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DOI

[10.33119/ASCASP.2023.1.2](https://doi.org/10.33119/ASCASP.2023.1.2)

Publication date

2023

Document Version

Final published version

Published in

Analyses and Studies

License

Other

[Link to publication](#)

Citation for published version (APA):

Buriak, S., & Hafkenscheid, R. (2023). What do IP-intensive businesses have in common with the extractive industry? The place of excess (incl. windfall) profits in the DEMPE analysis for intangible assets. *Analyses and Studies*, 2023(1 (15)), 13-27. <https://doi.org/10.33119/ASCASP.2023.1.2>

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What Do IP-intensive Businesses Have in Common with the Extractive Industry?

The place of excess (incl. windfall) profits in the DEMPE analysis for intangible assets*

Svitlana Buriak, * Rutger Hafkenscheid**

In this article, we touch upon one of the most topical and debatable loopholes in transfer pricing: how market distortions, dominant market power, and economic conditions that do not fit the normal economic cycle should affect transfer pricing analysis of controlled transactions.

During the most recent economic crises triggered by the COVID-19 pandemic and the energy security crisis as consequences of the Russian invasion of Ukraine, it became clear that business profits may not always be a direct result of investors' decisions, or in transfer pricing terms – of functions performed, assets used, or risks assumed, but, instead, a consequence of external circumstances. Such external circumstances may include rapid distortions in the supply and demand equilibrium for certain goods or services, such as digital software or energy resources. Yet, some external factors are not connected to a stage of the economic cycle, among which there are the market power or distorted competition, i.e. oligopoly, monopoly, or a monopsony position in the market.

In this article we observe that the ability of some sectors of the economy to capture abnormal returns is not a matter of luck or unpredictable events only. Instead, the ownership of certain scarce resources or artificially scarce assets determines the ability to generate excess (residual) returns. We build a parallel between the natural resources that produce economic rents and intellectual property assets, the scarcity of which is enabled by the strong system of legal protection of IP rights (in particular, patents) to demonstrate their common characteristic as rent-generating assets. We once again challenge the validity of the concept of value creation, arguing that it does not account for the level of competition, market power, and control and scarcity in the market, which are the main preconditions for a company to generate high profits.

Finally, we challenge the mainstream concept of DEMPE for the allocation of profits from intangibles for the fact that it attributes too much value to the stage of development of intangibles. Based on the understanding that IP protection may induce artificial scarcity of IP protected products in the market, which distorts competition and enables the IP owner to receive higher returns, the market jurisdiction should be entitled to a share of the residual profit for the facilitation of the IP protection regime.

* This work has been developed within the framework of the Amsterdam Centre for Transfer Pricing and Income Allocation. More information about the Centre is available at <https://actl.uva.nl/actp-project/actp-project.html>

Keywords: windfall profit, economic crisis, transfer pricing, economic rent, residual profit, intellectual property, DEMPE, value creation, value capture, International taxation, income allocation

JEL Classification: K33, K34, L1

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COVID-19 and the Russian invasion of Ukraine: windfall profits for the tech and IP industries, energy, and other sectors: a tip of the iceberg?

The last three years have been years of unprecedented and unpredicted events – from an outbreak of the global pandemic at the beginning of 2020 to the Russian military invasion of Ukraine and a full-scale war in the middle of Europe. These events disrupted the normal operation of the economy and affected its different sectors.

For some industries, first, the economic crisis triggered by the COVID-19 pandemic and then, the economic sanctions against Russia and the energy security crisis resulted in significant disruptions in business operations, business restructuring, as well as in a loss or even a default condition. For example, the biggest increase in the probability of a default during the pandemic was recorded for professional services (+117%), multiline retail (+145%), hotel, restaurants and leisure (+155%) airlines (+174%), road and rail (+178%) (Vodovic, 2022). The energy crisis impacted the most energy-intensive sectors, among which again there were aviation and shipping, but also the chemical industry, basic metals, road transport, cement, concrete and bricks industry, agriculture, etc. (Hieminga & van Sante, 2022; Hollinger, White, Speed, & Dunai, 2022).

At the same time, in every crisis, some industries gain benefits from it and derive extraordi-

nary profits. Thus, during the pandemic, the estimated COVID-19 windfall gain of the tech industry amounted to \$100 bn (HFS, 2022). Another research by TaxJustice UK highlighted that only six companies alone subject to the investigation in the pharmaceutical industry, mining, and real estate, increased their profit by a total of \$16bn. Their extraordinary profits prompted the discussion on the necessity of introducing a windfall tax (Topham, 2021).

In response to such calls for a special tax on COVID-19 profits, for instance, Tritax Group, a leading logistics real estate fund manager claimed the following: “The increase in our profitability during 2020 is a direct consequence of our long-term strategy and the funds we have raised and invested to expand the business. We are continuing to invest to profitably expand further our business, supported by long-term structural changes within the UK’s logistics market that have been ongoing for many years before COVID-19, rather than the direct effects of the pandemic.” (Topham, 2021). Thereby, the representatives of the group attempted to argue that extremely high returns were the result of long-term investments and strategic decision-making. Yet, the financial data of Tritax Big Box REIC managed by Tritax, for example, demonstrates that its return on the capital employed in the previous financial period was about 20.08% (MarketWatch, Tritax Big Box REIC, 2019), which may be an indicator of high excessive returns and windfall profits.

During World War I and II, the US already used to implement a windfall tax on excessive war prof-

its. One of the methods to determine whether a company generated windfall profits was to calculate its return on invested capital (ROIC) – the return of 8% was considered to be normal, while everything above this return was subject to the windfall tax (Magalhães & Christians, 2020, p. 1).

In this regard, in 2021, interestingly enough, the top twenty companies with the highest ROIC belonged to the technology and healthcare industry and IP-intensive B2C businesses. The ROIC of HP Inc in 2021, for example, was recorded at the level of 192%, whereas its annual revenue made \$63.5 bn. The revenue of NortonLifeLock Inc (\$2.75 bn) in 2021 in comparison was 250 times less than the revenue of Walmart in the same year (\$559.15 bn), but the ROIC of the former made 170%, while of the latter – only 11,1%. The ROIC of Moderna Inc. in 2021 was 49,1% and of Apple Inc. – 49,0% (Sure Dividend Research for 2021)

In 2022, the biggest profiteers from the energy crisis naturally became the energy sector, since the decrease in the supply of energy resources drove their profits up. As an emergency measure, the European Union agreed to adopt a windfall tax on record profits of energy firms. The EU Council Regulation on an emergency intervention to address high prices of 6 October 2022 laid down the temporary rules for taxing “surplus profits generated by Union companies and permanent establishments with activities in the crude petroleum, natural gas, coal, and refinery sectors”.

Windfall profits in energy and IP-intensive industries in different periods may seem like an accident triggered by external events. It could be explained by the fact that the pandemic indeed induced many people to switch to digital means of communication, while the energy crisis was provoked by a rapid change in the supply of energy resources. However, what if some industries have a stronger tendency and ability to capture abnormally high profits than others? What does unite these industries that seem to belong to completely different words – capital-intensive brick-and-mortar extractive industry, IP-intensive healthcare, and tech sectors?

The uniting element between the energy sector and IP-intensive industries (patents, trade-

marks, industrial designs, etc.) is the type of key strategic asset owned by the lead firms that allow them to control access to the industry. Natural resources such as oil and gas and IP rights belong to the same category of assets – rent-generating assets. It means that upon certain market conditions, i.e. when a rent-generating asset is in limited supply compared to the demand for this asset, economic rents may materialise (Baunsgaard & Vernon, 2022, p. 2). Economic rent is a return over and above what is required to compensate for all functions performed, assets used and risks assumed in normal market conditions (Devereux, Auerbach, Oosterhuis, Schoen, & Vella, 2019, p. 23). Stratford defines economic rent as “an economic reward which is sustained through control of assets that cannot be quickly and widely replicated, and which exceeds proportionate compensation for the labour of the recipient” (Stratford, 2020).

Thereby, the main precondition for an enterprise to capture economic rents is to own or control an asset that is in scarcity in the market or that the competition in the supply of an asset is limited by certain interventions in the free market, e.g. regulatory interventions (Shay, 2021, sec. 3.2; Schwerhoff, Edenhofer & Fleurbaey, 2020, p. 412). Scarcity is the main driver of profit in the capitalist economy: “things are valuable because they are scarce. The more abundant they become, the cheaper they become” (Lemley, 2015, p. 460). Scarcity may refer either to a limited amount of the product in the market or the limited number of suppliers of a rent-generating asset i.e. natural monopolies, monopolistic market power (incl. from anti-competitive behaviour) (Beer, Mooij, Hebous, Keem & Liu, 2020; Hebous, Prihardini, & Vernon, 2022).

The scarcity of natural resources and the ability of the companies exploiting them to derive excessive returns have been more evident to the regulator and, therefore, also subject to additional domestic tax mechanisms, such as gross revenue-based royalty taxation on income from natural resources or sector-specific taxes on extraordinary, excessive, abnormal or super-profits (Boadway & Keen, 2010, p. 29). Therefore, when

the energy crisis occurred, the implementation of a windfall tax in the energy sector was also more readily accepted and implemented than a windfall tax on the tech and IP-driven industries during the COVID-19 pandemic. Yet, what is important to highlight is that windfall profits, both during the energy and the global pandemic crises, are only a tip of the iceberg – the tip that became so obvious that it was difficult to ignore and to close our eyes on.

Windfall profits are only a portion of economic rents, which can be captured by large multinationals not only due to unpredicted events but any time when certain barriers to competition in the market exist. In addition, as Boadway and Keen (2010) state, “the resource sector is by no means the only one in which rents can arise” (Boadway & Keen, 2010, p. 29). In capital-intensive industries, barriers to competition are effectuated by large capital requirements and high sunk costs (e.g. fixed assets) that *ex-post* lead to economies of scale, which, in turn, limit entry opportunities for new producers (Wright & Zhu, 2018, pp. 341, 347). But why are IP rights also considered to be a rent-generating asset?

IP rights, mostly for patents, became the main source of gaining a monopolistic position in the market and limiting competition in the modern economy.¹ IP rights, or more precisely their strong

¹ Interestingly, the monopolisation of inventions commercialisation is a relic of the feudal society, in which the king had the exclusive right to grant individuals or guilds licenses to operate in a certain industry sector. Whether the king was inclined to grant a patent for a certain invention relied on the question of whether the king expected the invention would harm his personal interests, with the result that many inventions were denied a license, prohibiting the inventor to commercialise his invention. Only after the Glorious Revolution in England (1688), patents began to become a *protection against* the might of the king instead of a *protection of* the king’s might. It has been widely held that the new patent system incentivised innovation and was the start of the Industrial Revolution and thus capitalism (see Acemoglu & Robison, 2012). However, we will never know what would have happened if the feudal system, with its monopolisation, had not existed and thus inventors would not have had to beg the king for granting a patent. Logically, after the decline of the feudal

legal protection, may generate an artificial market entry barrier and hence scarcity that may trigger excess profits for their owners in the form of economic rent. The modern form of economic rents in the tech and other IP-intensive industries is called intellectual, knowledge or techno-scientific rent (Durand & Milberg, 2020; Rikap, 2022, pp. 439–440). The most crucial thing for tech businesses is to make sure that their technology and other IP rights are strongly protected by patents and trademarks. It helps them to secure their IP. However, at the same time, strong legal protection limits access of other competitors to the industry, thereby creating artificial scarcity and facilitating market monopolisation. Monopoly, in its turn, allows these businesses to charge prices to customers well beyond the cost of production and become extremely rich not only because of the functions that the company performs but because it enjoys the benefits of IP protection regimes and potential market monopoly. As a result, IP-intensive businesses can accumulate different types of economic rents: legal IP rent, intangibles-differential rent, or monopoly rent.

In fact, the IP owner is the new landowner of modern capitalism. The EC Joint Research Centre and OECD Directorate for Science, Technology and Innovation in a joint report demonstrated that legal artificial monopoly is significantly advanced, with only around 2,000 corporations owning 60 per cent of the patents granted by the world’s five leading patent offices (Dernis et al., 2019). And while the social value of such strong patent protection does not always bring the benefits of higher innovation (Lemley, 2015) but in fact can even hinder progress, for example, on public health as it was the case during the pandemic (WHO Watch Team, 2022), it is not the point that the authors would like to bring the reader’s attention to. As international taxation is concerned with profits

system, the new kings (i.e. patent owners) did no longer want to get rid of a system monopolising their intellectual property rights. The authors believe that innovation is part of human nature that needs no incentivisation by monopolisation of its commercialisation. We, humans, will always innovate, irrespective of financial incentives.

and their cross-border allocation, there are several conclusive key messages from the discussion above:

- IP rights are the source of economic rents, i.e. above normal returns that can be analogised with natural resources.
- In general, scarcity is the main driver of profit; the scarcity of IP-driven products, mainly protected by patents, is artificial and enabled by strong legal protection of IP rights (Cui & Hashimzade, 2019, p. 3 et seq.).
- Windfall profits can be inseparable from the cyclical profit component of economic rents (Baunsgaard & Vernon, 2022, p. 2). The ability to capture economic rents does not depend only on the existence of unpredictable events disrupting the market; economic rents materialise when there are barriers to competition in the market or other factors affecting the supply and demand forces there.
- High profits in IP-driven businesses may be explained not only by the value of the activities carried on by an IP owner but by the legal protection granted by the state to his/her ownership (e.g., like real estate).

Economic rents and residual profits: same or different?

In transfer pricing, in principle, a separate category of economic rents or windfall profits is not existent. Corporate income tax is levied on accounting profits determined as taxable revenue minus tax-deductible expenses (Buriak, 2023). Economic rents are not explicitly expressed in the accounting system. The economic profits (or pure profits) might not exactly be equal to accounting profits since, to derive an economic profit, the implicit costs must be deducted from the financial accounting profits (Phelps, 1986, p. 677).

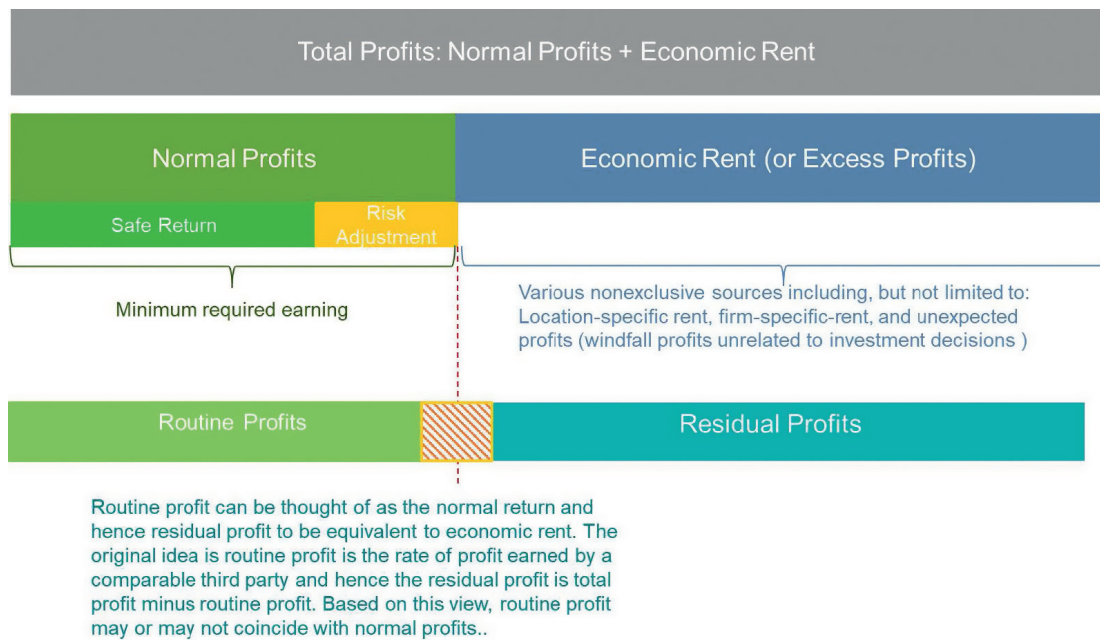
What is more, in transfer pricing it is hardly recognised that business profits might result from any external factors such as in the case of windfall profits resulting from unprecedented events

or abnormal returns derived due to monopoly power. Instead, transfer pricing profit allocation is built on the understanding that business profit is a return on functions performed, assets used, and risks assumed by an enterprise itself (see Section 4). Any abnormal returns are perceived to be the remuneration for entrepreneurial risk-taking and functions related to exerting control over business risks.

The closest category to the concept of economic rents, though, is the category of residual profits. In certain instances, international taxation appears to implicitly equalise the concept of residual profits to economic rents. For example, in OECD Pillar One, a market jurisdiction is entitled to a portion of the deemed residual profit of an enterprise, which is computed as the difference between a global adjusted profit before tax of a corporate group less the deemed routine amount of profits (OECD, 2020, p. 16). In its turn, deemed routine profit is defined in a formulaic way – it amounts to 10 per cent of the global corporate revenue of a group (OECD, 2020, p. 16). The portion that is allocated to the market jurisdiction is assumed to be the return on the contribution of the market jurisdiction in the form of demand and consumption of the value created by an enterprise. Thereby, the methodology of defining the routine profit and the residual profit of a corporate group appears to be aligned with the categories of normal return and economic profits. In addition, the Proposal recognises that not only the enterprise's own functions, assets and risks may contribute to the profit generation but also certain external factors such as the demand in a market jurisdiction.

Hebous et al. (2022) in an IMF policy note consider that “Pillar 1 is [an] example of a notion of excess profit, defined as profit exceeding 10 per cent of revenue” (Heboues et al., 2022, p. 13). They also suggest that “residual profits can conceptually be deemed equal to economic rents, but generally are not necessarily equal. The relative importance of the various sources and the total size of economic rent are project specific” (Heboues et al., 2022, p. 13). Beer et al. (2020) specify that

Figure 1. Breakdown of total profit: taxonomy of profits



Source: Heboues et al., 2022, p. 7.

“routine profit is broadly equivalent to normal return while residual profit is equivalent to economic rent”. Figure 1 provided by Heboues et al. (2022) illustrates the potential relation between routine and normal profits, and between economic rents (excess profits) and residual profits.

Overall, this approach to the understanding of the taxonomy of profits, routine and residual profits, could have been relied upon for building a coherent and conceptual view on the ways how windfall profits and other types of economic rents resulting from non-productive factors have to be allocated. The only ‘but’ is that transfer pricing rules as defined by the OECD TPG or UN TPM ascribe an absolutely different meaning to the category of residual profits.

Three out of five transfer pricing methods endorsed by the OECD TPG are one-sided. It means to apply these methods, one less-complex party in the controlled transaction is selected as a tested party. Considering its less-complex profile compared to the second party in the transaction, it is labelled as a routine entity. While the label of ‘routine’, in principle, should mean that comparables

are available for benchmarking of this entity,² being ‘routine’ instead is associated with not being entitled to high returns.

Nevertheless, the methodology entails that first the profits of the tested party have to be determined. The profit that remains after this calculation is defined as ‘residual profit’, to which the other, more complex party in the controlled transaction is entitled. Hence, the understanding of ‘residual profits’ under transfer pricing regulations is normally³ different from one of the OECD Pillar One; the residual profit includes both the normal return to the functions, assets, and risks of the more complex entity and all the potential excess income (e.g. from market monopolisation and other market distortions, exploitation of scarce natural resources, enjoying the scarcity of IP, location-specific rent, benefits of integration and synergies, network effects, etc). Thereby, the ap-

² See, for example, *Luxembourg and Others v. Commission (Amazon)* (2021), T-816/17 and T-318/18, GC Decision, para. 225.

³ Domestic regulations may contain different approaches, e.g. the excess profit regime in Belgium.

plication of one-sided transfer pricing methods results in arbitrary outcomes when only one party in the controlled transaction is allowed to rip all the benefits that a corporate group may enjoy when optimising global business operations, increasing the market share and deriving profits from other non-productive factors.

In addition, as stated above, there is no uniform understanding of what residual profits are in international taxation. It is not only different concerning OECD Pillar One and OECD TPG, but also for purposes of OECD Pillar Two solutions or even for different transfer pricing methods – one-sided methods and the residual profit split method. The latter actually attempts to determine the routine amount of remuneration for both parties and to split the residual profits. Hence, in contrast to one-sided methods, this methodology is closely aligned with the above-illustrated taxonomy of the business income and its breakdown into normal profits and economic rents.

In the authors' view, the nature of residual profits, in a nutshell, may imply the presence of certain factors other than own functions, assets, and risks of an enterprise that in one way or another may affect the profit or loss position of an entity. The two economic crises discussed in the first section luckily brought this matter to the attention of policymakers – extraordinary profit may be 'blown down by the wind'. Yet again, windfall profits are only a tip of the iceberg in the discussion of what factors contribute to profit generation besides 'functions performed, assets used, and risks assumed', how these functions should be taken into account in cross-border allocation, and what is a relative value of these new factors.

Considering the above, the authors would like to emphasise the key takeaway that will bring us to the next point of the discussion.

Business income is not only the result of value creation by an enterprise: it is partially hard work, partially luck of being at the right place at the right time, and partially a power game where the winner takes it all (be it the result of randomness or strategic skill).

Transfer pricing in a post-BEPS world: profits should be taxed where value is created

In the emergence of the Base Erosion and Profit Shifting (BEPS) project, the OECD and the European Union have embraced a new paradigm for the distribution of taxing rights between countries, i.e., that 'profits should be taxed where value is created'. The background to this new paradigm was the observation that MNEs used transfer pricing planning to shift profits from countries where the MNE has a presence in the form of activities performed by humans, to countries where the MNE merely has a legal presence, e.g. by transferring the ownership of income generating assets, to tax haven entities where almost no activities by humans are performed. The apparent thought was that the ownership (and the exploitation) of income-generating assets does not create value and that, therefore, no or limited taxing rights should be allocated to that ownership. Insofar as the BEPS project is concerned, the idea that no taxing rights should be allocated to entities in tax havens is indeed convincing and it is enticing to link the wish to disregard taxing rights to those jurisdictions to a concept of value creation. After all, the *communis opinio* is that the mere legal structuring of an activity as such does not contribute value to that activity and, therefore, legal structuring should not be a factor in profit allocation.

The authors believe, however, that the value-creation-paradigm works only to carve out low-tax jurisdictions from the distribution of taxing rights, but that 'value creation' is not a good measure for the distribution of taxing rights between 'normal' jurisdictions (Jiménez, 2020). What the OECD and EU aim to achieve is that no taxing rights should be allocated to jurisdictions that do not significantly contribute to the generation of these profits, which is a negative connection between value creation and distribution of taxing rights. However, defining a phenomenon negatively is not the same as defining it positively. Saying that a certain animal is not a cow does

not reveal much about what kind of animal it is then. Where it is relatively easy to recognise situations when a member of an MNE does *not* contribute to the profits of the MNE, and thus should not be allocated part of the profit (in terms of the EU and OECD: does *not* create value), it is much harder to recognise the positive contribution of a group member to the MNE's profit and thus to the value. Neither the OECD nor the EU has even tried to come up with a definition. That means that the term is prone to becoming a 'container concept', to which every user can attach any meaning that he or she deems preferable.

Even among management scholars, there is little consensus on what value creation is or on how it can be achieved (Lepak, Smith, & Taylor, 2007, pp. 181–182). First, 'value' is a vague concept. Lepak, Smith & Taylor distinguish (Buriak, 2023)⁴ two aspects of value, i.e. an objective (also referred to as exchange value) and a subjective aspect (also referred to as use value) (Buriak, 2023). The objective aspect of value can be defined as the *amount paid by the user* to the seller for the use value of the focal product or service. The subjective aspect of value refers to the specific quality of a product or service as *perceived* by users in relation to their needs, such as the speed or quality of performance on a new task or the aesthetics or performance features of a new product or service (Buriak, 2023). In the context of the distribution of taxing rights and transfer pricing, it is clear that value should refer to the objective (monetary) aspect of the value definition. However, when applying the concept of value creation in the context of transfer pricing, the problem with this definition is that it brings us into a Catch-22: according to the definition, value is the amount paid by the user to the seller, i.e. the price that the user is willing to pay, while, when trying to establish a transfer price, we should base our analysis on the contribution to value creation. That means that to establish the value of a good or service, one must know the price, while to evaluate the price, one must first know the value, a circular reference.

⁴ Buriak, 2023 (forthcoming).

Secondly, 'creation' suggests that there is always a clear relation between cause and effect of how value arises. However, in reality the relation between cause and effect, between action and result, is much more ambiguous than we humans believe it is. Nobel laureate Kahneman demonstrated that we humans have a poor track record of understanding the relation between cause and effect; we are compelled to simple narratives that explain the logic of a certain outcome, thereby disregarding alternative reasons that are complex or random. Kahneman calls this WYSIATI: what you see is all there is (Kahneman, 2011). Once we know the outcome (in our case: the profit of a company), we believe that the path of events leading to that outcome (the cause) was the only possible path that the events could take. We ignore the alternative paths that the events could also have taken and tend to attribute the outcome to human action that we believe leads inevitably to the end result. In other words, we underestimate the influence of external factors on success or failure (i.e. good and bad luck) and overestimate the contribution of internal factors such as human action.⁵ This phenomenon led Bernoulli, the founder of modern statistics, to state already in the 18th century that "one should not appraise human action on the basis of its results".⁶ The recent research

⁵ This sometimes leads people to admire absurdly other people who have the societal or financial success that can be attributed to random network effects. Examples are the influencers on Instagram with millions of followers, who are famous for What exactly? They enjoy the fact that there were people who started to follow them and then, due to the algorithms of Instagram, more people started to follow them, which put them higher in the algorithms and there you go. The book by Mauboussin (fn 44) demonstrates with an experiment using marble draws that even influencers will low odds (skill) may end up becoming famous due to the random network effects.

⁶ Mlodinow, 2008. American philosopher Nassim Taleb in his book *The Black Swan* describes that even academic success is significantly a lottery, due to the so-called Matthew effect. This effect is caused by the fact many academics cite references to papers without having read the original work; they will read a paper and draw their own citations from its sources. New researchers again draw from those papers and that (often randomly started) cita-

by Mauboussin (2012) has demonstrated that luck in many aspects of business (and life in general) has a significantly larger influence on success and failure than skill. He also offers methods to untangle the influence of luck and skill and, at the same time, shows that it requires significant effort to do so accurately. The fact that it is so difficult to untangle the influence of skill and luck on the results of certain activities (e.g. the value ‘created’ by the company), disqualifies ‘value creation’ as a reliable measure for the distribution of taxing rights. Yet, the OECD approach in which functionality and DEMPE are given so much weight in the distribution of taxing rights in case of intangibles completely ignores that luck (or as stated earlier: market power) has a much larger influence on the value of a company than human action.⁷

The last, and possibly most fundamental, reason to reject ‘value creation’ as a leading principle of distributing taxing rights is that it does not fit with the way profits are being taxed worldwide. Profit tax systems are not bothered by the *cause* of the value creation, but only by the *result* itself; profit is taxable irrespective of where profits stem from or how profit was created, i.e. whether through skill or luck. Profit taxation is tied to the person who can *capture* the value, not to the one who created it. The tax system does not care whether the profit is the result of pure luck, skill,

tion circus gets the academic reputation wheel spinning. Once a researcher has a reputation, that reputation generates more attention and that again leads to more citations. The same is true for many businesses that thrive on networks, for example, the entertainment industry, technology, or social media.

⁷ By saying that ‘value’ is less influenced by human action, the authors mean to stress that monetary value, which is inherently a ‘human notion’, arises *in the relation* between humans, not by the mere human action itself. Monetary value, therefore, only has sociological meaning, not intrinsic meaning. Someone on a desert island can create ‘use value’ but will not create ‘monetary value’. It is the relationship between humans, i.e. the inter-human exchange, that gives an invention monetary value. How much monetary value that invention has is determined by scarcity and for intangibles scarcity is largely the result of protection, not of the invention itself.

or market power. It just taxes the outcome. If the tax systems throughout the world base the taxation of profits on value *capture*, why then all of a sudden use value *creation* as a way of distributing taxing rights between the different members of an MNE? Instead, it would be more logical to distribute taxing rights based on value capture rather than on value creation.

Now the question arises: what causes a person or a company to capture value? As argued above, in the capitalist system value capture is the result of ownership rights, power, and the legal system surrounding it to protect that ownership and power; without a legal system there is no protection of ownership and power, without protection no (artificial) scarcity, without scarcity no possibility to capture monetary value. A system based on value capture would thus tie the distribution of taxing rights to the cause of economic rents and scarcity, and not (merely) to human action.

What a value-capture-based distribution system would mean for rent-generating intangibles and DEMPE

The reader may think “but a value-capture-based distribution system would bring BEPS back to square one”, because such a system would attribute significant taxing rights to legal ownership. Would not this again enable MNEs to apply transfer pricing planning through shifting legal ownership of income-generating assets to tax havens? This is certainly not what the authors advocate. Instead, the argument is to acknowledge that the protection of (for example intellectual) property rights is a significant source of income generation. So, the authors believe that it is *not* the mere ownership of IP that contributes to the profit-making potential of the IP, but rather the *protection* that the owner of the IP enjoys in the country where the IP is utilised.

The legal system in the jurisdiction where the IP is protected provides the exclusivity that grants the intellectual property rights its monetary value

because it is the legal system in which the MNE operates that allows it to capture the value. If Apple sells its products in Germany, it can count on the German legal system to protect its intellectual property rights, which allows Apple to capture the value of its inventions.⁸ If no such legal protection had been available, Apple's products could be copied or sold through by-passing its distribution network, its brand could be abused by competitors, enabling them to benefit from or undermine Apple's reputation. It is *technically* possible to copy Apple's products, and it should be *technically* possible to by-pass Apple's distribution network, e.g. for the sale of apps in the App Store, but it is not *legally* allowed either because the patents that Apple holds disallow copying or because the legal conditions that Apple imposes on selling apps in its App Store; it is the legal protection provided by Germany's legal system that creates the artificial scarcity and that enables Apple to capture value.

So, it is not only the uniqueness of Apple's products, the inventions underlying it, the organisation of the distribution network, or the Apple logo that (exclusively) generates value but also the legal system that the capitalist world has built around the protection of all these things that allows for Apple's value capture. What this legal protection provides for is artificial scarcity on behalf of Apple by excluding others from copying what Apple does.

Another example of the artificial scarcity that is generated by the legal system can be found in the pharmaceutical industry. Mazzucato argues that pharmaceutical companies use the patent system

⁸ Interestingly, Apple's inventions are less originated by Apple's staff than the mythical status suggests. Over its lifetime, Apple has collected many patents from others rather than that it made inventions itself. By collecting them, it created (artificial) scarcity that facilitated it to reap excessive benefits. So, it was again the legal system of patent protection, not the human action of the invention itself that enabled Apple to capture value. See Mazzucato 2018, where she unravels the myth that Apple's invention is a result of private inventiveness. She demonstrates that 90% of the iPhone technology was invented by or financed by government institutions.

mainly to monopolise the commercialisation of existing drugs, rather than to invent new drugs. A whopping 67% of the 'new' patents approved by the US Food and Drug Administration between 1993 and 2004 were just variations of existing 'me too' drugs that helped to commercialise existing drugs rather than to invent new drugs (Mazzucato, 2018, Ch. 3, Figure 7). In addition, a widely used strategy by pharmaceutical companies is to acquire smaller start-up firms after the innovation has been made (often at the expense of state-funded R&D) and then commercialise the patents through their existing distribution networks. That the value of patents can be traced back to the monopolisation and the associated scarcity that legal protection offers rather than the innovation itself, also follows from the fact that retail drug prices are significantly higher in the United States than in Europe: the US legal system provides stronger legal protection than the European system, the latter being more focused on public health than on ownership protection.

The role of functionality in the OECD Transfer Pricing Guidelines

In its report on BEPS Action 8-10, the OECD made functionality the core of the mechanism to distribute taxing rights. According to the guidelines, value is created by the people in the organisation who perform the decision-making and control functions with respect to the (risks of the) activities of the business. The idea of functionality as the key factor of 'value creation' is generally introduced in Chapter I of the guidelines and is worked out in detail for the 'value creation' of intangible property in the famous DEMPE-functions in Chapter VI. DEMPE is the acronym for development, enhancement, maintenance, protection, and exploitation. What the concept of DEMPE-functions aims to do is, again, to prevent MNEs from shifting profits generated by intangibles to tax havens by the mere transfer of their legal ownership. The OECD, therefore, links the income-generating po-

tential of these intangibles to the human activities surrounding intangibles. These human activities are classified into the categories comprising DEMPE. It is noted that ‘protection’ is one of the categories, which would suggest that this factor is already accounted for when identifying value-creating factors. This, however, is misleading because it is not the protection as such that, according to the guidelines, is a determining factor, but rather the function within the organisation that decides to invoke such protection. So again, the guidelines presume that human action is to be considered the factor to which the value captured should be traced back. That is a gross misunderstanding: the decision to invoke protection is worthless without a legal system that actually protects intellectual property. The same goes for the development, enhancement, or maintenance of intangibles. Development, enhancement, and maintenance are the human activities that can be summarised under the term ‘innovation’. Throughout the history of humanity, people have innovated. The wheel, irrigation of land, the plough, the axe, gunpowder, the windmill, book printing; all these inventions generated indescribable wealth⁹ for humanity. What differentiates these earlier inventions from later inventions is that the use of the former inventions was not monopolised and that the inventions could thus be copied and used freely by anyone. It is the monopolisation of the later (patented) inventions that enabled individuals to capture (monetary) value from them.¹⁰ In other words,

⁹ And in many cases: misery. An axe can be used to kill another human, gunpowder enabled Europeans to enslave the peoples of the East and West Indies, windmills could be used to torture people, book printing facilitated populists to spread their toxic ideas, sometimes with war as a result.

¹⁰ By the way, such monopolisation is not only true for intangibles that are explicitly protected by intellectual property laws, but also for trade or other business secrets that as such are not eligible for patent protection. A secrecy system functions only if it is supported by some sort of legal protection, for example by draconian penalties for employees who breach their non-disclosure obligations. These penalties are worth nothing if they are not backed up by a properly functioning legal system.

it is the (artificial) scarcity that is created by the support from the legal system in which the company operates that allows value capture, not the invention itself. Instead, the human activity of inventing by MNE staff is already remunerated on an arm’s length basis, i.e. through the payment of (apparently) arm’s length salaries to the people working on these inventions.

Interestingly, the OECD guidelines consider ‘exclusivity’ only a comparability factor, not a fundamental feature for the distribution of taxing rights.¹¹ The authors consider this a gross underestimation of the economic importance of intangible protection’s scarcity-causing effect.

How should value capture of intangibles be allocated?

As discussed, value capture forms the basis of any profits taxing system throughout the (capitalist) world and, therefore, the authors consider that value capture, not (the flawed concept of) value creation, should be the determining factor for distributing taxing rights among the jurisdictions where the MNE operates. As legal protection secures value capture, it is the protection enjoyed in the jurisdiction where the MNE performs its activities that, according to the authors, should become an allocation key, not the human action reflected in DEMPE functions. This does not mean that functions would become irrelevant to the allocation of profit. Instead, the DEMPE functions would be remunerated with a reasonable margin over their cost – like any other activity within the MNE, such as manufacturing, distribution, or logistics. The residual profit that remains after remunerating all the functions (e.g. DEMPE, manufacturing, distribution, etc.) is the result of either market power (economic rents) or the protection provided by a good functioning of the legal system in which the MNE operates. That remainder should then be allocated based on the protection that en-

¹¹ See para. D.2.1.1. of the OECD Transfer Pricing Guidelines, where a mere 150 words are spent on the subject.

ables the MNE to capture the value from its position. The authors believe that the price that the MNE receives for the product or service sold in the market in which it enjoys that protection reflects the value of such protection and should thus be the basis for the key allocating the residual profit. Indeed, if 'value' is defined as the 'exchange value' or 'monetary value' of a product or service (as described in section 3), then the value is created by optimising that monetary value in relation to the market. Therefore, the authors believe that the external market price received by the MNE is the best proxy for distributing residual profits.

Does a value-capture-based distribution system align with the arm's length principle?

Some people will argue that such a distribution of taxing rights does not fit the arm's length principle but is a form of global formulary apportionment. The authors disagree for five reasons.

Firstly, the application of the arm's length principle is most reliable if it closely aligns with prices that are paid in the market. The proposed system does this by using the external market price that the MNE receives as the proxy for distributing residual profits.

Secondly, the distribution of taxing rights based on DEMPE functions follows a flawed concept of value creation. DEMPE does not account for market power or the value capture that results from intangibles legal protection, while this is the source of excess profit. The authors re-iterate that value capture is the basis of profits taxation, not value creation; profits are taxed irrespective of what their cause ('creation') is and, therefore, distribution of taxing rights should follow that. The proposed system does align with value capture. So even if the system was not aligned with the arm's length principle, neither would DEMPE be, as it is based on the concept of value creation that does not align with the way profits taxation works and overestimates the contribution of human action to

the benefits from intangibles. A strict application of the arm's length principle, aligned with value capture, would require the distribution of taxing rights based on legal ownership, with BEPS opportunities as a consequence. The proposed system prevents such BEPS opportunities.

Thirdly, the system aligns with the capitalist system as a whole, as it distributes taxing rights also to the jurisdictions that facilitate the capitalist system through their protection of value capture. In so far, the possibility of taxing part of the residual profit that stems from the excess profit that an MNE makes because of that protection, covers the cost of maintaining a legal system that facilitates such value capture and, therefore, the capitalist system as a whole.

Fourthly, the proposed system could be qualified as a transactional profits method, i.e. the residual profit split method, which is recognised by the guidelines as an acceptable transfer pricing method (OECD TPG 2022, Ch. II, Part III, Sec. C). The authors admit that, according to the current guidelines definition, intangible assets protection does not form an intangible and, therefore, in itself is not a reason to apply a residual profit split, but they see no conceptual objection to include protection in the definition. As the authors have argued above, the functionality approach adopted by the guidelines is conceptually flawed because it fails to acknowledge the influence of (artificial) scarcity created by protection, overvalues the influence of human action, and goes against the notion that profits tax aims to tax value capture instead of value creation (Hafkenscheid, 2017, pp. 19–24).

Fifthly, it would make the Pillar One project obsolete, as the system would indeed distribute taxing rights to market jurisdictions. It would not do so based on a vague notion of 'fairness', but rather because of the idea that a profits tax should tax value capture (which the proposed system does) and that such a system should endorse and enhance the legal system of intangible's protection by allowing the jurisdictions to levy taxes to compensate for their contribution to the legal system that enables value capture.

Conclusion

The recent economic crises affected the economy and business operations in many countries in a negative way. Yet, in the COVID-19 period, the tech and pharmaceutical industries gained significant windfall profits, while the energy sector improved its financial position during the 2022 energy crisis. These events clearly demonstrated that business profits may be a result of external events and not only of strategic decision-making and own actions by an enterprise. Instead, business profits can be even ‘blown down by the wind’.

Yet, the authors considered that windfall profits are only a tip of the iceberg: excess returns – profits beyond the normal level of returns on functions, assets, and risks – may be caused by any market distortions that affect the demand and supply of an (artificially) scarce product. The energy crisis was provoked by a sudden increase in scarcity of natural energy resources, while the COVID-19 pandemic triggered an increase in demand, inter alia, for technology solutions, the (artificial) scarcity of which is maintained due to a strong global IP legal protection system.

Interestingly enough, both natural resources and IP rights belong to the group of rent-generating assets. In a capitalist economy, economic rent is understood as “income derived from the ownership, possession or control of scarce assets and under conditions of limited or no competition” (Christophers, 2021). Back in the days, land ownership was the main source of economic rents. In the modern knowledge-driven economy and the economy of mass consumption, IP assets are the main source of rentier power, rent extraction, and value capture. The system of the legal protection of innovations, especially the patent system, produces artificial scarcity and a limited supply of patented assets compared to the demand generating above-normal returns to the owner. This is the feature that makes the ownership of IP rights to be comparable to the energy industry and control over energy resources.

The current transfer pricing regulations normally do not fully recognise external factors such as

economic crises, scarcity, or monopoly power as profit-generating factors. Instead, intangible assets that lack comparables are considered unique and, therefore, highly valuable disregarding the fact that their uniqueness and limited offer might be sustained only due to regulatory intervention in the free market. There are numerous studies that rent-seeking strategies in fact deter economic growth and development, especially when the patent system effectively serves the interests of only a few rich countries (Stratford, 2020). In this regard, the transfer pricing regulations that normally attribute all the residual profits to only a few entities in an industry value chain based on the assumption of the uniqueness of certain functions, only facilitate and encourage rent-seeking strategies and global inequalities in the allocation of income.

After the BEPS project, a lot of attention was devoted to a paradigm of ‘value creation’, in particular, for purposes of reallocating taxing rights in the digital economy, and the ways a business creates value. The authors concluded that the value-creation-paradigm worked only to carve out low-tax jurisdictions from the distribution of taxing rights, but it was not a good measure for the distribution of taxing rights between ‘normal’ jurisdictions. After extensive criticism, the value-creation-paradigm was mostly abandoned, but no alternative solution to build an objective system of profit allocation was still on the table.

In this article, the authors supported the view that ascribing an economic meaning to the categories of routine and residual profits should facilitate the coherency of the current international tax rules and provide a more objective answer as to what factors indeed allow MNEs to gain profits. The concepts of residual and routine profits must be perceived as the closest approximation of economic rents and a normal return. The alignment of the concept of residual profits with the category of economic rents would induce the legislator to consider the source of economic rents including different factors that enable to *capture* economic rents (value).

Relying on the example of IP rights, the authors demonstrate that their scarcity and hence the abil-

ity to generate abnormal returns (economic rents) is due to their legal protection in the market. The DEMPE concept developed again during the BEPS project attributes the most value to the development and enhancement of IP in line with the predominant belief that profit is the result of significant people functions. Protection of intangibles

in fact secures their value. Yet, ‘protection’ is understood in this analysis as a function of the state and not as of a business. A DEMPE analysis, which would account for market power and intangible protection scarcity-causing effect, should compensate market jurisdictions for their contribution to the legal system that enables value capture.

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Received: 9 January 2023
Revised: 22 January 2023
Accepted: 23 February 2023
Published: 31 July 2023



Centre for Analyses and Studies of Taxation
Centrum Analiz i Studiów Podatkowych

· PUBLISHER ·

CENTRE FOR ANALYSES AND STUDIES OF TAXATION SGH · Al. Niepodległości 162 · Warsaw 02-554 · Poland
DOMINIK J. GAJEWSKI (General Editor) · GRZEGORZ GOŁĘBIEWSKI · ADAM OLCZYK (Managing Editor)

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