Outsourcing in the UK television industry:

A global value chain analysis

Author's name and address:

Professor Jean K. Chalaby
Department of Sociology
City, University of London
London EC1V 0HB
Tel: 020 7040 0151
Fax: 020 7040 8558
Email: j.chalaby@city.ac.uk

Author biography:

Jean K. Chalaby is Professor of International Communication at City University London and former Head of Sociology. He is the author of *The Invention of Journalism* (1998), *The de Gaulle Presidency and the Media* (2002) *Transnational Television in Europe* (2009) and *The Format Age: Television's Entertainment Television* (2015). He is the editor of *Transnational Television Worldwide* (2005) and has published extensively in leading journals on a wide range of media-related topics

Abstract

The aim of this study is twofold. First, it identifies outsourcing as a growing trend in the media industries: as leading media corporations integrate vertically and invest in segments that increase their asset specificity, they are also withdrawing from other segments and delegating a growing number of tasks to suppliers. This article uses the United Kingdom as a case study to demonstrate that while broadcasters are investing in TV content production, they are also stepping away from technology investments and media delivery tasks. It is a significant phenomenon that contributes to redefine the scope of companies whose engineering know-how was part of their core activity. Then, this article analyses the consequences of outsourcing as it contributes to vertical disintegration and the formation of global value chains in the media industries. It is also creating power asymmetries between lead firms and suppliers that have an impact on the type of M&A activities these companies pursue. The second contribution is theoretical in scope, as this article aims to state a case for GVC analysis in media and communication studies, showing the benefits of placing the evolution of the media industries in the context of long-term trends in the world economy.

Keywords

Global value chain (GVC) analysis, Media industries, Media globalization; Outsourcing, Segmentation, Vertical disintegration

Introduction: Applying the GVC framework to the media industries

At a time when technology and market forces are transforming the media industries apace, understanding firm behaviour and a rapidly changing industry structure can be challenging. Many of these driving forces have already been identified. Technological convergence has received due attention, as the emergence of the Internet and scalable platforms is leading to the rise of new value-creation models and altering the industry's contours (e.g. Gustafsson and Schwarz, 2013; Hacklin et al., 2013; Küng, 2017; Wirtz, 2017). Vertical integration has long scrutinized for the good reason that it is continuing unabated, as illustrated by Comcast's 2011 acquisition of NBC Universal and AT&T's ongoing bid to buy Time Warner (in both cases, a distribution company acquiring a content creator) (e.g. Crawford, 86-109; Chon et al., 2003; Ji and Waterman, 2015; Jin, 2013; Sullivan and Jiang, 2010).

This study aims to make a twofold contribution to our understanding of firm behaviour and industry structure. First, it identifies a growing trend in the media industry: *outsourcing*. As leading media corporations integrate vertically and invest in segments that are adjacent to their core activities, it is apparent that they are also withdrawing from other segments and delegating a growing amount of tasks to suppliers. This article uses the United Kingdom as a case study to demonstrate that while broadcasters are investing in TV content production, they are also stepping away from technology investments and media delivery tasks. It is a significant phenomenon that contributes to redefine the scope of these companies whose engineering know-how was part of their core activity. This article also analyses the causes and consequences of outsourcing and argues that it is contributing to the *vertical disintegration* and *globalization* of the media industries.

The second contribution is theoretical in scope, as this article aims to state the case for GVC analysis in media and communication studies. This theoretical framework has its roots in world system theory and is intrinsically holistic and historical in scope. As such, it enables us to locate the evolution of the media industries in the context of long-term trends in the world economy. With this purpose in mind, the next section establishes the connection between outsourcing, the rise of GVCs and macro factors such as financialization. Then, this study argues that outsourcing and its corollary, the formation of GVCs, which are characteristic of so many industrial sectors, is now contributing to the reshaping of the media industries. The third section explains how the GVC framework differs from Michael Porter's own value chain approach, and then details how the media industries look from a GVC perspective.

This study also uses GVC-related concepts to further our understanding of firm behaviour and the structure of the media industries *in a globalizing context*. It draws a clear distinction between lead firms and their suppliers, and explains how *power asymmetries* between these two parties lead them to divergent corporate strategies: while the former can choose to (vertically) integrate some of the tasks they deem core to their mission, the latter often opt for horizontal specialization within their industry segment. It is this horizontal specialization, this article argues, that pushes suppliers to cross borders in search of growth, thereby internationalizing the structure of the industry as a whole and making firms more transnationally interdependent.

Outsourcing and the rise of GVCs

GVCs have become a key feature of global capitalism and a characteristic of production processes over the last twenty years. In today's world economy, goods are no longer produced by a single company, let alone in a single territory: production processes have been sliced and diced and involve inputs from multiple firms (Foster *et al*., 2013: 2). This is caused by *organizational fragmentation*, a managerial process whereby multinationals dissect their activities in order to concentrate on their core competencies and outsource – often offshore – those service and production tasks that are best done by other companies in decentralized production networks (Contractor et al, 2011a: 6-8).

It is widely acknowledged that outsourcing - defined here as *the externalization of value-adding activities to contractual partners at home or abroad* - is a dominant business paradigm and commonly practiced by most major firms (e.g. Contractor et al., 2011b; Milberg and Winkler, 2013).[1] Whole industries operate on this model, including fashion and consumer electronics brands that sell products they manufacture in part only or not all (e.g. Abernathy et al., 2004; Gereffi, 2001). Multinationals allocate tasks and resources globally according to the local advantages they find and have become logistics coordinators, expert at managing flows of supplies and information across multiple locations (Curry and Kenney, 2004: 114).

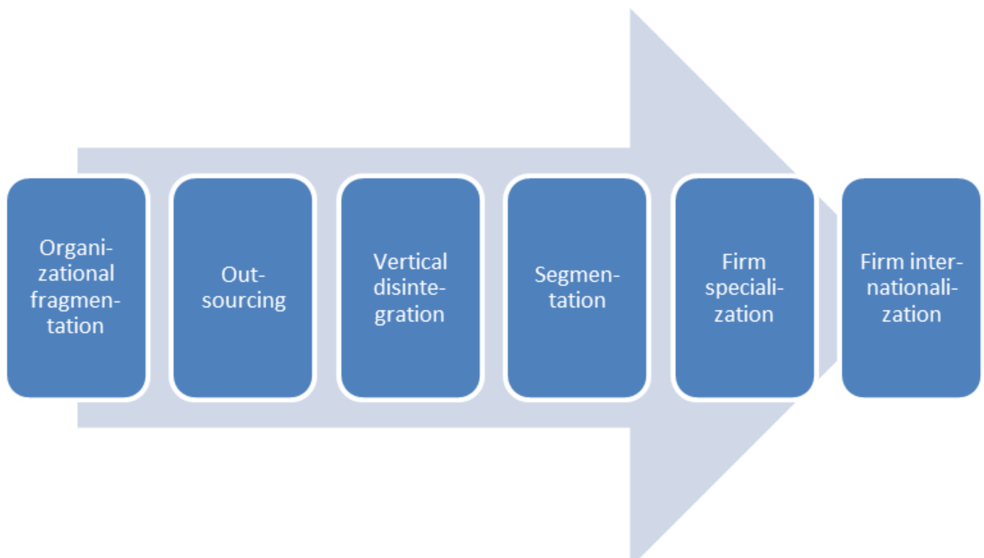
Outsourcing is driven by several factors, including cost reductions in IT and transportation, rapid rate of technological change, skills shortages and the 'greater codification of corporate knowledge' (Contractor et al., 2011b: 9). A key driver, however, is the process of financialization that characterizes contemporary capitalism. Milberg and Winkler argue that 'the globalization of production and financialization are fundamentally connected' because firms are under tremendous pressure to return dividends to shareholders (Milberg and Winkler, 2013: 27). Facing growing competition in sluggish economies, they opt to focus on core competencies, sell non-core assets and divisions, and save operating costs through outsourcing and offshoring (Milberg and Winkler, 2013: 27). In such a context, the ability of outsourcing to deliver cost savings and efficiency gains for businesses overcomes any risk and drawback this strategy may entail.

Outsourcing has encouraged the *disintegration* and *de-verticalization of production processes*, a phenomenon highlighted by economists as the most significant economic and 'organizational development' of recent times (Langlois, 2003: 373; see also Feenstra, 1998; Milberg and Winkler, 2013). Today, the multiple tasks involved in the making and distribution of products and services are carried out by transnational inter-firm networks functioning as global value chains, or 'interorganizational networks clustered around one commodity or product, linking households, enterprises, and states to one another within the world-economy' (Gereffi *et al*., 1994: 2). It is widely acknowledged that these transnational production networks have transformed the world economy and are prevalent in international trade, making consumers, firms and countries far more interdependent than ever before (e.g. Gereffi and Fernandez-Stark, 2016; Milberg and Winkler, 2013; WTO, 2013, 2017).[2]

The purpose of this research is to analyse the causes and consequences of outsourcing in the media industries, taking the British TV industry as a case study. Consolidation deals that aim to vertically integrate companies grab headlines because of their sheer size and the controversies they generate. Outsourcing is harder to detect, requiring a specific methodology for the magnitude of this trend to be uncovered. Using the GVC theoretical framework, this article shows how it has begun to reshape its structure and influence firm strategy.

This study focuses on the origins and consequences of GVCs in the media industries (Figure 1), rather than on the nature of these value chains, which have been analysed elsewhere (author, 2016, 2017). Nonetheless, it proposes a new type – the television GVC – which, for the first time, outlines the inter-firm network through which a TV programme travels from inception to consumption. The next section briefly outlines each industry segment.

Figure 1: The making of a global value chain



The Making of a GVC

Outsourcing and its far-reaching consequences is contributing to change the way media firms operate. Until the late 1980s, with the exception of the USA, broadcasters were fully integrated operations. In Europe, broadcasters produced what they aired, apart from domestic films and imports from Hollywood, and came fully equipped with studios and generously staffed production departments. Nor did they outsource engineering tasks, they carried out most of the transmission functions themselves and owned much of the hardware that delivered the signal to the final user.[3] Broadcasters operated on the basis of a vertical-integration model that saw them carry tasks from conception to transmission of programmes. To a large extent, this has been dismantled and replaced by an *outsourcing model*, whereby many tasks once performed by broadcasters (and newcomers in the aggregation segment) have been devolved to suppliers located at the juncture of the two production networks that form the television GVC (Figure 2).

The management literature offers several variants of media value chains (e.g. Doyle, 2002: 17-19; Hess and Matt, 2013: 38-9; Küng, 2017: 18-23; Picard, 2002: 30-43; Wirtz, 2017: 62-70). Without fail, however, management scholars use Michael Porter's version of the concept, for whom a value chain is a firm's 'collection of activities that are performed to design, produce, market, deliver, and support its product' (Porter, 1985: 36). This approach is reflected in both Küng, who writes that 'the value chain disaggregates the activities of *a firm* into sequential stages stretching from the supply side to the demand side' (Küng, 2017: 19, my emphasis), and Picard, for whom 'the concept is useful in considering those activities that are most central to the core activities of *a firm* and those that make the business operational' (Picard, 2002: 33, my emphasis).

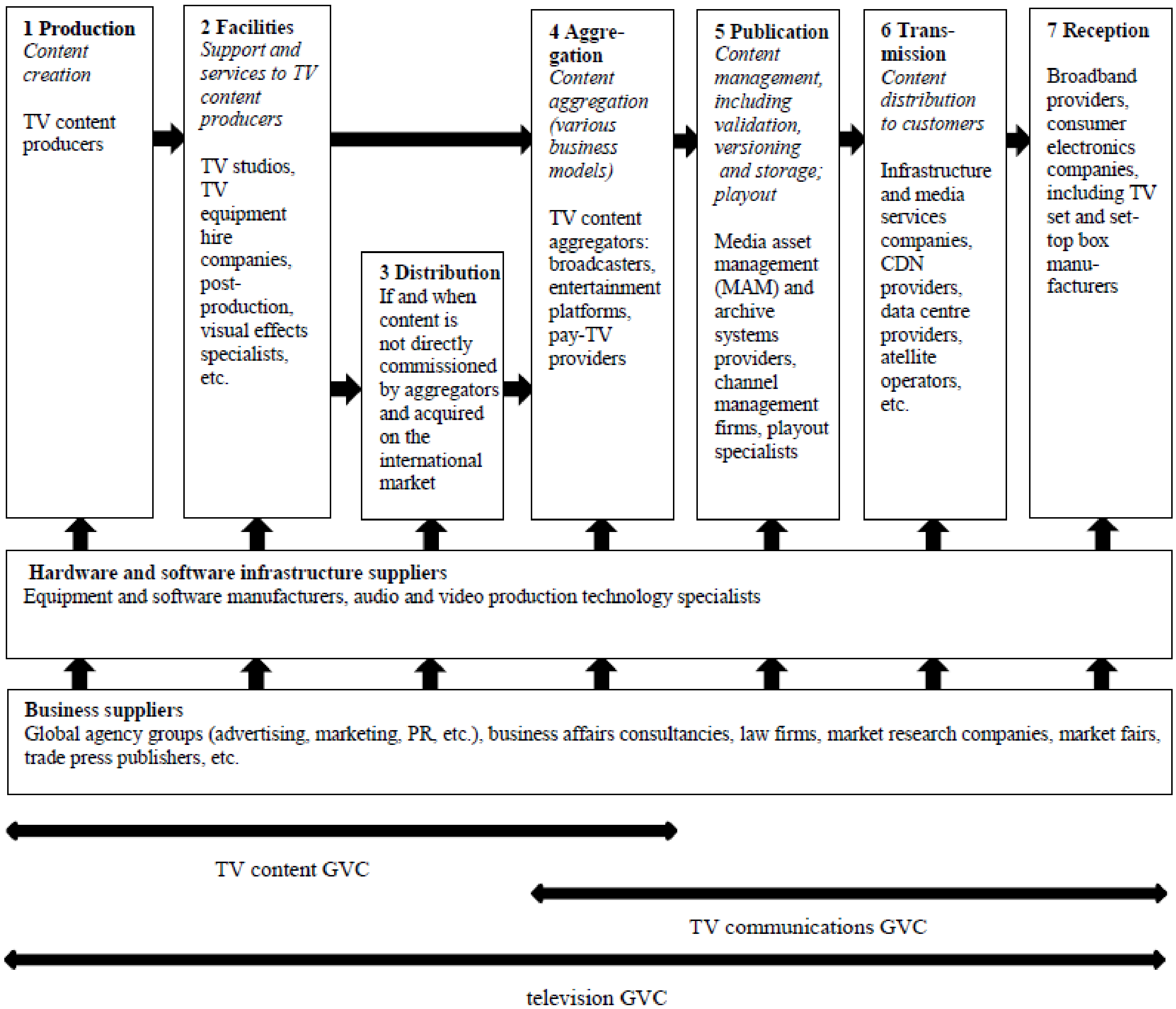
The GVC theoretical framework differs in nature and origin. Its conceptual lineage can be traced back to world-system theory: Hopkins and Wallerstein formulated the notion of 'commodity chain' in order to demonstrate that a world-scale division of labour can be traced back to 17th- and 18th-century Europe (Hopkins and Wallerstein, 1986). Today, the GVC approach is fashioned by multiple influences but its roots in historical sociology keep it distinct from Porter's value chain. First, the latter's framework is *firm-centric*, in the sense that the pivotal point of the analysis is the company's behaviour and activities within the sector. His method is intended to be a tool for analysts and executives to understand a firm's strategy, and help it gain a competitive edge by defining its core competencies and extracting the maximum value from its activities. By way of contrast, the GVC framework's point of reference is the inter-firm *network*, not the lead firm. It is both more holistic, because it gives an overview of a whole industry and its international structure, and structuralist, because it focuses on the dynamic between segments and the *relations* among firms working in them. GVCs are analysed through up to six dimensions (chiefly input-output structure, geographical scope, governance structure and institutional framework), which are so designed to embed them in wider social and economic trends such as financialization and globalization (Bair, 2009; Gereffi et al., 1994; Gereffi, 1995; Gereffi and Fernandez-Stark, 2016; Sturgeon, 2009).

The television GVC is a concept designed to support the analysis of outsourcing and its impact on the structure of the TV industry (Figure 2). In order to come to fruition, a TV programme needs to travel through the entire chain. It is made of two connected, but distinct, production networks: the TV content and the TV communications GVCs. The former works as the industry's content supply chain, and the latter ensures its connectivity. Both networks bring together a host of firms that specialise in a segment and collaborate in tasks.

The TV content GVC corresponds to the programme-making phase, which starts from conception and ends when the final production master has been approved. It involves multiple companies located across four key segments (production, facilities, distribution and aggregation), although distributors intervene only when aggregators do not produce or commission the content themselves and acquire it from a third party.

The TV content GVC having been analysed elsewhere (author, 2016), it suffices here to highlight the extent of outsourcing, taking the UK as a case study. The four British terrestrial broadcasters (BBC, ITV, Channel 4 and Channel 5) spent £2.7 billion on UK original content in 2013, for a total of 11,500 hours. Thirty-nine per cent of these hours were produced in-house by the BBC and ITV, the rest being commissioned from independently-owned TV production companies (Oliver & Ohlbaum, 2015b: 8). The same year, the independent production sector earned £1.6 billion from UK commissions and its total revenue (including international sales, etc.) amounted to £2.8 billion (Oliver & Ohlbaum, 2015a: 9). The firms that form the facilities sector (ranging from TV studios and visual effects specialists to post-production houses), had a combined turnover of £2.2 billion in the late 2000s (author, 2016).

Figure 2: The television GVC



The communications GVC corresponds to the media delivery supply chain and necessitates further explanation. It starts when production companies have finished working on the programme and aggregators package it up in order to reach various audiences. The focus changes from artistic intent to cost management and the search for efficiencies through automation and technology. The key segments are publication, transmission and reception.

Publication begins with validation. First, files are authenticated as coming from the right person and containing the correct edit. They go through a long list of validation processes in order to ensure that they are structurally correct and technically sound. Content is then stored in a digital asset management system where it is discoverable and referenceable. Once there, files are converted into formats that are suitable for distribution. A typical piece of content will have to be turned into many hundreds of versions, determined by an infinite number of combinations that vary according to the transmission path (cable, satellite, terrestrial or internet protocol (IP) delivery), consumer device and linguistic market (Plunkett, interviews 2017).

Content is then stored and readied for transmission, and audience-facing metadata is confirmed. Programme billings are prepared for inclusion in TV listings and electronic programme guides (EPGs), and are described for audiences (i.e. programme synopses) across a range of channels, platforms and countries. If content goes out to a linear broadcaster, it needs to be scheduled and placed within the context of a detailed media plan which allocates commercials and channel promotions using audience weightings, which can vary from one region to another for the same show. For on-demand platforms, content is catalogued instead of scheduled, and the catalogue is exposed to an application on a smart TV, PC, phone or tablet. It is essentially made up of metadata comprising programme synopses, promotional images and genre categories that end users can view to help them decide on the content they choose to watch (Plunkett, interviews, 2017; Smith, interviews, 2017).

Transmission can then begin, which starts when a signal or a file is sent out from the playout system as part of a continuous media stream. This process varies but content generally passes off through a transmission system that compresses it again. In essence, the programme – as part of the media stream - is squeezed into a bandwidth that is economically viable but which delivers a good enough quality output that the receiving device is able to process. For instance, a show shot in 4K UHD (ultra-high-definition) which comes out of the camera at 12 gigabits per second of audio and video would need to be compressed down to single digit megabits per second for most households to be able to view it. Finally, the signal reaches the consumer device - the TV set or set-top box - which may decompress it again in order to deliver a full bandwidth picture for viewing on the related screen.

In terms of workflow, publication and transmission are joined at the hip but they remain distinct from a commercial and technical point of view. The former is more about content management and the latter is about content distribution. Several software and hardware infrastructure providers overlap both segments but most firms tend to gravitate towards one. Media asset management, channel management and playout specialists do most of their work in publication. Typical transmission firms include infrastructure and media services companies, IP network providers and satellite operators. In the UK for instance, Arqiva would be the most likely company a broadcaster would choose for linear distribution. The company inherited the infrastructure that supported the first BBC TV broadcast in 1936 and operates 1,150 TV transmitter towers across the country today that can carry a TV signal along various transmission paths (terrestrial, cable, satellite) and distribution platforms (Plunkett, interviews 2017; company sources).

Outsourcing in the communications GVC

British broadcasters began to outsource media delivery tasks in the 2000s. By the end of the decade they outsourced most, if not all (Table 1).

Table 1: Outsourcing by British broadcasters in the communications GVC

	Publication (playout and media management)	*Linear transmission (multicast)*	*Nonlinear (on-demand) distribution (unicast)*
BBC	Ericsson	Arqiva	BBC
ITV	Deluxe/Ericsson	Arqiva	BT
Channel 4	Ericsson	Arqiva	Ericsson
Channel 5	Ericsson	Arqiva	Ericsson
Sky	Sky	Société Européenne des Satellites	Sky
BT Sport	Arqiva/Ericsson	BT Media & Broadcast	BT

Source: author's compilation

The specific circumstances that led to outsourcing vary between broadcasters, but the fact that they nearly all reached the same conclusion at the same time is an indication of the strength of the drivers that underpin the strategy. Outsourcing in the communications GVC is driven by two factors. As always, costs come into the picture because broadcasters, like any other firm, are under constant pressure to deliver more for less. The BBC, ITV and Channel 4 all outsourced at times of financial strain and the decision involved their respective CFOs. But the choice to outsource was also prompted by the rapid pace of technological change. For ITV and Channel 4, it was the investment required to upgrade to HD (high definition) that prompted a re-think of their media delivery chain arrangements (Stevens, interview 2017; Tucker, interview 2017).

At the BBC, outsourcing was the conclusion of a process which had begun with the rapid growth of its public service and commercial channels. The department that was originally responsible for BBC TV channel playout, Broadcasting and Promotion, grew significantly during the 1990s, but did so in an organic rather than strategic way as an increasing amount of demands were placed on it. Towards the end of the decade, the need to refresh its playout estate created an opportunity to approach the whole operation in a more strategic way, utilising the latest technology and introducing economies of scale to help drive down capital and operational costs. This led to the commissioning of a new building close to Television Centre in West London. The expense was such, however, that Director General Greg Dyke and Finance Director John Smith approved the incorporation of the department in order to create a limited company, with the aim of providing broadcast services to other organisations and thereby recouping some of the investment. BBC Broadcast Ltd was created in 2002 and, after limited success as a wholly-owned subsidiary of the BBC, was put up for sale following a review launched by the subsequent Director General, Mark Thompson. It was purchased in 2005 by Macquarie, the Australian investment bank. The fledgling group expanded in several markets through acquisitions in Australia, Spain and Germany, and delivered impressive growth with its Access Services offer: multilingual subtitling, signing and audio description. In 2014, Red Bee Media, as it was rebranded, was bought by Ericsson in a further consolidation of the UK broadcast services market (company sources; Smith, interview, 2017).

Sky has the least outsourced media delivery chain, probably because it has not faced the same financial pressures experienced by terrestrial broadcasters. It also has a very distinctive transmission path, using DTH (direct-to-home) satellite distribution in order to reach its 10 million plus UK customers. Likewise, the BBC still runs its own nonlinear on-demand operation because of its long heritage of technical innovation and, with the BBC iPlayer, the Corporation has a world-leading product which can be developed economically in-house (Smith, interview, 2017).

By way of contrast, ITV, Channel 4, Channel 5 and BT Sport have fully embraced the outsourcing model (even though the latter uses the transmission facilities of its parent company). Launched in August 2013, BT Sport built a TV studio in 18 weeks (a job that usually can take up to four years) and launched its first channel in nine months. It was the first in Britain to broadcast in 4K (ultra-high definition) and to run a fully digital (tapeless) operation. As Jamie Hindhaugh, the COO of BT Sport & BT TV, explains, none of this would have been possible without outsourcing. He describes the company as an 'umbrella', 'a creative village in a centre of excellence' which mixes internal experts with external partners (Hindhaugh, interview 2017).

Outsourcing enables broadcasters to handle the complexity of modern media delivery chains while remaining agile at a time of rapid technological change. When all regions and sub-regions are taken into account, ITV has 52 channels playing out on linear streams alone. Similarly, at the BBC, commitments to serving audiences in Scotland, Wales and Northern Ireland on BBC One & Two (and BBC Alba in Scotland), in addition to the 15 English regions and sub-regions, means that the total number of broadcast linear streams is, in practice, much greater than the channel portfolio suggests. The schedule reactivity of channels like ITV1 and BBC One necessitates support playout and distribution operations that are particularly complex (Stevens, interview 2017; Smith, interviews 2017).

Recent evolutions in the media delivery chain make outsourcing the only viable option for broadcasters. Consumer demand for anytime/anywhere programming and mobile-centric viewing means that they have to deliver content in a multitude of platforms and formats. This complexity necessitates an amount of investment and expertise that is difficult to sustain for most organizations but without technical support, they run the risk of operating TV services with a high level of unreliability and multiplying the number of 'irregs' (outages or failures/issues that can happen to a linear stream) (Stevens, interview 2017).

Technology can deliver considerable cost savings through economies of scale, especially when it shared across companies and even industries. In the past, when video was exclusively distributed within a broadcast facility, it was sent across a proprietary infrastructure. That is, the broadcaster owned and operated its own hardware-centric infrastructure for the sole purpose of transmitting its channels. With the growth and globalisation of IP delivery, things have changed on several counts. First, using IP-transport and files rather than tapes, television is migrating to the same technology components that other industries are currently using, thus making it able to tap into significant economies of scale. With the use of cloud computing, a broadcaster's files can now be hosted in the same high-density server infrastructure used by companies in any field of activity. All the companies that manage, store and transfer files, provide IP-transport and connectivity for broadcasters, have clients across many industries, from medical imaging to seismic exploration.

Costs can also be reduced further down the line. In the past, when broadcasters bought specialist equipment from a small group of industry suppliers there was little scope for economies of scale. But these are increasingly achievable when purchasing generic IP infrastructure that is used across several industries. Further savings are to be made when procurement is driven by a media delivery and management specialist that deals with the same vendors for its entire portfolio of clients.

Finally, when physical tapes were being wheeled around by people in local facilities, and distributed across private connectivity systems, the ability to automate was restricted. Today, with software-based systems and generic IP-type infrastructure, many tasks once performed by a human workforce are now being automated, further reducing costs (Plunkett, interviews 2017).

Lead firms vs. suppliers: Firm behaviour in a vertically disintegrated industry

The cascading consequences generated by the rise of outsourcing count among the factors that are reshaping the media industries (Figure 1). In particular, the formation of a GVC has created two distinct types of companies (lead firms aggregators and suppliers), and a distinct power dynamics between the two parties. Drawing from the GVC literature, the remainder of this study develops two arguments: the thrust of corporate strategies is strongly influenced by businesses' positions in the value chain, and the power asymmetries between lead firms and suppliers is leading them to divergent approaches to integration.

In a vertically-integrated scenario, many of the tasks necessary to conceive and bring a TV programme to air were performed in-house. It is only at the extreme ends of their scope that broadcasters collaborated with specialist firms or subcontracted work. Today, a piece of content, from its conception to consumption, goes through a long odyssey crossing the path of many firms, as it progresses through the segments of the television GVC. The making of a programme has become a collaborative effort between many businesses operating along this chain and which are contracted to perform a specific role. This mode of production is called *vertical disintegration* (Milberg and Winkler, 2013: 1-32; Baldwin, 2013), since the tasks associated with the making and distribution of a piece of content is sliced and diced across several firms and segments.

This new environment has had a great influence on corporate strategy, but only the chain's lead firms have the ability to choose (see below), which tasks to perform and which tasks to trade. For the suppliers, the best option is usually *specialization* if they are to retain a competitive advantage. As Porter argues, occupying a clear position in a value chain helps a firm to differentiate itself from its competitors by developing a unique selling proposition (Porter, 2004: 120). If a business has already assigned facilities to specific tasks, staying in the same segment enables it to further exploit these assets and solidify its cost position (Porter, 2004: 65-7). The expertise and reputation a business accumulates are sector-specific: as a firm operates in a chain, it expands its set of relationships (relational capital) and gains the trust of its customers (reputational capital) (Capello and Faggian, 2005). Thus, for managers, the question becomes: how to grow and expand the firm within a segment?

Suppliers' strategies in a segmented industry

In order to achieve growth, two options present themselves: *horizontal integration* and *internationalization*. By integration, I mean the combination of two companies through merger or acquisition (regardless of the outcome in terms of the name and shareholding structure of the surviving entity). The literature commonly distinguishes between horizontal and vertical integration (e.g. Chon et al., 2003: 143-144; Evens and Donders, 2016: 677-8; Sullivan and Jiang, 2010: 28). In our case, integration activity is deemed horizontal when it occurs between two firms in the same segment, and is called vertical when it brings together businesses operating upstream or downstream in the value chain.

There is strong historical evidence to suggest that horizontal integration has been prevalent among suppliers across the television chain. In particular, it has been the leading factor in the changing structure of the TV production segment. [4] This segment, once characterized by an array of small businesses making ends meet, is today dominated by less than a dozen transnational giants. In the UK, the first independent TV producers emerged in the early 1980s. As the British TV content market grew they expanded and began to merge with one another. This led to the formation of the so-called 'super-indies', which typically brought together between five and ten production companies, and one distribution arm (author). The phenomenon was not bound to the UK but also occurred in many European markets, in particular Scandinavia (Esser, 2016). The second wave of integration occurred in the 2010s, at which point global TV production majors that straddle several territories were formed (Table 2).

Table 2: The world's eleven TV content production majors, 2017

Company	*Owner/type of company*	*Headquarters*	*Number of production companies/labels*	*Production footprint (number of territories)*
All3Media	Integrated/ Discovery-Liberty Global	London	18	6
Banijay	Independent	Paris	59	19
BBC Worldwide	Integrated/BBC	London	17	9
Endemol Shine Group	Integrated/Apollo Global management & 21st Century Fox	London	120	30
FremantleMedia	Integrated/RTL	London	25	31
ITV Studios	Integrated/ITV	London	61	9
Nice Entertainment Group	Integrated/Modern Times Group	Stockholm	28	16
NBC Universal Intl. TV Production	Integrated/NBC Universal	London	5	3
Red Arrow Entertainment	Integrated/ ProSiebenSat.1	Munich	20	10
Sony Television Production Intl.	Integrated/Sony Pictures Television	London	18	13
Warner Bros. Intl. TV Distribution	Integrated/Time Warner	London	15	17

Sources: author; Esser, 2016. Majority stakes only except for BBC Worldwide.

Combining with similar businesses has also been prevalent in the media delivery chain. Ericsson offers a case in point: in the past ten years, the playout and media services firm has acquired 45 companies in IPTV and media management (full ownership only, excluding minority stakes and calls for capital from partly-owned businesses). Table 3 lists Ericsson's most significant transactions and highlights the company's strategy in the segment.

The drivers behind horizontal integration remain broadly similar from one industry to another: firms seek economies of scale, synergies, and increased market power, sometimes by becoming leader in their segment (Evens and Donders, 2016). But it is equally important to stress the constraints on growth that the GVC dynamics place on suppliers: they are pushed toward combining with similar businesses because their best option is often to grow strategically within their segment. It is the same constraint that explains the globalization dynamics in the TV value chain.

Table 3: Ericsson's key acquisitions in the media delivery chain

Date of transaction	*Acquired company*	*Description*	*Country of registration*	*Value of transaction*
27/10/2016	*Envivio*	IP video processing and distribution software developer	USA	111.2 M €
02/02/2015	*twofour54*'s playout business	Playout	United Arab Emirates	n.a.
31/12/2014	*Fabrix Systems*	Cloud storage and computing platform operator	Israel	78.2 M €
12/05/2104	*Creative Broadcast Services* (alias *Red Bee Media*)	Playout and online video content broadcasting services	United Kingdom	n.a.
05/09/2013	*Microsoft Mediaroom*	IPTV platform operator	USA	n.a.
03/07/2012	*Technicolor*'s broadcasting services division	Media broadcasting services	France, Netherlands and United Kingdom	28.0 M €
20/12/2007	*HyC*	Digital TV and broadband consultancy firm	Spain	n.a.
14/06/2007	*Tandberg Television*	IPTV technology	Norway	929.2 M €

Source: Zephyr database, accessed 15 March 2017.

Globalization

The globalization of television is driven by several factors. Free trade agreements help connect national economies and make it easier for multinationals to operate in several markets (WTO, 2017). New technologies further facilitate cross-border media flows and content distributed over the Internet flows effortlessly across borders. Entertainment platforms such as Netlix, for instance, have internationalized far more quickly than the transnational TV networks that preceded them (author; Lobato and Meese, 2016). By pushing firms to seek international growth, the dynamics of the TV GVC has also contributed to the globalization of the TV industry: the position of suppliers in the GVC dictates their need to have clients across borders (internationalization), and as their clients expand they also need to serve them across borders (globalization of production). When global suppliers serve global lead firms, an industry becomes underpinned by networks of enmeshed and interdependent firms operating on a transnational basis.

Companies on both sides of the TV GVC (content and communications) have placed internationalization at the heart of their strategy. Although TV producers pursue multiple objectives when they combine, the expansion of their production footprint (column 5, Table 2) has been a priority of the second consolidation wave. For instance, the formation of Banijay is the product of four rounds of *cross-border* mergers and acquisitions:

1. Scandinavia: Zodiak Television began life with the fusion of two Swedish TV production groups, Jarowskij Enterprises AB and MTV Mastiff Produktion AB in 2004. Zodiak Television AB joined thereafter and gave its name to the eponymous group. Three years later, the Stockholm-based group held majority holdings in 18 businesses. Its footprint was concentrated in Scandinavia but the company was making inroads in other markets (Zodiak Television, 2008).

2. Italy: De Agostini, originally a publishing firm, acquired Italy's largest independent TV producer, Magnolia, followed by France's Marathon, before turning its attention to Zodiak in 2008 (and adopting the latter's name). At this juncture, Zodiak spanned 30 companies and was present across the Nordic region, continental Europe (Belgium, France, Italy, the Netherlands, Spain), the UK (four companies), Eastern Europe (Poland and Russia), and India.
3. The UK: In 2010, Zodiak scooped RDF Media Group, one of the British super-indies, which consisted of 45 operating units spread across 17 territories.
4. France: Paris-based Banijay, founded in 2008, had an acquisitive mindset from the start and owned 14 production companies across 10 markets (including Germany, Nordic territories, Spain, Australia and USA) within two years (Wood, 2010). The 2016 merger of Banijay and Zodiak, aside from creating the world's largest independent content creation group with a revenue of around 1 US$ billion, brought together two multinational groups that grew and internationalized through horizontal integration (Porte, interview 2009; Roth, interview 2008; company sources).

In the media delivery chain, Ericsson achieved international presence through acquisitions and organic investment. Its Media and Broadcast division originates more than 500 TV channels and distributes over 2.7 million hours of programming each year through eight media hubs located in Abu Dhabi, Britain (multiple locations), Finland, France, Sweden, and the USA. The process of acquiring global scale is facilitated by the borderless nature of IP technology: while in the past the operational teams and the equipment would need to be co-located, today's technology enables TV channels to be operated remotely (Plunkett, interviews 2017). All of the chain's software and hardware vendors have similar capabilities. Aspera, an example among hundreds, is an IBM-owned company specializing in high-speed data transfer using patented technology and has more than 3,000 customers worldwide (Voaden, 2015).

Internationalization can be pursued independently from mergers and acquisitions. For instance, Pinewood Studios, located near Heathrow in the UK, has opened up media hubs in the Dominican Republic, Malaysia, and Atlanta. The Farm, a London-based post-production house, has also invested in multi-country facilities.

Vertical disintegration and the resulting segmentation have been key drivers of M&A activity and pushed many suppliers to combine with similar businesses. This process creates both opportunities and constraints for suppliers: while a segment represents an arena for development, it also delineates a field of activity, with horizontal integration and/or internationalization often the best alternatives for growth. For suppliers, the chain is a structuring reality that influences their behaviour and shapes their business model. By way of contrast, lead firms enjoy more strategic freedom.

Structuring the chain: The behaviour of lead firms

Analysing the behaviour of lead firms is key to understanding the TV GVC because to a large extent their strategies shape its structure. The reason aggregators (broadcasters and content platforms) are in this position is because they are the chain's *buyers*: commissioning content on one side and media services on the other. Different types of relationships can prevail between these firms and the rest of the chain's businesses (Gereffi et al, 2005), but buying power inevitably creates considerable *power asymmetries* in the

TV GVC.

In any given market, commissioning aggregators tend to be few and far between and are the chain's largest companies. This is compounded by the emergence of aggregators on a global scale as exemplified by Netflix, whose 2017 commissioning budget stands at US$6 billion (Castillo, 2017). In addition, the aggregation segment is often oligopolistic: in most territories a handful of TV networks still dominate both audience share and the local TV advertising market (Noam, 2016). They are able to derive an economic rent from their position, making aggregation an activity with higher entry barriers than any other. In addition, aggregators deal with markets (either subscription fees or advertising), that are larger than those of programming and media services: the global pay-TV market was worth US$ 216.3 billion in 2016, and the combined online and TV advertising market reached US$ 397 billion in 2017 (Clancy, 2017a and 2017b). In any given territory, aggregators are the chain's firms with the largest revenue.

Aggregators also have the best access to capital: financial markets recognize the advantages of their position and their capitalization far exceeds those of their suppliers (excluding revenue they may generate from other industries). While the overwhelming majority of independent content producers are in private hands (including the largest, Banijay), aggregators have strong market capitalizations, even though price to earnings (P/E) ratios vary according to the novelty of their business model: those that still rely on (mostly TV) advertising for a substantial part of their income (e.g. 55.5 per cent for ITV in 2016, ITV 2017: 7) have a lower P/E ratio than those that rely (primarily or exclusively) on subscription revenue such as Sky or Netflix (Table 4). Netflix's P/E ratio bears the hallmark of a price bubble but investors are attracted to the company's international on-demand/pay-to-view model. Two broadcasters have investment-grade credit worthiness

(ITV and Sky) while Netlix is rated as the more speculative by Moody's.

Table 4: Examples of lead firms market capitalization

Company name	*Stock exchange*	*Market capitalization (in US$ bn)*	*Price to earnings ratio (in US$)*	*Credit rating*
ITV	London Stock Exchange	8.67	21.40	Baa3
Netflix	NASDAQ	71.39	202.57	B1
ProSienbenSat.1	Börse Frankfurt	9.34	21.25	Not available
Sky	London Stock Exchange	21.20	30.86	Baa2

Source: Google Finance; Moody's. All prices and exchange rates on 21 August 2017.

Power asymmetries are such in the TV content GVC that they single-handedly explain the poor development of the TV production sector in those countries where government has failed to take action to protect producers (author). In the TV communications GVC, aggregators deal with firms that have a high level of expertise and operate in a sector with higher barriers of entry, giving them an amount of 'competence power' (Sturgeon, 2009: 129). Aggregators have responded to the situation by creating complex procurement processes that can stretch several years and include several shortlists.

British broadcasters use different approaches in procurement, not least because public service broadcasters have to abide by public procurement rules which are governed by a number of European Directives and Regulations. In principle, however, three stages can be distinguished. First a planning team is assembled to arrange requirements, including the publication of a core contract that is open for debate with the bidders. The competitive dialogue then commences, whereby suppliers are asked to register their interest and fill out a pre-qualification questionnaire (the RFI phase - request for information). On the basis of the information collected from potential vendors, a shortlist is drawn up of these suppliers that have the scale, capacity, and expertise to deliver the services under contract. These companies are invited to bid for the next series of competitive rounds (the RFQ phase – request for quotation), lasting until potential suppliers have been dwindled down to the winner. During this process, broadcasters make a strenuous effort to even out the playing field in order to ensure that the incumbent does not have an unfair advantage (Smith, interview, 2017; Stevens, interview, 2017; Tucker, interview, 2017).

During the course of the contract, broadcasters have different mechanisms to make sure that standards are maintained and suppliers deliver on promises, ensuring that 'best in class' is rewarded while applying penalties for drops in performance (Hindhaugh, interview, 2017; Smith, interview, 2017).

There are other differences in the way lead firms behave in each area (content versus communication) of the TV GVC. Aggregators (including global media conglomerates) have made numerous acquisitions in the TV production segment in the last 10 years or so. Some, like 21st Century Fox or Discovery Communications/Liberty Global, have bought ready-made TV production groups (Endemol Shine and All3Media respectively). Others, like ITV or ProsiebenSat.1 have built their own TV production major (ITV Studios and Red Arrow). The outcome is that ten of the world's eleven TV production majors are now in the hands of aggregators (Table 1). In the UK, 31 of the 50 leading British TV companies are fully or partially owned by a lead firm (*Broadcast*, 2017b: 9-10).

Table 5: 2nd tier TV production groups controlled by lead firms

Lead firm	*TV production division*	*Recent acquisitions (including minority shares)*
Canal Plus (France)	Studio Canal	UK: Guilty Party, Red Production Company, SunnyMarch TV, Urban Myth Films. RoW: Banbú Producciones (Spain), Final Twist Productions (USA), Sam Productions (Denmark), Tandem Communications (Germany)
CBS Corporation (USA)	/	Kapital Entertainment
Channel 4 (UK) (up to 25% stake)	/	UK: Arrow, Barcroft Media, Eleven Film, Firecrest Films, Lightbox, Parable, Popkorn, Renowned Films, Spelthorne Community Television, Voltage UK, Whisper Films
Channel 5 (UK)	/	Elephant House Productions
Sky (UK)	Sky Vision	UK: Blast! Films, Chrysalis Vision, Love Productions, True North, Sugar Films. USA: Jupiter Entertainment, Talos Films, Znak & Co
Vice Media (USA)	/	Pulse Films (UK)

Source: author's compilation; *Broadcast*, 2017.

Many other lead firms are actively building their own production group (Table 5). There are two reasons why they have opted to move upstream in the TV content GVC. Aggregation is the segment in the chain that has been most disrupted by the Internet, and lead firms are striving to rebalance their business by limiting exposure to the TV advertising market and diversifying revenue streams. They also seek to achieve a higher degree of *asset specificity*. As seen, IP-transport and connectivity has reduced the specificity of assets in the communications GVC since the new transmission paths increasingly work with technologies and facilities that are used across several industrial sectors. By way of contrast, a TV series whose intellectual property is controlled by an aggregator is a specific and proprietary asset. Economists agree that the optimal solution for firms is generally to devolve tasks that are non-specific and best left to the market, and integrate those that are specific (e.g. Langlois, 2003; Milberg and Winkler, 2013: 141-7, Ruzzier, 2012)

Offloading communication tasks while investing in content enables lead firms to increase the specificity of their assets. Precisely, outsourcing enables aggregators to abandon non-value adding tasks and focus on *rent-generating proprietary assets*: in producing content they not only avoid renting third-party assets but build their own portfolio of assets whose intellectual property they can exploit.[5]

As lead firms reshape the structure of the TV GVC they are also redefining their own role. Today, aggregators' *core competencies* lie in marketing. They are first and foremost intellectual-property-management companies that protect, exploit and promote the brands (programmes, formats, etc.) they own (when possible) and rent (when necessary). Second, they increasingly focus their energy on and devote resources to building a relationship with viewers, which entails understanding them and delivering the content they want. With IPTV's return path capabilities, they now have the data to personalize this relationship. [6]

Conclusion

This article has established that outsourcing, because of its cascading consequences (Figure 1), counts among the factors that are reshaping the media industries, at least in certain markets. Vertical disintegration and the formation of a global value chain are segmenting the industry and transforming the way firms act and position themselves within it.

This study presented evidence which demonstrates that a firm's position in the TV GVC is of great influence on the type of M&A activity it pursues: while suppliers tend to consolidate with businesses in the same segment, lead firms have the strategic freedom to move upstream in the chain. They combine outsourcing and vertical integration in order to change their cost structure and to increase the intensity of their asset specificity.

The formation of a TV GVC has generated power asymmetries. Although the behaviour of suppliers is structured by the chain dynamics and constrained by power inequalities, lead firms' decisions have, by way of contrast, a structuring effect on the chain. Segmentation also contributes to the globalization of television, it incites suppliers to cross borders in search of growth and, when necessary, serve clients across borders, thereby transnationalizing the fabric and globalizing the scope of the industry.

More research, however, is warranted. First, the geographical scope of this study is limited and the outsourcing activities of the US-based media conglomerates should to be investigated. In Europe, it would be worth following the impact of the vertical disintegration model on public service broadcasters. Will they follow the BBC and split their broadcasting and production operations (BBC Studios), or remain vertically integrated?

More research is also needed on the relationship between vertical integration and disintegration. Both are not mutually exclusive, but how do they combine? Vertical integration is a noted trend, especially in the United States; it is among the corporate objectives that drive the current wave of consolidation between large conglomerates such Comcast and NBC Universal, AT&T and Time Warner and Disney and 21st Century Fox. Notwithstanding the fact that the US is an exceptional market where regulatory authorities seem willing to accommodate big business and a high level of consolidation in the sector (Crawford, 2013; Kunz, 2007), these companies are selective in their acquisitions and seek assets that generate economic rent. Research should confirm that, as in the UK, American conglomerates, whilst investing in content production, are withdrawing from segments deemed non-core and non-strategic. Further, vertical aggregation does not preclude a certain degree of segmentation: none of the film and TV production companies integrated into larger conglomerates would be viable if they only supplied their parent entities. There are priority deals between the former and the latter but integrated production companies also operate on the open content market and supply films and TV programmes to third parties. For instance, although NBC Universal's content is clearly helping Comcast to increase its market power and keep its cable and Internet customers 'captive' (Crawford, 2013: 8-9), NBC Universal also act as an independent content provider, especially in the overseas markets.

Unlike mega-mergers, outsourcing does not grab headlines, but this article has established outsourcing as a growing trend, in the UK at least. The holistic perspective of the GVC framework enables us to analyse the media industries in the wider context of contemporary capitalism. As seen above, economists have demonstrated the significance of outsourcing and its knock-on effect for the world economy. This article has argued that the media industries, in certain markets, are no longer immune to this phenomenon. A multiplicity of trends are reshaping these industries but in order to understand their current dynamics, the practice of outsourcing and its consequences must be acknowledged.

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[1] While offshoring necessarily entails the relocation of activities and can be conducted by the foreign subsidiaries of a multinational (Contractor et al., 2011a: 7).

[2] Although difficult to measure precisely, ‘trade in tasks’ (or ‘trade in intermediate goods’) within value chains is routinely assessed as representing more than half the total value of (non-fuel) global exports (Milberg and Winkler, 2013: 37-48; WTO, 2013: 182-3).

[3] In the UK, for the BBC, see Briggs, 1979: 225-9; for ITV, see Sendall, 1982: 92-4.

[4] However, the precise extent of horizontal integration in this segment is difficult to measure precisely: most TV producers are privately owned and not registered on the major stock exchanges, and thus their transactions are not recorded by financial databases.

[5] Thus this targeted vertical integration strategy has had no impact on the segmentation of the industry: none of the production companies controlled by lead firms produce content exclusively for their aggregation business (author).

[6] No one understands this better than Netflix, which has a 300-strong data science team and spend US$ 150 million a year on its recommendation algorithm.