CAPTURING THE GAINS

economic and social upgrading in global production networks

Economic and Social Upgrading in Global Production Networks: Developing a Framework for Analysis.

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Abstract

A key challenge to promoting decent work in global production networks is how to improve the position of both firms and workers integrated into value chains in which lead firms play a dominant role. Analysis of global production networks and value chains has focused mainly on firms, often overlooking the role of labour. This paper develops a framework for examining the linkages between the economic upgrading of firms and the social upgrading of workers. It examines studies which indicate that firm upgrading can but does not necessarily lead to improvements for workers. Different trajectories and scenarios are explored in order to consider under what circumstances both firms and workers can gain from a process of upgrading.

Keywords: Global production networks; global value chains; economic upgrading; social upgrading

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GLOSSARY

ECE Eastern and Central Europe

ETI Ethical Trading Initiative

GPN global production network

GVC global value chain

ILO International Labour Organisation

OECD Organisation of Economic Cooperation and Development

OEM original equipment manufacturing

ODM original design manufacturing

OBM original brandname manufacturing

OPT outward-processing trade

Introduction

A key challenge to promoting decent work in global production networks is how to improve the position of both firms and workers. This is particularly important in a developing country context, where producers and workers are increasingly integrated into value chains in which regional or global lead firms play a dominant role. This paper explores the challenges and opportunities for promoting decent work through economic and social upgrading in the context of global production networks. Research indicates that firm upgrading can, but does not necessarily, lead to improvements for workers. The key question considered here is: under what circumstances can both firms and workers gain from a process of upgrading?

Rapid change in the dynamics of production and trade in the global economy has had a major impact on producers and workers in developing countries. A significant proportion of trade now takes place through coordinated value chains in which lead firms globally and locally play a dominant role. The offshoring of production by Northern buyers has stimulated the expansion of manufacturing, agriculture and service industries in the South. It has promoted global and regional production networks that have opened up supply opportunities in new and expanding markets, including China, India and Brazil. Firms engaged in global production networks have opportunities for economic upgrading through engaging in higher value production or repositioning themselves within value chains. But they also face challenges meeting the commercial demands and quality standards required by buyers, which smaller and less efficient producers find hard to meet.

The expansion of global production in labour-intensive industries has been an important source of employment generation. Many jobs have been filled by women and migrant workers who previously had difficulty accessing this type of waged work, and they have provided new income sources for poorer households (Oxfam International 2004; Barrientos, Dolan and Tallontire 2003). Where this employment generates better rights and protection for workers, it can enhance social upgrading. But often this employment is insecure and unprotected, and there are significant challenges ensuring decent work for more vulnerable workers.

This paper sets out to develop a framework for examining the linkages between economic and social upgrading in global production networks (GPNs). The paper draws on a number of existing empirical studies, but its primary goal is help advance our analytical understanding. Section one examines the literatures on global value chains, production networks, labour economics and labour studies. It addresses the separation between firm and worker levels of analysis in the context of GPNs, where production and employment decisions are not only influenced by local markets, but also by foreign buyers and their agents. Section two examines and defines the concepts of economic and social upgrading, as a means of assessing improvements for firms and workers that are participating in GPNs. Section three develops a framework for assessing the linkages between economic and social upgrading based on type of value chain and type of work. It then examines some of the opportunities and challenges for linking the two, given that regular and irregular workers have very different levels of access to employer-based channels to promote their rights, protection and voice. Section four considers some of the trajectories (and mixed outcomes) that can be pursued through economic and social upgrading or downgrading. This paper does not explicitly examine the policy and strategy options available to firms and other actors, as these are examined elsewhere in a complementary paper (Mayer and Pickles 2010).

1. Analysis of changing patterns of trade, production and employment

The rise of international outsourcing through global and regional production networks requires a shift in our analytical approach. Nowadays, expanded networks of producers and workers in Africa, Asia and Latin America are linked to the global economy. These range from large commercial firms and farms, through sub-contractors and outgrowers, to smallholders and homeworkers. Global production and services account for a growing number of workers in developing countries recruited into export-oriented industries, like apparel, footwear, and agriculture (Gereffi 1999; 2006). These changing structures of trade, production and employment have been defined in different ways, which need consideration from the outset.

Global value chain (GVC) analysis initially focused on the commercial dynamics between firms in different segments of the production chain. A seminal distinction was made between producer-driven and buyer-driven commodity chains (Gereffi 1994). In producer-driven chains, production was controlled by integrated transnational manufacturers in capital- and technology-intensive industries such as automobiles and advanced electronics. Buyer-driven chains evolved as developed country firms set up global sourcing networks to procure labour-intensive consumer goods from low-cost suppliers in East Asia, Latin America, and Africa. A novel feature of buyer-driven chains was that lead firms were large retailers (like Walmart and Tesco) and global brands or marketers (such as Nike and Gap) who had no direct ownership of factories, but increasing control over production through their ability to set prices, product specifications, process standards, and delivery schedules in their supply chains (Dolan and Humphrey 2000; 2004). They also contributed to the institutionalization of demand-responsive economies with lead firms or agents based in developing countries, such as South Korea and Taiwan (Hamilton and Gereffi, 2009). The expansion of GVCs encompassed not only agricultural and manufacturing sectors, but also global services, such as tourism, logistics, finance, and business process outsourcing located in diverse socio-economic contexts across countries (Gereffi, Humphrey and Sturgeon, 2005; Gereffi and Fernandez-Stark, 2010).

The growing complexity and pervasiveness of global production and trade led to diverse formulations. GVC analysis drew attention to the role of value creation, value differentiation, and value capture in a coordinated process of production, distribution and retail (Bair 2009b; Gereffi 2005; Gereffi and Kaplinsky 2001). A parallel literature around GPNs placed more emphasis on the institutional or social context of inter-connected commercial operations (Henderson et al. 2002). GPN analysis examined not only the interaction between lead firms and suppliers, but also the whole range of actors that contribute to influencing and shaping global production, such as national governments, multilateral organisations, and international trade unions and NGOs (Bair 2009b: 4; Hess and Yeung 2006). A focus on GPNs also puts more emphasis on the social and institutional embeddedness of production, and power relations between actors, which vary as sourcing is spread across multiple developing countries.

A focus on processes of work in GPNs has been limited, particularly in academic studies (Pegler and Knorringa 2007; Barrientos, Dolan and Tallontire 2003; Cumbers et. al. 2008; Schmitz 2005). In the early GVC/GPN literature the focus was on the firm, with labour primarily treated as an endogenous factor of production. Analysis of labour in value chains has largely been restricted to the aggregate number of workers at different nodes of the chain, with an occasional breakdown of

employment by job category, skill or gender. The exceptions have mainly been case studies examining conditions of employment, protection and the rights of workers in GPNs. These have included the study of women workers (Hale and Wills 2005), homeworkers (McCormick and Schmitz 2002), smallholders (ETI 2005), social protection of informal workers (Barrientos and Ware Barrientos 2002), and trade unions (Miller et. al 2008, Cumbers et. al. 2008). NGOs have also engaged in research on poor working conditions and lack of employment rights experienced by workers in GVCs as a basis for campaigns and advocacy in relation to high profile global buyers and their suppliers (Oxfam 2004, 2009, ActionAid 2005, Clean Clothes Campaign 2009). However, there has been a disjuncture in the literature between a 'firm focus' that treats labour as a factor of production, and a 'rights focus' that examines conditions and entitlements of workers.

To address this divide between an economic and social analysis of labour, we seek to integrate workers as productive and social agents into the changing dynamics of GPNs in developing countries. Through this effort, we aim to better understand how economic and social upgrading play out for firms and workers, and to inform research on how strategies for upgrading that benefit both firms and workers can be enhanced. In order to capture the different dimensions of labour, we approach the analysis of workers in the context of GPNs at two levels:

- *Labour as a productive factor:* Conventional economic theory views labour as a factor of production, based on the marginal productivity of labour and labour costs within individual firms or labour markets. An important assumption is that firms need to produce at the lowest possible marginal cost to remain competitive. However, this does not take into account the role of labour within the context of GVCs/GPNs. Here we consider workers as productive agents at a meso level within GPNs. An important commercial driver is the need to meet both cost pressures and quality standards (Barrientos and Kritzinger 2004). This affects the labour intensity and skill levels of workers required at different nodes within and between GPNs. This is shaped in part by local labour market conditions (availability of different types of workers), but also in part by the need to meet the requirements of organizational buyers.

- *Workers as social agents:* Viewing workers as social agents highlights their well-being in terms of both their capabilities and entitlements (Sen 1999; 2000). Wage labourers are largely dependent on access to rights that enhance their well-being, and this can be affected by participation in GPNs. Workers have rights as laid down through internationally agreed conventions, such as the Core Conventions of the International Labour Organization (ILO). Beyond the workplace, the well-being of workers and their dependents is affected by formal and informal social protection networks and strategies by communities and governments.

The analysis of GPNs allows for examination of both the narrower commercial dimension of labour use within value chains, and for the broader socially embedded dimension of work (often as a gendered process) through globalisation of production and services. However, the GPN context brings a number of challenges. Firstly, the quantity and type of employment by individual supplier firms are affected not only by national labour market conditions, but also by requirements dictated by foreign agents or buyers (in relation to product quality, price and delivery schedules). Secondly, the quality of employment is mediated not only by the national framework of labour legislation,

inspection and industrial relations, but also by the labour codes of large global buyers and a private system of monitoring and auditing. In this context, the relationship between the quantity and quality of employment is poorly understood (Milberg and Winkler 2008). An important question is whether it is possible to simultaneously improve both the quantity and quality of employment in GPNs. If so, under what circumstances might this occur, and what strategies could promote this? To further examine the linkages between the two, we explore the concepts of economic and social upgrading and how they can contribute to a broader strategy of development.

2. Defining economic and social upgrading

Upgrading has been identified as a move to higher-value added activities in production, to improve technology, knowledge and skills, and to increase the benefits or profits deriving from participation in GPNs (Gereffi 2005: 171-175). Initially, the GVC literature focused on labour-intensive manufacturing, such as garments, footwear and toys. These industries exemplified the outsourcing of labour-intensive segments of production to low-wage countries. In these studies the concept of 'industrial upgrading' was used (Gereffi 1999, Bair and Gereffi 2001). However, in recent years GPNs have widened beyond manufacturing to include sectors such as agro-food, and services like call centres, tourism, and business-process outsourcing, where the term 'industrial upgrading' is less appropriate. A more generic concept used here is that of economic upgrading which applies across sectors.

Economic upgrading is defined as 'the process by which economic actors – firms and workers – move from low-value to relatively high-value activities in global production networks' (Gereffi 2005: 171). There are four types of economic upgrading, each with different implications for skill development and jobs: (i) Process upgrading involves changes in the production process with the objective of making it more efficient; this could involve a substitution of capital for labour (e.g., higher productivity through automation) and hence a reduction of skilled work. (ii) Product upgrading, where more advanced product types are introduced, which often requires more skilled jobs to make an item with enhanced features. (iii) Functional upgrading involves firms changing the mix of activities performed towards higher value added tasks. For instance, inclusion of finishing, packaging, logistics and transport can be done in at least two distinct ways: via vertical integration, which adds novel capabilities to a firm or an economic cluster; or via specialization, which substitutes one set of activities for another (e.g., an apparel firm that moves out of production and into brand marketing and design). Both involve new worker skill sets. (iv) Chain upgrading, or shifting to more technologically advanced production chains, involves moving into new industries or product markets, which often utilize different marketing channels, manufacturing technologies. This may also require a different set of workers and/or new worker skill sets (such as textile firms shifting from traditional fabrics like denim for apparel, to specialty nanofibers and strong lightweight materials that can be used in the medical, defence or aircraft industries).

Within each type of economic upgrading, it is possible to identify a capital dimension and a labour dimension. The capital dimension refers to the use of new machinery or advanced technology. The labour dimension refers to skill development or to the increased dexterity and productivity of workers. In this formulation, labour is considered primarily as a productive factor determining the quantity and type of employment. Economic upgrading is connected with social upgrading, but the two have different dimensions.

Social upgrading is the process of improvement in the rights and entitlements of workers as social actors, and enhances the quality of their employment (Sen 1999; 2000). This includes access to better work, which might result from economic upgrading (for example, a worker that has acquired skills in one job is able to move a better job elsewhere in a GPN). But it also involves enhancing working conditions, protection and rights. Improving the well-being of workers can also help their dependents and communities. The concept of social upgrading is framed by the ILO decent work framework, which is constituted by four pillars: employment, standards and rights at work, social protection and social dialogue. This promotes work taking place under conditions of freedom, equity, security and human dignity, in which rights are protected and adequate remuneration and social coverage is provided (ILO 1999).

Social upgrading can further be subdivided into two components: measurable standards and enabling rights (Elliot and Freeman 2003; Barrientos and Smith 2007). Measurable standards are those aspects of worker well-being that are more easily observed and quantifiable. This includes aspects such as category of employment (regular or irregular), wage level, social protection and working hours. It can also include data related to gender and unionisation, such as the percentage of women supervisors or the percentage of union members in the workforce. However, measurable standards are often the outcome of complex bargaining processes, framed by the enabling rights of workers. These are less easily quantified aspects, such as freedom of association and the right to collective bargaining, non-discrimination, voice and empowerment. Lack of access to enabling rights undermines the ability of workers (or specific groups of workers such as women or migrants) to negotiate improvements in their working conditions which can enhance their well-being.

It is often implicitly assumed that economic upgrading in GPNs will automatically translate into social upgrading through better wages and working conditions. However, case studies provide a more mixed picture. While this can be the outcome, there is no evidence that this necessarily follows if the work generated is highly insecure and exploitative. A key issue is how both economic and social upgrading can be better analysed in order to understand if and when a move from lower to higher value or more sustainable activities is also associated with improved employment, rights and protections for poorer producers and workers. Conversely, we need to better understand how to stem economic and social downgrading, involving a move to lower value activities and undermining of workers' employment, rights and protection.

3. Framework for linking economic and social upgrading in GPNs

A number of factors can affect economic and social upgrading (or downgrading) by producers and workers. These include their position within the value chain, the type of work undertaken, and the status of workers within any work category. This section provides a framework of analysis to identify different typologies of work across GPNs, highlighting key elements of economic and social upgrading for each category. This framework provides the tools to analyse trajectories of economic and social upgrading described in Section 4.

3.1 Typology of work across GPNs in agro-food, apparel, IT and services

When discussing upgrading from a GPN perspective, it is important to emphasise that we are not taking the individual country, firm or worker as the unit of analysis, but the production chain within which firms and workers are located. GPNs are constituted by a mix of activities that require combinations of labour-intensive, low-skilled activities with knowledge- and technology-intensive higher-skilled activities. Different types of GPNs are likely to be composed of different ratios of both low-skill and high-skill production, therefore requiring different typologies of work.

i. Small-scale household and home-based work

Small-scale, household-based work is often found at the base of many GPNs in developing countries. This type of work can include small-scale producers or outgrowers involved in agricultural production, and homeworkers in more labour-intensive or artisanal types of manufacturing. These workers usually have access to their own assets and means of subsistence, and are often (but not always) based in poorer countries and regions. Production takes place in or around the household residence, with limited separation between commercial productive activity (producing saleable goods) and unpaid reproductive activity (e.g., household subsistence and chores). Small-scale production and homework involve both paid and unpaid family labour, including child labour. Homeworkers and small-scale producers are linked into GPNs through very different types of commercial arrangements. In small-firm economies like Taiwan, homeworking was often the initial stage in the development of what later became factory-based export production in buyer-driven commodity chains for many consumer goods industries, such as garments, toys, housewares, and sporting goods (Hamilton and Gereffi 2009; Feenstra and Hamilton 2006; McCormick and Schmitz 2002).

ii. Low-skilled, labour-intensive work

Labour-intensive production involves the use of waged labour situated on a commercial production site that is clearly distinct from a household dwelling. It involves a relationship between an employer (who may be the producer or an agent) and a worker based on a wage (normally in cash, but sometimes in kind). Global brands and retailers have been able to reduce costs and spread their market reach through outsourcing to lower cost developing countries. This stimulated the expansion of production and employment linked to GPNs. In manufacturing, after the first offshoring wave in the 1960s and 1970s, the nature of outsourced work has evolved. Whereas the first-generation maquila jobs in assembly for textiles and apparel in Mexico were quite labour-intensive, subsequent generations involving assembly of automotive parts and advanced electronics may involve substantial automation. As we move from apparel to autos to electronics, the very nature of assembly work changes to second- and third-generation maquila work. This phenomenon explains why workers in a single industrial district, such as Torreon, Tijuana, or Ciudad Juarez in Mexico, often get higher wages when they move from apparel to autos to electronics (Bair and Gereffi 2001, Carrillo 1998). China's phenomenal export success during the past two decades can also be linked to diverse kinds of labour-intensive production arrangements – government-created Special Economic Zones and more locally rooted but highly specialized industrial districts – which have quite different implications for both economic and social upgrading (Zeng 2009, Gereffi 2009).

iii. Moderate-skilled, varied labour-intensity work

Moderate-skilled, varied labour-intensity work is associated with full-package production. This has occurred with the rise of global buyers, which require that their preferred suppliers coordinate all

aspects leading to the delivery of the final good, including design, inputs, production, pre-pricing, packaging and presentation (Gereffi, 1994, 2005; Dolan and Humphrey, 2000). In full-package production, while global buyers control the orders, developing country suppliers coordinate the supply of inputs, make the final product, and send it to the buyer. As developing country firms improve their coordination capacity of the full production process with stronger forward and backward linkages, they gain a greater bargaining power usually associated with higher profit margins.

iv. High-skilled, technology-intensive work

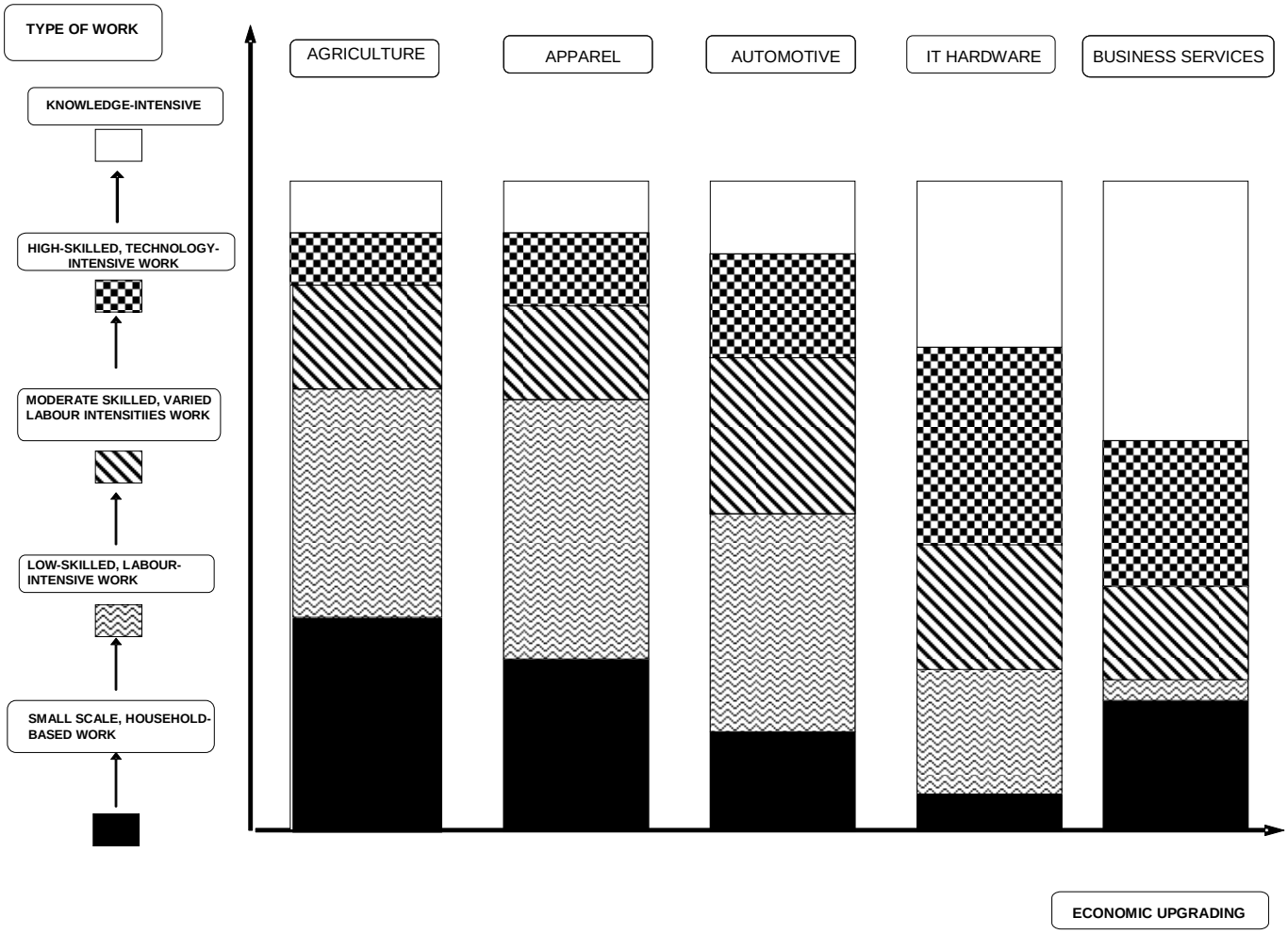
High-skilled, technology-intensive work emerged in the 1980s and 1990s from a different set of offshore activities as lead firms in capital- and technology-intensive sectors, such as automobiles and electronics, set up international production networks not only to assemble their finished goods, but also to develop a supply base for key intermediate items and sub-assemblies. A good example of this form of production is the rise of global contract manufacturers in the electronics industry and 'mega suppliers' in the automotive industry. To take a dramatic but not atypical example from electronics, Celestica, which spun off from IBM in 1996, grew from two initial production locations in Canada and the United States to nearly 50 factories in Asia, Europe, North America and South America by 2001 (largely via acquisitions), and increased its sales from $2 billion to $10 billion during this period (Sturgeon and Lester 2004: 47-49). At the uppermost tiers of these production networks, the suppliers tend to be very large and technologically sophisticated, and they concentrate 'good' jobs in relatively few locations.

There can be a tension between the final goods makers and their top-tier suppliers over core technologies and product design, and who sets the knowledge parameters essential for product innovation. One solution to this problem is the emergence of 'modular' production in GPNs (Gereffi et al. 2005), whereby the suppliers are in charge of the development of key subassemblies (e.g., hard disk drives for computers, or braking systems for cars) and the branded manufacturer integrates these subassemblies into the final product. Overall, these jobs are well-paying, productive, relatively secure, but increasingly flexible in adapting to demand.

v. Knowledge-intensive work

Knowledge-intensive work is created by a new wave of offshoring in services (Gereffi and Fernandez-Stark 2010). White-collar outsourcing started with simple service jobs like call centres and telemarketing, and it now includes more advanced business services such as finance, accounting, software, medical services and engineering. Knowledge-intensive service jobs are increasingly seen as an opportunity for developing economies to attain both economic and social benefits with technological learning, knowledge spillovers, and higher income. However, on average, the size of employment in this work category is relatively small considering the requirements for high skills and advanced degrees, mainly in science and engineering. Accordingly, the unskilled or less well educated majority in many countries is excluded from the very desirable employment opportunities provided by knowledge-intensive work.

Figure 1 Typology of workforce composition across different sector GPNs



In order to explore this further, we use a simplified typology identifying five types of GPN which combine labour-intensive, low-tech manufacture, medium-tech manufacture, technology-intensive and knowledge-intensive activities. Figure 1 shows graphically how different GPNs can involve different combinations of low-skill, labour-intensive and higher-skill technology-intensive work.

If we compare agriculture, manufacturing, and services, all five types of work are present in each sector. However, there are significant differences in the proportions of each type of work across various industries within these sectors. Agro-food involves a relatively large proportion of small scale and low-skill labour-intensive production, particularly at the farm level. Within manufacturing, if we compare industries that can be classified as relatively low-tech (apparel), medium-tech automotive), and high-tech (electronics), the low-skilled and household-based types of work decrease, and the relative importance of knowledge-intensive and highly-skilled work increases. This progression at the work level is associated with economic upgrading. As we move to more technology- and knowledge-intensive GPNs, such as IT, we find that labour-intensive production does not disappear but is relatively lower.

3.2 Status of workers

The type of work undertaken at any point within a value chain has to be further unpacked. The status of workers has important implications for their ability to benefit from or participate in economic and social upgrading. Regular workers with strong employer attachment can access legal employment protection and benefit from measurable labour standards. Their greater security of employment may increase their ability to participate in workplace-based union organizations and reduces their fear of reprisals, thus enhancing their enabling rights. Irregular workers with low employer attachment are less able to access employer-based protection or measurable standards. Where irregular workers are overrepresented by women, ethnic and migrant groups, they often face double discrimination, through both their social and employment status. Irregular workers in any type of job are therefore more likely to suffer a 'decent work deficit,' which denies their access to enabling rights, and undermines their relative ability to reap the benefits of economic and social upgrading.

An increasingly relevant category of irregular workers is constituted by third-party contract workers, especially in GPNs involving labour-intensive and seasonal production such as agro-food and apparel. Labour contracting can involve a number of different types of relationship with the producer, contractor and worker (for example, payment by the number of workers where the contractor takes a percentage, or payment by task such as clearing a field). Contractors move groups of workers between sites and locations depending on seasons and labour demand. They play an increasingly important role in matching 'the right type' of workers to tasks and coordinating labour supply to producers on a 'just in time' basis (Rogaly 2008). Labour contractors can play an important role in channelling migrant labour (internal and international) to production locations (Martin 2006). Their use also allows producers to offset production or market risks, and keep labour costs (as well as associated human resource management) to a minimum. Labour contracting can help workers enhance the continuity of work between different producers and provide some form of protection in sectors where there are seasonality or 'just-in-time' pressures. It can also involve unscrupulous agents who expose workers to high levels of exploitation both on and off site, undermining decent work conditions (Barrientos and Kritzinger 2004; Barrientos 2008; Kuptsch 2006; Theron and Godfrey 2000).

3.3 Factors Contributing to Economic and Social Upgrading or Downgrading

The position of workers within different types of work and status of employment provides the context to social upgrading, and highlights the interplay between economic and social upgrading. In Table 1 we provide an initial overview of how the two are related in these different contexts. Social upgrading is mainly represented by measurable standards, since the nature of enabling rights makes them difficult to assess. Anecdotal evidence indicates that certain aspects of social upgrading, such as flexibility, vulnerability, discrimination, voice and empowerment, cross-cut the types of work and thus characterise small scale household-based work as well as knowledge- intensive work.

Table 1 Key elements of economic and social upgrading, by type of work

	Small-scale, household-based work	Low-skilled, labour-intensive work	Moderate-skilled, varied labour-intensive work	High-skilled, technology-intensive work	Knowledge-intensive work
Economic Upgrading	(+) Allow poor workers and producers to engage in GPNs (+) Provides access to niche produce and labour skills, such as high plateau teas or hand sewn embroidery. (+/-) High dependence on intermediaries who can support or exploit. (-)Difficulty meeting standards leading to exclusion from GPNs (-) Often low value capture within chain	(+) Good for ramping up output, exports, and foreign exchange (+) Help to attract foreign investors and to meet international quality standards (-) Highly dependent on global buyers in control of inputs and orders (-) Minimal local linkages to host economy/local firms (-) Low value-added (-) Vulnerable to buyers' purchasing decisions	(+) Integrated production and control in final production, key inputs, even in finance, logistics, product development (+) A process of buyer-oriented upgrading (+) Stronger forward and backward linkages (+) Higher value-added (-) More stringent performance standards and reducing margins procured by global buyers	(+) Higher capital- and technology-investment inflows (+) Increasing modularity (+) Technology learning and knowledge spillovers – "supplier upgrading" (+) Emerging 'global firms' e.g. China, & India (-) High entry barriers for local firms in lucrative segments and know-how	(+) Better income and export prospects (+) Technology learning and knowledge spillovers (+) Upgrading from simple service jobs (call centers) to more advanced business services (software, medical services, engineering) (+) Newest area: offshoring of design & innovation (R&D centers in developing countries) (-) Entry barriers in lucrative segments and know-how

Social Upgrading	(+) High quantity of jobs, esp. Female workers (+) Women can balance productive and reproductive work (-) Likelihood of unpaid family labour, including child labour (-) Lack of contracts or security (-) Long or insecure working hours and poor conditions (-) Lack of social protection or rights (-) Few opportunities for skill improvement	(+) High quantity of jobs, esp. for female (-) Low quality, low wages; "footloose" jobs (-) Operation of labor relations predominantly on a flexible, casual basis (-) Absence of fixed working hours (-) Lack of employment security and other benefits (-) No skill improvement (repetitive, scrappy work)	(+) Fair quantity of jobs (+) Relatively higher wages than assembly jobs (+ -) Relatively high job security in vertically integrated firms, but increased use of flexible employment (+) Layers of skills and jobs down the supply chain make it possible to retain core skills and outsource others to peripheral workers	(-) Relatively small employment (+) High quality jobs (higher wage than that of other manufacturing industries) (+) Relatively high job security (-) Flexible work arrangements on the rise (-) Concentration of "good jobs" in advanced countries (+) Opportunity for skill improvement	(-) Low quantity of jobs (+) High wages and benefits in domestic standards (+) Continuous skill improvement (+) Flexible work arrangements not making employees vulnerable (+) Greater possibility of gender-neutral work (-) High entry barriers: education; English language – "not inclusive" (-) High individualization of work
	***Cross-cutting social upgrading issues**: vulnerability, flexibility of employment, lack of empowering rights*				

Source: Adapted from Gereffi and Guler (2008; also see 2010).

A number of early case studies highlighted problems of poor working conditions and lack of access to decent work (Smith et. al. 2004, Collins 2003, Hale and Wills 2005, Oxfam 2004). Conditions may vary depending on the type of sector and product, and mainly in relation to whether employment is based on regular or irregular work. Labour conditions are consistently found to be better amongst permanent workers rather than temporary and casual workers. Studies have also found a gender hierarchy by category of employment (permanent, temporary and casual). Women workers are preferred by many employers for their perceived dexterity and 'nimble fingers' (Elson and Pearson 1981). However, they tend to occupy the insecure and low paid work, often in temporary and seasonal employment arrangements (Barrientos and Kritzinger 2004), while men usually occupy the better paid and more skilled jobs. The position of workers in different nodes of GPNs also plays a role in their overall labour conditions. In manufacturing, conditions are likely to be better in the factory of a preferred supplier that is regularly audited than in a sub-contracted firm further down the chain which goes unmonitored (Locke et al. 2007).

The potential for social upgrading relates both to the type of production involved, and to the relationship between suppliers and buyers. Social upgrading in low-skilled, labour-intensive work typical of assembly plants can present greater challenges than in more diversified types of work associated with full-package production involving more skilled employment. Higher status lead firms in both buyer-driven and producer-driven chains tend to have a greater stake in decent work conditions, and hence social upgrading (especially those in buyer-driven chains, where retailers and marketers are concerned with price point, quality, and brand visibility of the products they sell). However for more traditional partners, poor working conditions or violations of worker rights in their supply chain can negatively affect their reputation, both in terms of brand image and product quality.

4. Trajectories in economic and social upgrading

A central question is to understand the causal relationship between economic upgrading and social upgrading. There is no clear evidence proving that economic upgrading necessarily leads to social upgrading (Brown 2007, Locke et al. 2007), and civil society research has highlighted some of the negative effects of engagement in GPNs (Oxfam 2004, CAFOD 2004). However, this needs to be further unpacked by exploring the relationship between economic and social upgrading, and specifically by understanding under which conditions economic upgrading leads to social upgrading or downgrading. Our hypothesis is that there are competing pressures for both outcomes within GPNs as suppliers balance higher quality with lower cost. For example, since functional upgrading implies the need for a stable, skilled and formalised labour force, we can assume that economic and social upgrading (especially in its measurable standards) can be positively correlated, especially when it increases workers' productivity. At the same time, pressures to reduce cost and increase flexibility might lead employers to combine economic upgrading with social downgrading (for example by outsourcing employment to a labour contractor), although this raises questions about commercial sustainability if quality is to be assured.

To maintain or advance their position in GPNs, suppliers have to engage in a balancing act between maximising quality (to meet buyers' standards) and minimising costs/prices (to remain

competitive to supermarket buyers). This has important implications for labour and the potential for social upgrading. Suppliers' labour strategies in response to coping with commercial pressures can vary between a "low road" involving economic and social downgrading, a "high road" involving economic and social upgrading, as well as mixed approaches. Those taking a low-road approach by worsening labour conditions risk losing out on quality. Those taking a high-road approach by improving wages and labour conditions risk losing out on price competitiveness. Therefore, many producers adopt a mixed approach of high quality and low-cost employment which facilitates both standards and cost flexibility. This is reflected in the simultaneous use of regular workers and irregular workers on any one site. Often workers of different status will be working alongside each other doing the same tasks, although some suppliers like to keep them apart. The combinations of workers may vary between producers based on type of product, location, producer preference, labour market connections, local labour supply, and social norms and regulation.

Identifying economic and social upgrading trajectories involves understanding that economic upgrading is not always the most appropriate strategy for long term sustainability. Such strategic decision-making depends largely on the characteristics of the actors. One identified path of upgrading from integrated or "full-package" production activities (also known as original equipment manufacturing or OEM) to original design manufacturing (ODM) and original brandname manufacturing (OBM) can be very beneficial for some firms in GPNs, such as selected East Asian apparel companies (Gereffi 1999), but it can not work for everyone because risk and competition are much higher in the more advanced segments of the GPNs. Some firms choose to remain in their more secure niche of OEM without attempting to further upgrade. Thus, for those firms economic "downgrading" is a business strategy. In Taiwan's computer industry, Acer decided it could upgrade by developing its own brand of computers, and was successful doing so; its competitor, Mitac, initially opted to pursue an OBM strategy as well, but soon returned to OEM where the profits were lower, but more secure (Gereffi 1995: 131-132).

In the highly competitive wine value chain, some South African wine makers prefer to occupy a lower position on the price and quality pyramid for their exported wines to the European market, and indeed are pursuing forms of product and functional "downgrading" (such as selling higher volumes of basic quality or bulk wines rather than premium wines, vertical disintegration by moving away from the high fixed costs of grape growing, and a reduced emphasis on premium brands), in order to maintain stable market share and margins for mid-range or basic wines, especially during the economic crisis when cost cutting has been necessary for survival in some segments of the industry (Ponte and Ewert, 2009). While these trends have been associated with certain forms of social downgrading, such as reduced lead times and the increased casualization of labour, tactical downgrading in selected areas of the value chain can permit other forms of upgrading when economic conditions improve. In short, developing economies can adopt mixed strategies of moving up and down the value chain according to both domestic and international conditions.

In the garment industry, Eastern and Central Europe (ECE) is an excellent example of how upgrading and downgrading trajectories have been intertwined. In the early 1980s, some of the ECE economies began to carry out outward-processing trade (OPT) for non-Soviet markets in Western Europe, primarily with German buyers and contractors. Given their legacy as established industrial economies, the emphasis on apparel exports might be considered economic downgrading. Within apparel, more advanced economies like Slovakia were able to move more quickly from OPT to full-package export production (OEM), and eventually to ODM and OBM, while

less developed economies such as Bulgaria had far more difficulty moving beyond basic OPT contracting. However, in ECE economies, it was often easier to develop ODM and OBM upgrading strategies for the domestic retail market, than for more discriminating fast-fashion markets in Western Europe (Pickles et al. 2006).

With regard to social upgrading, certain choices might be considered social "downgrading" for some actors, but not for others. For example, in agriculture the choice to move from a smallholder job to a wage job in a farm is often considered an example of social downgrading, because of the loss of independence and access to land. However, if the person making this choice is a female worker that used to be an unpaid family worker, the move towards wage labour can represent an improvement in terms of access to wages. Therefore, in order to fully understand trajectories in economic and social upgrading, it is important to keep in mind the characteristics of the actors involved in the process.

Figure 3 examines further the implications for decent work, portraying three possible trajectories. On the horizontal axis lay the different types of work, from small scale household-based production, through low- and moderate-skilled labour-intensive to high-skilled technology- and knowledge-intensive work. The vertical axis presents social upgrading, as indicated by measurable standards as discussed above. Due to their nature, enabling rights are not quantifiable in a chart of this form. However, they may be even more difficult to attain than measurable standards, both because of employer resistance and/or difficulties implementing interventions aimed at improving working conditions. Recognising the limitations of Figure 3, being located below zero (the horizontal axis) in the diagram constitutes a 'decent work deficit' for each type of work and above zero levels of 'decent work attainment' possible for each type of work. The further above zero, the greater the social upgrading gains achieved.

The trajectories of social upgrading presented in Figure 3 depict a range of possible situations:

A. Small-scale worker upgrading: where workers remain within home based production (agriculture or manufacture), but are still able to enjoy improvements in their work conditions. For example it is possible for improvements to occur for those working within African small-scale horticulture, through provision of more secure contracts, better payments and personal protective equipment for health and safety.

B. Labour intensive upgrading: where workers move to better labour intensive types of work where they can also obtain better working conditions. For example, women workers in Bangladesh or Sri Lanka, who have migrated from subsistence farming to waged work in garments, and been able to obtain jobs in factories that have implemented codes of labour practice.

C. Higher skill upgrading: where workers move both towards better paid employment associated with progressive social upgrading. For example, workers in India or China who have been able to gain sufficient education and training to move from lower-paid low skilled work into the IT sector, and at the same time obtain higher paid employment in firms where labour standards are improving.

Case study evidence suggests that a shift from lower to higher skilled types of work may directly lead to social upgrading, but this is not automatically the case. The challenge, therefore, is how to pursue strategies that will enhance labour standards for all workers in all types of work.

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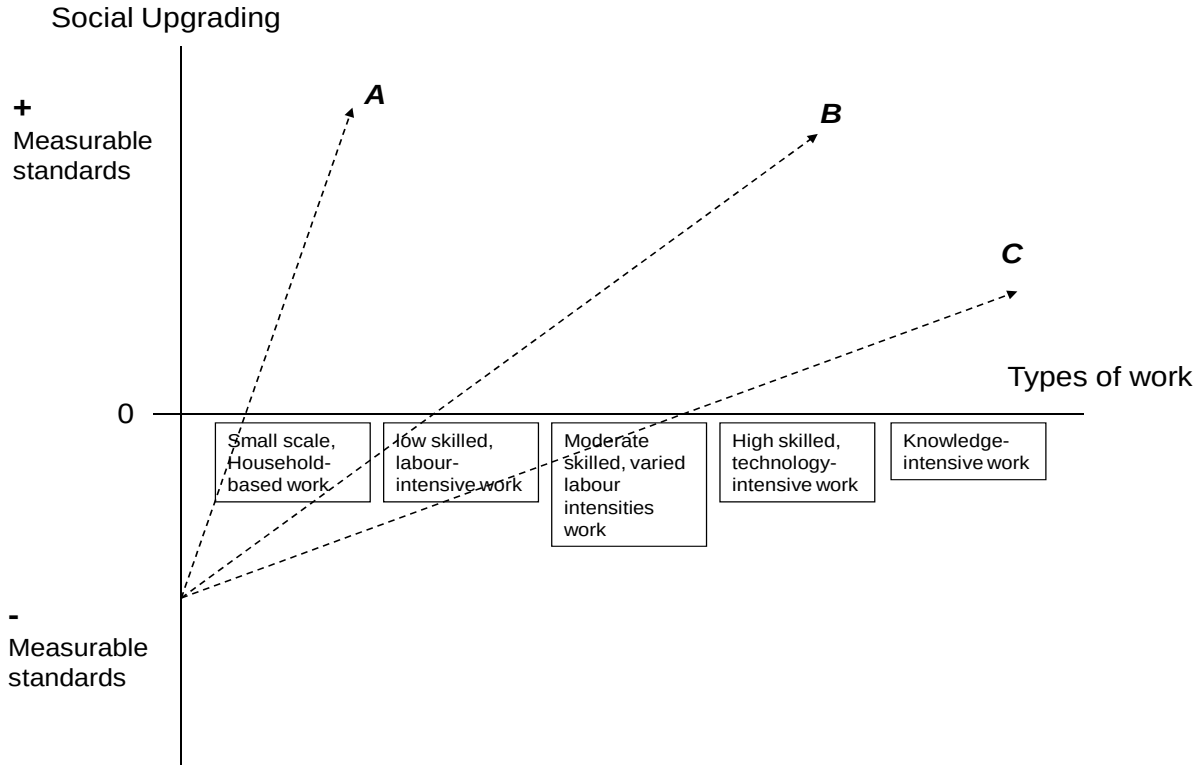
Figure 3 Trajectories of Social Upgrading



Research to date indicates that the main improvements created in GPNs in terms of measurable standards and enabling rights tend to be limited to regular workers, who are found in stable, usually permanent positions and have a high degree of attachment to their employers. Conversely, there are serious challenges to extending these improvements to irregular workers, such as casual, migrant and contract workers. There are indications that these constraints are structurally embedded, as suppliers use a mix of labour categories to achieve both quality and flexibility of output as required by their buyers, by employing regular workers to secure quality and consistency of production and irregular workers to respond to fluctuating orders and downward price/cost pressures.

5. Conclusion

This paper has sought to develop a more systematic framework to analyse economic and social upgrading in GPNs, taking into account the different levels of integration of firms and workers that can exist across industries and sectors. The typologies presented here imply different economic

and social upgrading opportunities, and downgrading risks. An important aim has been to better understand how and why economic upgrading does not automatically lead to social upgrading, helping to provide a more informed basis for designing and promoting interventions that will promote both (the so-called 'win-win' scenario). Such strategies are not discussed in this paper as they are explored elsewhere (see complementary paper by Mayer and Pickles 2010). These can involve different levels of intervention including: independent trade union representation of workers; company-level initiatives (including buyer codes of labour practice); government legislation; and multilateral initiatives (such as ILO and OECD Guidelines). An important challenge in the context of GPNs is how to advance cross-border interventions that yield benefits for poor workers and producers located in different countries, but who are linked through their involvement in the same GPN.

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CAPTURING THE GAINS

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Capturing the Gains brings together an international network of experts from North and South. The research programme is designed to engage and influence actors in the private sector, civil society, government and multi-lateral organisations. It aims to promote strategies for decent work in global production networks and for fairer international trade.