

Institutional Change in Value Chains: Evidence from Tea in Nepal

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Summary. — Local conditions in developing countries have long played a part in determining whether their small-scale firms can benefit from deepening their participation in global value chains (GVCs). Institutional theory allows us to characterize these local conditions not simply as particularistic oddities but rather as elements of an institutional matrix that affects the livelihoods of chain participants. However, the institutional dimension of GVC analysis has been traditionally neglected in the literature, to the detriment of our understanding of the impacts of upgrading in GVCs. This study aims to remedy this failure by illustrating how institutional context mediates between value chain upgrading and the livelihoods of chain participants. It particular, it seeks to elucidate how value chain upgrading spurs a process of change in the institutions that govern the livelihoods of suppliers in developing countries. This examination sheds light on the more general question of how value chain upgrading sometimes helps, but sometimes hurts, the welfare of chain participants. This theoretical contribution to the value chain literature is based upon an institutional analysis of primary qualitative data from more than 80 small-scale tea farmers in Nepal, some of whom had upgraded from conventional to organically certified production. Our study finds that value chain upgrading launches a process of institutional change that can be summarized in a general typology. The typology highlights how rules, strategies, organizations, and informal norms affect whether a given upgrading intervention yields livelihood benefits in a particular place. Upgrading can yield positive impacts in chain-linked livelihood dimensions, such as price, and yet induce negative changes in other livelihood dimensions, such as risk, and thereby yield overall adverse livelihood implications, in a process we dub “immiserizing upgrading”. These findings contribute to advancing the conceptual literature on global value chains (GVCs) by suggesting a general typology for cycles of institutional change that influence livelihood outcomes. The typology provides a framework to analyze such processes that is also of use to development practitioners seeking to understand the conditions under which upgrading worsens or improves the welfare of value chain participants. The research findings provide an interesting window into how certification schemes interact with the daily lives of the rural poor.

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1. INTRODUCTION

Under what conditions do small-scale firms in developing countries benefit from deepening their participation in global value chains? The diversity of evidence brought to bear in the academic and policy debate on the matter suggests that the impact of participation in global value chains is by no means uniform (cf. McCullough, Pingali, & Stamoulis, 2008). Suppliers in developing countries have adopted upgrading strategies in an effort to improve their position in the chain and capture more value added in production. Although it is often assumed that upgrading strategies will be advantageous to those who adopt them, evidence suggests that this is not always the case. Studies indicate that upgrading can adversely affect the welfare of chain participants (Ponte & Ewert, 2009; Rossi, 2013). More generally, upgrading efforts interact with local institutions and strategies in a process that generates heterogeneous welfare outcomes for chain participants. A product upgrade that improves quality and prices, for example, interacts with local labor institutions and internationally defined product quality rules, which in turn affect profitability.

Owing to the weak conceptualization of institutions in the global value chain framework, however, we know relatively little about the interplay between institutions and value chain upgrading (Neilson & Pritchard, 2009). The importance of the institutional context has been acknowledged in the literature, where it is considered the fourth pillar of analysis (Gereffi, 1999), yet theoretical and empirical work on institutions in value chains has been neglected. Indeed, on the basis of their review of the literature, Neilson and Pritchard (2009) argue that institutional analysis within the global value chain framework “tends to appear wooden and simplistic” (p. 47). The research presented here aims to remedy this failure by

examining how institutional context mediates between value chain upgrading and the livelihoods of chain participants.

A growing literature has highlighted how local conditions influence whether value chain upgrading impacts positively or negatively on the welfare of upstream suppliers (Mitchell & Coles, 2011; Ponte & Ewert, 2009; Rossi, 2013). Institutional theory allows us to characterize local conditions not simply as particularistic oddities but rather as elements of an institutional matrix that constrains and facilitates economic interactions (North, 1990). This paper contributes to the literature on institutions in value chains by building a stylized typology of how value chain upgrading changes the local institutions that govern the livelihoods of suppliers in developing countries. This theoretical contribution to the value chain literature is based upon an institutional analysis of dozens of field interviews with producers whose livelihoods have been affected by upgrading. When a buyer decides to upgrade to higher-quality strands of the value chain, for example, this can affect their rules for purchase and payment frequency, which in turn affects the sale options of suppliers. Institutional change can thus have knock-on effects on livelihoods, such as through wastage of suppliers’ agricultural product or unem-

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ployment of garment workers. Indeed, these unintended effects may be so negative as to generate an overall negative livelihood impact from the upgrading effort in a process this paper dubs “immiserizing upgrading”. When livelihoods are compromised, household welfare can bear the brunt of the impact; as such, the rest of this paper uses a livelihood perspective to understand welfare. The typology provides a framework to analyze such processes that is also of use to development practitioners seeking to understand the conditions under which upgrading worsens or improves the welfare of value chain participants.

The analysis is developed by examining how insights from economic theories of institutional change resonate in a value chain case study of small-scale tea farmers in Nepal. Findings suggest that upgrading sparks a cycle of change. Firstly, it induces changes in the institutions that govern the livelihoods of upgrading farmers. This in turn encourages the crafting of new livelihood strategies, the formation of organizations to support these strategies, and shifts in informal norms. This transformation affects whether value chain participants benefit or lose from upgrading. Yet it also generates new opportunities that can lead to another cycle of upgrading and institutional change. Analysis thus indicates that suppliers’ institutional context, and their strategies, influence commodity system dynamics.

The following section develops the conceptual framework for the paper through an exploration of the relevant literature on value chain upgrading and institutional change. Section three provides a background on the case study of the tea value chain in Nepal and methodology. In section four, institutional data from the case study is analyzed, discussing the process of change in Nepal. Section five derives a general typology for institutional change in value chains and analyzes. The last section concludes and draws policy lessons.

2. VALUE CHAIN UPGRADING AND INSTITUTIONAL CHANGE THEORY

Shifts in the governance of global trade flows are reconfiguring the livelihoods of small-scale producers in the global south. In addition to producing for local markets, or for wholesale markets, small-scale firms face opportunities to participate in coordinated international supply chains. The Global Value Chain (GVC) literature (Gereffi, 1994, 1999; Gereffi, Humphrey, & Sturgeon, 2005) has studied these chains, tracing the interactions between actors along a product’s trajectory “from its conception and design, through production, retailing and final consumption” (Leslie & Reimer, 1999, p. 404). According to Gereffi’s classic framework (1994), chains are characterized by how their input–output relationships are structured across space, as well as how they are governed. Subsequent scholarship in the GVC tradition has focused on governance, and particularly how product and information exchange is coordinated by lead firms. Gereffi *et al.* (2005) identify a range of types of chain coordination, with uncoordinated spot market-type exchange on one end and on the other the very tight, vertically integrated exchange that occurs within a corporation. Between these two extremes are forms of coordination that address the particular informational demands and supplier capacity of the chain. When the chain involves the exchange of highly complex and easily codified information from buyers to weak suppliers, then the authors suggest that a “captive” form of coordination will emerge. In captive chains, suppliers are dependent on buyers, who in turn monitor their suppliers intensely.

Recent value chain literature has highlighted that there may be synergies between the type of chain coordination and the tendency of chain actors to adopt strategies to improve their position in the chain. These strategies, which are known as “upgrading” efforts in the global value chain literature, are initiated because a rent has been identified, or because actors see an opportunity to mitigate risks or avoid volatile international prices (Kaplinsky & Morris, 2001). In their study of aquaculture in Asia, for example, Ponte, Kelling, Jespersen, and Kruijssen (2014) find that captive coordination tends to encourage process upgrading, wherein inputs are more efficiently transformed into outputs, as well as product upgrading, when agents shift to a new, higher value thread of the value chain. Other types of upgrading, including to new roles (functional) and products (inter-chain), are found in other types of chains. Although early scholarship focused on upgrading to improve market power and thereby access higher incomes, subsequent work has highlighted how it can also alter the control and decision-making power producers have over the terms and conditions of their participation in value chains (KIT, Faida MaLi, & IIRR, 2006; Riisgaard, 2009) and the rights and entitlements of workers (“social upgrading”) (Barrientos, Gereffi, & Rossi, 2011; Rossi, 2013). Impacts of upgrading range from income to poverty (Mitchell & Coles, 2011), gender (Laven & Verhart, 2011), and livelihoods (Neilson & Pritchard, 2009), and not always for the better. Downgrading, such as moving to a downstream function or less demanding thread of the chain, could actually be advantageous (Ponte & Ewert, 2009). Adopting different managerial models, supplying different end markets, improving efficiency, and meeting social and environmental standards could also yield benefits (Ponte *et al.*, 2014). Upgrading could also worsen welfare, including by worsening some livelihood aspects while improving others; as noted in the discussion later in the text, these strategies can be described as “immiserizing” upgrading efforts.

When firms undergo product upgrading, they can find themselves in tightly coordinated chains driven by strong lead firms. Lead firms in value chains use governance mechanisms such as production standards to exert control over the transmission of knowledge, information, product, and finance to and from suppliers. Yet at each node of the value chain, standards, as institutions for coordination in value chains (Bingen & Busch, 2006; Busch, 2011; Henson & Humphrey, 2010), intersect with local economic institutions. As such, upgrading, governance, and institutions have to be seen together in order to understand welfare impacts (Ponte & Sturgeon, 2014).

Unfortunately, the institutional dimension of analysis has been neglected in the value chain literature, obscuring our view of this interaction (Neilson & Pritchard, 2009; Ponte *et al.*, 2014). Indeed, one researcher has suggested that Gereffi saw the institutional framework surrounding the value chain as the “conditions under which control over market access and information are exercised on a global plane” (Gibbon, 2001, p. 347). Conceiving of the institutional framework in which the value chain is embedded in this passive fashion is problematic.¹ A richer conceptualization of institutions is offered by Global Production Network (GPN) theory. According to GPN thought, each stage of the production process is embedded in a web of networks and institutions across the social, economic, political, and environmental spheres. In this vision, commodity systems are “multi-dimensional, multi-layered lattices of economic activity” (Henderson, Dicken, Hess, Coe, & Yeung 2002, p. 442). Other conceptual approaches to commodity production similarly deploy non-linear multi-dimensional systems frameworks (Lazzarini,

Chaddad, & Cook, 2001; Levy, 2008; Mohan, 2014; Neilson & Pritchard, 2009). This research yields insights into how to conceptualize the embeddedness of commodity chains within society.

Notwithstanding their spatial sophistication, these bodies of thought fall short when it comes to analyzing how chains change over time. GPN theory moves beyond a value chain theory's exclusive focus on the chain by highlighting how a broad range of place-based networks and institutions interact with chain governance over time (Henderson *et al.*, 2002; Yeung & Coe, 2015). Similarly to GVC research, however, GPN research tends to focus on market power; chain transformation is initiated to obtain control over the chain and the economic rents that accrue to dominant chain actors. Changes in chain governance then interact with local institutions (Coe, Hess, Yeung, Dicken, & Henderson, 2004; Henderson *et al.*, 2002; Levy, 2008; Neilson & Pritchard, 2009). Extensions of GPN and GVC research have investigated the nature of such interactions in more detail. The interface between the chain and social institutions can be analyzed as a site of political contestation, including over the hegemonic ideology and governance structures of globalization (Levy, 2008). Other literature takes up the question of how changes in chain governance play out at a local level. Neilson and Pritchard (2009), for example, suggest that such changes incite "struggles" in particular locations. During these struggles, local institutions "configure", "sculpt" and "negotiate" outcomes in the chain. The chain thereby "coexists in an iterative nexus" with its institutional context in which both are "co-produced and in a state of perpetual dynamic transformation" (pp. 8–10, 56).

Economic theories of institutional change can shed light on these dynamics. Virtually all institutional economics scholars see change as an evolutionary process. The process starts with a trigger from within the economic system, and continues as agents envisage an alteration to an existing institution or a different institution entirely (Holm, 1995; Seo & Creed, 2002). Agents mobilize via organizations (Olson, 1965) to bring the new institution into being, and competition of some sort ensues among old and new institutions for adoption. Old institutions are destroyed or decayed, while new ones are adopted. Stability ensues—until the cycle begins again.

Different schools of thought diverge when it comes to analyzing the process in more depth. For example, several New Institutional Economics scholars assume that the change process is determinate and that optimal institutions will necessarily emerge that are efficient and maximize welfare (Williamson, 2000). This would imply that upgrading necessarily improves outcomes for participants. In what we will call scenario one, they depict institutional change operating like a Darwinian evolutionary process, wherein exogenous parameter change in relative factor prices, demand, technologies (Hayami & Ruttan, 1971; North & Thomas, 1973) or preferences (North, 1990) changes economic conditions. A variety of different rule sets are proposed to address the new conditions, and these institutions compete among one another to get the most economic agents using their set of rules. This competition among institutions will induce convergence around the lowest transaction cost institution (Alchian, 1950). The question then becomes how the initial exogenous change was instigated; in the context of value chain analysis, this begs the question of what makes suppliers decide to upgrade.

Endogenous theories of institutional change do not have this problem. Instead, they highlight how change is instigated from within the system. In contrast to the instrumental and determinate approach described above, in this approach institutional change arises in a complex environment wherein

institutions and individuals co-evolve by influencing one another. Multiple equilibria, some of which may be inefficient or indeed harmful, are possible in these theories.²

Such endogenous theories generate three additional institutional change scenarios. In scenario two, the ongoing operation of institutions over time changes parameters which are not essential to the rules of the game, but nonetheless affect the payoffs experienced by the actors. As these "quasi-parameters" shift over time—one can imagine, for example, changes in a region's overall level of technical knowledge or soil organic content over time—they can lead to institutional disequilibrium and affect the benefits from institutional change, triggering action (Greif & Laitin, 2004; Canales, 2010). In the third scenario institutional participants seek to marginally change the rules through institutional additions and alterations (North, 1990). This predicts that change is likely to be incremental. In the fourth scenario, institutional entrepreneurs set out strategically to change institutions. Since agents are shaped by existing institutions, however, they must step outside their constraints to change things. Seo and Creed (2002) suggest that for this to happen, agents must become aware that institutional contradictions exist, which depends on how profound the contradictions are and mechanisms of communication, and they must also see that they stand to benefit by rectifying these contradictions.

Interactions between upgrading and institutions are relevant to development particularly insofar as they affect the welfare of upstream producers. In this study, welfare outcomes are understood from a livelihoods perspective. Livelihoods have been defined by Ellis (2000) as "a combination of assets (...), activities and access to these (...) that together determine the living gained by the individual or household" (p. 10). Unlike other welfare measures used in value chain upgrading studies, a livelihood framework captures all the data about the well-being components that matter to the research subject. This includes income as well as income fluctuations, assets that insure against risk, and expectations for the future.

How does value chain upgrading interact with institutions to affect the livelihoods of chain participants? This broad question is taken up empirically through a case study of the Nepali tea value chain.

3. THE NEPALI TEA VALUE CHAIN

(a) *Methods*

Fieldwork was conducted in Spring 2010 in Nepal by the author and a Nepali translator/research assistant. A set of 85 field interviews informs this study.³ In the first stage of research, 16 informant interviews were conducted in Kathmandu (the capital city) and Ilam district using an exploratory, informal conversational interview format (Patton, 2001). The second and third stages focused exclusively on upstream actors. In the second stage, 20 semi-structured guided interviews were conducted with farming (15) and laboring (5) households. To start, the interviews used a short list of questions (the "guide") that were based on findings in the first stage. An emergent, iterative approach was then used such that once a topic was mentioned in an interview, it was included as a question in subsequent interviews (Patton, 2001). A full interview guide consisting of a list of questions⁴ emerged inductively through this process. It elicited information from participants regarding the livelihood factors and institutions they deemed relevant to their well being and how these factors had changed over time.

Since no pre-existing lists of farmers in each region existed, and the respondents were hard to identify in the densely forested, mountainous terrain, snowball sampling methods were used in this and the next stage. Informants in the first stage suggested a few key households. These respondents, in turn, suggested other households, who then suggested others. Suggestions that permitted inclusion of hard-to-reach groups, such as landless laborers, female-headed households, and tribal households, were followed with a view to reflecting the demographic and ethnic distribution in the region.

In the third stage, a quantitative survey was conducted with 30 households in order to measure the factors identified in the second stage. Quantitative data and findings are discussed in a separate policy paper (Mohan, 2013). Data from the second stage and, to a lesser extent, the first stage, form the backbone for the analysis in this paper. Analysis was conducted using Grounded Theory methods (Strauss & Corbin, 1998) deployed using QSR NVivo 9 software.

Research was conducted largely in three villages in Ilam, namely Sundarepani, Kolbung, and Sankhejung. Criteria for selection included the importance of village production in gross district output as well as the presence of both organic and conventionally certified production. A few additional interviews were held in other villages including Borboté (Fikal), Daragoun, Jasbiri, Horcoté, Iroté, and Kanyam.

(b) *Input–output, territoriality, and governance aspects of the tea value chain*

The tea sector in Nepal connects thousands of small-scale farmers to millions of discerning tea consumers worldwide. Unlike tea grown to the south and west, which is largely grown on plantations and processed according to cut–tear–and–curl (CTC) methods, orthodox tea production in Nepal is concentrated in the east, in Ilam district as well as neighboring Dhankuta and Panchthar districts, in the lush foothills of the Himalaya, just across the border from India’s famous Darjeeling tea gardens.⁵ For the remainder of the paper, unless noted otherwise, “tea” refers to orthodox tea grown by these farmers. Although the roots of tea production in Ilam stretch back to the 1860s, when the first tea seeds were planted, it wasn’t until the 1960s and 70s that small-scale farmers started planting their own tea plots (Rana, 2007). In 2009/10, these farmers produced 1,425 tons of tea on 4,987 hectares⁶ of land, most of which was exported to India and overseas.

The Nepali orthodox tea value chain typically starts when a smallholder farmer buys a tea seedling from a government nursery. Inputs including fertilizers and pesticides are applied and five years later, the farmer hires laborers to pluck the tea leaf. It is then transported by the laborer, farmer, or a local truck or horse to the processing factory. The factory grades and processes the tea leaf, and then sells it to a buyer. There are two kinds of buyers: on the one hand, there are buyers who will accept almost any quality of tea, such as Nepali and Indian buyers. On the other hand are premium buyers that require compliance with food safety and quality rules, including European wholesalers and retailers. The factory sells the processed tea to one of these buyers, who blends and sells it to a retailer. At the retail store, it is bought by consumers. Between each node, the tea leaf is transported and stored.

This input–output structure of the tea value chain is shown visually in Figures 1 and 2, which correspond to the conventional and organic threads of the chain respectively. As is evident from casual observation, the organic value chain is more streamlined than the conventional chain. However, the pattern of industry concentration has an hourglass shape in both

cases, with a large number of upstream farmers, a few processors and traders in the middle, and many retailers and consumers. International trade in conventional tea is dominated by a handful of large global agri-food firms such as Unilever, who buy tea at auctions, blend it, and retail it via brands such as Twinings or Lipton’s. Organic tea, on the other hand, is generally sold relatively directly to small-scale retailers in developed countries. The tea value chain is buyer-driven, and the conventional and organic threads are coordinated through spot and captive governance respectively. The lead firms in the high-quality segment of the tea market are specialized retailers or wholesalers in developed countries; while in the low-quality segment, international tea blenders use auctions, including in India, and exert little control over upstream production (Herath & Weersink, 2008; Larsen, unpublished; Loconto, 2012). Power in the Nepali segment is centralized in the 20 large- and medium-sized factories⁷ processing and exporting orthodox tea leaf in Nepal (USAID, 2011) whose production ranged from 10 to 800 megatons of made tea. Villages in Nepal had one, or at most two, such factories nearby; each factory thus had a virtual monopoly, capturing all the supply in the region. The producers who grew the tea, on the other hand, were numerous, relatively poor, and small in scale. More than 7,000 tea farming households toil on small-scale plots in Nepal (NTCDB – National Tea, 2009), average individual incomes in Ilam were US\$1344,⁸ and in our sample, the average farm size was 0.77 hectares.

4. INSTITUTIONAL CHANGE AMIDST THE TEA FIELDS

These input–output, territorial, and governance characteristics of the Nepali tea value chain intersected with the institutional context at each node of the chain. For the sake of analytical clarity, the rest of this paper focuses on this intersection at the farmer node of the chain.⁹ Interviews with small-scale farmers revealed a set of institutions that framed their livelihood efforts. Their testimonies affirmed that institutions used for vertical governance of the chain, such as standards and grading rules, were relevant for their livelihoods. Yet other local rules and informal norms guided their behavior. In order to understand how upgrading induced a process of institutional change, we first need to comprehend these rules in depth. For that reason, we will now consider a static view of the institutions governing the production of tea by farmers in the rolling hills of Ilam, Nepal.

(a) *A snapshot of institutions at the farmer node of the tea value chain*

The “rules of the game”, in the case of tea farming in Nepal, can be roughly grouped into three categories. Chain governance institutions were set by downstream actors to control the flow of product, information, and finance. Labor institutions set out the ways in which farmers could access workers for their fields. Finally, financial institutions affected farmers’ access to capital. Several other elements made up the institutional environment of the farmer: informal norms guided their valuation of different livelihood options, organizations provided support, and they had pre-existing livelihood strategies. The rest of this section explores each of these elements in more detail.

(i) *Chain governance institutions*

In each village, the local factory told farmers how tea was to be produced and sold. They did so through three institutions:

WORLD DEVELOPMENT

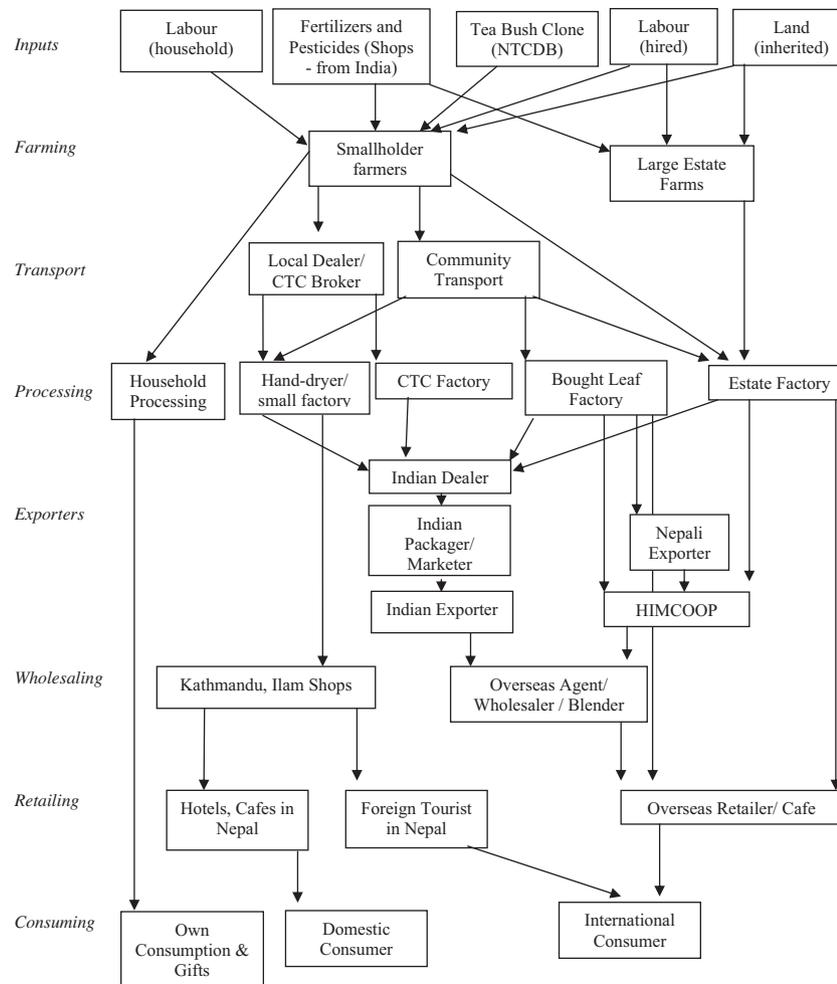


Figure 1. *The conventional Nepal orthodox tea value chain.*

standards; payment modalities; and grading rules. In the first category were certification schemes specifying, inter alia, how much leaf was to be plucked from each bush and how much chemical use was permitted. In Ilam, each village had only one local factory, which accepted tea produced according to one or more standards. Two such standards will be examined in depth in this paper: the Code of Conduct, a domestically-driven set of voluntary rules for tea production and processing; and Organic certification.¹⁰

Payment frequency rules set out when farmers could expect to be paid for the tea they delivered, which could be monthly, every other month, quarterly, or annually. Crucially, each factory had a system of rules for the grading of tea. When a farmer dropped off tea leaf at the factory, the manager classified it as either A-grade, high-quality tea that was paid the standard rate, or B-grade, lower-quality tea, which was paid a lower rate or not at all.¹¹ Yet it was the factory that decided which tea made the grade.

(ii) *Labor institutions*

The labor institutions farmers described as most relevant to their own livelihoods were payment modality, allocation rules, and availability rules. Workers were paid either a piece (per kg) or time (daily) rate. Daily rates ranged from US\$0.80 to \$1.61, and piece rates ranged from US\$0.09/kg to \$0.17/kg, but were virtually fixed in each village. Labor was allocated through customary obligations (i.e. landlord–tenant relations), by verbal contract from one season to next, through the

community labor sharing system (“porma”), by the discretion of mobile labor groups, or on a spot market. The last two modes of labor hiring were preferred by laborers, and were used particularly when labor was scarce and wielded market power. However, they were problematic for farmers, who found that these modalities led to difficulties in accessing labor at the right time, when the quality of the tea leaf was at its peak. A majority of respondents described acute labor scarcity as a problem. This shortage arose in part from increased out-migration of young men, often to jobs in the Middle East.

(iii) *Financial institutions*

Financial institutions, including banks and microcredit groups, constrained and assisted farmers by setting out rules for access to loans, loan forgiveness, and interest rates.

(iv) *Informal norms*

The informal norms of market participants conditioned what was feasible for farmers. Norms about gender, the valuation of the future, and environmental awareness particularly influenced decision-making. Women were often responsible for coordinating field practices, including coordinating labor and inputs, yet men were responsible for participating in cooperative training sessions. Those training sessions disseminated norms about the future that influenced how farmers evaluated non-financial benefits from upgrading.

Informal norms also existed regarding the acceptable level of risk in household production.

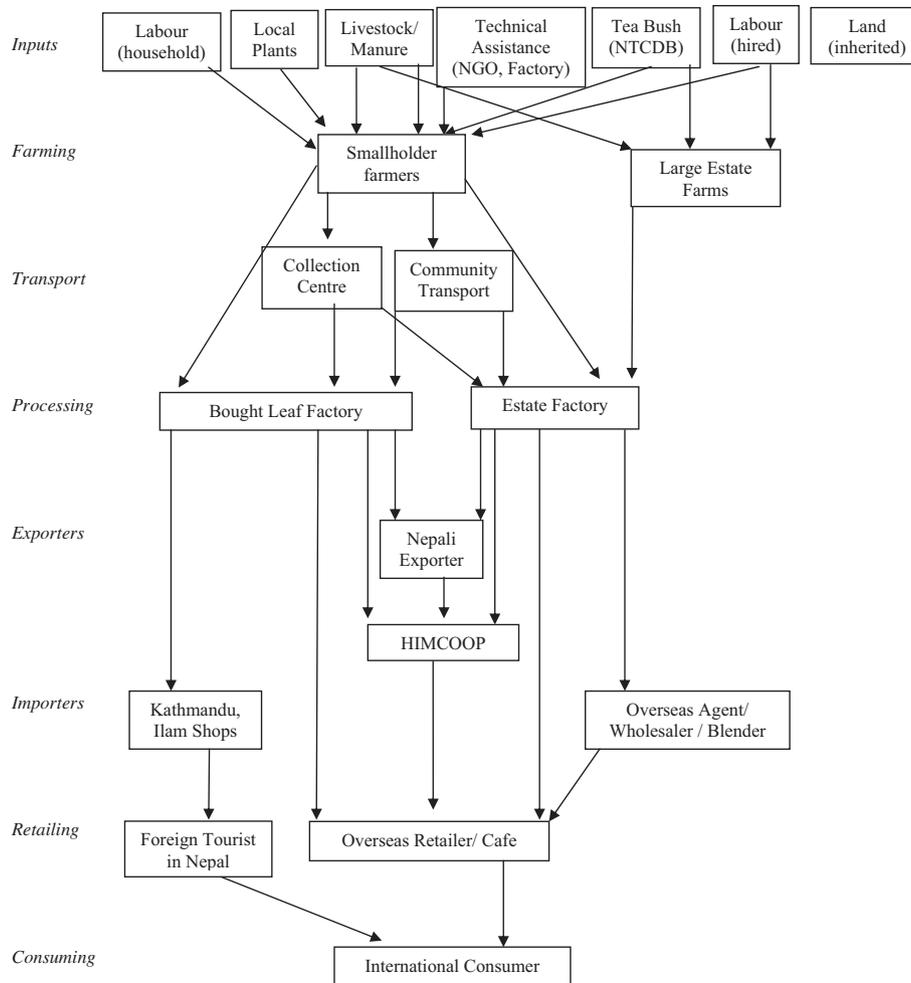


Figure 2. The organic export Nepal orthodox tea value chain.

As this convention changed toward a higher acceptable level of risk, farmers and their organizations were more willing to experiment with new production methods. Social convention demanded that parents send children and youth away to school.

(v) Organizations

The activities of non-governmental organizations (NGOs) and industry groups affected farmers’ livelihoods indirectly, including by strengthening cooperatives, affecting informal norms, and augmenting international demand for Nepali tea. HOTPA (the Himalayan Orthodox Tea Producers’ Association) was created in 1998 to represent and coordinate the interests of the factories. By 2003, several processing factories had opened, development organizations including JICA and Winrock International were active in the sector, and a Tea Development Alliance was formed to coordinate development work in the sector. In 2006, in order to complement HOTPA’s coordination role with income-generation activities, a marketing body was created—HIMCOOP, the Himalayan Orthodox Tea Producers’ Cooperative. The government affected multiple elements of household economics, including through education, loans, and national strikes.

(vi) Other strategies

Farmers were pursuing a variety of their own livelihood strategies well before the product upgrading began. In reaction

to risks, farmers were diversifying their livelihoods and their crops. In reaction to shifting conventions regarding outmigration and schooling, farmers adopted all sorts of innovative methods to access labor. In reaction to the perceived unfairness of factory rules for grading, payment frequency and pricing, farmers attempted to functionally upgrade by starting up their own small processing factories or hand-dryers. Many were sending children for higher education and a potential office job, in the hopes of the family eventually leaving the farm. There was also substantial emigration: male household heads migrated away to earn money to send the children to school, and then the educated children no longer wanted to work the farm. These factors influenced the course of institutional change and thus how upgrading was received in the region. To see this in more detail, we now turn our attention to the processes at play in Ilam in 2004, when the Code of Conduct was introduced.

(b) Upgrading alters institutions, Part I: the CoC

The process of institutional change at the farming node of the Nepali tea value chain began when the Tea Development Alliance and HOTPA recognized that they would capture more profits if they improved the reputation and quality of Nepali tea. They thus created a Code of Conduct (CoC) during 2004–06. The CoC is a self-enforcing, voluntary code, modeled on ISEAL, Codex, and International Federation of

Organic Agriculture Movements (IFOAM) standards. There are four components to the CoC: respect for nature, which requires that farmers reduce pesticide and chemical use by 25% in the first year of participation, by 50% in the second year, and bring chemical use to zero in the third year; respect for people, including reducing child labor¹²; transparent processes, including making factory sales more open for farmers; and assured quality, including encouraging the plucking of high-quality tea leaf (“two leaves and a bud” from each bush). In creating the CoC and implementing it, they instigated a process of product upgrading.

The CoC scheme was implemented at a field level by participating factories with NGO assistance. Two aspects of the standard were emphasized in implementation: the reduction in chemical use and plucking higher-quality leaf. Factories were tasked with creating a separate processing line for CoC tea and paying farmers a US\$0.04 premium per kg of CoC tea sold; an auditor was hired to inspect compliance with the standard; trainings were provided by NGOs and development agencies; farmers kept record books; they reduced pesticide and fertilizer use; and factories stamped tea with the CoC logo.

The creation of the CoC in turn created a new set of livelihood choices for farmers. Farmers had the option of participating in the CoC, and indeed some altered their livelihood strategies and opted into the upgrading process. As concerns farm-level practice, the new strategy notably required a reduction in the use of chemical pesticides and fertilizers, increased record-keeping, and participation in training sessions and cooperatives.

The new strategies gave rise to new organizational forms in the value chain. The CoC induced the formation of, firstly, a coordinated network of value chain actors wherein farmers, factories, buyers, and other actors exchanged information, product, and payment to support their trade in tea. Secondly, NGOs and development agencies provided input into the upgrading process, particularly through training sessions, and in the process helped increase national expertise in tea production and in rural organizing. Perhaps most importantly, and thirdly, the CoC strengthened cooperatives. Nepali NGO Teasec provided trainings to the cooperatives in organization, ecological agriculture, and the CoC components, with support from donor development agencies.

These three organizational forms in turn acted to change norms and informal conventions. As noted above, NGO training encouraged farmers to consider the impact of their decisions on long-term soil fertility and sales, and this shifted norms regarding sustainable farming. This was reflected in how several respondents spoke about the need to improve the fertility of the land for future generations. As one respondent put it, “We are doing this for the next generation. For our children’s children, so they don’t face hard times in the future.” [Farmer, Sudung, Sundarepani]

During interviews, respondents were asked to reflect back on the livelihood outcomes from the CoC. They recalled the extensive record keeping and training requirements of the initiative, and noted that they had been proud that their tea was “sustainable” and was selling overseas, but were skeptical about the benefits they received. In most households, tea production per hectare fell in the months after the CoC’s restrictions on chemical fertilizers and pesticides were imposed. This short-term drop in productivity stemmed from low producer capacity along with a shortage of field-level technical assistance on the use of organic fertilizer and pesticides.

Factories faced significant difficulties in marketing CoC tea to overseas buyers who were not familiar with the national

scheme. As a result, in virtually all the cases, they failed to deliver the promised price premium to farmers. Several factories stopped using the CoC scheme, that is, they stopped running a segregated CoC production line and told farmers not to bother separating CoC and non-CoC leaf.

The CoC’s elaborate rules of participation, low productivity, and absence of price premiums bode badly for farmer livelihoods. Farmers took to disobeying the strictures of the CoC by using chemical pesticides and fertilizers, making excuses to the factory when confronted. The scheme gradually faded into obscurity: less than 15% of our sample was still using the CoC in 2010. Although the CoC did not generate the hoped-for financial gains for farmers or factories, it did improve capacity, including in ecological farming techniques, collective organizing, expert training, and operating multiple production lines. Indeed, one informant described the Tea Development Alliance as a mother that gave birth to a baby, the CoC, which in turn gave birth to organic upgrading, to which we now turn.

(c) *Upgrading alters institutions, Part II: Organic*

In reaction to the shortcomings of the CoC upgrading process and the burgeoning market in organic tea, in 2008 several factories investigated opportunities to convert to organic production. Organic certification is conferred on factories and cooperatives by an external certifying agency if they comply with the requirements of the international binding organic standard, notably that they have not used any chemicals on the farm for three consecutive years. Although certification was conferred on the cooperative, the produce of its members was certified by association, and indeed field-level testing and implementation were done at the member level. Using their own financial resources and those of overseas donors, tea factories in Ilam encouraged cooperatives to convert to organic production, along with their farmers.

Many farmers decided to convert to organic via cooperatives, particularly on the basis of promises from the factory that organic production would garner higher prices and high future demand. The new livelihood strategy was more labor and planning intensive: households spent many hours making organic pesticides and fertilizers and seeking out labor. There was qualitative evidence that some households changed their livelihood strategies in reaction to conversion by reducing their financial and human investment in alternative occupations and investing more in the farm and the organic project, but the survey found limited quantitative evidence for a reduction in diversification. Both qualitative and quantitative data made clear, however, that organic farmers had more livestock assets and were more indebted. This indicates that conversion involved a more capital-intensive livelihood strategy in which investments were made in the hope of future gains.

Organic upgrading also altered the organizations involved in tea production. Factories and local NGO experts facilitated conversion, with the help of overseas organic certifiers, and development agencies were relatively less important. Factories hired Nepali experts developed in the previous cycle of change to provide training sessions through the cooperatives, and they hired the same consultant to audit participating farmers. At the same time, the terms of membership in the cooperative became very important for farmers wishing to obtain an organic premium. One farmer spoke critically of the “old guard” members in the local cooperative, lambasting the high entrance fees required to join and the politics in obtaining membership, while the factory refused to get involved in farmer-cooperative disputes.

The organic conversion process shifted informal norms in the villages. Pride, environmental, and health sustainability, and long-term prospects became important ways farmers evaluated their own livelihoods. Converting farmers increasingly saw tea farming as a viable way of life in the future, and indeed were empowered by the connection to overseas trade, foreign visitors, and improved knowledge about organic farming techniques. As one respondent put it, their tea “is earning not only a good price; it is also generating pride.” [farmer, Kolbung] Others said the market for tea in the long term was organic, and so it was necessary to convert. At the same time, a culture of surveillance arose in many certified areas given that one farmers’ transgression of the organic rules would threaten the market access of all the farmers in the area.

This process produced livelihood outcomes for participating farmers that differed from those of non-organic farmers. As noted in Section 3(b), the research method asked farmers which livelihood factors were relevant to them, gathered more in-depth qualitative data, and then measured the same factors. This process generated the following evidence on the livelihood outcomes that farmers deemed relevant and how they were affected by the upgrading and subsequent institutional change process.

Conversion to organic farming increased the prices received by farmers. Organic farmers received, on average, NRs40 per kg of tea sold in first flush of 2010, while conventional farmers received on average a lower NRs22. Change over time was different for the two livelihood strategies, and in favor of organic farmers: the change in pay per kg of tea in 2005–2010 was a positive NRs6.65 for organic tea, while prices had decreased by NRs1.42 for conventional farmers. The two groups also experienced different degrees of price volatility: the conventional group experienced prices that fluctuated 38% on average, while the organic farmers saw just 20% price volatility over the same time. Consistently high, and more stable, organic prices were an important livelihood benefit, and can be explained by the fact that the standard was well aligned with downstream market demand, it successfully conveyed downstream demand preferences to upstream producers, and there was more finance available to the factory to smooth short-term cash flow issues.

Affirming qualitative evidence on the matter, the productivity of organic farmers in the sample was lower, at just 2.3 kg per hectare per year, than conventional farmers, who on average had 5.9 kg/hect/yr. These productivity outcomes depended on the institutional conditions in each subvillage. In villages where organizations were stronger, training was more informative for field-level practice and so productivity, quality, and profits tended to be higher. In locations where local norms supported early adoption of innovation, farmers were more likely to adopt new standards and experiment until they yielded benefits.

On average, organic farming was less profitable. Profit is defined here as short-term marginal revenue (the price paid by the factory per kg) minus marginal cost (the per-unit expenses of production) times total production, as reported by the household head. Although organic farmers earned more average profit per kg for the tea they grew (NRs9 as opposed to NRs5.6 in 2010), because their productivity was lower, their total average profit per year was lower. In 2009, for example, the total average profit of organic farmers was NRs9,200 as opposed to NRs15,700 for conventional farmers.

These profit figures arose in part because of the different cost structures. Costs associated with tea production included, for nonorganic farmers, fertilizers, pesticides, labor for plucking, labor for pruning, own work time, and transportation. For

organic farmers, costs included own labor time for coordination, collecting organic pesticide ingredients, making organic pesticides and fertilizers, as well as the cost of hired labor plucking and pruning time. Organic farmers pointed out that they experienced increased stress from the increased time and coordination required for production according to the new standard. For example, during an interview in Kolbung village, one female farmer described hours of collecting plants to produce organic fertilizers and pesticides, and the pressure to find extra laborers. She said,

when I’m sleeping, I think, I’m doing such hard work, when will I get the profit from all this? I think when [the price is] NRs200! Sometimes the production is low because of the sun, then because of labor, and. . . Some days ago I opened this drum to apply pesticide, and I got a headache, the smell was so strong.

The benefits of upgrading were reduced by how the high labor intensity of organic production intersected with rigid labor institutions and shortages. Wage rates were social rules and didn’t adjust upward to meet the increased demand. Other livelihood strategies, namely outmigration, reduced the labor supply. In villages where the labor shortage was more acute, farmers were less able to mobilize the increased labor required for organic conversion and were thus less likely to benefit from upgrading. Farms seemed to prosper under the organic scheme if they had more family members, more family working the land, had a smaller farm, if they used a labor exchange system, had laborers living on the land, or had found a way of securing guaranteed laborers in advance.

There were higher supervision costs under the organic scheme. Under the conventional standard, laborers could be paid on a per-kg basis, and if they plucked large quantities of poor quality, that could still be sold. Under the organic standard, such low-quality leaf would not garner full price under the factory grading institutions, and so laborers had to be paid according to a daily rate that incentivized good-quality plucking. Unfortunately, such a time-based payment modality demanded intense supervision to prevent labor shirking, and the increased supervision time had its opportunity costs.

Several other financial aspects of tea farming affected household livelihoods. Farmers’ understanding of the prosperity of their farm extended to how insulated they were from risks such as drought, strikes (bandhs), and suddenly low prices. The evidence on how organic upgrading affected this is not clear, apart from a possible reduction of diversification. Finally, as noted earlier, organic farmers had on average NRs10,000 more in outstanding debt than conventional farmers.

Farmers spoke often about how they felt when they went to sell their tea, and how that feeling affected their well-being. This reflected the process of informal norm change that took place concurrently with upgrading. The quantitative survey thus asked each respondent to choose the term that best expressed how they felt when they went to sell their tea. Results indicated that organic farmers felt less satisfied than conventional farmers, but were more hopeful for the future. Organic farmers described a sense of pride that their tea was being sold overseas and shared optimism that their market prospects in the future would be good. Indeed, there was a difference in how farmers described the future market for their tea: Organic farmers described that market as very good, while conventional farmers described the future market just as “OK”. The long-term health of the soil was also described as important to well-being, and organic farmers were more confident that the tea they were growing was good for this objective.

Outcomes from the second, organic conversion-induced process also appeared to be giving birth to yet another cycle

of institutional change. The factories had difficulties selling all the tea grown according to organic standards on organic markets, which highlighted that upgraded product might need to be certified to several different standards in order to address the requirements of several different export markets. The process also increased knowledge regarding the importance of the quality of the tea and that improved plucking, transportation, and processing was needed to access niche high-value markets. Finally, stronger cooperatives delivered more sophisticated training that empowered farmers to become active in organizing region and nation-wide in lobbying for change in policies.

5. A TYPOLOGY OF INSTITUTIONAL CHANGE IN VALUE CHAINS

This institutional history of upgrading in Ilam highlights how, in practice, institutional change unfolded around the CoC and Organic initiatives. The processes of change that followed each of these upgrading initiatives seem to share common elements. Analysis of the case study data through grounded theory methods (Strauss & Corbin, 1998) employed a progressive, iterative approach which triangulated the evidence from different upgrading initiatives, methods, and stakeholders. The framework that emerged from this analysis suggested that each upgrading initiative launched a process of institutional change that followed a series of general phases. This process can be summarized in a general typology, which abstracted from this particular case study yields insights into how institutional change works in value chains. The rest of this section presents this typology and derives implications. The first subsection presents and analyzes the typology, while the second and third analyze implications for institutional and value chain theory respectively.

(a) *A proposed typology*

The institutional change typology that emerged from this research can be conceived of as an iterative cycle that operates at each node of the chain, but for the sake of pedagogy, it is presented here at the farmer's node and as starting with the upgrading decision.

The cycle begins when an actor in the chain decides to upgrade. Institutional change theory teaches us that this first stage depends crucially on the chain actor being able to "see" that a new way of participating in the chain is possible, a vision that might be enabled by seeing chains in other places or hearing expert advice. A governance lens on this stage highlights how multiple actors at a controlling node in the chain build consensus around the decision to upgrade. Their ability to make their vision a reality depends on collective action dynamics. Furthermore, only relatively powerful chain actors, such as lead firms and controlling nodes, have the market power to induce upstream actors to follow their lead. To do so, they seek out mechanisms by which to impose their decision on upstream actors.

These efforts lead to the second stage in the typology, when the governance of the value chain shifts as actors at the controlling node in the chain impose a governance institution on other chain actors to facilitate upgrading. Upgrading calls for more tightly coordinated value chain interactions, and standards can be used to impose rules that precisely define flows of information, knowledge, and product. In the case of the Nepali product upgrade, factory owners adopted certification standards to govern quality improvements and

interactions in the chain. A shift in the vertical institutions that govern the product along the value chain thus flows from the decision to upgrade.

In the third stage of institutional change, actors at a given node in the value chain craft new livelihood strategies in view of the change in chain governance. They may decide to participate in upgrading; on the other hand, the strategy phase of the cycle may include a downgrading strategy, or a path that is not readily explained as a change in position in the chain, such as a diversification of livelihoods or an investment in education. In the case of product upgrading in Ilam, some farmer-suppliers decided to improve their production processes and get certified, while others decided to continue to produce using conventional methods. Still others decided on other strategies, including leaving the tea sector entirely or diversifying to other crops. In deciding on this strategy, actors at the node consider not just how the chain governance has shifted, but how the new opportunity interacts with existing livelihood strategies and institutional constraints.

The fourth stage is characterized by the creation of new or altered organizations. These organizations may be created in the first phase by lead firms to build consensus, in the second phase or third phases to implement the new governance mechanisms, or they may arise at the behest of less-powerful actors to pursue success with their new set of strategies. They may help resolve market failures, including for communication along the chain and for technical assistance at particular nodes. Existing organizations may experience a rebirth as they are retooled for the purposes of participation in altered value chains.

As these organizations take on a life of their own, and develop their own voice and advocacy practices, and as actors are shaped by their new strategies and organizations, the informal norms at the node of the value chain shift, marking out the fifth stage in the cycle. This may involve the rise of a sense of pride in the quality of the product, and the local "terroir" for which the region has become known. It may include increasing trust for actors at other links of the chain. As such, informal institutions in particular places are in part the product of the history of chain transformation, as per Neilson and Pritchard (2009). However, as these authors also suggest, institutions also act upon value chain governance: informal norms that are developed through the institutional change cycle are used by chain actors to understand their reality and decide how to act.

This is evident in the sixth stage of our cycle, where the new horizontal institutions, organizations, and strategies generate a new set of livelihood outcomes. Livelihood strategies, including upgrading plans, come up against constraining and enabling factors in actors' institutional environment, including aid by organizations. Norms are important in motivating participation in the strategy, improving performance, but also in constituting evaluation criteria. Actors at a given node of the value chain see the livelihood outcomes emerging from the complex interplay of upgrading, strategies, and all the institutional factors outlined in the cycle above. Indeed, these outcomes are generated over time throughout the cycle. However, once the outcomes from a cycle of change spurred by upgrading become more clear to the chain actor, they also often notice new opportunities, thereby re-launching the cycle. The adoption of a new standard throughout the chain can highlight a constraint to future growth, such as a shortfall in technical knowledge, creating opportunities to profit through the creation of institutions and organizations that provide technical training. Efforts to capture these rents through upgrading then launch a new cycle of change. This is

Stage	Code of Conduct	Organic
1. Decision to Upgrade	TDA decides to upgrade to eliminate middle men and capture value-added in chain: draft CoC	Factory owners take advice of industry experts, decide to adopt organic standard
2. Governance Shifts	NGOs, factories, cooperatives, auditor all help to implement CoC, including through training	Factory invites cooperatives to get certified, strict rules and three-year conversion process initiated
3. New/Changed Strategies Chosen & Adopted	Some farmers decide to participate in the CoC, others do not; participating farmers notably have to reduce fertilizer/pesticide use & pluck better quality tea leaf	Cooperatives get certified, some farmers choose to join and get certified. Organic strategy includes absolute elimination of chemical use, more labor time, increased investment in livelihood assets, debt
4. New/Changed Organizations	More coordinated network of chain actors; rise of NGOs and development agencies to support the sector; and strengthened cooperatives.	Factories hire NGO experts and staff to provide training and conversion support; cooperatives become key organization mediating between factory and farmer
5. Shift in Informal Norms	Shift towards sustainability norms, particularly long-term soil health.	Pride, environmental and health sustainability, and long-term prospects became important. Culture of peer surveillance arises as bulwark against forbidden chemical use.
6. Livelihood Outcomes Emerge	Productivity decreases in short-term; financial premium nonexistent in most cases; lack of market support	Higher prices; increased stress from high coordination requirements; household burden to acquire inputs, include green fertilizers, more labor; more stable prices; more pride in farming, hopeful for future.

Figure 3. *The typology of institutional change in the case of the Nepali tea value chain: highlights.*

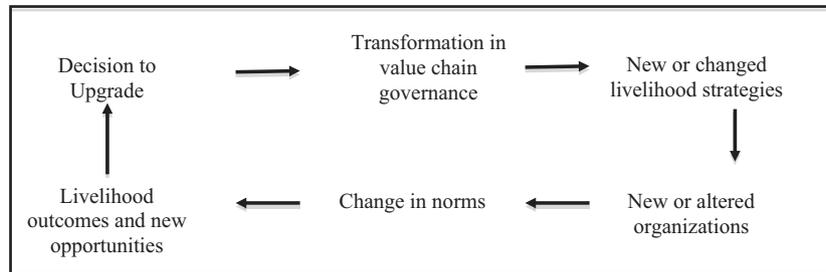


Figure 4. *Institutional change cycle in value chains.*

highlighted in the Nepali tea case study, when upgrading to the Code of Conduct laid the foundations for a new cycle, launched with upgrading to Organic. The breakdown of the process of change according to the typology in that case is presented in Figure 3.

Although the typology has been presented for clarity as a single, bounded process, shown in its general form in Figure 4 above, it is better conceived of as a repeated, iterative cycle in which outcomes beget more upgrading and institutional change.

Furthermore, in a given case, the cycle can start at any stage, and the direction of causation may be different. For example, a chance event may lead to a change in an organization that in turn encourages a shift in norms and a decision to upgrade. More profoundly, one can see each of the “stages” as a domain of change in itself, and the local system is made up

of interactions between these domains over time within the value chain node. Finally, while the analysis has focused on how this process takes place at a single node, processes of institutional change are also occurring at other nodes of the chain; shifts in chain governance, often induced by upgrading, tie these worlds of local change together, in a system not unlike the “multi-dimensional, multi-layered lattices of economic activity” of GPN theory (Henderson *et al.*, 2002, p. 442; Lazzarini *et al.*, 2001). The combined effect of these concurrent change processes affects subsequent cycles of change and livelihood outcomes throughout the chain.

(b) *Implications for institutional change theory*

The case study and its analysis via the typology generate empirical support for some, but not all, of the institutional

theories presented earlier. The typology affirms that an evolutionary process guides adjustment as multiple cycles alter the system over time. However, the vision of an exogenous trigger spurring Darwinian competition does not resonate in light of the field data. Rather, the trigger comes from within the system, namely when value chain agents decide to change institutions in order to capture rents and reduce risk. The new institution emerged not because it is optimally suited to reduce transaction costs, but rather because it benefitted one actor, and since other actors could not effectively resist the change, affirming that political economy struggles are important determinants of the course of change.

As concerns the question of how and why agents step outside of existing constraints, this research suggests that change agents take initiative because they see opportunities for profit. This depends on their ability to “see” alternatives (Seo & Creed, 2002), which in this case involved envisaging certification schemes that could increase value-added capture. Exposure to different ideas from outside the local context (Canales, 2010) gave factory owners ideas about potential improvements they could undertake, while for farmers, the practices of neighbors and NGO discourse did the same. The model espoused by the data is thus an endogenous one in which institutions do condition agents, but where agents then re-affect institutions—that is, institutions and agents co-evolve.

The second ideal-typical institutional change scenario has more empirical support and appears to be a superior framework to analyze value chains. The profitability of reducing chemical use and the level of knowledge of agents were akin to quasi-parameters that gradually changed. Major parameters like input or output prices didn’t change significantly; instead, shifts in these quasi-parameters opened up rents, which then changed the benefits from instigating change via upgrading. As per scenarios two and three, however, upstream value chain actors were not passive recipients of change: they crafted strategies whose execution affected outcomes.

Finally, there appeared to be important complementarities among sets of formal and informal institutions. For example, the organic standard worked alongside labor payment modalities and norms about sustainability. The failure of a given upgrade may thus be at least partially attributed to constraints to the establishment of complementary institutions elsewhere in the system (Mohan, 2014).

(c) *Implications for upgrading theory*

The analysis in this paper has suggested that deciding to upgrade to a higher quality thread of the value chain is a particular sort of livelihood strategy. Yet as far as terms go, “value chain upgrading” obscures the reality of livelihood strategies. It incorrectly presumes that such a strategy will eventually lead to functional and/or inter-chain upgrading and an improvement in market position (Ponte *et al.*, 2014). It only sees that aspect of the strategy that overlaps with the value chain: for example, a move to reduce quantity supplied into the chain is only seen as that, and is labeled as “downgrading” (Ponte & Ewert, 2009), rather than being seen as part of a process of diversification or emigration. Perhaps most problematically from the perspective of this article, the upgrading lens obscures the broader institutional context in which livelihood strategies sink or swim, including how upgrading strategies are born as part of broader livelihood strategies, how they are constrained by intransigent local rules, or how they are made possible by organizations that are

themselves the product of earlier livelihood strategies. One implication of the research in this paper is thus that a broader livelihood strategy lens, embedded in an understanding of institutions, is a more comprehensive way to understand change in value chains.

The typology presented above stresses that the welfare impacts of upgrading emerge as the cumulative result of how upgrading interacts with institutions over time. There is nothing in the typology nor in the data that suggests that this process always yields outcomes that are efficient and improve welfare. Indeed, in the case study, some upgrading farmers experienced adverse impacts on selected livelihood metrics. Rather than describing welfare effects as “social upgrading” or “social downgrading” (Barrientos *et al.*, 2011), or emphasizing how “downgrading” to a less demanding thread of the chain can be beneficial (Ponte & Ewert, 2009), this paper instead finds the notion of “immiserizing upgrading”, which hurts the actor who undertakes it, to be more informative.

In the terminology of Bhagwati (1958), and how it was applied to a value chain context by Kaplinsky *et al.* (2002) and Kaplinsky (2004), “immiserizing growth” occurs when a country or sector increases the quantity it produces, but actually earns less profit since the price it receives per unit has gone down. In the macroeconomic perspective of Bhagwati and Kaplinsky, the actor has tried to improve its well-being by changing one economic variable (here output) that it has control over: but this changed strategy has had a knock-on effect on another variable (here price) and the intended and unintended effects combine to hurt, or “immiserize”, the actor. Likewise, immiserizing upgrading can be defined as a strategy of a value chain actor which targets improvement in a chain-governed livelihood factor (such as market power, position, or price) yet has adverse implications on other livelihood factors (such as gender, productivity, or risk) such that the net result of the strategy is worsened welfare. In the Nepali case, farmers upgraded to try and access better prices in the short and long term, but upgrading led to higher labor costs, stress, and lower productivity, all of which commiserated to reduce overall welfare in some cases.

Furthermore, insofar as one welfare-reducing cycle of change can lay the basis for subsequent welfare-improving cycles of change, isolating the impact of a single upgrade may be misleading. Instead, the impact of change on the adaptive efficiency of the economic system may be important. For example, one respondent recounted how the local factory’s sudden decision to stop buying tea leaf one year, and the concomitant adverse impacts on farmers’ livelihoods, triggered the creation of a new cooperative. The cooperative fomented an entrepreneurial approach which encouraged farmers to rise to future challenges: they “learned how to learn”, seeing each new problem as an opportunity to extend their eco-agricultural, marketing, and organization techniques. As per Aoki (2007), such chance moves early on in the process seem to influence the path taken by the local economy. If this is the case, then particular locations can “lock in” to certain trajectories of economic development through path-dependent participation in value chains.

6. CONCLUSION

Participation in global value chains has been characterized alternatively as an opportunity or as a threat to the well being of small-scale firms in developing countries. The research pre-

sented here highlights how downstream firms' decision to upgrade affects the welfare of the upstream poor. As in other studies, outcomes spring in part from the certification standards that are used to govern the upgrading process. Yet this paper suggests that upgrading is not imposed on passive victims in the south; rather, the Nepali case highlights how upgrading interacts with local institutions, strategies, and organizations to deliver outcomes in the short and long run. Institutional analysis can thus help us understand impacts of these policies and improve their development dividend.

This study yields support for endogenous theories of institutional change in value chains. Exposing potential change agents to different institutional arrangements can help to kick-start the process of change. Future research could examine how certain such paths of change are more or less conducive to positive livelihood outcomes as well as growth-inducing future phases of change. Additional research is also needed to consolidate the literature on immiserizing upgrading within the broader gamut of commodity systems analysis.

Value chain upgrading can yield benefits for small-scale firms in developing countries, and particularly so if local institutions are conducive. In our case study of the Nepali tea value chain, the status of labor, factory, and informal institutions conditioned whether small-scale farmers benefited from upgrading to organic production. The typology of institutional change that emerged from the field data suggests that upgrading encourages value chain actors to craft new livelihood strategies and organizations, which in turn con-

tribute to shifts in informal norms at that node of the value chain. The combined effect of the new institutions, strategies, organizations, and norms is felt as livelihood outcomes for chain participants which, in generating new profit opportunities, spur future cycles of change. One upgrading intervention can thus trigger several cycles of institutional change that promote growth and long-term benefits. At the same time, upgrading can yield negative livelihood impacts, at least in the short term, in a process of immiserizing upgrading. This lets lay theories of institutional change and value chain upgrading which presume that these interventions can only improve efficiency and welfare.

Heterogeneity in outcomes from upgrading can thus at least in part be attributed to differences in the institutional setting, and evolution, in different places. Business and development policy-makers could thus enhance the development dividend from upgrading by first assessing institutional constraints and opportunities related to proposed upgrading initiatives, and designing accompanying policies to address these conditions. For example, in the Nepali case, firms upgrading to organic production could have adopted policies to foster immigration of laborers that would have helped households harvest good-quality tea leaf to address labor constraints. Instead of assuming that upgrading is beneficial, such a pragmatic approach could help ensure that disadvantaged suppliers reap the benefits of participation in global value chains.

NOTES

1. While more recent work has assigned an active role to the institutional context surrounding GVCs (Neilson & Pritchard, 2009; Herath & Weersink, 2008; Kersting & Wollni, 2012; Ponte *et al.*, 2014), it has overwhelmingly focused on meso and macro-level institutions, particularly government regulations, national policies, and organizations. Other, micro-level local institutions mediate production in developing countries—and as such are important to how actors at particular nodes of the chain engage with upgrading—yet have been neglected in the GVC literature.

2. In this they concur with research in other disciplines on the suboptimality of a given institutional framework. The political economy perspective of North (1990) and historical institutionalists (Immergut, 1998) stresses that the powerful can change rules for their own benefit, so there can be institutions, and institutional change, that do not enhance efficiency or overall societal welfare. Sociological institutionalists (Berger & Luckmann, 1966), and equilibrium view institutionalists (Aoki, 2007), view the existing set of institutions as one among many possible equilibria. In the setting of the paper, this implies that upgrading can result in suboptimal outcomes that can undermine livelihoods. More generally, as one reviewer pointed out, there is no consensus on which institutions are crucial to a well-operating economy; indeed, many empirical studies are of single institutions.

3. The field data was complemented by desk research from Nepal and elsewhere, three follow-up interviews, and a verification fieldwork phase.

4. Questions pertained to, *inter alia*, land holdings; household composition; amount of land planted to tea; revenue from tea; costs incurred; net income from tea; sources of risk; degree of agricultural and occupational diversification; mechanisms used by the household to respond to shocks; motivation for converting to organic/CoC production; pride, confidence in the future, and other subjective factors; education and training;

cooperative membership and politics; interaction with government and NGOs; factory practices, including frequency of payment, grading, and rules concerning chemical usage and quality of leaf plucking; household expenses; payments to laborers; and how revenue, income, and other factors have changed since conversion (if applicable). The survey in the third stage quantified a similar list of livelihood and institutional factors through a standardized questionnaire (more information available upon request).

5. There are two ways to process tea leaf in Nepal. The cut, tear, and curl (CTC) method produces low-quality, easily soluble tea for tea bags. The majority of Nepali tea leaf is grown outside Ilam district, primarily in the terai region, and is processed using CTC methods in Nepal and India. Tea leaf for CTC production is paid a low price per kg. The orthodox method involves withering, rolling, and drying the tea leaf, producing a high-quality loose leaf tea sold in tea boutiques around the world. This paper focuses on tea leaf produced and processed in the orthodox tea sector. This focus was adopted since the orthodox sector has been identified as a key potential growth and development sector by development, government, and business actors. The majority of leaf in the research area, Ilam district, is processed using orthodox methods.

6. These figures are for combined orthodox and CTC tea. (USAID., 2011, 15)

7. There were, in addition, several small-scale processing works that did not export their product.

8. 2006 figures, GDP per capita PPP. (UNDP., 2009, p.149)

9. The research project set out to examine the institutions and livelihoods of farmers, and thus by construction the treatment of labor in this paper is limited. As such, although data was gathered from and about laborers,

owing to both space constraints and the need for analytical focus it has been analyzed so as to shed light on institutional change at the farmer node of the value chain. Other research has examined institutions at other nodes, notably labor (Rossi 2013).

10. Other standards which may be relevant for some parts of the chain, at some point in time, include HACCP rules (Hazard Analysis and Critical Control Points), which require record-keeping all along the chain, including regarding farmer suppliers to each processing batch. Other rules include the Codex Alimentarius standards for safe pesticide and fertilizer use; EcoCert; Fair Trade; private supermarket chain rules; and EUREPGAP rules.

11. In some cases, the farmer was told on the spot how much was A and how much was B grade. In other cases, it was only at payment time months later that the farmer was told how much was A and how much was

B grade. At payment time, the farmer was either paid for both A and B grade tea on the spot; or, payment was made for A grade tea, and B grade payment only came months later. In some cases, farmers received no payment for B grade tea whatsoever.

12. Although the “respect for people” (including reducing child labor) and “transparency” (opening factory books to farmers) elements were included in the CoC, evidence from interviews suggested that these two aspects of the Code were less operationally relevant. The reasons for this neglect were less clear. Neither child labor nor factory secrecy was raised as problematic issues by informants, farmers or laborers, but this does not preclude the possibility that these phenomenon were present. This study did not measure child labor in Ilam, and as such does not have sufficient evidence to judge its prevalence. As such, it is unclear whether child labor, or factory transparency, are relevant problems in the value chain.

REFERENCES

- Alchian, A. (1950). Uncertainty, evolution and economic theory. *Journal of Political Economy*, 58(3), 211–221.
- Aoki, M. (2007). Endogenizing institutions and institutional changes. *Journal of Institutional Economics*, 3(1), 1–31.
- Barrientos, S., Gereffi, G., & Rossi, A. (2011). Economic and social upgrading in global production networks: A new paradigm for a changing world. *International Labour Review*, 150(3–4), 319–340.
- Berger, P. L., & Luckmann, T. (1966). *The social construction of reality*. Garden City, USA: Doubleday.
- Bhagwati, J. (1958). Immiserizing growth: A geometrical note. *Review of Economic Studies*, 25(3), 201–205.
- Bingen, J., & Busch, L. (Eds.) (2006). *Agricultural standards: The shape of the global food and fibre system*. Dordrecht, The Netherlands: Springer.
- Busch, L. (2011). *Standards: Recipes for reality*. Cambridge, USA: Massachusetts Institute of Technology.
- Canales, R. (2010). *The Mechanisms of Institutional Change: Bringing Agents (back?) In* (Yale School of Management Working Paper). New Haven, USA: Yale University. Retrieved June 5, 2013, from <http://som.yale.edu/faculty-researchpdf/canales_mechanisms_agents.pdf>.
- Coe, N. M., Hess, M., Yeung, H. W. C., Dicken, P., & Henderson, J. (2004). ‘Globalizing’ regional development: A global production networks perspective. *Transactions of the Institute of British Geographers*, 29, 468–484.
- Ellis, F. (2000). *Rural livelihoods and diversity in developing countries*. Oxford, UK: Oxford University Press.
- Gereffi, G. (1999). International trade and industrial upgrading in the apparel commodity chain. *Journal of International Economics*, 48(1), 37–70.
- Gereffi, G. (1994). The organization of buyer-driven global commodity chains: How US retailers shape overseas production networks. In G. Gereffi, & M. Korzeniewicz (Eds.), *Commodity Chains and Global Capitalism* (pp. 95–122). Westport, USA: Praeger.
- Gereffi, G., Humphrey, J., & Sturgeon, T. (2005). The governance of global value chains. *Review of International Political Economy*, 12(1), 78–104.
- Gibbon, P. (2001). Upgrading primary production: A global commodity chain approach. *World Development*, 29(2), 345–363.
- Greif, A., & Laitin, D. (2004). A theory of endogenous institutional change. *American Political Science Review*, 98(4), 633–652.
- Hayami, Y., & Ruttan, V. W. (1971). *Agricultural development: An international perspective*. Baltimore, USA: John Hopkins Press.
- Henderson, J., Dicken, P., Hess, M., Coe, N., & Yeung, H. E.-C. (2002). Global production networks and the analysis of economic development. *Review of International Political Economy*, 9, 436–464.
- Henson, S., & Humphrey, J. (2010). Understanding the complexities of private standards in global agri-food chains as they impact developing countries. *Journal of Development Studies*, 46(9), 1628–1646.
- Herath, D., & Weersink, A. (2008). From plantations to smallholder production: The role of policy in the reorganization of the Sri Lankan tea sector. *World Development*, 37(11), 1759–1772.
- Holm, P. (1995). The dynamics of institutionalization: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly*, 40, 398–422.
- Immergut, E. M. (1998). The theoretical core of the new institutionalism. *Politics & Society*, 26(1), 5–34.
- Kaplinsky, R. (2004). *Immiserizing Growth: Note #2*. Unpublished. Retrieved June 4, 2015, from <http://www.soc.duke.edu/sloan_2004/Papers/Memos/Kaplinsky_immiserising%20growth_25June04.pdf>.
- Kaplinsky, R., & Morris, M. (2001). *A handbook for value chain research*. Ottawa, Canada: International Development Research Centre.
- Kaplinsky, R., Morris, M., & Readman, J. (2002). The globalization of product markets and immiserizing growth: Lessons from the South African furniture industry. *World Development*, 30(7), 1159–1177.
- Kersting, S., & Wollni, M. (2012). New institutional arrangements and standard adoption: Evidence from small-scale fruit and vegetable farmers in Thailand. *Food Policy*, 37(4), 452–462.
- KIT, Faida MaLi, & IIRR. (2006). *Chain empowerment: Supporting African farmers to develop markets*. Royal Tropical Institute, Amsterdam; Faida Market Link, Arusha; and International Institute of Rural Reconstruction, Nairobi.
- Larsen, M.N. (unpublished). *State Interventions around Quality Upgrading: Smallholder-Bought Leaf Factory Tea in South India*. Manuscript submitted for publication.
- Laven, A., & Verhart, N. (2011). *Addressing gender equality in agricultural value chains: Sharing work in progress*. Netherlands: On Track with Gender.
- Lazzarini, S. G., Chaddad, F. R., & Cook, M. K. (2001). Integrating supply chain and network analyses: The study of netchains. *Journal on Chain and Network Science*, 1(1), 7–22.
- Leslie, D., & Reimer, S. (1999). Spatializing commodity chains. *Progress in Human Geography*, 23(3), 401–420.
- Levy, D. L. (2008). Political contestation in global production networks. *Academy of Management Review*, 33(4), 943–963.
- Loconto, A. (2012). Value chains and chains of value: Tracing tanzanian tea. In F. Arfini (Ed.), *Local Agri-Food Systems in a Global World: Market, Social and Environmental Challenges* (pp. 195–214). Newcastle upon Tyne, UK: Cambridge Scholars Publishing.
- McCullough, E. B., Pingali, P. L., & Stamoulis, K. G. (Eds.) (2008). *The transformation of agri-food systems: Globalization, supply chains and smallholder farmers*. UK: Earthscan.
- Mitchell, J., & Coles, C. (Eds.) (2011). *Markets and rural poverty: Upgrading in value chains*. London, UK: Earthscan.
- Mohan, S. (2013). *Institutions and Livelihoods in Nepal's Tea Value Chain: A Policy Paper*. <https://www.academia.edu/4800391/Institutions_and_Livelihoods_in_Nepals_Tea_Value_Chain_A_Policy_Paper>.
- Mohan, S. (2014). Rethinking governance of complex commodity systems: Evidence from Nepali tea production. In F. Padt, P. Opdam, N. Polman, & C. Termeer (Eds.), *Scale-Sensitive Governance of the Environment* (pp. 220–240). Oxford, UK: Wiley-Blackwell.
- Neilson, J., & Pritchard, B. (2009). *Value chain struggles: Institutions and governance in the plantation districts of South India*. Malaysia: Wiley-Blackwell.

- North, D. (1990). *Institutions, institutional change and economic performance*. New York, USA: Cambridge University Press.
- North, D., & Thomas, R. (1973). *The rise of the western world: A new economic history*. Cambridge, UK: Cambridge University.
- NTCDB – National Tea and Coffee Development Board. (2009). Status Report on Nepali Orthodox Tea 2009. Kathmandu, Nepal: NTCDB.
- Olson, M. (1965). *The logic of collective action*. Cambridge, USA: Harvard University Press.
- Patton, M. Q. (2001). *Qualitative research and evaluation methods*. Thousand Oaks, USA: SAGE Publications.
- Ponte, S., & Ewert, J. (2009). Which way is “Up” in upgrading? Trajectories of change in the value chain for South African wine. *World Development*, 37(10), 1637–1650.
- Ponte, S., Kelling, I., Jespersen, K. S., & Kruijssen, F. (2014). The blue revolution in Asia: Upgrading and governance in aquaculture value chains. *World Development*, 64, 52–64.
- Ponte, S., & Sturgeon, T. (2014). Explaining governance in global value chains: A modular theory-building effort. *Review of International Political Economy*, 21(1), 195–223.
- Rana, A. (2007). *Orthodox tea in Nepal: Upgrading with value chain approach*. Kathmandu, Nepal: GTZ.
- Riisgaard, L. (2009). Global value chains, labor organization and private social standards: Lessons from East African cut flower industries. *World Development*, 37(2), 326–340.
- Rossi, A. (2013). Does economic upgrading lead to social upgrading in global production networks? Evidence from Morocco. *World Development*, 46, 223–233.
- Seo, M.-G., & Creed, W. E. D. (2002). Institutional contradictions, praxis, and institutional change: A dialectical perspective. *Academy of Management Review*, 27(2), 222–247.
- Strauss, A., & Corbin, J. M. (1998). *Basics of qualitative research: Techniques and procedures for developing grounded theory* (2nd ed). Thousand Oaks, USA: Sage.
- UNDP. (2009). *Nepal Human Development Report*. <<http://www.undp.org.np/publication/html/nhdr2009/>>.
- USAID. (2011). *Value Chain/Market Analysis of the Orthodox Tea Sub-Sector in Nepal*. <<http://nepaltrade.org/sites/default/files/reports/Value-Chain-Market-Analysis-of-the-Orthodox-Tea-Sub-Sector-in-Nepal.pdf>>.
- Williamson, O. (2000). The new institutional economics: Taking stock, looking ahead. *Journal of Economic Literature*, 38, 595–613.
- Yeung, H. W. C., & Coe, N. (2015). Toward a dynamic theory of global production networks. *Economic Geography*, 91(1), 29–58.

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