The Proliferation of Valuable Digital IP and Data Assets Creates an Inflection Point (and Opportunity) for Companies

*by* **STEPHEN SNYDER, CPA, CGMA, CVA** *and* **CHRIS JEFFORDS, CPA, CMA**

If you peruse the latest annual reports of the most valuable companies, Microsoft, Apple, Nvidia, Amazon, Alphabet and Meta, you will notice a common theme – digital. In fact, Microsoft describes itself as a technology company committed to making "digital technology available broadly with a mission to empower every person and every organization on the planet to achieve more." Developing valuable digital technologies and data digitization drives a transformation across all industries.

this article will

DEFINE
digital intangible property ("digital IP") and data assets

DESCRIBE
how data drives value in companies

PROVIDE EXAMPLES
of ways companies exploit data and digital IP

INTRODUCE
the data value stack framework for analyzing data

DESCRIBE
how companies can identify their value-creating digital and data assets

HIGHLIGHT
certain tax implications associated with valuable digital and data assets

DESCRIBE
typical operating models and legal entities that can be created to manage digital IP and data assets more effectively and efficiently

PROVIDE TAKEAWAYS

Companies are now deploying robotic process automation ("RPA"), machine learning ("ML"), and artificial intelligence ("AI") tools to manage all of this data, uncover new insights about customers and suppliers, reduce errors, and drive more efficient use of resources.

As executives within organizations are driving new investments in digital capabilities to identify and unlock new sources of value across the company, tax leaders should be paying close attention to how those investments are being structured, the types of assets being developed, how they are registered and managed, where they are being developed, and how they are being monetized.

All of these changing value drivers mean disruption to your company's existing value chain and tax model.

DEFINITIONS OF DIGITAL IP AND DATA ASSETS

Digital IP

Digital IP is a type of intangible asset that is created and stored digitally. Digital IP includes software copyrights, non-copyrightable software, domain names, digital content, data, trade secrets, algorithms, analytics, etc. Despite being intangible, digital IP can hold significant value for businesses and individuals, especially in the digital economy.

Examples of technologies and products that utilize digital IP comprise software for internal use and software for sale to customers. Internal use software includes tools businesses leverage to enhance revenue, improve productivity, and help decrease operating costs in strategic activities such as product development, procurement and supply chain management.

Software developed for customer sale includes traditional application software, software-as-a-service ("SaaS"), internet of

things ("IOT"), and platform as a service. Software can also be embedded in a device's hardware to help control its functionality.

Data Assets

Data assets are typically a company's largest and most prevalent category of digital IP. A data asset is a digital entity or object made up of data that has value for a company or individual. Data assets can be structured or unstructured and exist in many formats, including databases, spreadsheets, videos, images, audio files and text documents. Data assets can improve decision-making, increase efficiency, transparency and generate revenue.

Additionally, data assets can be shared internally, externally, or transacted. Some common examples of data assets include:
- A dashboard that displays real-time data;
- A website that returns data in response to queries;
- A service that returns individual records from a database;
- Training materials and videos;
- Marketing collateral;
- Advertisements;
- Sales receipts;

Companies can use the right strategy and governance to turn their raw data into a valuable asset.

DRIVING VALUE FROM DATA

As a strategic asset, data should be viewed similarly to other value-driving intangible assets (e.g., trademarks, patents, copyrights, etc.) and measured against the value it provides to the company, whether that is increased revenue or profitability, operational efficiencies, or access to new markets and customers. The value of data lies in its ability to provide insights and information that can drive decision-making, create new products and services, and enhance overall efficiency and productivity for a company.

As companies continue to invest in data assets and develop new ways to harness value across their global organizations, tax departments are faced with understanding the impact on their current tax operating models:
- How are data asset investments structured within the global organization?
- How can data assets be identified and valued throughout the data lifecycle or "data value stack"?
- Which legal entity owns the data assets and bears the corresponding costs?
- Who sets the strategies, performs key functions and controls risks associated with data?
- Where do data assets fit within the organization's core value drivers, and how does that impact the company's value chain, economic relationships and tax operating models?
- What transactions exist around data assets, and how are they being reported for tax purposes?
- Do legal agreements exist that help clearly define which legal entity(ies) owns the data assets, which bears the development expenses and how transfers of the data are priced?

Data is a unique asset because its value and legal ownership can change based on where the data sits within the data value stack at a given point in time and what has been done to it. For example, raw data collected during customer purchases has an innate value, but its value can increase, sometimes exponentially, as the data is cleansed, enriched, combined, analyzed and monetized. Data is not a finite resource: its value and utility often increase as more and more data is collected and analyzed.

EXAMPLES OF WAYS COMPANIES EXPLOIT DATA AND DIGITAL IP

Now that we have defined digital IP and data let's describe some of the common ways that leading companies exploit data and digital technologies to drive value across their organizations:

Predictive Analytics and Forecasting – can enable organizations to anticipate future events and outcomes accurately, providing new growth opportunities.

Customer Targeting – use purchase patterns and associated buyer behaviors to identify product and buyer trends that can help optimize revenue and profit growth.

Targeted Advertising – build unified customer profiles that link known and unknown customer data together, giving marketers the power to provide personalized experiences for each customer at every touchpoint by connecting data across various external platforms.

Data Monetization is often used where enhanced data (and, in some cases, raw data) is delivered or sold to third-party entities in the form of data feed or preassembled reports.

Improve Operations - enhanced data can be exploited to improve the supply chain, maximize production volume and efficiency, enhance inventory management and enable the benchmarking of key information and metrics.

Asset Management and Predictive Maintenance – using data to determine when equipment and other assets should be serviced, repaired, or parts replaced to minimize downtime, reduce operating costs, and increase employee safety.

Data-as-a-Service – the delivery of value to end users through a SaaS mechanism or interface, where the customers can access the data products for a monthly or annual subscription fee.

Online/E-Commerce Marketplace – commerce platforms help companies transact directly with other companies (business-to-business) or customers (business-to-consumer). E-commerce marketplaces such as travel, online retail, gaming, auctions, gambling, travel, social media, etc., are increasingly gaining customer acceptance.

Software and firmware - these items are embedded in products, such as controls that drive improved functionality.

Internally developed software – leading retailers invest billions of dollars annually to develop and enhance internally developed software tools to optimize various aspects of their complex supply chains.

THE DATA VALUE STACK

The data value stack is a way to organize and visualize the components of value created with respect to data. It is created and organized in a manner consistent with a traditional Michael Porter[1]-style value chain analysis. The elements of the data value stack are summarized below.

Data Strategy: Long-term plan that defines the technology, processes, people, and rules required to manage an organization's information assets

Data Acquisition: Gather, filter and cleanse raw data before it is put in a data warehouse or another storage solution.

Data Cleansing: Fix incorrect, incomplete, duplicate or otherwise erroneous data in a data set.

Data Enhancement: Improve internal and client first-party data by appending it with context pulled or purchased from additional external sources.

Data Management: Collect, organize and access data to support productivity, efficiency, and decision-making.

Data Privacy and Security: Protect personal and privileged information from unauthorized access, use and disclosure.

Data-as-an-Asset: A body of data is a comprehensive asset for an organization and has value in relation to other data. The individual data points have value, and the reporting, analytics, insights and value gained from the data are all part of the overall value.

Data Delivery/Exploitation: Make data (internally or via third-party commercialization) to derive insights and disseminate throughout the organization to drive value.

PERFORMING A VALUE CHAIN ANALYSIS (VCA) TO IDENTIFY VALUE CREATING ASSETS

A value chain is a series of actions carried out to deliver a valuable service or product in the market. Michael Porter developed a popular model for analyzing a company's supply chain and corporate activities to identify key value drivers.[2] The Value Chain Framework effectively identifies unique and difficult-to-value assets such as digital IP and data. In Michael Porter's value chain model, there are nine major value-generating functions with five primary activities that directly impact the added value of the final product. This category comprises the activities related to 1) inbound logistics, 2) operations, 3) outbound logistics, 4) marketing and sales and 5) services.

Four support activities indirectly create the final added value: 1) the company's infrastructure, 2) human resources, 3) technological development and 4) procurement. In certain circumstances, these support activities can independently drive as much or more value than the primary activities.

Undertaking a value chain project will help identify which existing digital IP and data assets, as well as other assets, create value and provide an indication of the relative value of each category.

TAX IMPLICATIONS ASSOCIATED WITH VALUABLE DIGITAL IP AND DATA ASSETS

Once valuable digital IP and data assets have been identified, companies are better positioned to develop strategies to manage them. The development of valuable digital IP and data assets by multiple legal entities across an organization creates a myriad of tax transfer pricing questions and issues. These transfer pricing issues drive income tax results across countries and states and other issues, such as indirect taxes. For each U.S. and foreign characterization of data transactions, there is the inevitable waterfall of other tax impacts, including Subpart F, withholding taxes, global intangible low-taxed income ("GILTI"), foreign-derived intangible income ("FDII"), base erosion and anti-abuse tax ("BEAT") along with the other global tax issues that apply to tangible property, intangible property and services implicated by digital IP and data.

Value creation, profit attribution and how and where valuable digital IP resides in an organization directly impact where a company's digital profits (and taxable income) should be generated. The Organization for Economic Cooperation and Development ("OECD") realized that as multi-national companies leverage complex technologies, such as digital ones, a standard framework needed to be developed to assess which entity(ies) contribute to the value of the IP. The OECD's DEMPE framework, which analyzes where companies undertake development, enhancement, maintenance, protection, and exploitation activities, was its solution. Knowing where the digital IP is owned and where DEMPE functions reside helps companies avoid tax risks and unexpected audits.

The following are two types of legal entities that help companies proactively centralize the DEMPE of valuable digital IP and data assets.

DIGITAL CENTER OF EXCELLENCE (DCOE)

The DCOE is an operating unit built around software development for internal use or for customer sale (e.g., IoT, software as a service, platform as a service, traditional software sales, software embedded in a product like a car or medical device) that can create an agile, cutting edge offering, distinguishing the company while also providing significant financial benefits. In many cases, this centralization of digital IP allows companies to establish an effective legal and IP management model for their digital IP, which may be intentionally different from how they manage more traditional IP.

For example, companies in industries that include industrial manufacturing, transportation, retail, life sciences, chemicals, etc. leverage internal use software in many aspects of their company, from portfolio management to product design, procurement, supply chain management, finance and on through to customer delivery – often accounting for significant components of value. Many such companies have used a DCOE to solve a variety of company challenges. Some of the common challenges include alignment to strategy, maintaining quality and establishing enhanced visibility and control in an agile development environment. In addition to the operational benefits, such companies have been able to align these models with which can increase transparency and transfer pricing accuracy, but also (depending on the facts) can mitigate tax and transfer pricing risks or perhaps even create tax benefits.

DATA HUB
Many leading companies are focused on operational excellence concerning data. They have strong compliance, governance and protection models. Moreover, like other high-value components of the company that involve assets or functions that could benefit all or large components of the global company, many companies leverage operating models for data aligned with business efficiency. One common model is a "data hub." Such models often centralize ownership and/or control of data, including managing how other entities within the global organization operate with respect to data. A data hub is typically an integrated component of an organization's data management and privacy model.

Informed companies understand that the best tax strategies are those that not only align with the company but often mirror the operating model that the core company has built as much as possible.

TAKEAWAYS
Where should companies start to analyze their existing digital IP and data asset portfolios? A simple starting point for companies is to ask the following questions:
- Do I know how my organization is currently utilizing and/or developing digital technologies and data assets?
- Do I know which legal entity owns those digital IP and data assets within the organization and whether other legal entities are compensating the owner for access to them?
- While my company's digital transformation is evolving, do I know what the intended future looks like?

These simple questions can help tax leadership assess if their companies are prepared for the complexities of digital transformation.

[1] *"Michael Porter's Value Chain: Unlock Your Company's Competitive Advantages"*
[2] *"The Five Competitive Forces That Shape Strategy," Harvard Business Review. 2008.*

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