The Big Four: Multiple Functions and Power in Global Value Chains

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1. **Introduction**

With the rise of international trade and the organization of spatially and functionally fragmented production within Global Value Chains (GVC), the role of professional/business services firms has grown significantly. Leading examples are the Big Four global accounting and consulting firms of Deloitte, PwC, EY, and KPMG, which over time, have expanded their services from audit, accountancy, tax, and law to strategy consulting, IT transformation, and advisory on securities issuance and M&As. Today, they resemble a 'one-stop-shop' (Greenwood et al., 2002) for corporate customers, governments, and public-sector entities, rather than audit firms. With globalization and the establishment of international accounting standards (Perry & Nölke, 2006), the Big Four have grown in size. In 2019 they employed over 1 million people in 2,711 offices worldwide, making combined gross revenue over $155 billion (see **Supplementary File**).

Literature on GVC and related research on Global Production Networks (GPN) have explored the nature, extent, and implications of *servicification* of global production understood as the rising importance of services in terms of input and value added in the production of goods and global trade (Faulconbridge, 2019; Thangavelu et al., 2018). Meanwhile, researchers in Critical Accounting (CA) and International Political Economy (IPE) emphasize the importance of business services firms, referred to as Advanced Business Services (ABS) or Global Professional Services Firms (GPSF), emblematic representatives of which are the Big Four (Boussebaa & Faulconbridge, 2019; Mazzucato & Collington, 2024; Power, 2024). Although there is a growing number of studies that attempt to bring together insights from the GVC/GPN, IPE and CA scholarships regarding the role played by ABS firms, there are key questions that are still not discussed sufficiently in the literature. In this paper we argue that the respective literature suffers from two limitations: a) the services provided by ABS firms are considered solely as input in the production process, with little exploration of their strategic behavior and interaction with value creation actors in GVC and GPN; b) the literature focuses on institutional and political power of Big Four in influencing global standards and rules, rather than on their impact on the structure of GVC.

The objective of this paper is to address these gaps by addressing two research questions: 1) what are the channels through which the power of the Big Four is manifested in GVC; 2) how the exercise of the power of the Big Four influences the structures and governance of GVC? We follow a mixed methods approach. For quantitative data, we rely on annual reports and corporate websites of the Big Four, as well as news articles and industry-specific reports from think tanks and professional associations. Our qualitative data consist of 16 semi-structured interviews with senior officials and executives from the Big Four, in various locations, including two interviews with non-Big Four consulting firms. Analytically, we utilize the framework of power typologies proposed by Dallas, Ponte and Sturgeon (2019), which from now on we will refer to as the DPS framework.

The remainder of the paper is organized as follows. Section 2 provides a critical review of the literature on power relations and governance structures in GVC and GPN in dialogue with IPE and CA research. Section 3 describes the data and methodology. In Section 4 we analyze the channels through which the Big Four exercise power in a multidimensional way and how it influences the structures and governance of GVC. The last section concludes.

2. **Literature Review**

The analytical framework of GVC highlights the "full range of activities that firms and workers perform to bring a product from its conception to end use and beyond" (Gereffi & Fernandez-Stark, 2016, p. 7). The investigation of the behavior of lead firms and their interactions with suppliers at the local, regional, and global scales, as well as with non-economic actors, such as the state and international institutions is central to the framework of GVC. The core element of these interactions is the existence of *power asymmetries* between GVC actors that affect the distribution of economic outcomes, the upgrading trajectories of firms, communities, labor and national economies, and the terms of participation in GVC (Bair & Mahutga, 2023; Lang et al., 2023). In this context, power translates into the ability of lead firms to shape *governance structures* - a set of concrete practices, authority relationships and organizational forms - to dominate their respective value-chains and consequently capture the highest possible share of value (Ponte & Sturgeon, 2014).

Dallas, et al. (2019) build on social theories of power to propose a fourfold typology of power relations in GVC. They define GVC governance as "the actions, institutions and norms that shape the conditions for inclusion, exclusion and mode of participation in a value chain, which in turn determine the terms and location of value addition, distribution and capture" (Dallas et al., 2019, p. 667). Their typology distinguishes between the main *actors* that possess and exercise power and the *transmission mechanisms*, through which power is spread. This leads to the identification of four types of power: *bargaining*, *institutional*, *demonstrative*, and *constitutive*. Their typology is dynamic as it allows for one type of power to transform into another. Bargaining power is the most common aspect of power found in political economy usually referring to the *firm-to-firm* (or more generally to actor-to-actor) relationships. It is based on the resources and structural characteristics of the firm actors and can be operationalized by market concentration ratios, barriers to entry, and economies of scale, scope, and network. The second type - institutional power - is exercised by formal collectives, such as business associations and states, to design and establish worldwide regulations, rules, and standards. Demonstrative power focuses on how actors exercise power through the transmission of requirements, inducing imitation of actions, products, tastes, and preferences. Lastly, constitutive power emerges from the uncoordinated, but collective actions of individuals and collectives, concerning the establishment of norms and best practices.

A framework related to the GVC and relevant to our discussion is the GPN, led by economic geographers (Henderson et al., 2002; Yeung & Coe, 2015). Its most recent version, GPN 2.0 (Yeung & Coe, 2015), underlines the importance of "actor-specific strategies", determined by the interaction of network actors vis-à-vis an environment of "competitive dynamics". In GPN 2.0, it is not only governance structures and inter-firm relations that matter for the analysis of power in the world economy. Equally important factors are the (strategic) behaviors of economic and non-economic actors within the competitive environment of contemporary capitalism and the strategies those actors form and implement to position themselves in the production network to maximize value creation, retention and capture.

As this research agenda has grown in scale and scope, exporting its research themes to neighboring fields of enquiry such as industrial sociology, international economics and critical accounting, more attention has been devoted to the process of servicification of global production. Previous literature has argued that globalization and international fragmentation of production have resulted in: a) the significant growth of the outsourcing and offshoring of the intangible aspects of global production, with manufacturing firms promoting finer divisions of their production processes and concentrating on core activities; b) the rising importance of the services sector in terms of the value-added content of produced material products c) the

bundling of tangible manufacturing with intangible end-market services (Lodefalk, 2017; Miroudot & Cadestin, 2017). The implications of servicification for global production for GVC are significant. Firms use business service providers to enter, participate, connect, and ultimately gain from GVC and international trade. Hence, business service providers become 'enablers' or 'glues' of GVC, facilitating spatially fragmented manufacturing production processes by providing those necessary services that render them functionally integrated (Reddy et al., 2023; Thangavelu et al., 2018). Additionally, business service firms enable manufacturing firms to upgrade their position in GVC and improve their performance, paving the way for the introduction of new production innovations.

Recent studies on GVC servicification show that manufacturing companies search for the business service of highly specialized providers that would offer them "higher operational flexibility, cost savings, product differentiation, and/or search for greater efficiency" (Blázquez et al., 2020, p. 2/22). In the process, a new international web of intermediate business service providers develops, as international corporations become more complex and specialized both spatially and functionally, introducing, but also capturing, a larger portion of value-added along the value chain (Cadestin & Miroudot, 2020). Coe (2014), for example, underscores the role of the intermediary logistics sector in shaping production networks and contributing to value generation and distribution, as well as upgrading trajectories of territories and actors. Similarly, Faulconbridge (2019) investigates the services of Southeast Asian law firms for transnational corporate clients. Yet the role of the Big Four in coordinating and organizing GVC with the provision of business services like auditing and legal services remains poorly understood. These services are understood as simply an input to client industries, rather than the result of interaction with a critical actor that facilitates global production. We argue that such a view severely limits our understanding of the increasingly strategic role that these service providers play within the global economy.

Studies at the intersection of International Political Economy and Critical Accounting can shed light on the hidden linkages between professional and advanced business services and the growth of GVC. For instance, following a political-institutional approach, Boussebaa and Faulconbridge (2019) emphasize the leading role of the Big Four, and the sector of ABS[1] as "agents of economic globalization" (2019, p. 73). They argue that the latter "influence the nature of particular (Western) institutions (e.g., laws, standards, and procedures) that are used to enable economic globalization" (2019, p. 82). Specifically, they argue that ABS multinational firms develop power strategies that, on one hand, facilitate the design of institutions of economic globalization. This includes the construction of strategic alliances with transnational non-governmental bodies and professional associations, the definition and leveraging of technical expertise, and the implementation of lobbying activities. On the other hand, these firms implement strategies that produce and promote a common worldview about the profession, the infiltration of client organizations and the dismissing of alternatives (Boussebaa & Faulconbridge, 2019).

From a critical accounting perspective, Power (1997, 2024) introduces the term "auditing society" to describe the neoliberal tendency of business and governmental organizations to become increasingly reliable and dependent on quantifiable mechanisms of performance and control, which in turn "shape organizations to be receptive to, and aligned with, auditing and evaluation processes" (2024, p. 4), thus becoming auditable. Similarly, Shore and Wright (2018) stress that the Big Four have significantly contributed to the consolidation of an *audit*

[1] They use the term GPSF.

culture, defined as the "set of economic practices, political technologies and modes of thinking that seek to apply the principles of accounting to ever-wider domains of professional and social life" (2018, p. 318).

Crucial element of the auditing society is the role played by professionals. Prior research suggests that professionals, especially those located in transnational business frameworks, such as those employed by the Big Four, nurture powerful corporate cultures, as accountancy firms promote an *enterprise culture* responsible for the use of illegal or semi-legal practices, such as, cartels, tax avoidance, bribes, corruption and money laundering (Sikka & Willmott, 2010, 2013) and professional practitioners have been instrumental in the expansion of "technological, legal, and political changes that facilitate the international mobility of elites, capital, and ideas" (Harrington & Seabrooke, 2020, p. 400).

From an international political economy perspective, Arnold (2005) uses the WTO and the GATS agreement as case studies in order to describe how the Big Four, through their lobbying activities, have promoted the construction of a global market of accounting and auditing . Likewise, Kalaitzake (2019) explore the role of Big Four with respect to the European Financial Transaction Tax initiative, underlying the intricate relationship between the Big Four and the financial sector, established due to the "tight commercial links and professional interactions that habitually occur between the accountancy/professional service sector and the financial industry" (2019, p. 300). His findings show that the involvement of the Big Four was multifaceted, including not only lobbying activities on behalf of the financial sector (including the design of trading strategies for financial firms that would enable them to evade the FTT), but also providing technical assistance to the EC for the preparatory work for the FTT initiative (2019, p. 321).

Elsewhere, Arnold (2012) investigates the harmonization of accounting standards after the 1997 East Asian crisis, emphasizing the role played by global accounting firms in promoting their interests in accounting reforms. Similarly, Perry and Nölke (2006) focus on the generalization and harmonization of international accounting standards and the work of the non-governmental, international business associations, like the International Accounting Standards Board. Specifically, they note the approaches of Fair Value Accounting and Balance Sheet to auditing, are essential in the transfer of power from enterprise managers towards financial analysts and traders and/or fund managers.

The above approaches provide a rather narrow conceptualization of the ABS that emphasizes their role as either aggressive tax planners, oligopolistic auditors or regulatory and standards-setting political actors. In that way, the literature disregards the role the ABS and the Big Four play in the coordination, expansion, and management of GVC governance structures. These approaches also restrict the analysis to lobbying and political activities, exercised e.g. through professional/business associations or expert groups, but do not address issues of accumulation of power related to the structural position of business service providers in global production. Our analysis closely aligns with the work of Boussebaa and Faulconbridge (2019). However, our original contribution is to encompass the entire spectrum of GVC activities and Big Four activities, while their research is confined to the logic of institutional design, infiltration of regulatory authorities and professional expertise. Furthermore, contrary to the DPS framework, they do not differentiate between the mechanisms utilized to exercise power and actor configurations (collectives-vs-dyadic) present in power struggles. We address these gaps by utilizing a framework of power relations that sheds light on multiple dimensions of power, beyond their influence on designing the institutions of globalization.

3. Data and Methodology

To explore the multiplicity of power of the Big Four and provide empirical evidence on the mechanisms they utilize for the coordination and development of GVC, we employ a mixed methods approach. We engage in close dialogue with lead partners of the Big Four and combine it with quantitative data. The latter were retrieved from corporate websites and annual reports, news articles and special reports from various sources. The complete list of corporate data sources is reported in Section C of the Supplementary Materials file. For qualitative data, we focused on 16 semi-structured interviews with high-profile partners and executives of the Big Four in various locations, as well as two non-Big Four consulting firms. Our interview sample belongs to a larger pool of over 200 interviews of financial markets and advanced business services sector participants, professionals, stakeholders, and regulators carried out between March 2019 and February 2021 in person in China, India, Brazil, the UK, and the US, and online in Mexico and Argentina, due to travel restrictions after the outbreak of the COVID-19 pandemic. We enhance and contextualize insights from the sample of 16 interviews with those from the larger pool of interviewees to obtain a more holistic view of the role of the Big Four in globalized and financialized capitalism and the mechanisms and tools they employ to facilitate and coordinate the development and upgrading trajectories in GVC.

To arrange interviews, we used our networks, corporate websites, and *LinkedIn*. We applied the snowballing technique of asking contacts whether they could introduce us to others. Whenever possible, we targeted executives to gain insight into strategic decision-making. All interviews were semi-structured (Longhurst, 2010), with an average duration of one hour, and were all audio-recorded, transcribed, coded, and analyzed using the qualitative data analysis software *NVivo.* The transcripts were manually coded by the authors, following a narrative-conversation analysis, based on 6 thematic topics: a) the scope of services, b) competition and consolidation, c) business structure, d) financialization, e) digitalization and strategic alliances with other ABS, f) SMEs and startups. The personal and professional details of our interview partners have all been anonymized. To reference the in-text citations and quotes of interviewees, we provide an anonymized list of participants in **Table 1.**

Although we acknowledge the limitations of conducting interviews with actors who often represent the commercial interests of the Big Four, we believe that contextualizing these interviews with those conducted outside of the Big Four, as well as our mixed-method approach in general, allow us to develop a clearer understanding of the multifaceted and dynamic nature of the power of these companies. Our interview questions were designed to minimize the risks of being 'hijacked' by self-serving narratives. Prior to each interview, we shared a list of broad topics (see **Supplementary File**) with our interviewees, centered around issues such as, globalization and financialization, their impact on the advanced business services sector, the challenges of post-crisis banking regulation, and the evolution of financial centers.

We often allowed our interview partners to drive the conversation, whenever we deemed it beneficial to our research. We did not take for granted what the Big Four actors assumed or claimed. Our interview partners seemed fully aware of our position as critical social scientists, and in most cases spoke about themselves and their employers in an open and reflexive manner. As such, our approach builds on the benefits of 'close dialogue' (Clark, 1998; Clark&Wójcik, 2024), which is a particularly valuable strategy as it allows each interview partner to spend more time on issues they were most familiar with and considered most important to the topic. In summary, both our quantitative and qualitative data come from within and outside the Big

Four, which allowed us to compare our evidence on the manifestations, instances, and experiences of the power of the Big Four in GVC. Supplementary materials, including the interview guide and codebook, are available at https://github.com/panagiotisiliopoulos/GN_TheBigFour_SupplementaryMaterials/blob/main/SupplementaryMaterials_GN_RR.docx

Table 1 Data Sources Summary

Anonymized List of Interview Partners

Interview Partner (IP) Reference	IP Region	IP Country	IP Firm	Interview Date
IP_01	Asia	China	Firm 1	Aug-19
IP_02	Asia	China	Firm 2	Sep-19
IP_03	Asia	China	Firm 3	Sep-19
IP_04	Asia	China	Firm 2	Sep-19
IP_05	Asia	China	Firm 4	Sep-19
IP_06	Asia	India	Firm 4	Feb-20
IP_07	Latin America	Brazil	Firm 4	May-19
IP_08	Latin America	Argentina	Firm 4	Mar-19
IP_09	Latin America	Mexico	Firm 4	Mar-20
IP_10	Latin America	Mexico	Firm 2	Mar-20
IP_11	Latin America	Brazil	Firm 3	May-19
IP_12	Europe	UK	Firm 1	Feb-21
IP_13	North America	USA	Firm 2	Mar-19
IP_14	North America	USA	Firm 4	Feb-21
IP_15	North America	USA	Firm 5	Mar-19
IP_16	North America	USA	Firm 6	Apr-19

Source: Own Illustration. *Notes*: We have fully anonymized our interview materials. The choice of firms' ordering and naming in this table is random. The full reference list is provided in the Supplementary File.

4. The Multiplicity of Power of the Big Four: How they reshape GVC

The investigation of the multiple dimensions through which they accumulate, and exercise power requires, on the one hand, an analytical framework that shifts the focus of research to the organization of global production and GVC, and on the other, recognizes the possibility of multiplex configurations of power relations between economic and non-economic actors. In this study, we contend that the DPS framework satisfies these properties and is essential for uncovering the paths through which the Big Four exercise accumulate and exercise their power, for three reasons:

1. The DPS framework distinguishes between two critical dimensions of the exercise of power, namely the *arena of actors* and the *transmission mechanisms*. As such it helps to unveil hidden dimensions of power between economic and non-economic agents in globalized capitalism and thus identify mechanisms that might over-determine outcomes of trade along the lines of GVC, such as upgrading/downgrading, value distribution, etc.
2. It is designed to incorporate power conceptualizations that are both *dyadic* and *collective*, as well as *formal* and *informal*, *coercive,* and *un-intentional*. Consequently, the broader structural features of GVC and the influence of regulatory frameworks, social and economic standards and trends, and other dynamics relevant to GVC governance structures are not neglected.

3. Constituent parts of the DPS power typology are not mutually exclusive, allowing for the co-existence, dynamic interaction, and historical transformation of one type of power into another. This flexibility of the framework minimizes the risk of missing cases that do not involve clearly defined actors who, instead of possessing resource-based power, take advantage of socio-political situations, norms and conventions, which allow them to accumulate and exercise power in global production (Dallas & Shiu, 2023).

In what follows, we investigate the multiple dimensions in which the power of the Big Four is manifested through and within GVC, using the DPS power typology, as illustrated in **Figure 1**, and we explore how the exercise of such power by the Big Four is reshaping critical elements of the governance structures of GVC.

Trasmission Mechanisms			
Arena of Actors		**Direct**	**Diffuse**
	Dyadic	*Bargaining Power* • Through actor-to-actor relationships. • Multidisciplinary Practice Firms (MPFs) acting as 'one-stop-shops' and 'body-shops', for private and public clients. • Exerting oligopolistic power in the market, built on economies of scale, scope and networks.	*Demonstrative Power* • Through former, current and future employees. • Ticket to the upper middle-class and the ladder for future corporate executives. • Revolving doors for government positions.
	Collective	*Institutional Power* • Through multi-level standard-setting and lobbying activities. • Key players in IFRS, IASB, and ACCA shaping the standards of accounting, audit, and financial management. • Players in GFMA and ISDA, contributing to broader financial sector lobbying.	*Constitutive Power* • Through generalisation of norms and best practices. • Audit culture and financialized business models. • Anglo-American expertise and hegemony.

Figure 1 Typology of Power of the Big Four

Source: Own Illustration. *Note*: Adapted from Dallas, et al. (2019, p. 673) and modified by the authors.

4.1. Bargaining Power

The bargaining power of the Big Four stems from the possession of specialized resources and their structural characteristics with respect to the scope of the services they provide to clients. The highly concentrated market of consulting, auditing, and tax services globally, as well as the magnitude of the economies of scale, scope, and network of the Big Four, are the most important aspects of their bargaining power. Focusing exclusively on the market that the global accountancy and multi-services companies have established, the situation can be characterized as an oligopoly.

In the early 1980s, there were eight global accountancy firms, whereas today we have only four. This is mainly the result of successive mergers and acquisitions. This has been illustrated

as an ongoing process by our interview participants. IP_01 confirms that all the Big Four are acquiring many "second tier or mid-tier consulting firms", as well as "a lot of law firms as well, so that means [we] enter into law business as well" (IP_01). Similarly, IP_15 who represents a non-Big Four consulting firm situated in the US, highlights the trend of consolidation stating that "we've seen a lot of consolidation, we saw each of the Big Four really acquire some consultancy ability […] E&Y acquired *Parthenon*, PwC acquired *Booz & Company* to become *Strategy And*, and Deloitte, it is growing in the space as well" (IP_15).

Whereas in their core services markets (auditing and accounting) the Big Four might face limited competition, this is not the case in other market segments, where specialized leaders in financial services, business strategy consultancy (e.g., Accenture) and IT transformations (e.g., IBM or Alibaba) compete with the Big Four. However, what the Big Four do more effectively is to put all these diverse services together to help their clients insert themselves into GVC, a competitive advantage that no other firm in the world can match. Mazzucato and Collington (2024) talk about the ability of multinational consulting companies to exploit not only their extensive client networks and business connections with firms and governments, but also the necessary financial resources and market power to artificially keep the costs of contracts low in order to secure tenders of consulting contracts, a tactic that is known as lowballing. Various interview participants have identified such a power attribute by noting that the Big Four are professional services "body-shops", which can give a "total solution" (IP_03) to clients or an "integrated proposition" (IP_09), that no other specialized law or consultancy firm can offer. This is also highlighted by IP_11, who describes how his/her Big Four firm won a project from a non-Big Four consultancy firm: "We recently won a project to [non-Big Four competitor] … because we had tax services and forensic services and we needed to provide tax services as well some due diligences and [non-Big Four competitor], they only have the strategic side, and we had a lot of additional services to serve our clients" (IP_11).

Data show a high degree of oligopoly power of the Big Four in specific market segments. They audit 97 of the world's top 100 firms in terms of market capitalization (PwC, 2020). They audited 171 out of 229 companies that went public in the US in 2020 (Ntiamoah, 2021). A report of the European Commission (2017) on the monitoring of the EU market for statutory audit services to Public-Interest Entities (PIEs) shows that the Big Four have, on average, a market share of 70%. If we concentrate on the market concentration of the top 10 key audit players[2], the market share for the Big Four increases to 80% of the total EU audit market, with Deloitte having 23.2%, PwC 18.0%, KPMG 15.8%, EY 11.6%, while the next firm, Mazars, has a mere 3.7% (European Commission, 2017, p. 8). In the consulting services market, the Big Four are estimated to command 37.4% of the global market, with the next top 6 firms only 19.2 % (Healey et al., 2019). Their revenues from consulting services were $63bn, compared to $122bn by the top 10 specialized (non-Big-Four) consulting firms combined (The Economist, 2021).

Yet another element that enhances the bargaining power of the Big Four, is the intricate relationship they nurture with the world of finance. Since the Big Four have expanded their repertoire of services to financial markets, they have become "obligatory passage points" in global financial networks, assisting capital provision to firms. Financial geography (Pažitka et al., 2022) defines "obligatory passage points" as APS firms that position themselves within financial networks to extract oligopolistic rents from transactions. These APS firms include

[2] The other six Key Audit Players (KAP) and their respective market shares, are: Mazars (3.7%), BDO (3.1%), Grant Thornton (2.0%), Baker Tilly (0.6%), Nexia (0.6%), Moore Stephens (0.4%), whereas the rest of the market is covered by other smaller audit firms (20.9%) (European Commission, 2017, p. 8).

specialized financial firms, such as investment banks, brokers, stock exchanges, financial infrastructures, but also business service firms in accounting, auditing, legal, tax planning, that provide necessary complementary activities that make possible financial transactions. The Big Four provide complementary financial services to corporate clients under the same organizational roof. They act as the gatekeepers of financial markets, conducting all the necessary paperwork for corporate clients in need of finance. In doing so, they help impose financial discipline on market participants, both on the demand and supply side of financial markets. Consequently, they fine-tune financial transactions raising the mobility of capital and reducing the cost of finance.

Evidently, the above is not independent of the financialization of the global economy, as a process of escalating influence of financial motives, markets, and institutions in modern economies (see also, Chiapello, 2017; Froud et al., 2014; Gleadle et al., 2014). Mazzucato and Collington underscore that financialization has increased the "pressure from shareholders for companies to improve productivity, further increasing the demand for new ideas and techniques that the consulting industry promised would lead to improved profit margins" (2024, p. 50). As an illustration, Wójcik & Camilleri (2015) analyze the evolution of the Chinese national telecommunications provider, China Mobile, and its interconnections with the global financial system, to highlight the centrality of the Big Four in the process of underwriting an Initial Public Offering. They document how accountancy firms act as "key assistants" to investment banks. This symbiotic relationship between the Big Four and financial services companies, like investment banks, has been noted by many interview partners (IP_01; IP_04; IP_13). Interviewee IP_04 points out that this symbiotic relationship between the Big Four and investment banks is not immune to conflicts and competition: "we are sometimes working together with the investment bankers, but sometimes we are in direct competition as well. [I]n terms of the smaller size clients […] we are in direct competition with the bankers" (IP_04).

The Big Four's influence extends beyond market consolidation and oligopolistic power. Drawing on their significant bargaining power, the Big Four drive business transformation and outsourcing activities, thus reshaping the structure of GVC. For example, the Big Four affect business transformation, by advising on strategy development and execution and providing other consulting services that support GVC. They help firms to identify new opportunities for growth and expansion, and to optimize their operations to achieve greater efficiency and profitability. They provide a range of services that help suppliers improve their operational efficiency and quality, reduce costs, and increase innovation. These services may include supply chain management, inventory management, quality control, and technology consulting, among others. This is particularly important for lead firms in GVC, which must navigate complex market conditions and regulatory environments across multiple jurisdictions. The Big Four also play a crucial role in facilitating the flow of information and knowledge across GVC. They provide market intelligence, data analytics, and other services that help companies to identify new opportunities and mitigate risks. This helps to ensure that GVC remain dynamic and adaptive, even in the face of changing market conditions and geopolitical risks.

Another key role the Big Four play in GVC is related to offshoring and outsourcing. Whereas the Big Four often act as *outsourcees* and offer general and industry-specific business services directly to global clients, they also act as drivers of offshoring/outsourcing by bringing together businesses and specialized services providers. Put simply they act as key organizers of services offshoring/outsourcing, forming strategic alliances with other business service providers that have greater expertise in performing specialized tasks, as well as bundling, customizing, and

co-providing business services to corporate clients. Every Big Four has established an *outsourcing advisory service* line which supports the development and organization of IT and Business Processes outsourcing of business clients. As an example, the Big Four have established strategic alliances with Big Tech companies and other specialized providers in human resources, supply-chain management, financial services, accounting, etc. All the Big Four have established alliances with tech firms that specialize in business solutions, cloud computing, data analytics, cybersecurity, supply-chains operations, and others. The Big Four not only use new technologies for enhancing their core services like cloud platforms or AI, but also become promoters and facilitators of technological transformation for other businesses.

Many interview participants have stressed the role of strategic alliances with specialized business service firms in the IT and software sector. Interviewee IP_04 describes the strategic relationship of his/her firm with a global Big Tech company, that they not only sell services to that company, but also collaborate with it and sell the resulting advisory services to other clients. Likewise, interviewee IP_01, notes that "we do work with [software company #1], [software company #2], [software company #3] … where clients buy their technology solutions, software or hardware [and we] provide the implementation. Because all those packages you cannot just like, it's not like you go home, you just hook up TV and you watch. In the business, you have to kind of customise or reset some stuff to make sure it works with that sector, industry, and that customer specific requirement. So, we do a lot of that kind of work together with hardware and software companies" (IP_01).

Commenting on the ability of the Big Four to facilitate the seamless interface between business clients and specialized business service providers, IP_11 mentions that "in the last five years we've worked with package implementation, like [software company #1], [software company #2], [software company #3], and now we have a lot of demand, mostly in the financial sector, for agile development, so for agile development we need to have a bunch of programmers and coders, that must be very, very low cost, and they are very narrow and deeper in one technology like [inaudible 0:13:26], or the micro services development, and programming languages" (IP_11). Integrating the supply- and the demand-side of business services outsourcing and providing the necessary means for the smooth implementation and customization of those services according to the business needs of their clients, makes the Big Four function as outsourcing/offshoring platforms offering holistic business solutions.

This attribute of the Big Four to act as business services 'body-shops' or as Greenwood, et al. (2002) describe it, an "one-stop-shop", is emphasized by IP_09 when he/she compares the other global consulting firms with the Big Four: "…when you see an integral proposition coupled with the legal opinion, the tax view, processes, risk, compliance and all together it's very difficult to compete with a proposition which is around them. So, I think where we are competing is in these type of propositions where we go, not only with one services but with one integrated proposition" (IP_09). Bringing together buyers-suppliers of business services, the Big Four also play a critical role in establishing and enforcing contractual agreements among GVC actors. They help design contracts that align the incentives of different actors, reducing the risk of opportunistic behavior and ensuring that all parties benefit from their participation in the chain.

In summary, the Big Four use their significant bargaining power not only to dominate specific market segments but also to drive business transformation and outsourcing as well as provide access to finance. By providing integrated solutions, forming strategic alliances with other business service providers, customizing, and co-providing business services to corporate

clients, they reshape the structures and governance of GVC, reinforcing their pivotal role in the global economy. This multifaceted influence underscores their capacity to reshape GVC.

4.2. Institutional Power

The institutional power of the Big Four is exercised through global professional and business associations, like the International Financial Reporting Standards (IFRS) and the International Accounting Standards Board (IASB). These international organizations promote political, institutional, and regulatory coherence in global economic transactions, particularly in relation to governance and reporting standards. As such they challenge and complement the role of state actors to shape and implement regulatory authority.

Additionally, the Big Four are active lobbying machines promoting the interests of their clients and their own, operating through multi stakeholders' initiatives, agenda-setting, and policy-making institutions. Their role as political actors, influencing the regulatory and institutional context within which the GVC are shaped, is also important for theorizing their power. We identify two channels of influence of the regulatory and institutional context, through which the political role of the Big Four is manifested.

- The first channel focuses on the influence of business and professional associations, in which the Big Four are direct members, including the IFRS, the IASB, the ACCA and national professional organizations. Through this channel, the Big Four are able to exercise institutional power in order to set international professional standards, particularly international accounting, and financial standards, as well as promote corporate best practices. According to the database of the Office of the Clerk (2022) of the US House of Representative that gathers data on the lobbying activity of companies in the US Congress, only for the tax year of 2021, the Big Four disclosed 64 lobbying reports for issues related to the reform of auditing and accounting legislation and standards-setting. Among the issues the Big Four lobbied for in 2021, were the independence of accounting standard setting from Congressional intervention, the degree of transparency behind disciplinary proceedings that involve audit control failures, and the Environmental, Social and Governance requirements that should complement financial reporting of SEC registered companies (Thomson Reuters, 2021).

- The Big Four have also become an integral part of multilateral institutional *fora* and Inter-Governmental Organizations (IGOs). This second channel involves their indirect role in influencing the agenda of IGOs (e.g., WTO, IMF, European Union, etc.), as well as governmental and regulatory authorities at the national and sub-national level. Designing and carrying out lobbying activities, either for their own corporate interests or on behalf of individual and collective corporate clients, the Big Four have influenced public policy at multiple scales. For example, the European-based NGO Corporate Europe Observatory (2018), investigated the impact of the Big Four on the EU tax legislation, indicating various means of influence through which they promote their own corporate interests, but also the interests of their clients. According to the report and the EU Transparency Register database, which records and authorizes lobbying activities, the Big Four have 57 entries in total (CEO, 2018, p. 7). Deloitte declared 10 lobbying entities from 9 different EU countries and 34 lobbyists; PwC one entity with 11; EY one entity with 6; and KPMG one entity with 6. The total amount of money spent in 2018 for lobbying activities in the EU, according to the CEO report, was

between 2.5 and 3.3 million euros. Furthermore, the Big Four participate in 'advisory groups' established by the European Commission, to advise the latter on policy making. Moreover, they have established tax-related lobbying groups and professional associations that "are actively trying to influence EU policy responses to tax avoidance" (2018, p. 11), whereas only in 2016 the Directorate-General for Taxation and Customs Union paid "for tax-related contracts … the Big Four nearly 8 million euros" (2018, p. 10).

The institutional power of the Big Four if further reinforced by their dominance in national and international associations that focus on the training and professional representation of auditors and accountants. For example, out of the 28 council members of the Association of Chartered Certified Accountants (ACCA) – a global association of chartered professional accountants - 14 work or have worked for the Big Four. Likewise, as we mentioned in the previous section on bargaining power, the Big Four have established preferential institutional and political linkages with the financial sector, playing a key role in the constituent associations of GFMA and ISDA, thus demonstrating their collective power in the broader financial and business services sector.

What particular benefits do the Big Four firms gain from their institutional power, and how do they utilize it with respect to GVC? Leveraging institutional power, the Big Four firms help companies navigate the complex legal and regulatory environment of GVC and ensure that their operations comply with the regulatory, legal and tax requirements and laws applicable in multiple jurisdictions. This is particularly relevant for global firms that participate in GVC, which span multiple national and regional jurisdictions, with varying legal and regulatory frameworks. Crucial to the operation of the GVC, the Big Four have developed organizational capabilities and professional expertise to satisfy demand for general and specialized business services, irrespective of the geographical location or the functional specialization of their clients. Important in this respect is the scale and scope of the Big Four capabilities. For instance, interviewee IP_04, referring to the implementation of the regulatory obligations that arose with Basel III and Solvency II initiatives, emphasizes how cost-effective it is for a Big Four firm to have an experienced and skillful team that implements regulatory transformation for many clients, instead of recruiting a separate team for every client (IP_04). Likewise, IP_03 highlighted the scale effects of having an international network of specialized employees, stating that "we try to leverage our international network and try to get the resources from other centers and see how we can help the clients. So, I think the clients see we have that kind of capability and that's the reason why they come to the Big Four" (IP_03).

4.3. Demonstrative Power

Whereas bargaining and institutional power are exercised through direct transmission channels, demonstrative and constitutive power involve more diffused and informal paths. Dallas, et al. (2019), indicate that individual actor preferences, tastes, generalized norms and best practices, are fundamental factors for the identification of demonstrative and constitutive power, respectively.

In the case of the Big Four, demonstrative power is channeled through the professional trajectories of employees and executives. Demonstrative power, in this sense, is not exerted directly through formal organizations like IASB or ACCA, but indirectly, by the virtue of the influence of the Big Four professionals who contribute to public debate, teach accounting, audit and business, and work in the private and public sector, including the government. Chief

accountants but also CROs, CFOs, and other members of the C-suite, particularly in large private companies, often come from the Big Four.

Revolving doors represent another way through which demonstrative power is manifested, with high-ranked personnel swapping positions from the private to the public sector, and vice versa. For Seabrooke and Tsingou (2021) the practice of revolving doors is critical for convincing political and economic elites "how policy knowledge is crafted and implemented", while simultaneously gives elite policymakers "access to networks where they can either affirm their predispositions or try and convince others of their relevance" (2021, p. 295). The special report of the CEO records dozens of cases in which former Big Four professionals were recruited by the Directorate Generals for Taxation and Customs, and for Financial Services (CEO, 2018, p. 19).

This 'army' of professionals scattered around the world shapes an *epistemic community* present in global firms, financial institutions, international associations, and governmental bodies, shaping, and promoting a specific professional and business culture. Working for a Big Four brand means professional and social prestige, and handsome remuneration. The Big Four offer good pay and a clear path for career development. For thousands of employees around the world, working for one of the Big Four is like winning a ticket to the upper middle-class or an assurance to stay there, with an option for progression within the structures of the global executive and business world.

Accounting and auditing services – the core business services of the Big Four firms - are fundamental to the conceptualization of demonstrative power. With *accounting* services, we define "the processes of organizing, analyzing, and communicating financial information that is used for decision-making" (Franklin et al., 2019, p. 12), such as financial reporting of economic activity, preparation of financial statements that are available to external users like investors, business partners, stockholders, employees, regulatory and tax authorities, and so on, and recording of financial transactions through bookkeeping. *Auditing* services refer to control processes that ensure that the financial records of a company are accurate, reliable, unbiased, and consistent with the relevant applicable rules, regulations, and laws.

In market economies, accounting firms play a crucial role in reducing information asymmetries such as adverse selection and moral hazard (Mishkin & Eakins, 2012). They provide "an independent assessment of the accuracy and fairness with which financial statements represent the results of operations in accordance with generally accepted accounting principles" (Hope et al., 2012, p. 502), supporting the confidence of market participants, shareholders, employees, the state. Accounting and auditing is a "social utility that builds trust and legitimacy in firms and organizations" (Leaver et al., 2020, p. 6). Operating globally the Big Four can thus facilitate the flow of valuation information across different stages of GVC.

Reporting and verifying the validity of the financial information of businesses also affects the performance of enterprises. El Ghoul, et al. (2016), for example, show that the choice of auditor matters for the cost of capital, with an advantage for firms selecting the Big Four. Hope, et al. (2012) show that such an advantage applies also to non-publicly-traded firms, as they communicate their financial and operational viability and gain access to investment markets. Audit quality also minimizes the enterprise risk and lowers the cost of supply chain processes, by presenting a more accurate view of the company's financial situation, and improves the efficiency of financial markets (Alzeban & Gwilliam, 2014; Power, 2003).

Given that performance criteria and control systems in capitalist firms have taken the form of quantifiable measures denominated in monetary terms, Big Four professionals, through their everyday practice of accounting and auditing, are able to frame the corporate governance configurations and legitimize business strategies that eventually promote GVC articulation as the imperative goal of international competition and economic efficiency. Power's (Power, 1997, 2022) thesis of 'auditing society' speaks directly to the above conclusion, when he postulates that the growth of corporate systems of performance and control and the accounting and auditing technology have resulted in the spread of "systematic tendencies for organizations to orient their internal processes around accounting requirements and to make themselves 'auditable'" (2022, p. 4). As firm actors adhere to the logic of auditability, they unintentionally align their internal decision-making mechanisms with the accounting frameworks, judgments and worldviews of the accounting/auditing professionals they hire and thus become more "governable" (2017, p. 58).

The demonstrative power of the Big Four is not static in nature. On the contrary, it is constantly nurtured by the Big Four through specialized training initiatives. Each of the Big Four firms has developed extensive relationships with leading business schools around the world, offering job opportunities through graduate programs or even specialized post-graduate education options. According to a recent report from the *Wall Street Journal* (Thomas, 2021), the Big Four and other ABS are collaborating with universities and business schools to "ensure their new-graduate hires are ready from the start or their existing employees have the skills to move onto bigger roles" (2021, p. 1). For instance, Deloitte US has developed the Graduate School Assistance Program, which offers the opportunity to consulting professionals to attend top graduate schools in the country (Deloitte, 2021a). Meanwhile, it also offers full-time employment opportunities, as well as internships, competitions, scholarships, and conferences to undergraduate and graduate students (Deloitte, 2021b).

Finally, the Big Four have established tailormade academic programs for their potential and current employees. EY for example, offers a virtual corporate Tech MBA with the collaboration of Hult International Business School (EY, 2021). PwC is collaborating with D'Amore-McKim School of Business at Northeastern University providing a Master of Science Management (MSM) degree (Northeastern University, 2021), whereas KPMG has established a tax KPMG school and a master's program in accounting (KPMG, 2012, 2019). At the Economic University in Cracow (Poland), one of the leading centers of BPO and ITO, EY is one of the main partners of a recently launched Global Business Services undergraduate program (Global Business Services, 2022). Consequently, it is not surprising that all the Big Four have stayed in the top-10 list of the world's most attractive employers for almost a decade[3], whereas three of them (Deloitte, PwC and EY) are among the top-100 global most valuable brands (Forbes, 2021).

4.4. Constitutive Power

According to the DPS typology, constitutive power is an indirect type of power that is collectively diffused, in the form of the generalization of norms and best practices. In the case of the Big Four, constitutive power can be identified if we conceptualize these firms as a group,

[3] Universum is a Swedish employer branding specialist. For the last 12 years they have conducted a global survey among business and engineering/IT students (approximately 200,000 career seekers) in the world's 12 largest economies (Canada, USA, Brazil, France, United Kingdom, Germany, Italy, Russia, India, Japan, China, Korea) identifying the most attractive employers. In 11 out of 12 surveys, the Big Four are among the top-10 employers. Only in 2020, KPMG fell to the 12th position of the list (see **Supplementary File**).

transcending their unique firm-level characteristics and the cultural gravitas that their brand names impose. Chiapello (2017, p. 58) has argued that "accounting techniques are systems for production of knowledge constructing actors' worldviews and informing their action, systems built on chosen conventions that are part of particular economic views and theories of the world and are subject to debate and change". As a consequence, instances of constitutive power can be found in the professionalization process they promote as well as in their strategic involvement in the design and promotion of an audit and enterprise culture, and more generally the production and reproduction of a neoliberal, globalized, outsourced/offshored and highly financialized, business model (Chiapello, 2017; Shore & Wright, 2018; Sikka & Willmott, 2010, 2013).

Exercising constitutive power, the Big Four have become essential partners of the corporate world in terms of promoting business resilience solutions, most recently highlighted by the COVID-19 pandemic and the climate change crisis. Dealing with the pandemic crisis, mitigating the financial and regulatory risks and costs of climate change, managing supply chains, and even facilitating the legal and regulatory aspects of banking relocations precipitated by Brexit, are only a few of the ready-to-use service templates of the Big Four. For instance, KPMG offers a menu of services tailormade for facilitating the legal and regulatory aspects of banking relocations (KPMG, 2021). PwC advertises business solutions that strengthen business resilience in light of the pandemic crisis, concentrating on services that minimize production disruptions in supply chains, finance and liquidity shortages and tax, trade and regulatory challenges (PwC, 2021). In the climate change front, Deloitte offers services for sustainable and climate change management that provide "CSR governance, strategy, information disclosure … [and]…report assurance services" (Deloitte, 2021c). Interdisciplinary research has illuminated the pivotal role of the Big Four in the commoditization of carbon and the establishment of carbon market infrastructures and institutions (Lovell & MacKenzie, 2011), as well as the creation and simultaneous satisfaction of the demand for climate change expertise, environmental management solutions, even the invention of the ESG framework (Christensen & Collington, 2024; Mazzucato & Collington, 2024).

5. Conclusions

Our paper argues that there is a need to supplement the existing understanding of global production in GVC/GPN perspectives with an analysis of the role of ABS firms, particularly the Big Four. Employing a mixed-methods approach and a wealth of quantitative and qualitative data, we recognize the influence and power exercised by the Big Four, as well as their coordinating role in global production as business service intermediaries. Specifically, we map the manifestations of the power of the Big Four into four types - bargaining, demonstrative, institutional, and constitutive - and reveal the procedures through which the exercise of power drives and (re)shapes the structures and governance regimes of GVC. Thus, we provide a new perspective in the analysis of the dynamic exchange between ABS firms and fundamental research themes in GVC/GPN, including upgrading and governance.

In this paper we followed the DPS analytical framework, drawing on the existing literature on governance structures and power in global production. We argue that the DPS framework is instrumental in analyzing the intricate dynamics of power within GVC. It offers several advantages that enhance our understanding of power relations, among others, providing a comprehensive approach that allows a nuanced analysis of multiple power dimensions, incorporating both direct and indirect types of influence. Furthermore, this holistic perspective

is crucial for capturing the complexities of power interactions that traditional frameworks often overlook. Finally, the power typologies of the DPS framework are not mutually exclusive, allowing for dynamic interactions between different types of power, providing greater flexibility to the researcher.

However, despite its strengths, we highlight that the DPS framework is not without limitations. One significant shortcoming is the potential for overgeneralization. Although the framework aims to be broadly applicable, this can sometimes lead to a lack of specificity in certain contexts. Additionally, the DPS framework may require further refinement to address emerging forms of power dynamics in the digital age, where traditional notions of power are continually evolving. Reflecting on the above, it is crucial to keep in mind that while the DPS framework is a powerful tool for analyzing power structures, it must be applied with a critical eye and supplemented with other theoretical perspectives when necessary.

Several challenges remain to be addressed in future work. As mentioned, the DPS power categories are not mutually exclusive, as one type of power can co-exist with another. Nevertheless, the present paper does not explore the possibility of one type of power evolving into another. Addressing this issue would require following a research path that combines historical and political economic approaches, to unravel the economic, institutional, and political developments that allowed direct and dyadic forms of power relations to gradually evolve and diffuse into general and collective practices and norms. Second, the role of finance in the Big Four activity and their power needs more research. Studies in the literature of financial geography have viewed the Big Four as an integral part of the global financial system (Coe et al., 2014; Wójcik, 2013, 2018), highlighting their mediating role through auditing, accounting and other financial services they provide to both economic and financial actors. Shedding light on the specificities of this special connection between the Big Four and financial actors, would expand their definitional scope, viewing them not only accounting and professional services corporations, but also as financial and business service firms that play a central part in global finance.

The Big Four pose significant challenges with respect to issues of oligopolistic power and potential market abuse. Many attempts have been made by national and multi-national regulators and policymakers to tame the power of Big Four, by introducing, either strict rules for conducting business that includes more than one service line (e.g., mandatory audit rotation), or legislation that separates auditing from consultancy, in order to reduce probable conflicts of interest (e.g., the Sarbanes-Oxley Act in the US). Based on our findings, we propose two sets of policy recommendations aimed at addressing power imbalances and enhancing the accountability and transparency of the Big Four.

First, strengthening public sector institutions, by increasing the human and technological resources available to regulatory and tax authorities. By doing so, these bodies can conduct speedier investigations, more effectively apply regulatory rules, and match the resources available to private sector entities, including the Big Four (Mazzucato & Collington, 2024; Sikka, 2018). Mazzucato and Collington (2024) have described the process of *infantilization* of public (and private) organization, as the increasing dependence of organizations on contractors and consultants which ultimately erodes entities from in-house knowledge and institutional memory. Reversing the trend of infantilization requires the rebuilding of capabilities and the regaining of the critical knowledge and capacity to deliver services to citizens and function properly across various areas. One way to achieve this is to reduce public sector's reliance on large-scale contracting and outsourcing of service delivery, as well as to

nurture partnerships with other public organizations, universities, and research institutions to rebuild and enhance its internal capabilities (Mazzucato & Collington, 2024).

The second recommendation is to introduce stricter regulations and transparency rules in order to reduce conflicts of interest and enhance the integrity of the Big Four's operations. Simple restrictions on the extent of services cross-selling by the Big Four will not suffice to tame the huge economies of scale, scope and networks. One key measure could be the implementation of a complete ban on the cross-selling of auditing and non-auditing services in order to prevent conflicts of interest, ensure the independence and objectivity of auditing functions, but more importantly to reduce the market power of Big Four. Another crucial measure involves mandating comprehensive disclosure of the Big Four firms' business practices and clientele, particularly in sensitive areas such as business consulting, government decision-making and services provision, and financial transactions. Enhanced disclosure requirements, like those applied for publicly traded companies, could significantly raise transparency of and public trust in the work of Big Four. Implementing these policy recommendations, we can address existing power imbalances and promote a more transparent, accountable, and ethical operational environment for the Big Four. Strengthening public sector institutions and introducing stricter regulations will help ensure that the influence and power of these firms are exercised in ways that benefit society as a whole.

Data Availability Statement

The interview recordings and transcripts cannot be shared to preserve the confidentiality of respondents' identities and responses. However, research materials, including the interview guide and codebook, are available at:

https://github.com/panagiotisiliopoulos/GN_TheBigFour_SupplementaryMaterials/blob/main/SupplementaryMaterials_GN_RR.docx.

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Supplemental Online Materials

The Big Four: Multiple Functions and Power in Global Value Chains

This file is the Online Supplementary Materials to the manuscript "The Big Four: Multiple Functions and Power in Global Value Chains". In Section A, we gather some basic summary statistics for the Big Four regarding their network of offices, the number of employees and gross revenues. In Section B, we have a sample of the questions asked during the interviews. In Section C, we have included the codebook used in Nvivo software for coding our interviews. In Section D, we present the complete list of the corporate data sources (annual reports, press releases, etc.) used in the paper.

Section A

Table A1 The Big Four at a glance

	Deloitte	PwC	KPMG	EY
Number of Countries	136	143	128	141
Number of Cities	683	645	684	639
Number of Offices	743	713	733	750
Number of Employees	312,000	276,005	219,281	284,018
Gross Revenues ($bn)	50.4	45.1	32.1	40

Source: Own Calculation. *Data*: Corporate websites, selected annual reports and press releases, and for employment data for 2004, Cruz (2014). Notes: The gross revenues correspond to 2021, whereas the other variables to 2019.

Section B

Questions guiding semi-structured interview with the Big Four professionals:

1. What is the organizational structure of [your company] globally, in terms of groups of services, sectors, ownership and geographies? What is the role of global and regional headquarters within that structure?
2. How much autonomy do different parts of [your company] have? How integrated is [your company] internationally, and how has it changed over the last decade/s?
3. What are the driving factors of the relative performance of [your company] in relation to other Big Four companies in terms of gross revenues? How do these factors differ between groups of services and geographical regions?
4. How has the market share of [your company] changed over the last decade in various groups of services and markets?
5. How important are services for governments and the public sector for [your company]?
6. Do you expect further expansion in the global office network of [your company]?
7. What are the main challenges [your company] has experienced because of the pandemic?
8. What are the key threats and opportunities facing [your company] in the future?
9. Do you think the influence of the Big Four on the world economy has changed over the last decade/s?
10. Over the next decade do you foresee any changes in the role that the Big Four firms play in the world economy?

Section C

Interviews Codebook (Nvivo)

Name	Description	Sources	References
Competition and Consolidation	Comments referring to the competition pressures in the markets of accounting, auditing, business consulting services and the trend of consolidation and M&As.	9	13
Digitalization and Strategic Alliances	Comments referring to the process of digitalization and the formation of strategic alliances with other Advanced Business Services firms and BigTech firms.	10	17
Financialization	Comments referring to the process of financialization as the of the global economy, as a process of escalating influence of financial motives, markets, and institutions in modern economies	7	10
Horizontal Integration and Business Structure	Comments referring to the internal business structure of the Big Four firms.	8	12
Scope of Services	Comments referring to the menu of services provided by the Big Four firms (economies of scale, scope and network).	11	21
SME and Startups	Comments referring to small and medium enterprises and startups.	3	5

Section D

The quantitative data used in this paper were manually collected by the authors from the respective corporate websites, as well as from selected global annual reports and company press releases. The list of those sources is the following:

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