

# Multinational enterprises, value creation and taxation

## Key issues and policy developments

### SUMMARY

The substantial reduction in trade costs and the rapid technological advances characterising the global economy over the past three decades have allowed multinational enterprises (MNEs) to increasingly break up their supply chains and spread them across different countries. The principal implication of this change relates to the concept of value added and the way it is created and captured across MNE-controlled global value chains (GVCs). The dynamic nature of transfers within MNEs, the increasing role of services and intangible assets in manufacturing, and most critically the unfolding digital revolution have all intensified the mobility of value-generating factors within GVCs, and highlighted the difficulty of defining the exact location where value is generated.

These developments have significant policy implications. One critical area is that of tax policy, where the challenges posed by the new economic landscape are numerous and multifaceted. On the one hand, governments seek to encourage trade and investment by MNEs by removing tax and regulatory barriers they face. Some governments go even further by resorting to harmful tax competition that drives corporate income taxes to the bottom. At the same time, many MNEs continue to employ enhanced tax arbitrage to minimise their tax obligations across jurisdictions; furthermore, business models are increasingly becoming borderless and highly mobile, and therefore difficult to tax. In view of these challenges, consensus is gradually emerging that tax systems need improved alignment to ensure that profits are taxed where the economic activities generating them are performed and where value is created. Yet, allocating jurisdiction to tax business profits in the context of MNE-controlled GVCs remains a highly complex process.



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## The issue

Multinational enterprises ([MNEs](#)) are corporations that own or control facilities and assets in more than one country for the purpose of producing goods or delivering services globally. The way MNEs operate and develop their respective production networks across borders has gone through considerable transformation over the past three decades. More specifically, by capitalising on the gradual lowering of trade costs and tariff barriers, as well as on technological progress, MNEs have significantly expanded their capacity to break up their respective supply chains and to disperse them across borders. Consequently, since the 1990s, value chains have become increasingly [globalised](#) and fragmented, with specialisation reaching task and business function levels.<sup>1</sup>

These developments have resulted in an increasingly interconnected and interdependent global economy, and triggered challenges in a number of policy areas beyond national borders. One critical area relates to tax policy and its role in addressing the ongoing internationalisation of production for goods and services. Tax can be a key determinant for choosing a company's [investment location](#). Therefore, the challenges for taxation in the context of global value chains are numerous and multifaceted. On the one hand, countries are seeking to identify and address potential tax and regulatory barriers to trade and investment in order to facilitate their integration in the global economy. This has led to a proliferation of trade and investment agreements and to an expansion of the related tax-treaty networks. However, it has also led many countries to engage in harmful tax competition in order to attract investment, income-generating assets and jobs, with questionable consequences for public finances and long-term growth.

On the other hand, the exponential increase in cross-border transactions has allowed MNEs to shift profits between jurisdictions in order to minimise their tax obligations. The scope for such aggressive tax planning and tax avoidance opportunities has been broadened even further by the expansion of digitalisation and the increasing role of services and intangible assets in value-added trade. Digital transformation has not only resulted in new business models with an obscure physical presence, but has also disrupted traditional production networks and methods. Meanwhile, tax systems worldwide remain deeply rooted in a '[bricks and mortar](#)' view of the world, which undermines their ability to address these new borderless and highly mobile models of economic activity. Digitalisation has highlighted the difficulty of defining the location where value is created, and the consequent complexities involved in taxing the activities that create such value.

These new challenges have prompted the rethinking of tax policy at a global level, which has required greater coordination and cooperation among countries.

## Drivers, trends and developments in GVCs

### MNEs and the emergence of GVCs

Production processes across the world have become increasingly [fragmented](#) as a result of the unbundling of tasks and functions and their sourcing from different geographical locations. Goods and services are increasingly being produced in separate stages, and production is located in different countries. Assembly of different parts takes place either sequentially along the supply chain or in a final location.

The consequent growth of trade through GVCs has rendered economies increasingly interdependent, thereby making international trade relationships more complex and intertwined than before. Most critically, GVCs have led to a [growing specialisation](#) of specific activities along the value chain, rather than of entire industries. The main effect of this development has been the emergence of higher value-adding activities at several different stages and locations, which has propelled, in particular, international trade in intermediate inputs. Today, [about two-thirds](#) of global trade involves intermediate goods that cross borders during production. At the same time, roughly

a quarter of a country's total export content is imported from abroad rather than produced domestically.

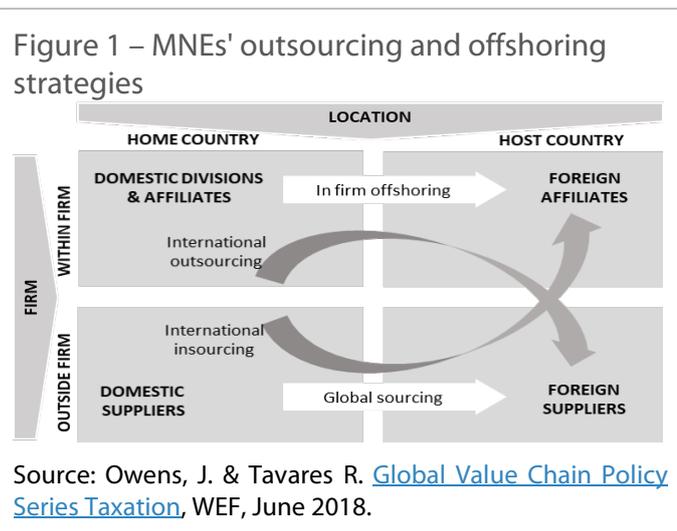
Large MNEs have been a [major driver](#) of growth for GVCs. In seeking to expand their operations, MNEs undertake foreign direct investments (FDI) and establish subsidiary production facilities in different countries. Theories on MNEs generally distinguish between [horizontal and vertical MNEs](#). The first move their production plants to other countries to be closer to their final or intermediate consumers. Proximity to markets minimises trade costs and thereby allows MNEs to realise economies of scale by producing in multiple locations. Such MNEs can be considered as being predominately market-seeking in their internationalisation efforts. By contrast, vertical MNEs are primarily efficiency-seeking in their strategies. They break up production into different stages and seek to transfer it to different locations based on cost considerations. In this context, outputs from production in one country serve as inputs for production in other countries. The location of the different stages of production depends primarily on the cost of the various factors of production that are used during these stages more intensively. Vertical MNEs have been critical in driving GVCs over the past few decades, facilitated by the decreasing transaction and coordination costs of producing across borders.

## MNEs as a network of affiliates and suppliers

Recent [research](#) indicates that MNEs have evolved beyond the horizontal–vertical dichotomy, and become a hybrid version of both categories. Indeed, MNEs are driven by both market and cost considerations, but also by considerations involving access to knowledge and technologies, as well as financial and tax legislation. They thereby engage in horizontal *and* vertical investments that have different implications with regard to how value is created, added and distributed across respective supply chains.

Moreover, [evidence](#) suggests that MNEs are increasingly extending their networks beyond their strict affiliates, by concluding contracts with independent partners for contract manufacturing, franchising and licensing. Other [studies](#) have further argued that MNEs use their affiliates less for sourcing inputs and more for facilitating intra-firm transfers of intangible inputs. The key goal pursued in establishing affiliates therefore is not to fragment production within a vertically integrated structure, but to enable the sharing of intangible inputs, and thereby to give affiliates a role in the creation of value alongside the parent company.

Today, [MNEs increasingly function](#) as networks within the international production networks of GVCs. This offers them flexibility both strategically and operationally. Pure intra-firm networks allow headquarters and affiliates located in different countries to exchange goods, services, capital and staff as well as knowledge across national borders. In this context, while some affiliates will be involved in production, others will be more involved in innovation and R&D, financial and tax operations or support activities. Independent partners and suppliers both at home and in the host countries will complement the network. Figure 1 illustrates the range of strategies available to MNEs in the outsourcing and offshoring of inputs and activities.



This evolving nature of multinationals has a strong effect on value added. Both the generation and [capture](#) of value across MNE-controlled GVCs has become more complex to map and more difficult to localise.

## GVCs, servicification and digitalisation

The production and trade of goods and services, both globally and in the EU, are undergoing radical transformation. Services are assuming an increasingly bigger role in production. Manufacturing firms not only [buy and produce](#) more services than before, but also sell and export more services as integrated activities. These services constitute an ever-growing share of the value added in a product's supply chain, estimated at [37 %](#) in certain OECD countries.

Services are incorporated in manufacturing either as inputs (such as marketing, design, distribution or after-sales care embedded in the value of a good), or as enablers of trade (such as e-commerce platforms and logistics services). This process of '[servicification](#)' suggests that upstream activities, such as R&D and

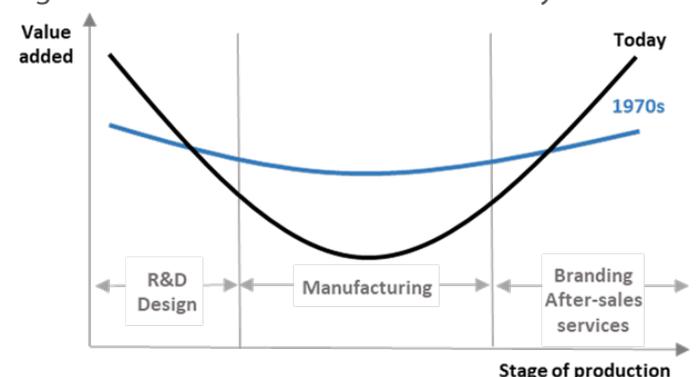
product design, together with downstream activities, such as branding and advertising, are acquiring an increasing share of the value added, while activities involving the intermediate production of components and their final assembly are seeing their share shrink (Figure 2). It also implies that high-value-adding activities are becoming more mobile, as the locus of services production can move more easily across frontiers. It therefore puts the premium on [trade in services](#).

At the same time, digitalisation is resulting in the development of new economic models. Companies offering digital services hold primarily [intangible assets](#) such as brand recognition, reputation and intellectual property, but also software and algorithms. Such characteristics minimise the need for firms or individuals to be physically present in the country where a service is provided, or to have a fixed geographical location. Intangible assets can be located anywhere, which enhances mobility and renders different types of activities more difficult to physically locate.

Innovative digital technologies, such as big data and the internet of things, are expanding mobility in traditional sectors (including automotive, pharmaceuticals, aerospace and even mining) as well, and are generating new paradigms in the context of value creation. This is particularly true for [digital manufacturing](#). With the enhancement of computing power, ensuing capabilities have allowed to physically decouple research from engineering and engineering from manufacturing. As emphasised by the World Economic Forum, this [decoupling](#) effectively means that research can be conducted in one place, engineering in another, and manufacturing in a third, with suppliers collaborating in different processes, all in different global locations, and with all participants linked by digital technology infrastructure.<sup>2</sup>

These considerations have significant policy implications, especially with regard to the taxation of international production networks. On the one hand, servicification enhances mobility by placing greater emphasis on intangible value creation (design, branding,

Figure 2 – Production in the 21st century



Source: Adapted from WIPO, [World Intellectual Property Report 2017: Intangible capital in global value chains](#), 2017.

### Global innovation networks and GVCs

Firms' innovation activities are becoming increasingly internationalised. After having offshored their production, MNEs have also started to offshore their R&D. In the beginning, R&D investments abroad were mainly aimed at adapting products and processes to local market demands. However, as emphasised by OECD research, such investments have recently been used to tap into foreign knowledge, technology and human capital, and to leverage the innovation activities that remain concentrated in the R&D headquarters at home.

Source: De Backer, K. et al., [The links between global value chains and global innovation networks](#), OECD, April 2017.

advertising, after-sales support), but by and large does not disrupt the allocation of income to its source. On the other hand, digitalisation has shown how difficult it is to define the geography of where value is generated. It has also highlighted the challenge to identify the source of the value.

## Taxation of MNE-controlled GVCs

### Taxing rights and the emergence of value creation

The foregoing discussion drew attention to the complex strategies MNEs employ through their cross-border operations to cut their costs and improve their efficiency. Central in this effort is the notion of value creation across tasks, functions and geographies, and how it relates to profits and consequent tax obligations.

[Value creation](#) is a fairly new concept in international tax law. [Traditionally](#), the doctrine of economic allegiance was used as the basis for the design of the international tax framework and as the main principle for the allocation of taxing rights between jurisdictions.<sup>3</sup> Economic allegiance [prescribed](#) that the jurisdiction to tax should be distributed depending on where the true economic interests of the individual (nexus) are found. On the basis of this understanding, the concept of permanent establishment was employed to determine the extent of taxing rights by states other than the resident state.<sup>4</sup> In turn, the concept of permanent establishment became the foundation on which the [criteria](#) for source taxation of business profits were designed at the international level. This involved the [rules that determine](#) the jurisdiction to tax a non-resident enterprise (nexus) and the rules that determine the relevant share of the profit to be taxed (profit allocation). Where the [production chain](#) was split, international agreements prescribed methods to ensure that the transfer prices applied between two companies of the same corporate structure are no different than where the two companies involved are independent of each other ([arm's length principle](#)).

Given the above, the locus of income-sourcing in the context of international taxation has traditionally been the location where production takes place. In other words, [emphasis has been placed](#) on the supply side. However, recent developments driven by the digital transformation of production have challenged this approach, placing greater emphasis on the demand side and the role of the consumer in localising economic activity. Highlighting the role of demand has most critically brought the notion of value creation forward, and pointed to the need for [aligning](#) it with international tax rules.

[OECD](#) analysis distinguishes between three sets of value creation: value chain, value network and value shop. **Value chain** relates more to traditional business models where value is created along a linear production process, on the basis of which inputs are converted into outputs through discrete but related sequential activities. This includes vertically integrated manufacturing, for example, automotive, consumer and electronic goods, as well as heavy industrial goods including steel and aluminium. Value chain models are also applied by less traditional businesses, including services-oriented manufacturers such as software developers, audiovisual service providers and resellers.

**Value networks** reflect the transition from the mass production of goods that characterised much of the 20th century, to the mass production of services typical for the 21st century. They rely on a mediating technology or platform, which links end-users or customers with each other and facilitates their relationships. The critical determinant of value to any user are the other users with whom they are connected via a network. Value creation may occur through the direct links that are established between users (e.g. friend request) or the indirect links between customers (e.g. a bank can make a loan by virtue of the aggregate deposits made by customers). In such models, revenue is generated through a range of channels. One could be subscription or pay-as-you-go fees. However, income can also be generated indirectly through users. Targeted advertising can leverage user information, with its value expanding the more users there are in the network.

Finally, in the case of **value shops**, value is created by resolving a customer problem or demand with the use of an intensive technology. Problems are usually characterised by information

asymmetry, in that the shop has more information than its customers. [Examples](#) include business consulting, specialised data analysis, software development or cloud computing, as well as laboratory technology used in university research to conduct experiments.

## Taxing of value where it is created: Old and new challenges

In view of the evolving nature of MNE-controlled GVCs and the changes in the generation and localisation of value across production networks, the international community is converging towards better alignment of [tax systems](#) to ensure that profits are taxed where economic activities generating the profits are performed and where value is created. Notwithstanding the clarity and straightforwardness of this principle, the process of allocating jurisdiction to tax business profits in the context of MNE-controlled GVCs and human capital deployment within cross-border production networks is a highly complex one. A number of [challenges](#) continue to confront this process, from incoherence in the understanding of the notion of an enterprise under international tax law, to differing interpretations of the rules governing permanent establishment and transfer pricing, which were developed at a time when value chains were less elusive and considerably less complex.

A first critical area relates to the bridging of taxing rights with the localisation of value. This problem is not a new one in international taxation, yet a number of new challenges reinforce the existing ones. Today, MNEs are in a position to increasingly leverage on intra-group transactions and on the financial structure of their group to minimise tax obligations. In this context, MNEs seek to maximise efficiency by [structuring their operations](#) so as to localise profits in lower-tax jurisdictions. Whilst the problem is a long-standing one, it has become amplified by the increased fragmentation of functions and tasks along GVCs in recent decades. In addition, the process of servicification has also been critical in magnifying the complexity of the problem. Immaterial and knowledge-based assets that are increasingly being embedded in manufacturing can facilitate the faster and cost-effective (de)localisation of value.

Worldwide, tax authorities have also been facing greater challenges. Tax systems have been slow in developing detection, analysis and enforcement capacities to adapt to changes at the global level, adhering instead to their deeply rooted 'bricks and mortar' view of the world.

To protect their tax bases, many countries have reacted unilaterally, driving their tax rates down to encourage MNEs to integrate them into their network. While the focus of such competition is primarily on corporate income tax, it may also relate to production-related and other indirect taxes. At the same time, countries' integration into GVCs may include a significant presence of investments by MNEs or MNE-owned production node networks. It may also involve artificial localisation of MNEs' mobile assets purely for tax purposes. Integration of a local industry into a global value chain can only be beneficial for a country if it ensures real value capture and value localisation capable of generating jobs and local income. When this is not the case, the result is simply forgone tax revenue, which will have to be [made up](#) for through higher taxes on the rest of the economy. Besides, other policies, such as those aimed at improving the quality and functioning of institutions and markets may also be critical for companies and may get chosen by countries as a tool to attract investment, as recent [research](#) has shown.

A further critical area relates to the emerging economic model of [scale without local mass](#). According to the [OECD](#), this is a key characteristic of highly digitalised business models, which take advantage of digital technologies to achieve strong involvement in the economic life of a jurisdiction, without having any (or any significant) physical presence in it. That way, businesses achieve operational local scale without local mass. This phenomenon is closely linked to the importance of intangible assets for the operations of digital firms. Although not an exclusive characteristic of digital companies, as argued earlier, intangibles – especially software and algorithms – are employed much more intensively by such firms.

With local physical presence minimised, supply-side drivers are less important in the allocation of the tax base. However, with evident value generation originating from local markets, the implication

is that sales play a key role. [Data and user participation](#) question the existing rules on nexus and profit allocation. This is particularly the case where data of end-users are involved in jurisdictions where companies have little or no taxable presence, but generate income indirectly elsewhere. Therefore, data and user participation bring value that is monetised in another transaction not necessarily involving the data or the users.

Finally, the ongoing debate over digital activities points towards a broader issue concerning the role of the consumption side in localising taxing rights. The market is a relatively [immobile factor](#) and retail sales may be less easy to manipulate as compared to sales between businesses, primarily along a value chain controlled by an MNE. However, as US tax expert [Michael Durst](#) has emphasised, in the era of digital commerce, using sales as the single criterion for allocating taxing rights on corporate income might generate undesirable results for some countries, especially those where much income is generated by capital- or labour-intensive activities.

## International and EU-level policy developments

Policy developments in response to the aforementioned challenges have varied between governments worldwide.

At the international level, views have been converging in certain areas and not yet in a number of others. In this context, action to fight corporate tax avoidance and aggressive tax planning has been [deemed necessary](#) by a broad number of OECD members. Since 2013, the G20/OECD Base erosion and profit shifting action plan (known as BEPS), has been the main driver of this effort. BEPS action plans are based on commonly agreed actions, designed to be flexible and ranging from minimum standards to guidelines. The [effectiveness](#) of these actions depends upon the consistent implementation of the BEPS package by a large number of countries, in order to ensure a level playing field among countries and jurisdictions in the fight against tax avoidance.

However, despite considerable progress on these fronts, corporate tax rates continue to fall worldwide reflecting the emphasis placed by many countries on tax competition. Tax incentives targeting intangible assets, low tax regimes favouring high-net-worth individuals, special tax schemes for land and buildings, and a wider use of special economic zones are all practices that, according to [research](#), will not only continue but will likely proliferate in coming years.

As regards the challenges generated by the mobility and immateriality of assets in the context of digitalisation, despite convergence on the importance of value generation, consensus is still to be reached on how it should be taxed. Some [countries](#) maintain that existing international corporate tax arrangements are still applicable, others argue for specifically designed tax rules for digital companies, and yet others call for a complete overhaul of the system whereby tax treaties divide the multinational tax base between source and residence countries.

At the EU level, recent years have seen an extensive reform of the common legal basis addressing corporate taxation. Triggered by emerging challenges, these efforts aim to create a fairer, more effective and more growth-friendly tax environment. In 2015, a [tax transparency package](#) was launched, addressing, among other things, reporting for multinationals on a public country-by-country basis. This was complemented by the adoption of common rules to ensure that companies pay tax where they make their profits. These are included in the [Anti-tax-avoidance Directive](#), which sets legally binding anti-abuse measures for the entire EU and comes fully into force by the end of 2019. Additional [reviews](#) of preferential regimes (such as patent boxes) and transfer-pricing rules have also been launched, to prevent tax avoidance through these channels. At global level, since 2016 the EU has strategically pursued greater cooperation with third countries on fair tax matters, including [ways to deal](#) with countries that refuse to respect the international standards for good governance. Beyond these initiatives, efforts continue on two key fronts. The first relates to intra-group transactions and the facilitation of uniformity in taxing profits across borders, pursued by the [common consolidated corporate tax base](#) (CCCTB) proposals. These are aimed at achieving the cross-border consolidation of taxable profits and their subsequent apportionment using a

predetermined formula. Efforts related to the second front seek solutions that would enable fair and effective taxation of the digital economy. The proposal for a new [digital services tax](#) seeks to address the disconnection – or mismatch – between where value is created and where taxes are paid.

## MAIN REFERENCES

Cadestin, C., et al., [Multinational enterprises and global value chains: New Insights on the trade-investment nexus](#), OECD Science, Technology and Industry Working Papers, No 2018/05, 2018.

OECD, [Addressing the Tax Challenges of the Digital Economy](#), OECD/G20 Base Erosion and Profit Shifting Project, 2014.

Lennard, M., [Act of creation: the OECD/G20 test of Value Creation as a basis for taxing rights and its relevance to developing countries](#), Transnational Corporations Vol. 25, No 3 Special Issue on Investment and International Taxation, 2018.

## ENDNOTES

- <sup>1</sup> Recent [IMF](#) empirical research indicates that participation in global value chains can have a positive impact on a country's per capita income and productivity. However, there is a lot of divergence and the gains appear to be more significant for upper-middle and high-income countries.
- <sup>2</sup> An example in this context is 3-D printing. As demand for customised goods expands, 3-D printing could lead to geographically dispersed small-scale manufacturing that accesses international designs and prints them locally.
- <sup>3</sup> The [concept](#) of economic allegiance dates back to the League of Nations in the 1920s. Four factors were argued to comprise economic allegiance: i) origin of wealth or income, ii) place of wealth or income, iii) enforcement of the rights to wealth or income, and iv) place of residence of the person entitled to dispose of the wealth or income.
- <sup>4</sup> The permanent establishment concept effectively acts as a threshold, which, by measuring the level of economic presence of a foreign enterprise in a given state through objective criteria, determines the circumstances in which the foreign enterprise can be considered sufficiently integrated into the economy of a state to justify taxation in that state.

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