The Shifting economic allegiance of capital gains

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Forthcoming, *Florida Tax Review*, Volume 26

Abstract

Technological advances and the digitalization of the global economy have created an economic environment beyond the imagination of the original designers of the international tax system. Much scholarly attention has been paid to the question of how these economic transformations should affect which country is able to tax a multinational company’s income. But which country should be able to tax capital gains income from the sale of that company’s shares is an important and overlooked question.

This Article answers this question. It concludes that taxing authority over capital gains income must be reallocated to the countries in which companies conduct business. In our modern, digitalized economy, this reallocation is necessary to align international sourcing rules with international tax law’s underlying principles.

The current international sourcing rules were developed in the 1920s. These rules were informed by the benefits principle, which justifies taxation based on the resources that a country provides to taxpayers, and the accompanying approach of granting taxing authority to the country with the closest economic allegiance to an item of income. Applying this approach, the original designers of the international tax system granted taxing authority over capital gains income to the investor’s residence country rather than the countries in which a company operates (the source countries).

This Article argues that in our modern economic environment the economic allegiance of capital gains income has shifted away from the residence country and towards the source countries. The unique nature of value creation in the digital economy and multinational companies’ broad shareholder bases have especially driven this shift. Because of this shift, source countries must be granted taxing authority over capital gains income if we are to maintain a coherent and equitable international tax system that is aligned with its driving norms.

While this Article is a primarily a proof of concept, it also seeks to begin a conversation about ways to implement this reallocation and describes one possible approach. An annual mark-to market tax on the company-level on increases in company value apportioned amongst source countries based on a set formula.

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Introduction

In our modern, digitalized economy, the time has come to reform the dominant model for taxing capital gains income. Under the current international tax sourcing rules, which dictate which country is able to tax an item of income, capital gains income from the sale of a company’s shares is taxed in the investor’s residence country. The countries in which businesses operate and engage in value-creating activities—the source countries[[1]](#footnote-1)—are not granted taxing rights over this capital gains income.[[2]](#footnote-2)

This Article argues that this model is no longer in line with the underlying principles of international tax law. New technologies and digitalization have transformed the global economy in ways that the designers of the international tax system could never have envisioned in the 1920s. In this transformed economy, source countries must be allowed to tax capital gains income[[3]](#footnote-3) to maintain fairness within the international tax system.

The basic question that drives the design of the international tax system can be stated quite simply. If residents of Country A invest in a business that is resident of Country B and that business conducts activities in Country C, which of Countries A, B, and C should tax income stemming from this investment and these business activities?[[4]](#footnote-4) Only one country can be granted taxing rights over an item of income if double taxation is to be avoided.[[5]](#footnote-5)

Benefits theory and the resulting concept of economic allegiance have been and remain essential guiding principles in answering this question.[[6]](#footnote-6) In the context of international tax, benefits theory can broadly be viewed as the principle that a country is justified in taxing income from economic activities that occur within its borders because it provides the taxpayer with benefits and resources that facilitate those activities.[[7]](#footnote-7) Flowing from benefits theory is the concept of dividing taxing authority amongst countries based on which country has the closest economic allegiance to an item of income or asset.[[8]](#footnote-8) The endurance of these principles can also be seen in recent efforts to reform the tax system to ensure that companies are taxed in the country where value is created.[[9]](#footnote-9)

Applying the principle of allocating taxing authority based on the relative economic allegiance, the architects of international tax law devised in the 1920s a system in which the source country can generally tax active business income and the investor’s residence country can generally tax passive investment income.[[10]](#footnote-10) Accordingly, capital gains income from the sale of shares of a business are typically sourced to the investor’s residence country in the same way as other forms of passive income, such as interest.[[11]](#footnote-11) The international tax system has remained little changed since the 1920s.[[12]](#footnote-12) In the intervening century, fundamental transformations in global economy have rendered this tax regime obsolete, leading to outcomes that are often incoherent and inequitable.

This failure of the international tax system, particularly in the context of the digital economy,[[13]](#footnote-13) has been broadly recognized.[[14]](#footnote-14) Political outrage over multinational companies[[15]](#footnote-15) and their investors not paying their “fair share” of taxes is ubiquitous[[16]](#footnote-16) and a rallying cry has arisen in recent years that taxation should occur “where value is created.”[[17]](#footnote-17) These conversations have led to significant and radical reform proposals, namely the OECD Inclusive Framework, which allocates taxing rights over corporate income to countries in which companies’ users and customers are located.[[18]](#footnote-18)

These potential reforms represent an important step towards creating a more coherent and equitable international tax system that allows the countries in which value is created to tax multinational companies. But these reforms, along with the current conversations in the international tax community more generally, possess a key flaw: they focus exclusively on how to divide taxing authority over company income. They fail to recognize that the value created by a company’s business activities manifests itself in two ways. In addition to generating company income, business activities lead to growth in the overall market value of the company. This growth in market value then translates into capital gains income when the investor sells their shares. Determining which country should be allocated taxing authority over income stemming from growth in company value is essential to designing an equitable international tax system that is in line with its underlying principles. By focusing only on company income, the current conversation is missing half the picture.

This Article fills this gap. Applying the benefits principle and the concept of allocating taxing authority based on the relative economic allegiance of income, it re-evaluates whether the investor’s residence country or the source country should be allowed to tax capital gains income in our current economic environment. It concludes that two economic realities not anticipated by the original designers of the international tax system point in particular towards granting taxing authority to the source countries.

The first involves the nature of value creation within the digital economy. As is described in more detail in Part III.A below, value creation is driven by the growth of large networks of users and customers, which provide the company access to their free production of data as well as content. Users’ and customers’ participation in the networks and their content creation drive positive network effects. Data collection allows companies to improve products and services, expand their companies, and build economic power in the long-term.[[19]](#footnote-19) Networks of users and customers, access to their free production, and access to their data are all resources that have a particularly strong economic allegiance to the source country.

Furthermore, this method of value creation also defies the assumption that an increase in the market value of a company will in most instances be accompanied by contemporaneous company profits.[[20]](#footnote-20) To grow networks, digital companies introduce free or low-cost services. They forego income in the short-term, betting on better business outcomes in the long-term. The market rewards this approach, and company values often skyrocket before any income is seen. As a result, unless source countries are able to tax capital gains income, digital companies can conduct substantial value-creating business activities in a country, exploiting that country’s benefits and resources without ever having to pay taxes. This result is in clear violation of the benefits principle.

The second economic reality that points towards granting taxing authority to source countries is the rise of highly diversified investor portfolios and the resulting broad shareholder bases of multinational companies. This broad share ownership has weakened the economic allegiance of capital gains income to the investor’s residence country. Diffuse ownership prevents most individual investors from having substantial influence on the success or failure of the business, contrary to the assumptions of the original designers of the international tax system.[[21]](#footnote-21)

The Article concludes that, given the realities of the modern digitalized economy, taxing authority over capital gains income should be allocated to the source country under the normative principles of international tax law. This Article is primarily a proof of concept. However, it also strives to begin a conversation about possible reforms to implement this reallocation. It introduces one possible approach to reform and analyzes its possible effects, strengths, and drawbacks. This approach is an annual mark-to-market (MTM) tax at the company level on increases in a company’s market value. Taxing authority over would be divided amongst source countries based on a set formula.

The Article proceeds as follows. Part I explains the benefits principle and the concept of economic allegiance and provides the historical context for their application in the original design of the international tax system. Part II summarizes current conversations and reforms presented within the international tax community to address the appropriate taxation of the digital economy. It identifies their common flaw of focusing exclusively on company income. Part III first analyzes two economic trends—the novel nature of value creation in the digital economy and multinational companies’ broad shareholder bases. It explains the impact of those trends on international taxation and accompanying unfair results. It then takes a fresh look at the relative economic allegiance of capital gains income in light of these economic trends and analyzes whether the outcomes under the current international sourcing rules are in line with the benefits principle. It concludes that the countries in which companies are conducting business, not the investor’s residence company, should be allowed to tax capital gains income. Part IV introduces and analyzes a MTM tax scheme to implement this reallocation of taxing authority from residence to source countries.

I.  
International Tax Law: Structure, Origins, and Principles

This Part first describes the international tax law’s system for dividing taxing rights over items of cross-border income amongst countries and how that system came into being in the 1920s. It then explores the normative underpinnings that influenced the initial development of the international tax system—benefits theory and the resulting approach of allocating taxing authority based on the relative economic allegiance of an item of income.

1. Structure and Origins

International tax law is a very complex field of law that seeks to answer a question that appears simple. If a person living in Country A invests in a business that is a corporate resident of Country B and conducts business activities in Country C, should Country A, B, or C be allowed to tax the income stemming from this investment and these business activities?

The first attempt to answer this question on an international level[[22]](#footnote-22) occurred in the 1920s as members of the League of Nations sought to establish a coordinated international tax system.[[23]](#footnote-23) The result is often referred to as the “1920s Compromise.” In light of the general resistance to double taxation,[[24]](#footnote-24) the challenge faced by these initial designers was to devise a system whereby a taxpayer operating internationally would only be taxed by a single country. The work towards the 1920s compromise began with a 1920 meeting of the International Chamber of Commerce (ICC) and culminated with the release of several model treaties in 1927 and 1928 by committees of technical experts of the League of Nations.[[25]](#footnote-25) During both the ICC and League of Nations negotiations, the United States, Britain, and other allied nations were the central players in the process of developing this international tax system.[[26]](#footnote-26) The United States was represented by T.S. Adams, who has become known as the leading architect of the U.S. international tax system.[[27]](#footnote-27)

The 1920s Compromise answered the question of which country should be allowed to tax an item of cross-border income by establishing a “classification and assignment” system. International tax law’s current system of classification and assignment is a direct relic of a model established by League of Nations members in the 1920s.[[28]](#footnote-28) Under international tax law, two countries are considered to have a legitimate claim to tax an item of cross-border income: the residence country and the source country.[[29]](#footnote-29) The residence country is the country of the taxpayer’s residence—in the question presented above, Country A if the taxpayer is the investor, Country B if the taxpayer is business itself. The source country is the country that is the locus of the economic activities giving rise to income—Country C in the question presented above.[[30]](#footnote-30)

Rather than allocating taxing authority exclusively to the country of residence or the country of source, the international tax system balances the taxing claims of the residence and source countries. It balances the claims of the residence and source countries by placing items of income into different classes (such as royalties or business profits) and then assigning taxing authority over each class to either the residence country or the source country.[[31]](#footnote-31) Generally, the source country is granted taxing authority over active business income, and the residence country of the taxpayer is granted taxing authority over passive investment income.[[32]](#footnote-32) Capital gains income from the sale of shares of businesses is, therefore, taxed in the country of the investor’s residence, not the country in which the business operates.[[33]](#footnote-33) An exception to this is capital gains income from the sale of shares in businesses that derive more than 50 percent of their value from “immoveable property,” such as land.[[34]](#footnote-34) The source country has taxing authority over this type of capital gains income.

This design of this system of classification and assignment was influenced by benefits theory and the resulting concept of assigning taxing authority over an item of income based on its economic allegiance to a country. The following subpart discusses the benefits theory, economic allegiance, and their impact on the design of the international tax system.

1. Benefits Theory

Benefits theory espouses the principle that the source country is justified in taxing business activities occurring within such country because it provides benefits and resources that are necessary for those business activities to occur.[[35]](#footnote-35) The benefits principle has remained a central normative feature of international tax law despite criticisms.[[36]](#footnote-36)

Many of the criticisms of the benefits principle stem from scholars viewing of the principle as justifying tax as a form of direct compensation for government benefits. These scholars have critiqued benefits theory by arguing that the benefits principle is incoherent as a basis for justifying income taxation because it is not possible to accurately measure the benefits received by each taxpayer and that the relative level and value of benefits received does not necessarily align with the taxpayer’s relative income.[[37]](#footnote-37)

However, this criticism implies a very narrow view of benefits theory that treats taxes as individualized payments for specific benefits and services. In contrast, a modified benefits theory reflects a broader view that the benefits and resources provided by a country establishes the necessary nexus to justify taxation. This broader view of benefits theory has been present since the 19th century and continued into the 20th century.[[38]](#footnote-38) As Klaus Vogel wrote in 1988: “Turning to benefit theory arguments, I want to emphasize first that in a modern theoretical setting arguments of this type cannot and do not imply that taxes are prices for individual state services. Such an assumption would be far from reality.”[[39]](#footnote-39)

It is this broader application of the benefits principle that animated the original development of the international tax system in the 1920s. Its influence was clearly present in the 1920s negotiations. T.S. Adams supported source-based taxation, specifically with respect to businesses, first under the benefits principle. He explained that “[a] large part of the cost of government is traceable to the necessity of maintaining a suitable business environment” and that the source country had a “prior claim . . . upon profits which public expenditures or the business environment maintained by the state have in part produced.”[[40]](#footnote-40) He viewed the benefits principle as justifying source-based taxation both morally and politically.[[41]](#footnote-41) The concept that taxing authority should be granted based on benefits received was a core principle of the U.S. approach to international taxation during the 1920s negotiations and the following years.[[42]](#footnote-42) Other countries’ negotiators also expounded the importance of the benefits theory in the 1920s Compromise negotiations. The benefits theory of taxation guided many of the recommendations made by the panel of experts gathered in 1925 by the League of Nations, often accompanied by appeals to a general sense of “fairness” espoused particularly by Belgium representative Charles Clavier.[[43]](#footnote-43)

The importance of the benefits principle in international tax law has continued over the intervening century. Reuven Avi-Yonah has identified the benefits principle as one of two norms (the other being avoiding double taxation) that together have led to a coherent and unified international tax system.[[44]](#footnote-44) The benefits principle has continued to serve as a guide for international tax law’s current sourcing rules.[[45]](#footnote-45)

1. Economic Allegiance and the Allocation of Taxing Rights

This broader, modified benefits principle animated the development the approach of allocating taxing authority based on the relative economic allegiance of an item of income. Georg van Schanz first introduced the concept of economic allegiance to international tax. In his 1892 article “Zur Frage der Steuerpflicht” (Regarding Tax Liability), Schanz presents the idea of economic allegiance and bases it on the benefits provided by both the countries in which income is earned and in which income is consumed.[[46]](#footnote-46) He writes: “I want to emphasize that indeed there is no tax for which no benefit relation relates.”[[47]](#footnote-47) He argues that the benefits principle can be used to establish a tax base, or nexus, but eschews the idea of tax as a means of direct compensation for government benefits received.[[48]](#footnote-48)

The benefits principle also underlies the concept of “economic allegiance” as it is presented and applied during the 1920s negotiations. An important moment in the lead up to the 1920s Compromise was the release of the “Four Economists’ Report” in 1923.[[49]](#footnote-49) The League of Nations tasked Edwin Seligman of the United States, Josiah Stamp of Great Britain, Luigi Einaudi of Italy, and G.W.J. Bruins of the Netherlands to draft a report on possible designs of an international tax system that prevented double taxation of cross-border income. The report put forward a system of classification and assignment of income that was adopted in the subsequent model treaties and that, as explained above, remains the basis of the international tax system to this day.[[50]](#footnote-50) The organizing principle of this classification and assignment system was the principle of “economic allegiance” that the authors of the report articulated. Whether an item of income was assigned to the source versus the residence country was based on its relative economic allegiance to each.[[51]](#footnote-51)

As Reuven Avi-Yonah has noted, the concept of economic allegiance that the Four Economists’ Report puts forward has at its core granting taxing authority based on the benefits principle.[[52]](#footnote-52) He observes that “[the four economists’] definition of ‘economic allegiance’ is clearly based on a benefits theory of taxation” and that they use this theory to justify both source-based and residence-based taxation.[[53]](#footnote-53) The authors of the Four Economists’ Report were on the surface critical of the benefits theory of taxation. Applying the quid pro quo view of benefits theory, they described the theory as hobbled by the inability to correctly measure the value of government benefits received by various taxpayers and distribute tax burdens accordingly.[[54]](#footnote-54) However, their account of the concept of economic allegiance flows from the modified view of the benefits principle rather than the quid pro quo approach of which they were critical.

The authors describe economic allegiance as a problem of “duties or obligations” of the taxpayer rather than benefits. But they then go on to describe those very duties as connected with benefits received.[[55]](#footnote-55) They highlight the role that legal frameworks of governments, both in the country of source and the country of residence, play in allowing income from economic activities to come into the hands of the taxpayer[[56]](#footnote-56) and speak of the fact that the overall economic life of a community makes possible the production of income and acquisition of wealth.[[57]](#footnote-57) The relative extent and importance of benefits provided by a country were, thus, an important consideration in determining the economic allegiance of different categories of income for the report’s authors.

In the report, the authors assessed the relative economic allegiance of different categories of income and wealth and make recommendations as to whether taxing authority over them should be assigned to the source country or the residence country. The suggested classification and assignment framework ultimately put forward in the report reflected the general divide of active business income being allocated to the source country and passive investment income being allocated to the residence country.[[58]](#footnote-58) In this assessment, the authors of the report presented a detailed articulation of the concept of economic allegiance. This articulation helps both to elucidate the nature of the concept of economic allegiance and explain the historical context and assumptions that shaped the design of the international sourcing rules that persist to this day.

In assessing the relative economic allegiance of an item of income to the source country versus the residence country, the authors focused on the importance of the location itself, including land and other resources of the country, to wealth production.[[59]](#footnote-59) They weighed this importance against the contribution of the personality of the taxpayer and, in the case of businesses, the manager*.*[[60]](#footnote-60)

Whether the taxpayer had a choice and ability to move the location of wealth production was another important factor in their considerations. If it was difficult or impossible to move the location of the wealth producing activities, economic allegiance to the source country was strengthened.[[61]](#footnote-61)

The location where labor occurred was also viewed as important to economic allegiance—a taxpayer being able to contribute to wealth producing activities from their home country would reduce economic allegiance to the country of origin.[[62]](#footnote-62) The authors viewed effective remote contributions and management as an uncommon occurrence, however.[[63]](#footnote-63)

The authors applied these considerations to various categories of income, further illustrating how they conceived of economic allegiance. In the case of agriculture, the relative contribution of the land itself versus the personality of the taxpayer was of central importance in their view. The authors assessed that, although in some instances capital invested in the land would influence yield:

In most cases, however, the yield of land depends to an overwhelming extent upon the land itself. The most capable individual is almost helpless where the soil is incorrigibly poor or the rainfall inadequate. While the individual can somewhat modify the characteristics of the land, he cannot completely change them.[[64]](#footnote-64)

This centrality of the land itself to the economic success of agricultural enterprises resulted in the economic allegiance of the taxpayer with respect to that income to be closely tied to the country of source.

To determine the economic allegiance of business income, the authors separately considered three categories of businesses—mining, oil, and other extractive businesses; industrial businesses; and commercial businesses.[[65]](#footnote-65) The authors found the economic allegiance to the source country to be strongest in the case of mines and wells, likening it to almost as close of a connection as to agriculture. The authors explain that the yield from this type of business “will in the main depend after all on the richness of the mine or the quality or quantity of oil.”[[66]](#footnote-66) They also placed emphasis on the fact that the owner was not able to choose the location of the resources because mines and wells were immovable.[[67]](#footnote-67)

For industrial and commercial businesses, the authors found the connection with the source country to be somewhat weaker due to the ability to choose the location of the business activities, a greater influence of management on the success of the business, and the possibility that management might be conducted from the taxpayer’s residence country.[[68]](#footnote-68) Despite this, they still concluded that the economic allegiance of these business profits laid with the source countries.

The Four Economists’ Report considers separately from business income the economic allegiance of wealth in the form of corporate shares and associated income. They ultimately conclude that the economic allegiance of corporate shares was closer to the country of the shareholder’s residence versus the source country.[[69]](#footnote-69) Their assessment of the economic allegiance of capital gains appears in many ways at odds with the authors’ analysis of the economic allegiance of specific items of business income discussed above. The reason that these assessments appear at odds stems from two fundamental assumptions that the authors of the report held about the functioning of companies and business models, neither of which hold in our modern economic environment. [[70]](#footnote-70)

First, the authors assumed that a company whose value was increasing would also be earning income in the country in which they were operating. They explained that: “﻿[c]orporate shares would, indeed, be worth nothing if the company had no earnings. . . .”[[71]](#footnote-71) Therefore while they acknowledged that increases in the value of a company’s shares was “in part bound up with the economic prosperity” of the country in which the business activities occur,”[[72]](#footnote-72) the countries that were providing the benefits and services necessary for these businesses to operate and grow in value would be compensated through tax revenues on company earnings. Under this assumption, allowing source countries to tax capital gains income was not necessary to align the international tax system with the benefits principle and acknowledge the economic allegiance of capital gains income to the source country.

Second, the authors assumed that the owners of businesses would have a substantial impact on their success or failure and, therefore, a substantial impact on whether capital gains income was realized. They considered the personality of the owners to be a key driver of business growth.[[73]](#footnote-73) The importance of the owner to achieving capital gains income strengthened the economic allegiance of that income to the owner’s residence country—the location from which they were presumably contributing to business decisions while enjoying the benefits and resources provided by the country.

As explained in Part III, neither of these assumptions hold in the modern economy. The imaginations of the four economists and other participants in the 1920s Compromise could not predict the rapid technological advances of past decades and the ways in which they have transformed the global economy. As a result, the international tax system produces results that are out of line with the normative principles of benefits theory and economic allegiance. As the following part will explain, this misalignment and the perceived failings of the international tax system have sparked significant, albeit incomplete, debates and efforts at reform.

II.  
Taxing the Modern Economy: The State and Limitations of the Debate

This Part begins by discussing the failings of international tax law in the face of the modern, digitalized economy. It explains how the benefits principle and concept of economic allegiance have colored and influenced current conversations around these failings and the need to reform the international tax system. It then identifies a key oversight in the current debate—exclusively focusing on the fair taxation of corporate income. It argues that, in order to comprehensively reform the international tax system and realign international tax law with its underlying norms, the fair taxation of capital gains income in the digital economy must also be considered.

The sentiment that the international tax system is broken and unfair is pervasive in scholarly and political discourse.[[74]](#footnote-74) As explained above, the international tax system that was created in the 1920s has been largely unchanged since.[[75]](#footnote-75) And it has proven inadequate in the modern economy. Countless features of the modern economy are beyond what could have been conceived of by economists and lawmakers in the 1920s. An individual’s ability to invest in thousands of companies through mutual funds and ETFs.[[76]](#footnote-76) Technological advances and widespread internet connectivity allowing for an explosion in remote sales and provision of services.[[77]](#footnote-77) Platforms companies operating multi-sided business models with groups of customers in different jurisdictions.[[78]](#footnote-78) The emergence of the data economy.[[79]](#footnote-79) Social media companies that rely on free user-generated content.[[80]](#footnote-80)

These are just a few of the global business trends that have challenged the international tax system in recent years and, in many instances, allowed multinational companies, particularly digital companies, to avoid paying taxes in the countries in which they are conducting business.[[81]](#footnote-81) The ability to conduct business in a country without paying taxes there implicates the benefits principle and the accompanying concept of allocating taxing rights based on economic allegiance.

A general political consensus has emerged that, under the existing principles of international tax law, companies should be taxed “where value is created.”[[82]](#footnote-82) Taxing where value is created has accordingly been the political mantra of the past decade’s efforts to reform international tax law. Most notably, the OECD/G20’s Base Erosion and Profit Shifting (BEPS) Project has from its 2013 inception focused on the goal of reforming international tax law to ensure that profits are taxed in the location where value is created.[[83]](#footnote-83) The multilateral OECD/BEPS Project called for “a bold move by policy makers to restore confidence in the system and ensure that profits are taxed where economic activities take place and value is created.”[[84]](#footnote-84) After nearly a decade of work,[[85]](#footnote-85) the OECD/G20 Inclusive Framework, which comprises 141 member countries, put forward a two-pillar solution to address the challenges of taxing the digital economy*.*[[86]](#footnote-86)

Pillar One of this framework addresses the goal of realigning taxation with value creation. It builds upon prior proposals by the European Commission and United Kingdom to take into account user-generated value when allocating taxing authority over company income.[[87]](#footnote-87) The Pillar One Blueprint reallocates taxing authority over a portion of a company’s profits to countries “where there is an active and sustained participation of a business in the economy of that jurisdiction through activities in, or remotely directed at, that jurisdiction.”[[88]](#footnote-88) This reallocation based on active and sustained participation allows countries in which companies have users and customers, but no substantial company-level operations, to tax companies.

The benefits principle and concept of economic allegiance have underlaid these as well as other recent proposals for the reform of the international tax system.[[89]](#footnote-89) The influence of these principles are particularly clear in calls to realign the place of taxation and the place of value creation. Some scholars have questioned the validity of the political assertion that value creation is a common underlying principle that has guided the international tax system, arguing that it is a newly devised concept without theoretical basis.[[90]](#footnote-90) The political discourse surrounding taxing companies where value is created indicates, however, that allocating taxing authority based on value creation is not a new principle. The discourse instead indicates that value creation is an extension of the benefits principle and the accompanying approach of allocating taxing authority based on relative economic allegiance.[[91]](#footnote-91)

For example, the EU Commission asserted in its 2018 report on the fair taxation of the digital economy that “[c]ompanies engaged in digital activities, like all other companies, must share the tax burden needed to finance the public services on which they rely.”[[92]](#footnote-92) The report highlights in particular the market infrastructure, judicial system, and high level of connectivity provided by the EU member states from which digital companies benefit.[[93]](#footnote-93) The OECD/BEPS initiative has repeatedly emphasized in its reports the need to grant a taxing right to countries when companies engage in the “economic life”[[94]](#footnote-94) of those countries. This same language of participation in a country’s “economic life” was used in the Four Economists’ Report to explain when a country would be considered the “origin of wealth,” thereby establishing an economic allegiance to that country.[[95]](#footnote-95)

The current discourse goes even further in considering what benefits provided by countries should create a right to tax. Rather than just looking at government-provided benefits, policymakers are identifying the benefits and resources provided by citizens themselves. The U.K. government argued in a 2017 position paper that taxing authority should be granted to countries based on the engagement and participation of users and customers on digital platforms.[[96]](#footnote-96) The U.K. cited the value that this engagement and participation creates through data and content production as well as building of network effects and market power.[[97]](#footnote-97) It ultimately concluded that not taking into account this value creation when allocating taxing authority led to a result that was “inconsistent with the objectives” of international tax law.[[98]](#footnote-98) The OECD/G20 BEPS Project and the European Commission have similarly discussed the potential need to grant taxing authority to users’ and customers’ countries based on the data, content, and network effects they provide.[[99]](#footnote-99)

The debates of the past decade demonstrate that the benefits principle and the accompanying concept of economic allegiance are alive and well in the efforts of international tax policymakers to reform the international tax system. And these debates and reform efforts are significant steps in the work to realign taxation of multinational companies with international tax law’s normative goals. But they do not fully address this task because they focus exclusively on how taxing authority over *company income* should be allocated. Value-creation manifests itself in two ways—not only through company income but also through growth in the market value of the company itself. The current conversation leaves open the important question of how the existence of value-creating business activities in a country should affect that country’s right to tax income stemming from growth in a business’s value. Should an investor’s capital gains income be taxed in the source country or residence country?

The following part answers this question. It takes a fresh look at the economic allegiance of capital gains income in our contemporary economic setting. It concludes that the nature of value creation in the digital economy, with the accompanying trend of companies eschewing income in favor of growth, as well as the rise of diversified portfolios and broad shareholder bases have shifted the economic allegiance of capital gains towards the source country.

III.  
The Shifting Economic Allegiance of Capital Gains

This Part begins by explaining two new economic realities that implicate the appropriate division of taxing authority over capital gains income. The first is the novel nature of value creation in digital business models. The second is diversification of investor portfolios and accompanying broad shareholder bases of multinational companies. It then evaluates whether, in light of these new economic realities, taxing authority over capital gains income should be granted to the source countries or the investor’s residence country.

1. The Nature of Value Creation in the Digital Economy
2. Overview

Informational capitalism and the digitalization of the global economy have radically shifted the ways in which companies create value for their investors. This form of value creation looks very different from the agricultural, mining, industrial, and commercial business ventures whose economic allegiance the four economists considered in their report.[[100]](#footnote-100)

As is explained in more detail below, digital businesses build vast networks of users and customers. They create economic value from these networks by leveraging users and customers to produce content and, importantly, data that companies are able to collect. Content creation fuels the further growth of the network. The data that these companies collect is a valuable and forward-looking asset. It enables companies to improve products and services as well as predict and modify behavior. The market has recognized the value of these networks and data and rewards companies that build user and customer bases, even when that comes at the expense of profits.

The acquisition of social media platform LinkedIn by Microsoft illustrates this method of value creation. In 2016, Microsoft acquired LinkedIn for $26.2 billion.[[101]](#footnote-101) It posted losses of 89 cents per share in 2016 and 53 cents per share in 2015.[[102]](#footnote-102) In pitching the acquisition to its shareholders, Microsoft did not focus on income or revenues. Its emphasis was instead on the size of LinkedIn’s user base and the engagement of those users. For example, in its press release announcing the deal, Microsoft highlighted LinkedIn’s worldwide network of 433 million users, its 105 million visitors per month, its 45 billion quarterly page views, and its 7 million active job listings.[[103]](#footnote-103) Revenues were not mentioned. This process of focusing on and presenting users and user engagement to investors as a key company asset is a common strategy seen amongst digital companies.[[104]](#footnote-104) And analysts highlighted the importance of the access to this user network and user data in driving the transaction.[[105]](#footnote-105) The value of LinkedIn came from its network and the resulting access to their users’ free production of content and data. This value was not linked to current income.

There are important international tax implications when value creation manifests as growth in the market value of a company but not as company income. When value creation manifests as an increase in the market value of a company, this value creation is translated into income when the investor sells their appreciated shares in the company and realizes capital gains. This capital gains income is taxed exclusively in the investor’s residence country. Unless a company earns income, the source countries will not be able to tax the company at all.

Take the example of the LinkedIn. LinkedIn’s network of hundreds of millions of users spread across the globe.[[106]](#footnote-106) And the market recognized the value of this network and the content and data they created, as its $26 billion acquisition demonstrated. But the only countries that were able to tax the income stemming from this value creation were the countries in which LinkedIn’s investors live. Without company income, the location of a company’s business activities was irrelevant. Only the investors’ residence countries were getting a bite at the tax apple.

1. From Networks to Data

This subpart provides a more detailed explanation on the nature of value creation within the digital economy. It describes how that value creation is reflected in increased market values of companies, leading to the capital gains income when the investor sells their appreciated shares. This explanation demonstrates the close economic allegiance of this means of value creation to the source countries and the resulting unfairness of international sourcing rules that allocate taxing authority over capital gains income exclusively to the residence country.

In the digital economy,[[107]](#footnote-107) value creation begins with a company’s network of users and customers. The economic effects created by this network are recognized by the market and inform the market value of that company and its shares. Empirical studies have shown that an increase in the size of a company’s network is tied to an increase in the market value of the company. One venture capital firm studied 336 tech companies from 1994 and 2017 and estimated that seventy percent of their increase in value of these companies was attributable to network effects.[[108]](#footnote-108) Empirical evidence suggests that user traffic on e-commerce platforms is a more important indicator of stock price than the platforms’ earnings.[[109]](#footnote-109)

The size of a company’s network of users and customers is so central to value creation in the digital economy because these users and customers do not create value for companies simply by purchasing their products and services. They create value by participating within the networks, fueling network effects, producing content, and producing data that companies are able to collect.[[110]](#footnote-110) Access to this free production is an essential resource that drives growth in the company.

Users’ participation and content creation is central to the business model of digital platform businesses in particular. Geoffrey G. Parker et al. describe platforms as “a new business model that uses technology to connect people, organizations, and resources in an interactive ecosystem in which amazing amounts of value can be created and exchanged.”[[111]](#footnote-111) Julie. E. Cohen has highlighted that platforms can be considered more than simply a new business model but as “the core organizational form of the emerging informational economy.”[[112]](#footnote-112) In platform business models the company creates, maintains, and polices the platform, but it is the interaction between participants that creates value.

As is described in more detail in Part III.A.3 below, one reason that networks are so valuable is because users and customer’s engagement and content creation drive network effects. Networks of users and customers are particularly valuable in the case of certain platform business models where the content provided by users is the essence of the digital platform’s good or service. Without the users’ free production it is an empty platform with no value. The most obvious example of this is a social media platform. The entertainment content that the platform offers is produced almost entirely by users. It is their status updates, photo uploads, and shared articles that comprise the entertainment that other users’ are engaged by and interact with. The users’ production allows social media companies to build hugely valuable companies using a fraction of the workforce that a traditional media platform would use. Take the example of Instagram. Facebook purchased the social media platform for $1 billion in 2012. At the time of its sale, Instagram had 27 million users on the iOS platform alone and was poised to reached 50 million users with the launch of an Android platform.[[113]](#footnote-113) It had thirteen employees.[[114]](#footnote-114)

The scale of content created by users’ free content production is tremendous and rapidly growing. In an average minute in 2021, Facebook Live received 44 million views, 5.7 Snapchat users sent 2 million messages, and 575,000 tweets were sent on Twitter.[[115]](#footnote-115) In that same minute, 1.4 million “swipes” were made on the dating platform Tinder, 167 million videos were viewed on TikTok, 5.7 million searches were performed on Google, and 6 million people shopped online.[[116]](#footnote-116) As of 2018, the average adult in the United States engaged with some type of digital media for 6.3 hours per day, or 2,300 hours per year.[[117]](#footnote-117) A full-time job with two weeks of vacation is 2,000 hours per year. A full-time job with two weeks of vacation is 2,000 hours per year.

Free content production is a key driver of value creation in the digital economy. But free data production arguably is even more important to value creation, and its influence expands beyond platform businesses or companies we traditionally view as tech companies.[[118]](#footnote-118) Data has been described as the most important resource to companies in the modern economy.[[119]](#footnote-119) Data produced by users and customers has created enormous amounts of wealth for digital companies and their investors—wealth that is directly tied to the actions, behaviors, and relations of people.

Data is a unique and controversial asset[[120]](#footnote-120) that has become central to the global economy. These unique elements are important when considering how it should shape the taxation of companies and investors who financially gain from it. Data is non-fungible—each piece of data is unique.[[121]](#footnote-121) It is a product of our behavior and our relationships and interactions with one another.[[122]](#footnote-122) Amy Kapczynski has characterized data as “a social product, one that can be transformed into a commodity but that does not exist in a world without us, waiting for collection and exchange.”[[123]](#footnote-123) While data is collected on the individual level, its application and related benefits and harms exist on the population level.*[[124]](#footnote-124)* Data collection in the digital economy is used to place individuals into different categories and then predict behavior and gain other insights in the aggregate based on that categorization. As Salomé Viljoen explains: “[d]ata’s relationality is central to how data collection produces economic value.”[[125]](#footnote-125)

As a product of our actions and social relations, users and customers create data that companies are able to collect in a myriad of ways. People create data both when they actively input content and information onto a platform and when their activities and interactions are observed by companies.[[126]](#footnote-126) Activities such as posting photos on a social media platform, uploading videos to a media hosting platform, writing reviews on an e-commerce website, or entering personal information when signing up for a platform are all acts of data creation. Likewise, people create data when they navigate an online platform (scrolling and pausing on sites, clicking through links, or movements and hovering a cursor over a link),[[127]](#footnote-127) when they navigate physical spaces, and when they interact with physical objects and one another.[[128]](#footnote-128)

The level of data creation has grown and continues to grow exponentially. As of 2020, it is estimated that 1.145 trillion megabytes of data is created every day, with the average person creating 2.5 quintillion bytes daily.[[129]](#footnote-129) Data production is expected to reach 0.463 zetabytes per day by 2025.[[130]](#footnote-130)

Data collection has become a central component of companies’ business activities in the modern economy.[[131]](#footnote-131) Under the current U.S. legal regime, data is formally owned by no one.*[[132]](#footnote-132)* But through a combination of contractual arrangements and use of trade secrecy laws, companies have created de facto ownership of their users’ and customers’ data.[[133]](#footnote-133) The possession of this data has led to enormous gains in wealth for companies and their investors, who realize this wealth through capital gains income.

How does users’ and customers’ data creation translate to wealth for companies? There are various ways in which companies currently monetize data, such as the direct sale or license of data[[134]](#footnote-134) and targeted advertising.[[135]](#footnote-135) But, while many companies monetize their data currently, data is largely a forward-looking asset. Jathan Sadowski helpfully highlights six general ways in which data can be used by companies to create economic value—(1) to profile and target people, (2) to optimize systems, (3) to manage and control things, (4) to model probabilities, (5) to build new products, and (6) to grow the value of existing assets.[[136]](#footnote-136) It is considered valuable because of what it signals about a company’s potential revenues, not current revenues.

Companies can seize on the predictive value of data to optimize and expand their businesses. As Erik Brynjolfsson and Andrew Mcafee explain, “[t]he data revolution has turned customers into unwitting business consults.”[[137]](#footnote-137) Digital platforms have been most notable for using user data to innovate and improve their products, creating added value for their companies. As Tim O-Reilly explained, “[a] true Web 2.0 application is one that gets better than more people use it. . . . [Google] gets smarter every time someone clicks on an ad. And it immediately acts on that information to improve the experience for everyone else.”[[138]](#footnote-138) Data has allowed digital companies to enter into new lines of business and develop new products. For example, Alphabet, Inc., Google’s parent company, launched in 2020 a new business under their life sciences unit, Verily, that will use data from the company’s mobile devices to help employers who self-insure conduct risk assessments and sell stop-loss insurance.[[139]](#footnote-139) Data increases company value because it can improve and add to a company’s operations, products, and services and, therefore, increase the company’s revenues and income at some future point.

Because of its potential to drive income creation in various ways, a company’s data is increasingly central to its market valuation. This importance of data to companies’ market valuations is demonstrated by disconnect between the book value of companies and their market value—a phenomenon sometimes referred to as the “data gap.” As an intangible asset, data does not appear on a company’s balance sheet—the more valuable a company’s data is, the greater the disconnect between the assets on their balance sheet and their market capitalization.[[140]](#footnote-140) Facebook, Inc. (now Meta Platforms, Inc.), for example, had a market capitalization of $950 billion[[141]](#footnote-141) at the end of 2021. It only held hard assets of approximately $166 billion[[142]](#footnote-142), but it had a user base producing an average of 4 petabytes (4 million gigabytes) of data each day.[[143]](#footnote-143) As Washington Post reporter Elizabeth Dwoskin has explained: “Facebook’s greatest asset is the data it has on billions of people.”[[144]](#footnote-144)

The “data gap” can also be seen in the growing disconnect between a company’s earnings and market capitalization.[[145]](#footnote-145) The Microsoft acquisition of LinkedIn displays this disconnect as do many other transactions. For example, within a few hours of its 2013 IPO, Twitter had a market capitalization of $24 billion.[[146]](#footnote-146) In the years leading up to its IPO, Twitter was a loss company, having lost approximately $67 million in 2010, $128 million in 2011, $49 million in 2012, and $69 million in the first 6 months of 2013.[[147]](#footnote-147) It had assets of $964 million.[[148]](#footnote-148) This disparity between market value of companies and their earnings and assets signals the importance of data to market values.

While the data economy is most often thought about in the context of companies with highly digitized business models, such as search engines, data is actually an increasingly important asset for businesses across all industries. Big box retailers and financial services firms, for example, both gather large quantities of data that is a result of incidental data creation by their customers. As Andrew W. Lo of the MIT Laboratory for Financial Engineering explained in 2016, “[f]or most companies, their data is their single biggest asset.”[[149]](#footnote-149)

Companies outside the digital sector are now beginning to recognize the value of their data. A notable example is the airline industry. In the wake of the COVID-19 pandemic, the industry saw the market capitalization of airline companies drop to half or a third of their previous value over the course of a few weeks.[[150]](#footnote-150) United Airlines and American Airlines both secured much-needed loan funds by obtaining third-party appraisals of the data the companies had gathered through their loyalty programs and using this data as collateral for loans.[[151]](#footnote-151) The third-party estimates of the value of their data was staggering—United Airlines’ data was valued at $20 billion while American Airlines data was valued between $19.5 billion and $31.5 billion. These valuations were two to three times the companies’ market capitalizations at the time.[[152]](#footnote-152) The airline industry’s new focus on the value of their data indicates that companies outside of industries that are traditionally viewed as “digital” are recognizing that they too belong in the data economy.[[153]](#footnote-153) Data is an asset that will impact the valuation of companies across broad swaths of the economy moving forward.

The market is rewarding companies for building networks of users and customers, leveraging their network participation, content creation, and data production, and collecting their data. These companies’ investors are able to cash in on this new method of value creation by selling their appreciated shares at any time they chose. As a result, the investors’ residence countries are able to tax this value creation in real time. But the countries in which these companies are operating do not receive tax revenues. The nature of value creation in the digital economy involves forgoing income in the short and medium term in order to grow networks and collect data, with the hope of income at some point in the future. The following subsection discusses this business strategy and the phenomenon of company growth without income.

1. Growth without Income

Without business income, source countries have no opportunity to tax companies that are operating within their borders. The nature of value creation within the digitalized economy has led companies to eschew revenues and income for lengthy periods in order to build a large network of users and customers whose participation, content and data creation will fuel further growth of the company.

Positive network effects fuel this growth. Positive network effects occur when the utility or value a user derives from a particular good or service is increased by the number of other people that use either that good or service or a compatible good or service.[[154]](#footnote-154) This increased value, in turn, encourages more users to participate.

The importance of network effects can be seen most clearly in the context of platform business models.[[155]](#footnote-155) For example, as users join social media platforms, they create more content for other users to engage with, and this increased level of content and potential interactions encourages more users to join the site. The more reviews users leave on an e-commerce website, the more useful that site is for other potential users, increasing website traffic and reviews. As website traffic increases, so does the motivation for third-party vendors to join and sell products on the platform because the pool of potential consumers has increased.

When a platform is first introduced, there are low incentives for users to join the network because there are few others with whom to have value-creating interactions. Positive network effects will only begin to drive the growth of a network when a critical mass of users is reached, and the critical mass point only occurs when the value a user obtains from a good or service equals or exceeds the price.[[156]](#footnote-156) Because of this necessity of reaching a critical mass to achieve the network effects that drive growth, digital platforms often turn to the “freemium” business model of providing services for free in order to attract users.[[157]](#footnote-157) Revenues and profits only come later for digital companies—after achieving a large network and dominant market position.[[158]](#footnote-158) As Vijay Govindarajan et al. explain: “the most important aim for digital companies is to achieve market leadership, create network effects, and command a “winner-take-all” profit structure.”[[159]](#footnote-159)

This growth-oriented approach is not limited to platform businesses. The data economy also relies on a phenomenon known as “data network effects.”[[160]](#footnote-160) As explained above,[[161]](#footnote-161) the predictive value of data allows companies to improve their products and services, launch into new industries, and optimize their operations. The control of large amounts of data also brings with it significant economic power.[[162]](#footnote-162) The desire to achieve these “data network effects” and the accompanying competitive advantage and power they bring can push companies towards eschewing current revenues and profits in favor of greater volumes of data collection from their growing network of users and customers.

For this reason, any attempts to achieve fairness in international taxation that focus only on how to tax company income will be incomplete. Companies often conduct substantial business activities in countries and create substantial amounts of wealth for their shareholders through increases in their market value before they ever create income. This trend results in source countries providing the resources to support value-creating economic activities without being able to tax any of that value creation. This is a clear violation of the benefits principle, and one that can only be resolved by income tax law if the allocation of taxing authority over capital gains income is revisited. The transformation of global business over the past century requires it.

1. Diversified Portfolios and Broad Shareholder Bases

While the nature of value creation in the digital economy has strengthened the economic allegiance of capital gains income to the source country, diversification of investors’ portfolios and the resulting broad shareholder bases of multinational companies has weakened the economic allegiance of capital gains income to the residence country. As discussed in Part I.C above, the drafters of the 1920s Compromise assumed that investors would have significant influence over the success or failure of a company and the increase or decrease in the value of its shares. This is arguably true in the context of closely-held companies. But in an environment of diversified portfolios, index investing, fractional share ownership and the resulting broad shareholder bases of multinational companies, this assumption does not hold true. Technological advances beyond the imagination of the original designers of the international tax system and the digitalization of global finance have enabled this new economic environment.

Broad shareholder bases of multinational companies have been driven, at least in part, by the investor’s capacity to diversify their portfolios through investing in mutual funds and ETFs. The first mutual fund in the United States was opened to investors in 1928, but by the mid-1950s there were only approximately one hundred mutual funds.[[163]](#footnote-163) In the following decades, mutual funds grew (with ebbs and flows) and by 1990 mutual fund assets were over $1 trillion.[[164]](#footnote-164) Three years later, in 1993, the first ETF was introduced.[[165]](#footnote-165)

As of 2020, approximately a third of the U.S. stock market was held by mutual funds or ETFs⁠.[[166]](#footnote-166) In 2019, passive index funds overtook funds that are actively managed.[[167]](#footnote-167) This accompanies the general trend of institutional investment on behalf of underlying owners—about 70-80 percent of U.S. equities are owned through asset management companies.[[168]](#footnote-168) These ownership patterns allow individual shareholders to hold very small stakes in thousands of companies and remain disconnected from their governance and management.

Advances in information and communications technology were necessary for this proliferation of these financial products, diversified investing, and broad share ownership of multinational companies. Access to the internet, electronic trading, computerized systems of settlement, and countless other advances allowed for broad proliferation of financial products like ETFs that allow investors to easily diversify their portfolios and own these small stakes in thousands of companies.[[169]](#footnote-169) Along with the nature of value creation within the digital economy, this new economic reality calls for a re-evaluation of the appropriate allocation of taxing authority over the capital gains income stemming from these diversified portfolios.

1. Re-evaluating the Economic Allegiance of Capital Gains

The central project of international tax law is to ensure that an item of cross border income is taxed by only one country.[[170]](#footnote-170) As this Article has explained, which country should be given priority to tax various items of cross-border has been driven by the relative economic allegiance of that item of income to the source country versus the residence country.[[171]](#footnote-171) And the concept of relative economic allegiance has flowed from the benefits principle—the principle that the benefits and resources provided by the country to the taxpayer and their importance to the creation of income justify taxation by that country.

Capital gains income stems from the increase in the market value of a company. In determining which country should be allocated taxing authority over this capital gains income, the crucial question is what is the economic allegiance of the value creation that manifests as growth in the value of the corporation. In the 1920s, it was determined that the economic allegiance of capital gains income was closest to the investor’s residence country. The residence country has, therefore, been allocated taxing authority over capital gains income under our current international sourcing rules. A notable exception to this is capital gains income from the sale of a company who derives more than fifty percent of their value from immoveable property, such as land.[[172]](#footnote-172) When value creation stems from property like land with a close and essential link to the source country, international tax law departs from the approach of allocating taxing authority to the residence country.

The economic transformations of the past decades warrant re-evaluating the appropriate allocation of taxing authority over capital gains income. The nature of value creation in the digitalized economy has a particularly close link to the source country, in the same way as value creation stemming from property like land, indicating that the allocation of taxing authority over capital gains income to the source country should be expanded to become the dominant model, rather than the exception.

As explained in Part III.A above, the nature of value creation in digital economy involves networks of users and customers that drive company growth through their participation in the networks, free production of content and, crucially, free data production. The economic allegiance of this means of value creation tips in favor of source countries.

These networks of users and customers are made up of members of a country’s population, and this population can be viewed as a type of resource of the country, in the same way as resources like land and oil. In the Four Economists’ Report, income that came from agricultural as well as mining and oil extraction were considered to have a particularly close economic allegiance to the source country because the business’s economic success relied on the resources of that country.[[173]](#footnote-173) Value creation derived from land is already taxed in the source country.[[174]](#footnote-174) These users and customers also provide free labor to the company through their participation in networks and their creation of data and content. Reliance on the local labor was also considered by authors of the Four Economists’ Report to be a strong factor in favor of economic allegiance of income being tied to the source country.[[175]](#footnote-175)

Data collection is also a key driver of value creation within the digital economy. The importance of data is not limited only to traditional tech companies—data is a key asset of companies across all industries.[[176]](#footnote-176) To which existing economic activity data collection is most comparable has been a topic of intense debate. However, each comparison points towards a strong economic allegiance to the source countries of capital gains income that stems from wealth created by data collection.

Many consider the nature of data as an asset to share characteristics with agricultural yields or with natural resources. Julie Cohen likens the process of “harvesting” personal data to harvesting within industrial agriculture.[[177]](#footnote-177) Shoshana Zuboff describes informational capitalism as reducing people to “human natural resources,”[[178]](#footnote-178) and the language of “extraction” has been used when describing data collection.[[179]](#footnote-179) This characterization of data as akin to a natural resource that companies extract and collect—a “new oil”—is pervasive in political, popular, and academic discussions of the digital economy.[[180]](#footnote-180) As discussed in Part [] above, income stemming from agricultural activities, as well as mining and oil extraction, was considered to have a closer economic connection to the source country versus the residence country. If data is most comparable to crops or extracted natural resources, the source country has a strong claim to value creation stemming from it.

This view of data as similar to a natural resource has been rejected by many scholars as inaccurate and ignoring the active role of people in creating data. As Jathan Sadowski explains, “Data mining is a misleading name; a more apt term would be data manufacturing. Data is not out there waiting to be discovered as if it already exists in the world like crude oil and raw ore. Data is a recorded abstraction of the world created and valorised by people using technology.”[[181]](#footnote-181) Some of these scholars have suggested that data should instead be viewed as a form of capital.[[182]](#footnote-182) One group of scholars, including Jaron Lanier, Eric Posner, and Glen Weyl, have gone further in recognizing the role of humans in producing data, arguing that data should be viewed primarily as a product of the data subject’s labor.[[183]](#footnote-183)

Viewing data and data production in this way also results in a close economic allegiance between capital gains income and source countries. The Four Economists’ Report found income from industrial businesses to have a strong economic connection to the source country.[[184]](#footnote-184) One reason for this was the reliance on local labor in creating income from industrial activities.[[185]](#footnote-185) When the human role in creating data is acknowledged, and the process of data production and collection is viewed as a process similar to manufacturing, the importance of local production comes to the forefront. And this is even stronger when data is viewed as a product of the data subject’s labor. The non-fungible nature of data also strengthens the importance of local production in this value creation. Personal data of users and customers can only be created by the unique activities and characteristics of those specific users and customers themselves—the company cannot create data itself, nor could the same data be created by people in other locations.

Embedded within the concept of allocating taxing authority based on relative economic allegiance is the benefits principle. Digital business models go beyond simply relying on benefits and services from the government to facilitate their business activities. The population of the country is also providing benefits and services to the company by virtue of participating in the network and engaging in value-creating interactions and producing for free valuable data and content. Individual citizens are largely not being compensated by companies for this value creation, in a dynamic that many have argued is exploitative.[[186]](#footnote-186) This free provision by citizens of benefits and services makes allowing their home countries (i.e. the source countries) to tax the capital gains income that is linked to this value creation even more important. Granting taxing authority to source countries directly compensates the government for benefits and services and can indirectly compensate citizens through lower tax rates or increased government services. This reallocation realigns taxation of capital gains with the goals of the benefits principle while also alleviating some of the exploitative outcomes seen in our modern economy.

Furthermore, the phenomenon in the digital economy of companies foregoing short- and medium-term income in favor of company growth also makes allocating taxing authority over capital gains income to source countries essential in order to satisfy the benefits principle and maintain fairness within international taxation. Source countries are typically able to tax a company’s business income. The original designers of the international tax system assumed that a company growing in value would also have current income so the benefits principle would be satisfied even if the source country was unable to tax capital gains income.[[187]](#footnote-187) This assumption no longer holds and, as a result, the only way that source countries will be compensated for the benefits and resources provided by the government as well as the people themselves is if they are able to tax capital gains income.

The nature of value creation within the modern economy has shifted the economic allegiance of capital gains in favor of source countries. At the same time, the economic allegiance of capital gains income to the residence country has been weakened by the trend of diversification of investor portfolios and the accompanying broad share bases of multinational companies. An investor in a closely-held corporation might have significant influence over the success of a company and the resulting capital gains income that the investor realizes upon selling shares in the company. They could closely oversee and advise management and actively participate in business decisions. This influence would establish a close economic allegiance to the investor’s residence country, which is providing the investor benefits, resources, and legal protections. However, in an economic environment where investors own small stakes in thousands of companies, often indirectly through investment vehicles such as ETFs, their influence on the success or failure of a company becomes minimal. This trend, therefore, weakens the economic allegiance of capital gains income to the investor’s residence country and points in favor of revising the international sourcing rules to allow source countries to tax capital gains income.

This Part has demonstrated why the source country should be allocated taxing authority over capital gains income to realign international tax law with its underlying norms and maintain fairness in international taxation. The following Part discusses one possible approach to effect this reallocation of taxing authority to the source countries.

IV.  
A New Model: Beginning a Conversation Around Reform

This Article is primarily a proof of concept. This Part, however, aims to begin a conversation about how to make the allocation of taxing authority over capital gains income a reality through administrable reforms to international tax law. This Part presents one possible approach. This approach is an annual mark-to-market tax on increases in the company’s market value. This MTM tax would be paid by the company directly to the source countries based on a set formula. This Part provides an overview of the possible design of the approach and its benefits and challenges from the perspective of administrability, equity, and efficiency.

1. An Annual Mark-to-Market Tax on Increases in Company Value

One means to reallocate taxing authority over capital gains income is an annual mark-to-market tax paid by the company on any increase in a company’s market value with taxing authority distributed amongst source countries based on a set formula.[[188]](#footnote-188) All publicly-traded companies, regardless of industry,[[189]](#footnote-189) would pay the tax to source countries on any increase in their market value over the course of the company’s tax year, as measured by its market capitalization on the final day of the company’s tax year versus its market capitalization on the first day of the tax year. The rate of the MTM tax would be low, such as a range of 2 to 4 percent, to avoid overly heavy tax obligations for companies.[[190]](#footnote-190) The tax would be non-refundable, but the company would be able to carry forward losses for years in which its market capitalization declined to offset taxes in subsequent years on a country-by-country basis. The tax would not replace domestic taxation of capital gains income on the investor level.

The choice of how taxing rights under this MTM scheme should be apportioned amongst source countries is a central question for its design and informs the global revenue impacts of the tax. Because the tax would be imposed on individual companies, it is possible to apportion taxing authority over increases in a company’s market value amongst countries based on the extent to which that company is conducting value-creating business activities within the country. [[191]](#footnote-191) This Article proposes two formulas to apportion taxing rights amongst source countries—one that would apply to consumer-facing businesses and automated digital services businesses and another that would apply to all other industries.[[192]](#footnote-192)

When determining how taxing authority over the MTM tax should be distributed, the formula for consumer-facing and automated digital services businesses would place equal weight on the relative revenues and sales from each country and the relative number of users/customers of the company in each country. Including the absolute number of users/customers in the formula takes into account the value-creating function of networks, data, and free production even in cases in which there are not associated revenues in the country. Including revenues in the formula reflects the fact that the same value-creating functions of users and customers can in some cases translate into greater volumes of sales or revenues in some countries versus others.[[193]](#footnote-193)

For businesses other than consumer-facing businesses and automated digital services businesses, the apportionment formula would be based on sales and revenues alone.[[194]](#footnote-194) This reflects the fact that these business models do not rely on the value-creating activities of users and customers to the same extent that consumer-facing and automated digital services businesses do. Apportioning the MTM tax based on relative numbers of users and customers as well as relative sales and revenues would likely result in countries with large populations and markets receiving the most substantial direct revenue increases from the tax. Sales and revenues from high-income countries are often greater than those from low-income countries. As a result, apportioning the MTM tax based solely (or with a greater weight) on the absolute number of users/customers within a country would achieve a greater benefit for low- and middle-income countries versus high-income countries than the current design. This design change should be considered if greater global redistributive effects are desired.[[195]](#footnote-195)

The following is a simplified example of how this reform proposal would apply to a large, multinational social media company.[[196]](#footnote-196)

The company’s market capitalization increased in the year 2020 by $200 billion. Its income before taxes was $35 billion and its revenues were $85 billion. It paid a total of $4 billion in corporate income taxes globally. The company operated in four countries: the United States, India, Germany, and Nigeria. Its distribution of users and revenues by each country were as follows:

|  |  |  |
| --- | --- | --- |
|  | Percentage of Users | Percentage of Revenues |
| United States | 9% | 48% |
| Germany | 15% | 24% |
| India | 42% | 18% |
| Nigeria | 33% | 9% |

In this example, the rate of the MTM tax is 3% of the change in the company’s market capitalization for the year 2020. The change in market capitalization for this company in 2020 was an increase of $200 billion so the total MTM tax owed by the company for 2020 is $6 billion. As an automated digital services business, the two-factor formula applies, placing equal weight on the relative number of users in each country and the relative revenues from each country when apportioning the MTM tax amongst countries.

|  |  |  |  |
| --- | --- | --- | --- |
|  | MTM Tax Receipts | Percentage of Users | Percentage of Revenues |
| United States | $1.7 billion | 9% | 48% |
| Germany | $1.2 billion | 15% | 24% |
| India | $1.8 billion | 42% | 18% |
| Nigeria | $1.3 billion | 33% | 9% |

The company’s overall tax burden, including both income tax and the MTM tax, would be $10.0 billion, which represents 5.0% of their increase in market capitalization, 11.8% of their revenues, and 28.6% of their income.

If this MTM reform were to be implemented, additional questions of its design would need to be considered. One important question is whether a one-time transition tax should be imposed on publicly-traded companies. This transition tax would equalize the burden of the tax between companies that have exited their growth phase and those that have not and would also recognize the historic contribution to growth in corporate value of source countries.[[197]](#footnote-197) Another important question is whether there should be a coordinating tax for non-publicly-traded companies. A coordinating tax would equalize the treatment of publicly-traded and non-publicly-traded companies and recognize the value creation in source countries that manifest as growth in these companies’ values. However, this tax would have to deal with the administrative difficulty of accurately assessing the market value of a business whose shares are not publicly-traded.[[198]](#footnote-198)

This subpart has provided a basic overview of the possible design of a MTM tax. The following subpart discusses further considerations regarding the administrability, equity, and efficiency of the MTM tax.

1. Further Considerations

The proof of concept in this Article has been based partly on the argument that the novel nature of value creation within the digital economy justifies reallocating of taxing authority over capital gains income from the residence country to source countries. But this proposed approach would apply to all capital gains income from the sale of business shares, regardless of whether that company employs digital business models. There are several reasons for this. First, the argument that taxing authority over capital gains income should be re-allocated to the source countries is partly based on the fact that diversified portfolios and multinational companies’ broad shareholder bases has weakened the economic allegiance of capital gains income to the residence country.[[199]](#footnote-199) This trend applies across industries. Additionally, as is discussed above, data is central to value creation for companies outside of the tech industry.[[200]](#footnote-200) The data economy is permeating more and more industries. Finally, there are major administrability advantages to applying the reform across all industries rather than attempting to ring-fence certain business models.

One disadvantage of the MTM tax approach is that it would not fully reallocate taxing authority over capital gains income from the residence countries to the source countries. The MTM approach is not envisioned as a replacement for taxing capital gains at the investor-level. And the investor’s residence country would still be allowed to tax that capital gains income. It would instead be a new tax layered on top of the existing regime for sourcing capital gains income.

If the company pays the MTM tax, the value of the company will presumably decrease,[[201]](#footnote-201) thus decreasing the level of capital gains income realized by the investor upon sale. In this way, the MTM tax would function as a surrogate tax, indirectly taxing investors by decreasing the ultimate capital gains income they receive. By decreasing the amount of investors’ capital gains income, this lowers the extent to which residence countries are able to tax income stemming from growth in corporate value. In this way, it partially reallocates taxing authority over income from corporate growth from residence countries to source countries. Global capital ownership skews heavily towards developed versus developing economies—in 2017, 78% of investment in public equity markets was held by investors from developed economies versus 22% held by those from developing economies.[[202]](#footnote-202) This reallocation, therefore, will disproportionately decrease the capital gains tax receipts of higher-income countries because capital ownership is disproportionately concentrated in these countries. However, because the MTM tax does not replace domestic capital gains taxation and is instead layered on top of it, residence countries could mitigate this revenue decrease by raising the capital gains rates.[[203]](#footnote-203) And a country’s decreased capital gains tax receipts will be offset to the extent of its receipts from the MTM tax. As discussed above, the choice of formula for dividing taxing authority over the MTM tax amongst source countries will be determinative of its global redistributive effects.[[204]](#footnote-204)

The fact that the MTM tax functions as a surrogate tax raises the important question of the incidence of the tax. The MTM tax aims to indirectly tax investors via a company-level tax and shift taxing rights over income stemming from corporate growth towards the source countries. Placing the tax at the company level implicates the debate tracing back to Arnold Harberger’s 1962 study of the extent to which the incidence of corporate taxes falls on capital or labor.[[205]](#footnote-205) While recent scholarship indicates that the burden of corporate-level taxes falls primarily on capital,[[206]](#footnote-206) it is possible that the incidence of this tax would not be borne fully by capital. While this is an undesirable outcome, it is a challenge that plagues corporate taxation more broadly, is not specific to this proposal, and should not invalidate the effort to achieve a fair division of taxing authority amongst jurisdictions. Even if capital does not bear the full incidence of the tax, it should bear a substantial portion of it, thus furthering the proposal’s policy goal. However, further research to assess the question of incidence should be pursued.

Another possible concern with the MTM approach is company liquidity. Unlike an income tax, an increase in market value is not necessarily accompanied by cash flow for the taxpayer, drawing into question whether the taxpayer will have the necessary liquidity to pay such tax. This concern can be alleviated in a few ways. First, if a company experiences an increase in market value, signaling that investors have confidence in the economic viability of the company, raising cash through either debt or equity issuances should be feasible for these companies. Additionally, the MTM tax could incorporate some mechanisms to alleviate liquidity concerns, such as deferrals on tax for companies that see significant increases in market value in a given year, or allow companies to set aside stock and sell such stock over a set period of time to pay the tax.[[207]](#footnote-207)

Critics of the MTM tax might highlight that increases and decreases in the market value of a company often are responding to broader macroeconomic factors, such as shifting interest rates, versus value creation within the company itself. This is certainly the case, and it is not possible to track with precision the extent to which increases in the value of a company’s shares is driven by external versus internal factors. However, over time and in the aggregate, some internal value-creating activities must drive the sustained growth in the value of a company. Additionally, the MTM tax is designed as a substitute for directly taxing investors on their capital gains income. Capital gains income is currently taxed regardless of whether those gains stem from macroeconomic or company-specific factors. It is, therefore, consistent to impose the MTM tax in the same way.

The MTM tax approach also brings with it many advantages over other possible approaches to reallocating taxing authority over capital gains income, such as a globalized pooling and redistribution of capital gains tax receipts.[[208]](#footnote-208) The approach would not require the creation of an international taxing agency to administer the program. Domestic tax authorities would collect the tax from companies as part of their existing process for collecting income taxes. There would also be no need for countries to alter their existing regime for taxing investor’s capital gains income under their domestic tax law. There are also minimal concerns about a distortionary effect on company behavior. One of the key distortions that could be caused by international business taxation is a company shifting the location of investment and economic activities in response to tax law changes. While it is not possible for a real-world tax to have no effects on company behavior, the apportionment of this MTM tax is based on relatively immobile factors—sales and customers/users. Because “customers do not have feet,” a company will not have an impetus to shift location of economic activities in response to the impact of this tax in the way that they might if the allocation were based on factors such as assets or payroll.*[[209]](#footnote-209)*

From an equity perspective, the MTM tax approach mitigates two features of the U.S. tax system that have facilitated the pace of wealth concentration. Because the MTM is assessed annually, it indirectly forces investors to pay taxes on increases in wealth as those increases occur. This counters the wealth concentration effects of U.S. tax law’s realization requirement, which defers tax payments on capital gains until the asset is sold.[[210]](#footnote-210) The wealth concentration effects stemming from the realization requirement has been an active topic in recent years.[[211]](#footnote-211) Forcing investors to indirectly pay taxes on increases in the value of their shares as those increases occur also counters the wealth concentration effects of stepped-up basis at death, a provision which allows heirs to avoid all capital gains taxes on inherited assets.[[212]](#footnote-212)

The approach discussed in this Part is just one of many that could be employed to reallocate taxing authority over capital gains income from residence countries to source countries. Further conversation and collaboration within the policy and academic communities will be essential to effectively implement this reallocation and bringing international tax law back in line with its underlying principles.

Conclusion

The current model for taxing capital gains income must be revised if we are to maintain a coherent and equitable international tax system in line with its driving norms. Our modern economic environment departs greatly from that envisioned by the original designers of the international tax system in the 1920s. The nature of value creation in the digital economy relies extensively on resources and benefits provided by source countries and their populations and often results in significant growth in corporate value within accompanying corporate income. Additionally, diversified portfolios and broad shareholder bases of multinational companies have limited the influence of investors on the success of a company. In this environment, the current allocation of taxing authority over capital gains income exclusively to the residence country is no longer congruent with the benefits principle and accompanying concept of allocating taxing authority over cross border income based on its economic allegiance. The economic allegiance of capital gains income has shifted. And the time has come for the international tax system to recognize this shift and grant taxing authority over capital gains income to source countries.

1. As is discussed in more detail below, *see* note 30 *infra* and accompanying text, the “source country” has historically referred to the country of production only, not the market country. Recent reforms have presented an expanded concept of source that includes both the country of production and the market country. Unless otherwise specified or required by context, references to the source country in this Article point to this expanded concept of the source country as encompassing both the country of production and the market country. [↑](#footnote-ref-1)
2. Further explanation of the mechanics of the international tax sourcing rules is included in Part I.A below. [↑](#footnote-ref-2)
3. For purposes of this Article, “capital gains income” refers specifically to capital gains income from the sale or disposition of shares of a company. It does not refer to capital gains income from the sale or disposition of any other capital asset (as defined in I.R.C. § 1221(a)). This is a style choice to facilitate brevity and clarity of language for the reader. [↑](#footnote-ref-3)
4. In their seminal 1972 essay, “Inter-Nation Equity,” Peggy and Richard Musgrave described the central questions of international tax as follows: “﻿If residents of country A invest in a business incorporated in B and operating in C, who should be permitted to tax the income on such capital and at what rate? Should there be a rule pertaining to this, or should unrestricted multiple taxation apply? Moreover, if there are such rules, should they apply equally at the corporate and individual level of taxation?” Richard Musgrave & Peggy Musgrave, *Inter-Nation Equity*, *in* Modern Fiscal Issues: Essays in Honor of Carl S. Shoup 64 (Richard Bird & John Head, eds. 1972). [↑](#footnote-ref-4)
5. There is a near universal agreement within international tax law that double taxation is undesirable. *See* Reuven Avi-Yonah, International Tax As International Law 1 (2006) (identifying the principle that an item of cross-border income should only be taxed once as one of the unifying norms of international tax law). [↑](#footnote-ref-5)
6. For a detailed discussion of benefits theory, including critiques of the theory, see Part II.B below. [↑](#footnote-ref-6)
7. *See* Avi-Yonah, *supra* note 5, at 12 (“[Government] benefits justify source-based corporate taxation in the sense that the host country’s government bears some of the costs of providing the benefits that are necessary for earning income.”); Mitchell Kane, *A Defense of Source Rules in International Taxation*, 32 Yale J. Reg. 311, 315, note 10 (identifying a broad class of benefits-based theories that justify taxing non-residents as “on the grounds of a sovereign having offered something to those non-residents.”). [↑](#footnote-ref-7)
8. The concept of economic allegiance and its relation to the benefits principle is discussed further in notes 46 to 55below and accompanying text. [↑](#footnote-ref-8)
9. *See* notes 89-99, *infra,* and accompanying text (discussing the link between the political push to tax income where value is created and benefits theory and economic allegiance). [↑](#footnote-ref-9)
10. *See* H. David Rosenbloom & Stanley I. Langbein*, United States Tax Treaty Policy: An Overview*, 19 Colum. J. Transnat’l L., 359, 366-67 (1981) (explaining the general allocation of active income to the source country and passive income to the residence country but also noting that income from real property is typically allocated to the source country); Reuven Avi-Yonah, *All of a Piece Throughout: The Four Ages of U.S. International Taxation* 25 Va. Tax Rev. 313, 322 (2005) (explaining that the scheme adopted in the bilateral treaty network allocates active income to the source country and passive income to the residence country). [↑](#footnote-ref-10)
11. Org. Econ. Co-operation & Dev., Model Tax Convention on Income and on Capital, art. 11, 13 (2017) (addressing the allocation of taxing authority over interest and capital gains income).

    An exception to this is sale of shares in businesses that derive more than 50 percent of their value from immoveable property, such as land. *Id.* at art. 13, para. 4. [↑](#footnote-ref-11)
12. *See* Michael J. Graetz & Michael M. O’Hear, *The “Original Intent” of U.S. International Taxation*, 46 Duke L. J. 1021, 1023 (1997) (“Despite massive changes in the world economy in the last

    seventy years, the international tax regime formulated in the 1920s has survived remarkably intact.”). [↑](#footnote-ref-12)
13. A uniform definition of the “digital economy” or “digital business activities” has proven elusive. *See* Int’l Monetary Fund, Measuring the Digital Economy 7 (2018) (“There are no agreed definitions of digital sector, products or transactions, let alone the digital economy.’), https://www.imf.org/en/Publications/Policy-Papers/Issues/2018 /04/03/022818-measuring-the-digital-economy; Lilian V. Faulhaber, *Taxing Tech: The Future of Digital Taxation*, 39 Va. Tax Rev. 145, 150-51 (2019) (describing efforts to define the digital economy). The OECD has defined the digital economy in broad terms, explaining that the digital economy encompassed “all economic activity reliant on, or significantly enhanced by the use of digital inputs, including digital technologies, digital infrastructure, digital services and data. . . . [and] all producers and consumers, including government, that are utilising these digital inputs in their economic activities,” Org. Econ. Co-operation & Dev., A Roadmap Toward a Common Framework for Measuring the Digital Economy 5 (2020), and has also highlighted three common characteristics of digital business models: the ability to establish a significant economic presence across jurisdictions without an accompanying physical presence, reliance on intangible assets, and the importance of data, user participation, and network effects, OECD/G20 Base Erosion & Profit Shifting Project, Tax Challenges Arising from Digitalisation—Interim Report 24 (2018), *available at* https://www.oecd.org/ctp/tax-challenges-arising-from-digitalisation-interim-report-9789264293083-en.htm.

    The centrality of network effects, data collection, and user participation in the digital economy are the most relevant characteristics for this Article’s analysis. References to the “digital economy” in this Article will generally be connected to these characteristics. These characteristics are linked to the rise of the data economy as well as platform-based business models, both of which are of increasing important within the global economy. *See* Julie Cohen, Between Truth and Power 63-72 (2019) (describing the role of data within the new informational economy). *See generally* Geoffrey G. Parker et al., Platform Revolution (2016) (describing the development of the platform economy). [↑](#footnote-ref-13)
14. *See, e.g.* Kane, *supra* note 7, at 311 (“The body of law generally labeled "international taxation" is widely perceived to be in shambles.”); Reuven S. Avi-Yonah, *International Taxation of Electronic Commerce*, 58 Tax L. Rev. 507, 515-16 (1997) (describing features of the internet and e-commerce and the challenges they present for the international tax regime); Ruth Mason, *The Transformation of International Tax*, 114 Am. J. Int’l L., 353, 364-66 (2020) (describing a series of government investigations into the issue of corporate tax avoidance following the 2008 financial crisis and their political influence); Edward D. Kleinbard, *Stateless Income*, 11 Fla. Tax Rev. 699, 703-05 (2011) (discussing the failures of the international tax system that have led to the ability of multinational companies to create “stateless” income on which they do not have to pay tax); Michael Devereux & John Vella, *Are We Heading Towards a Corporate Tax System Fit for the 21st Century?*,35 Fiscal Stud. 449, 461 (2014) (describing elements of the international tax system as incoherent and arbitrary). [↑](#footnote-ref-14)
15. This Article uses the terms “company” and “business” to describe business entities generally, including corporations (as defined in I.R.C § 7701(a)(3)), whose income is taxed directly, and partnerships (as defined in I.R.C § 7701(a)(2)), whose income tax burden is passed through to owners. This Article’s arguments and conclusions apply equally to these non-passthrough and pass-through entities. [↑](#footnote-ref-15)
16. *See, e.g.,* White House, Press Release, Fact Sheet: The American Jobs Plan (March 31, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/03/31/fact-sheet-the-american-jobs-plan/ (framing President Biden’s proposed 2021 tax reforms as aiming “to make sure corporations pay their fair share of taxes . . .); Richard Lough, *Explainer: Macron’s quest for an international tax on digital services*, Reuters (Aug. 22, 2019), https://www.reuters.com/article/us-g7-summit-digital-tax-explainer/explainer-macrons-quest-for-an-international-tax-on-digital-services-idUSKCN1VC0VH (explaining that “the governments of a growing number of countries have been vexed by their inability to tax profits of multinational tech companies that they believe are derived in their jurisdictions”); Jesse Eisinger et al., *The Secret IRS Files: Trove of Never-Before-Seen Records Reveal How the Wealthiest Avoid Income Tax*, ProPublica (June 8, 2021) (documenting the ability of the wealthiest individuals to avoid taxation despite large accretions of wealth), https://www.propublica.org/article/the-secret-irs-files-trove-of-never-before-seen-records-reveal-how-the-wealthiest-avoid-income-tax.

    Concerns that companies are not paying their fair share of taxes have two components, one related to amount and one related to location. There is a concern that the total amount of taxes paid by companies is too low, as a result of companies’ ability to manipulate international tax rules to direct income to favorable taxing jurisdictions. Kleinbard, *supra* note 14, at 703-05. The second concern is that the countries in which companies are being taxed does not align with the countries in which they are conducting business. Devereux & Vella, *supra* note 14, at 461. This Article addresses this second concern. [↑](#footnote-ref-16)
17. For a detailed discussion of the conversations and reforms related to taxing where value is created, see notes 82 to 99 below and accompanying text. [↑](#footnote-ref-17)
18. The Inclusive Framework also includes a global minimum tax, thus addressing the concern about the total amount of tax paid by companies. *See* notes 85-86, *infra*, and accompanying text (describing the OECD Inclusive Framework). [↑](#footnote-ref-18)
19. This method of value creation is explained in more detail in Part III.A. [↑](#footnote-ref-19)
20. *See Fin. Comm.*, *Report on Double Taxation*,League of Nations Doc.E.F.S.73.F.19 (1923) [hereinafter Four Economists’ Report]. As is explained in more detail in Part I.C below, this report was commissioned by the League of Nations during the original design of the international tax system in the 1920s. The report’s recommendations were largely followed and remain the core of the international tax system to this day. [↑](#footnote-ref-20)
21. *See id.* at 36 (describing the role of company investors). [↑](#footnote-ref-21)
22. In 1899 Austria-Hungary and Prussia entered into a treaty designed to prevent double taxation of cross-border income and other bilateral treaties with the same goal were signed across Western Europe in subsequent years. Mitchell B. Carroll, *International Tax Law: Benefits for American Investors and Enterprises Abroad: Part I*, Int’l Lawyer692, 693 (1968). The 1920s negotiations sought to spread these efforts internationally. [↑](#footnote-ref-22)
23. For a detailed history of the negotiations leading to the 1920s Compromise, see Sunita Jogarajan, Double Taxation and the League of Nations (2018). [↑](#footnote-ref-23)
24. The idea that double taxation should be avoided was prominent in the initial design of the international tax system in the 1920s. For example, the International Chamber of Commerce, which was composed of business representatives from the allied countries, resolved in 1921 that it “urge[d] prompt agreement between the Governments of the allied countries in order to avoid the individuals or companies of any one country may be liable for tax on the same income . . . .” International Chamber of Commerce, *quoted in* Bret Wells & Cym Lowell, *Income Tax Treaty Policy in the 21st Century: Residence vs. Source*, 5 Colum. J. Tax L. 1, 13-14 (2015). And the League of Nations, when it tasked Edward Seligman and others with writing a report on double taxation and potential international tax schemes requested that they determine whether general principles could be formulated “to remove the evil consequences of double taxation.” Four Economists’ Report, *supra* note 20, at 2. [↑](#footnote-ref-24)
25. Graetz & O’Hear, *supra* note 12, at 1066; Jogarajan, *supra* note 23, at 3-4. [↑](#footnote-ref-25)
26. *See generally* Graetz & O’Hear, *supra* note 12, at 1066-1089 (providing an overview of the ICC and League of Nations negotiations between 1920 and 1928). [↑](#footnote-ref-26)
27. *Id.* at 1080-81. [↑](#footnote-ref-27)
28. Rosenbloom & Langbein, *supra* note 10, at 365-66 (identifying the classification and assignment system as derived from the work of the League of Nations in the 1920s). [↑](#footnote-ref-28)
29. *See* Hugh J. Ault & Brian J. Arnold, Comparative Income Taxation, 429, 431 (3d ed. 2010) (identifying personal connection to a jurisdiction and that jurisdiction being the “source” of income as the two bases for granting taxing rights under international tax law); Mason, *supra* note 14, at 355 (“The current international tax system . . . relies on the concepts of source and residence.”).

    The residence country’s claim to tax is justified based on the political affiliation between the taxpayer and the country. Kane, *supra* note 7, at 314 (“﻿the basic idea captured by the residence principle is that the existence of some requisite threshold political connection between a taxpayer and a state justifies the state's tax claim over that individual.”). In the case of income earned by a corporation, the residence principle applies to the corporation’s residence country because the corporation is recognized as a separate legal entity. As discussed in more detail in Part I.B below, the source country’s claim to tax is typically justified under the benefits theory, *see* notes 35-36, 40-43, *infra*, and accompanying text (providing a detailed explanation of benefits theory and its role in the development of international tax law). [↑](#footnote-ref-29)
30. The international tax system currently does not recognize the market country, the country in which companies have users and customers, as a locus of economic activities giving rise to income. The market country is, therefore, not considered to have a legitimate claim to tax income as the source country. Amanda Parsons, *Tax’s Digital Labor Dilemma*, 71 Duke L. J. 1781, 1791-93 (2022). The concept of source is based on production, *see, e.g.*,I.R.C. § 861(a)(3) (services income sourced to the place of performance; I.R.C. § 863(b) (inventory property sourced to the place of production); Org. Econ. Co-operation & Dev., *supra* note 11, at art. 7 (allowing s country to tax business profits only if the business has an office, factory, or other fixed place of business in the country). *See also* Avi-Yonah, *supra* note 10*,* at 320 (describing source-based taxation as connected to the “production of wealth”), and the international tax system currently does not recognize the production role that users and customers often play for companies. Therefore, a company having users or customers present in a country is alone not enough to make it the source country. As a result, the market country is not granted taxing rights under our current system despite the enormous value that users and customers create for companies through things like network effects and data and content production. These value-creating activities of users and customers are discussed in more detail in Part III.A below. This author has advocated in other work for the international tax system to recognize this production role of users and customers and grant their home countries taxing authority over income stemming directly from their work as the source jurisdiction. *See* Parsons, *supra* note 30.

    The recent Pillar One Blueprint reform proposal reallocates taxing authority over a portion of a company’s profits to countries “where there is an active and sustained participation of a business in the economy of that jurisdiction through activities in, or remotely directed at, that jurisdiction,”⁠ OECD/G20 Base Erosion & Profit Shifting Project, Tax Challenges Arising from digitalisation—Report on Pillar One Blueprint: Inclusive Framework on BEPS 11 (Oct. 2020), https://www.oecd-ilibrary.org/docserver/beba0634-en.pdf?expires=1641849624&id=id&accname=ocid177456&checksum=E37EBF09CF8A96BF934C49842D8784EF. This reallocation based on active and sustained participation allows countries in which companies have users and customers, but no substantial company-level operations, to tax companies. It can be viewed as expanding the concept of the “source” of the economic activities giving rise to income to encompass market countries in addition to the countries of traditional production.

    When advocating for taxing authority over capital gains income to be re-allocated to the “source” country, this Article refers to the expanded concept of source as encompassing both the country of traditional production and the market country in which value-creating data and content production is being accomplished by company’s users and customers. [↑](#footnote-ref-30)
31. Rosenbloom & Langbein, *supra* note 10, at 365-66 (explaining that a system of classification and assignment underlies “virtually all” bilateral tax treaties); Steven A. Dean, *A Constitutional Moment in Cross-Border Taxation*, 1 J. Fin. Development 1, 1-3 (2021) (explaining the classification and assignment system and arguing that it forms a type of material constitution). [↑](#footnote-ref-31)
32. *See supra* note 10 and accompanying text. [↑](#footnote-ref-32)
33. Org. Econ. Co-operation & Dev., *supra* note 11, at art. 13. [↑](#footnote-ref-33)
34. *Id.* at art. 13, para. 4. [↑](#footnote-ref-34)
35. *See* *supra* note 7 and accompanying text. [↑](#footnote-ref-35)
36. *See* Joel Slemrod & Jon Bakija, Taxing Ourselves 61 (4th ed. 2008) (identifying the benefits principle as one of the principles that guides “the fair distribution of tax burden”); Klaus Vogel, *Worldwide vs. Source Taxation of Income—A Review of the Arguments (Part III)*, 16 Intertax 393, 398 (1988) (arguing that inter-nation and inter-individual equity favors taxation by source countries based on the benefits provided).

    This Article does not argue that benefits theory or any other principle or factor has alone informed the evolution of international tax law. Notably, in addition to the benefits principles, the ability-to-pay principle has played an important role in the development of both domestic and international tax law⁠ and is cited as the more sound principle by some critics of benefits theory⁠. The ability-to-pay principle holds that the burden of taxation should be distributed amongst taxpayers based on who is most materially able to bear that burden. Slemrod & Bakija, *supra* note 36, at 64. Furthermore, when pen meets paper and tax laws are drafted, theoretical principles have often given way to realities of politics and administrability.⁠ T.S. Adams, for example, emphasized the importance of political realities when discussing his support for source-based taxation, “[e]very state insists upon taxing the non- resident alien who derives income from source within that country, and rightly so, at least inevitably so.”Graetz & O’Hear, *supra* note 12, at 1037 (quoting T.S. Adams). Incorporating political inevitabilities was also a feature of the Four Economists’ Report, discussed in more detail below. Their recommendation for a classification and assignment system stemmed from their understanding that a pure residence or source-based system would not be politically palatable. Four Economists’ Report, *supra* note 20, at 51. [↑](#footnote-ref-36)
37. These critiques instead favor taxation based on ability-to-pay, which tends to support residence-based versus source-based taxation. *See, e.g.* Richard A. Musgrave & Peggy B. Musgrave, Public Finance in Theory and Practice 221 (5th ed. 1989) (explaining the difficulties of assessing the relative government benefits received by taxpayers and distributing tax burdens accordingly); Robert A. Green, *The Future of Source-Based Taxation of the Income of Multinational Enterprises*, 79 Cornell L. Rev. 18, 29 (1993) (arguing that source-based taxation is not compatible with underpinnings of international taxation because it does not comport with the ability-to-pay principle); Nancy H. Kaufman, *Fairness and the Taxation of International Income*, 29 L & Pol’y Int’l Bus. 145, 183-84 (1998) (outlining the technical and conceptual weaknesses of benefits-based taxation due to the inability to allocate tax burdens in line with benefits received). *See also* Kane, *supra* note 7, at 314-318 (summarizing critiques of benefits theory). [↑](#footnote-ref-37)
38. *See* Vogel, *supra* note 36, at 395-96 (describing benefits theory generally as well as 19th century scholars and others who have promoted it). [↑](#footnote-ref-38)
39. *Id.* at 396. [↑](#footnote-ref-39)
40. Graetz & O’Hear, *supra* note 12, at 1036-37 (quoting T.S. Adams). [↑](#footnote-ref-40)
41. *See id.* at 1036-38 (explaining T.S. Adams’s reliance on the benefits principle). [↑](#footnote-ref-41)
42. *See* Avi-Yonah, *supra* note 10, at 318 (explaining T.S. Adams’s strong support of source based taxation under the benefits principle). [↑](#footnote-ref-42)
43. Jogarajan, *supra* note 23, at 82. [↑](#footnote-ref-43)
44. Avi-Yonah, *supra* note 5, at 2, 11-12. [↑](#footnote-ref-44)
45. *See* Lawrence Lokken, *What Is This Thing Called Source?*, May-June 2011 Int’l Tax J. 25, 26 (“Because source rules cannot be derived directly from the ability to pay principle, benefit provided must be the theoretical foundation of jurisdiction to tax income on the basis of source.); Fred B. Brown, *An Equity-Based Multilateral Approach for Sourcing Income Among Nation*, 11 Fla. Tax. Rev. 565, 574 (2011) (“An important principle used in formulating source rules is the view that income should be sourced to the country that provides governmental services and protections that are used in deriving the income.’). [↑](#footnote-ref-45)
46. *See* Klaus Vogel, *Worldwide vs. Source Taxation of Income—A Review of the Arguments (Part I)*, 16 Intertax 216, 219 (1988). Schanz suggests that taxing authority over income should be allocated three-fourths to the source country and one-fourth to the residence country. *Id.* [↑](#footnote-ref-46)
47. Georg von Schanz, Zur Frage der Steuerpflicht 9 II *Finanzarchiv* 1, 4 (1892), translated and quoted in Vogel, *supra* note 46, at 219. [↑](#footnote-ref-47)
48. *See id.* at 219. [↑](#footnote-ref-48)
49. Academics have disagreed on whether too much importance has been placed on the 1923 report in tax scholarship. *Compare* Graetz & O’Hear, *supra* note 12, at 1027 (arguing that academics have overstated the importance of the 1923 Report to the 1920s compromise and, as a result, overemphasized the preference for residence-based taxation in the 1920s negotiations) *with* Avi-Yonah, *supra* note 10, at 321-22 (stating that Michael Graetz and Michael O’Hear underemphasize the importance of the 1923 Report and noting its key contribution in creating the groundwork for the 1920s compromise). [↑](#footnote-ref-49)
50. Four Economists’ Report, *supra* note 20, at 42. *See also* Hugh J. Ault, *Corporate Integration, Tax Treaties, and the Division of the International Tax Base: Principles and Practices*, 47 Tax L. Rev. 565, 567-68 (1992) (explaining the conclusions of the Four Economists’ Report and its influence on the international tax system). [↑](#footnote-ref-50)
51. Four Economists’ Report, *supra* note 20, at 20. [↑](#footnote-ref-51)
52. Avi-Yonah, *supra* note 10, at 320. [↑](#footnote-ref-52)
53. *Id.* at 320. [↑](#footnote-ref-53)
54. Four Economists’ Report, *supra* note 20, at 18. *See* Part I.A., *supra* (describing the adoption of the classification and assignment system and its continued importance). [↑](#footnote-ref-54)
55. In discussing economic allegiance to the residence country, the authors explain, “[i]t is undeniable that the individual owes some duty to the place where he lives. He receives benefits from, and confers benefits upon, that community. He receives benefits in that he enjoys not only the protection of the laws but the various conveniences that are afforded by the community where he chooses to live.” *Id.* at 29. [↑](#footnote-ref-55)
56. *Id.* at 23. [↑](#footnote-ref-56)
57. *Id.* at 23. [↑](#footnote-ref-57)
58. Avi-Yonah, *supra* note 10, at 322-23. [↑](#footnote-ref-58)
59. Four Economists’ Report, *supra* note 20, at 27-31. [↑](#footnote-ref-59)
60. *Id. at* 27-31. [↑](#footnote-ref-60)
61. *Id.* at 31. [↑](#footnote-ref-61)
62. *Id.* at 30-31. [↑](#footnote-ref-62)
63. *Id.* at 30 (“﻿It is true that the manager of the factory can generally do most effective work on the spot, but this is not necessarily so. In not a few instances the real brains of the management may be found at a distance. This is, however, apt to be the exception.”) [↑](#footnote-ref-63)
64. *Id.* at 28. [↑](#footnote-ref-64)
65. The Four Economists’ Report describes the business enterprises it is considering as those “of an immovable character or closely connected with immovables,” indicating that the report is only considering businesses with a physical presence in a country. *Id.* at 29. [↑](#footnote-ref-65)
66. *Id.* at 30. [↑](#footnote-ref-66)
67. *Id.* at 30. [↑](#footnote-ref-67)
68. *Id.* at 30-31. [↑](#footnote-ref-68)
69. *Id.* at 36-37. [↑](#footnote-ref-69)
70. Another consideration that likely influenced their allocation of taxing authority to the residence country was that of administrability. The report notes that the possibility of multiple countries of origin—such as when goods are produced in one country and sold in another—would “constitute a serious embarrassment” in determining the rights of each country and consequently weakens the claims of source countries to corporate shares.*Id.* at 36. Part IV of this Article aims to start a conversation about possible reforms that would overcome this concern about administrability. [↑](#footnote-ref-70)
71. Four Economists’ Report, *supra* note 20, at 36. [↑](#footnote-ref-71)
72. *Id.* at 36. [↑](#footnote-ref-72)
73. *Id.* at 36. [↑](#footnote-ref-73)
74. *See supra* notes 13-18 and accompanying text. [↑](#footnote-ref-74)
75. *See* Graetz & O’Hear, *supra* note 12, at 1023 (“Despite massive changes in the world economy in the last seventy years, the international tax regime formulated in the 1920s has survived remarkably intact.”). [↑](#footnote-ref-75)
76. See further discussion in Part III.B below. [↑](#footnote-ref-76)
77. *See* Org. Econ. Co-operation & Dev, Explanatory Statement, OECD/G20 Base Erosion and Profit Shifting Project 4, 52-54 (2015), www.oecd.org/tax/beps-explanatory-statement-2015.pdf (describing business activities that have been enabled by information and communication technology and internet connectivity). [↑](#footnote-ref-77)
78. *Id.* at 65 (highlighting multi-sided markets as a feature of the digital economy that has a significant impact on international taxation). [↑](#footnote-ref-78)
79. See further discussion in Part III.A below. [↑](#footnote-ref-79)
80. *See* Pierre Collin & Nicolas Colin, Taxation of the Digital Economy 51-52 (Jan. 2013) (discussing the reliance on free user-generated content in Web 2.0). [↑](#footnote-ref-80)
81. *See* Carol Dunahoo, *Source Country Taxation of Foreign Corporations: Evolving Permanent Establishment Concepts*, 86 Tax Mag. 37 (2008) (analyzing the challenges that e-commerce has presented for appropriately allocating taxing authority over profits amongst countries); Allison Christians, *Digital Services Taxes and Internation Equity: A Tribute to Peggy Musgrave*, 95 Tax Notes Int’l 589, 589 (Aug. 12, 2019) (describing the debate over the appropriate allocation of taxing authority amongst countries). [↑](#footnote-ref-81)
82. For example, the European Commission explained in a 2018 report that although “[i]t is an internationally agreed principle that profits should be taxed where value is created,” features of the digital economy have led to “a disconnect between where the value is created, and where taxes are paid.” European Commission, Time to establish a modern, fair and efficient taxation standard for the digital

    economy 4 (2018), https://eur-lex.europa.eu/resource.html?uri=cellar:2bafa0d9-2dde-11e8-b5fe-01aa75ed71a1.0017.02/DOC\_1&format=PDF. The report goes on to propose a comprehensive, multilateral solution of a Common Consolidated Corporate Tax Base as well as digital services taxes as interim, unilateral measures. *Id.* at 6-9. The U.K. government likewise explained in a 2017 position paper that “[t]he overall principle underpinning [the international tax system’s] framework is to tax a multinational group’s profits in the countries in which it undertakes its value-generating activities” and analyzed a variety of potential reforms to ensure that this principle was upheld in the face of digitalization. Her Majesty’s Treasury, Corporate tax and the digital economy: policy paper 4 (2017), https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/689240/corporate\_tax\_and\_the\_digital\_economy\_update\_web.pdf. [↑](#footnote-ref-82)
83. *See* Org. Econ. Co-operation & Dev., Action Plan on Base Erosion and Profits Shifting 10 (2013), https://www.oecd.org/ctp/BEPSActionPlan .pdf (describing the challenges that digital business models present for international tax law and the need to properly take into account value creation in the context of the digital economy). [↑](#footnote-ref-83)
84. Org. Econ. Co-operation & Dev., Explanatory Statement, OECD/G20 Base Erosion and Profit Shifting Project 4 (2015), https://www.oecd-ilibrary.org/docserver/9789264263437-en.pdf?expires=1591823645&id=id&accname=ocid177456&checksum=9F28B823DC34C7E14BE3923189B1D6FE [↑](#footnote-ref-84)
85. For a complete listing of the reports and proposals put forward by the OECD/G20 Inclusive Framework, see OECD/G20 Base Erosion & Profit Shifting Project, *Action 1: Tax Challenges Arising from Digitalisation,* https://www.oecd.org/tax/beps/ beps-actions/action1/ (last visited Jan. 10, 2022). [↑](#footnote-ref-85)
86. *See* OECD/G20 Base Erosion & Profit Shifting Project, Tax Challenges Arising from digitalisation—Report on Pillar One Blueprint: Inclusive Framework on BEPS 11 (Oct. 2020), https://www.oecd-ilibrary.org/docserver/beba0634-en.pdf?expires=1641849624&id=id&accname=ocid177456&checksum=E37EBF09CF8A96BF934C49842D8784EF [hereinafter OECD Pillar One Blueprint] (outlining the Pillar One reform); OECD/G20 Base Erosion & Profit Shifting Project, Tax Challenges Arising from digitalisation—Report on Pillar Two Blueprint: Inclusive Framework on BEPS (Oct. 2020), *available at* https://www.oecd-ilibrary.org/sites/abb4c3d1-en/index.html?itemId=/content/publication/abb4c3d1-en [hereinafter OECD Pillar Two Blueprint] (outlining the Pillar Two reform). The original Pillar One and Pillar Two blueprints were modified in October 2021 after subsequent negotiations. OECD/G20 Base Erosion & Profit Shifting Project, Statement on the Two-Pillar Solution to Address the Tax Challenges Arising from the Digitalisation of the Economy (Oct. 2021), *available at* https://www.oecd.org/tax/beps/statement-on-a-two-pillar-solution-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy-october-2021.pdf.

    As of January 2022, 137 of the 141 inclusive framework member states have agreed to this final statement of the two-pillar solution. Press Release, OECD/G20 Base Erosion & Profit Shifting Project, *Mauritania joins the Inclusive Framework on BEPS and participates in the agreement to address the tax challenges arising from the digitalization of the economy* (Nov. 4, 2021), *available* at <https://www.oecd.org/tax/beps/mauritania-joins-the-inclusive-framework-on-beps-and-participates-in-the-agreement-to-address-the-tax-challenges-arising-from-the-digitalisation-of-the-economy.htm>. The OECD has recently released an implementation framework for Pillar Two and further public consultation document relating to Pillar One reforms. Press Release, OECD/G20 Base Erosion & Profit Shifting Project*, Further progress on two-pillar solution: OECD releases consultation document on the withdrawal of digital service taxes and other relevant similar measures under Pillar One and an implementation package for Pillar Two* (Dec. 20, 2022), *available at* <https://www.oecd.org/tax/beps/further-progress-on-two-pillar-solution-oecd-releases-consultation-document-on-the-withdrawal-of-digital-service-taxes-and-other-relevant-similar-measures-under-pillar-one-and-an-implementation-package-for-pillar-two.htm>. [↑](#footnote-ref-86)
87. Parsons, *supra* note 30, at 1799-1801 (explaining the UK and EC proposals and their influence on the OECD Pillar One Blueprint). [↑](#footnote-ref-87)
88. OECD Pillar One Blueprint, *supra* note 86, at 11. [↑](#footnote-ref-88)
89. *See e.g.*, Reuven Avi-Yonah, *The New International Tax Regime* 1-2 (U of Michigan Public Law, Working Paper No. 21-031, 2022)(explaining that the OECD/BEP Pillar One Blueprint follows the benefits principle); Brown, *supra* note 45, at 568-69 (arguing that the current application of the benefits principle in international sourcing rules is not consistent and proposing a new system of equity-based source rules with the benefits principle as a guiding standard); European Commission, A Fair and Efficient System in the European Union for the Digital Single Market 2 (2017), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52017DC0547&from=en (framing the European Commission’s proposed reforms for digital tax as responding to the problem of digital businesses “taking full advantage of the infrastructure and rule of law institutions available while they are not considered present for tax purposes.”). *See also* Stephen E. Shay, J. Clifton Fleming, Jr. & Robert J. Peroni, *What’s Source Got to Do With It? Sources Rules and U.S. International Taxation,* 56 Tax L. Rev. 81, 91 (2003) (supporting source-based taxation based on the benefit of market access facilitated by the government). [↑](#footnote-ref-89)
90. *See, e.g.*, Michael P. Devereux & John Vella, Value Creation as the Fundamental Principle of the International Corporate Tax System 3-5 (European Tax Policy Forum Policy Paper, 2018) (disputing the descriptive claim that international corporate tax law is based on the concept of value creation); Wolfgang Schön, *Ten Questions about Why and How to Tax the Digitalized Economy* 4-5 (Max Planck Institute for Tax Law and Public Finance Working Paper 2017–11) (arguing that it is “highly doubtful whether [the concept of ‘value creation’] ever shaped international tax policy and treaty practice in the past.”); Allison Christians, *Taxing According to Value Creation*, 90 Tax Notes Int’l 1379, 1379 (2018) (“It may sound vaguely familiar, but the idea of taxing income where value is created is not in fact a well-worn tax mantra.” ).

    For a brief overview of scholarly critiques of the concept of value creation in the context of the OECD/BEPS reforms, see Werner Haslehner, *Value Creation and Income Taxation: A Coherent Framework for Reform? in* Taxation and Value Creation 39, 40-41 (Werner Haslehner & Marie Lamensch, eds., 2021). [↑](#footnote-ref-90)
91. Other scholars have likewise identified value creation as a continuation of the concept of economic allegiance. *See* Stanley I. Langbein & Max R. Fuss, T*he OECD/G20-BEPS-Project and the Value Creation Paradigm: Economic Reality Disemboguing into the Interpretation of the 'Arm's Length' Standard*, 51 Int’l Lawyer 259, 262 (2018) (advocating that the value creation paradigm is “a useful, if not profound, elaboration” of the principle of economic allegiance); Jinyan Li et al., *Value Creation: A Constant Principle in a Changing World*, 67 Canadian Tax J. 1107, 1112-14 (2019) (arguing that the concept of value creation is an extension of the concept of economic allegiance articulated by the League of Nations). *See also* Avi-Yonah, *supra* note 89, at 1-2 (describing the OECD/BEPS Pillar One reforms, which are based on the concept of taxing where value is created, as an expansion of the benefits principle). [↑](#footnote-ref-91)
92. European Commission, *supra* note 82, at 4. [↑](#footnote-ref-92)
93. *Id.* [↑](#footnote-ref-93)
94. *See, e.g.*, OECD/G20 Base Erosion & Profit Shifting Project, *supra* note 13, at 178 (“[A] tax challenge raised by digitalisation relates to how some enterprises can now be extensively involved in the economic life of a jurisdiction with little or no taxable presence.”); OECD/G20 Base Erosion & Profit Shifting Project, Addressing the Tax Challenges of the Digitalisation of the Economy 16 (Feb. 2019), available at https://www.oecd.org/tax/ beps/public-consultation-document-addressing-the-tax-challenges-of-the-digitalisation-of-the-economy.pdf. (explaining a possible reform proposal responding to the view that digital companies are able “to be heavily involved in the economic life of a jurisdiction without a significant presence” which has “rendered the existing nexus and profit allocation rules ineffective.”).

    The OECD/G20 BEPS Project also discussed the continued importance of benefits theory in international treaties in a 2015 report on taxing the digital economy. Org. Econ. Co-operation & Dev., *supra* note 84, at 25-26. [↑](#footnote-ref-94)
95. Four Economists’ Report, *supra* note 20, at 23 (“When we are speaking of the origin of the wealth, we refer naturally to the place where the wealth is produced, that is, to the community the economic life of which makes possible the yield or the acquisition of the wealth.”) [↑](#footnote-ref-95)
96. Her Majesty’s Treasury, *supra* note 82, at 8. [↑](#footnote-ref-96)
97. *Id.* [↑](#footnote-ref-97)
98. Her Majesty’s Treasury, Corporate tax and the digital economy: position paper update 6 (2018), *available at* https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\_data/file/689240/corporate\_tax\_and\_the\_digital\_economy\_update\_web.pdf [↑](#footnote-ref-98)
99. Org. Econ. Co-operation & Dev., *supra* note 84, at 99 (noting the possible challenges to the validity of international tax law’s existing nexus rules presented by user-generated content and data); OECD/G20 Base Erosion & Profit Shifting Project, *supra* note 13, at 170-71 (discussing how the increasing role of network effects draws into question the appropriateness of international tax’s current rules for allocating taxing rights to countries); European Commission, Proposal for a Council Directive on the Common System of a Digital Services Tax on Revenues Resulting from the Provision of Certain Digital Services 1-2, 9 (2018), http://data.consilium.europa.eu/doc/document/ST-7419-2018-INIT/en/pdf (highlighting user-produced data and content as well as network effects as factors creating a substantial economic presence in a jurisdiction and arguing for reforms to international tax law to grant taxing authority based on substantial economic presence). [↑](#footnote-ref-99)
100. *See* Four Economists’ Report, *supra* note 20, at 29-31 (analyzing the economic allegiance of business income from these industries). [↑](#footnote-ref-100)
101. Ingrid Lunden, Microsoft officially closes its $26.2B acquisition of LinkedIn, TechCrunch, Dec. 8, 2016, https://techcrunch.com/2016/12/08/microsoft-officially-closes-its-26-2b-acquisition-of-linkedin/. [↑](#footnote-ref-101)
102. Kerry Flynn, *LinkedIn earnings are just fine ahead of Microsoft merger*, Mashable, Aug. 4, 2016, https://mashable.com/article/linkedin-earnings-ahead-of-microsoft-merger. [↑](#footnote-ref-102)
103. Press Release, Microsoft, Inc., Microsoft to acquire LinkedIn (June 13, 2016), <https://news.microsoft.com/2016/06/13/microsoft-to-acquire-linkedin/>. [↑](#footnote-ref-103)
104. *See generally* Kean Birch et al., *Data as asset? The measurement, governance, and valuation of digital personal data by Big Tech*, 8 Big Data & Society 1 (2021) (identifying this trend of framing users and user engagement as a type of company asset and conceptualizing this trend as a form of “techcraft”). [↑](#footnote-ref-104)
105. *See, e.g.*, Douglas Laney, *Your Company’s Data May Be Worth More Than Your Company*, Forbes, July 22, 2020, https://www.forbes.com/sites/douglaslaney/2020/07/22/your-companys-data-may-be-worth-more-than-your-company/?sh=35104653634c (identifying the Microsoft acquisition of LinkedIn as a data-driven merger); Sarah McBride, *Microsoft to buy LinkedIn for $26.2 billion in its largest deal*, Reuters, June 13, 2016, <https://www.reuters.com/article/us-linkedin-m-a-microsoft/microsoft-to-buy-linkedin-for-26-2-billion-in-its-largest-deal-idUSKCN0YZ1FP> (noting the “enormous” amount of user data that Microsoft would have access to as a result of the merger). [↑](#footnote-ref-105)
106. *Id.*  [↑](#footnote-ref-106)
107. As explained in note 13, *supra*, use of the term “digital economy” in this Article generally refers to the data economy as well as platform business models. [↑](#footnote-ref-107)
108. NfX, *70 Percent of Value in Tech is Driven by Network Effects*, https://www.nfx.com/post/70-percent-value-network-effects/#:~:text=The%20short%20answer%3A%20over%20the,more%20than%20a%20%241%20billion (last visited Jan. 15, 2021). [↑](#footnote-ref-108)
109. Shivaram Rajgopal, Mohan Venkatachalam, & Suresh Kotha, *The Value Relevance of Network Advantages: The Case of E-Commerce Firms*, 41 J. of Acct. Res. 135 (2003) (finding that network advantages created by platform traffic to be more closely tied to stock prices than traditional measures such as earnings). *See also* Shivaram Rajgopal, Mohan Venkatachalam, & Suresh Kotha, *Managerial Actions, Stock Returns and Earnings: The Case of Business-to-Business Internet Firms* 40 J. Acct. Res. 529 (2000) (finding managerial actions to increase market penetration to be key value driver for internet firms). [↑](#footnote-ref-109)
110. In other work, this author has argued that users and customers currently serve a role that is more akin to that of a traditional workforce than that of a traditional customer when creating content and data for companies. It is, therefore, appropriate for purposes of determining how a company should be taxed on the wealth created by that data and content production to treat them in the same way as a traditional workforce. Parsons, *supra* note 30. [↑](#footnote-ref-110)
111. Parker et al., *supra* note 13, at 3. [↑](#footnote-ref-111)
112. Julie E. Cohen, *Law for the Platform Economy*, 51 U.C. Davis L. Rev. 133, 135 (2017). [↑](#footnote-ref-112)
113. *Facebook Buys Instagram for $ 1 Billion, Turns Budding Rival Into Its Standalone Photo App*,Tech Crunch, April 9, 2012, https://techcrunch.com/2012/04/09/facebook-to-acquire-instagram-for-1-billion/. [↑](#footnote-ref-113)
114. Ravi Kumar, *Understanding the basics of Network Effects—the Power of the Platform*, Medium, July 28, 2018, https://medium.com/world-of-iot/understanding-the-basics-of-network-effects-the-power-of-the-platform-2cfef215fe4a. [↑](#footnote-ref-114)
115. Aran Ali, *From Amazon to Zoom: What Happens in an Internet Minute in 2021?*, Visual Capitalist, Nov. 10, 2021, https://www.visualcapitalist.com/from-amazon-to-zoom-what-happens-in-an-internet-minute-in-2021/ [↑](#footnote-ref-115)
116. Ali, *supra* note 115. [↑](#footnote-ref-116)
117. Mary Meeker, Bond, *Internet Trends 2019*, https://www.bondcap.com/report/itr19/ (last visited Jan. 3, 2023). [↑](#footnote-ref-117)
118. *See* notes 149-153, *infra*, and accompanying text (describing the growing importance of data across industries). [↑](#footnote-ref-118)
119. *See, e.g.*, *The world’s most valuable resource is no longer oil, but data*, The Economist May 6, 2017 (describing the increasing importance of data). [↑](#footnote-ref-119)
120. Whether data should even be an “asset” that is commodified is a contentious question that has sparked much debate both amongst legal scholars and scholars in other fields. For a useful summary of this debate and proposed reforms, *see* Salomé Viljoen, *Data as Property?* Phenomenal World (Oct. 16, 2020), https://www.phenomenalworld.org/analysis/data-as-property/ .

     It is beyond the scope of this Article to question whether data should be commodified and, if it is, who should legally own and economically benefit from that commodity. The current reality is that data is being commodified and appropriated by digital companies through a combination of contractual arrangements and trade secrecy laws. *See* Cohen, *supra* 13, at 63 (explaining the use of these legal mechanisms by companies to gain property entitlements to data). The market considers data to be the property of these companies when assessing their value, *see infra* notes 142-148 and accompanying text (discussing the impact of data on company valuations). It is this current reality, not the ideal normative approach, which should guide international tax law’s response to this economic development. [↑](#footnote-ref-120)
121. *Data is giving rise to a new economy: briefing*, The Economist, May 6, 2017 (explaining that data is not fungible because "each stream of information is different, in terms of timeliness, for example, or how complete it may be.”) [↑](#footnote-ref-121)
122. *See* Shoshana Zuboff, The Age of Surveillance Capitalism 100 (2019) (describing the process of translating human behavior into data resources, thus commodifying human behavior); Jathan Sadowski, *When data is capital: Datafication, accumulation, and extraction*, 6 Big Data & Society 1, 26 (2019) (“Much of the valuable data capital extracted from the world is about people – their identities, beliefs, behaviours, and other personal information.”). [↑](#footnote-ref-122)
123. Amy Kapczynski, *The Law of Informational Capitalism*, 129 Yale L. J. 1460, 1498-99 (2020). [↑](#footnote-ref-123)
124. *See* Salomé Viljoen, *Democratic Data: A Relational Theory for Data Governance*, 131 Yale L. J 573, 603-617 (2021) (mapping the relationality of data flows and the social effects of data relations); Cohen, *supra* note 13, at 67 (explaining that while data is derived from and corresponds with particular individuals its purpose is to predict and monetize human behaviors in the aggregate). [↑](#footnote-ref-124)
125. Viljoen, *supra* note 126, at 610. Viljoen further explains that the centrality of data relationality in the digital economy leads to the benefits and harms stemming from data collection and use to occur at the population-level, not simply the level of the individual data subject. *Id.* at 583. [↑](#footnote-ref-125)
126. *See* World Economic Forum, Personal Data: The Emergence of a New Asset Class (2011), https://www.weforum.org/reports/personal-data-emergence-new-asset-class (dividing data into data volunteered by users, observed data, and inferred data). [↑](#footnote-ref-126)
127. For example, in 2010, Google was awarded a patent for a “[s]ystem and method for modulating search relevancy using pointer activity monitoring.” U.S. Patent, http://patft.uspto.gov/netacgi/nph-Parser?Sect1=PTO2&Sect2=HITOFF&u=%2Fnetahtml%2FPTO%2Fsearch-adv.htm&r=1&p=1&f=G&l=50&d=PTXT&S1=7,756,887.PN.&OS=pn/7,756,887&RS=PN/7,756,887, *See* Chris Crum *Google Eyes Mouse Movement as Possible Search Relevancy Signal*, WebProNews July 13, 2010, https://www.webpronews.com/google-eyes-mouse-movement-as-possible-search-relevancy-signal. *See also* Qi Guo & Eugene Agichtein, *Towards Predicting web searcher gaze position from mouse movements* (Jan. 2010), Conference Paper, Proceedings of the 28th International Conference on Human Factors in Computing Systems (Chicago, April 20-15, 2010) (discussing techniques of inferring users gaze on search engines based on mouse position). [↑](#footnote-ref-127)
128. *See* Sadowski, *supra* note 124, at 6-7 (2019) (discussing modes of data extraction from these types of tracking and surveillance). *See generally* Zuboff, *supra* note 124 (describing the rise of “surveillance capitalism” and its impact). [↑](#footnote-ref-128)
129. Jacquelyn Bulao, *How Much Data is Created Every Day in 2021?*, Techjury, Jan. 4, 2022, https://techjury.net/blog/how-much-data-is-created-every-day/#gref. [↑](#footnote-ref-129)
130. Jedd Deshardins, World Economic Forum, *How much data is generated each day?*, April 17, 2019, https://www.weforum.org/agenda/ 2019/04/how-much-data-is-generated-each-day-cf4bddf29f/. [↑](#footnote-ref-130)
131. S*ee* Sadowski, *supra* note 124, at 1 (“Data has become central and essential for increasingly more sectors of contemporary capitalism.”); *The world’s most valuable resource is no longer oil, but data*, The Economist, May 6, 2017 (describing data as the “new oil”); *Data is giving rise to a new economy: briefing*, The Economist, May 6, 2017 (describing data as “a crucial feedstock[] for the world economy”); Viljoen, *supra* note 126, at 586 (explaining that companies “view data production as a key feature of what makes the digital economy profitable.”). [↑](#footnote-ref-131)
132. *See* Lothar Determann, *No One Owns Data,* 70 Hastings L. J. 1*,* 25-26 (2018) (concluding that there are no property rights over informational content); Pamela Samuelson, *Privacy as Intellectual Property*?, 52 Stan. L. Rev. 1125, 1132 (2000) (explaining the absence in U.S. law of a legal rule granting a person “a property interest in one’s personal data”). [↑](#footnote-ref-132)
133. Cohen, *supra* note 13, at 44-46 (describing this process of data collecting companies creating de facto property rights over data). *See also* Katharina Pistor, *Rule by data: The end of markets?*, 83 L. & Contemporary Problems 101, 108 (2020) ([D]ata harvesters have exploited the legal ambiguity around data ownership, captured raw information, and claimed property rights to the aggregate databases they created.”); Kapczynski, *supra* note 125, at 1508 (explaining how the encasement of information property has facilitated the rise of private economic power by “insulat[ing] it from democratic control”). [↑](#footnote-ref-133)
134. For example, the market for data on people’s phone locations alone is estimated at $12 billion. Jon Keegan & Alfred Ng, *There’s a Multibillion-Dollar Market for Your Phone’s Location Data*, The Markup, Sept. 30, 2021, https://themarkup.org/privacy/2021/09/30/theres-a-multibillion-dollar-market-for-your-phones-location-data. As of 2020, the size of the overall data brokerage industry was estimated at $200 billion. Catherine Tucker & Nico Neumann, *Buying Consumer Data? Tread Carefully*, Harv. Bus. Rev., May 1, 2020, https://hbr.org/2020/05/buying-consumer-data-tread-carefully. [↑](#footnote-ref-134)
135. Companies are able to charge a premium for the targeted advertising that users’ data creation facilitates. Howard Beales, Network Adver. Initiative, The Value of Behavioral Targeting 8 (2010) (finding that the price of targeted advertising to be 2.68 greater than non-targeted advertising). *See also* Zuboff, *supra* note 124, at 74-82 (2019) (describing Google’s incorporation of behaviorally targeted advertisements into its business model). [↑](#footnote-ref-135)
136. Sadowski, *supra* note 124, at 5-6. [↑](#footnote-ref-136)
137. Erik Brynjolfsson & Andrew Mcafee, *The Big Data Boom Is the Innovation Story of Our Time*, The Atlantic, Nov. 21, 201a1, https://www.theatlantic.com/business/archive/2011/11/the-big-data-boom-is-the-innovation-story-of-our-time/248215/. *See also* MIT Tech. Review Custom, The Rise of Data Capital 2 (2016) (“[D]ata is now a kind of capital, on par with financial and human capital in creating new digital products and services.”). [↑](#footnote-ref-137)
138. Quoted in Michael Schrage, *Rethinking Networks: Exploring Strategies for Making Users More Valuable*,MIT Initiative on the Digital Economy, Research Brief Vol 1, 2016. [↑](#footnote-ref-138)
139. Kristen V. Brown, *Alphabet’s Verily Plan to Use Big Data for Health Insurance*, Bloomberg, Aug. 25, 2020, https://www.bloomberg.com/news/articles/2020-08-25/alphabet-s-verily-plans-to-use-big-data-as-health-insurance-tool. [↑](#footnote-ref-139)
140. Experts in the field have attributed the frequent gap between the market capitalization of digital companies and traditional market valuation to the value of data. Howard Baldwin, *Drilling into the Value of Data*, Forbes (Mar. 23, 2015), https://www.forbes.com/sites/howardbaldwin/2015/03/23/drilling-into-the-value-of-data/?sh=5092b86565fa (quoting an industry consultant who stated that the gap between market capitalization and market value of many digital companies “screams to the value of data”). It is difficult to find precise estimates measures of the value of data although progress has been made by both academics and policymakers. *See, e,g.*, Kean Birch et al., *Date as asset? The measurement, governance, and valuation of personal data by Big Tech*, Jan.-June 2021 Big Data & Society 1, 7-9 (studying how the value of data is measured by digital companies managers and investors); Org. Econ. Co-operation & Dev., *supra* note 13, at 52-56 (2020), https://www.oecd.org/sti/roadmap-toward-a-common-framework-for-measuring-the-digital-economy.pdf (discussing the challenges and possible methods for accurately measuring data flows in the digital economy). While the increased importance of data to the value of companies is undoubtedly a key factor in the disconnect between companies’ market values and book values, the importance of intangibles other than data has also contributed to this disconnect. As discussed above, a company’s network is an intangible asset that drives the value of companies but does not appear on its balance sheets. Other intangible assets, such as brands and intellectual property, also contribute to this gap. For a useful discussion of the disconnect between company balance sheets and market valuation in the modern economy, see Baruch Lev & Feng Gu, The End of Accounting and the Path Forward for Investors and Finance (2016). [↑](#footnote-ref-140)
141. Meta Platforms Market Cap 2009-2022, Macrotrends, https://www.macrotrends.net/stocks/charts/FB/meta-platforms/market-cap (last visited May 18. 2022). [↑](#footnote-ref-141)
142. Meta Platforms, Inc., Form 10-K 79 (Feb. 3, 2022). [↑](#footnote-ref-142)
143. Bulao, *supra* note 131. [↑](#footnote-ref-143)
144. Elizabeth Dwoskin, *Regulators want to break up Facebook. That’s a technical nightmare, insiders say.*, The Washington Post (Dec. 11, 2020), ﻿https://www.washingtonpost.com/technology/

     2020/12/11/facebook-breakup-antitrust/. [↑](#footnote-ref-144)
145. Vijay Govindarajan, Shivaram Rajgopal & Anup Srivastava, *Why Financial Statements Don’t Work for Digital Companies*, Harv. Bus. Rev., Feb. 26, 2018 (“﻿[E]arnings explains only 2.4% of variation in stock returns for a 21 century company. . . .”; Lev & Gu, *supra* note 142, at 34 (showing a rapid decline in the R^2 value of regression of company market value to report earnings beginning in the late 1980s). [↑](#footnote-ref-145)
146. Julianne Pepitone, *#WOW! Twitter soars 73% in IPO*, CNN Business (Nov. 7, 2013), https://money.cnn.com/2013/11/07/technology/social/twitter-ipo-stock/. [↑](#footnote-ref-146)
147. Twitter, Inc., Form S-1, p. 11 (Oct. 3, 2013). [↑](#footnote-ref-147)
148. *Id.* at 12. [↑](#footnote-ref-148)
149. Andrew L. Lo, *quoted in* MIT Tech. Review Custom, *supra* note 139, at 3. [↑](#footnote-ref-149)
150. *See, e.g.* Macrotrends, American Airlines Market Cap 2006-2020, https://www.macrotrends.net/stocks/charts/AAL/american-airlines-group/market-cap (last visited June 1, 2022) (showing a decrease in market value from $12 billion to $4 billion between mid-February and mid-March 2020); Macrotrends, Delta Airlines Market Cap 2006-2020, https://www.macrotrends.net/stocks/charts/DAL/delta-air-lines/market-cap (last visited June 1, 2022) (showing a decrease in market value from $36 billion to $13 billion between mid-February and mid-March 2020). [↑](#footnote-ref-150)
151. Laney, *supra* note 148. [↑](#footnote-ref-151)
152. *Id.* [↑](#footnote-ref-152)
153. *See generally* Deloitte, Data Valuation: Understanding the Value of Your Data Assets (2020) (presenting strategies for businesses in a variety of sectors to leverage the value of their data). [↑](#footnote-ref-153)
154. Oz Shy, *A Short Survey of Network Economics*, 38 Rev. Industrial Org. 119, 119 (2011). Network effects can be either positive (the user’s value increases with the number of additional users) or negative (the user’s value decreases with the number of additional users). *Id*. at 120. While there are some circumstances where an addition of new users might lower user value, such as if the increase in users makes the good or service appear less exclusive or elite, this discussion focuses on positive network effects, which drive the type of value creation on which this Article is focused.

     The concept of network effects was first introduced by Jeffrey Rohlfs in his 1974 analysis of the communications industry and the increased utility that additional subscribers derived from communications services with the addition of other subscribers. Jeffrey Rohlfs, *A Theory of Interdependent Demand for a Communications Service*, 5 Bell J. of Econ. & Management Sci., 16 (1974). In the years since Rohlfs’s work, scores of scholars have contributed to the study of network effects. This discussion is a very abbreviated overview of the concept. For more detailed discussions, see Jeffrey Rohls, Bandwagon Effects in High-Technology Industries (2003), Carl Shapiro & Hal R. Varian, Information Rules: A Strategic Guide to the Network Economy (1999), and Nicholas Economides, *The Economics of Networks*, 14 Int’l J. Industrial Org. 673 (1996). [↑](#footnote-ref-154)
155. *See generally* Shapiro & Varian, *supra* note 154. [↑](#footnote-ref-155)
156. *See* Rohls, *supra* note 154, at 20-28 (outlining the impact of network effects on digital companies’ business models). [↑](#footnote-ref-156)
157. *See* Collin & Colin, *supra* note 80, at 28-29 (discussing the freemium business model and the challenges it presents for international tax law). [↑](#footnote-ref-157)
158. *Id.* [↑](#footnote-ref-158)
159. Govindarajan et al., *supra* note 147. [↑](#footnote-ref-159)
160. *See Data is giving rise to a new economy: briefing*, The Economist, May 6, 2017 (describing data network effects as using data to attract more users, who then generate more data, which help to improve services, which attracts more users.”); Robert Wayne Gregory et al., *The Role of Artificial Intelligence and Data Network Effects for Creating User Value*, 46 Academy of Management Rev. 1, 1 (2021) (describing the phenomenon of data network effects); Andrei Hagiu & Julian Wright, *When Data Creates Competitive Advantage*, Jan.-Feb. 2020 Harv. Bus. Rev. Magazine (exploring the impact of data-enabled network effects on competition and concluding that they create barriers to entry although these barriers are less strong than those created by traditional network effects). [↑](#footnote-ref-160)
161. *See supra* notes 138-141 and accompanying text. [↑](#footnote-ref-161)
162. Pistor, *supra* note 135, at 105 (“Today, controlling vast amounts of data and determining who can access them and at what price is an expression of economic power.”). [↑](#footnote-ref-162)
163. Bianco Research, A Brief History of Equity Mutual Funds, Aug. 20, 2018, https://www.biancoresearch.com/a-brief-history-of-equity-mutual-funds-2/. [↑](#footnote-ref-163)
164. ICI, 2021 Investment Company Facebook 306 (2021). [↑](#footnote-ref-164)
165. *Id.* [↑](#footnote-ref-165)
166. *Id.* at 49-50. [↑](#footnote-ref-166)
167. Dawn Lim, *Index Funds Are the New Kings of Wall Street*, Wall St. J. (Sept. 18, 2019), https://www.wsj.com/articles/index-funds-are-the-new-kings-of-wall-street-11568799004 [↑](#footnote-ref-167)
168. Jose Azar et al., Anticompetitive Effects of Common Ownership, Michigan Ross School of Business Working Paper 1235, at 3 (2015).

     A large academic literature has emerged that analyzes the impacts (both positive and negative) on corporate behavior and economic outcomes of this rise of institutional investing and resulting horizontal ownership of shares of companies by large investment houses. *See, e.g.,* Einer Elhauge, *How Horizontal Shareholding Harms Our Economy—And Why Antitrust Law Can Fix It*, 10 Harv. Bus. L. Rev. 207, 213-254 (2020) (highlighting and analyzing evidence for the anti-competitive effects of horizontal shareholder through index funds); Audra K. Boone & Joshua T. White, *The effect of institutional ownership on firm transparency and information production,* 117 J. Fin. Econ. 508 (2015) (finding index investing to result in higher levels of management disclosure and transparency). These questions are beyond the scope of this analysis. Instead, this analysis focuses on how the rise of diversified portfolios and resulting broad share ownership has impacted the relationship between the investor that beneficially owns shares in a company and that company’s success or failure. [↑](#footnote-ref-168)
169. *See* Adam Marszk et al., *Information and Communication Technologies for Financial Innovations*, *in* The Emergence of ETFs in Asia-Pacific 53 (Marszk et al., eds. 2019) (tracing the impact of ICT advances on the development of ETFs as well as the financial system more generally); Katie Kolchin, Electronic Trading Market Structure Primer (Oct. 2019), https://www.sifma.org/wp-content/uploads/2019/10/SIFMA-Insights-Electronic-Trading-Market-Structure-Primer.pdf (discussing electronic trading and its impact on financial markets).

     The trend of broad share ownership of multinational companies is only poised to continue as trading platforms, such as Robinhood, have begun to offer retail investors the opportunity to purchase “share slices,” with larger banks jumping in on the trend. Thomas Heath, *Shares by the slice: Fractional investing sparks a stock market stampede*, The Washington Post, July 10, 2020, https://www.washingtonpost.com/business/2020/07/10/shares-by-slice-fractional-investing-sparks-stock-market-stampede/. [↑](#footnote-ref-169)
170. *See* Mason, *supra* note 14, at 370 (explaining the historic commitment of international tax law to preventing double taxation as well as an effort in recent years to also prevent double non-taxation); Graetz & O’Hear, *supra* note 12, at 1033 (“The basic task of international tax rules is to resolve the competing claims of residence and source nations in order to avoid the double taxation that results when both fully exercise their taxing power.”). [↑](#footnote-ref-170)
171. *See* Part I.C, *supra*. [↑](#footnote-ref-171)
172. Org. Econ. Co-operation & Dev., *supra* note 11, at art. 13, para. 4. [↑](#footnote-ref-172)
173. Four Economists’ Report, *supra* note 20, at 28-31. [↑](#footnote-ref-173)
174. If 50 percent or more of a company’s share value stems directly or indirectly from immoveable property, capital gains from the sale of shares of that company is taxed in the country in which located. *See supra* note 34 and accompanying text. [↑](#footnote-ref-174)
175. Four Economists’ Report, *supra* note 20, at 28-31. [↑](#footnote-ref-175)
176. *See supra* notes 149-153 and accompanying text. [↑](#footnote-ref-176)
177. Cohen, *supra* note 13, at 66. [↑](#footnote-ref-177)
178. Zuboff, *supra* note 124, at 100. [↑](#footnote-ref-178)
179. *See* Sadowski, *supra* note 124, at 1-2 (describing the prevalence of in media and academic of comparing data collection to an extractive industry). [↑](#footnote-ref-179)
180. *See* Kapczynski, *supra* note 125, at 1498 ﻿(“You cannot wade far into the literature on our data-intensive age without en-countering the pervasive metaphor of data as ‘the new oil.’”); Sadowski, *supra* note 124, at 2 (highlighting that academic and media discussions of data explicitly and implicitly view data as a commodity like oil and ore); *see, e.g.*, *The world’s most valuable resource is no longer oil, but data*, The Economist, May 6, 2017 (describing data as “the oil of the digital era”); *Data is giving rise to a new economy*, The Economist, May 6, 2017 (comparing oil refineries to data centers). [↑](#footnote-ref-180)
181. Sadowski, *supra* note 124, at 2 (citation omitted). *See also* Kapczynski, *supra* note 125, at 1498-99 (rejecting the view of data as similar to oil). [↑](#footnote-ref-181)
182. *See, e.g.*, Sadowski, *supra* note 124, at 7 (arguing that data should be treated as a form of capital, not a natural resource); MIT Tech. Review Custom, *supra* note 139, at 2 (“﻿To call data a kind of capital isn’t metaphorical. It’s literal. In economics, capital is a produced good, as opposed to a natural resource, that is necessary for the production of another good or service. Data capital is the recorded information necessary to produce a good or service.”); Kapczynski, *supra* note 125, at 1499 (describing data as “as a critical form of capital in the current age”). [↑](#footnote-ref-182)
183. Eric A. Posner & E. Glen Weyl, *Data as Labor*, *in* Radical Markets: Uprooting Capitalism and Democracy for a Just Society (2018); Imanol Arrieta Ibarra et al., *Should We Treat Data as Labor?*, Am. Econ. Ass’n Papers & Proceedings (2017); Jaron Lanier, Who Owns the Future? (2014).

     Even if data is conceptualized as labor, it will ultimately be coded into law as capital through contractual relationships. Viljoen, *supra* note 122 (describing divide between propertarian and dignitarian reform proposals). [↑](#footnote-ref-183)
184. Four Economists’ Report, *supra* note 20, at 30-31. [↑](#footnote-ref-184)
185. *Id.* at 30-21. [↑](#footnote-ref-185)
186. *See infra* note 195 and accompanying text. [↑](#footnote-ref-186)
187. *See supra* notes 71-72 and accompanying text. [↑](#footnote-ref-187)
188. The MTM tax would be imposed at the company-level, rather than the investor level. The reasoning and implications of imposing the tax at the company level are discussed further below. [↑](#footnote-ref-188)
189. For below for a discussion of the rationale for applying reforms re-allocating taxing authority over capital gains income uniformly across all industries rather than ring-fencing digital companies. [↑](#footnote-ref-189)
190. The example provided below demonstrates the approximate increase in overall company tax liability that would occur as a result of the tax. Similar to the global minimum tax put forward by the OECD Pillar Two Blueprint, *see* OECD Pillar Two Blueprint*, supra* note 86, multilateral consensus on the rate of the MTM tax would be desirable. [↑](#footnote-ref-190)
191. Whether there is a sufficient nexus between a company and country for that country to gain taxing rights under the MTM tax regime would be determined under a standard similar to that put forward in the OECD Pillar One Blueprint—the market jurisdictions, therefore, would be granted taxing rights and there is no physical presence requirement. OECD Pillar One Blueprint, *supra* note 86, at 11. [↑](#footnote-ref-191)
192. The definitions of “consumer-facing” and “automated digital services” businesses are drawn from the OECD Pillar One Blueprint. *Id*. at 19-21. Consumer-facing businesses are businesses that earn revenue through the “sale of goods and services of a type commonly sold to consumers.” *Id.* at 21. Automated digital services businesses include those whose revenues come from activities that are automated (require minimal involvement following initial set-up) and digital (provided over an electronic network), this includes revenues from monetization of data. *Id.* at 19-20. [↑](#footnote-ref-192)
193. Users and customers in higher-income countries would likely generate greater revenues. For example, only 9 percent of Facebook users were from the United States or Canada in 2020, but the company derived 48 percent of their revenues from that region. Facebook Inc., Annual Report (Form 10-k) 55-56 (Jan. 27, 2021) [hereinafter Facebook 2020 Form 10-k].

     Adapting the apportionment formula to only consider the absolute number of users/customers likely result in more equal distribution of revenues from the MTM tax globally. [↑](#footnote-ref-193)
194. This would mirror the sales-based formulary apportionment model put forward by Kimberly Clausing and Reuven Avi-Yonah. *See generally* Kimberly A. Clausing & Reuven Avi-Yonah, Reforming Corporate Taxation in a Global Economy: A Proposal to Adopt Fornulary Apportionment (June 2007). [↑](#footnote-ref-194)
195. This would be a radical shift in the approach and purpose of international tax law. International tax would become a mechanism for global redistribution of wealth. Given concerns about the exploitative nature of the data economy, this new role for international taxation might be justified. *See* Amanda Parsons, *Advancing Equity in the Data Economy: The Case for International Taxation*, LPE Blog (May 18, 2022), https://lpeproject.org/blog/advancing-equity-in-the-data-economy-the-case-for-international-taxation/ (advocating for international tax policymakers to consider using international tax law as a means to advance global equity). Scholars have described the data economy as “technofeudalism,” colonialism, and even a new form of slavery. Posner & Weyl, *supra* note 183 (describing digital companies provision of services in exchange for user data as a system of “technofeudalism”); Nick Couldry & Ulises A. Mejias, The Costs of Connection: How Data Is Colonizing Human Life and Appropriating It For Capitalism 3 (2019) (introducing the concept of “data colonialism” as “an unprecedented mutual implication of human life and digital technology for capitalism.”); Mick Chisnall, *Digital slavery, time for abolition?*, 41 Pol’y Stud. 488 (2020) (arguing that the collection and exploitation of data is a new form of enslavement). Shoshana Zuboff contends that in the modern economy “[w]e are the native peoples now whose tacit claims to self-determination have vanished from the maps of our own experience. Zuboff, *supra* note 124, at 100. International tax law could be a powerful tool to advance global equity in this new economic environment. However, this raises important normative questions about purposes of and justifications for international taxation that are beyond the scope of this Article but a promising area for future research. [↑](#footnote-ref-195)
196. This example is loosely based on financial information for Facebook, Inc. (now Meta Platforms, Inc.) during the calendar year 2020, gathered from the company’s SEC filings and investor reports. *See* Facebook 2020 Form 10-k *supra* note 193, at 55-67. Basing the example on real data on change in market capitalization and distribution of users and revenues provides a general sense of the impact this proposal might have on companies’ tax burdens. In their annual reports, the company divides their users and revenues into four geographic regions: the United States and Canada, Asia-Pacific, Europe, and the rest of the world. The use of the United States, India, Germany, and Nigeria in the example is chosen to mirror this regional divide. [↑](#footnote-ref-196)
197. Due to larger tax base, this transition tax would likely need to be at a lower rate than the annual MTM tax, such as 1 to 2 percent, and payable over an extended period, such as 10 years, to avoid undue burdens on companies. [↑](#footnote-ref-197)
198. A coordinating tax could attempt to overcome this administrative difficulty by imposing the MTM tax on companies at moments in time at which an arms-length transaction has signaled the market value of the company. These may include the acquisition of a substantial portion of the company’s shares or assets by a third-party, its merger, or a public or private offering of its shares. To avoid undue burdens on small and mid-sized businesses operating internationally, the MTM tax could only be imposed on companies with a market value above a set threshold, such as $50 million. [↑](#footnote-ref-198)
199. *See* Part III.B-C, *supra.* [↑](#footnote-ref-199)
200. *See supra* notes 149-153 and accompanying text. [↑](#footnote-ref-200)
201. It is possible that the incidence of the tax will not fall wholly on the investor, and this concern is discussed notes 205 to 206 below and accompanying text. [↑](#footnote-ref-201)
202. Org. Econ. Co-operation & Dev., Owners of the World’s Listed Companies 9 (2019). [↑](#footnote-ref-202)
203. Increases in tax rates on capital gains income brings with it concerns about distorting taxpayer’s investment behavior and decisions. *See generally* Noël B. Cunningham & Deborah H. Schenk, *The Case for a Capital Gains Preference*, 48 Tax L. Rev. 319 (1993). From the U.S. perspective, economists have recently estimated the revenue maximizing rate to be between 38 percent and 47 percent, which provides significant room for rate increases above the current marginal capital gains rate is 23.8%. Ole Agersnap & Owen Zidar, *The Tax Elasticity of Capital Gains and Revenue-Maximizing Rates* (Dec. 23, 2020), *available at* https://scholar.princeton.edu/sites/default/files/zidar/files/capgains.pdf (estimating the revenue-maximizing capital gains rate in the United States to be between 38 and 47 percent). [↑](#footnote-ref-203)
204. *See supra* note 195 and accompanying text. [↑](#footnote-ref-204)
205. For an overview of this debate, see Alan J. Auerbach, *Measuring the Effects of Corporate Tax Cuts*, 32 J. Econ. Perspectives97, 99-102 (2018). [↑](#footnote-ref-205)
206. *See, e.g.* Edward Fox, *Does Capital Bear the U.S. Corporate Tax After All? New Evidence from Corporate Tax Returns*, 17 J. Empirical Legal Stud. 71 (2020). [↑](#footnote-ref-206)
207. The author is grateful to Joseph Bankman for suggesting these mechanisms as part of his proposal for a market-value based corporate income tax. Joseph Bankman, *A Market-Value Based Corporate Income Tax*, Tax Notes 1347, 1352 (Sept. 11, 1995). [↑](#footnote-ref-207)
208. For a discussion of the potential advantages of international tax collection and distribution, *See generally* Henry Ordower, *Uniform International Tax Collection and Distribution for Global Development, a Utopian BEPS Alternative*, 12 Colum. J. Tax. L. 126 (2021). [↑](#footnote-ref-208)
209. *See* Clausing & Avi-Yonah, *supra* note 194, at 12, 32 (putting forward a proposal for apportionment based on sales versus assets or payroll because of the relative mobility of those factors compared to the location of sales and customers); Paul Oosterhuis & Amanda Parsons, *Destination-Based Income Taxation: Neither Principled Nor Practical?*, 71 Tax L. Rev. 515, 518 (2018) (explaining limited distortion of company behavior as an advantage of destination-based proposals). [↑](#footnote-ref-209)
210. Relating to the absence of a realization requirement, there is also the question from the perspective of U.S. tax law of whether a MTM tax would be unconstitutional because an unrealized increase in market value does not constitute “income” as is was defined by the Supreme Court in 1920 in Eisner v. Macomber. While Eisner has never been formally overruled, developments in tax law over the past century, such as the mark-to-market accounting method for securities dealers under section 475 of the Internal Revenue Code, suggests that this MTM tax proposal should be constitutional under current U.S tax law. *See* David J. Shakow, *Taxation Without Realization: A Proposal for Accrual Taxation*, 134 U. Penn. L. Rev. 1111,1113 (1986) (concluding that an accrual-based tax, which would lack a realization requirement, would be constitutional under post-*Eisner* law); Victor Thuronyi, *The Taxation of Corporate Income: A Proposal for Reform,* 2 Am. J. Tax Pol’y 109, 131-35 (1983) (outlining post-*Eisner* legal developments that indicate that taxation of unrealized gains should be constitutional). [↑](#footnote-ref-210)
211. ProPublica published an in-depth analysis explaining how the realization requirement has allowed the world’s wealthiest individuals to see large increases in their net worth with no (or low) accompanying tax bills. Eisinger et al., *supra* note 16. *See also* Lawrence Zelenak, *1924, 2021: Taxes of the Ultrarich, and Mark-to-Market Reforms*, 172 Tax Notes Fed. 583 (July 26, 2021) (outlining similar trends amongst the wealthiest individual taxpayers in the 1920s). [↑](#footnote-ref-211)
212. I.R.C. § 1014(a) (basis of property acquired from a decedent is the fair market value of that property as of the date of the decedent’s death). [↑](#footnote-ref-212)