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Upgrading and exploitation in the fishing industry: Contributions of value chain analysis

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ABSTRACT

This article presents a framework for fisheries sector analysis based on the literatures on global value chains (GVCs) and global production networks (GPNs). A value chain approach offers an alternative to focusing primarily on policy as an explanatory variable, by bringing into focus relations among buyers, sellers and other stakeholders as well as their institutional context. After outlining the utility of this approach, the article identifies three questions at the forefront of contemporary debates on the dynamics of GVCs and GPNs. Namely: (1) How institutional context affects distributional and regulatory outcomes; (2) The conditions under which particular institutions that limit or regulate market forces are either productive or perverse; and (3) Why and how particular markets are constituted in the ways that they are. The article then showcases some of the central findings from the case studies brought together in this thematic issue, demonstrating how they contribute to current analytic debates surrounding value chains and core substantive problems facing both fisheries and those engaged in the fishing industry.

1. Introduction

The globalisation of the fisheries value chain continues to transform both fishing and production patterns. Fish may be caught in one country, post-harvesting processing occur in another and the final product may be exported to third country markets [1]. Exports "may well cross national boundaries several times before final consumption" [2]: p. 46. Globally, trade in fish and fisheries products has increased steadily, with significant growth occurring in the aquaculture sector. The impressive growth of the industry has important implications for decision-makers in terms of how to capture greater economic benefits, as well as how to ensure responsible and sustainable fisheries practices. Whether these decision-makers are company managers or policy-makers, their understanding of the fisheries value chain is critical. A country's position within the fisheries value chain has implications for economic growth and development. Similarly, a company's position along the chain has implications for its ability to extract value in a sustainable way.

Key questions confronting the sector include: Why does the development of commercial fishery resources sometimes result in sustainable outcomes while at other times it does not? How do people at the production end benefit from participation in a fisheries value chain when greater benefits typically accrue to those further along the value chain? These questions are urgent at a time when fisheries globally are under immense stress due to over-fishing and when problems of poverty and labour exploitation in the fishing industry repeatedly surface [3–5]. A framework that helps to shed light on such questions takes the value chain as the starting point for analysis. This offers an alternative to approaches that focus primarily on policy settings by bringing into the analysis relations among buyers, sellers and other stakeholders as well as their institutional context. It thus offers insights into how more value might be captured along the value chain—a process known as upgrading.

The articles in this collection explore pathways and obstacles to upgrading. Upgrading has two broad meanings here—extracting greater value at a particular point in a value chain, and increasing the efficiency and sustainability of resource use. These two broad meanings equate roughly to problems of distribution and regulation respectively, both of which have received enduring attention in the literature on global value chains (GVCs) and cognate work on global production networks (GPNs). The articles employ the term 'fisheries value chain' as a heuristic rather than an indication of theoretical or methodological commitment to either the GVC or GPN approach to understanding the dynamics of the global economy. It is useful as a heuristic; first, because it captures the concern of firms and other actors (both governmental and social) with an interest in processes by which a raw product is acquired, transformed and taken to market. For these actors, 'value' is a key concern, whether understood as profits, livelihoods, jobs or external impacts. Second, the heuristic of the value chain is useful as an intuitive way of distinguishing the 'vertical' relationships linking actors directly involved in a value chain – for example, producers with intermediaries, intermediaries with processors,

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processors with distributors – from the 'horizontal' relationships that participants in a value chain have with outside actors, as well as the range of often place-based contextual factors (social, economic, institutional and political) that both enable and constrain players in a value chain [6]: p. 37, [7].

This use of the 'value chain' terminology does not preclude an analytical approach that is consonant with the GPN framework, with its explicit theorization of macro, whole-of-chain-level governance dynamics and attention to differing institutional contexts. GVC analyses focus on the dyadic, inter-firm relationships between buyers and sellers at different links in the chain. In contrast, the GPN approach explicitly calls attention to a broader set of relationships: not only inter-firm ties between buyers and sellers, but also relations between firms and government actors, firms and other social actors, and relationships among competitor firms within the same industry.

This introductory article sketches the core elements of two major approaches to studying the dynamics of global production and exchange, namely the GVC and GPN frameworks. It then identifies some of the ongoing uncertainties and debates within these analytic frameworks. Finally, it presents in summary the contribution to these debates made by the other articles in this collection, with empirical illustrations based on case investigations in the fisheries sectors of Iceland, New Zealand, Indonesia, Singapore and the Philippines.

2. Global value chains and global production networks

Both GVCs and GPNs are explanatory frameworks to "explain geographical patterns of value creation, retention and capture in the global economy" [8]: p. 1. In his initial work on global commodity chains (GCCs), the progenitor to GVCs, Gereffi identified four key dimensions—an input–output structure, territoriality, governance and institutions [9,10]. In the input–output structure, products and services are linked together in a value-adding sequence. Firms that co-ordinate these activities along the value chain, and by extension capture the most value, are referred to as lead firms. The governance structure examines the power relationships and networks that determine how resources are coordinated along the value chain. This is an important dimension, as access to some markets is only possible through a lead firm's networks. The territoriality dimension examines the spatial dispersion of production and distribution networks in order to understand how firms use geographical regions to gain access to resources. The institutional context encompasses the institutional arrangements, both formal and informal, in which the value chain is embedded [11]. GVCs are governed at the chain level by lead firms, often also referred to as buyer firms, as well as by institutions that influence firm strategy [9,12].

Gereffi [9] identified two key types of governance—producer- and buyer-driven chains. The type of governance mode reflects the ways in which the firms that hold the largest amount of power along the value chain operate. For example, the more commodity-like the product, the greater the role lead-firms play in organising the chain. Over time, the term 'commodity chain' was seen to be too limiting and referring to undifferentiated products. Gereffi et al. [13]: p. 3 perceived GVCs to be "inclusive of the full range of possible chain activities and end products". The governance dichotomy was subsequently disputed and refined several times in order to explain more elaborate types of governance structures (see for example [14–17]. Gereffi and colleagues [15] subsequently identified a typology of governance structures. At the extreme ends of the governance scale are the market (arms-length market transactions) and hierarchical (vertical integration) modes of governance, with modular (limited monitoring), relational (mutual reliance between suppliers and buyers) and captive (suppliers are dependent on buyers) falling in between [15]. Notwithstanding, the buyer- and producer-driven dichotomy remains important, particularly for commodity industries [18–20], and has shown "dynamism over time" [20]: p. 81.

Central to governance is the internal relationship between actors along the value chain and, in particular, ways in which lead firms provide opportunities for supplier firms to maintain or improve their position within GVCs. In turn, GVCs have become important transmitters of knowledge diffusion thus stimulating learning and upgrading opportunities along the value chain [17]. Three types of upgrading have been identified: economic, social and environmental [21–24]. Economic upgrading refers to ways in which firms (and countries) can move to higher value added activities "in order to increase the benefits (e.g., security, profits, technology or knowledge transfer) that they receive from participating in it" [12]: p. 5). This can occur through process upgrading (transferring inputs into outputs more efficiently), product upgrading (production of more sophisticated product lines), chain upgrading (firms move into different, but related, sectors) and functional upgrading (firms acquire new functions along the chain). Social upgrading refers to improving workers' rights and entitlements by enhancing their quality of employment and respect for labour standards. Firms can improve their environmental performance and achieve upgrading benefits through changes in their organizational, technological and social processes. While social and environmental upgrading are linked to economic upgrading, the way in which these three types of upgrading impact on each other is under-researched [22,25].

A key debate within the GVC literature is the extent to which suppliers can upgrade, (or not) through their interaction with lead firms [26,27] and whether upgrading does in fact lead to increased competitiveness [28]. Brewer [29] states "in some regions and countries the upgrading efforts of individual firms seem to have a potential to lift the industry as a whole, while in others these same efforts ultimately end up downgrading the industry in its entirety".

GPNs emerged as a critique of the GVC framework, particularly the failure of GVCs to "appreciate the importance of different institutional and regulatory contexts that shape international production systems" [12]: p. 355. While the GVC analysis emphasizes lead firms as key actors within a "hierarchical system of production", the GPN approach "focuses on the way that different social actors interact in the process of value creation and capture" [30]: p. 371 and places more emphasis on the wide range of actors, including governments, multilateral organizations and non-governmental organizations, which influence and shape global production [31,32,16]. More recently, there has been a convergence of the two literatures as an "intellectual modality for thinking about the global economy" [8]: p. 6. Neilson et al. [8], however, caution that "the theoretical and methodological toolkit of the GVC–GPN approach needs to be as restless as the global economy it serves to study".

3. Current debates and areas of uncertainty

Institutional context and social relationships shape both distributive and regulatory outcomes. This is a well-established finding of GPN analyses, as well as complementary work on economic development from vantage points in economic geography, anthropology, political economy and – increasingly – economics [33–36]. The contributions in this group of articles build on this established insight in two ways. First, they show how value chain analysis can offer something to the marine policy area. GVC and GPN studies have overwhelmingly focused on manufacturing industries and, to a lesser extent, commodities such as agricultural products and minerals. Fisheries have received less attention in this perspective. In turn, studies of fisheries management have focused most on policies and institutions [37–39]. Second, this set of articles addresses questions at the forefront of current debates in the value chain literature. First, they ask *how* does institutional context matter? Second, they ask what are the *conditions*

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