Global Value Chains: From Governance to Governmentality?

Abstract

One of the main preoccupations of Global Value Chain (GVC) analysis has been analysing how, and by which types of firms, value chains are governed. Most current conceptualizations distinguish between different types of GVC governance and see them as effects of given distributions of attributes between firms along chains. The governmentality literature instead sees economic governance primarily in terms of invoked models of practice, and interprets it through economic agents’ descriptions of their own governing (or governed) practices. Drawing on the specialised magazines, training manuals and professional journals that served purchasing practitioners in US manufacturing, this article draws attention to the hitherto unexplored role of expert knowledge and practices in GVC governance. At the same time, it highlights that the governmentality literature glosses over problems associated with the actual implementation and effectiveness of expert practices. The article concludes by reflecting on the theoretical implications of such an analysis for both the GVC and the governmentality literatures.

Introduction

Global Value Chain (GVC) analysis has emerged in the last decade and a half as a novel tool for understanding the dynamics of economic globalization and international trade. It postulates that the global economy can be usefully understood as a combination of discreet, product-specific ‘value chains’ rather than of liberalised markets. In these value chains, distinct firms are linked in internationally dispersed but integrated systems of input supply, trade, production, and final marketing.

In addition to the descriptive projects of tracing input-output structures and geographical configurations, the central focus of the GVC literature has been analysing how, and by which types of firms, individual chains are governed, whether there are systematic patterns to governance and – if so – what accounts for them (Bair 2005; Gereffi et al. 2005; Ponte and Gibbon 2005). This focus has been linked to a concern about how opportunities and rewards for GVC participation are determined and distributed, and how unequal distributions of rewards and/or blocked access can be challenged in favour of labour and/or developing country producers.

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1 The authors benefited from comments on an earlier draft of this article by two anonymous referees, Jakob Vestergaard and the participants of a workshop held in Copenhagen in June 2007, especially Tim Sturgeon and Jennifer Bair. Responsibility for the article’s errors remains the authors’ own.
Prior to around 2005, two principal approaches to chain governance had emerged in the GVC literature. The first conceptualised it in terms of the economic power of some (lead) firms over all other chain participants (Gereffi 1994; Kaplinsky 2000). Here, power is exercised by lead firms through driving a certain functional division of labour and (escalating) performance requirements to immediate suppliers – who then enforce them further upstream. The second approach analysed governance in terms of different forms of coordination between buying and supplying firms. In this approach, forms of coordination directly reflect the competences and resources of supplying firms, combined with the technical characteristics of what they produce and of the systems for communicating knowledge of these characteristics (Sturgeon 2002; Humphrey and Schmitz 2003; Gereffi et al 2005).

Both these approaches conceptualise governance of GVCs as reflecting given distributions of attributes between firms along chains. In the first, the key attribute is access to capital and proprietary technologies or marketing devices such as brands. In the second, the key attribute is technical capability, whose relevance may be enhanced or diminished by the codifiability of exchanges between firms. Similarly, both approaches link (types of) governance to sets of expected outcomes. In the first, these comprise an ongoing re-allocation of functional activities and profit between chain participants in the interest of one or more ‘lead firms’. In the second, the main outcome is an optimised utilisation, with varying degrees of mutual benefit, of the capabilities of paired buyer-supplier groups of firms.

As noted in the introduction to this collection, assumptions that the constraints shaping governance forms are entirely structural or technical are difficult to defend. Even only the briefest glance at the trade press over the last 30 years shows that GVC governance has existed not simply as a type of relation between firms but also as an expert discourse which includes, amongst other things, paradigms of suppliers’ ideal roles and capacities and of how these may be measured and shaped. As such, GVC governance can be understood in the same vein as the management of a variety of other economic processes has been by Miller and Rose (1990), Munro (1995), Power (1997) and Vestergaard (2004), namely as a set of programmatic rationalisations of the proper roles of economic agents and institutions and as a set of techniques and tactics for engineering conformity to these roles.

If GVC analysis has the weakness of systematically ignoring expert knowledge and practice, the governmentality alternative sometimes appears to grasp only part of the implications of treating economic governance in terms of expert-based prescriptive models, which arise and attain legitimacy in the realm of the social and natural sciences rather than in the realm of economic practice. While rationalisations based on these models may be invoked in national or corporate economic strategies over long periods, it by no means follows that they are implemented on the ground or – where implemented – that they lead to material changes. The governmentality approach, in other words, can be criticised for its exclusively programmatic form. In most cases the assumption appears to be that, albeit after some initial friction, technologies of government roll out smoothly and generally succeed in normalising the range of objects to which they are addressed.

This article borrows from the governmentality perspective in reconceptualising GVC governance in terms of invoked models of practice. It seeks to uncover these models
in the literatures read by managers responsible for dealing with supply and suppliers, in the curricula of the courses they attended and in the formalised benchmarks they used to measure their performance. However, it complements this by noting and reflecting on these same literatures’ reports and analyses of governance failures.

The rest of this article is organised in five sections. The first elaborates how and in relation to what materials the governmentality perspective is operationalised here. The second explores the discourse of purchasing/supply management in US manufacturing as a complex of formal institutions. The third examines this same discourse as a programme of government, that is, as a set of guiding rationales, prescriptive techniques and tactics for governing what became known as supply chains. The fourth describes what is termed here as the programme’s ‘project of verification’. The final section revisits the substance of certain central formulations and controversies concerning governance in the GVC literature, recasting GVC governance as a prescriptive model rather than as a substantive process. It also examines the implications for the governmentality perspective of the analysis undertaken.

Operationalising Governmentality

The governmentality perspective is operationalised in this article using the ‘programme of government’ framework as defined by Rose and Miller (Miller and Rose 1990, Rose and Miller 1992). According to these authors, ‘programmes of government’ comprise: (1) a guiding rationality specifying the ideals of the programme and defining the true nature of the objects to which government is applied (a rationale); (2) a set of analytical tools (a toolbox); and (3) prescriptions for action in relation to judgements obtained using these tools (a tactics).

Two more elements will be added to this framework. The first is a description of the institutions in which the programme was developed and through which the enrolment in the programme of GVCs’ would-be governors was organised. Such institutional descriptions are an almost universal component of governmentality analyses, even if they tend not to be accorded an explicit role in methodological guidelines.

The second is the programme’s own efforts to monitor and analyse its implementation and outcomes. Despite Foucault’s (1982) observation that programmes of government (or ‘disciplines’) can be ‘precarious’ and thus may entail only ‘better invigilation’ rather than ‘greater obedience’, efforts to directly interrogate the effectiveness of programmes of government are by contrast largely absent in governmentality analyses.

The programme of GVC government that will be examined here empirically concerns the same group of economic practices as those that the GVC governance literature sees as fundamentally constitutive of relations between lead firms and suppliers. That is, it deals with purchasing or supply management. Interestingly, in contrast to most GVC governance literature, which asserts fundamental discontinuities between patterns of GVC governance across sectors and historical periods, the research reported here identifies only one fully elaborated supply management programme of government – albeit with changes in emphasis over different periods of recent history.
This is not to deny that certain other programmes of government, with objects not mainly concerning the management of lead firm-supplier relations, are also more or less institutionalised in some GVCs. These programmes, whose objects include consumer relations, are not considered here. It is worth underlining that they too are nowhere considered in the GVC literature.

The source for the following analysis is the files of trade magazines and academic business journals and textbooks, as well as reports by an independent foundation, the Centre for Advanced Purchasing Studies (CAPS, founded in the mid-1980s), whose common subject is variously referred to as procurement, purchasing or supply (chain) management. These magazine and journal files were examined for the period from the late 1970s to the end of 2003, while the textbooks examined were three widely used manuals from the early 1980s, early 1990s and 2003 respectively. These sources were all associated with the National Association of Purchasing Managers, the professional body of buyers in US manufacturing industry. Despite their preoccupation with ‘purchasing’ as a problem-field and sphere of intervention, these sources are almost totally ignored in existing GVC literature.

The ‘Supply Management’ institutional complex

The institutional context of the programmatic elaboration of supply management, as it occurred in the US manufacturing sector from 1975-2003, had three principal components: a trade, a discipline and a consulting industry. These interacted practically through formal and informal networks and through individuals crossing from one component to another, as well as in terms of a common set of concepts. Nevertheless, for the purposes of exposition they will be considered separately.

The trade

In the medium and large-scale US manufacturing sector a distinct corporate function emerged in the early part of the 20th century – that of purchasing agent. The title remained standard until the 1970s. Agents were responsible for procuring raw materials, components and operational requirements (e.g., office equipment and supplies) and, sometimes, for inbound transport, storage and inventory management.

In 1915, US purchasing agents became organised, and their functions subject to formal definition, with the setting up of the National Association of Purchasing Agents (NAPA) and a trade magazine, The Purchasing Agent. An ongoing theme of both was the low corporate status of purchasers relative to functions such as engineering. Thus, elaboration and dissemination of knowledge was linked from the outset to improving the status of agents. In the pre-World War II period, this involved

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3 The manufacturing sectors that were of concern to the contributors to this body of work were made up mainly of US-domiciled firms and were all characterised by what in the early 1990s Gereffi and others (1994) called ‘producer-driven chains’. However, the programme of government that was elaborated in this literature seems to have provided a template for all subsequent reported articulations of how to govern GVCs – regardless of sector, country or period.
4 This history of the trade is based on Anon. (1990), Wilkinson (1992) and the historical sections of Dobler et al. (1984) and Leenders and Fearon (1993).
formulating purchasing operations in terms of efficiency engineering and promulgating the resulting principles of so-called ‘scientific purchasing’ (cf. Gushee and Boffey 1928).

After 1945, status improvement was re-cast in terms of the new general paradigm of professional management. Focus turned to developing professional tools such as desk manuals and guides. NAPA changed its name to the National Association of Purchasing Managers (NAPM), and a professional journal (initially called the Journal of Purchasing) aimed at business school-educated managers was launched. In 1974, NAPM began a certification programme for members, the Certificate of Purchasing Management (CPM). The Purchasing Agent, now re-titled Purchasing, focused increasingly on case studies of best practice and of firms and outstanding purchasing professionals exemplifying it. Purchasing devoted a special annual edition to a company incarnating best practice, with the winner receiving ‘The Purchasing Medal of Excellence’. By the early 1990s, NAPM had well over 30,000 members, of whom around 19,000 held the CPM. Three rival professional associations also existed, but had less than 10,000 members between them.3

The discipline

Purchasing was a component of business administration degrees in the US from the late 1940s, with Leenders and Fearon’s (1993) first modern textbook on the subject appearing in 1948.6 By the early 1990s, at least six universities were offering undergraduate majors in the subject and several more textbooks were in circulation. Academics published in NAPM’s professional journal (renamed three times from the 1970s, to reflect changing trends) as well as in other academic business journals. Their output was of three types, represented in roughly equal volume. The first elaborated technically (particularly, mathematically-) refined versions of what the textbooks described as core tools of the purchasing professional. The second provided detailed best practice case studies. The third reported survey-based studies on the incidence of adoption and outcomes of purchasing practices.

In 1986, NAPM and Arizona State University launched the Centre for Advanced Purchasing Studies (CAPS), to ‘conduct industry-oriented research on purchasing’. CAPS was led by Robert Monczka and conducted a number of surveys in its first 15 years of operation. From 1989, it began benchmarking. About 400-500 companies became involved in reporting their performance on over 20 indicators (sectorally-specific and cross-sectoral).

The late 1990s witnessed an important change with the importation from the consultancy industry of the notion ‘supply chain’.7 According to this notion, better integrating the management of transport, storage, purchasing, inventory management, manufacture and marketing could radically enhance competitiveness. Soon, some

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3 Between 1957 and 1991, one of these associations published a second trade magazine, Purchasing World.
7 Credit for coining the term ‘supply chain management’ is disputed – reflecting different promotional projects. A Purchasing journalist (Smock 2003) states it was coined in the 1980s by Thomas Stallkamp, then head of purchasing at Chrysler. Laseter & Oliver (2003) claim it was coined by Keith Oliver of Booz Allen Hamilton in 1982.
major universities established supply chain management departments and two new US supply chain management' journals appeared in 1997 alone.8

The consulting industry

The US consulting industry’s main products between 1975 and 1995 were prescriptions on internal corporate organisation and culture (Kipping 2002; McKenna 2006). Apart from occasional articles in academic journals by consultants from the larger companies, the main consultancy companies kept a low profile on supply management until the 1990s. However, around 1992, AT Kearney sought to differentiate itself from other firms by developing a package of supply management prescriptions, linked to a global benchmarking project involving 200-300 firms. This was carried out in collaboration with NAPM and CAPS and led to the unveiling of an umbrella corporate prescription, ‘The House of Purchasing and Supply’ in 1996. ‘The House’ was an easy-to-remember diagram of the ideal relation between supply management and other corporate goals, and a series of specific prescriptions drawing on the trade and the discipline.

Initially, the mainstream US consultancy focus on corporate organisation was heavily intertwined with selling computer systems for resource planning (production scheduling, inventory and warehouse management), for recording management information and for limited electronic data interchange with very large suppliers. By the mid-1990s, as this market was saturated, consultancies began selling new IT applications for integrating supply chain management into existing systems, and/or linking existing systems to the financial control function.

Having established a foothold in corporate purchasing on this basis, the big consultancy companies marketed their organisational and tactical prescriptions on supply management. IBM’s Procurement Services Group, employing 135 people by 2002, devised an assessment instrument for customers to benchmark their ‘entire supply management approach’ against best practice, and – where appropriate – use IBM for rectification. As in the case of AT Kearney’s ‘House’, the assessment covered issues discussed by the trade and the discipline over the previous 20-30 years, while IBM’s best practices were borrowed in the same way.

The trade welcomed the attention of the big consultancies, since the latter’s endorsement of its prescriptions was seen as augmenting their political legitimacy. Furthermore, as with the discipline, the trade adopted the consulting industry’s vocabulary. NAPM was renamed Institute of Supply Chain Management in 2001, following its professional journal’s change of title (to Journal of Supply Chain Management) in 1999. Yet, the consultants given most coverage by Purchasing remained ‘organic intellectuals’ like Gene Richter and Dave Nelson who worked in corporate purchasing their entire careers and who combined writing about supply management9 with pioneering implementation of the trade’s core prescriptions.10

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8 Supply Chain Management: An International Journal and Supply Chain Management Review.

9 Nelson was co-author of a book (Nelson et al. 2001) well received by the trade, while Richter contributed occasional articles (e.g., Richter 2003) and frequent interviews to Purchasing.
The programme of government

The attribution of programmatic status to the system of knowledge and prescriptions that will now be described does not imply that it was original, homogeneous or successful. The genealogy of this programme cannot be explored in detail here, but its components were borrowed from military contracting, operations research and modern marketing. More importantly, the programme was also heterogeneous in that, over time, its analytical tools and tactical prescriptions were stapled together with different guiding rationalities.

Rationales

The central problem that the programme claimed to address, and the terms in which its objects (suppliers) were defined, went through three distinct periods and two main transformations – one in the mid-to-late 1980s and the other in the late 1990s.

During the decade prior to 1985, the programme’s stated rationale referred to the problem of securing a smooth and uninterrupted flow of buying-firm operations. This was justified by invoking firstly global uncertainty concerning the availability of raw materials and inputs, and secondly the potential for increased capacity utilisation and economies of scale opened up by advances within Material Resource Planning (MRP). Full utilisation of MRP was depicted as depending on secure, continuous and better-coordinated supply. Supply management’s rationale was thus as the cornerstone of ‘an integrated management approach to planning, acquisition, conversion, flow and distribution of production materials from the raw material state to the finished product’ (Dobler et al. 1984: 27). Correspondingly, suppliers were objectified as sources of scarce materials, and buyers as ‘Purchasing and Materials Managers’. This influenced both the main benefits that purchasing was seen to provide companies (optimising availability) and the tactics thought necessary to assure this. These involved allocating very large shares of total orders on a long-term basis to large suppliers that were believed to have privileged access to materials – what became known later as ‘out-buy(ing) the opposition’ (Morgan 2003).

In the mid-1980s, a new supply management rationale emerged. This was that of quality, or more specifically, the journey to zero-defect or near zero-defect quality, embarked on by forcing suppliers to adopt process-based quality management systems. This was justified by claims that quality had become the dominant

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10 Richter occupied senior positions at Ford, Black & Decker, Hewlett-Packard, IBM and Xerox, as did Nelson at Honda, Deere and Delphi. Black & Decker, Hewlett-Packard and Xerox were all awarded Purchasing’s ‘Medal of Excellence’ when Richter headed their purchasing operations.

11 Supplier qualification, measurement of supplier performance and even first-tier supplier (or prime contractor) systems can be traced to US weapons procurement (Sapolsky 2003). Operations Research, emerging at the interface between natural science and the US military, generated the first inventory management models (Mirowski 2002, 180). The idea of partnering emerged out of ‘relational marketing’.

12 MRP involves computerised integration of data on purchases and inventory with corporate master production schedules, to calculate materials requirements on a time-phased basis.

13 In 1972 NAPM’s Journal of Purchasing was re-named the Journal of Purchasing of Materials Management, a title it retained until 1992. Dobler et al’s textbook (1984) was titled Purchasing and Materials Management, and proposals were made to include materials management in NAPM’s title.
international competitiveness factor, reflecting Japanese and German manufacturers’ use of superior reliability (as opposed to availability or price) to increase their market share. It borrowed credibility from Crosby’s (1979) dictum that, with process-based quality management, production costs should fall.\textsuperscript{14} Suppliers were now re-objectified as determinants of quality. As with the objectification that preceded it, this was used to justify buying large amounts from few suppliers on a long-term basis (Leenders and Fearon 1993).

Between about 1993 and 1998 a third rationale of supply management emerged, around the problem of maximisation of cost savings. By 2001 this had displaced that referring to quality. It postulated an ideal of supply management as the central vector of corporate profit, against a background where other options had been exhausted. Repeating an argument first made in Purchasing by Porter (1993: 170), Monczka et al’s (2003: 170) textbook states:

‘Low inflation combined with increased productivity … means that prices cannot be raised, [while] the number of lower-priced, higher quality products is often increasing. Reducing costs has [therefore] become an area of intense interest. Companies often begin by reducing their workforce but [by now] the probability of obtaining significant cost savings through further downsizing [has become] marginal … purchasing is the last major opportunity area for achieving significant improvements on returns on assets’.

Suppliers were now objectified as sources of cost reduction. Despite the new emphasis, it was again mainly via close, long-term ties with a few large suppliers that such ideals could be realised. Only such partners were likely to ‘follow [buying firms] offshore [and] develop links with local suppliers’ (Carbone 1996), or engage with ‘a more data or benchmark-driven approach to driving the optimal cost’ (Hannon 2003). This problematisation coincided with the rise of financialist or shareholder value rationales in US business, and with a perception that the ‘IT revolution’ enabled hitherto impossible levels of measurement and control of corporate spending. Thus, all three of the rationales justifying the supply management programme of government from 1975 borrowed from what the institutional complex perceived as corporate America’s central pre-occupation of the time.

\textit{The toolbox}

The purchasing toolbox comprised formalised methodologies for: (1) choosing between a fixed menu of buying strategies; (2) selecting new suppliers; (3) evaluating existing suppliers; (4) determining suppliers’ true manufacturing costs and buyers’ true purchasing costs; (5) analysing how to reduce the cost of manufactured inputs (value analysis/engineering);\textsuperscript{15} (6) negotiating price reductions; and (7) analysing and managing inventory.

\textsuperscript{14} Leenders and Fearon (1993: 152-153) contrast ‘the old-fashioned management perspective … that it is considered acceptable to live with a significant defect level because it is assumed that achieving fewer defects will increase costs’ with ‘the contributions of leaders like Deming and Crosby, as well as [of] Japanese industry [showing] that every defect is expensive and that prevention of defects lowers costs’.

\textsuperscript{15} Value analysis examines the functions that a product performs, and then (proposes) alternative ways to provide that function at less cost (Cayer 1988b). According to Ellram (1992), value analysis was developed by buyers at General Electric during World War II. It was promoted by Purchasing from the 1950s, with a special edition devoted to it in 1955.
All the toolbox’s components were elaborated in the literature by at least 1980, and they are typically referred to as having originated between the 1940s and 1970s. Over time, there are changes in the tools receiving most emphasis, and from the early 1990s new variants of some tools are introduced, alongside a new tool (benchmarking). Space constraints prevent a full exposition of all these tools. Only four core tools are briefly described, to give a flavour of the methodologies employed, and changes over time in their content and in the emphasis they received.

Selection of buying strategy: Leenders and Fearon (1993: 115, 189), in a section unchanged from the 1948 edition of their textbook, differentiate buys according to their physical volume, their unit costs, and the start-up and investment costs they entail for suppliers. Different buying strategies follow from different combinations of these circumstances, with two principle types of buy emphasised. These are commodity buys combining high volume, low unit cost and low supplier start-up and investment costs (where a price/volume strategy is indicated), and buys combining relatively high volume, high unit costs and high supplier start-up and investment costs (where multi-year contracts with a small group of preferred suppliers are indicated). Over time, more sophisticated versions of this so-called portfolio methodology emerged (cf. Kraljic 1983). Interest in using objective methods for selecting strategy apparently waned between 1985-2000, before re-surfacing again around 2001.16

Evaluation of existing suppliers: Description of formal methods for evaluating supplier performance dates from at least the late 1960s (Wind and Robinson 1968; Pooler 1972; Serchuk 1973; Lamberson et al. 1976). Methods or plans outlined in the literature were mainly of three main types: categorical, weighted point, and cost ratio (Dobler et al. 1984: 122; Leenders and Fearon 1993: 250; Monczka et al. 2003: 215-17).17 Categorical plans, typically disparaged as subjective, involved pooling the impressions of different departments before arriving at a common rating. Weighted point plans involved giving suppliers percentage point scores on quality, deliveries and price, weighting these according to importance and then computing the sum. Cost ratio plans sought to arrive at scores for each supplier based on the so-called ‘total cost of ownership’ concept. From the late 1980s onward the quality criteria referred to in these plans become more demanding.18 What did not change, at least until well after 2000, is silence on what performance levels should be considered unacceptable and on the proposed fate of suppliers who receive low ratings.

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16 Cox (2001a; 2001b; Cox et al 2002) then developed a revised version of the portfolio approach, while Gelderman and van Weele (2002) and Monczka et al. (2003) claim use of different variants of the approach by a number of very large companies.

17 By 2000, a specialised literature existed proposing increasingly sophisticated computable supplier evaluation methods (cf. Petroni and Braglia 2000). According to Larson and Halldorsson (2002) performance measurement ranked third amongst specialised research interests of all supply chain management researchers polled (after buyer-seller relations and supplier development). The main novelty of the more sophisticated models was inclusion of a wider range of variables. Researchers acknowledged a trade-off between complexity and utility. Sarkis and Talluri (2002) stated that, when their own model was tested in discussions with managers, ‘it was clear that the large number of factors and relationships caused them to be fatigued’.

18 Allied Signal’s use of a ‘Quality Impact Score’ taking into account not only defect levels but types of defects, costs of defective parts and location of defect discovery is cited by Minahan (1997b) as a ground for awarding the company a Purchasing Medal of Excellence, while Motorola’s ‘Sigma system’ for classifying defect rates in terms of parts per million rather than parts per 100 is cited from around 1990 as paradigmatic (Raia 1991).
Determining suppliers’ true costs of manufacture: Throughout the 1975-2003 period, the literature emphasises the importance for buying companies of establishing what their purchases should cost. Until the 1990s, methodologies identified for this comprised using public data sources for some raw material costs, complemented by estimates made by buying companies’ own engineering and financial staff of labour requirements, appropriate share of given production runs in suppliers’ total overhead, allowable margin, etc. In 1992, GM adopted an accounting tool known as ‘Activity-Based Costing’ (A-BC). One of its implications was to generate lower estimates of overhead costs on products with long production runs than traditional historical cost methods would have done (Lere and Saraph 1995). This was then used by the GM’s head of purchasing to demand (and apparently obtain) greater disclosure of financial information by suppliers, as a first step in optimising input costs. For a time, using such information in an openly adversarial way was viewed negatively in the trade (Minahan 1997). Yet, a decade later, under the title ‘target costing’, Input Cost Optimisation had displaced earlier should-cost tools as the trade’s recommended methodology (Monczka et al. 2003: 368-69).

Determining own costs of buying: From the 1970s onward, central to the trade’s claim to professional status was that, by using ‘total cost of ownership’ (TCO) methodologies, it avoided the economic and moral pitfalls of price-based buying. Determining the TCO of a supplier/product buy involved adjusting the purchase price by a purchase’s transaction cost, i.e., giving a financial value to suppliers’ defect rates, delivery problems, follow-up requirements and so on. Textbooks from the 1980s onward define and prescribe how to collect and collate such data, and provide models for computing TCO accordingly (e.g., Leenders and Fearon 1993: 298-301), while articles in the trade press seized on cases where leading companies appeared to have adopted the method (e.g., Morgan and Zimmerman 1990).

The tactics

The main tactics prescribed by the trade, the discipline and eventually the consulting industry demonstrate a similar continuity over time. Throughout, partnering with core suppliers occupied a central and organising role. Other ongoing prescriptions concerned better integration of purchasing with other buying firm functions, increasing international buying (later, ‘global sourcing’) and making it more effective, e-enablement of buyer-supplier relations and well-communicated purchasing self-assessment. As in the case of the toolbox, some incremental changes occurred over time in these tactics’ detailed specification. Furthermore, the period 1993-2003 saw reference to tactics that, although probably used earlier, were not widely discussed. These included use of reverse auctions, extending supplier payment periods (Avery 2001) and making more use of spot buying (Smock 2002). In general though, consistency prevailed. Discussion here will focus on the central tactics of partnering and of reforming the relation between purchasing and other corporate functions.

Partnersing: Partnerships between buyers and a few preferred suppliers of strategic inputs was prescribed throughout, albeit using different language. Until the late-1980s, the literature refers to (strategic) alliances. The term partnering proper belongs to the 1990s. After 2002, this was replaced by supplier integration. Grounds for favouring partnering remained constant. The buyer obtained security of supply and leverage to negotiate better and/or more services and lower prices. The supplier benefited from reduced investment risk, higher volumes and capacity utilisation, and
access to technical assistance. At the same time, partnerships were defined to include a widening range of activities over time. Definitions of the central subjects of cooperation have also changed, as have the cooperation’s prescribed degree of formalisation.

Partnering prior to the mid-1980s is depicted as multi-year contracting involving coordination of buyers’ and suppliers’ production and delivery schedules, dedicated investment and R&D by the supplier, partial transfer of inventory management tasks to the supplier, and mutual efforts to reduce costs (Dobler et al. 1984: 115-16). In the 1990s, partnerships are broadened to include joint multi-year materials acquisition planning, quality improvement and efforts to find ‘new ways of developing products and services’ (Semich 1989; Leenders and Fearon 1993: 154, 278). Simultaneously, it is now openly acknowledged that the partnership tactic is linked to supply base rationalisation/‘vendor consolidation’ (Leenders and Fearon 1993: 278).

Following the emergence of the term ‘supplier integration’ around 1996 (Stainbrook 1996), a still broader coverage for partnerships is prescribed. Multi-year joint materials acquisition planning is widened to include acquisition of technology. Secondly, exchange of information is deepened to encompass open book costing methods (Fitzgerald 1996). Thirdly, coordination of production and delivery schedules and supplier inventory management is extended into ‘co-location for reduced cycle times’ (Monczka and Morgan 1996) on the one hand, and supplier adoption of consigned and bonded inventory management systems19 on the other (Anon. 1997; Monczka et al. 2003: 537). The widening range of services expected of suppliers is also extended to include preferred suppliers playing the role of systems integrators in some sub-sectors. This involved suppliers either vertically integrating with their own suppliers or coordinating their own suppliers to service the buying firm.

Central amongst the activities that partnership was said to cover in the mid-1980s was coordination of buyers’ and suppliers’ production and delivery schedules (Dobler et al. 1984: 116). By the mid-1990s, the central activity shifts to joint efforts to ‘continuously improve quality’ (Leenders and Fearon 1993: 154) which is said to be possible only by giving partner status to core suppliers. Joint efforts entailed suppliers being prescribed specific quality management technologies (Murphy 1997; Stundza 2000). After the mid-1990s, while quality remained a pre-occupation, central prescriptive weight shifts to ‘merging of technological efforts’ (Fitzgerald 1996), a practice said to be most widespread in the electronics sector.

Formalisation of partnerships was only consistently prescribed during the period of the quality paradigm, inter alia through the introduction of Supplier Advisory Councils (Morgan and Caylor 1991). The functions of these councils are unclear, although a recurrent theme was using them to obtain suppliers’ ideas on ‘saving costs, increasing throughput and supervising quality’ (Anon. 1992). A second type of formalisation was to make annual ‘supplier awards’. Grounds for awards included improvements in quality or delivery performance, or ‘identification of successful projects that will benefit both parties’ (Porter 1996; 2002), although typically these grounds were never made explicit.

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19 Consigned inventory is reserved exclusively for the buyer, but only paid for when the buyer consumes it. Bonded inventory becomes suppliers’ property when the buyer has no use for it.
Another dimension of formalised partnerships was programmes of supplier development (Hartley and Jones 1997). These involved representatives of buying companies visiting preferred suppliers to gather data on defect rates, downtime, cycle time and work-in-progress inventory, then selecting single lines for improvement. However, the trade literature tended to describe any buyer intervention that could be construed as helpful, including informal feedback, as supplier development. Prescriptions to formalise partnerships tend to die out after 2000.

The relationship between purchasing and other functions: Between 1975-2005 the trade and the discipline depicted the typical US manufacturing firm as organised in ‘silos’ (divisions and specialisations), with little communication and few synergies. Where central strategic direction existed, its penetration was typically low due to the ‘silo mindset’. The silo system was held to limit the effectiveness of purchasing by fragmenting purchasing effort and blocking any coherent purchasing strategy and set of procedures. This in turn obstructed the visibility of purchasing to senior management.

The trade literature argued from 1975 that the effectiveness and visibility of purchasing would be greater if the purchasing function – or at least some key purchases – were centralised across silos. Particularly for commodity buys, centralisation would increase buying leverage, improve control over expenditure and allow greater savings through standardisation of inputs, bulking-up transport arrangements and so on (Cayer 1988a; Leenders and Farrow 1993: 34-36). However, from the mid-1990s, the centralisation prescription gave way to advocacy of purchasing by cross-functional teams. This idea originated in the ‘cultures of quality’ strand of the quality discourse (cf. Legge 2002). Cross-functional teams were depicted as the ideal location both for traditional purchasing tasks such as supplier evaluation and tasks in which purchasing was normally marginal, such as new product development and quality management. The idea was that, the more such teams there were, the more a system of lateral rather than vertical accountability would be promoted. Through this a wider stratum of the trade could be empowered and an alliance secured between purchasing and quality managers (cf Munro 1995 and Smock 2001).

The project of validation

As noted above, while Foucault leaves open the question of whether programmes of government result in greater obedience rather than simply greater efforts at securing obedience, this contrast is rarely taken up in governmentality studies. The contrast is one which nonetheless pre-occupied the protagonists of the supply management programme of government, not least because they recognised that improving their professional status depended on demonstrating the programme’s effectiveness in the wider world of management.

With this in mind, from 1980 a series of studies were undertaken to confirm the normative status of the toolbox and the tactics within US manufacturing, and to demonstrate their impact. These were mainly academic in form and implemented in cooperation with NAPM or other US business associations, using these organisations’ membership lists as sampling frames. Popular summaries were often published in
Purchasing, which also undertook its own surveys that used its subscribers as a sampling frame. Overall, the project of validation produced rather unsatisfactory results from the viewpoint of the trade and the discipline, especially given that the samples used were self-selecting and therefore more likely than the general population to include (successful) implementers.

The results obtained will be briefly reviewed in relation to the programme’s toolbox and tactics. The main tools subject to study were supplier evaluation instruments and methods for determining suppliers’ costs and transactional costs of buying. Among the tactics, both partnering and the organisational relation of purchasing to other functions were studied.

Evaluation of existing suppliers (tool): Five studies between 1987 and 2002 reported incidence of adoption of formal systems of supplier evaluation, in a range between 22 per cent and 53 per cent of all responding firms (Anon. 1987; Monczka and Trent 1995; Avery 2000; Anon. 2001; Simpson and Signaw 2002). While the proportion appears to have risen over time, the last and most detailed of the studies showed that only around a third of those stating use of a formal system were using ones where data on more than two or three indicators was collected in a standardised way and on a longitudinal basis.

Methods for determining suppliers’ costs of manufacture (tool): Two studies from the mid-1990s report incidence of buying firms’ analysing of suppliers’ costs (Hendrick and Ellram 1993; Monczka and Trent 1995). In Hendrick and Ellram’s sample, only in just over half of all cases was any analysis of supplier costs carried out with partners. In Monczka and Trent’s survey, 26 per cent of buying firms reported that they had emphasised cost-based pricing in the previous five years. Two other studies, with samples deliberately composed of firms believed to use target costing, examined the nature of its use (Ellram 2002a; 2002b). They reported target costing being used quite frequently in exceptional circumstances (e.g. new product development or purchase of capital goods) but only in around a third of cases for high volume buys. Ellram (2002b) also reported that, where target costing identified discrepancies between suppliers’ offer prices and target prices, buyers’ normal response was to adjust specifications rather than to force price reductions.

Methods for determining costs of buying (tool): Two studies in 1980 and 2003 reported incidence of use of TCO-type models for calculating costs of buying (Jackson and Ostrom 1980; Smeltzer and Manship 2003). Both these studies report around 25 per cent of responding firms to be using models not relying exclusively on buy-in price. Three other studies, with samples composed of firms known or thought likely to be using TCO proper reported the nature of its use by the firms concerned (Ellram 1994; 2002a; Ferrin and Plank 2002). These three studies all report TCO (like target costing) being used mainly for non-routine buys, as well as the absence of standardised methodologies across and even within firms, and lack of integration with accounting systems. Ellram et al. (2002), examining the relation between firms’ self-reported adoption of TCO and Standard & Poor’s data on the same firms’ financial performance, found adoption of TCO associated with worse than average financial performance.
Forging partnerships (tactic): Six studies between 1987 and 2001 reported incidence of partnerships, although the indicators used were not consistent (Guinipero 1990; Morgan 1997; Stuart and McCutcheon 1995; Stork 1999; Vonderembse and Tracey 1999; Anon. 2000). Longitudinal studies asking buying firms whether they used multi-year contracts reported between 39 per cent and 43 per cent replying affirmatively, depending on when the study was carried out (Morgan 1997; Anon. 2001). About one third of Stuart and McCutcheon’s (1995) buying firm respondents directly stated that they participated in partnerships. But studies asking whether firms used only 1-3 suppliers for particular items reported much lower frequencies, between 13 per cent (1987) and 20 per cent (1999) (Stork 1999, Anon. 2001).

Hendrick and Ellram (1993) Graham et al. (1994) and Ellram et al (2002) sought to measure the impact of partnerships. Two of these studies, relying on buying firm self-reporting of impacts, state that they resulted in improvement in suppliers’ defect rates but had at best marginal impacts on other objectives of partnering. The third reported no relation between buying firms’ long-term collaboration with suppliers and their financial performance.

Centralising purchasing and creating cross-functional teams (tactic): Four studies undertaken during 1987-1998 report persistently low levels of centralisation of the purchasing function or of participation by purchasing departments in cross-functional teams. Results in a similar vein are reported by studies examining levels of implementation of the only two new prescriptions to arise from the consulting industry over the last decade: adopting a chain perspective and systematising e-enablement. Only the first of these can be dealt with here.

While the industry was usually vague on what a chain approach consisted of, the interpretation mostly used in these studies resembled that of the GVC literature: buying firms setting framework conditions not only for first-tier, but also for second- and third-tier suppliers. Suppliers on the second-tier and beyond are mentioned in the trade literature for the first time only in the early 1990s, with reference to the US auto giants requiring them to adopt process-based quality management methods and to exchange information on delivery and quality with the first-tier. Two studies from after 2000 demonstrate their continuing invisibility to buying firms in other sub-sectors, even after ascendancy of the consulting industry’s supply chain paradigm (Fawcett and Magnau 2001; Ellram 2002a).

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20 Results in the same range were obtained by Vonderembse and Tracey (1999), asking about the incidence of supplier participation in new product development, and by Guinipero (1990) asking about the incidence of ‘open and informal communication with suppliers’. Hendrick and Ellram’s (1993) survey of buying firms claiming to be partnering, as well as of some of their suppliers, reported that while partners typically supplied up to 75 per cent of intake for some items, they represented less than 1 per cent of all active suppliers and that the main motive for initiating partnerships was securing price reductions via offers of higher volume. When suppliers were questioned, the study found significant disagreements with buying firms’ perceptions concerning frequency of contact and extent of interchange of information between partners, and on buyer involvement in quality improvement efforts.

The trade and the discipline themselves found all these results disappointing. Three explanations were provided for why adoption of the programme of government was low. The first was that obtaining the toolbox’s data requirements both posed complex technical difficulties and left purchasers little time either for routine work or more exciting activities like partnering (Baatz 1998; Porter 2000). The second harked back to the silo nature of corporate structures and the lack of visibility of the trade to CEOs and company presidents (Beidelman 1987; Millen 1990; Bales and Fearon 1993; Monczka and Trent 1995). The third explanation tried to deal with lack of results when tools and tactics were applied. It postulated that deficient outcomes reflected bad faith in the way that the toolbox and tactics had been used, such as ‘misuse of partnering’ and ‘using alliance relationships coercively’ (i.e., exclusively to reduce prices) (Ellram et al. 2002).

GVC Governance through the Lenses of Governmentality

As the discussion above shows, a programme of government for purchasing (later, supply management), reproduced by specialised magazines, training institutions and professional associations serving purchasing professionals, has existed largely unchanged in content from 1975 onwards in US manufacturing. Many of its constituent parts clearly date back to World War II. The programme comprised a set of ideas, theories, tools for measurement, tactical blueprints, discussion forums and research results that together provided a coherent framework for conceptualising and enacting supply management. However, this programme was practically implemented only to a limited extent – and even then without the promised outcomes. This concluding discussion embodies two sets of reflections. The first concerns the challenges for the existing GVC governance literature posed by recognition of this programme of government. The second concerns a number of new substantive issues relating to both GVC governance studies and governmentality studies, which are raised once the patchy implementation of this programme of government (including its lack of implementation) is accepted.

The supply management programme of government and the GVC literature

Recent literature on GVCs has articulated governance along two main lines. One approach, broadly following in the footsteps of pioneering studies of global commodity chains by Gereffi and others published in the mid-1990s (Gereffi et al. 1994; Gereffi 1994), focuses on buying firms driving changes along the full length of a given commodity or value chain (Kaplinsky 2000; Gibbon and Ponte 2005). This driving approach focuses on how a group of (lead) firms in specific functional positions along a GVC uses its leverage in supply markets to oblige its immediate suppliers to reshape their portfolio of activities and their relations with their own suppliers, in order to itself concentrate on a few highly profitable activities. At the same time, lead firms deflate suppliers’ prices by a combination of paying below-

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22 This is contrary to observations in a recent article appearing in this journal (Busch 2007) where the emergence of the theory and practice of supply chain management is dated to the mid-1980s at the earliest.
market rates for the new services that they receive and demanding lower unit prices where suppliers’ volumes increase as a result of supply-base consolidation.

Governance in this context mainly involves using immediate (first-tier) suppliers as multi-purpose extensions of the lead firm, while disengaging from what occurs upstream of them. Thus first-tier suppliers serve to formalise, communicate and enforce quality and delivery standards throughout the chain – albeit for some functions in combination with third-party auditors and certifiers. These trends are seen as bound up with broad social and economic trends toward the proliferation of quality standards on the one hand and of more demanding norms concerning financial returns on the other (Gibbon and Ponte 2005)

A second approach, embodied in Gereffi’s later work with Sturgeon and Humphrey (Gereffi et al. 2005; see also Sturgeon 2002; Humphrey and Schmitz 2003), focuses primarily on coordination between large buying firms and their immediate suppliers. It examines how this is influenced by the complexity of information and knowledge necessary to sustain a specific buyer-supplier relation, the opportunities for codifying and efficiently transmitting this information between the parties, and the capabilities of the supply base in relation to the requirements of transactions. Five main categories of GVC governance (market, modular, relational, captive and hierarchic) result from the different possible combinations of these variables (see Gibbon, Bair and Ponte, this edition for details).

Both these approaches claim to be empirical, in the sense of constituting generalisations from case studies of particular chains and of being based on interviews with agents representing different positions – particularly buying ones – within these chains. Both are nonetheless constructed without reference to the programmatic formulation of buying objectives and practices found in the purchasing trade. Thus, their findings tend to mainly reflect the theoretical biases of the variant of GVC analysis that they arise from.

There are several substantively shared emphases between the content of the programme of government unearthed in this article and the different GVC approaches. Within the programme of government, Gereffi et al’s (2005) ‘relational’ coordination of buyer-supplier relations – where transactions are characterised by high supplier capabilities, high informational complexity and low ability to codify information - has a central role. The programme also recognises market-based commodity buys, another coordination form in Gereffi et al., as the main alternative to relational coordination. On the other hand, the programme elaborates techniques, such as formalised supplier selection methods and input cost optimisation, and tactics such as reverse auctioning and extension of supplier payment periods, which are identified and discussed in the some of the ‘driving’ literature as expressions of the influence of financialisation on GVC governance (Gibbon 2002; Palpacuer et al. 2005).

Yet, conceptualising the programme of government as an integral account of how buyers believed that GVC governance should look throws up doubts about the usefulness of the characterisations of governance associated with both these established GVC approaches. Recent variants of the driving approach postulate a more or less causal relation between financialisation/cost-reduction rationales and the techniques and tactics just described above. They also see the use of these techniques
as an intensification of earlier forms of GVC governance, inspired by an increased
determination to leverage market power. Within the supply management programme
of government, by contrast, the relation of prescribed techniques and tactics to
financialisation/cost-reduction rationales is contingent and instrumental. These
techniques and tactics are also compatible with seemingly opposed rationales such as
optimising quality. Furthermore, where hard-nosed techniques such as input cost
optimisation are prescribed, this is as an extension of partnering rather than as a
rejection of it.

The coordination approach to GVC governance postulates that different forms of
buyer-seller coordination reflect differences in types of transaction, as does the
programme of government. Yet, while types of transactions are differentiated by
Gereffi et al (2005) in terms of information content and their parties’ technological
resources, for the programme of government the important factors are volume, unit
cost, risk and profit impact. Furthermore, for the programme, relational coordination
is not simply one form amongst a number but an over-riding prescription that can
optimise almost all types of transaction. Its incidence therefore reflects the extent to
which buying is coordinated intelligently per se, rather than whatever conditions are
typical in specific sectors or sub-sectors.

New substantive issues for GVC and governmentality analysis

A different set of issues is raised by the patchy or non-implementation of the
programme as such. As indicated earlier, the broader governmentality literature
provides little help in this regard. An alternative approach is to ask whether GVC-
related arguments could take matters further, as well as whether other approaches
could be usefully drawn on to complement GVC and/or governmentality approaches.
Three main substantive questions are raised by the phenomenon of patchy or non-
implementation. Why was the programme not implemented? Why did no
comprehensive alternative emerge? and Why did the programme continue to be
articulated even when not implemented? These will be discussed in turn.

Participants in the project of validation believed the programme was not implemented
mainly because it was very technically demanding and because the low status of
purchasing departments militated against its corporate mainstreaming. While the
second of these reasons is implicitly circular, the first does make sense. The time and
resources necessary to carry out the programme in its entirety would have been
enormous, since even the implementation of single techniques such as TCO imply
considerable investment of resources in data specification, gathering and analysis, as
well as coordination across departments and finessing of internal corporate politics.
This is against a background where purchasing departments were widely reported to
be drowning in routine paperwork (issuing requests for quotations, purchase orders,
etc.). This raises the issue of rationalisation: can programmes of government become
over-rationalised, i.e. elaborated to an extent disproportional to their objectives, or to
other governmental values such as cost-effectiveness?

Because the supply management programme of government remained largely unimplemented in US
manufacturing, the above observations do not represent a disproof of characterisations of GVC
governance as found in the existing literature. However, they do indicate problems in the GVC
literature of selective use of buyer testimony which - while expressed in the programme’s language - is
then used to make links or demonstrate claims incompatible with its philosophy.
Another, this time GVC-related, factor also may have impeded implementation. Despite its prescription of partnerships, the way in which the programme was formulated implied a rather detached relation between buying and supplying firms. These firms intersected, in effect, only through a forest of mathematical methods and computations. Yet, as the trade literature often acknowledged, US manufacturing was subject throughout the period covered to a brutal and drastic process of consolidation on both sides. Even where partnerships did not exist, the main actors on both sides will have become increasingly familiar to each other. The idea of turning on the governmental searchlights – rather than sorting things out at a CEO to CEO level – will have seemed increasingly bizarre.

Occasionally, an outline of an alternative programme does appear in the trade literature. In this, a financialist rationale is combined with a narrower and more adversarial range of tactics than typically referred to, and with a lesser emphasis on formal techniques. However, this alternative never materialises in a fully-fledged way. A possible sociological reason is that its adoption would imply a diminution and downgrading of the role of purchasing relative to that of finance and that it therefore lacks a corporate constituency. A GVC-related reason is that, at least in US heavy manufacturing, rising technological and capital requirements for entry are inconsistent with a radical commoditisation of supply relations, since they restrict the extent to which an open market of suppliers can be created.

Why was then the programme still articulated (or, more accurately, re-packaged) even when it did not have a substantial impact on actual practices? In a recent article in this journal, Busch (2007) argues that ‘Supply Chain Management’ has become a model of performing the economy that is partially displacing (or at least overlapping with) neo-classical economics. Busch (2007: 441) states that SCM ‘arose out of certain practices and has been gradually theorized, refined, clarified, and recast as a set of strategies for performing the economy’. In other words, SCM as a model (itself a reflection of existing or forming practices) is really shaping the working of the economy. However, empirically, the case study material examined in this article seems to support the opposite argument of ‘virtualism’, developed by Daniel Miller (1998; 2002, see also Carrier 1998; Holm 2007), in that the purchasing profession is able to change (some people’s) representations, but does not seem to be able to radically transform corporate practice.

Miller’s argument was articulated in response to Callon’s (1998a; 1998b; 2007) work intending to show that the abstract representations of economics and by economists shape reality. In a similarly vein to Callon, Power (1997), Strathern (2000) and MacKenzie (2006) have argued that auditors, management consultants and financial analysts are increasingly able to transform the world into closer approximations of their abstract models (see also MacKenzie et al. 2007). But the difference between virtualism and performativity may actually rest on empirical grounds rather than on theory. This is signalled strongly by MacKenzie’s (2007a) latest work, which explicitly distinguishes between ‘generic performativity’ and ‘effective performativity’ (the ability to make a difference through abstract representation) and

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24 In a recent paper Sturgeon et al. (2007) list 30 bankruptcies among major suppliers in the automotive sector between September 1999 and March 2006.
highlights the material and pragmatic elements of what he calls ‘the production of virtuality’ (MacKenzie 2007b). A similar pragmatist turn is also signalled by Muniesa (2007), one of Callon’s collaborators.

This article’s case study suggests that representations, systems and tools of measurement may not be so efficient in disciplining behaviour and decisions (in other words, they do not constitute ‘effective performativity’ in MacKenzie’s words), contrary to what the governmentality literature more generally suggests. At the same time, the supply management programme of government did record performative successes such as its embrace by IBM, university departments and so on in the context of their discovery of supply chains. In this way, a virtual performance of purchasing could be construed as bolstering its status.

Other cases where nuances are similar have been documented in recent empirical work. In the realm of food safety, for example, the appearance of having a system in place which functions ‘as if it followed regulation on food safety is what counts for good performance when systems are evaluated for conformity with EU rules. Little attention is paid to actual practices on the ground or the outcomes of such functioning systems (see Ponte 2007a). Similarly, in sustainability certification in the food trade or in certification of corporate social responsibility, performing systemic compliance (with appropriate documentary flows and organizational adjustments) often supercedes the original objectives upon which these systems were founded (Klooster 2005; Ponte et al. 2007; Ponte 2008). So, while conformity to abstract models may have repercussions for action, this action may be superficial and ideological rather than substantial.

Besides promoting professional interests, performing abstract models can be argued to offer two other possible advantages. Firstly, abstract systems (and their writing and rewriting) can allow actors to cope better with complexity (Callon 2002) – an explanation that is both managerial and psychological. Secondly, performing a model may be the only way in which actors can appear to a variety of others to be achieving multiple and possibly contradictory objectives. Appearing to comply with one expectation may actually allow meeting another one in practice – a strategic explanation. It is not our aim to resolve these competing or overlapping explanations here, but more modestly to draw attention when dealing with both governmentality and GVC governance to the fault lines between representation and practice, and between interests, the complexity of situations and the contradictions of achieving multiple objectives with few tools.

The applicability of these findings beyond the boundaries of the present case study remains to be tested. But a lesson to be learnt is that existing analysis of GVC governance seem to be articulated in complete ignorance of how chain governors have tried to codify and problematise governance. Engaging with these problematics on the basis of frameworks such as governmentality leads to conclusions suggesting that political economy has radically overestimated the potential for systematic GVC governance. The continued intellectual interest of GVC analysis (and by implication, its policy relevance) rests in exploring such new terrain and in continuing to test established truths, rather than in the monotonous repetition and validation of the ‘mighty buyers’ story.
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