment installed in the datacenter. The employees working in the datacenter would follow the instructions received by the relevant management teams with respect to daily operations and maintenance of the datacenter. Access to the datacenter would be restricted to the employees of the Danish subsidiary as well as certain service providers.

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 another situation of emergencies), this server could be shut down using the remote access, which also enabled redirecting the data to other servers. Finally, it was stated that such remote access would not differ from the standard terms seen in any cloud computing arrangement.

The Danish Tax Assessment Board ruled that the Danish subsidiary did not constitute a permanent establishment for the parent company as the parent company should not be considered to own, lease or operate the servers but instead to pay an arm's length service fee for the hosting services provided by the Danish subsidiary. On this basis, the Danish Tax Assessment Board referred to paragraph 42.2. of the OECD Commentary to article 5 of the OECD Model Tax Convention (2014) by stating that an agreement with an internet service provider according to which a website is stored on a server belonging to the internet service provider, typically does not result in the server and the location of the server to be at the disposal of the company, even if the company has been able to determine that its website should be stored on a specific server at a specific location. The Danish Tax Assessment Board concluded that the parent company should only be considered to have a permanent establishment in Denmark if the company would exercise control over a server *as if the parent company in fact owned the servers or operated the servers* of the Danish subsidiary. Based on the facts, no such access was present since the parent company did not have the right to instruct or control the work of the employees of the Danish subsidiary. Moreover, the parent company would generally not have physical access to the servers and the remote access could not be regarded as the right to dispose over the servers. On this basis, de facto control over the servers did not exist and, as a result, no permanent establishment would be created. It should be noted that the Danish Tax Assessment Board made the reservation that all the agreements between the companies should be concluded on arm's length terms.

Somewhat similar decisions have been made in other advance binding rulings given by the Danish Tax Assessment Board, e.g., SKM 2015.369 SR, where a Danish resident company according to a contract would receive certain services but did not obtain further rights. Hence, the Danish company would be responsible for the operation and maintenance of the content placed on the servers, i.e., software and data, while the service provider

would be responsible for the operation of the servers and could change functions after notifying the Danish company. On this basis, the Danish Tax Assessment Board found that the Danish company could not be considered to have facilities available from which its business activities were performed and therefore its foreign activities did not constitute a permanent establishment.

Analytic based consultancies

From the perspective of Consultant Co as a separate corporate entity and considered a tax resident of Denmark, we find it likely that the payment made by Educational Institutions for consultancy services and by researchers for the access to the database should most likely be considered taxable income.[33] This tax treatment does not rely on any specific classification of the payment at hand, since all business income is considered taxable income. Based on the facts of the example, we consider it unlikely that Consultant Co in any event should be allowed tax depreciation for the accumulated data set. Further, in a situation, where consultant services or access to the database is being sold – without physical presence of Consultant Co – this should fall outside the Danish definition of a permanent establishment.

From the perspective of the Educational Institutions and assuming that such institution would have been taxable in Denmark (as a general rule, state-owned institutions are tax exempt), payments for consultancy services should most likely be deductible as a business expense.[34] This is provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income of the Educational Institutions and that the cost is not used to broaden the income base, including start-up costs and establishment costs. Further, in a situation, where consultant services are being purchased – without physical presence of Educational Institution in the country of the supplier – this should clearly fall outside the Danish definition of a permanent establishment.

From the perspective of the researchers had they been Danish tax residents, payments for the access to databases are deductible insofar that the researchers are engaged in the conduct of a taxable business in Denmark. This is provided that the relevant costs are incurred for the purpose of acquiring, securing or maintaining taxable income of the researcher and that the cost is not used to broaden the income base, including start-up costs and establishment costs. Based on the facts of the example, we consider it most likely that the researchers under no circumstances should be allowed tax depreciation for access to the database. Further, in a situation, where access to the database is being purchased – without physical presence of researchers in the country of the supplier – this should fall outside the Danish definition of a permanent establishment.

From the perspective of Danish tax treaty policy, where access to the database is purchased/sold and consultancy services are purchased/sold – without physical presence – this should fall outside the definition of a permanent establishment according to the existing tax treaty practice.

In respect of the classification for tax treaty purposes of payments paid by Educational Institutions as consideration for consultancy services, it seems unlikely that the payment should be classified as royalties for tax treaty purposes as the payment should not be

[33] S. 4 of the Danish State Tax Act [DK: Statsskatteloven].

[34] S. 6a of the Danish State Tax Act [DK: Statsskatteloven].

considered paid for *the right to use* a protected intellectual property (i.e., potentially the database). Instead, we consider it likely that the provision of consultancy services (based on information from the database) should be classified as business income in accordance with Danish tax treaty provision ad modum article 7 of the OECD Model Tax Convention. Conversely, payments paid by researchers as consideration for access to the database, could be classified as royalties according to Danish tax treaty provision ad modum article 12 of the OECD Model Tax Convention provided that the payment is considered paid for *the right to use a protected intellectual property*. However, for domestic tax purposes, the narrower royalty definition would entail that Danish source taxation under such potential royalty classification could not occur, since any payment paid as consideration for the right to use a copyright protected asset (including protected databases) falls outside the scope of the domestic royalty definition.[35]

[35] S. 65C (4) of the Danish Taxation at Source Act [DK: Kildeskatteloven] which contains the general royalty definition relevant with respect to Danish limited liability taxation.


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