THE IMPACTS OF PRIVATE STANDARDS ON GLOBAL VALUE CHAINS

LITERATURE REVIEW SERIES ON THE IMPACTS OF PRIVATE STANDARDS – PART I

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LITERATURE REVIEW SERIES
ON THE IMPACTS OF PRIVATE
STANDARDS – PART I

Abstract for trade information services

Part one of a series of four papers, each comprising a literature review of the main information resources regarding a specific aspect of the impact of private standards – covers: the main areas of impact of private standards in global value chains and the reasons behind such impacts; how and why governance mechanisms and chain structures change in global value chains as a result of standards being implemented; the way private standards impact small producer and exporter participation in a value chain and how they enhance or hinder upgrading opportunities (e.g. vertical integration) for producers/exporters; and the extent to which the distribution of revenues along the value chain is affected by these standards.

Acknowledgement

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Abbreviations

ATO	alternative trade organization
C.A.F.E.	Starbucks Coffee and Farmer Equity Practices
CIRAD	Centre de coopération internationale en recherche agronomique pour le développement
DIIS	Danish Institute for International Studies
ETI	Ethical Trading Initiative
FAO	Food and Agriculture Organization of the United Nations
FSC	Forest Stewardship Council
FT	Fairtrade
FTO	Fairtrade organization
HEBI	Kenyan Horticultural Ethical Business Initiative
GCC	global commodity chain
GLOBALG.A.P.	Global Good Agricultural Practice standards
GVC	global value chain
HACCP	hazard analysis critical control points
IDS	Institute of Development Studies
IISD	International Institute for Sustainable Development
ISO	International Organization for Standardization
KFC	Kenya Flower Council
MDGs	Millennium Development Goals
MSC	Marine Stewardship Council
NGO	non-governmental organization
PEFC	Programme for the Endorsement of Forest Certification
SA8000	Social Accountability (8000) Standard
SAN	Sustainable Agriculture Network
SKU	stock keeping units
UTZ	Utz Certified Standards

Executive summary

While standards play an increasingly important role in international trade and global value chains, little is known about their actual impacts in these chains. By applying a systematic literature approach, this paper aims to apply the key research findings to this question.

Generally, the research in this area was found to focus on few standards, products and countries. The case studies provide rich qualitative information about the complexity of the impacts of standards, but in most cases do not allow for the identification of correlation between variables. A systematic analysis of value chain impacts across standards and products providing quantitative, statistically valid data is lacking. Data is not comprehensive enough to make standard- or product-specific conclusions. Finally, there is a focus on the production side of the value chain, despite claims made about examining the entire value chain.

Still, the research provides some qualitatively rich findings, which are summarized according to four areas:

1. *The impact of standards on the management and administrative mechanisms in value chains and their structures*

Many authors describe standards as instruments for value chain management and administration (governance), particularly when it comes to facilitating arm's length relationships. These relationships are characterized by very little interaction between the buyer and the seller, with both acting in their own self interest. It has been confirmed in this analysis that standards may indeed facilitate arm's length relationships; nevertheless, we argue that this picture remains incomplete and standards impact value chain governance in many other, although mostly unintended, ways. This applies to: changes in chain structure and participating actors, mechanisms for standard implementation and monitoring, and effects from mainstreaming strategies. The term mainstreaming strategies refers to Fairtrade certified products that were formerly only sold by alternative trade organizations (ATOs; exclusively selling certified products) but that can now be carried by all kinds of traders, wholesalers and retailers. While standards might be an instrument for value chain governance, when implemented their actual effects go beyond governance. The question of whether standards are a tool allowing buyers to manage interactions with producers without building relationships or getting involved with them ('hands-off governance'), also seems to depend on the way standards are understood and used by buyers, often the most powerful actors in the value chain. For example, standards might also enhance dialogue between trading partners leading to stronger coordination and increased exchange of information on quality consistency, reliability of supply and managerial skills. In general, it remains unclear which factors, besides buyer attitude, contribute to 'hands-off' forms of governance and how these factors differ by product or sector.

While standards may generate alternative value chains, their impact in conventional chains seems rather limited and authors cited in this analysis question whether mainstreaming strategies does change governance patterns in global value chains. Generally, where the use of standards at producer level has been strongly fostered without providing additional support to the producer, this tends to come at the expense of standards' objectives of altering the distribution of power and revenues in value chains. Positive impacts have been found where dominant chain actors promote and share the values promoted by standards.

2. *The impact of standards on upgrading opportunities for producers*

The involvement in activities further down the value chain, e.g. through product conversion, processing or packaging (upgrading) has been described in the literature as an opportunity for firms to improve their position in a chain or as a shear necessity to not be excluded from business. This analysis also shows that standards might facilitate or even demand upgrading by producers/exporters. Effects were found to be twofold: (i) vertical integration (several steps in the production, processing and distribution of a product controlled by one company) puts additional demands on producers and exporters, and requires organizational and financial strength or support from other actors (inside or outside the chain), and (ii) vertical integration enables producers to carry out value-added activities and increase revenues. Adding value to the product allows producers to sell products at higher prices.

There is very limited empirical evidence about the question of whether standards enhance upgrading opportunities. This might be due to the fact that upgrading opportunities largely depend on other dimensions of the value chain, such as its structure, barriers to entry (disadvantages for new competitors entering the market), access to finance, income distribution and chain governance, and is rarely found to be investigated separately.

3. Small producer participation in value chains

The rise of food standards in export value chains and the demand for consistent high volumes and good quality produce has led to more vertically integrated value chains. This is also the result of complex and stringent standards that require close monitoring throughout the chain. Meeting the requirements set by increasingly performance-type standards requires costly investments. Performance standards define product characteristics as opposed to conditions of production. The investments required may include, cooling facilities, safety and quality monitoring or packaging devices, for example, which not all producers can afford. Representing a politically charged topic, the impacts of standards (mainly standards developed by firms in this case) on the participation by smallholders in global value chains is one of the issues investigated more comprehensively. While the majority of studies hint towards increased barriers to entry in value chains through standards, some authors cited in this report have been found to disagree.

4. The influence of standards on the distribution of revenues along the value chain

Research on revenue distribution is relatively comprehensive and outlines that (i) compliance with standards increases revenues along the value chain, (ii) but additional revenues are mostly distributed unevenly along the value chain to the benefit of the retailer, and (iii) value chain structures and governance play a significant role in how revenues are distributed. Nevertheless, results need to be considered cautiously as none of the studies reviewed represents a complete cost-benefit analysis. Consequently, no conclusion can be drawn as to the actual net income of value chain actors derived from standards compliance. Likewise, statements on the appropriation of the premium by the retailers need to take into consideration that logistics, inventory and the marketing costs of stock keeping units (SKU – a unique identifier for each product and service sold by a company) can be considerably higher for reduced volumes of these products. A direct comparison would not be totally appropriate.

Recommendations for further research

This systematic review found 63 papers on the impacts of standards on value chains, out of which 32 were empirical and 31 were conceptual, theoretical or methodological. The majority of papers have been published in academic journals or by research institutions. Most empirical studies were carried out in Africa and Latin America and dealt with coffee, flowers and fresh fruit and vegetables. Almost all empirical papers are based on qualitative case study approaches.

Most research activities have been carried out as isolated exercises. There is a lack of broadly comparable data and researchers are far from being in a position to draw broader, more general conclusions about the impacts of standards on value chains. Future research particularly needs to foster the definition of widely agreed upon indicators that allow a comparison of results. At the same time, quantitative measures of impact are a precondition for comparability across standards, value chains and countries. Lastly, it is pivotal that data collection and analysis methods allow for the analysis of correlations.

The amount of standards and their specificities, the multitude of value chains differing by product and the country-specific conditions producers and exporters find themselves in put a natural limit to researchers' ability to draw an exhaustive picture of the impact of private standards on value chains. Nevertheless, statistically valid data employing counterfactual conditioning (an estimate of what would have happened in the absence of the intervention, in this case the compliance with a standard) would allow for comparisons about the impacts of standards on value chains. Furthermore, methodological thoroughness and conceptual diversity already has, and could in the future, provide further valuable and rich results.

Finally, future research should investigate entire value chains and move beyond a focus on the producer to be able to identify where the impacts and constraints are in particular types of chains.

1. About the literature review series

This paper on the impacts of private standards on global value chains[1] is part of a broader systematic literature review on the impacts of private standards. The review consists of a series of five papers in total, each paper focussing on one specific issue. The topics were selected according to their relevance to the International Trade Centre's (ITC) main constituents - producers, exporters, trade support organizations and policymakers in developing countries - and their prevalence in research.

The question on how standards impact value chains is more relevant than ever. Against the background of a world economy that is global in scope and organizations with economic activities being spread across national boundaries, liberalization of trade has been one factor contributing to a policy shift from import substitution to export-led growth strategies. This has led to the involvement of a large number of producers in export activities and in global or regional value chains. Consequently, the nature of specific value chains determines to a considerable extent business practices for producers, and the risks and opportunities they face. Compliance with standards has become an important determinant of trade competitiveness. Given the importance of value chains and standards for producers in developing countries, we decided *in this first paper* to analyse the literature on private standards impacts on global value chains.

While few standards include requirements that directly address the value chain, most private standards comprise requirements that pertain to social and environmental conditions on producer/farm or factory levels. In most cases producers and/or factory workers are the primary target group and standards aim to improve living and/or working conditions. At the same time, standards impact producers' surrounding communities, or the wider environment. This is why *in a second paper* we analyse the results obtained by studies looking into the impacts of private standards on producers, exporters and their environments.

The framework within which producers and exporters and all other stakeholders act is provided by public standards that pertain to, for example, product safety, food security, quality or environmental protection. While public standards are set by governments or intergovernmental bodies, interdependencies between private standards and public standards are growing. Private standards are increasingly being aligned to public standards and, conversely, standard setting at a public level is being influenced by private standards. Regulations increasingly include principles and provisions developed by private standards. In order to better understand these interdependencies and their implications for producers and policy makers, *a third paper* will analyse the literature relating to these issues.

Finally, in a *fourth paper* we aim to understand under which circumstances the application of standards is an effective tool to foster sustainable development. The underlying question is in which situation does complying with a certain standard (or several standards) benefit producers and exporters? And if these groups would not benefit from implementing a standard, which factors enhance positive impacts and how could support be provided to make standard adoption a beneficial endeavour? These are key questions for producers and exporters and therefore provide the framework for this forth paper. Based on the main results obtained in the earlier papers this fourth contribution approaches these issues from a practitioner perspective and concludes this series by outlining some policy recommendations.

Accordingly, four categories were found suitable for organizing the research:

1. The impacts of private standards on global value chains
2. The impacts of private standards on producers and exporters
3. The interdependencies between private and public standards
4. When the application of standards is an effective tool to foster sustainable development.

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[1] Chains in which several companies or individuals interact to supply goods and/or services are referred to in the literature as commodity chains, supply chains and value chains. These terms are often used interchangeably lacking a clear conceptual distinction. The notion of the *value chain* focuses on value-adding activities that are being carried out by a single firm or by several firms in a chain. Value creation can occur through processing, physical transformation, addition of inputs, acquisition of services, and innovations of all kinds in products and processes. The term *supply chain* highlights the processes and activities between the different actors of a chain and covers everything flowing from one actor to the other (e. g. material, finance or information). Efficient management, reduction of transaction costs and friction between actors is the main concern of the approaches using this terminology. The notion of *commodity chains* by contrast focuses attention on the power relations among actors in a chain and related governance patterns. The term commodity chain is increasingly being substituted with the term value chain and the *global commodity approach* is being referred to as *global value chain analysis*. This is due to the fact that the term value chain captures a wider range of products and includes those that do not have commodity features. Therefore, in this paper we use the term value chain.

2.   About this paper

This first contribution to this series of papers aims to outline the main research results and key answers to the following questions: what are, on a general level, the main areas of impact of private standards in global value chains and why do standards impact the value chain? How and why do governance mechanisms and chain structures change in global value chains as a result of standards being implemented? How do standards impact small producer and exporter participation in a value chain? How do standards enhance or hinder upgrading opportunities (e.g. vertical integration) for producers/exporters? To what extent is the distribution of revenues along the value chain affected by standards?

Therefore, the purpose of this study is to gain an understanding of the landscape of studies on standards and to provide a review of important themes in the study of standards and global value chains.

The value chain framework allows for the comprehensive analysis of these questions. Value chain analysis is also important because: (i) value chains connect producers to markets and determine whether producers participate in international trade; (ii) the specificities of a chain determine to what extent producers benefit from participation; (iii) it helps clarify the role of standards in creating competitive advantages in global value chains; and (iv) it provides a holistic perspective on how standards influence the conditions of making business for producers and exporters in developing countries.

For the purpose of this paper, we refer to Kaplinsky and Morris[2] who broadly define a value chain 'as the full range of activities which are required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), and delivery to final consumers.'[3] This definition includes all vertically linked, two-way processes and horizontal linkages to create value chains, and emphasizes that a range of activities is being carried out within each link of the chain.

Several approaches have been developed to analyse the activities, processes, actors and interrelations comprising a value chain. In order to appropriately frame research outcomes, the next section briefly introduces some of the main approaches.

3.   Value chain research – an overview of perspectives

The studies reviewed in this research are mainly based on three conceptual approaches, namely the global commodity approach, the global production networks concept and the global value chain approach. Other concepts, such as transaction cost economics or efficiency analysis, are not being consulted in the studies reviewed. This is why, although being of equal significance in value chain research, the latter are mentioned without being discussed any further.

While the following concepts overlap and build on each other, we decided to discuss each of them separately. We focus on the various elements of the approaches referred to in the literature reviewed.

3.1. The global commodity chain

The notion of global commodity chains (GCC) was originally introduced by Hopkins and Wallerstein in 1986,[4] but Gereffi and Korzeniewicz's collection of studies from 1994[5] marks the first analysis using GCC analysis as a coherent paradigm. Although GCC had originally been developed for the analysis of manufacturing, this concept has been widely used to analyse trade in commodities and non-manufactured goods.

Gereffi introduced three key dimensions of commodity chains: the input-output structure and geographical coverage, their form of governance and their institutional framework. The innovative core of Gereffi's use of

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[2] Kaplinsky, Raphael and Mike Morris. *A Handbook for Value Chain Research*, Institute of Development Studies. 2002.

[3] *Ibid*, page 4.

[4] Hopkins, Terence K. and Immanuel Wallerstein. 'Commodity Chains in the World-Economy Prior to 1800.' *Review*, 10, 1, 157-170, 1986.

[5] Gereffi, Gary. *The organization of buyer-driven global commodity chains: how U.S. retailers shape overseas production networks.* Westport, United States. Greenwood Press. 1994.

the GCC approach lies in (i) accentuating the international nature and territoriality of value chains demanding coordination of activities over long distances and across borders, (ii) emphasizing the issues of power relations and coordination in inter-firm networks, and (iii) introducing the notion of producer-driven and buyer-driven chains.

Figure 1: Producer-driven and buyer-driven commodity chains
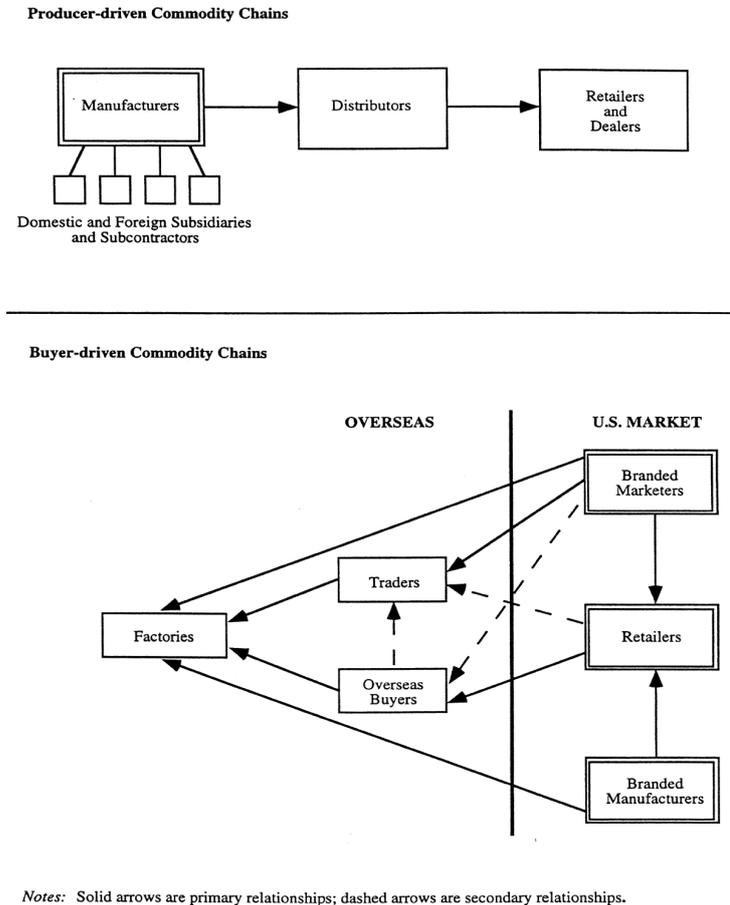
Notes: Solid arrows are primary relationships; dashed arrows are secondary relationships.

Source: Gereffi, 1999.

In producer-driven chains, producers control capital-intensive and technologically complex production processes. This type of chain is usually found in sectors of high technological sophistication and those that are capital intensive. Capital, technology and production expertise constitute main entry barriers. Buyer-driven chains are characterized by dominant manufacturing firms, traders or retailers focusing on branding, design and marketing functions. This kind of chain is usually found for relatively simple products and is controlled by buyers that derive power from high purchasing volumes determining conditions of production and requirements for product characteristics.

Islam[6] goes beyond Gereffi's traditional dichotomy and introduces the notion of twin-driven commodity chains. In addition to a lead firm that governs the supply network, a third party has a degree of power in governing these chains. This party defines regulatory aspects in the industry through enforcing production and process parameters. Islam argues that these actors 'presented as "external to the chain" are no longer "external", but rather very much indispensable and intrinsic part of the commodity chain.' This approach is particularly relevant in agro-food systems.

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[6] Islam, Md Saidul. 'From pond to plate: Towards a twin-driven commodity chain in Bangladesh shrimp aquaculture'. *Food Policy,* 33, 3, 2008.

GCC and its emphasis on governance issues is particularly useful for the analysis of how standards are used to govern commodity chains and change power patterns, and whether standards allow for upgrading in commodity chains.

3.2. Global production networks

A number of scholars employ the notion of global production or supply networks, pointing out that production takes place in networks that are situation specific, locally integrated and socially embedded (instead of dyadic interactions between buyers and suppliers). The term network avoids the linear connotation of chains and puts economic activities in their social contexts without rejecting their dispersion to multiple geographic locations. Networks require a high degree of governance and coordination of activities and acknowledge the role of private standards in this context.[7]

In a much cited work, Raynolds[8] builds on Gereffi's commodity chain approach and develops a commodity network approach describing how individual and social actors construct, maintain and transform commodity networks. The commodity chain terminology is being complemented by network analogies facilitating 'a shift from a fixed linear view (…) to the fluid multidirectional flows of material, discursive and knowledge resources among a variety of individual and collective social agents'.[9] Raynolds's approach provides a framework to analyse network organization, patterns of coordination and quality assessments by complementing traditional commercial and industrial conventions with a concept of alternative domestic and civic conventions, i.e. trust, equality, social and environmental responsibility, collective effort, and societal wide benefits.

Raynolds's commodity network approach maintains the analytical focus on governance issues. It applies a less structuralist view on the commodity chain drawing from network analysis and conventions approaches. Raynolds[10] understands governance as 'the relations through which key actors create, maintain, and potentially transform network activities'.[11] This approach highlights how social, political and economic actors influence practices across commodity networks.

3.3. The global value chain

The global value chain (GVC) school of thought follows Michael Porter[12] who focused on value adding activities aiming to analyse profitability affecting factors within a firm. While Porter originally applied the value chain concept to activities internal to an organization, it was later used to analyse competitive advantages in inter-organizational collaboration.

Governance in value chains is defined as the process of defining, communicating and imposing compliance with process and product parameters along the value chain. Based on Gereffi's[13] earlier work on commodity chains, Gereffi, Humphrey and Sturgeon[14] pick up the value chain taxonomy and refine the concept of governance by defining five types of value chain governance influenced by three factors: the complexity of transactions (transfer of knowledge and information required in transactions with respect to product and process specifications), the codifiability of transactions (the extent to which information and knowledge can be exchanged in an efficient way) and the competence of suppliers (ability of suppliers to fulfil requirements). The authors distinguish between the following forms of governance with an increasing degree of explicit coordination and power asymmetry from markets to hierarchy:

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[7] Levy, David. Academy of Management. 'Political Contestation in Global Production Networks'. *Academy of Management Review,* 33, 4, 2008.

[8] Raynolds, Laura T. 'Consumer/Producer Links in Fair Trade Coffee Networks'. *Sociologia Ruralis,* 42, 4, 2002.

[9] *Ibid*, p. 408.

[10] Raynolds, Laura T. 'The Globalization of Organic Agro-Food Networks'. *World Development,* 32, 5, 2004.

[11] *Ibid*, page 728.

[12] Porter, Michael. *Competitive Advantage of Nations*, New York, Free Press. 1990.

[13] Gereffi, Gary. 'International trade and industrial upgrading in the apparel commodity chain'. *Journal of International Economics,* 48, 1, 1999. And Gereffi, Gary. 1994. *The organization of buyer-driven global commodity chains: how U.S. retailers shape overseas production networks*, Westport, United States, Greenwood Press.

[14] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

- Markets: this simple form of governance is characterised by few transactions, low complexity of information, simple products with little need for coordination and codification. Buyers meet specifications easily and loose linkages exist between value chain actors.

- Modular value chain: this type of governance is somewhere between the network and market style of GVC governance patterns. Suppliers employ a generic technology with little transaction-specific costs. Interactions between buyers and suppliers are becoming more intense with an increased information flow and stronger linkages. But knowledge and information is still easy to codify, which keeps interactions simple. Arms-length market linkages make switching partners inexpensive.

- Relational value chains: this network-style governance form is marked by mutual dependence regulated through reputation, and social and spatial proximity. Switching costs to new partners are high. Interactions are dense, knowledge is tacit, and complex information is exchanged with little codification of product specifications. Typically, supplier capabilities are high.

- Captive value chains: in this governance pattern small suppliers depend on dominant buyers that control and monitor the chain activities. Chains are captive as switching costs for suppliers is high, and linkages are thick and idiosyncratic. Typical is the combination of complex products and a high ability to codify information with low supplier capabilities.

- Hierarchy: full vertical integration as product specifications cannot be codified, products are highly complex and competent suppliers cannot be found. Buyers are forced to control resources.

Focussing on value creation in general, this approach is somewhat broad in scope and allows for the analysis of input material, production processes, technologies, standards, regulation, products and markets. Nevertheless, much research on private standards relates to the above introduced five types of chain governance.

Figure 2:   Five types of value chain governance
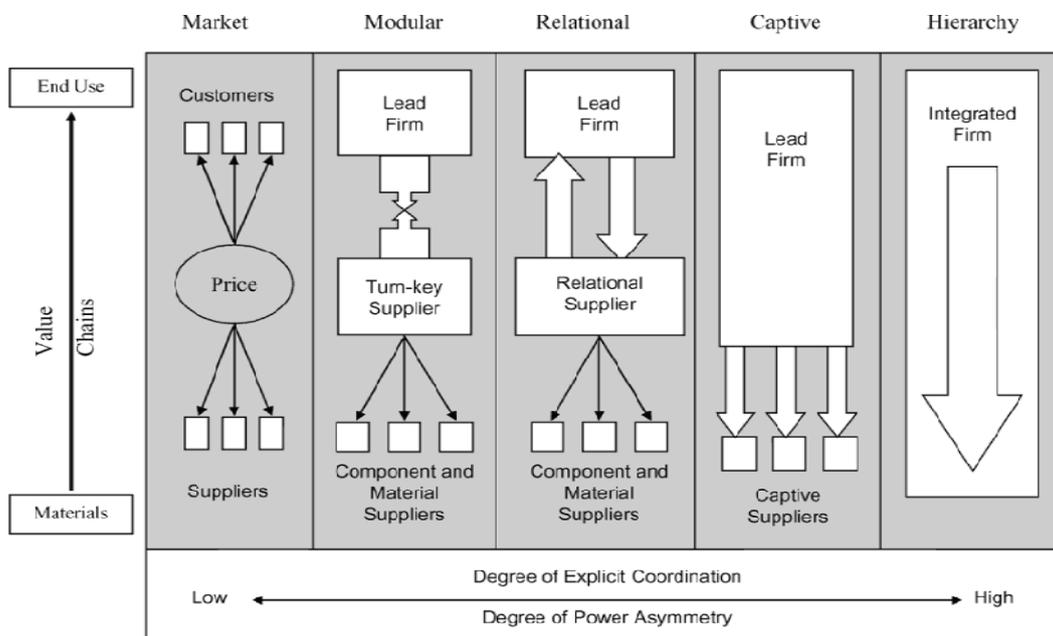
Source: Gereffi et al., 2005.

An important dimension of this approach lies in the inclusion of the institutional context in the analysis, accounting for the fact that value chains 'do not exist in a vacuum but within a complex matrix of institutions and supporting industries'.[15] Work by Gereffi,[16] Gibbon[17] and Humphrey and Schmitz[18] lays the groundwork

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[15] Sturgeon, Timothy. 'How do we define value chains and production networks'. *IDS Bulletin* 32, 3, 9-18, 2001.

for our understanding of the role of institutions embedding global value chains and provide a framework for the analysis of how the institutional context shapes global value chains. Thus, the global value chain approach also takes into account the geographic (local and global) context defining rules, norms and social relations that surround economic actors and that often accounts for the differences that are found in value chain outcomes. Researchers, policymakers and practitioners, therefore, need to take the institutional context into account.[19]

4.   Methodology

For this paper we employed a systematic literature review methodology that adopts a replicable, scientific and transparent process that aims to minimize bias through exhaustive literature search of published and unpublished studies and by providing an audit trail of the reviewer's decisions, procedures and conclusions'.[20] Providing for comprehensiveness and comparability, this method captures the fragmented and heterogeneous field of research on private standards' impact on value chains with its many subfields, research questions, conceptual approaches and methodologies applied.

It also offers a framework to identify thematic gaps in the literature, to highlight areas more comprehensively covered and to provide evidence for informing policy and practice in this discipline. Based on a thematic analysis and on the breakdown of methodologies and conceptual frameworks applied, a systematic literature review approach also informs future research activities.

In the interest of readability, findings have been linked to constitute a narrative suggesting comparability of results. However, while the approach allows for the integration of heterogeneous research, findings have to be interpreted cautiously as they are based on different theoretical approaches and emerge from diverse methodologies. This particularly applies to the comparison of results.

The review process

The review process was guided by the methodology's main elements, rigor and traceability, and all steps taken were defined and documented in view of comprehensive and unbiased research. The review has been carried out following an established 'systematic review' methodology.

The methodology consists of three main phases: planning and search, screening, and extraction and analysis. In a first step the main questions guiding the research were defined and all relevant sources of literature were identified, namely: (i) identification of the main keywords used in the different streams of literature; these keywords were later used to build search strings in the most comprehensive academic search databases; (ii) identification of key journals that are not covered by these databases and use of an additional database to search these journals applying the same keywords; (iii) review of the references used in previous literature analysis; (iv) review of influential authors in the field; (v) identification of central research institutes and international organizations in the field and review of their publications; and (vi) identification of key articles and book sections providing background information on specific topics.

Three main sources of literature were used in our research: (i) three electronic databases namely EBSCO, Science Direct and ISI Web of Knowledge; (ii) previous literature reviews and publications by institutions working in this field; and (iii) cross-references in papers.

The next step in a systematic literature review consists of the selection of papers based on their relevance and quality. The screening process entails three steps: a title review, the review of abstracts and the full

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[16] Gereffi, Gary. *The organization of buyer-driven global commodity chains: how U.S. retailers shape overseas production networks*, Westport, United States, Greenwood Press. 1994.

[17] Gibbon, Peter. 'Upgrading primary production: A global commodity chain approach'. *World Development,* 29, 2, 2001.

[18] Humphrey, John and Hubert Schmitz. *Developing Country Firms in the World Economy: Governance and Upgrading in Global Value Chains*. Dusiburg, Germany, Institut für Entwicklung und Frieden der Gerhard-Mercator-Universität Duisburg. 2002.

[19] Neilson, Jeff and Bill Pritchard. *Value Chain Struggles: Institutions and Governance in the Plantation Districts of South India.* Oxford, Blackwell. 2009.

[20] Tranfield, David et al. 'Towards a Methodology for Developing Evidence-Informed Management Knowledge by Means of Systematic Review'. *British Journal of Management*, 14, 3, 207-222, 2003.

paper review. Before each step, inclusion and exclusion criteria had been defined to ensure transparency and the ability to replicate the process.

Lastly, in a final screening step, full papers were reviewed according to defined selection criteria, such as contribution to research, clarity of data collection and sampling methods, or the linkage between the methodology used and conclusions reached. This screening exercise resulted in 54 papers that have been analysed for this literature review.

The analysis of these papers has been divided into two areas: a descriptive analysis and a thematic analysis. The former describes the type of studies included in this review, their geographical scope, time of publication and the methodologies used. The latter analyses and synthesises the main research findings.

For more details on the methodology and the review process please refer to the appendices.

In the following, we focus our analysis on (i) the main issues covered in value chain research on private standards and the key outputs of research, (ii) answering the above questions relating to the impact of standards on value chains, and (iii) drawing conclusions from the research output as to its explanatory and analytical power and the direction of future research. First, we will provide an overview of the scope of research, the methods used for data collection and analysis and its foundation in theory.

5.   Descriptive analysis

This descriptive analysis sets the framework for the thematic analysis by providing background information on the research carried out. It includes information on the methodologies adopted and the main topics covered. It also answers the questions: which standards and products are covered by research; is there a regional focus; and what is the date range of the articles?

For this review we selected a total of 63 documents out of which about half of the studies (32) were empirical, 30 articles were theoretical and/or conceptual (including papers working with secondary data) and one paper was methodological in nature.

Figure 3:   Steps in a systematic review process

Documents included in each step

Out of the 63 documents selected, 37 have been published in academic journals, 22 were reports or working papers published by research institutions (IISD, IDS, DIIS, and CIRAD) or universities and four were books or book chapters.

All documents reviewed have been published after the year 2000 reflecting the rise of private standards in the past decade. The dip in 2006 might have to do with publishing cycles and project timelines. Figure 4 shows the number of publications by year.

Figure 4:   Documents reviewed by publication date
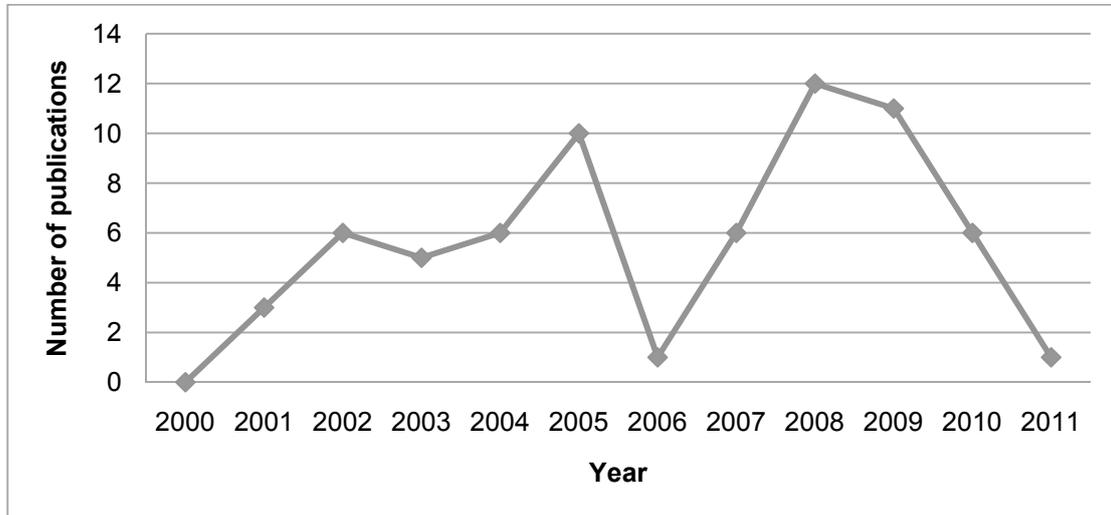
Out of the 32 empirical papers reviewed, 14 studies were carried out in Africa, eight in Latin America, and six were conducted in Asia and one in Europe. Most prominently featured countries in (i) Africa include Kenya, South Africa, Zambia, Zimbabwe, and the United Republic of Tanzania and in (ii) Latin America include Nicaragua, Costa Rica and Mexico. An additional three papers were based on global data or data pertaining to more than two world regions (figure 5).[21]

Figure 5:   Geographic distribution of empirical papers
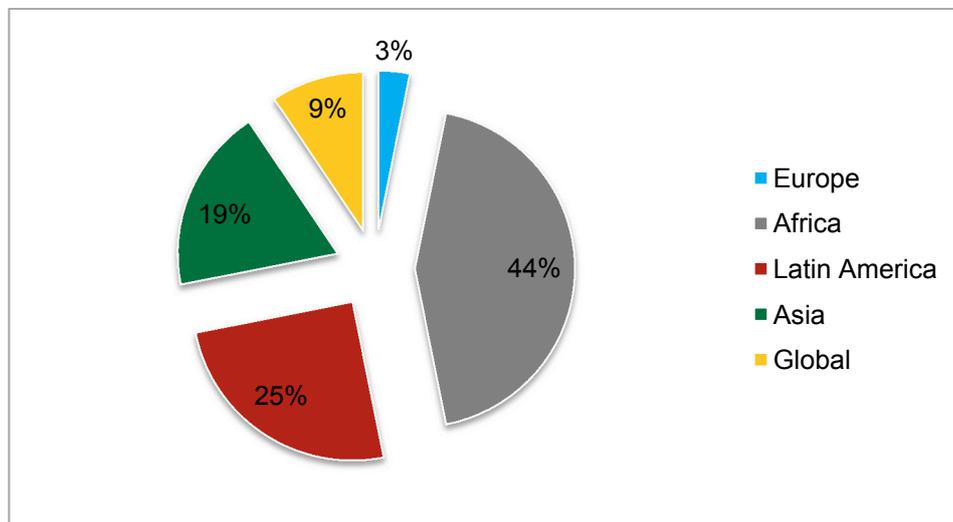
A range of standards were covered by more than half of the empirical studies (14), which covered more than one standard. In the food category, most studies were firm-specific, and horticultural standards feature most prominently in this category. Two studies were found to be on both Organic and Fairtrade standards and two on the Forest Stewardship Council (FSC) and Programme for the Endorsement of Forest Certification

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[21] Numbers in the figure (39) do not correspond to the count of empirical papers (32) as papers on several products were counted multiple times (where possible). This allows for an analysis of methodology applied by product.

(PEFC) standards. Six studies were exclusively on Fairtrade, three on GLOBALG.A.P., two on FSC and one paper each on Starbucks C.A.F.E. Practices, HACCP,[22] and the IKEA Code of conduct.

Empirical studies also covered a wide range of products, with 25 studies based on one product or product group and the remaining seven covering several product groups and sectors or not specifying a product focus. Coffee (9), flowers (8), fresh fruits (7), vegetables (6), (Rooibos) tea, forest and wood products (3), and apparel/textiles/cotton (2) were the most prominently covered products in research. Remaining studies were on cocoa, fish, spices and wine.

When it comes to methodologies, almost all of the 32 empirical papers were based on qualitative case study approaches (29), out of which 17 report on single case studies and 12 on multiple case studies. Two papers were based on surveys and one paper employs an econometric model. In general, counterfactual outcomes[23] were not found to be established in the studies reviewed. Some studies use non-certified producers and exporters as counterfactual outcomes without controlling for any other factor. Figure 6 provides an overview of methodologies applied by product/sector. 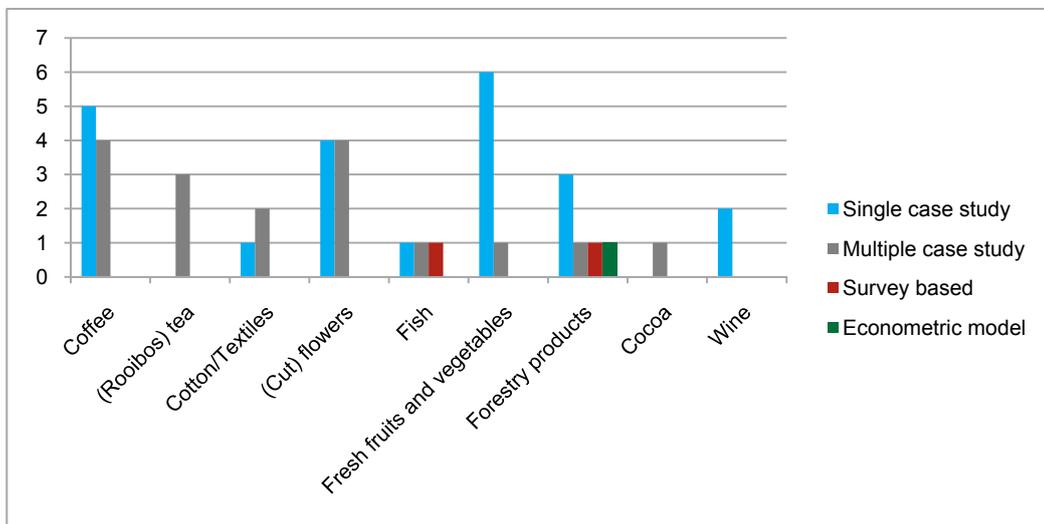In conclusion, the rare use of quantitative or statistically valid sampling techniques and counterfactual outcomes makes it difficult to establish correlations. For a detailed overview of methodologies applied by standard and product/sector please see appendix II.

Figure 6: Methodologies applied by products/sectors[24]

Topics covered by the 63 documents are organized in five main categories. A number of studies cover more than one topic. Table 1 provides an overview of the number of documents addressing each of the topics and indicates that governance is the most prominently covered topic. This might be a consequence of the fact that many authors related to Gereffi's work on governance patterns in global value chains. At the same time, this focus might be due to the fact that governance patterns not only determine upgrading opportunities and barriers to entry in value chains but essentially shape global value chains. Governance analysis also allows for conclusions about the distribution of power in value chains and helps understand the causes for inequities and potential opportunities for interventions.

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[22] HACCP is a food safety management system and stands for hazard analysis critical control point. HACCP addresses physical, chemical and biological hazards and is used in the food industry to identify potential food safety hazards.

[23] A counterfactual outcome is an estimate of what would have happened in the absence of the intervention, in this case complying with one or several standards.

[24] Numbers in the figure do not correspond to the count of methodologies as some papers address several products/sectors. These were counted multiple times.

Table 1: Articles reviewed by topic

Topic	Number of documents[25]
Governance	34
Value chain structure	9
Upgrading/vertical integration	7
Small producer participation	8
Revenue distribution	9

The next section summarizes the empirical evidence on the impact of private standards on value chains. Its structure is based on the core issues discussed in the reviewed literature. Classification of the literature has been carried out as specific as possible and in cases where papers address several topics, papers have been classified according to their main focus. The order of publications presented in each sub-section follows the order of the core themes extracted from the data and illustrated in table 1.

6. The impact of private standards on value chains: empirical evidence

The section starts with a summary of the impacts of private standards on the *governance* of value chains. We discuss the question of hands-off governance, mainstreaming strategies, standards implementation in different chains and value chain structure. The section continues with an overview of papers assessing how standards change *upgrading* opportunities, e.g. through vertical integration. It goes on to summarize how standards impact *small producer participation* in value chains. Lastly, we investigate the influence of standards on the *distribution of revenues* along the chain.

Further publications on the same or related topics that have not been separately reviewed are identified at the end of each section. Additionally, appendix I provides a list of interesting further readings.

6.1. Governance

Value chain governance corresponds to an organization's ability to define and enforce production parameters and product attributes. This includes the authority to control decision-making processes, dictate forms of horizontal coordination, verify performance and, last but not least, influence the distribution of revenues along the chain. Governance mechanisms are manifold and include formal (e.g. contracts) and informal (e.g. trust, values) instruments, control processes (enterprise resource planning, 'just in time'[26]), information systems, structures and networks. While many authors discuss governance relating to the concepts of power and trust, surprisingly, the reviewed literature does not refer to these concepts.

In general, there are two main reasons why firms aim to govern value chains. First, differentiated products allow firms to build competitive advantages beyond differentiation by price, including factors such as reliability of supply, product variety and quality and speed of innovation. Implementing this strategy requires close coordination and communication with suppliers to successfully meet changing product specifications and transmit information about market requirements. Second, pressure is increasing on final buyers to meet labour, environmental and product safety and quality standards. These factors do not necessarily require stronger value chain governance as long as suppliers are in a position to meet the demands. Yet, many suppliers lack the capacity and know-how to meet these demands and standards have an important risk mitigating function for final buyers.

Gereffi et al.[27] describe governance along a continuum of five types of relationships between firms. So how do standards influence the nature of relationships and the type of governance in a value chain? Do standards favour a market type of governance characterized by arm's-length relationships as some authors argue or, on the contrary, are standards an instrument for closer relationships between value chain actors fostering closer

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[25] Numbers do not add up to 63 as some studies address more than one topic and were counted double in this table.

[26] Just in time is a business strategy that aims to minimize in-process inventory and related costs.

[27] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

coordination, technical assistance and learning? Some standards created alternative value chains. But when these standards decided to employ a mainstreaming strategy and operate in conventional chains, did this also impact conventional value chains in their governance type and structure? And is there an inverse effect: how does the type of governance in a value chain influence the adoption of standards? The following section outlines the most important theoretical contributions and empirical results obtained.

6.1.1. The impact of standards on governance patterns

A central contribution to the theoretical discussion on value chain governance through standards has been made by Ponte and Gibbon.[28] Combining concepts from conventions theory and Gereffi's GCC approach,[29] the authors analyse the role of quality standards in setting conditions of participation in value chains determining functional division of labour and barriers to entry along the chain. Using secondary data, the authors argue that quality standards become a key element in governing global value chains. In clothing, while quality is a basic entry barrier, buyers are shifting from direct monitoring of suppliers to 'control of control approaches', leaving direct control to certification and auditing bodies. At the same time, the demand for product attributes beyond quality (such as clients' preferred handling operations) gains more importance. In the fast-changing coffee sector, consumers ask for more complex information beyond coffee quality, including environmental and socio-economic conditions of production. Paradoxically, with an increased number of product attributes and information about the production process to be ensured and an increasing need for control of operations and quality checks, the authors observed hands-off quality management rather than direct control of suppliers. This shift, they argue, is made possible by certification systems.

This view was backed by Raynolds.[30] Applying a commodity network approach, Raynolds analyses the global institutional regulations and main actors shaping organic trade and the market structure in organics. The author finds that participation in organic value chains is governed by certification institutions and their requirements. Their power is based on the ability to define quality attributes, measures (production and documentation requirements) and rewards. Raynolds argues that although co-ordination in global value chains might be increasingly 'loose', this does not imply that overall chain drivenness (control) by leading firms is in decline. New forms of coordination through quality conventions defined in standards on production and process methods (such as HACCP, ISO 9000 and 14000), allow for a 'hands-off' approach in quality management. Raynolds concludes that 'certification represents a powerful new form of network governance.'[31]

Similarly, Dolan and Humphrey[32] observe a shift from company-specific standards to generic social codes and sectoral codes (ETI, EurepG.A.P. (now GLOBALG.A.P.) and SA8000) as alternative instruments in parameter setting and enforcement. Compliance with these standards is being monitored by actors outside the chain and allows supermarkets and retailers to be less involved in auditing exporters. At the same time, the authors do not expect a total substitution of firm specific standards (e.g. Tesco's Nature's Choice). They also point out that relationships between exporters and buyers might shift from hierarchy towards market types of governance.[33]

In a later study on Fairtrade, Raynolds[34] draws a more differentiated picture of standards' impact on chain governance. Raynolds points out that the actual impact of Fairtrade on value chain governance, coordination and upgrading depends on the buyers' relationship to suppliers and distinguishes between mission-driven, quality-driven and market-driven buyers according to the role they play in the value chain.

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[28] Ponte, Stefano and Peter Gibbon. 'Quality standards, conventions and the governance of global value chains'. *Economy and Society,* 34, 1, 2005.

[29] Gereffi, Gary. *The organization of buyer-driven global commodity chains: how U.S. retailers shape overseas production networks.* 1994. Westport, United States, Greenwood Press. And Gereffi, Gary. 'International trade and industrial upgrading in the apparel commodity chain'. *Journal of International Economics,* 48, 1, 1999.

[30] Raynolds, Laura T. 'The Globalization of Organic Agro-Food Networks'. *World Development,* 32, 5, 2004.

[31] *Ibid*, page 738.

[32] Dolan, Catherine and John Humphrey. 'Changing governance patterns in the trade in fresh vegetables between Africa and the United Kingdom'. *Environment and Planning,* 36, 3, 2004.

[33] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

[34] Raynolds, Laura T. 'Mainstreaming Fair Trade Coffee: From Partnership to Traceability'. *World Dev.,* 37, 6, 2009.

Mission-driven buyers often exclusively sell Fairtrade products and promote alternative values in their business models. These buyers build close partnerships with suppliers. While the pattern of coordination might be characterized as 'relational' in nature,[35] buyers do exert power particularly relating to quality demand.

In *quality-driven buyer-seller relationships* buyers collaborate with producers aiming to reach and maintain a certain quality level of the product. This relationship is characterized by more direct and stable trading relations, income predictability and pre-financing.

Market-driven buyers, on the other hand, pursue conventional business practices, promote competition among certified producers, and mainly see certification as a traceability enhancing tool. Certification in these cases allows for 'hands off' quality management from buyers and facilitates dictating conditions of production and processing for producers.

An analysis of the South African value chain of wine by Ponte[36] confirms that governance clearly depends on the roles played by lead firms. The author distinguishes three strands of the value chain for wine: the lower quality wine strand, the middle quality wine strand and the high quality wine strand. Ponte finds, although similar in theory, three differently governed value chains in practice. The low quality wine chain is strongly driven by retailers based on strict demands on quality and price pressure. The middle quality strand is not dominated by lead firms. Suppliers earn higher margins and have a stronger say in determining quality. The high quality strand is somewhere between the low and middle quality strands in terms of drivenness. Interestingly, these chains are mostly driven by external actors' (wine critics) appreciation of quality. In a later study on South African wine, Ponte[37] reiterates the central role of wine quality conventions when it comes to governing the value chain. Corresponding to earlier findings Ponte emphasizes that chain governance is not exclusively based on power, market share, and/or economies of scale or scope but in this case is based on 'normative work', i.e. defining quality conventions for wine. He finds that only when these conventions are clearly defined and dominant, e.g. in basic quality wine, are lead firms able to drive a value chain through the ease of transmission of these conventions from a distance. In mid to top quality wine conventions are less dominant and portable and the author finds a more fragmented and less driven value chain.

External actors also play a central role in Tallontire et al[38] where the authors argue that governance analysis has to look beyond vertical chain governance (i.e. relations between buyers and suppliers) and include wider horizontal processes of governance. Taking the example of KenyaGAP and the Horticulture Ethical Business Initiative (HEBI) standards operating in the Kenyan horticultural industry the authors apply an extended value chain framework that allows the inclusion of legislative, executive and judicial aspects of governance. The horizontal aspects of governance are most evident in legislative and in judicial governance. Legislative governance refers to external actors participating in standard development and judicial governance refers to how the auditing process is carried out. According to Tallontire et al the way these horizontal aspects are defined and implemented in standards influences governance patterns in value chains.

Taking the case of the EurepG.A.P. standards, Konefal et al.[39] argue that the rise of private standards and the increasing authority of supermarkets are the result of a restructuring in agro-food networks. These are increasingly dominated by supermarkets that not only set private standards but according to the authors control 'what food is grown where, how, and by whom'. Pointing out how large producers and exporters became involved in decision-making structures in GLOBALG.A.P. Bain[40] balances this view. Her study on the Chilean fresh fruit export sector revisits the issue of supermarket power and demonstrates that by becoming

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[35] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

[36] Ponte, Stefano. *Governance in the Value Chain for South African Wine*. TRALAC Working Paper 9, DIIS. 2007.

[37] Ponte, Stefano. 'Governing through Quality: Conventions and Supply Relations in the Value Chain for South African Wine'. *Sociologica Ruralis,* 49, 3, 2009.

[38] Tallontire, Anne, Maggie Opondo, Valerie Nelson and Adrienne Martin. 'Beyond the vertical? Using value chains and governance as a framework to analyse private standards initiatives in agri-food chains'. Agriculture and human values, 2009 1-15.

[39] Konefal, Jason, Michael Mascarenhas and Maki Hatanaka. 'Governance in the Global Agro-Food System: Backlighting the Role of Transnational Supermarket Chains'. *Agriculture and Human Values,* 22, 3, 2005.

[40] Bain, Christopher. 'Governing the Global Value Chain: GLOBALGAP and the Chilean Fresh Fruit Industry'. *International Journal of Sociology of Agriculture and Food,* 7, 1, 2010.

part of the organizational structure of GLOBALG.A.P. Chilean producer and exporters participated in standard setting and implementation decisions.

In summary, evidence is both limited to a few (mostly conceptual) studies and rather unambiguous when it comes to the question whether standards allow for 'hands-off' governance insofar as authors seem to agree that standards foster 'hands-off' governance or governance 'from a distance'. This seems logical as standards are instruments to codify information reducing the need for intensive coordination and communication. Nevertheless, Raynolds[41] suggests that the question whether standards actually lead to this kind of governance depends on the way standards are understood and used by the most powerful actor in the value chain. Raynolds demonstrates that standards might also enhance dialogue between trading partners leading to stronger coordination and increased exchange of information on quality consistency, reliability of supply and managerial skills. In general, it remains unclear which factors, besides buyer attitude, contribute to 'hands-off' forms of governance and how these factors differ by product or sector.

6.1.2. The impact of mainstreaming strategies

Fairtrade organizations (FTOs) distribute certified products ensuring adherence to Fairtrade principles such as direct and short value chains, focus on small scale producers or capacity building. Also, farmers are shareholders of FTOs and are involved in FTO management. While FTOs underwent considerable changes from non-profit organizations to for profit companies employing marketing and branding strategies, Fairtrade also decided to employ new distribution channels and mainstream its operations. This step (also taken by the FSC) aimed to address a larger number of producers and increase market penetration. This means that in addition to building alternative value chains these standards organizations decided to work with conventional chains, including exporters, importers and distribution channels. A number of studies analyse how this decision changed governance patterns in conventional value chains and whether these standards still managed to achieve their objectives.

An important differentiation regarding the various forms of Fairtrade value chains is made by Tallontire[42] who points out that corporate participation led to different value chains depending on the Fairtrade business model applied. Business models differ based on whether an alternative trading organization (ATO) is involved, producers own equity in the ATO, a retailer sources from registered producers or owns a Fairtrade license for some of its products, among other forms.[43] As each business model involves different forms of chain governance, these business models also affect producers in different ways. Tallontire[44] also suggests that chain governance and institutional governance (in Fairtrade) are linked as they influence each other. Consequently, Tallontire[45] suggests that differences in business models need to be reflected in Fairtrade institutional governance structures (e.g. in standard setting processes and systems of accountability) and in the Fairtrade standards.

In a study on Fairtrade coffee, Taylor[46] finds that the mainstreaming strategy has lead to a shorter value chain with closer and more personal ties between actors, and a shift in distribution of benefits towards the producer. These effects have been fostered by specialty roasters who at least partially share values promoted by Fairtrade. According to Taylor, in forestry, FSCs decision of mainstreaming has not lead to these effects of re-distributing benefits, and facilitating more direct ties throughout the chain. Standards are forced to operate in conventional chains if they want to reach their goals of changing the way business is being done. At the same time it is conventional market logics that make it so difficult for these standards to make a meaningful change. This argumentation is based on the analysis of seven case studies of coffee

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[41] Raynolds, Laura T. 'Mainstreaming Fair Trade Coffee: From Partnership to Traceability'. *World Dev.,* 37, 6, 2009.

[42] Tallontire, Anne. 'Top heavy? Governance issues and policy decisions for the fair trade movement'. *Journal for International Development,* 21, 2009.

[43] Reed, D. 'What do Corporations have to do with Fair Trade? Positive and Normative Analysis from a Value Chain Perspective'. *J.Bus.Ethics,* 86, 2009.

[44] Tallontire, Anne. 'Top heavy? Governance issues and policy decisions for the fair trade movement'. *Journal for International Development,* 21, 2009.

[45] *Ibid.*

[46] Taylor, Peter Leigh. 'In the Market But Not of It: Fair Trade Coffee and Forest Stewardship Council Certification as Market-Based Social Change'. *World Dev.,* 33, 1, 2005.

producers in Mexico, Guatemala and El Salvador. Taylor et al.[47] found that Fairtrade requirements pertaining to formal organization significantly change the coffee value chain as production, processing and commercialization is being carried out in democratically organized associations. But the case studies also show that the interest of corporate actors in Fairtrade puts at risk the paradigm of Fairtrade to create direct producer-consumer links through developing fair trade marketing channels.

Bassett[48] applies a comparative case study design to analyse Fairtrade certified cotton growers in Burkina Faso and Mali and agrees with the more sceptical elements in Taylor's work. He argues that in the case of Burkina Faso and Mali, mainstreaming of Fairtrade limited the positive impacts Fairtrade had on farmers. The main reason was that the same cotton companies and traders operated in Fairtrade value chains and in the conventional chain. This made it impossible to change power inequalities and hindered real structural changes in the cotton chain. Riisgaard[49] joins this critical view and employs Tallontire's[50] framework to assess legislative and judicial governance in value chains and analyses the Kenya Flower Council (KFC) and the HEBI standards, two Kenyan initiatives. Although locally developed, requirements in these standards are closely aligned to international standards and to retailers' demands. While KFC does not further take into consideration needs growing form the local context, HEBI at least goes beyond international standards in addressing social standards. Still, the author concludes that both standards do not contest governance patterns and the power of retailers in the cut flower value chain is being reinforced.

Research results lead us to conclude that, while standards may generate alternative value chains, impact in conventional chains seems rather limited and authors put into question whether mainstreaming strategies do change governance patterns in global value chains. Tallontire (2009)[51] takes a more detailed look and concludes that mainstreaming impacts on Fairtrade value chains depends on the business model applied as this again affects chain governance. Generally, more effective market penetration seems to come at the expense of standards' objectives of altering the distribution of power and revenues in value chains. Positive impacts have been found where dominant chain actors share the values promoted by standards.

6.1.3. Implementation of standards along the value chain

In this section we look at studies that analyse whether there are certain factors that hinder or foster the adoption of standards and how standards are implemented along the value chain. As chains always involve a number of actors the questions arises as to (i) what is the role of the different actors in a chain when it comes to promoting, obstructing or enforcing standard adoption; (ii) what are mechanisms to promote, obstruct or enforce a standard's adoption in a chain and (iii) how does the value chain structure affect the adoption of standards?

Pedersen,[52] in a case study on the IKEA code of conduct, investigates problems resulting from actors driven by self interest and opportunistic behaviour in value chains. While elsewhere it has been argued that standards are a way to monitor actors and to reduce these threats, Pedersen indentifies five mechanisms that help companies implement and manage codes of conduct along their value chains: direct sanctions in case of non-compliance, involvement of suppliers in the planning and implementation of the code, goal congruence through medium- to long-term contracts, building trust, and third-party monitoring and enforcement.

Morris and Dunne[53] acknowledge the importance of one of these five mechanisms: goal congruence. The authors take a value chain perspective to understand how certification requirements are implemented

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[47] Taylor, Peter Leigh, Douglas L. Murray and Laura T. Raynolds. 'Keeping trade fair: governance challenges in the fair trade coffee initiative'. *Sustainable Dev.,* 13, 3, 2005.

[48] Bassett, Thomas J. 'Slim pickings: Fairtrade cotton in West Africa'. *Geoforum,* 41, 1, 2010.

[49] Riisgaard, Lone. 'What's in it for Labour? Private social standards in the cut flower industries of Kenya and Tanzania'. DIIS Working Paper 2007:16, 2007.

[50] Tallontire, Anne. 'CSR and regulation: towards a framework for understanding private standards initiatives in the agri-food chain'. *Third World Quarterly,* 28, 4, 2007.

[51] Tallontire, Anne. 'Top heavy? Governance issues and policy decisions for the fair trade movement'. *Journal of International Development,* 21, 2009.

[52] Rahbek Pedersen, Esben and Mette Andersen. 'Safeguarding corporate social responsibility (CSR) in global supply chains: how codes of conduct are managed in buyer-supplier relationships'. *Journal of Public Affairs (14723891),* 6, 3, 2006.

[53] Morris, Mike and Nikki Dunne. 'Driving environmental certification: its impact on the furniture and timber products value chain in South Africa'. *Geoforum,* 35, 2, 2004.

throughout the furniture and timber value chain in South Africa and how businesses at the upper ends of the value chain responded to the new requirements. The authors conducted interviews with FSC and non-FSC certified manufacturers and sawmill companies in South Africa, a major United Kingdom based retailer, and the FSC accredited certifier. Although the global buyer (in this case the retailer B&Q) demanded supplying firms to comply with FSC certification, they delegated the management and coordination to their agents. Interestingly, although the retailer and its agents initiated and drove the process,[54] the authors found a *snowball effect* up the value chain that played an important role in pushing the actors for certification. This effect occurred as the actors in the chain depended on the next respective actor upstream to also get certified as otherwise a chain of custody certification would not have been possible. This led to manufacturers pushing sawmills and sawmills pushing forest and plantation owners. Governance power was found to be split between two actors: the retailers and the few large sawmills in South Africa as the retailer depended on the acceptance of certification by the former.

Mueller et al.[55] point out that standards also contribute to ensuring legitimacy in value chains. In a situation where suppliers do have the option to choose whether they want to join value chains complying with certain standards, the standard's perceived empirical and normative legitimacy plays a central role. Standards must:

Be effectively accepted as rules governing social and environmental conditions and structures (empirical legitimacy) and

Conditions must be such that social and environmental terms and structures defined by standards are perceived as justified.

Furthermore, the procedure of enforcing must follow normative requirements.

Another of the five mechanisms identified by Pedersen[56] has been confirmed to be of great significance in the implementation of standards: the involvement of suppliers in the planning and implementation of the code. In a survey on compliant and non-compliant Chinese textile and apparel suppliers to the United States, Jiang (2009) analysed the likelihood of suppliers' commitment to Codes of Conduct. The author summarizes the findings on implementing Codes of Conducts as follows: 'if the buying companies are not part of the solution, they are part of the problem.'[57]

This conclusion is supported by findings from Locke et al.[58] who study the implementation of a private labour standard in a multinational apparel company and its value chain. The authors argue that the widely applied model to implement standards based on compliance audits is inefficient because it rests upon wrong assumptions about the power of firms in value chains, the role information plays derived from audits and the incentives required to change behaviour and promote better labour standards. A 'commitment-oriented model' which is based on joint problem solving, information exchange, and the diffusion of best practices among the buyer and its suppliers, was found to lead more efficiently to improvements in working conditions and labour rights in factories. According to the authors, this 'commitment-oriented approach' should complement 'compliance-oriented approaches'.

In two case studies, Riisgaard and Hammer[59] demonstrate the importance of the value chain structure (i.e. the level of drivenness, position of the driver) when it comes to standard adoption. The authors take the example of the banana value chains in Guatemala, Honduras and Costa Rica and the cut flower value chain in Kenya and the United Republic of Tanzania.

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[54] See also Bass, Stephen, Kirsti Thornber, Matthew Markopoulus, Sarah Roberts and Maryanne Grieg-Gran. *Certification's impacts on forests, stakeholders and supply chains*, IIED, Earthprint Ltd, Nottingham. 2001.

[55] Mueller, Martin, Virginia Dos Santos and Stefan Seuring. 'The Contribution of Environmental and Social Standards Towards Ensuring Legitimacy in Supply Chain Governance'. *Journal of Business Ethics*, 2009, 89, 4.

[56] Rahbek Pedersen, Esben and Mette Andersen. 'Safeguarding corporate social responsibility (CSR) in global supply chains: how codes of conduct are managed in buyer-supplier relationships'. *Journal of Public Affairs (14723891)*, 6, 3, 2006.

[57] Jiang, Bin. 'Implementing Supplier Codes of Conduct in Global Supply Chains: Process Explanations from Theoretic and Empirical Perspectives'. *Journal of Business Ethics,* 85, 1, 2009.

[58] Locke, Richard, Mathew Amengual and Akshay Mangla. Virtue out of necessity? 'Compliance, commitment and the improvement of labor conditions in global supply chains'. Working Paper no. 4719-08, 2009.

[59] Riisgaard, Lone and Nikolaus Hammer. 'Organised labour and the social regulation of global value chains'. DIIS Working Paper 09, 2008.

Figure 7:   The banana value chain
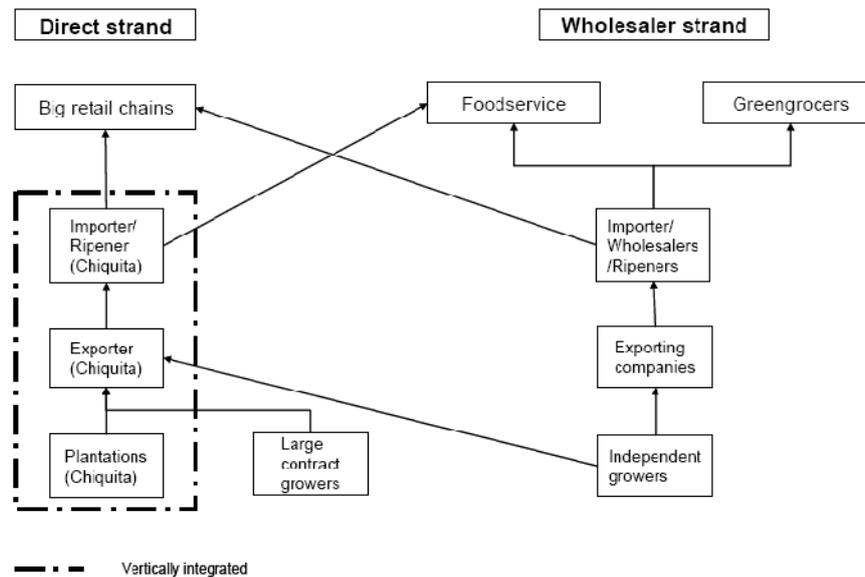
Source: Riisgaard, 2008.

For bananas, the authors differentiate between a direct strand value chain and a wholesaler value chain. The direct strand is characterized by a high level of vertical integration whereas the wholesaler strand is less integrated and consists of independent growers with comparatively loose trading relations. An example for the direct strand type of chain is provided by Chiquita. The company owns all elements within the chain (plantations, exporters, importer/ripener), purchases the entire production of suppliers and implements 'hands-on' coordination and makes long-term contracts with suppliers. It is evident that this kind of value chains facilitates the enforcement of standards (e.g. SA8000 and ETI standards) by buyers and fosters the adoption of standards by actors along the chain. According to the typology introduced by Gereffi et al.,[60] it is easier to introduce standards in a hierarchy-similar or captive structure where buyers dominate chains, switching costs are high and suppliers are weak.

Empirical work in the flower industries in Kenya and the United Republic of Tanzania[61] shows that a similar distinction of value chains can be made in this industry. A strongly driven, highly integrated direct strand stands alongside an auction strand. The auction strand is characterised by strong market based coordination at the auction point and comes close to what Gereffi et al.[62] describe as market or modular value chains. This makes chain governance difficult. Although retailers do not exercise hands-on coordination over production (as this is done by large flower companies upstream), standards play a more important role in the direct strand chain with retailers having strong leverage to impose standards. The structure of the auction strand chain makes it difficult for buyers to impose standards upstream. Thus, standard adoption much depends on the channel through which the flowers are sold. Still, it was found to be a condition for selling to retailers in the United Kingdom and in the EU. Again, a 'captive' value chain[63] seems to facilitate the implementation of standards.

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[60] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

[61] Riisgaard, Lone. 'Localizing private social standards: standard initiatives in Kenya cut flowers'. DIIS Working Paper 20, 2008. And Lazaro, Evelyne, Lone Riisgaard, Freedy T. M. Kilima, Jeremiah Makindara and Raymond Mnenwa. *Sustainability standards and agro-food exports from East Africa.* Copenhagen, DIIS. 2010.

[62] Gereffi, Gary, John Humphrey and Timothy Sturgeon. 'The governance of global value chains'. *Review of International Political Economy: RIPE,* 12, 1, 2005.

[63] *Ibid.*

Figure 8:   The cut flowers value chain
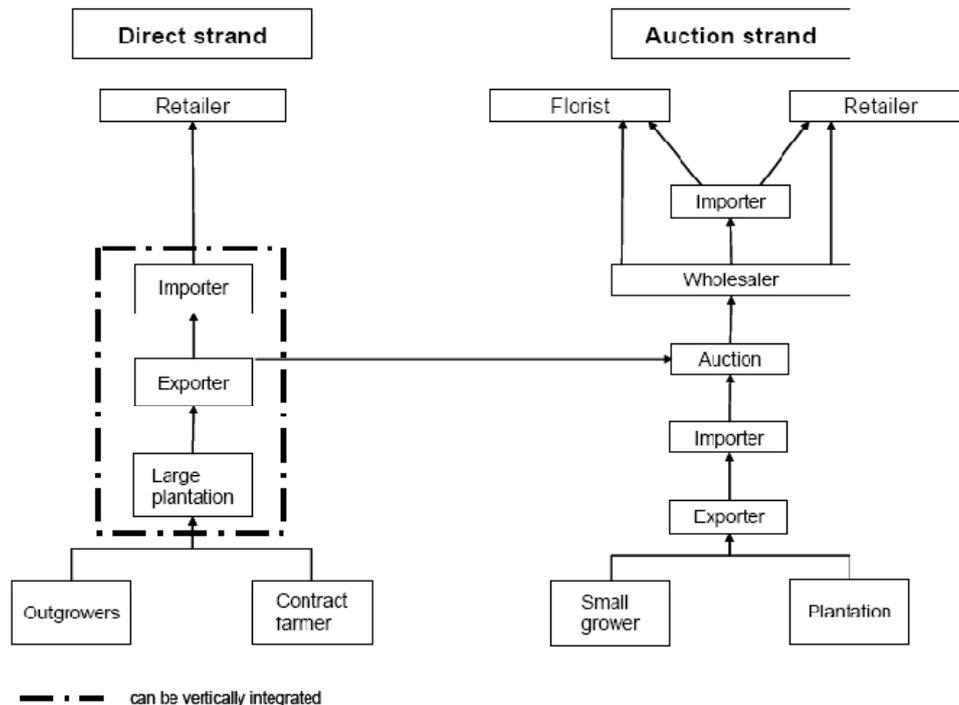
Source: Riisgaard, 2008.

In a report to the World Bank Tallontire and Greenhalgh[64] investigate how different value chains might affect buyers' capacity to implement labour codes in production sites and value chains. The authors identified six factors facilitating compliance with standards in value chains:

- Length of the chain: short chains with few actors.

- Degree of integration: highly integrate chains.

- Type of product: products with high (and legal) requirements regarding traceability, quality and safety (e.g. food) and where information on the origin is important.

- Market conditions: high level of market concentration among actors purchasing supplies, such as retailers, manufacturers, brands.

- Kind of relations among actors: long-term relations and high degree of trust.

- Identification: commodities identifiable in end products (e.g. cocoa, coffee, sugar).

Bedford et al.[65] studied the Kenyan tea and Indonesian cocoa sectors, came to similar results and identified three factors that affect the management of social responsible value chains. (i) In many sectors smallholders represent important producers. The sheer amount of producers and the fact that many are widespread makes auditing of production sites a difficult task; (ii) smallholders are entrepreneurs, employers and labourers, which makes social standards difficult to apply; and (iii) value chains tend to be long and lack integration, involving a number of intermediaries. Short-term relationships among players further complicate the implementation of social standards.

While a comprehensive analysis as to what extent certain factors obstruct or promote the implementation of standards along the chain is missing, evidence is provided by some studies that there *are* crucial factors facilitating the implementation of standards. This pertains to the five mechanisms identified by Pedersen and

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[64] Tallontire, Anne, and P. Greenhalgh. *Establishing CSR drivers in agribusiness*. 2005.

[65] Bedford, Ally, Mick Blowfield, Duncan Burnett and Peter Greenhalgh. *Value Chains: Lessons from the Kenya tea and Indonesia cocoa sectors.* 2002.

Andersen,[66] the distribution of power and the value chain structure. Given the importance of this question to standard organizations promoting their standards and buyers committing to implement these standards in supply chains, the lack of more complete evidence is unexpected. Also, these questions will become more important as standards are being implemented by a larger number of actors.

6.1.4. Value chain structure

A value chain map lays out all kinds of activities, transactions, flows (e.g. information), and processes pertinent to a value chain. It is also a useful tool to identify the captured value at each link in the chain, to look at the value chain structure itself and to identify the different actors in value chains. While Fairtrade aims to shorten the value chain (generating direct producer-buyer relationships) most standards do not explicitly pursue a change in value chain structure. However, the adoption of standards might result in structural changes leading to broader impacts for producers, beyond those affected by a standard's requirements. We discussed earlier the two options of standards: (i) working in mainstream value chains or (ii) creating alternative chains with direct producer-buyer relationships and alternative distribution channels. Here, the question is no longer whether an alternative chain is being generated but how standards modify mainstream chains vertically (shortening vs. lengthening) and horizontally (thinning vs. widening or less vs. more players in key nodes) as a result of their requirements and of local conditions.

A qualitative study by Neilson[67] explores how the structure of the coffee value chain in Indonesia changed after the adoption of the Starbucks C.A.F.E. Practices standard. The author identifies three main changes:

- Prioritization of farmer cooperatives over traditional trade networks: traditional networks include mostly unorganized small farmers, several middlemen/collectors and processing mills and exporters. A large number of actors participating in traditional value chains were cut out, and buyers preferred working with farmer cooperatives. The economic functions these actors performed need to be taken over by (local) institutions. In this case, middlemen offered product marketing, money lending and merchandising (involving the sale of rice, sugar and other necessities) representing vital economic functions.

- Exporter consolidation and upstream involvement of international traders: knowledge about international traceability demands and further requirements set by international standards helped foreign exporters gain market share in Indonesian coffee exports and finally led to three foreign exporters controlling 72% of exports in 2006. International traders were also found to strongly engage in establishing traceability systems in accordance with C.A.F.E. Practices allowing direct purchasing from farmers.

- The lock-in of farmers within value chains: as producers often are not able to bear high costs of certification, exporters take over this financial burden and hold certification rights. Looking to recover these costs, exporters enrol smallholders in 'contract farming'-like arrangements. Small producers become locked into these value chains. This increases producer dependency from one exporter, but also improves access to information, knowledge, facility upgrading and quality improvement.

Overall, Neilson provides a spotlight on how value chain structures and institutional landscapes change due to the implementation of standards.

Value chain restructuring has also been observed resulting from the implementation of the Utz Certified standard for coffee in the United Republic of Tanzania.[68] A parallel value chain strand of certified products by-passes the national auction floors trading conventional coffee. It consists of certified plantations, certified millers for milling, grading and storing and dedicated storage facilities. Except for lower grades of certified coffee that have to go through the national coffee auction, this new value chain strand for certified coffee occurs independently of local and national institutions, such as farmer extension, farmer organization and

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[66] Rahbek Pedersen, Esben and Mette Andersen. 'Safeguarding corporate social responsibility (CSR) in global supply chains: how codes of conduct are managed in buyer-supplier relationships'. *Journal of Public Affairs*, 6, 3, 2006.

[67] Neilson, Jeff. 'Global Private Regulation and Value-Chain Restructuring in Indonesian Smallholder Coffee Systems'. *World Development*, 36, 9, 2008.

[68] Lazaro, Evelyne, Lone Riisgaard, Freddy Kilima, Jeremiah Makindara and Raymond Mnenwa. 'Sustainability standards and agro-food exports from East Africa'. *Global Agro-Food Trade and Standards. Challenges for Africa,* 120-136, 2010, Copenhagen.

export regulation systems. Another study in the United Republic of Tanzania, in this case on certification of vegetable value chains with the GLOBALG.A.P. standard, found that standard adoption led to significant changes in value chain structure as exporters outsourced production and focused on quality checking, sorting, packing and transporting. Lazaro[69] refers to this development as lengthening of the value chain.

Although results remain indicative, these studies provide a better understanding of how value chains can change significantly following the implementation of standards. While some actors are excluded from value chains, new ones come in and others take on new roles. Particularly, the study by Neilson demonstrates the broader impacts value chain restructuring might have on producers.

Many authors describe standards as instruments for value chain governance particularly when it comes to facilitating arm's length relationships. This undoubtedly has been confirmed in this analysis; nevertheless, we argue that this picture remains incomplete and standards, although mostly unintended, impact value chain governance in many other ways. This applies to: changes in chain structure and participating actors, effects from mainstreaming strategies, and mechanisms for standard implementation and monitoring. While standards might be an instrument for value chain governance, when implemented, their actual effects go beyond governance to specification of process and product attributes. These may be the most direct and obvious effects, but the other effects mentioned should not be overlooked as they shed a different light on the questions outlined above. Lastly, studies also demonstrated inverted effects and described how chain structures influence the implementation of a standard.

For an analysis of non-market coordination through the setting and enforcement of product and process parameters in value chains, the role of and need for governance and how firms can ensure that parameters are met, we refer to work by Humphrey and Schmitz (2002) called 'Developing Country Firms in the World Economy: Governance and Upgrading in Global Value Chains'. 'Trading Down: Africa, value chains and the global economy' written by Gibbon and Ponte (2005b) covers a wide range of effects of global economic changes on African countries. This also includes the impact of emerging quality standards on value chain governance, which is being reviewed through the convention theory lens (see also Ponte/Gibbon 2005a). The book 'Fair Trade: The challenges of transforming globalization' edited by Raynolds, Murray, Wilkinson (2007) provides a broad overview of Fairtrade from its historical emergence to its impact in markets and on companies in the global north. It also looks into the effects of Fairtrade on making business for produces and exporters in the global south. Part two of our series on the impact of standards on producers will refer to this book in more detail.

6.2. Upgrading

Upgrading is a concept applicable to the entire value chain (chain upgrading) or to single firms (firm upgrading). Gereffi defines upgrading as opportunities for firms to acquire additional capabilities (learning) and accessing new markets through the flow of knowledge and information from buyers upstream to producers.[70]

This opportunity is based on the acquisition of new capabilities, and an increased flow of information and knowledge allowing producers to carry out additional functions in production and processing. While generally upgrading aims to increase competitiveness, Humphrey and Schmitz[71] developed a typology of four different forms of upgrading:

- Process upgrading: the more efficient transformation of inputs into outputs by reorganizing productive activities and using better technology;

- Product upgrading: moving into more sophisticated product lines, defined as increased unit value;

- Functional upgrading: increase overall skill content of activities by acquiring new functions or abandoning old ones.

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[69] *Ibid, page 129.*

[70] Gereffi, Gary. 'International trade and industrial upgrading in the apparel commodity chain'. *Journal of International Economics,* 48, 1, 1999.

[71] Humphrey, John and Hubert Schmitz. *Developing Country Firms in the World Economy: Governance and Upgrading in Global Value Chains.* Dusiburg, Germany, Institut für Entwicklung und Frieden der Gerhard-Mercator-Universität Duisburg. 2002.

- Intersectoral upgrading: firms apply the competences acquired in a particular function of a chain to move into a different sector/chain.

Gibbon[72] points out that upgrading might involve complying with standards and certification systems, delivering larger volumes, adhering to lead times, and increasing product quality and prices received for the same product. Upgrading might also lead to improved chain coordination through vertical integration (see below) or through increased contractualization - longer and more complex relationships between chain actors.[73]

Undoubtedly, sectoral specificities influence the extent to which upgrading is a viable option for producers and exporters in developing countries. Although a Uganda-based company called Good African Coffee saw a coffee roasting and packaging facility being installed in 2009, upgrading is often restricted by limited access to finance and other factors. Nevertheless, upgrading at a smaller scale is a promising strategy for producers to add value to products, increase chances of participation in the global economy and, at best, increase income. This makes the impact of standards on upgrading an important question. Furthermore, standards might demand upgrading directly through specific requirements, or encourage or facilitate upgrading through prescribed changes in organizational processes and production practices.

Muradian and Pelupessy[74] underline standards' potential to reap economic rents in terms of upgrading production and improving producers' position in a chain. While upgrading is an important means of retaining added value, it also is a way to minimize risk of being excluded from value chains and outperformed by competitors. The authors claim that for coffee producers, adopting a standard does not necessarily lead to receiving a price premium as a higher price additionally depends on the coffee quality. Thus, standards not guaranteeing a premium are 'not instruments for upgrading per se, but rather facilitate coordination with other agents along the chain, which may lead to access to commercialization channels and upgrading opportunities.'[75]

More promising results have been found by Kadigi et al.[76] in an extensive research effort comparing assets and net incomes of compliant and non-compliant fisheries with food safety standards (i.e. HACCP) for the Nile Perch value chain in the United Republic of Tanzania and Kenya. Along the entire value chain compliance with food safety standards increased prices received and improved upgrading facilities. Compliant actors showed higher portfolios of fishing assets (boats, ropes, torches, etc.) creating competitive advantages. However, upstream actors (fishers and boat owners) had lower net values of fishing assets and income portfolios than the actors in the subsequent stages (collectors, processors and sellers). Jaffee and Henson[77] estimate that the average cost for processing plants upgrading their facilities and implementing a HACCP system is about US$ 40,000. Several processing facilities could not bear the costs and had to close down.

Considering Humphrey and Schmitz'[78] categories of upgrading, it becomes evident that the research that has been conducted in this area remains rather unspecific. While a number of studies emphasize potential upgrading opportunities provided by standards, limited empirical research has been carried out in this field. For example, Humphrey and Schmitz[79] concluded that value chain governance impacts upgrading opportunities for SMEs as quasi-hierarchical chains provide favourable conditions for process and product upgrading, but hinder functional upgrading. Overall, the role of standards remains unclear.

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[72] Gibbon, Peter. 'Upgrading primary production: A global commodity chain approach'. *World Development,* 29, 2, 2001.

[73] Bolwig, Simon, Stefano Ponte, Andries du Toit, Lone Riisgaard and Niels Halberg. 'Integrating poverty, gender and environmental concerns into value chain analysis: a conceptual framework and lessons for action research'. DIIS Working Paper 16, 2008.

[74] Muradian, Roldan and Wim Pelupessy. 'Governing the coffee chain: The role of voluntary regulatory Systems'. *World Development,* 33, 12, 2005.

[75] *Ibid*, page 11.

[76] Kadigi, Reuben M. J., Ntengua Mdoe, Ephraim Senkondo and Zena Mpenda. 'Effects of food safety standards on the livelihoods of actors in the Nile perch value chain in Tanzania'. DIIS Working Paper 24, 2007.

[77] Jaffee, Steven and Spence Henson. 'Agro-food exports from developing countries: the challenges posed by standards'. In: M. Ataman Aksoy, John C.Beghin (Eds). *Global agricultural trade and developing countries*. World Bank, Washington D.C. 91-114. 2005.

[78] Humphrey, John and Hubert Schmitz. *Developing Country Firms in the World Economy: Governance and Upgrading in Global Value Chains.* INEF Report 61, 2002.

[79] *Ibid.*

Vertical integration

Vertical integration refers to the degree of ownership of upstream suppliers and downstream buyers in a value chain and is one way of upgrading. In developing countries vertical integration has increased significantly across sectors in the past decade, often fuelled by international buyers looking for ways to add value, achieve efficiencies, or improve product quality. One differentiates backward (upstream) vertical integration, forward (downstream) vertical integration, and balanced (both upstream and downstream) vertical integration.

While Transaction Cost Economics[80] suggest that the main factors driving vertical integration in value chains are risk, uncertainty and asset specificity, inherent opportunities to increase revenues is the most important reason that makes forward vertical integration interesting for producers in developing countries. An important question is therefore: do standards foster vertical integration on the producer end of the chain? Carrying out more activities within the value chain not only provides the opportunity to add value to the product but may also enable closer relationships to buyers.

Standards do not contain requirements directly addressing vertical integration, but their implementation may still have indirect effects on vertical integration in value chains. Correspondingly, a move towards a more integrated value chain for farmers converting from traditional to organic agriculture, particularly through producer/buyer contracting has been found by Akyoo[81] in the Tanzanian spice industry. The non-organic chain was characterized by spot market transactions with no contracting or vertical integration. The organic produce by contrast is entirely exported, which involves additional requirements for producers, namely: the need for responsiveness to buyers, supply volume reliability, and conformity with international standards. These demands not only make closer chain coordination a precondition for exports, but also necessitate additional changes in the Tanzanian spices value chains by leading to backward, and forward vertical integration:

- Backward integration: exporters purchase land and become producers. This requires a certain level of organization and financial strength.

- Forward integration: close partnerships between exporters and foreign trading companies have been institutionalized through shared subscriptions. These partnerships are crucial as minimal trust in international spice trade makes it otherwise impossible to engage in export.

A similar shift towards stronger vertical integration has been described in Dolan and Humphrey's[82] analysis of African fresh vegetables exports to the United Kingdom. The authors explore the role of standards in communicating information about product and process characteristics, a function of particular importance for credence goods.[83] The horticulture industry in Kenya has seen a development towards the concentration of production and processing activities in the hands of a few big firms. At the same time, value chains are controlled by a small number of United Kingdom importers and retailers. The authors describe how value chains became highly integrated due to: (i) increasing demand for product innovation and quality; (ii) meeting environmental and labour standards and (iii) reliance of supply.

The role of buyers and Fairtrade networks is being explored in a buyer-driven value chain of Rooibos tea in South Africa. Raynolds and Ngcwangu[84] show how tea distributors in South Africa build direct relations with Fairtrade certified cooperatives cutting out middlemen, and together with church, NGO and European ATO assistance, provide market information, financial assistance and training opportunities. This support enables cooperatives to export their tea and triple earnings by switching from conventional to organic and Fairtrade

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[80] Williamson, Oliver E. *The economic institutions of capitalism: Firms, markets, relational contracting*. The Free Press, New York. 1985.

[81] Akyoo, Adam and Evelyne Lazaro. 'The spice industry in Tanzania: general profile, supply chain structure, and food standards compliance issues'. DIIS Working Paper 08, 2007.

[82] Dolan, Catherine and John Humphrey. 'Changing governance patterns in the trade in fresh vegetables between Africa and the United Kingdom'. *Environment and Planning*, 36, 3, 2004.

[83] A credence good is a good whose utility for the consumer is difficult or impossible to measure. Even after consumption, in contrast to experience goods, the utility impact is impossible to ascertain. Only the producer and/or seller of the good know its utility impact.

[84] Raynolds, Laura T. and Siphelo Unathi Ngcwangu. 'Fair Trade Rooibos tea: Connecting South African producers and American consumer markets'. *Geoforum,* 41, 1, 2010.

markets. Higher net income allows a cooperative to upgrade its products and functional capacity and engage in more profitable processing, blending and packaging. Beyond increasing returns, this forward integration empowers producers and strengthens bargaining power in international markets. The supporting tea distributor exemplifies what Raynolds calls a mission driven buyer committed to embody fairer practices in trade.

While upgrading and/or vertical integration has been described as an opportunity for firms to improve their position in a chain or as a necessity to not be excluded from business, it became clear in this analysis that standards might also facilitate or even demand vertical integration. Effects were found to be twofold: (i) vertical integration puts additional demands on producers and exporters and requires organizational and financial strength or support from other actors (inside or outside the chain) and (ii) vertical integration enables producers to carry out value adding activities and increase revenues. Although Raynolds and Ngcwangu[85] provide an example of how the implementation of a standard combined with technical and financial support facilitated upgrading, it remains unclear how this could work under different conditions (other producers, products, countries) and how opportunities created by foreign direct investment (FDI), or public-private partnerships could facilitate upgrading linked to standard implementation.

The absence of more empirical quality studies might be due to the fact that the question of whether standards enhance upgrading opportunities largely depends on other dimensions of the value chain, such as its structure, barriers to entry, economic rents, income distribution and chain governance and is found to be rarely investigated separately. Some studies deal with upgrading alongside other questions, and where this was found to be the case it has been mentioned in this review. Although upgrading/vertical integration is a concept frequently used for analysis in microeconomics and management, a limited number of studies shed light on the questions raised at the beginning of this section.

Other related references include a study by Gibbon and Bolwig (2007) called 'The economic impact of a ban on Imports of air freighted organic products to the UK'. This paper includes information on investments made in order to functionally upgrade facilities made by organic producers exporting to the United Kingdom. Although not particularly focussing on standards, the FAO's Committee on Commodity provided an analysis of upgrading opportunities and trends in tea value chains: 'Upgrading in the international tea sector - A value chain analysis. Similarly, Talbot (2002) in a paper called 'Tropical commodity chains, forward integration strategies and international inequality: coffee, cocoa and tea' investigates how actors move into the more advanced processing stages of the chains and describes limits to forward integration for developing country producers. Humphrey and Schmitz (2002) in a study called 'Developing Country Firms in the World Economy: Governance and Upgrading in Global Value Chains', investigate the consequences of clusters being inserted in global value chains in local level upgrading efforts. While standards are of secondary concern, the authors concentrate on the position of developing country firms selling to large, global buyers.

6.3. Small producer participation in value chains

While standards in agriculture primarily covered technical functions such as reducing transaction costs and easing coordination and communication between chain actors, their purpose nowadays also includes strategic dimensions of product differentiation, market penetration and brand complementation. At the same time, the nature of standards changed from performance (characteristics of the product at a certain point in the agrifood chain) to process (conditions and characteristics of production and processing) standards. The question whether these developments led to the exclusion of small farmers and increased barriers to entry, or whether standards actually contributed to small producers' participation in global value chains is contested in the literature.

The majority of authors[86] seem to agree that stringent quality and safety standards endanger small farmer participation in global value chains. This is because sourcing from a large number of small farmers is more difficult for companies, for several reasons: (i) higher transaction costs for monitoring conformity, (ii) need for more intensive farm extension, and (iii) need for financial resources. In general, vertical integration might

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[85] *Ibid.*

[86] Reardon, Thomas, Jean-Marie Codron, Lawrence Busch, James Bingen and Craig Harris. 'Global change in agrifood grades and standards: agribusiness strategic responses in developing countries'. *The International Food and Agribusiness Management Review,* 2, 3-4, 1999. And Swinnen, Johan F. M. *Global supply chains, standards and the poor*. Oxon, United Kingdom, CAB International. 2007.

benefit small producers by increasing income, productivity and product quality, providing guaranteed prices and sales, and improving access to capital.[87] Nevertheless, evidence shows that these benefits are hypothetical as vertical integration in many cases led to the exclusion of small farmers.

However, assistance programmes can provide farmers with the necessary capabilities to reduce transaction costs when using standards. In labour intensive production with small economies of scale, small farmers might also have cost advantages.[88] But the few studies carried out in this area point towards standards leading to small farmer exclusion.

Dolan and Humphrey's[89] papers on Kenyan fresh fruits and vegetables value chains has become the central reference in the discussion of buyer driven chains in developing countries and potential exclusion of small-scale farmers from these chains. The authors look into the governance of fresh vegetable chains and describe how the standards set by United Kingdom retailers have influenced the horticultural business in Africa, particularly Kenya and Zimbabwe. United Kingdom supermarket chains requested more consistency in terms of supply, taste and appearance. Additionally, due diligence requirements and more conscious consumers about environmental and labour issues resulted in further investments in traceability systems, and in the implementation of standards. According to the authors, smallholder participation in United Kingdom-bound fresh fruits and vegetables value chains declined from 50%–55% in 1999 to under 20% in 2001. The authors attribute this development to investments necessary to meet supermarkets' demands, particularly post-harvest cool chain facilities, quick response to orders, high and consistent volumes, and traceability requirements. Other studies confirm this trend for United Kingdom-bound horticulture exports from Kenya.[90]

The changes in the African horticulture value chain described by Dolan and Humphrey[91] have later been confirmed by Humphrey[92] who refers to several studies carried out on the adoption of the EurepG.A.P. standard in Kenya. While these studies point to the exclusion of small-scale growers from EurepG.A.P. (now GLOBALG.A.P.) certified EU retail market value chains (not accounting for entries of new farmers), Humphrey emphasizes the key decision-making role of exporters in shaping the impact of this standard. Exporters are the gateway to importers and they decide on the proportion of costs of certification born, the implementation of monitoring and coordination requirements, and consequently the viability for small farmers to participate in these schemes. Humphrey[93] also found different impacts on farmer exclusion depending on the type of value chains: exporters with well organized outgrower schemes more often continued working with small growers, whereas exporters that had loose relations with suppliers were found to switch to larger producers leading to the exclusion of small farmers.

Jaffee and Henson[94] rebalance the debate in emphasizing that some countries and/or industries repositioned themselves in global markets using quality and safety standards. Citing several case studies, the authors draw a less pessimistic picture and point to the fact that more than half of the 83 countries complying with European standards for the capture, processing, transportation and storage hygiene standards for fish and fishery products (in 2003) were low-income countries. Yet, no information on the respective producer size and ownership structure in those countries is provided.

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[87] *Ibid* and Maertens, Miet and Johan Swinnen. 'Standards as barriers and catalysts for trade, growth, and poverty reduction'. *Journal of International Agricultural Trade and Development,* 4, 1, 2008.

[88] Maertens, Miet and Johan Swinnen. 'Standards as barriers and catalysts for trade, growth, and poverty reduction'. *Journal of International Agricultural Trade and Development,* 4, 1, 2008.

[89] Dolan, Catherine and John Humphrey. 'Changing governance patterns in the trade in fresh vegetables between Africa and the United Kingdom', *Environment and Planning,* 36, 3, 2004. AND Catherine Dolan and John Humphrey. Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry, *The Journal of Development Studies,* 37, 2, 2000.

[90] Jaffee, Steven. From Challenge to Opportunity. 'Transforming Kenya's Fresh Vegetable Trade in the Context of Emerging Food Safety and Other Standards in Europe, 2003'. Agriculture and Rural Development Discussion Paper 1. World Bank.

[91] Dolan, Catherine and John Humphrey. 'Governance and Trade in Fresh Vegetables: The Impact of UK Supermarkets on the African Horticulture Industry'. *The Journal of Development Studies,* 37, 2, 2000.

[92] Humphrey, John. 'Private Standards, Small Farmers and Donor Policy'. EUREPGAP in Kenya, IDS Working Paper 308, 2008.

[93] *Ibid.*

[94] Jaffee, Steven and Spencer Henson. 'Standards and agro-food exports from developing countries: rebalancing the debate'. Policy Research Working Paper 3348, 2004.

Another development influencing the structure and conditions in the agrifood system in Africa is the rapid growth of the supermarket sector in Africa.[95] In a case study of the supermarket sector in South Africa and Eastern Africa (i.e. Kenya and United Republic of Tanzania), Weatherspoon and Reardon[96] illustrate how the growing importance of supermarkets and their procurement systems changes the role of traditional markets. For two main reasons this development is another threat to small farmers possibly leading to their exclusion: (i) there is a clear trend towards the convergence between export standards and domestic-retail product standards, and (ii) local retailers prefer procuring large volumes to realize economies of scale and of coordination. Nevertheless, supermarkets were also found to engage in upgrading projects for small farmers aiming to enable them to meet their needs.

The rise of food standards in export value chains and the demand for consistent high volumes and good quality produce has led to more vertically integrated value chains. This is also the result of complex and stringent standards that require close monitoring throughout the chain.[97] Meeting the requirements set by increasingly performance type standards requires costly investments, e.g. cooling facilities, safety and quality monitoring or packaging devices, not all producers can afford. This results in a shift from smallholder contract-base production towards large vertically integrated production controlled by food processing and trading companies. Nevertheless, Ponte concludes in the book 'Global agro-food trade and standards: challenges for Africa' that a 'general shakeout of African smallholders does not seem to have taken pace' despite large processors and exporters gaining market share.[98]

Representing a politically charged topic, the impacts of (firm specific) standards on the participation by smallholders in global value chains is one of the issues more comprehensively investigated. While the majority of studies hint towards increased barriers to entry in value chains through standards some authors have been found to disagree.

> *A central study on the role of the supermarket sector in changing agrifood chains in developing countries and on the implications for small farmers is called 'The rise of supermarkets in Africa, Asia, and Latin America' and was written by Reardon et al (2003). Similarly, Berdegué et al. (2005) analyse the evolution of the retail sector in Central America. On the basis of five case studies the authors focus on the emerging demands regarding product quality and supply driven by supermarkets in Central America. How privately set quality and safety requirements might impact firms engaged in agrifood in the Mercosur region has been demonstrated by Farina and Reardon (2000) in 'Agrifood grades and standards in the extended Mercosur: their role in the changing agrifood system'. The authors outline standards' challenges and opportunities for small producers and potential governmental support for small farmers.*

6.4. Revenue distribution

Another more closely investigated topic in research relates to the question whether standards influence the distribution of revenues in a value chain. In this context the main question is not necessarily whether standards offer price premiums to these actors, but how premiums (when existent) are distributed among the actors in the chain. Do producers and exporters equally benefit from premiums as traders and retailers do – does the tide rise evenly?

Valkila et al.[99] analysed the distribution of benefits from Fairtrade certification between producing and consuming countries. The authors collected price data on Fairtrade certified and conventional coffee in Nicaragua in 2005/06 and 2008. In Finland, a major retail chain provided information on its coffee prices (conventional and certified) in about 811 of its stores between 2006 and 2009. This was complemented by Nielsen data on coffee consumer prices and the consumer price index established by Statistics Finland. Comparing the four most popular conventional coffees with the two most popular Fairtrade coffees, the

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[95] Hatanaka, Maki, Carmen Bain and Lawrence Busch. Third-party certification in the global agrifood system, *Food Policy,* 30, 2005.

[96] Weatherspoon, Dave and Thomas Reardon. 'The Rise of Supermarkets in Africa: Implications for Agrifood Systems and the Rural Poor'. *Development Policy Review*, 21, 5, 2003.

[97] Maertens, Miet and Johan Swinnen. 'Standards as barriers and catalysts for trade, growth, and poverty reduction', *Journal of International Agricultural Trade and Development,* 4, 1, 2008.

[98] Gibbon, Peter, Stefano Ponte and Evelyne Lazaro. *Global Agro-Food Trade and Standards. Challenges for Africa.* England, Palgrave Macmillan. 2010.

[99] Valkila et al. 'Empowering Coffee Traders? The Coffee Value Chain from Nicaraguan Fair Trade Farmers to Finnish Consumers'. *Journal of Business Ethics*, 97,2, 257-270, 2010.

authors found that consumers in average and across coffees paid 55% more for Fairtrade certified coffee in 2006 and 58% more in 2008. The average price received by farmers in Nicaragua (excluding the Fairtrade social premium which has to be reinvested in community projects and costs charged by the cooperative) was found to be only 7% higher compared to the price paid by one of the largest local coffee export companies.

Based on Schumpeter's concept of economic rents, Sexsmith/Potts[100] investigate the economic impacts of private standards along the coffee, fisheries and forestry value chain. The authors find certified producers improving administrative and technical abilities, building closer collaboration along the value chain, and benefiting from synergies among certified producers. However, the authors emphasize that marginalized producers will most likely not benefit from certification and oversupply of certified produce limits collaboration along the value chain. Results on the impact of standards on revenue distribution along the value chain seem to be limited particularly for forestry products and fisheries. For coffee, the authors support findings obtained by Valkila et al.[101] that the bigger share of premiums is being generated at the retailer end of the chain. When compared to coffee, premiums in certified fisheries and forestry seem fairly limited, despite an inverted relation of demand and supply for certified timber. Possible reasons might be a greater degree in quality differentiation in coffee, stronger retailer power in timber and Fairtrade setting premium expectations in coffee not existing for wood products. Across sectors, market access and security are the most consistent economic benefits for producers.

In the case of bananas, a case study carried out in Latin America by Kilian et al.[102] found premiums at producer level for organic or Fairtrade bananas in 2004 ranging from 15% to 50%, while premiums at the retail level for these products in Europe oscillated between 50% and 100%, depending on the market and the type of certification. This tendency is confirmed in another study on bananas carried out by CIRAD[103] stating that supermarkets captured most of the retail value with 33% in the Fairtrade chain and even 40% in the organic chain in 2006. However, this share is slightly lower in the Fairtrade chain when compared to the conventional chain (39%).

Similar results were found by Mendoza and Bastiaensen[104] for Nicaraguan coffee. The authors compare the Fairtrade coffee (using alternative distribution channels) and conventional coffee value chains. Although data is from 1996, the main results of this study are highly interesting and therefore presented briefly: despite producers receiving 90% of the final price in the Fairtrade chain compared to 35% for the conventional chain, net income increase for Fairtrade producers is only 4%. The authors explain this difference with lower cost competitiveness due to smaller volumes for Fairtrade and with inefficiencies in post-harvest treatment on the producers' side and increased processing and retailing costs on the side of the (alternative) roaster and distributor.

Based on estimated prices paid along the value chain, Valkila et al.[105] also offer information on the distribution of retail prices between consuming and producing countries. In absolute terms, Fairtrade certification increases revenues captured in producing countries. In case of Fairtrade coffee, producer revenues increased by about 13% of the respective retail price. However, the share of the retail price captured in the consuming country increased about 85%. In relative terms, this means that producer countries received a larger proportion of the price paid by the consumer in the conventional coffee chain when compared to the Fairtrade coffee chain.

The Food and Agriculture Organization of the UN (FAO) in 2009 offers a review of studies[106] on the price distribution in the value chain of conventional, organic and Fairtrade certified bananas. The analysis includes

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[100] Kathleen Sexsmith and Jason Potts. Voluntary sustainability standards and economic rents: The economic impacts of voluntary sustainability standards along the coffee, fisheries and forestry value chain, 2009.

[101] Valkila et al. Empowering Coffee Traders? The Coffee Value Chain from Nicaraguan Fair Trade Farmers to Finnish Consumers, *Journal of Business Ethics*, 97,2, 257-270, 2010.

[102] Bernard Kilian et al. The value chain for organic and fairtrade products and its implications on producer in Latin America, 2005, available at www.ifama.org.

[103] Roquigny, S., I. Vagneron, T. Lescot and D. Loeillet. Making the rich richer? Value distribution in the conventional, organic and fair trade banana chains of the Dominican Republic, CIRAD Working Paper, 2008.

[104] Mendoza, René and Johan Bastiaensen. Fairtrade and the coffee crisis in the Nicaraguan Segovias, *Small Enterprise Development*, 14, 2, 2003.

[105] Valkila et al. Empowering Coffee Traders? The Coffee Value Chain from Nicaraguan Fair Trade Farmers to Finnish Consumers, *Journal of Business Ethics*, 97,2, 257-270, 2010.

[106] Including the above mentioned Kilian at al., 2005 and Roquigny et al., 2008.

regional studies and case studies of exporting countries such as the Dominican Republic, Peru and Ecuador. The report confirms the above results: (i) a relatively small proportion of the price premium goes to the exporting country, with some evidence indicating that Fairtrade guaranteeing a minimum price redistributes more value to producers than organic and conventional bananas, (ii) depending on the exporting and the importing country, the proportion of the premium for organic certified bananas reaching the producer varied between five and 16% of the premium at retail level. In each case, the premium was not evenly distributed along the chain and culminated at the wholesaler/retailer level with these operators capturing 40%–48% of the retail price, which is probably due to retailers controlling banana value chains. (iii) Comparing the organic and the conventional chains, the author finds that the share of the retail price accruing to exporters ranges from 10%–15% for both, organic certified and conventional exporters.

Ibanez and Laye[107] construct a model of vertical relationships where two competing value chains – one selling certified products and the other one non-certified products – offer a homogeneous wood product. In contrast to pessimistic studies on price premiums for certified wood (see above) the authors found that the price premium depends on the coordination of certified producers. Where certified producers coalesce, profits on retailer side diminish (even below conventional market profits) and profitability of producers increases.

Research on revenue distribution is relatively comprehensive and outlines that (i) compliance with standards increase revenues along the value chain, (ii) but additional revenues are mostly distributed unevenly along the value chain to the benefit of the retailer and (iii) value chain structures and governance play a significant role in how revenues are distributed. Nevertheless, results need to be considered cautiously as none of the reviewed studies represents a complete cost-benefit analysis. Consequently, no conclusion can be drawn as to the actual net income of value chain actors derived from standards compliance. Likewise, statements on the appropriation of the premium by the retailers need to take into consideration that logistics, inventory and marketing costs of stock keeping units (SKU) can be considerably higher for reduced volumes of these products so a direct comparison would not be totally appropriate.

> *Other related references include a paper called 'Comparative Analysis of Conventional and Fair Trade Value Chains: the Colombian Banana Case' by Madero and Ximena (2004) who compare conventional and Fairtrade value chains of bananas in Colombia. The implications of private governance for food safety and suppliers is being discussed in a conceptual paper called 'The private governance of food: Equitable exchange or bizarre bazaar' by Busch (2008).*

7.   Conclusions

This systematic literature review found 63 papers on the impact of standards on value chains, out of which 32 were empirical. Some, particularly these empirical studies, shed light on questions that have been raised at the beginning of this paper while others, mostly conceptual studies, generated new questions. Informing future empirical research this review highlighted areas that have been researched more closely, such as the impact of standards on small producer participation in value chains and distribution of premiums, and identified gaps in the literature, such as the impact of standards on upgrading opportunities.

In this paper we provide insights into the following questions: (i) how do standards impact value chain governance, including whether standards allow for 'hands-off' governance, (ii) what are the effects of mainstreaming strategies, (iii) how do standards change actors' roles following standard adoption, and (iv) what leads to exclude some and involve others. Research also provides a good understanding of how value chain structure has changed following the implementation of standards and, conversely, how a certain structure/governance type allows for standard implementation along the chain. While upgrading opportunities is an important question for producers in the developing world, only a few studies researched this issue and many questions remain open. On the other hand, studies show that smallholders struggled when adopting standards and pointed out that the distribution of benefits is not even along the chain.

Given the methodological bias in this field, research necessarily remains indicative and a systematic analysis of value chain impacts, across standards and products, is lacking. No study has been found to generate quantitative, statistically valid data or to establish a valid counterfactual outcome. Some studies were found to

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[107] Valkila et al. Empowering Coffee Traders? The Coffee Value Chain from Nicaraguan Fair Trade Farmers to Finnish Consumers, *Journal of Business Ethics*, 97,2, 257-270, 2010.

compare compliant to non-compliant producers, but do not control for other factors. This makes the identification of correlation between two variables, such as the implementation of a standard and a specific impact, impossible. Establishing correlations is important as they would indicate a predictive relationship between variables which could be of high relevance in practice.

Instead, the vast majority of studies take case study approaches. The reason for this most likely is researchers asking 'how' and 'why' questions and the fact that this approach provides rich qualitative insights about complex phenomena. While case studies allow for comparison to a certain extent, they do not allow for generalization.

While dealing with several issues, research was found to focus on a relatively limited number of standards, products and countries. Few standards (e.g. Fairtrade, FSC, GLOBALG.A.P. and Organic) and countries (e.g. Kenya, United Republic of Tanzania, Nicaragua) have been investigated by more than one study. This limited coverage also pertains to products/sectors, where coffee, flowers, fresh fruits and vegetables and forestry were researched in more detail. Although not statistically valid in any way, the amount of data is not even large enough to make standard or product specific conclusions, let alone to make comparisons across products and standards. Additionally, there is a focus on the production side of the value chain, despite claims made about examining the entire value chain.

When it comes to the theoretical basis of research, studies mostly draw on Gereffi's GCC approach or approaches based on Gereffi's work constituting a general lack of wider theoretical underpinning. While some authors build on resource-based theories and conventions theory, concepts such as cluster analysis, transaction cost economics, and approaches on value chain efficiency are not taken into consideration.

Recommendations for further research

Research aims to (i) increase our understanding of how private standards influence developing countries' exports and (ii) lay out the opportunities and the risks private standards entail. Research will be pivotal in designing policies and support mechanisms that enable producers and exporters to effectively deal with this new paradigm in trade.

Research activities have been carried out as isolated exercises. There is a lack of broadly comparable data and researchers are far from being in a position to draw system-wide conclusions about impacts of standards on value chains. Future research particularly needs to foster the definition of widely agreed upon indicators that allow a comparison of results. (And we have seen that this has been possible on a much bigger scale with the establishment of indicators measuring progress towards the Millennium Development Goals – MDGs). At the same time, quantitative measures of impact are a precondition for comparability across standards, value chains and countries. Lastly, it is pivotal that data collection and analysis methods allow for the analysis of correlations.

Additionally, theoretical approaches beyond Gereffi's work should be applied more often. While concepts around governance have emerged as an interesting analytical approach, because they allows looking at power relationships and inequities, and therefore help identify points for interventions, the use of different approaches could certainly complement results obtained thus far. Suggestions for picking up new perspectives have been made: Messner's concept of the 'world economic triangle' takes into account the growing importance of private global governance through technical, social and ecological standards. This approach particularly allows for the analysis of standards in value chains as it defines standards as rules for functional spaces instead of territorial spaces. Another example is Bartley,[108] who has taken a first step in combining institutional theories in economic sociology with research on global value chains.

The amount of standards and their specificities, the multitude of value chains differing by product and the country-specific conditions producers and exporters find themselves in, puts a natural limit to researchers' ability to draw an exhaustive picture on the impact of private standards on value chains. Nevertheless, statistically valid data employing counterfactual conditioning would allow for comparisons and for drawing product/sector and country/region-wide conclusions about the impacts of standards on value chains.

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[108] Ibanez, Lisette and Jacques Laye. 'Ecocertification, differentiation in retailing and upstream market power'. *International Journal of Agricultural Resources, Governance and Ecology,* 7, 1, 2008.

Furthermore, methodological thoroughness and conceptual diversity already did, and could in the future, provide further valuable and rich results.

Finally, future research should investigate entire value chains and move beyond its focus on the producer to be able to identify where the impacts and constraints are in particular types of chains.

Horizontal analysis

Horizontal analysis in value chains pertains to issues such as poverty alleviation, gender implications, environmental effects or livelihood impacts. These questions have long been neglected in value chain research and it remains unclear how standards impact these issues along the value chain. Bolwig et al.[109] suggest a stronger and more systematic integration of poverty, gender and environmental concerns into value chain analysis. To this aim, Bolwig et al.[110] develop a conceptual framework that integrates vertical and horizontal aspects of value chain analysis. The resulting matrix links vertical dynamics in value chains – e.g. inclusion, exclusion, and terms of participation - to potential impacts on poverty and environmental aspects. The framework also considers those actors being affected indirectly by value chains such as excluded actors, external actors and non-participants. As to practical implications of their research, Bolwig et al. draw lessons for interventions aiming to improve value chain participation in developing countries. Operationalizing these lessons, Riisgaard et al.[111] designed a set of tools for the design and implementation of action research projects in value-chain analysis. The methodology, including the approach and the tools were tested in 2008-09 in seven research projects.

Limitations

There are two limitations to this study. A first limitation in the review is the limited research on the impact of standards in global value chains. This restricts the results obtained from this analysis as discussed above. Studies carried out by standard bodies themselves have not been taken into account. A second limitation is imposed by the interdisciplinary coverage of the topic. This results in a wide divergence in terminology used by different areas of literature.

Accordingly, the search for keywords proved to be a complex part of the process. To try to incorporate all this into an electronic database search is a challenging undertaking. Finally, it was found that a considerable amount of relevant papers has not been published in academic journals and that further sources had to be taken into account.

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[109] Bartley, Tim. 'Institutional emergence in an era of globalization: The rise of transnational private regulation of labor and environmental conditions'. *AJS,* 113, 2, 2007.

[110] *Ibid.*

[111] Bolwig, Simon, Stefano Ponte, Andries du Toit, 'Lone Riisgaard and Niels Halberg. Integrating poverty, gender and environmental concerns into value chain analysis: a conceptual framework and lessons for action research'. DIIS Working Paper 16, 2008.

Appendix I   Further readings

Global Agro-Food Trade and Standards: Challenges for Africa (2010) is a book edited by Gibbon, Ponte and Lazaro from the Danish Institute for International Studies. With an empirical focus on food safety, environmental and climate change, and social and labour standards, the book examines the challenges and opportunities that new public and private standards present to African producers and exporters.

Building Competitiveness in Africa's Agriculture: A Guide to Value Chain Concepts and Applications (2010) is a World Bank guide to value chain concepts and application edited by Webber and Labaste provides: an overview of theories and approaches on value chains, a literature review on value and value chains, and a discussion on tools used in value chain analysis.

In the book *Frontiers of Commodity Chain Research* (2009), Bair and colleagues provide an analysis of the status quo of commodity chain research.

Hutchens (2009) in her book *Changing Big Business: The Globalisation of the Fair Trade Movement* discusses about and provides a theoretical frame around how Fairtrade aims to change industry and power structures in international markets.

A three-year project led by the International Institute for Environment and Development (IIED) and the Natural Resources Institute (NRI) explored ways for small producers to participate in international horticulture value chains, particularly regarding trade with the United Kingdom. Main outcomes are summarized in a book called *Standard bearers: Horticultural exports and private standards in Africa* edited by de Battisti, MacGregor and Graffham (2009).

Supermarkets and Agri-Food Supply Chains: Transformation in the Production and Consumption of Foods (2007) is a book edited by Burch and Lawrence. It's academic contributors discuss questions including the influence of supermarkets in global value chains, the emergence and transformation of power relations in these chains, the growth in 'ethical trade' and its implications for supermarkets, and the environmental impacts of agro-food supply chains.

In Global Supply Chains, Standards and the Poor: How the Globalization of Food Systems and Standards Affects Rural Development and Poverty (2007) Swinnen provides an analysis of the rise of global retail chains and its implications for the structure of the global agrifood industry. The author investigates how private standards and their requirements influence global value chains and their impact on, particularly poor, producers and possible policy implications for a poverty eradication and growth in developing countries.

The FAO (2006) published a book on the implications of the developments in agricultural value chains and in the analysis of value chains by economists. *Governance, coordination and distribution along commodity value chains* (2007) also includes an outline of changing patterns in agricultural value chains and the developments in market power.

Agricultural Standards: The Shape of the Global Food and Fibre System edited by Bingen and Busch is a collection of papers discussing a wide range of issues ranging from public standards discussed and set at the World Trade Organization, standard setting and regulatory processes, small farmer access to global markets through quality standards, organic standards and the situation of cotton in West Africa.

Daviron and Ponte's book *The Coffee Paradox: Global markets, commodity trade and the elusive promise of development* (2005) is a seminal work on the coffee sector including coffee production, value chains structure and its implications, international trade, consumption, standard initiatives and the coffee sectors potentially to enhance development and foster poverty eradication in producing countries.

In Fair Trade: Market-Driven Ethical Consumption, Nicholls and Opal (2004) offer a summary of the Fairtrade history, and how it changes economics along the value chain. The authors also investigate how Fairtrade changes industry structures, provide data on the Fairtrade market, and discuss impact measurement.

In their contribution named 'Nourishing Networks: Alternative Geographies of Food' Whatmore and Thorne provide a readable theoretical discussion on Fairtrade. The book is called *Globalising Food: Agrarian Questions and Global Restructuring* (1997), by Goodman, D. and M. Watts, (Eds.).

Appendix II Overview of methodologies applied by standard and product/sector

The following table relates the methodologies applied in empirical papers included in this review to the products and standards under investigation.

Table 2:   Methodologies applied by product and standard[112]

Product/ Research method	Forestry products	Fresh fruits and vegetables	(Cut) flowers	Coffee/tea	Fish	Cotton, textiles	Several and other products
Single case study	2 FSC 1 IKEA	2 Several 2 GLOBALG.A.P. 1 FT+Organic	3 Several	2 FT 1 UTZ 1 FT + Organic 1 C.A.F.E.	1 Several	1 Firm standard	2 Several (wine, spices) 2 GLOBALG.A.P.
Multiple case study	1 FSC+ PEFC	1 Several	1 HEBI+ KFC; 2 several	1 FT 1 FT (tea) 1 FT+SA+UTZ	1 MSC	1 FT 1 Several	3 Several
Survey based (no counter.)	1 FSC+ PEFC				1 HACCP		
Econometric model	1 FSC+ PEFC						

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[112] Numbers in the figure (39) do not correspond to the count of empirical papers (32) as papers on several products were counted multiple times (where possible).

Appendix III   Sources of literature

Three main sources of literature were used in our research:

- Three electronic databases EBSCO, Science Direct and ISI Web of Knowledge were used for the review. EBSCO and Science Direct were used due to their comprehensive coverage of business research and ISI Web of Knowledge was used to search key journals that have not been covered by the other databases.

- Additional sources included previous literature reviews, research institutes, think tanks and international organizations working on private standards.

- Lastly, cross-references providing background information on specific topics, such as conceptual approaches applied in research were identified, checked for relevance and quality and included in this work.

Appendix IV   Keywords and search terms

The definition of search terms followed two principles: the terms had to be (i) wide enough to make sure not to miss any reference on the topic and (ii) be precise enough to limit search results to a manageable quantity. With an inconsistent terminology in this area, this process proved to be complex. For example, several terms are used to refer to the nature of standards under review, including among others private standards, voluntary standards, sustainability standards, and certifications. As the literature on these standards and their impacts on value chains is relatively young and limited it was decided to make the search as broad as possible by defining more general keywords. See table 3 for an overview of search terms used in each category.

Table 3:   Search term by category

Sustainability		Certification	Market	Operations	Impact	Meso-Macro
Sustainab*		Certif*	Market	Yield	Impact	Policy
Environment*		Standard*	Buyer	Product*	Income	Govern*
Ethic*	A N D	Regulat*	(Supply OR Value OR Commodity) AND Chain	Quality	Effect	MDGs OR (Millennium AND Development AND Goals)
Social		Label*	Consumer	Control AND system	Premium	Development
Responsib*			Governance		Price	Poverty
			Power		Surplus	Community
			Trade		Outcome	Gender
			Stakeholder		Cost	
			Market AND (Share OR Participation		Risk	
			Stakeholder		Livelihood	

Related journals that were not covered by the electronic databases EBSCO and Science Direct were searched for in the database ISI Web of Knowledge separately. For a list these publications see table 4.

Table 4:   List of related publications

Publications	Academy of Management Review, Business and Politics, Consumer Policy Review, Corporate Governance Journal, Cultural Sociology, Environment, Development & Sustainability, Forest Trend, globalEDGE Business Review, Human Organization, International Journal of Consumer Studies, International Journal of Sustainability, Journal of Business Ethics, Journal of Public Policy and Marketing, Journal of Strategic Marketing, Review of International Political Economy, Small-scale Forestry, Small Enterprise Development, Sustainable Development International, Social Enterprise Journal.

Appendix V   Search strings and electronic search engines

The selected keywords were then used to construct strings with Boolean connectors (AND, OR, and NOT) searching the electronic databases. A wildcard (*) search was also included on some words so to better capture the alternative spellings of core concepts. The strings were used to search in titles and abstracts for the *EBSCO* database and included also keywords for *Science Direct*. In the *ISI Web of Knowledge* database the search strings were applied to search for selected journals not covered by the other two databases.[113] Only scholarly (peer reviewed) journals in databases and no particular timeframe have been selected for searches. In EBSCO, selected databases included *Academic Search Premier* and *Show all Environment Complete.*

The total number of articles found in the initial search was 7536 in EBSCO, over 380,000 in Science Direct and 5,603 in ISI Web of Knowledge. Due to the high numbers of results, the search strings had been amended adding new keywords, removing some of the very general keywords and adding exclusion criteria. Re-running searches with the new search strings significantly lowered returns to 2,187 papers in EBSCO, still 130,000 papers in Science Direct and no major change in the ISI database. As even the exclusion of a number of subjects[114] did not significantly reduce results and due to the fact that the search in Science Direct showed high overlap with the search in EBSCO it was decided to focus further screening on the two other databases, ENSCO and ISI Web of Knowledge.

Additional sources included research institutes, international organizations and further bodies involved in research relating to private standards, and other literature reviews. The search for relevant papers consisted in screening these organizations' websites and checking cross references. The documents were screened using the research questions and an additional 874 papers (previous literature reviews) and 4,142 papers (research institutes, etc.) were identified and included in the subsequent phase of the research. Another source of literature was derived from cross references in articles.

A total of 12,806 papers were included in the screening process.

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[113] Journals include: Academy of Management Review, Business and Politics, Consumer Policy Review, Corporate Governance Journal, Cultural Sociology, Environment, Development & Sustainability, Forest Trend, GlobalEDGE Business Review, Human Organization, International Journal of Consumer Studies, International Journal of Sustainability, Journal of Business Ethics, Journal of Public Policy and Marketing, Journal of Strategic Marketing, Review of International Political Economy, Small-scale Forestry, Small Enterprise Development, Sustainable Development International, Social Enterprise Journal.

[114] This lead to the exclusion of the following subjects: Arts and Humanities, Biochemistry Genetics and Molecular Biology, Chemical Engineering, Chemistry, Computer Science, Decision Sciences, Earth and Planetary Sciences, Engineering, Immunology and Microbiology, Materials Science, Mathematics, Medicine and Dentistry, Neuroscience, Nursing and Health Professions, Pharmacology, Toxicology and Pharmaceutical Science, Physics and Astronomy, Psychology, Veterinary Science and Veterinary Medicine.

Appendix VI   Systematic review methodology and screening process

Figure 9 provides an overview of the systematic literature review process. The screening process entails three steps: a title review, the review of abstracts and the full paper review. Before each step inclusion and exclusion criteria had been defined to ensure transparency and replicability of the process.

The *title review* has been carried out according to predefined keywords that led to the exclusion of papers and reduced the amount of articles to more manageable numbers. For the EBSCO search results there was a remainder of 450 papers, for the ISI database 385 papers remained, 788 references from the literature reviews were kept for the abstract screening and screening the research institutes resulted in 1,642 papers kept.

The next step consisted in the *abstract review* according to predetermined topics operationalized through keywords. It was decided to keep 80 papers for full screening from EBSCO, 165 papers from ISI, 779 papers from the literature reviews, and 391 from research institutes and other organizations.

Figure 9:   **Steps in a systematic literature review**
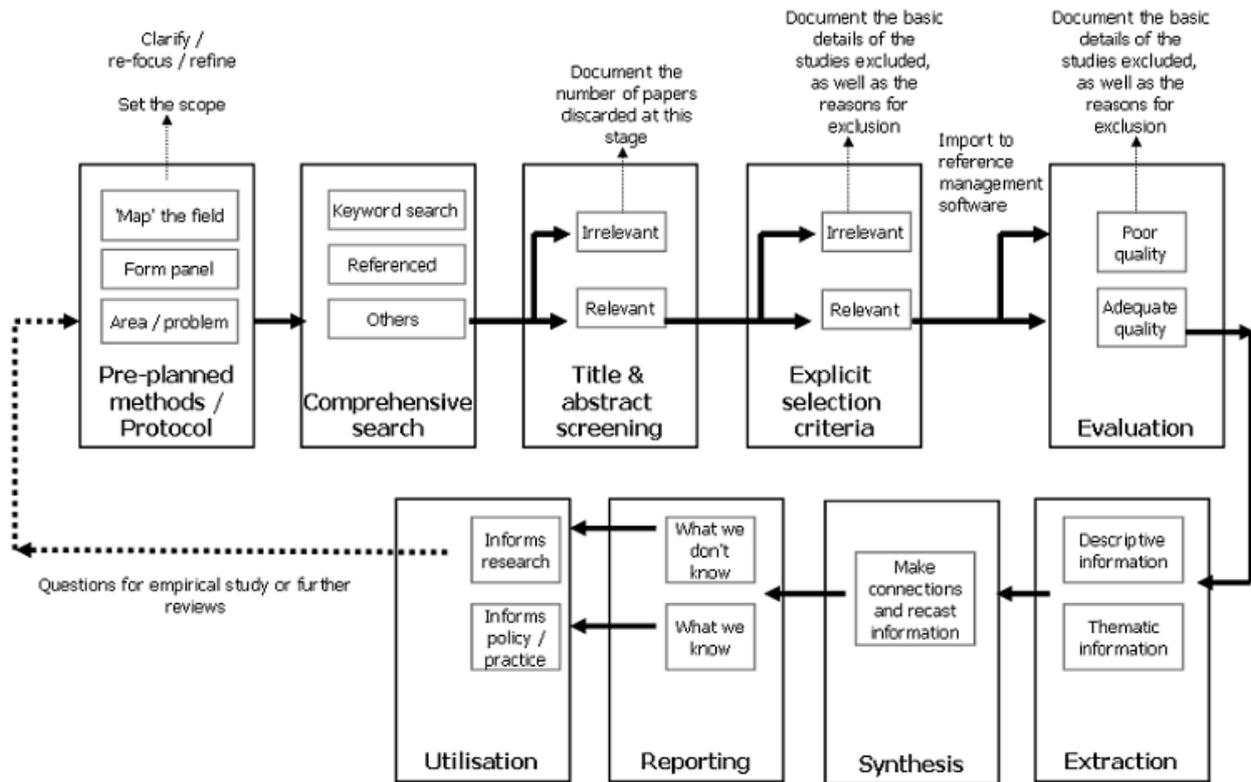
Source: David Denyer, Advanced Institute of Management Research, www.networkcranfield.com

Papers have been dismissed in the process of abstract screening when dealing with: CSR issues that are not related to standards//Environmentally friendly or sustainable investments//Socially friendly investments//Voluntary standards in developed countries//Ethical trade issues other than standards//Sustainable development issues other than standards//Other kinds of certification, e.g. land certificates//Sustainability economics//Geographical indicators//Consumer behaviour issues//Voluntary initiatives to foster "ethical" corporate behaviour or projects other than standards, e.g. codes of conduct//Private standards for non-export products, e.g. milk//Ethical behaviour of employees or managers//Public-private partnerships//UN Global Compact.

Out of all papers kept for full screening we included those that deal with the question of this report, namely how standards impact on global value chains. One hundred fourteen (114) papers were found to deal with this issue and were kept for full screening.

Lastly, in a final screening step full papers were reviewed according to defined selection criteria, such as its contribution to research, clarity of data collection and sampling methods, or the linkage between the methodology used and conclusions reached. This screening exercise resulted in 63 papers that have been analysed for this literature review.

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