Multinational Firm Theory and International Tax Law: Seeking Coherence

This study provides an interdisciplinary analysis of firm theory and international tax law, applied within a framework of hypothetical illustrations of prototypical multinational enterprises. The study finds that the construct and interpretation of different norms of international tax law correlate over time with different and partial views of the functioning of multinational enterprises and of their value drivers. Accordingly, international tax law is incoherent or ineffective in key aspects of its design, interpretation and enforcement, such as in the recognition of permanent establishments under articles 5(1), 5(5) and 5(7) of the OECD Model, the attribution of profits to permanent establishments under article 7, and the interpretation of the arm’s length principle under article 9. The “value creation” approach promoted through the G20/OECD BEPS Project, as well as the “Authorised OECD Approach” for the attribution of profits to permanent establishments under article 7, seem to approximate the interpretation of treaty law to modern firm theories, albeit inconsistently and still requiring improvement. Other fundamental rules for the allocation of taxing rights, however, remain unaltered and dated, and/or incoherently interpreted. This study supports the consistent use of modern firm theories and the convergence of international tax norms to a common and coherent approach.

Contents
1. Introduction: International Tax Law and Theories of the Firm 243
2. The International Tax System of the League of Nations: Transactional Costs and Structural Uncertainty 248
3. The International Tax System of the OECD v. Offshore Abuse: Ownership and Agency Theories 255
4. MNE-Controlled GVCs as Unitary Firms: Reinterpretation or Reform of Article 5 of the OECD Model? 265
5. The International Tax System of the OECD: Agency Costs, Ownership Structure and Property Rights 267
6. The International Tax System Post-BEPS: Unitary Taxation of GVCs under the ALP 271
   6.1. Information and knowledge-based approaches to the theory of the firm 271
   6.2. Unitary taxation and the ALP 273
7. Conclusion 275

1. Introduction: International Tax Law and Theories of the Firm

Legal scholars in the field of international tax often resort to “firm theory” to critically address policy considerations concerning the international allocation of taxing rights (e.g.
The most widely known theory of the firm, which is invariably cited by such scholars, emphasizes the reduction of transactional costs to scale, grounded on a 1937 article by Ronald Coase, The Nature of the Firm. Such theory is commonly used to debate the international allocation of the right to tax residual income from synergistic multinational firms and to address the subject of transfer pricing. The functionally separate legal entity approach (FSLE), which is instrumental to the arm’s length principle (ALP), embedded in article 9 of the OECD and UN Models, is heavily influenced by, or perhaps derived from, views of the firm in which ownership and property rights, as well contractual law, are primary value drivers (supported by the vast literature developed primarily in the 1980s, particularly on asset specificity). Critics of the inherent flaws of the ALP often use the same transactional cost theory of the firm to defend the unitary taxation of multinational firms and the abandonment of the ALP in favour of global formulary apportionment (GFA), or an equivalent formulary application of the profit split.
method. Such critics often object to the ownership and property-rights views of the firm using arguments of ineffectiveness of the ALP as an anti-abuse rule, whilst raising inter-nation equity considerations.

Coase’s article, which sets the foundation for the transactional cost theory of the firm, nonetheless responds and is arguably complementary to an earlier theory of the firm which can be derived from Professor Knight’s book, Risk, Uncertainty and Profit of 1921. More than cost savings and synergistic gains, Knightian theory supports the view that entrepreneurial risk-taking and structural uncertainty would be greater determinants not only of the existence, but of the growth or demise of firms. The role of agents (i.e. management) within firms would therefore be critical. Both views of the firm have been significantly developed and systematically proven or disproved and enhanced over the last century through numerous theoretical and empirical studies in the fields of economics and strategic management, which continue to evolve to this date. Ultimately, many views and theories of the firm have flourished over the last three decades, enhancing, elaborating, refining and expanding the ideas of Coase and Knight. Agency costs and the ownership structure of firms (Jensen & Meckling, 1976) and views on asset specificity (Williamson, 1985) and property rights...
(Hart, 1989)\textsuperscript{14} remained largely influential through the 1990s and most likely informed the OECD Guidelines.

Complementary theories that were further developed since the 1990s focus on the value of information and (Alchian & Demsetz, 1972; Demsetz, 1988)\textsuperscript{15} and serve as grounds for a knowledge-based approach to the theory of the firm (Penrose, 1959; see also, for example, Teece, Rumelt, Dosi, Winter, 1994; Foss, 1996; Langlois, 2005; Freiling, Gersch & Goeke, 2008).\textsuperscript{16} Under these later theories, innovation and entrepreneurial risk-taking led to the creation of intangibles and the emergence of knowledge-based capital (KBC),\textsuperscript{17} which fosters the growth of firms (i.e. the production of corporate income). These later theories bear a striking resemblance to the value creation approach promoted by the OECD in the BEPS Project.\textsuperscript{18}

Contributing to the same general Coasian-Knightian theories and views of the firm, and predominantly building upon the related agency, ownership and asset specificity views, substantial research further addresses the nature and functioning of the multinational enterprise (MNE).\textsuperscript{19} Setting the structuring of the international legal system governing the taxation of MNEs in the historical context of the development of firm theory may reveal the potential influences shaping the development of the law. Figure 1 illustrates key milestones in the development of international tax law in the historical context of the different building blocks of firm theory:

\begin{itemize}
\item \textsuperscript{14} Hart, supra n. 11.
\item \textsuperscript{15} See Alchian & Demsetz 1972; Demsetz 1988, supra n. 11.
\item \textsuperscript{16} See Penrose, 1959, infra n. 121; see also, for example, Foss, 1996; Langlois, 2005, supra n. 11, Teece, Rumelt, Dosi, Winter, 1994 and Freiling, Gersch & Goeke, 2008, infra n. 122.
\item \textsuperscript{17} For a definition of KBC, see OECD, Supporting Investment in Knowledge Capital, Growth and Innovation, pp. 21-22 (OECD 2013), where it is stated that “KBC is poorly measured and its many policy implications require further assessment” and that:

[k]nowledge-based capital comprises a variety of assets. … This non-tangible form of capital is, increasingly, the largest form of business investment and a key contributor to growth in advanced economies. One widely accepted classification groups KBC into three types: computerized information (software and databases); innovative property (patents, copyrights, designs, trademarks); and economic competencies (including brand equity, firm-specific human capital, networks of people and institutions, and organisational knowhow that increases enterprise efficiency (Corrado, Hulten and Sichel, 2005).

\end{itemize}
Why do business entities exist and what are their boundaries? How do they function, differentiate from one another and grow domestically and internationally? These are the fundamental questions that must be addressed by the different views and theories of the multinational firm. Different views that have arisen over the years from these theories underlie many principles and norms of international tax law, sometimes incoherently, as suggested in Figure 1 and further discussed hereinafter. In particular, international tax law does not consistently and coherently recognize economic firms and intra-firm operations, but legal entities and intra-firm contracts. It also fails to fully capture the latest theories on the value of information and KBC. An in-depth understanding of such theories and views is critical to properly frame tax policy that affects MNEs, and thus to enhance the international tax legal system.

Notwithstanding policy considerations that could shape legislative reforms, an in-depth understanding of the multinational firm could enable a more purposeful interpretation of the international tax laws that are in force. For instance, determining the boundaries of firms is inherent to the notion of permanent establishment contained in article 5 of the OECD and UN Models, and can greatly contribute to the enhancement of interpretation of these rules. These theories examine the reality of multinational firms and address facts through scientific methods, with findings that are not coherently regarded by international tax law. That is, tax policy research lags decades behind other disciplines in its understanding of the firm. Unsurprisingly, international tax laws are interpreted and designed based on incomplete or incoherent views of multinational firms. Briding this gap

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20. Kane, supra n. 1, at p. 293 acknowledges this issue and states that:

Sometimes vertical integration will fail to solve a bilateral monopoly problem. Specifically, if there is divisional autonomy then vertically integrated entities will seek to maximize own-entity profit rather than group profit. From a business perspective internal transfer pricing could be used to try to solve this problem. The great complexity is that in any case where there is one set of transfer pricing books the vertically integrated firm will have to determine both how its transfer pricing approach affects pre-tax joint production and how it affects the after tax situation. Although this sort of issue has undergone substantial analysis in the managerial literature it has taken on much less importance, as far as the author can tell, in the tax policy literature on the preferred content of transfer pricing rules. The author consid-
that seems to exist between legal research and the disciplines of strategic management and economics (which have continued to evolve in their understanding of the firm since the 1980s), and providing policymakers with a coherent international tax view of the multinational firm would be highly beneficial.

This article illustrates selected features of the functioning of multinational firms, highlighting aspects that are relevant for the analysis of international tax law, particularly in the context of vertically integrated global value chains (GVCs). Alternative interpretations or clauses are considered in light of international tax policy considerations. Through this approach, the study illustrates that an in-depth consideration of firm theory can lead to a more refined interpretation of current treaty rules and can also lead to a more coherent reform of international tax laws.

2. The International Tax System of the League of Nations: Transactional Costs and Structural Uncertainty

Coase’s and Knight’s theories not only provided a conceptual framework for the understanding of the firm and of the relationship between entrepreneurs and agents, but they may also have predicted how multinational firms would be organized and managed. International tax law seems to have captured both Coase’s view on transactional costs and on the “spatial boundaries” of the firm, as well as Knight’s view on information asymmetries (structural uncertainty) and the allocation of residual profits to risk-taking entrepreneurs. The widely adopted and fundamental principles of international tax law that, to a great extent, are still in force today governing the international allocation of taxing rights, were developed in the early 20th century under the League of Nations (and were later reflected in the OECD)


22. With robust intuitive logic, Coase predicted the emergence of the large multinational enterprises that thrive in the globalized economy in which we live today, as follows:

Apart from variations in the supply price of factors of production to firms of different sizes, it would appear that the costs of organising and the losses through mistakes will increase with an increase in the spatial distribution of the transactions organised, in the dissimilarity of the transactions, and in the probability of changes in the relevant prices. As more transactions are organised by an entrepreneur, it would appear that the transactions would tend to be either different in kind or in different places. This furnishes an additional reason why efficiency will tend to increase as the firm gets larger. Inventions will tend to bring factors of production nearer together, by lessening spatial distribution, tend to increase the size of the firm. Changes like the telephone and telegraph which tend to reduce the cost of organising spatially will tend to increase the size of the firm. All changes which improve managerial technique will tend to increase the size of the firm.

Model (1963) and in the UN Model (1980) in a world where multinational firms functioned primarily to enable market-seeking or resource-seeking foreign direct investment (FDI). Trade barriers predating the General Agreement on Tariffs and Trade (GATT) and the World Trade Organization, erected to enable import substitution policies adopted by many countries throughout the world, often justified FDI. The functioning of a prototypical multinational firm of the early 20th century would therefore resemble the illustration shown in Figure 2:

Figure 2: Fragmented multinational firm

In Figure 2, each entity functions autonomously, albeit under the monitoring of the management of the parent firm. The parent firm raises capital, be it through the issuance of publicly traded securities or private investment (or borrowing), and is thus subject to the governance structure required by such investors, whereas equity investors at the parent firm would be the principal owners of the business venture in question, thus carrying all entrepreneurial risks of the entire venture.

In 1928, the League of Nations published four model tax conventions dealing with the prevention of double taxation, succession duties, administrative assistance, and assistance in the collection of taxes. The double taxation of business income should be prevented by allocating the taxing rights between the contracting states with the PE concept as the focal point. The 1928 Model, however, intentionally did not address the income allocation issue due to time constraints. Hence, it was left to the competent authorities to reach an arrangement regarding income allocation. This applied to both PEs and affiliated companies that were treated as separate entities for tax purposes under the 1928 Model. In 1930, the Fiscal Committee resolved to make a detailed survey of the domestic rules on income allocation in a number of countries. The inquiry was entrusted to Mitchell B. Carroll who examined the taxation of business income in 35 jurisdictions, culminating in the 1933 report entitled Taxation of Foreign and National Enterprises.


24. See UN, supra n. 4.
27. Id.
Management at the capital-exporting parent firm directs operations only in Country A, negotiating all material elements for the purchase of inputs “I” (e.g. property, plant, equipment, inventory, labour, etc.) and performing all marketing, sales and distribution functions that enable the sale of products (output “O”) within Country A. Let us suppose the parent firm manufactures products A, B, C and D and owns all product-related or process-related intangibles necessary to manufacture such products efficiently (e.g. patents, know-how, etc.) and has established reputable brands for itself and for each of its products (e.g. valuable trade names and trademarks, etc.).

In a world of high barriers to trade and costly transportation, accessing foreign markets through exports of finished goods manufactured in Country A would limit the size of the multinational firm and the return to capital owners, therefore limiting investment and employment growth, while reducing the welfare of consumers in foreign markets. Accordingly, through FDI, multinationals have entered into foreign markets and replicated their operations to the extent possible, while reducing transportation costs and avoiding trade barriers.

In Figure 2, the parent firm invests in its subsidiaries (via equity or debt) the capital, “K”. As such, in Countries B and C, where the necessary inputs for production are available at feasible prices, local production of products A and/or B and/or C and/or D would take place (full-fledged manufacturing, full-risk distribution to the local market), whereas in Country D (and in other countries), distribution operations would be established to facilitate trade and delivery of products manufactured in Countries A, B or C. All foreign subsidiaries would perform country-specific marketing, sales and distribution functions that enable the sale of products (output “O”) in each country. Additionally, sales representatives or sales agents (dependent or independent) would be used in other countries to facilitate trade and initiate market development activities. The parent firm would license product and process-related intangibles to the manufacturing subsidiaries in Countries B and C, and would license its trade name and trademark to all manufacturing and subsidiaries.

Both the League of Nations (OEEC/OECD) and UN Model addressed such prototypical multinational firms of the early 20th century quite appropriately and quite consistently with Coasian-Knightian theories. All model treaties presupposed that firms that were to expand internationally and gain scale through FDI would need to delegate substantial authority to managers in the foreign country. Local management of a controlled subsidiary, consistently with firm theory, would thus function as secondary agents of the principal owner. Such secondary agents would be monitored by the primary agents, i.e. the executive management and board of directors or the capital-exporting (or headquarters/HQ) entity, including through external audit. Associated enterprises would, thus, be separately managed by such separate agents, each dealing with separate sets of country-specific transactions, often in closed markets, each managing separate combinations of production factors particular to each country, and separate sets of information and risks specific to each country of operation. Consistently

28. Id.
29. See Krug & Daniels and Hitt & Cheng, supra n. 19. See also Eicher, Mutti & Turnovsky, supra n. 19, reference to the ownership factor of Dunning’s (1974, 2001) OLI paradigm, at p. 236. The so-called halo effect associated with this factor of the OLI paradigm, that benefits MNEs, is also counterbalanced by a potential liability of foreignness which is a manifestation of information asymmetries across countries and within firms. See L. Eden & S.R. Miller, Distance Matters: Liability of Foreignness, Institutional Distance and Ownership Strategy, in Hitt & Cheng (eds.), supra n. 19.
with Coasian-Knightian theories, all secondary agents would be subject to the monitoring\textsuperscript{30} activities performed by the primary agents, but not to their direction (given the vast information asymmetries that existed within such multinationals across countries throughout the first half of the 20th century), on behalf of the ultimate entrepreneurs. Such monitoring activities would therefore serve primarily to benefit (i.e. to limit the risks) of the owner-entrepreneur, rather than the management (i.e. coordinating transactions and enhancing the operations) of each foreign subsidiary.\textsuperscript{31}

Hence, each foreign firm would be viewed by firm theory as a disintegrated cell of the multinational corporate body, as a deconsolidated entity forming part of an investment portfolio directly held by an investor/entrepreneur. Each country operation would, in turn, represent a separate production function, a separate source of income, managed by separate agents on behalf of the ultimate owner.\textsuperscript{32} That is, the system designed in the League of Nations era effectively treats each country-specific operation (whether embodied in one or multiple local legal entities or permanent establishments, or grouped or consolidated within each country) held by foreign shareholders as if it were a publicly traded company, as opposed to part of a wider enterprise.

Whether by historical accident, or simply derived from parallel observations of the actual functioning of multinational firms that existed in the early 20th century,\textsuperscript{33} or through

\begin{itemize}
\item[30.] Viewing the firm as a solution for the cost of transactions in the market, Coase’s solution to the coordination problem was indeed quite simple: authority over agents. In other words, the entrepreneur would bind the enterprise together through the legal authority to hire and fire management agents. Some measure of agency costs, nonetheless, would always exist in a firm – be it the remuneration of management personnel and the cost of monitoring their activities, be it the cost of poor managerial performance and the risk of conflicts of interest – matters which would be thoroughly addressed in a string of literature developed in the 1970s which gained the force of a standalone “Principal-Agent” theory following the work of Jensen & Meckling (1976). Accordingly, Coase ascertained that market forces would take over whenever the market alternative would be more efficient, i.e. less costly as compared to the internal costs of operating the firm. And henceforth the notorious “make-or-buy” conundrum which constantly begs entrepreneurs for decisions was essentially founded. Coase posited that the longer the term of the contract underlying a market transaction, the higher the expected cost to establish such a contract among unrelated parties; whereas intra-firm relations would be naturally of a longer term given a firm’s continuity of enterprise. Therefore, quite logically, firms would exist and expand up the limit of their marginal efficiency as compared to the market. See M.J. Jensen & W.H. Meckling, \textit{Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure}, 3 Journal of Financial Economics 4, pp. 305-360 (1976). The “Principal-Agent” (or “Agency”) theory, and in particular, issues of moral hazard and adverse selection that are addressed through management incentives, are discussed in sec. 3. of this study.
\item[31.] The assumption of self-sufficiency of local firm management caused many capital-importing countries to systematically deny or challenge the deductibility of “management services” or “headquarters charges”, deeming such “stewardship” costs to be unnecessary for the production of income within source countries. That is, the activities of management in the residence country would have no economic allegiance with the source country, aside from not being justified through the benefit theory. This view remains influential in many capital-importing countries to this date.
\item[32.] Interestingly enough, the residence standards of “management and control”, “real center of management”, and “place of effective management” (POEM) of firms have been relevant or even determinative throughout history (not only in the UK treaty tradition which traces back to 1925 shipping treaties and the 1946 London Model Convention), whilst POEM still serves as a tie-breaker rule in the current OECD Model article 4(3), in spite of its notorious difficulties of interpretation. See, for example, J.F. Avery Jones, 2008 \textit{OECD Model: Place of Effective Management – What One Can Learn from the History}, 63 Bull. Intl. Taxn. 5 (2009), Journals IBFD.
\item[33.] See Carroll 1939, supra n. 23. The survey which grounded the Carroll Report of 1933 has devised a system that would be adequate considering the functioning of such MNEs that he observed – the legal fictions embedded in the system would therefore serve as proxies to enhance the efficiency in the administration of the law without jeopardizing its effectiveness and without creating inequities. See L.F. Fuller, \textit{What motives give rise to the legal fiction?} in \textit{Legal Fictions} ch. 2 (Stanford University Press 1967).
\end{itemize}
direct influence, Coase’s theory supports that the deconsolidation of separately managed firms within a multinational group is consistent with the framework of separate enterprises established under article 5 (including agency rules and exceptions) of the current Models. Permanent establishments are recognized as a result of factual observations, albeit within the legal criteria established in the norm. The terms of a prior article 5, suggested by the League of Nations in 1933, created this legal framework through which separate enterprises were no longer considered permanent establishments; such deconsolidation is also embodied in the current article 5(7) of the OECD Model and in article 5(8) of the UN Model and such terms were fully justified. It is worth noting, however, the precise wording of these articles:

[t]he fact that a company which is a resident of a Contracting State controls or is controlled by a company which is a resident of the other Contracting State, or which carries on a business in that other State (whether through a permanent establishment or otherwise), shall not of itself constitute either company a permanent establishment of the other.

The term “shall not of itself” implies that other facts and activities of the parties shall determine whether a unified firm should be recognized through the constitution of a permanent establishment. However, the term also suggests that this control relationship can be one of the many factual elements considered to ascertain whether or not a permanent establishment is constituted.

Aside from the current article 5(7), the 1933 League of Nations system is also an ancestor of article 9 of the current OECD Model. Again, given the functioning of the early multinationals that were observed at the time when these provisions were created, Coase’s theory fully supports the separate entity approach established under article 9 concerning associated enterprises. Knight’s views also support the framework established in the tax treaties. According to this theory, agents or executives would be given authority to manage the local firm and would be funded by the capital provided by the entrepreneurs. They would make decisions regarding the acquisition and use of assets, and the employment of labour which they would direct. Such a separate local firm would correspond to either a separate associated enterprise under article 9 or a permanent establishment under article 5, constituted in the source country where such agents would carry on their business.

34. See, for example, J.F. Avery Jones, The Origins of Articles 5(5) and 5(6) of the Model and R. Petruzzi, The Dependent Agent Permanent Establishment as an Extension of the Permanent Establishment Concept of Article 5(1) of the OECD Model Convention, in Dependent Agents as Permanent Establishments (M. Lang et al. eds.), Linde Verlag 2014.
36. See Carroll, supra n. 23.
37. Under Knightian theory, one can assert that only consumers control their preferences whilst competition amongst suppliers is, thus, inherently imperfect. The assertion that consumer preferences are unknown to suppliers, highlighted by Knight, quite originally illustrates the information asymmetry problem inherent to markets; as such, the likelihood of success of every enterprise is inherently uncertain. In light of such structural uncertainty of markets, different individuals with different risk preferences and profiles would serve different functions in an enterprise (be it a firm or a firm-like arrangement). Entrepreneurs would provide capital and decide the long-term objectives of the inherently uncertain business enterprise, and would join forces with agents or managers who would execute the entrepreneurial vision. Managerial direction would not only be a substitute for the education of managed employees but would serve to standardize procedures and mitigate risk. This view of the firm as a bureaucracy, wherein management performs a scalable and yet dominant function, was explored and illustrated by A.D. Chandler in The Visible Hand: The Managerial Revolution in American Business, Harvard University Press (1977); see Langlois, supra n. 11, at p. 21 et seq.
Under both Coase’s and Knight’s theories, agents would be monitored and held accountable by the entrepreneur for the performance of their fiduciary duties within the boundaries of their roles. Managers would, however, not be directed, but merely monitored by the principal investor or a unitary firm would surface both in Coase’s and in Knight’s view (and, coherently, under treaty law). Accordingly, local agents or subsidiaries would not constitute permanent establishments of a foreign resident under article 5 of the treaties, provided such agents and subsidiaries are not, in fact, managed and controlled by a foreign resident, something that would cause them to act on behalf of a foreign principal and thus constitute a permanent establishment of the foreign firm.

However, to preserve such consistency and coherence, the test imposed by the law should not be narrower or tied to the formalities of contractual obligations established among related parties; the actual conduct of the parties shall determine whether a unitary firm should surface and whether the facts warrant the recognition of a permanent establishment. Given the narrower scope of the dependent agent clause of article 5(5) under which the “authority to conclude contracts in the name of the enterprise” has become a standard, substantial treaty abuse ensued – something that was targeted by Actions 6 and 7 of the BEPS Project. Similarly, given the relevance of intercompany contracts and intra-group allocations of capital and risks via such contracts, the separate entity approach could be prone to distortions and transfer pricing abuse – something that was targeted by Actions 6 and 8-10 of the BEPS Project.

Knightian’s entrepreneurial risk theory is also clearly visible in the general structure of the allocation rules of the bilateral tax treaties, as well as the underlying logic of transfer pricing rules. According to this theory, the entrepreneur and capital owner would not only be exposed to the entrepreneurial risk itself but also to the risk of poor managerial performance in decision-making (or through shirking), as the entrepreneur would only be remunerated through uncertain, variable returns and could effectively lose all capital contributed or all earnings retained. It is Knight’s 1921 theory, therefore, that sustains that the ultimate risk-taking entrepreneur who delegates management authority to agents would be entitled to all residual income resulting from the business enterprise, and would be symmetrically exposed to any residual losses, which would ultimately augment or deplete the capital invested.

38. Accordingly, in Knight’s view, managers would be remunerated primarily through fixed income and would, thus, have greater certainty over the utility they would derive from performing the services they contribute to the business enterprise. If the business ultimately failed because of market forces and irrespective of the best efforts of managers, such agents would remain in possession of their education and skills, and would seek employment elsewhere; they would primarily bear the risk of their own poor performance or incompetence, and have no share in the overriding risk of the enterprise. See generally Knight, supra n. 10, at Chapter X, Enterprise and Profit (continued) The Salaried Manager, pp. 291-312.


41. The risk-taking personal nature of the entrepreneur, thus, is distinguished from that of the agent. Obviously, the endowment and ownership of capital is also a distinguishing feature (in spite of the availability of capital markets to fund entrepreneurs, which is a condition assumed by Knight’s theory on preferences).
To compensate for the higher risk incurred by the investor in the capital-exporting country, source countries that receive FDI are limited in their power to tax capital income earned by investors/entrepreneurs, and are generally entitled to tax business profits commensurate with the risks attributed to and managed within permanent establishments situated within their borders. Withholding tax rates are reduced or eliminated on rather passive\textsuperscript{42} income streams that are paid out to the owners of capital or property. Accordingly, all active income would be earned by the separate foreign entities that would be exposed to separate risks, and would thus be separately managed.

Residence states are therefore accorded the residual right to tax all income, with prevalence over source states, even with respect to the residual right to tax foreign-source business income. Relief from double taxation would be granted by the residence state, either through the credit method (under the capital-export neutrality principle that allows the residence state to impose full residual taxes on foreign active income accounting for any rate differential)\textsuperscript{43} or through the exemption method (under the capital-import neutrality principle that limits or eliminates the residual tax applied by the residence state to foreign active income).\textsuperscript{44} Where the UN and OECD Models differ is not in relation to this fundamental framework

\textsuperscript{42} The distinction between “active” and “passive” income is traditionally based on human endeavour and activity and is ingrained in US tax policy (“active trade or business” standard). See R.J.S. Tavares, The “Active Trade or Business” Exception of the Limitation on Benefits Clause in Base Erosion and Profit Shifting: The Proposals to Revise the OECD Model Convention p. 145 (M. Lang et al. eds., Linde Verlag 2016); “The notion of a ‘trade or business’ suggests something active, perhaps even entrepreneurial, by contrast to passive investment, which, while also aimed at income or profit, entails little more than the commitment of capital and patient expectation”, citing to J. Isenbergh, International Taxation – U.S. Taxation of Foreign Taxpayers and Foreign Income, Volume II p. 225 et seq. and p. 275 et seq. (Little, Brown and Company 1990), and J. Isenbergh, International Taxation – Second Edition, Concepts and Insights Series p. 94 (Thomson West 2005).


\textsuperscript{44} See Vogel, supra n. 23, at p. 216 et seq., in reference to the long-standing German tradition under which the international allocation of taxing rights with a prevalence of source-country taxation is rooted in the theories developed by European scholars (such as 19th century authors Adolph Wagner and Georg von Schanz). The difficulty is in ascribing “source” status to country-specific activities, as well as in ascertaining the relative weight of income-producing factors across countries and entities. Vogel himself is a notorious advocate of the prevalence of source taxation, in what has been named by US scholars as “capital import neutrality” (even though such a term may represent but a partial view of the analytical issue addressed by the German authors and lead to the consideration of such policy not as a measure of efficiency and global welfare but solely of business competition).
(limitation of taxing rights of source countries, recognition of residual taxing rights to residence countries), but on other specific allocation rules.45

3. The International Tax System of the OECD v. Offshore Abuse: Ownership and Agency Theories

The Coasian-Knightian theories, as applied to FDI, would justify setting the boundaries of separately managed national firms within a multinational group of firms and consequently the deconsolidation of legal entities within MNEs (allowing for the consolidated treatment of groups of legal entities within the same country). On the other hand, not all capital-importing countries would maintain wide networks of international tax treaties or of investment treaties.

Since the 1950s and 1960s, such limited coverage of treaties that facilitate FDI created an incentive for multiple layers of legal ownership to be used by MNEs. Each separate layer of legal ownership, however, would have been regarded under international tax law as a bona fide capital exporter or residence country, an original foreign direct investor, even when such investment decisions are directed by the parent firm of an MNE.46 Such separate layers, therefore, represented opportunities for abuse, both through the improper use of treaties as well as through the undue accumulation of residual (or passive) income offshore. Figure 3 depicts the typical structures that were common in the 1960s and 1970s:

**Figure 3: Fragmented multinational firm with abuse of treaties and tax havens**

The legal fiction of disintegration or deconsolidation within multinational firms, and the implied autonomy of controlled foreign entities, which were, throughout the 1960s, con-

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45. The models differ on specific aspects that govern the allocation of taxing rights in certain scenarios, with lower thresholds for the recognition of permanent establishments and allowing higher rates of withholding taxation with respect to capital income.
sistent with the reality of multinationals under prevailing theories of the firm, created an environment that permitted abuse. Such an environment would only be relativized decades later by the United States, particularly when the notion of a “limitation on benefits to keep bilateral treaties bilateral” was introduced in the US Model, following the introduction in the United States of anti-deferral rules affecting controlled foreign corporations (CFCs) through the US Revenue Act of 1962 and of transfer pricing regulations in 1968.

Coasian and Knightian theories can be indicative of what might constitute a permanent establishment under article 5 of the treaties. Yet, given that the substance of structures illustrated in Figure 3 would remain unaltered under these theories (i.e. local management and local operations would remain separate), firm theory would not support the constitution of permanent establishments in these wholly artificial and highly abusive schemes. The solutions for these cases of offshore abuse observed by the United States in the 1960s, as developed throughout the 1970s and the 1990s, arose under US domestic law in the form of anti-deferral provisions and also through more refined transfer pricing regulations governing the application of the separate entity approach and ALP. Such anti-abuse rules developed in the United States, nonetheless, are also grounded in Coasian and Knightian theories of the firm, as well as in the derivative ownership and property right views of the firm, which influenced the structuring of the OECD Guidelines and, hence, of transfer pricing laws around the world.

Both the OECD and the UN Models embrace the ALP under article 9 to govern the allocation of taxing rights over profits arising from transactions between associated enterprises,

47. See Rosenbloom & Langbein, supra n. 23. The Rosenbloom & Langbein article is a slightly revised transcript of a 29 April 1980 statement by Rosenbloom, the then-International Tax Counsel of the Department of the Treasury, before the Subcommittee on Oversight of the House Ways and Means Committee, of 1980, and adds to the early 1970s US Congressional Hearings on Offshore Tax Havens. See also Tavares, supra n. 42, at p. 134.

48. The underlying assumption of CFC rules is that “passive income” would be deemed to be earned (sourced) in the residence state in spite of its formal recognition by a controlled corporation residing in a foreign state, and, hence such income would be taxable in the residence state as if directly earned by the resident shareholder and not by a foreign permanent establishment (i.e. passive income would have no economic allegiance with the active trade or business of a foreign permanent establishment). Therefore, tax treaties do not limit the residence state’s authority to tax its own resident on income that is not effectively connected with foreign business activities (i.e. CFC rules are not meant to recapture rate differentials on active income, as such income remains untainted and entitled to deferral). See M. Redmiles & J. Wenrich, A History of Controlled Foreign Corporations and the Foreign Tax Credit, US Internal Revenue Service Publication, available at https://www.irs.gov/pub/irs-soi/historycfcftc.pdf. See also para. 23 OECD Model: Commentary on Article 1 (2010); para. 14 OECD Model: Commentary on Article 7 (2010); para. 37 OECD Model: Commentary on Article 10 (2010).


51. See Wittendorff, supra n. 23, at p. 109.

52. See UN Department of Social and Economic Affairs, United Nations Practical Manual on Transfer Pricing for Developing Countries (UN 2013), [hereinafter UN Manual], under which the ALP is not discarded. However, substantial language would favour formulary apportionment, openly supported in the country report from China and implied in the approaches supported by Brazil and India. The UN Manual is often misinterpreted as if it were an instrument that advocates in favour of such country practices, beyond a seemingly implicit support. In fact, the UN Manual is an instrument to assist developing countries in the application of the OECD Guidelines, which it explicitly supports; specific country practices of G20 countries which do not conform to the OECD Guidelines are illustrated simply to demonstrate the approach of these
and the Commentary on Article 9 leads to the interpretation of the ALP in accordance with the OECD Guidelines. Under the ALP, the minimum amount of profit that each state is entitled to tax is that which would arise from a less profitable transaction otherwise carried out between unrelated parties, and the comparability of unrelated firms would rely upon an economic analysis of functions, activities, assets and risks (FAAR). It is clear that Coase would support that market transactions imply costs not otherwise incurred in related party transactions, and, hence, holding related parties accountable to that costlier benchmark through the ALP would effectively set a minimum standard. Under such a standard, a multinational firm would always have a “cushion” of residual profits, be it at a transactional level within each controlled subsidiary or in consolidation at the ultimate level of ownership. Such a cushion of residual profits would be the spoils of Coase’s transactional cost savings (i.e. synergistic gains or benefits of affiliation), which could be reallocated to readjust non-market transactions back to the third-party benchmark, and would thus effectively serve as an anti-abuse rule. It is a brilliant solution that has aged, as discussed in sections 4.-6. Knightian theory, as well as the proponents of the ownership, asset specificity and property rights views of the firm, would also support the economic analysis (e.g. of FAAR) and related methodology that has been developed under the US regulations and OECD Guidelines. The ALP with the FSLE approach, FAAR and resulting methods, comprise a formidable toolkit which is operated primarily through domestic law.

As an allocation rule of taxing rights between residence and source countries, however, the framework has remained the same. International tax law embraced the anti-abuse toolkits developed by domestic law. In the current framework, source countries were allowed to tax no less than the lower profits otherwise expected from unrelated third-party transactions, while residence countries would source and be entitled to tax any residual entrepreneurial gains or would allow deductions for any residual entrepreneurial losses. In the Transfer Pricing Guidelines originally published by the OECD in 1995 (based on the 1979 Report) and revised in 2010, as in the US transfer pricing regulations, further aspects of the theory of the firm (which are briefly discussed hereunder) are explored and the allocation of residual rights to the legal owners of capital and property, which finds its roots in Coase and Knight, is greatly reinforced.

US transfer pricing regulations and the similarly structured OECD Guidelines, however, have often failed to regard the value-creating capacity of management and have continued to place greater emphasis on capital (property rights and ownership). While the exponential development of information and communication technologies (ICT), particularly since the

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53. See paras. 1-2 OECD Model: Commentary on Article 9 (2010). See also OECD Guidelines, supra n. 3.
54. See Vann & Schön, supra n. 1, and Avi-Yonah & Brauner, supra n. 7.
55. See Y. Brauner, BEPS: An Interim Evaluation, 6 World Tax J. 1 (2014), Journals IBFD; see also M.C. Durst, Limitations of the BEPS Reforms: Looking Beyond Corporate Taxation for Revenue Gains, International Centre for Tax and Development (ICTD), Working Paper 40 (2015). The limitations of the current system and methods are the very core of the effort to reform the rules since 2010, most noticeably through the OECD/G20 BEPS Project, and the system has been strengthened against abusive schemes, but substantial reforms of fundamental concepts have not (yet) occurred.
56. See Wittendorff, supra n. 23.
57. Id.
58. See Tavares & Owens, supra n. 17.
1990s, including the massive growth of enterprise resource planning (ERP) software and the internet, has allowed for the substantial “integration” of management and operations within firms.59 This reduction of transactional costs and the increase in technology, foreseen by Coase in 1937, has enabled firms to grow beyond their formal legal-entity and jurisdictional boundaries, and has permitted the functioning and growth of virtually seamless, firm-like GVCs.60

Through such GVCs, capital has acquired even greater mobility with efficiency-seeking FDI flourishing across the world, enabling a more efficient division of functions, activities and risks within MNEs and the integration of not only management but also of operations. Above all, the economic integration of Europe has further blurred the dividing lines between firms that jointly operate GVCs in the region – from a Coasian and Knightian perspective, MNE-controlled GVCs operating within the internal market in Europe would quite likely represent a single firm.

In the illustration of a prototypical multinational suggested in this article, let us assume now that Country A would be the United States, while Countries B and C would be large, industrialized countries in Europe, the United Kingdom and Germany respectively. Accordingly, Country D would represent another consumer market in Europe, such as France. Assume the US parent would continue to manufacture Products A, B, and C for distribution to the US market. The United Kingdom would continue to manufacture Products A and B. However, instead of supplying the UK market only, it would supply of the whole of Europe. The US parent would transfer the production of Product D to the German subsidiary, which would also take over from the United Kingdom the manufacturing of Product C for the European market. Assume managers from the United States and Germany would cooperate to oversee the manufacturing and continuing development of Products C and D. Managers from the United States and the United Kingdom would cooperate and oversee the manufacturing and continuing development of Products A and B. Similarly, managers from the United States, United Kingdom, Germany and France would cooperate to develop the marketing intangibles owned by the MNE.

This high degree of international cooperation within an MNE and operational and managerial integration across borders would only be possible through the alignment of incentives of management agents.62

Through an economic view of the firm, the following “separate firms” could be identified through their concerted effort, interdependence and joint management of relevant business activities.63

59. Id.
60. See Tavares & Owens, supra n. 21.
61. See Eicher, Mutti & Turnovsky, supra n. 19, Determinants of Vertical Integration, at p. 238. See also Tavares & Owens, supra n. 21.
62. See Jensen & Meckling, supra n. 29.
63. OECD, Attribution of Profits to Permanent Establishments (OECD 2008), International Organizations’ Documentation IBFD, and OECD, Attribution of Profits to Permanent Establishments (OECD 2010), International Organizations’ Documentation IBFD. See also OECD Model: Commentary on Article 7 (2010), in particular paras. 4-9 referencing the OECD Reports of 2008 and 2010. The 2008 and 2010 Reports and related OECD Commentary under article 7(2) effectively establish the AOA for the APPE. It should be noted that the reference to “relevant business activities” that was included in the AOA Report of 2008 and OECD Commentary under article 7(2), was deleted in the 2010 Report and OECD Commentary. The following statements were made in 2008 and are still referenced as 2010 deletions to the Commentary:

B. Statement of principles used to attribute profits to a PE; B-1. The ’functionally separate entity approach’. Two broad interpretations of Article 7, paragraph 1, are currently used by member coun-
the United States and the United Kingdom would be deemed co-owners of product and process-related intangibles related to the manufacturing of Products A and B and such full-fledged manufacturing operations should be viewed as a unified industrial firm;

- the United States and Germany would be deemed co-owners of product and process-related intangibles related to the manufacturing of Products C and D and such full-fledged manufacturing operations should be viewed as another unified industrial firm;

- the United States, the United Kingdom, Germany and France would be deemed co-owners of marketing intangibles while the United States would be regarded as a separate full-risk distributor operating within the US market and the United Kingdom, Germany and France would be regarded as a unified full-risk distributor operating within the EU internal market; and

- US shareholders who invested in the overall MNE would remain as the ultimate risk-takers of the unified MNE operations and accordingly any residual profits, synergetic gains or economic rents over and above the normal return for the operations of the “firms” identified above, should accrue to such US shareholders. Whether the US tax on such profits is deferred (or whether the US adopts an exemption system) should be irrelevant for Europe.64

The following chart illustrates this economic view of the firm:

Figure 4: Integrated multinational firm operating a GVC

![Diagram of GVC]

Through firm theory, it is possible to ascertain in the MNE illustrated in Figure 4 the potential existence of three separate firms: (1) a manufacturing firm engaged in the production of Products A and B in the United States and in the United Kingdom; (2) another manufacturing firm engaged in the production of Products C and D in the United States and in Germany and finally (3) another manufacturing firm engaged in the production of Products A and B in the United Kingdom, Germany and France.


deferral: a spectacle of fireworks, smoke and mirrors

Of particular concern is the vision of an amplified role for low-tax (developed) countries in seeking to
post-BEPS. Through legal form (i.e. the segregation of property rights across separate entities of a multinational group, the allocation of management functions and/or operating assets to offshore entities), the aforementioned unification of operations (e.g. through the characterization of permanent establishments) could easily be avoided.

Figure 5 illustrates this legalistic view of the firm (that remains valid even post-BEPS):

Figure 5: Integrated multinational firm operating a GVC through deconsolidated tax entities

Phase III – 1990s to date: Operational consolidation v. legal deconsolidation

65. See Tavares & Owens, supra n. 17, at pp. 593-594:
Of particular concern is the vision of an amplified role for low-tax (developed) countries in seeking to further channel investment and attract a tax base by meeting inadequate minimum standards in a continuing and enhanced post-BEPS ‘race to the bottom’. Conversely, MNEs remain entrenched in their traditional stance that no business exists without the financial capacity to bear entrepreneurial risks, i.e. the financial capital required to take and to ‘cushion’ risks of loss. Consequently, traditional transfer pricing methods under the arm’s length principle, with absolute observance of the functionally separate legal entity approach as applied over decades, would determine whether any base should ever be reassessed and redistributed within a GVC. Such a conservative stance would limit the effectiveness of the BEPS reforms to the prohibition of wholly artificial and particularly abusive transactions or harmful and opaque tax practices. It would, however, preserve MNEs’ tax-motivated business models of fragmentation of functions and capital within controlled value chains, which would remain effective in most if not all OECD member countries and in EU and/or European Economic Area (EEA) Member States through the use of more substantive ‘intermediaries’, for example, “knowledge boxes”, with a workforce engaged in any part of the development of intangibles and “active holding companies” carrying on genuine functions within their residence state.

Suppose the MNE in Figure 5 is not only incorporated in the United States but its securities (stocks and bonds) are publicly traded in the US capital market. As such, the MNE maintains a board of directors, which includes its chief executives, as well as independent representatives of shareholders. Suppose the top management of the MNE is comprised of 20 executives (chief executives of functions or presidents of business units), all employees of the US parent, who direct global operations. Assume the MNE in Figure 5 employs 5,000 workers overall. Assume that 4,000 workers have no authority to make significant decisions and simply follow instructions to execute repetitive or routine tasks: 2,000 are blue-collar workers (e.g. in manufacturing and procurement operations) and 2,000 are clerical workers (e.g. in distribution and sales operations or performing back-office support activities, such as accounting data entry). As such, 980 employees with decision-making authority would remain in all functions (ranging from research, development, innovation and engineering, to marketing, branding and sales) and be distributed across the world.

Assume 80 “vice-presidents” report directly to the 20 top executives of the US parent; absent of tax planning, 60 would be employed by the US parent firm, 8 by the UK sub, 10 by the German sub and 2 by the French sub. Assume that another 160 “directors”, 100 of which are employed by the US parent and 60 by the European subsidiaries, report to the 80 vice-presidents and direct the activities of 740 highly skilled workers (including, for example, several highly qualified engineers). Absent of tax planning, these directors and managers would be employed in the United States, the United Kingdom, Germany and France, and would perform the bulk of their activities while located in these countries. Assume all incentives are fully aligned across countries, fostering the integration of management teams and functional teams across borders. Such teams cooperate both through virtual and physical means (i.e. some team members are grouped in a single location, while many are spread across different countries and function through ICT including ERP systems). Tangible assets are used according to the necessary footprint to support operations and are either bought or leased from third parties according to the optimum financial structure of the aggregate firm. Intangibles are co-developed continuously. Assume this MNE operates with 100 patents and trademarks, and other proprietary intangibles, whilst continuously innovating in such a way that every 5 years another 20 intangibles are added to its portfolio, while 10 intangibles lose market value.

Legal capital and asset ownership continue to carry substantial weight under the prevailing interpretation of article 9 of the treaties, guided by OECD Guidelines and related domestic rules, even post-BEPS. The operational interdependence of the legal entities depicted in Figure 5, further evidenced by the joint management of shared economic risks of the entire GVC that comprises the associated enterprises in question, would often not be interpreted as indicative of the existence of permanent establishments across the different

66. See Kane, supra n. 20 and Jensen & Meckling, supra n. 30. Managerial accounting records would often be designed so as to permit the measurement of unitary management reporting entities or business units within firms. Firms would view themselves and would be managed based on such managerial accounting records. Decision-making employees would be rewarded for their collaborative efforts, for their joint management of cross-border risks and integrated operations, through the granting of equity (stocks or derivative call options) of the ultimate parent (and/or other variable performance-based remuneration) proportionate to the results of such unitary entities. Statutory accounting records would therefore serve only to report results to external stakeholders in standard format (i.e. consolidated statements would be disclosed to capital markets and other creditors of the parent firm (e.g. residence-country tax authorities), whereas deconsolidated statements would be disclosed to country-specific creditors (e.g. source-country tax authorities)).
jurisdictions mentioned above (except post-BEPS if any of the distribution activities are structured through commissionaire arrangements\textsuperscript{67}), a result which is questioned in section 4. Therefore, given the legal entity form of the subsidiaries depicted (i.e. corporate entities instead of unincorporated branches), and given that human capital often becomes no more than a substance indicator to meet specific tests or exceptions under anti-abuse rules (e.g. substantial activity test under CFC rules and active trade or business exception under LOB,\textsuperscript{68} development, enhancement, maintenance, protection and exploitation (DEMPE)\textsuperscript{69} analysis in transfer pricing or EU anti-abuse directives\textsuperscript{70}), there would be an incentive for the MNE in Figure 4 to restructure its functions and activities along with its legal ownership of assets and legal allocation of capital and risks, and add substance to its offshore hub\textsuperscript{71} (which may, for instance, comprise a Double Irish Dutch Sandwich\textsuperscript{72} or another EU reverse-hybrid low-tax scheme).

In the example depicted in Figure 5 and discussed above, assume that 2 of the 80 vice-presidents are relocated to the offshore hub along with 10 of the 160 directors and with 100 of the 740 highly skilled workers. Key supply-chain and marketing functions would be represented by such workers, along with some research, development and innovation (R\&D&(I))\textsuperscript{74} (so-called “white coat”) activities. Through integrated procurement activities, contracts with key third-party suppliers would be entered into by the offshore hub (e.g. the global procurement of inputs for production, machinery and equipment, or advertising) and such “master agreements” (which could be fractioned or entered into by the US parent as a result of the same joint activities of personnel from multiple entities) would benefit the whole MNE. Assume that prior to the transfer of personnel, all pre-existing intangibles would already have been co-funded through the offshore hub (along with the United States through a cost contribution agreement (CCA)\textsuperscript{75}), whilst the continuing DEMPE activities concerning such functions would have been jointly performed by such personnel employed by the offshore hub in full compliance with the new standard that has emerged from BEPS.

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\textsuperscript{67.} See OECD, supra n. 24; see also A. Storck & R. Petruzzi, Permanent Establishments: Proposals Related to Agency Permanent Establishments – Article 5(5) and (6) of the OECD Model Convention, in Base Erosion and Profit Shifting: The Proposals to Revise the OECD Model Convention (M. Lang et al. eds., Linde Verlag 2016).

\textsuperscript{68.} See Tavares, supra n. 42; see also Tavares, Bogenschneider & Pankiv, supra n. 64.

\textsuperscript{69.} The BEPS Actions 8-10 Report indicates “DEMPE” (Development, Enhancement, Maintenance, Protection and Exploitation) as the standard to assess value creation pertaining to intangibles, as substantive activities that would allow the recognition of intangible ownership and control over risk. See OECD, supra n. 40. This or a similar activity-based test may ultimately be adopted for the attribution of capital and risk intra-group.

\textsuperscript{70.} See Tavares & Bogenschneider, supra n. 65.

\textsuperscript{71.} Hypothetically, if relocating personnel would be inefficient or exceedingly disruptive, a tax incentive would remain for additional personnel to be hired at the offshore hub without a corresponding reduction of personnel in other countries, thus adding to the overall headcount and activities of the selected functions. See Tavares & Bogenschneider, supra n. 65 citing L.A. Sheppard, Twilight of the International Consensus: How Multinationals Squandered Their Privileges, 44 Washington University Journal of Law & Policy 61, p. 71 (2014):

> The Europeans think requiring substance in CFCs will solve the problem. It will not. Requiring substance will mean income shifting is more expensive, and requires more bodies to be thrown at tax avoidance plans; but when billions of dollars are at stake, a few boots on the ground in a pleasant European tax haven becomes a bearable cost. And the result may still be objectionable to the multinational’s home country.


\textsuperscript{73.} See Tavares, Bogenschneider & Pankiv, supra n. 64.

\textsuperscript{74.} See Tavares & Owens, supra n. 65.

\textsuperscript{75.} See OECD Guidelines, supra n. 3, at Chapter VIII – Cost Contribution Arrangements; see also OECD, supra n. 40 and n. 63.
Action 8. Suppose the offshore hub were to establish a board of directors comprising 8 of the 80 vice-presidents and including the 2 that are employed at the hub, and 4 others who are resident in the United States, Germany, the United Kingdom and/or France respectively, and have the legal authority to approve the funding of projects and operations that impact the entire MNE, even if such authority is ultimately delegated by, and such decisions are subject to the approval of, the chief executives of the MNE, employed by the US parent (who, in turn, report to the board of directors of the US parent).

Suppose that the board of directors of the offshore hub sets up operational committees, including the 20 directors that form the board along with 120 other directors located in the United States or elsewhere in Europe. These operational committees would cooperate continuously and meet both physically and virtually through ICT to monitor all operations, deliver analytical reports and make recommendations (including of capital expenditure projects funded through the reinvestment of retained earnings) for the approval of the board, whilst also continuously cooperating with the other 78 vice-presidents that are not physically located in the offshore hub. Such operational committees would ultimately manage significant entrepreneurial risks for the MNE as a whole, under the control of all 80 vice-presidents, formalized by the board of directors of the offshore hub in quarterly meetings that would either be conducted at the offshore hub, in the United States or elsewhere within the MNE (with virtual attendance by some participants). The 20 directors employed by the offshore hub would also oversee significant activities carried on within its territory by the 100 highly skilled workers located therein, and might also oversee the outsourcing of relevant functions to third parties (e.g. contract R&D, contract manufacturing, etc.). After 5 years of operations, the offshore hub would still co-own 50 legacy intangibles, plus 100 new intangibles that would have been created in co-ownership with the United States and through joint cooperation with highly skilled workers employed by all entities in the MNE group. To the extent that workers of each European subsidiary would perform activities that benefit the offshore hub and/or other entities in the MNE group, their services would be charged to the offshore hub, at cost-plus. All services and activities rendered within the United States versus those rendered within Europe would be accounted for under the terms of the CCA at arm’s length.

Absent of the offshore hub and the contracts that it enters into, the same operational committees would function, and the same degree of collaboration and overall governance structure would take place, and the same dynamics of management of integrated operations would exist. The offshore hub and its board, nonetheless, would be inserted into the value chain and it would not be regarded as a functionally-thin cash box or IP (intangible property) box. Furthermore, assume the offshore hub (as a co-owner of valuable intangibles, and backed by the activities of the personnel it employs and governance it exerts) assumes, via intercompany contracts, the “entrepreneurial risks” for all of Europe and, as such, the subsidiaries in France, Germany and the United Kingdom are treated as low-risk contractors. That is, Germany and the United Kingdom would be viewed as contract manufacturers and, along with France, also as low-risk distributors (LRDs). Accordingly, the offshore hub would receive capital contributions from the US parent or retain and reinvest the significant earnings it records, thus demonstrating the financial capacity to bear such entrepreneurial

76. Id.
risks.\textsuperscript{77} Suppose the offshore hub operates a treasury centre and cash pooling from which the European subsidiaries borrow funds at arm’s length levels of indebtedness, remunerated by arm’s length interest rates. The offshore hub would maintain a dividend policy whereby all after-tax profits recorded in the statutory books of the European subsidiaries would be distributed as dividends, thereby preventing the funding of local operations through retained earnings, which would instead be accumulated by the offshore hub.

The legal restructuring (or conversion) illustrated in Figure 5 has been addressed in the context of article 9 of the OECD Model, primarily under chapter 9 of the OECD Guidelines, which is based on the 2010 Report on Business Restructuring,\textsuperscript{78} and can still be greatly refined, particularly in respect to the recognition of broader intangibles (i.e. KBC) and prospective returns on such KBC-related intangibles.\textsuperscript{79} BEPS Actions 8-10 introduce the DEMPE standard and new CCA language\textsuperscript{80} within its new value creation approach, and it addresses the commensurate with income (CWI) standard for the initial outbound transfer of hard-to-value intangibles.\textsuperscript{81} Nonetheless, ownership and property rights theories of the firm, and recognition of the stated capital and financial capacity of the separate legal entities illustrated in Figure 5, as well as the governance model illustrated here which is vested in legal form that is consistent with the mechanics of the OECD Guidelines, would likely result in a disproportionate allocation of earnings to the offshore hub under article 9.

Action 7 of the BEPS Project addresses the substance of commissionaire arrangements in such business restructurings to conclude that a dependent agent permanent establishment (DAPE) can arise,\textsuperscript{82} but it has not reassessed the legal meaning of the functional integration, economic interdependence and the joint management of integrated entrepreneurial risks that occur in other scenarios, such as LRDs and contract manufacturers (CMs), through the association of personnel employed by associated enterprises controlled within the same MNE. Parent firms no longer monitor, but often direct and manage operations of controlled subsidiaries along business units (not corporate-wide), which themselves are integrated within the relevant business activities or business units that represent GVCs. From an economic perspective, all limited-risk contractors (whether or not commissionaires, LRDs or CMs) are equivalent, and can be managed and controlled through the same integrated oper-

\textsuperscript{77} See OECD, supra n. 40 and n. 63.
\textsuperscript{78} See OECD Guidelines, supra n. 3, at Chapter IX – Transfer Pricing Aspects of Business Restructurings. The focus of the guidance of Chapter IX, however, leads at most to the imposition of exit taxes on outbound transfers of intangibles or going concerns in the midst of a conversion from full-fledged manufacturers and full-risk distributors into LRDs or commissionaires, as well as for the transfer of intangible property rights to a central entity (e.g. a so-called "IP company") within the group. Chapter IX also provides guidance for the pricing of transactions between associated enterprises (as per art. 9 of the OECD Model) after the restructuring. The exit tax solution, however, is often incompatible with the fundamental freedoms established under EU law if the business restructuring moves production factors, assets and personnel within the European Union. See V.E. Englmair, The Relevance of the Fundamental Freedoms for Direct Taxation, in Introduction to European Law on Direct Taxation, 4th ed. (M. Lang et al. (eds.), Linde Verlag 2015).
\textsuperscript{79} The worth of high value-adding services and KBC, which is embodied in services rendered by highly skilled workers (including all decision-making management), are, at present, remunerated at markups over payroll expenses for the related activities, which are but a fraction of the value created by such activities, whereas intra-group allocations of capital and of property rights continue to disproportionately enable the excessive mobility of income through electivity of source jurisdictions (i.e. the offshore hub illustrated here). It may be justifiable to develop a methodology that would allow the sharing of returns from the broader intangibles created through the joint functions performed, be it through art. 7 or through art. 9 of the OECD Model.
\textsuperscript{80} See Tavares & Owens, supra n. 17, at p. 592.
\textsuperscript{81} See OECD, supra n. 40 and n. 78.
\textsuperscript{82} See OECD, supra n. 40; see also Storck & Petruzzi, supra n. 67.
ational model. Further, not only employees of the parent firm perform activities that benefit the entire MNE, but also employees of controlled limited-risk contractors (and offshore hubs that have economic substance) perform activities for the benefit of the parent firm and the entire GVC. The interdependence of entrepreneurial risks across countries within a GVC that is jointly managed and controlled within an MNE, as illustrated here, has not been addressed under Action 7 of the BEPS Project, as it is not properly addressed in the OECD Commentary on Article 5 of the OECD Model. In fact, the delineation not only of transactions under article 9 and their appropriate pricing, but also of a legally restructured “firm” under article 5, which would enable the application of rules pertaining to the attribution of profits to permanent establishments, has not been considered (or addressed) by the OECD.

4. MNE-Controlled GVCs as Unitary Firms: Reinterpretation or Reform of Article 5 of the OECD Model?

As noted in section 3., through firm theory it would be possible to ascertain in the MNE illustrated in Figures 4 and 5 the potential existence of three separate firms and the legal restructuring or conversion noted in section 3. would not materially affect that conclusion; it would simply insert the offshore hub in the firm units as follows:

(1) the manufacturing firm engaged in the production of Products A and B would function in the United States, in the United Kingdom, and in the offshore hub;

(2) the other manufacturing firm, engaged in the production of Products C and D, would function in the United States, Germany, and in the offshore hub; and

(3) the marketing and sales firm would be engaged in the distribution of Products A, B, C, and D in all markets, including the offshore hub.

This economic view of the firm requires the analysis of the hypothesis of whether the US parent would have permanent establishments in all source countries above, given not only the relationship of control, but the operational interdependence and integration of management and entrepreneurial risks illustrated here. This hypothesis must be addressed under article 5(1), 5(5) and 5(7) of the current OECD Model, in addition to the suggested post-BEPS variants of such article. The policy view supported herein is that, if through purposeful interpretation of the law in its current terms it is not possible to conclude that permanent establishments are constituted irrespective of the legal form of the contracts entered into by the controlled parties, then the rule would need to be changed so as to approximate the permanent establishment notion (once again) to the reality of the multinational firm.

It is not clear, however, that the present terms of article 5 of the current Models are insufficient to reach the intended policy conclusion and properly ascertain the enterprise (despite the historical practice and traditional interpretation of such terms which are somewhat limiting); particularly if interpreted in conjunction with Article 3(1)(c). Secondary to this analysis of the proper delineation of the firm is the solution to the complex problem of the attribution of profits to such permanent establishments, which is not the main object of this article.

In fact, it is reasonable to conclude that recognizing such permanent establishments would be consistent with the object and purpose of the rule of article 5(1), while it would not be

83. See OECD Model: Commentary on Article 5 (2010).
contrary to the objective and purpose of the rule of article 5(7).\textsuperscript{84} As discussed in sections 2.-4., the historical context in which such rules were created concerning the functioning of MNEs has led to them being designed in a manner that \textit{would}, in fact, be coherent with an economic view of such firms. Restoring that coherence once again would, therefore, represent a proper approach to the purposeful interpretation of these norms. As such, joint managerial activity and the high integration of operational risks, through to the high degree of interdependence that is observed in the MNE-controlled GVCs depicted here, should delineate the “carrying on of a business”; these are factual considerations that should be determinative of the existence of permanent establishments under article 5(1).\textsuperscript{85}

Accordingly, the meaning of the term “fixed place of business”\textsuperscript{86} should not limit this conclusion, as, in Figures 4 and 5, all personnel would jointly conduct activities constituting the carrying on of an integrated and interdependent business through “fixed places of business” represented as the managerial offices of all associated enterprises. The rule of article 5(7) should not limit such characterization, as it would not be the common control “in and of itself” that would trigger the constitution of a permanent establishment,\textsuperscript{87} rather all of the facts pertaining to the nature of the business carried on (i.e. the vertically integrated, fully interdependent and jointly managed GVC) would be ascertained in conjunction with the relevant circumstance of ultimate management and control by the US parent.

It is the US parent that enables the funding of operations by entrepreneurial risk-takers (i.e. shareholders or bondholders operating in the US capital markets, who also approve the reinvestment of retained earnings). As such, consistent with the original design of the international tax system and bilateral nature of tax treaties, the US parent should be viewed as the capital-exporting residence state and ultimate entrepreneur of the MNE business (and not the offshore hub), operating different permanent establishments in multiple source countries. The permanent establishment of the offshore hub may well jointly manage and control other permanent establishments in Europe, which would imply multilateral consolidation of the relevant business activities (i.e. manufacturing of Products A and B in the United States, the United Kingdom and the offshore hub, manufacturing of Products C and D in the United States, Germany and the offshore hub, and distribution of Products A, B, C, and D in all countries). Such operations would be consolidated across borders and treated as separate (albeit unitary) businesses (e.g. France would have no taxing rights over manufacturing income in general; Germany would have no taxing rights over manufacturing income of Products A and B; and the United Kingdom would have no taxing rights over manufacturing income of Products C and D), in a manner that is coherent with the economic view of the firm suggested above.

A general feature concerning the relevance of managed activity in the assertion of permanent establishments is reinforced by the original design and historical developments of the


\textsuperscript{85} See OECD Model Commentary, \textit{supra} n. 83, in particular at paras. 1-4, 10, 32 and 34. Language in the Commentary under Article 5(1) is often limiting, while the norm remains rather broad.

\textsuperscript{86} See OECD Model: Commentary, \textit{supra} n. 83, in particular at paras. 40-42. See also OECD Discussion Drafts, Article 5 PE Definition (2012) issue 3 p. 8 and issue 18 p. 33. Language in the Commentary under Article 5(7) is often inconsistent and potentially misleading, while the norm remains permissive.

\textsuperscript{87} Hence, the view suggested herein differs quite significantly from what is generally supported by those in favour of unitary taxation.
dependent agency norm of article 5(5). Under the framework of the League of Nations and as per the original 195688 design of this rule through 1958,89 and again under the 1977 OECD Model,90 the activity provision through which a dependent agent would constitute a permanent establishment had a broader meaning than it does today. Instead of the “authority to conclude contracts in the name of” and instead of resorting to the term “binding”, the activity term used was “on behalf of”, or even broader language was used, such as that found in the 1977 OECD Model:

[…] that enterprise shall be deemed to have a permanent establishment in that State in respect of any activities which that person undertakes for the enterprise […].

Indeed, many treaties might still be in force using such broader provisions. For those treaties, it may be reasonable to consider that a DAPE may arise in the fact pattern of the illustration noted hereinabove. The current structure of the provision, however, even post-BEPS, would limit the characterization of permanent establishments in this illustration, as all terms are intrinsically linked with a formalistic legal term, i.e. the “conclusion of contracts” (e.g. “negotiates material elements of contracts”, “contracts which by virtue of the legal relationship between the person and the enterprise are on the account and risk of the enterprise”).91

In any event, to ascertain the interdependence, integration and sharing of risks within MNE-controlled GVCs, it is important to consider the views of the firm that resulted in the alignment of incentives between management (agents) and the ultimate owners of firms (principal entrepreneurs).92 The evolution of agency theory and its impact on the ownership structure of firms was not fully captured in the development of transfer pricing regulations in the United States and, therefore, the OECD Guidelines are incomplete in their consideration of the value-creating capacity of management. Under the BEPS Project, a new emphasis on human capital is evident and represents an evolution of the transfer pricing rules and of the international tax system. However, the rules are still incoherent, as, for example, different results may be obtained for the allocation of taxing rights under the same arm’s length principle, depending upon whether article 9 is interpreted in accordance with the OECD Guidelines (with greater emphasis on contracts and legal form) or whether article 7 is interpreted under the Authorised OECD Approach (AOA) for the APPE.93

5. The International Tax System of the OECD: Agency Costs, Ownership Structure and Property Rights

Coasian and Knightian theory evolved in the United States and influenced the shaping of US firms and US management, particularly after the ICT revolution of the 1980s and 1990s, and after the reduction of trade barriers which fostered globalization. Consistently with Coasian-Knightian theories, large managerial bureaucracies emerged within US publicly traded firms that had been booming since the 1950s, and such bureaucracies reigned supreme...
throughout the 1970s. Conflicts of interest dividing investors in the US capital market and empire-building salaried managers who abused the perquisites first incited the increase of monitoring and control responses within US corporations, and further increased agency costs, while decreasing the latitude or breadth of decision-making (and possibly the depth of innovation) throughout the 1980s within large US firms.

The framework developed by Jensen and Meckling in 1976, which addressed agency costs in varying ownership structures, proved that agents or managers who were not also owners or entrepreneurs attracted the greatest monitoring costs. Consequently, the partial ownership of firms by managers would effectively represent an alignment of incentives and lead to a reduction in agency costs. Furthermore, such a reduction in agency costs would enable the growth of the firm and benefit all investors: equity-holding entrepreneurs and debt-holding lenders. Jensen and Meckling’s impersonal Coasian rationale and approach to the principal-agent dilemma was built upon a theory of the firm grounded on property rights enforced through legal contracts, reinforcing a string of literature rooted in Coase and identified with Alchian and Demsetz (1972).

Jensen and Meckling famously defined the firm as:

…simply one form of legal fiction which serves as a nexus for contracting relationships and which is also characterized by the existence of divisible residual claims on the assets and cash flows of the organization which can generally be sold without permission of the other contracting individuals.
And furthermore that:

…[t]here is in a very real sense [sic] only a multitude of complex relationships (i.e., contracts) between the legal fiction (the firm) and the owners of labor, material and capital inputs, and the consumers of output.

As such, these complex relationships and bundle of contracts would be constantly subject to conflict, and the equilibrium that could be reached within the firm (between capital owners and agents, and between both of the aforementioned and labour) would depend upon the alignment of incentives. That alignment followed this 1970s string of literature and materialized primarily through the proliferation of employee stock ownership programmes in the 1980s and 1990s until now, as well as through the increased use of variable and equity-based compensation and the like, particularly benefiting managers with critical decision-making power.\textsuperscript{104} The more equity incentives they received, the greater their relevance as risk-taking or entrepreneurial agents.\textsuperscript{105} Such equity-holding managers with decision-making powers would be more than true agents in the Coasian and Knightian sense, but would ultimately be one and the same as each individual investor-entrepreneur owning the firm.

Arguably, given the timeframe within which such theories evolved, and while US firms gradually adopted equity-based compensation more and more predominantly, it is likely that US transfer pricing regulations which served as the foundation for the OECD Guidelines maintained a view that agency would represent merely a cost to be mitigated within a firm; the issue of equity-based compensation would only affect the taxation of individual managers and not correlate in any manner with the creation of value within firms. That is, management would not be a value-creating function and, hence, its costs of whatever nature would not attract a significant share of returns. Instead contractual rights, property and capital would attract the lion’s share of corporate income. Again, the matter to be addressed is how international tax law weighs different factors that contribute to the production of income (i.e. labour, property and capital) and it is rather clear that the contribution of labour was historically seen as relatively limited, a situation which began to evolve with the development of the AOA approach to APPE\textsuperscript{106} and has now developed even further in the value creation theory that is promoted under BEPS.\textsuperscript{107}

The Jensen-Meckling (1976) and Alchian-Demsetz (1972) views of the firm, however, appear to have influenced the seemingly exacerbated regard for contractual law under US transfer pricing regulations of 1968 and 1994, in which the 1979 and 1995 OECD Guidelines are grounded. This is a formalistic view of the firm which \textit{limits} the interpretation of article 9, and which may have survived the BEPS Project.\textsuperscript{108}

This legalistic view of MNEs was further emphasized by the property rights theory of the firm that was particularly influential in the early 1990s, contributing to the entrenchment of transfer pricing in a realm of intra-group contractual law. The theory developed by Hart (1989)\textsuperscript{109} identifies the shortcomings of several prior theories (i.e. neoclassical, principal-agent, Coase’s transactional cost economics) and posits a property rights theory of the

\begin{enumerate}
\item Other employees with less risk-taking latitude would also benefit from such alignment of incentives albeit with less intensity. \textit{See} Jensen & Meckling, \textit{supra} n. 30 and n. 66.
\item See Kane, \textit{supra} n. 20 and Jensen & Meckling, \textit{supra} n. 30 and n. 66.
\item See OECD, \textit{supra} n. 63.
\item See Tavares & Owens, \textit{supra} n. 17.
\item Id.
\item See Hart, \textit{supra} n. 11.
\end{enumerate}
firm. Hart cites several seemingly viable market-alternative transactions which are, nonetheless, conducted intra-firm and explains such situations by arguing that “ownership of an asset goes together with the possession of residual rights of control over that asset; the owner has the right to use the asset in any way not inconsistent with a prior contract, customs, or any law.” Consequently, the rights of the firm’s owners would define the firm itself. Hart’s defence of the property rights theory and his emphasis on capital assets is consistent with views on transaction costs and asset specificity and is also consistent with the agency cost theory. But while Hart limits the definition of the property in question to “nonhuman assets”, he includes items in his listing of assets that can only be created or sustained through human endeavour “client lists, patents, copyrights, and the rights and obligations embodied in outstanding contracts to the extent these are also transferred with ownership.”

Numerous views expressed in the interpretation of article 9 and the ALP under US regulations, as well as under the OECD Guidelines, appear to be significantly influenced by this property rights theory of the firm. It should remain clear, however, that all such regulations as well as the Guidelines are not the law itself; they are only highly influential interpretations of domestic or international law. Jurisprudence and court rulings that have reproduced such an interpretation can therefore evolve and reform this understanding, should it be necessary to establish the rule of law. More desirable still is that such regulations and interpretative

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110. See Hart, supra n. 11, at pp. 1757-1763. Hart cites several seemingly viable market-alternative transactions to ascertain that:

all [theories] discussed so far suffer from the same weakness: while they throw light on the nature of the contractual failure, none explain in a convincing manner how bringing a transaction into the firm mitigates this failure.

And yet, citing Jensen & Meckling, he states that:

[...]

111. Id., at p. 1765.

112. The owners, nonetheless, are the (individual) shareholders, the investors who ultimately bear the entrepreneurial risk of the firm and who control its assets.

113. As noted by Demsetz, supra n. 11, at pp. 149-150, “Klein, Crawford, and Alchian, Riordan and Williamson, and Williamson adopt the view that asset specificity … raises the prospect for opportunism. This heightened prospect is presumed to raise the cost of transacting” and at p. 152, “Thus, Klein, Crawford, and Alchian (and Riordan and Williamson also) lean toward a position in which firm-like production, through vertical integration, reduces the severity of opportunism in the presence of asset specificity.”

See also O.E. Williamson, The Economic Institutions of Capitalism – Firms, Markets, Relational Contracting (Free Press 1985).

114. Interestingly enough, even though Hart’s proposition is to exclude “human assets”, his inclusion of assets which can only result from human ingenuity, approximates his relatively narrow and legalistic definition to a much broader category of assets, i.e. knowledge-based capital. And although not all assets included in the broader KBC definition can be separately transferred and conserved, the ownership of a conjunction of KBC assets (whether or not embodied within a firm) can be transferred through a myriad of transactions including corporate reorganizations. A unifying theory would, therefore, need to incorporate a broader view that includes the human contribution to the identity, growth and boundaries of the firm, overcoming the analysis of moral hazard and emphasizing the role of agents as value-creators within a firm.
guidelines continue to evolve post-BEPS seeking coherence in the application of the ALP among associated enterprises and permanent establishments, and in the recognition of permanent establishments with due regard to the interdependence of entities that operate under a vertically integrated GVC within a multinational firm.

6. The International Tax System Post-BEPS: Unitary Taxation of GVCs under the ALP

6.1. Information and knowledge-based approaches to the theory of the firm

The system of international tax law that was created in the early 20th century was influenced (and justified) by the theories of the firm of the early 20th century as discussed in sections 1. and 2., with significant aspects framed by neoclassical economic thought. The later theories of the 1970s and 1980s built upon such mainstream views of the firm, emphasizing legal contracts and property rights. Such views of the firm seem to have influenced international taxation particularly in the design of the dependent agency rule of article 5(5) of the OECD Model, and the interpretation of articles 5 and 9 – with their most significant ramifications being the terms and underlying rationale of the OECD Guidelines.\(^{115}\) Agency (management) remained primarily viewed only through the lenses of moral hazard considerations or transactional costs, supporting the general view that management services would be priced at market value at the payroll cost of managers or with a modest markup, without a substantial attribution of corporate profits.\(^{116}\) Such profits are deemed to be produced primarily by other factors or sources (i.e. specific assets, capital and contractual rights) – except under the AOA/APPE developed from 2001 through 2008-2010, wherein significant people functions (SPF) or key entrepreneurial risk-taking functions (KERT) would govern the intra-group allocation of risks and capital (the AOA/APPE devises a method to reallocate intra-firm risks and capital and to regard intra-firm dealings as determinative to the allocation of profits).\(^{117}\)

Furthermore, the approximation of agents and entrepreneurs and the joint operation of management across borders, which is effected through the alignment of incentives via ownership,\(^{118}\) is a phenomenon that was not addressed in the understanding of the multinational firm under the principles of international tax law,\(^{119}\) and thus not captured in the permanent establishment provisions of article 5 or the taxation of associated enterprises under article 9 of the treaties.

Contrary to the general approach of the OECD Guidelines pre-BEPS and yet consistent with the ALP, the AOA/APPE rule of article 7(2) of the OECD Model (2010) seems to be more aligned with modern theories and views of the firm that have flourished since the mid-1990s, emphasizing the value of information, structural uncertainty and KBC through its use of SPF and KERT functions to allocate intra-group risks and capital. In fact, the value creation approach promoted under BEPS (e.g. the modified nexus approach to tax competition, the...

\(^{115}\) See Wittendorff, supra n. 23. Originally published in a 1979 Report, the OECD Transfer Pricing Guidelines were approved by the OECD Council only in 1995, with minor updates in 2008 and 2009 and with a significant update in 2010. In light of the G20/OECD BEPS Project, substantial revisions to the OECD Guidelines should be proposed in 2016.

\(^{116}\) See supra n. 71 and supra n. 79.

\(^{117}\) See OECD, supra n. 63; Dziurdz, supra n. 94; see also Tavares & Owens, supra n. 17.

\(^{118}\) See OECD, supra n. 30.

\(^{119}\) A proper analysis of this phenomenon might serve also to address residence definitions under art. 4 under the place of effective management (POEM) approach. This standard is often rendered useless. However, if an economic (FAAR) analysis is produced under art. 9 (mapping a firm’s entire value chain) or under art. 7 (personal business functions or key entrepreneurial risk-taking functions) it is possible that even the residence of firms could be reassessed through a coherent approach which considers firm theory.
activity exception to the LOB clause, the DEMPE approach in transfer pricing)\textsuperscript{120} seems to approximate article 9 to article 7(2) and thus to have captured the same knowledge-based views of the firm.

Knowledge-based contributions to the theory of the firm can be traced back to Penrose’s 1959 “The Theory of the Growth of the Firm”,\textsuperscript{121} which would only be the object of rigorous theoretical and empirical studies after the mid-1990s (hence, after the 1979 and 1995 OECD Guidelines were designed), studies that have intensified since the mid-2000s.\textsuperscript{122} These modern theories have significantly expanded the study and understanding of multinational enterprises.\textsuperscript{123} In her seminal work, Penrose did not attempt to suggest a complete theory of the firm to explain why firms exist or what their boundaries are; instead, she focused on what endogenous or intrinsic factors differentiate firms and can explain their growth. The scientific findings that build upon this theory would be extremely relevant for the purposes of the design and interpretation of the ALP in transfer pricing, for the continuing development of the OECD Guidelines.

The “theory of the growth of firms” posits that the access to and use of information through management decision-making is what makes a difference and creates value. Not unlike the negative effect from moral hazard or shirking (which can lead to a firm’s demise), a positive effect from human ingenuity in decision-making can spur growth. This is strikingly consistent with the general direction used not only in the AOA/APPE of article 7(2) of the OECD Model, but also in the BEPS value creation approach. Alchian and Demsetz (1972)\textsuperscript{124} and Demsetz (1988)\textsuperscript{125} incorporated Penrose’s views on the “use of information” and placed emphasis on the market failure of information asymmetry and on the transactional cost of

\begin{equation}
\text{\textsuperscript{120}} \text{See Tavares, supra n. 42; OECD, supra n. 69; and Sheppard in Tavares & Bogenschneider, supra n. 71. See also OECD, Countering Harmful Tax Practices More Effectively, Taking into Account Transparency and Substance, Action 5 – 2015 Final Report, OECD/G20 Base Erosion and Profit Shifting Project (OECD 2015).}
\end{equation}

\begin{equation}
\text{\textsuperscript{121}} \text{E.T. Penrose, The Theory of the Growth of the Firm (Oxford University Press 1959, 1995). Being in the field of organizational theory and not rooting her reasoning in prevailing economics, for many years Penrose’s contribution was not deemed to add to the theory of the firm as such, or to the field of economics. This has changed significantly since the 1990s and particularly in the digital economy. The theory of the growth of firms is uniquely useful in analyzing the functioning and growth of firms in the digital age.}
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[w]hat is common to all knowledge-based contributions to the theory of the firm that are explicitly influenced by organizational theory is that they reject the pure contractual interpretation of the nature of the firm. Some of these contributions argue that the essential thing about the firm is not only its ‘contractualness,’ but just as much its function as a repository of distinct productive (technological and organizational) knowledge, and as an entity that can learn – and grow – on the basis of this knowledge (Dosi et al. 1992). Such knowledge stocks are associated with differential efficiencies, and are accumulated in a path-dependent way. Thus they not only help explain why some firms realize competitive advantage while other firms do not, they also help in addressing issues relating to diversification and innovation. In this view of the firm, it is Edith Penrose’s 1959 classic, ‘The Theory of the Growth of the Firm,’ just as much as Coase’s, ‘The Nature of the Firm’ that defines the proper lenses through which firm activity should be perceived. Key words are here ‘capabilities’, ‘competencies’, ‘learning’, ‘social knowledge’, and ‘tacit knowledge’, indicating the huge epistemic content in these theories.
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\text{\textsuperscript{123}} \text{See Krug & Daniels and Hitt & Cheng, supra n. 19.}
\end{equation}

\begin{equation}
\text{\textsuperscript{124}} \text{See Alchian & Demsetz, supra n. 104.}
\end{equation}

\begin{equation}
\text{\textsuperscript{125}} \text{See Demsetz, supra n. 11, at p. 159. Demsetz differentiated common knowledge (particularly of language and arithmetic) from specialized knowledge. He emphasized that:}
\end{equation}

\begin{equation}
[t]here must be a low-cost method of communicating between specialists and the large number of persons who either are non-specialists or who are specialists in other fields. Since this communication cannot consist of extensive education in this knowledge without losing the gains from specialized learning,
obtaining and sharing knowledge. They identified that productivity gains achieved individually or achieved separately within each factor or function of production would be inferior to productivity gains achieved jointly within a centrally managed firm-like organization. Firms would be repositories of valuable knowledge. Furthermore, “[k]nowledge about the objectives and organization of the firm is learned ‘cheaply’ through continuing association.”

This feature of the firm would be more defining of its nature than a mere expression of a routine function – the meaning and worth of an assembled workforce can be distinguished using Demsetz’s differentiation of knowledge categories (e.g. human capital within the labour factor). The economic competence of producing, retaining and sharing specialized knowledge would extend far beyond scientific or product-specific applications – much like what is nowadays referred to as KBC; it would encompass all aspects of the enterprise, including the management of uncertainty and the taking of entrepreneurial risk. It was not until the 1990s, however, that the theory of the growth of firms gained a life of its own in academia, which continues to evolve to this day.

A unified knowledge-based approach, which builds upon Knightian and Coasian theories of the firm and incorporates elements of the agency theory, seems to substantiate the “state of the art” in the understanding of multinational firms. These theories, which have begun to surface in the latest technical work of the OECD (particularly in the value creation approach of the BEPS Project) should be further used to readdress with greater depth not only the interpretation of the ALP under article 9, but also the interpretation of permanent establishments under article 5(1) and 5(5), and to continuously enhance the AOA/APPE whilst also seeking coherence and consistency between the standards applicable under article 9, and those applicable under article 7.

6.2. Unitary taxation and the ALP

As noted in sections 4. and 5., critics of the inherent flaws of the ALP often defend the unitary taxation of multinational firms and the abandonment of the ALP in favour of global formulary apportionment (GFA). GFA, however, is not inherent to unitary taxation, and even some of the most vocal proponents of formulary apportionment would tend to seek a

and since the bare facts contained in this knowledge are often uninterpretable, much communication must consist in the giving of directions. These directions may pertain to product use or to work activity.


127. See Krug & Daniels and Hitt & Cheng, *supra* n. 19.

128. See, for example, Langlois, *supra* n. 11; see also Teece et al., *supra* n. 123. Substantial literature on the knowledge-based approach attempts to unify traditional Coasian theory and “denies … that perspectives on the firm that emphasize this knowledge-bearing nature unassisted by Coasian / contractual insights can say anything substantial about the existence, boundaries, and internal organization of the firm.” See also Foss, *supra* n. 10, citing B. Kogut & U. Zaner, *Knowledge of the Firm, Combinative Capabilities and the Replication of Technology,* 3 Organizational Science 3, pp. 383-397, and K. Conner, *A Historical Comparison of Resource-Based Theory and Five Schools of Thought Within Industrial Organization Economics: Do We Have a New Theory of the Firm?*, 17 Journal of Management 1, pp. 121-154. Foss specifically disputed a line of research which supported an autonomous knowledge-based theory of the firm, which would deny or supersede the contractual, property rights and transactional cost theories.

129. See Jensen & Meckling, *supra* n. 30.

130. See Wittendorff, *supra* n. 51 and Kleinbard, *supra* n. 72.

131. See, for example, Avi-Yonah, *supra* n. 6; Brauner, *supra* n. 6; Avi-Yonah & Benshalom, *supra* n. 8; Avi-Yonah & Tinhaga, *supra* n. 8; Picciotto, *supra* n. 9; Durst, *supra* n. 9; see also S. Picciotto, *Towards Unitary Taxation of Transnational Corporations,* Tax Justice Network (2012).
middle ground with the OECD Guidelines through the application of a profit split method with a sales-based formula. The view that unitary taxation and GFA cannot be dissociated from one another seems to be influenced by the formulary apportionment rules historically adopted by US States; this experience has also led the European Union to consider a unitary method in its formulation of a common consolidated corporate tax base (CCCTB).

It seems to be quite clear, however, that unitary taxation can be operated through the ALP. The construct of the AOA/APPE of article 7(2) of the OECD Model and its coherence with the ALP which is embedded in article 9, for example, confirms this understanding. Similarly, the application of domestic transfer pricing regulations to cross-border transactions involving partnerships or branches can also occur in the midst of an economic study (functional and factual analysis or FAAR) and broader value chain analysis under the ALP. In fact, the application of a residual profit split method (RPSM) can also effectively deem separate enterprises which make “unique and valuable contributions” to the same value chain to jointly earn and share returns comparable with what would arise in an arm’s length partnership. This RPSM approach does not require or imply in a pre-established formulary consideration using the sales factor as a proxy or legal fiction, or any other general rule; instead, RPSM allocations can be derived under the ALP of article 9. Therefore, unitary taxation can effectively result from the recognition of a permanent establishment under article 5 of the OECD and UN Models without conflicting with article 9.

The application of a unitary method should not, therefore, hinge only upon the legal instrument of corporate control. Tax law should be applied with greater regard for the relevant economic facts underlying such legal instruments, be them intra-group contracts under commercial law or be them contracts and legal forms under corporate law. Ignoring article 5(7), as suggested by the more radical proponents of MNE-wide unitary taxation, would be

135. See Dziurdz, supra n. 94.
136. It is conceivable that an MNE-controlled GVC is a quasi-entity equivalent to a cross-border “partnership” with multiple permanent establishments at the fixed place of business of each “partner”.
137. See Tavares & Owens, supra n. 17.
138. See OECD Guidelines, supra n. 3, at para. 2.109 et seq.
139. See Avi-Yonah & Tinhaga, supra n. 7.
incoherent with firm theory, with the object and purpose of article 5, and with the international law system established through the overall allocation rules of the treaties.

Whether the FSLE approach of the ALP is operable in the context of a unitary firm with permanent establishments in multiple countries within the boundaries of an MNE-controlled GVC is a question that can be answered not only through the (still relatively) limited experience of the few countries that adopted the AOA/APPE, but also through the experience of countries with the RPSM, particularly in the context of bilateral of multilateral APAs. The use of RPSM in APAs also serves to demonstrate that a general formulary method does not necessarily have to be developed in order to achieve fair and equitable results. It would be reasonable to expect that a firm-specific application of the ALP to a unitary business, through an in-depth value chain analysis developed multilaterally, would produce less distortionary results than any other alternative allocation of international taxing rights.

7. Conclusion

Vogel ascertained with great wisdom that source “is no ‘a priori’ concept”. The debate over the international allocation of taxing rights is therefore misguided. There seems to be an ongoing trend to treat sales and source as one and the same, whilst Vogel would defend that sales are a measure of trade while source must always be ascertained as an income production function. The relative weight of the value-creating capacity of each income-producing factor (i.e. property, labour, capital) of a function remains elusive. The source of income in the context of MNE-controlled, vertically integrated GVCs should be recognized in multiple jurisdictions wherein such GVCs operate, in proportion to the economic functions performed globally within such value chains, with no pre-established preponderance of the countries where sales to consumers ultimately take place.

It is reasonable to conclude through the purposeful interpretation of article 5(1) of the OECD and UN Models, that permanent establishments should be more frequently ascertained in the context of MNE-controlled vertically integrated GVCs, while this assertion would not be contrary to the object and purpose of the rule of article 5(7). This would be equivalent to a modular adoption of unitary taxation for the taxation of GVCs as “relevant business activity” jointly carried on by commonly controlled permanent establishments and associated enterprises. The allocation of profits would be ascertained through an enhanced version of the AOA/APPE of article 7(2) and/or through a more sophisticated and coherent application of the RPSM under article 9.

The historical context in which such rules were created concerning the functioning of MNEs has led to their design in a manner that would be coherent with an economic view of such firms. Restoring that coherence once again would, therefore, represent a proper approach to the purposeful interpretation of these norms. As such, joint managerial activity and high integration of operational risks to the high degree of interdependence that is observed in MNE-controlled GVCs should delineate the “carrying on of a business” or an “enterprise” under article 3(1)(c); these are factual considerations that should be determinative of the existence of permanent establishments under article 5(1).

140. See OECD Guidelines, supra n. 3, at para. 4.132 et seq.
141. Vogel, supra n. 23, at p. 217.
142. This view would be supported by Schön & Kane, supra n. 1, among others. See also S.I. Langbein, U.S. Transfer Pricing and the Outsourcing Problem, 106 Tax Notes International 11, pp. 1.065-1.092 (2005).
The application of a unitary method should not, however, hinge only upon the legal instrument of corporate control. Tax law should be applied with greater regard for the relevant economic facts underlying such a legal instrument, and yet consider control as a relevant circumstance. Unitary taxable firms within MNEs would therefore be recognized and conform to the relevant business activities conducted within interdependent GVCs. Finally, such a unitary taxation result can, and should, be operated through the ALP, be it under article 7(2) or under article 9 of the OECD Model.

In the absence of a definitive general answer to the question of what income-producing factors should carry greater relative weight, the structure of existing allocation rules and factual and functional analyses embedded in the international tax legal system cannot be prima facie discarded. Source countries are still allocated the primary taxing rights over business profits under articles 5 and 7, while capital-exporting countries remain entitled to tax all residual profits. Firm theories that demonstrate how multinationals were organized when the present allocation system was created in the early 20th century can help elucidate the objective and purpose of such allocation rules. Accordingly, modern firm theories that demonstrate how multinationals function in the digital age can be instrumental, both for the purposeful interpretation and enhanced enforcement of existing treaty rules, as well as for the continuing development of the law within an appropriate, coherent and well-informed tax policy framework.