

The Global Dialogue on Digital Finance

Briefing Note: Data Monetization – a new accounting paradigm? September 2020

During the [IIF Digital Interchange: the Global Dialogue on Digital Finance](#) this month, we discussed the monetization of data and implications for taxation with David Hardoon, Senior Advisor for Data and Artificial Intelligence at Union Bank of the Philippines.¹ This briefing note summarizes and captures some reflections from the very thought-provoking questions and issues that David raised in that session.²

These are complex and challenging issues, and there is much work still to be done in developing and improving consistent methodologies for valuing data. As such, we do not yet have all the answers, though this note seeks to identify the key issues and considerations that warrant further exploration.

Data is more central to the economy than ever before, and this presents some fundamental questions and challenges for the ability of existing financial and governmental frameworks to keep up. David observes that we have rapidly evolved from thinking of data just as a risk or compliance issue, to where it is recognized as having essential value as a key economic driver.

Where data-enabled activities have ushered in a new economic paradigm, they also pose the question as to whether we might need to consider a new accounting paradigm also. This gives rise to a series of pertinent considerations, including:

- valuation methodologies for data, recognizing the unique characteristics of different parties, data sets, and use scenarios;
- how to represent the monetized value of data as an asset on the balance sheet;
- depreciation or amortization treatments for data as an asset;
- how to attribute revenues and profits to data, and/or to other asset types; and
- cross-border implications.

Measuring and Recognizing Data's Value

The nature of data does not neatly align with existing concepts of other asset types. It is not fungible like a monetary instrument or a bulk commodity, with each data item being individually different. Data is also not uniquely consumable, David noting that “Unlike perishable fuels, data in its raw form doesn’t get destroyed when you use it; it doesn’t go away.”

¹ Prior to joining Union Bank of the Philippines, David was the Chief Data Officer at the Monetary Authority of Singapore. David is also Chair of the Data Committee at the Aboitiz Group, Senior Advisor to both Singapore’s Central Provident Fund Board and Corrupt Practices Investigation Bureau, and a faculty member at Singapore Management University. David has spoken in various IIF events on data-related topics, including privacy expectations through COVID, localization and ethical use; he also addressed these topics with us on [Episode 66](#) of the IIF’s FRT podcast.

² See [here](#) for the video of our conversation. This conversation also preceded a panel discussion on other areas of taxation and digital services, with expert representatives of the OECD, the UK’s HM Treasury, IBM and PwC.

The worth of the same data item varies significantly for two parties, depending on what other data they have, and on their capacity to ‘refine’ that data. There might be some reliance on network effects (and a wider data set), to amplify the value of an individual data item held. And the value of a data item may decline over time, as it becomes outdated and/or superseded by new data.

Equally, data’s vital role in the modern economy makes it more important to a business’s success than the traditional designation of ‘Intangible’ assets might suggest. Across digital advertising, social media, credit analytics and more, whole business models are founded on the paramount importance of accessing, holding, analyzing and utilizing data.

Indeed, in the new digital economy, there is a legitimate question on whether legacy classifications of Intangible Assets are still fit for purpose: perhaps intellectual property and patents now differ from goodwill? Or maybe it is simply that data and intellectual property are more important to a business now than land or property or physical inventory. David suggests that we are perhaps in an era where data is a new type of “exotic asset,” not neatly fitting into existing categories. We may need a new conceptual framework, a new paradigm, as well as new valuation methods.

A Productive Asset – and Liability

Some have used the analogy of data as “the new oil” for the digital economy, overlooking the fungibility issue, but correctly recognizing that its value increases at different stages of the ‘refinement’ process. David poses that any attempt to value data (and indeed any potential effort to tax it) must look beyond its simple ‘raw’ level:

“How do we go about an actual value for data? Do we value it in its raw form? Do we value it in fact in terms of the process that one applies which is enacting the value? How do you accommodate where the data had originated from? How do we accommodate it where the process to enrich it has taken place? Where do you actually leverage data, in terms of selling it?”

Perhaps a more rounded analogy is that of data as the “new uranium,” a point made previously by Australian open banking report author Scott Farrell.³ Scott had outlined that data not only needs to be refined, and that it can be used for both positive and malevolent purposes, but that it decays over time - and critically, it has to be secured.

This alludes to an important duality in a world with an intense legislative and supervisory focus on digital privacy: as well as being an asset, data can also be a liability, if not sufficiently secured and protected. As well as the potential for reputational damage and misconduct risk, the European Union’s General Data Protection Regulation (GDPR) provides for fines of up to four percent of a firm’s global annual revenues for violations.⁴ To correctly account for data on the balance sheet, we need to recognize this net asset value; and when we attribute the revenue generated from data, we also need to consider the costs to secure it.

The Attribution Challenge

If we do recognize data as some type of meaningful (net) asset, whether an “exotic asset” or otherwise, a further consideration is how revenues and profits can be attributed to that asset, and to the investments and capabilities exhibited through the refinement process. David observes:

“It is... necessary to create a view and almost an end-to-end perspective of what are the stages that are involved from origin to uses of data, and how does the value get attributed to it, in what stages and in what location?”

³ [IIF 2019 G20 Conference](#), Tokyo, June 2019.

⁴ The full GDPR text is available at <https://eur-lex.europa.eu/eli/reg/2016/679/oj>

This poses some further interesting challenges for how to align that alongside income that might be attributable to other assets, such as logistics capabilities. Discussing the example of Amazon, known for its very strong capabilities in data and in logistics and delivery services, David stresses that the ability of Amazon's Alexa service "to recommend to you a product that you have now bought... needs to be attributed to a data-related process."

However, even this attribution with logistics can become complex, or even circular. Discussing the notion of a hypothetical firm, David observes that you could have the scenario where "20% or 30% of what they're doing in logistics is made possible by this optimization algorithm, which is driven by data from the same logistics."

Attribution modelling also needs to consider timeliness, and the declining value of data over time. This in turn may help to inform (or perhaps at least align with) the choice of depreciation method and schedule for data. It would also need to consider that the potential costs from security breaches or mis-use would not necessarily erode at the same rate as the commercial value.

David also notes that several firms already use third party providers for services such as cleansing data – services that are paid and taxed. Another consideration is 'data ownership', or the concurrent 'data rights' of multiple parties that may have access to use that asset.⁵

Cross-border Implications

Facing into known data localization issues and also layering a taxation lens, David highlights that having an attribution framework could actually "be an immense enabler for driving cross-border data." Absent such a framework, he identifies two sets of risks: (i) that some countries may view data in its singular (unrefined) form, as a strategic national resource that must not be shared abroad; and (ii) that the potential for mis-use of data may be amplified in countries where some parties may effectively be encouraged to mine data from that country for free.

David also highlights that an attribution framework is a necessary precondition for taxation, with the ability to reflect refinement (beyond the status of the initial raw data) and the value added. While this is already complex with a need for measurement methodologies at the different stages where value is enhanced, David identifies a possible opportunity to move the dial in data cross-border connectivity debates, particularly if it was to generate a new revenue source for a sovereign:

Such a framework "will motivate leveraging on that asset in a safe way, a controlled manner, that has a revenue stream back, and mitigates those situations that... without controls may occur – and to me, taxation is a control – for the exploitation of data."

Next Steps

These are complex issues, with a complex labyrinth of interested stakeholders, and there is a need for extensive further dialogue and analysis. The IIF will continue exploring these issues with leading thinkers such as David, and it will be a subject for further papers and/or podcast episodes.

More immediately, the IIF is convening a new Data Forum, for regular 'virtual roundtable' discussion amongst IIF members, policymakers, regulators, and other industry leaders. This subject will be one of the key initial agenda items in that Forum, alongside ethical use and connectivity across borders.

⁵ The concepts of data 'ownership' and 'rights' are discussed further with Doug Elliott of Oliver Wyman on [Episode 34](#) of the IIF's FRT podcast

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