

**Industrial Clusters and Social  
Upgrading in Developing Countries:  
Towards An Analytical Framework**

**Frank Pyke, Independent Researcher**

**Peter Lund-Thomsen, Copenhagen Business School**

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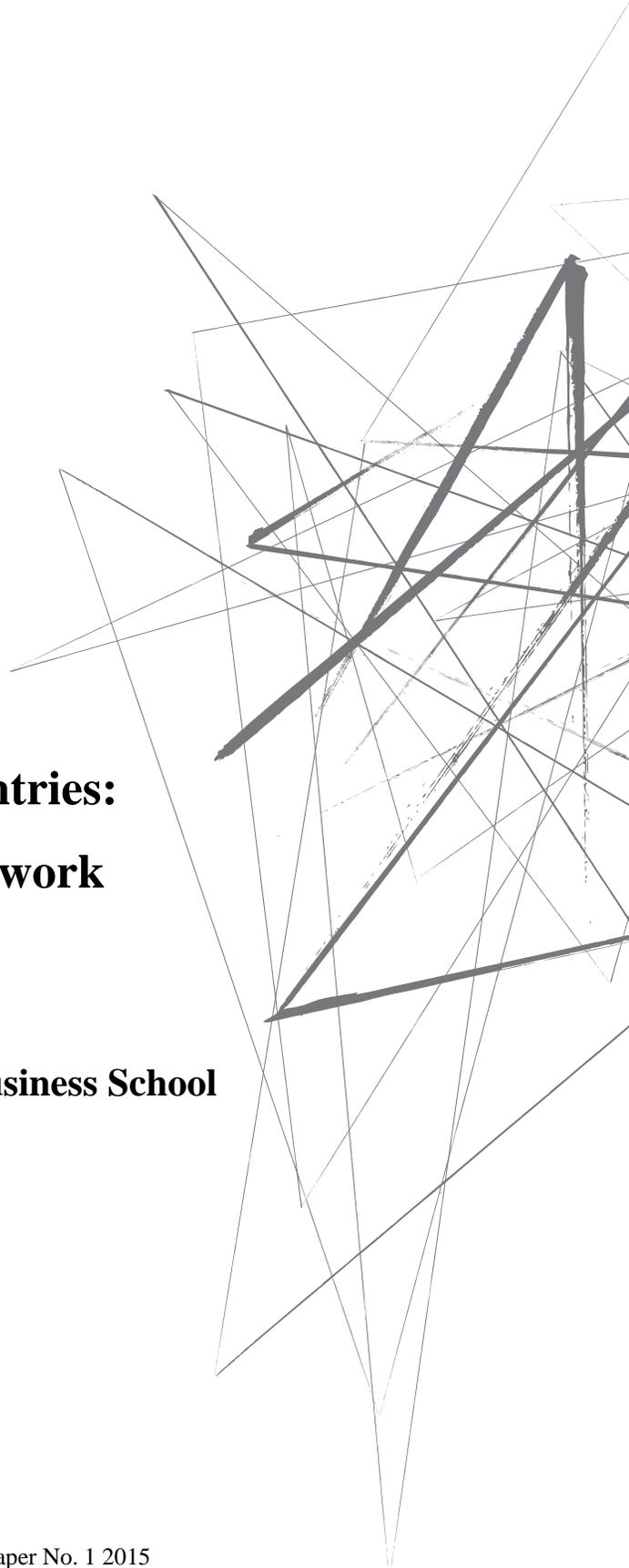
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**Industrial Clusters and Social Upgrading in Developing Countries:  
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By

Frank Pyke  
Independent Researcher

&

Peter Lund-Thomsen  
Center for Corporate Social Responsibility/  
Center for Business and Development Studies, Copenhagen Business School  
Management Division, Nottingham Business School

**Abstract**

In this article, we explore the relationship between industrial clusters and social upgrading in developing countries. Our article focuses on the hitherto little-considered influence of the economic and regulatory environment on the social upgrading of a cluster and on its governance system. In doing so, we develop an analytical framework that seeks to explain how the enabling environment and different actors in cluster governance can either facilitate and/or hinder the process of social upgrading in cluster settings in developing countries. Finally, the conclusion outlines our main findings, the research and policy implications of our analysis.

## 1.0 Introduction

Globalization is creating new opportunities for developing countries and for industrial clusters (Gereffi and Lee, 2014). Industrial clusters are agglomerations of hundreds, sometimes thousands, of mostly small enterprises - often co-located with larger firms - in similar or related industries, such as footwear, jewelry, or textiles, or in specific services or agricultural products (Pyke, 2010). It is widely believed that their organizational form is conducive to raising productivity and incomes amongst member firms, and the communities that host them (Nadvi, 1999). This productivity potential is generally thought to derive from the collective efficiencies that come from agglomeration, business and institutional specialization, access to common goods such as infrastructures and specialized labor, knowledge spillovers and opportunities for sharing and collective action (Schmitz, 1997; Lund-Thomsen and Nadvi, 2010a). Clusters are ubiquitous, with many countries having at least some clusters; and some countries such as India, Brazil and China many (Nadvi and Knorringa, 2014). For the fast growing economies of India and China in particular, thousands of industrial clusters are fundamental to their development as they bring local economies and small and medium sized firms into productive networks, create denser industrial relations, and build up industrial skills (Zeng, 2011; Posthuma and Nathan, 2010).

Clusters are connected to the outside world by value chains which link individual firms through local, regional, national, and global channels, from raw material extraction to retail selling and finally consumers (Mezzadri, 2014). Over the last 20 years, much research has been carried out on value chains - and the associated topics of commodity chains and global production networks - as enablers and constraints on cluster growth (Humphrey and Schmitz, 2002, Schmitz, 2004; Nadvi and Knorringa, 2014). Many valuable insights have been made, but these have typically focused on narrow economic, business, or inter-firm issues, to the neglect of a range of broader social, community, regulatory and local governance aspects (Lund-Thomsen and Pillay, 2012; Puppim and Jabbour, 2015). As a consequence, experts are now beginning to call for the need to better integrate social and economic dimensions into cluster and value chain analysis and policymaking, and to give greater consideration to the mobilization of labor and community assets as determinants of development outcomes (Nadvi, 2007; Puppim de Oliveira, 2008; Pyke, 2008; Tewari, 2010; Gulati, 2012; Puppim de Oliveira and Fortes, 2014; Gereffi and Lee, 2014).

In this article, we focus on the upgrading of social conditions in developing country clusters. By good social conditions we mean good employment and income opportunities, a high quality in-work employment environment - including fair remuneration, good physical environmentally safe working, employment security, an absence of child or forced labor, rights of collective representation, and opportunities for social dialogue -, and adequate outside of work social protection.<sup>i</sup> By social upgrading we mean improvements in the above social conditions. From an academic perspective, we have only recently begun to pay more detailed attention to the role that upgrading of social conditions plays in industrial clusters (Awasthi, et al., 2010; Damodaran, 2010).

Empirically, the evidence shows that at their most dynamic industrial clusters have been capable of exhibiting fast economic growth and creating many jobs.<sup>ii</sup> For example, the Los Lagos salmon cluster in Chile grew its employment by 300% between 1992 and 2002, and at an annual rate of 13% between 2000 and 2006, by which time total numbers employed were 45,000 (UNCTAD, 2006). The Panyu jewelry cluster in China increased its employment levels from a very low base to around 70,000 in less than 20 years. The Qiaotou buttons cluster and town in China rose in less than 25 years from a small village to a community employing 65,000 by 2009. In Brazil, in the late 1980s the Sinos Valley footwear cluster employed around 150,000. In India, the Tirrupur textiles cluster grew from less than 50,000 jobs in the 1980s to around 400,000 by 2007. In Mexico, the Torreon blue jeans cluster rose from 12,000 jobs in 1993 to 75,000 by 1996 (Schmitz, 1999; Bair and Gereffi, 2001; Nadvi and Barrientos, 2004; Pyke, 2009; UNIDO, 2009).

However, the empirical evidence on clusters and social upgrading also points out that there can be significant problems of low pay, poor conditions, and insecurity, especially for some workers in small and micro enterprises (Lund-Thomsen, et al., 2014). On the one hand, incomes and/or working conditions are said to have risen in clusters such as Los Lagos salmon, Chiapas coffee, and Phnom Penn garments (UNCTAD, 2006; Damiani, 2008; Parisotto, 2008). On the other hand, wage levels in clusters such as the Chennai leather cluster in India, the Sialkot medical instruments cluster in Pakistan, and the Sinos Valley footwear cluster in Brazil have been described as “low” (Nadvi and Barrientos, 2004). In addition, wages are reported to be low and jobs insecure with few extra benefits in the Agra leather cluster in India and widespread social deficits are said to exist in the Bangladesh garment industry (Damodaran, 2010; Bell and Newitt, 2010).

The evidence suggests that clusters are capable of generating much economic growth, and also many jobs, but that economic growth per se does not guarantee that all, or maybe even most, workers will benefit in terms of higher incomes, improved working environments and other aspects of good social conditions (Lund-Thomsen et al., 2014). In fact, there may be negative externalities from cluster growth processes in particular industries (e.g., leather tanning or textiles) such as an increase in occupational health and safety risks facing workers or environmental pollution levels affecting local communities in which workers and their families reside (Puppim de Oliveira and Jabbour, 2015). That is to say, there is no automatic link between economic growth and social upgrading (Barrientos et al., 2011; Gereffi & Lee, 2014).

This observation is important because the assumption that there is an automatic causal link from economic growth to improved social conditions and reduced poverty appears to be prevalent in some policy circles (See, for example, Perry et al., 2006). Moreover, there is mounting evidence that for economies generally there can be a reverse direction of causality. That is to say, poverty and deficits in social conditions can hinder growth and threaten a locking in to a spiral of decline (Perry et al., 2006; Pyke, 2015). Moreover, this can be compounded by the nature of price-based competition in clusters that in effect promote a cycle of immiserising growth, a situation in which production and exports are expanding while the number of jobs and real incomes of the inhabitants in local

production areas are declining (Kaplinsky, 2005). In addition, a process of upgrading within a cluster may include multiple or conflicting trends whereby some firms are upgrading at the expense of others that are downgrading (Posthuma and Nathan, 2010).

Therefore the question is begged: under what conditions might both growth and social upgrading occur in industrial clusters in developing countries? To address this question this article focuses on the roles of the relatively neglected aspects of a cluster's economic and regulatory enabling environment and its governance system in a developing country context. In doing so, we seek to contribute to the embryonic literature on social upgrading in industrial clusters in developing countries. For example, Puppim de Oliveira (2008) and Puppim de Oliveira and Jabbour (2015) were of the view that social upgrading in clusters may be facilitated by voluntary corporate social responsibility (CSR) policies, through social compliance pressures that cluster-based SMEs may face as part of their participation in global value chains, and/or by the enforcement of national labor laws. Similarly, Lund-Thomsen et al. (2014) have argued that social upgrading (which the authors dub 'CSR') may be facilitated/hindered by the presence/absence of strong, well enforced labor laws, by independent civil society monitoring, by effective, well-organized business associations, by organized stakeholder dialogue, and by community-based corporate accountability strategies.

In this article, we conceptualize how economic growth and social upgrading can either be facilitated or constrained by the broader environment in which developing country clusters are located, and how the 'influence' of the broader environment is mediated by the actions of different combinations of key actors involved in local cluster governance.

For the enabling environment, we focus on social, environmental, and quality standards; monetary and fiscal policies; and other forms of government regulation. For the cluster governance system, we identify key actors as: government, employers' associations, workers' organizations, and representatives from the communities in which clusters are located (see also, Coe and Jordhus-Lier, 2011). In linking the broader forces in the enabling environment to an analysis of the role of key actors in cluster governance, we argue that the effects of particular regulations, standards, and policies are mediated by the role of the state and key governance actors that may – in different circumstances – either contribute to or undermine economic growth and social upgrading within developing country industrial clusters.

Our article is structured as follows. Section 2 focuses on a cluster's enabling environment, and in particular on how monetary, fiscal, regulatory, and standards policies are likely to shape social upgrading (or downgrading) outcomes in developing country clusters. Then, Section 3 highlights the role of different actors in cluster governance in shaping social upgrading (or downgrading) outcomes. In Section 4, we move onto bringing together the influence of components in the broader enabling environment and key actors in cluster governance into an analytical framework that seeks to explain the conditions under which social up/downgrading may occur in developing country clusters. Section 5 makes some concluding remarks and notes the research and policy implications of our analysis.

## **2.0 The Enabling Environment for Social Upgrading in Clusters**

Clusters exist in broader monetary, fiscal and regulatory environments emanating from various levels of regional, national and international levels of governance. Such macro policies and framework rules are important for influencing the capacity of clusters to develop, and in particular whether they do so in ways that encourage economic growth and the equitable sharing of the fruits of such growth (Pyke, 2010). We will here look at three issues that form central parts of the macro policies or framework rules that facilitate and/or constrain social upgrading in developing country industrial clusters. These are social, environmental, and quality standards (section 2.1); monetary and fiscal policies (section 2.2); and other forms of government regulation (section 2.3).

### **2.1 Social, environmental, and quality standards**

Standards compliance by enterprises in clusters and elsewhere may enable better access to high value markets, promote productivity, and allow enterprises to differentiate their products from simple commodities (Das, 2014). Many requirements for standards compliance have an international origin, emanating from the private sector (often in the form of codes of conduct) or from transnational governmental agencies (Nadvi and Wältring, 2004). In Los Lagos, compliance with a range of international hygiene and quality standards for farmed fish has been essential for accessing foreign markets (UNCTAD, 2006). In Lake Victoria, Kenya, the need for fish farmers to meet European hygiene standards was an important premise for market access and a spur to upgrading (McCormick, 1998). In Sialkot, Pakistan, demands in the mid-1990s for adherence to quality standards in the surgical instruments industry provided the incentive for the cluster to upgrade its procedures and may have put it on a higher value-adding path. However, failure to address other issues, such as health and safety and child labor, was threatening to stop the cluster's upgrading trajectory and push it down a low quality, low price path (Nadvi, 2004).

In Torreon, Mexico, meeting international quality and labor standards was an integral part of holding on to contracts with American buyers, leading to improvements in working conditions – at least in some plants (Bair and Gereffi, 2001). For the Panyu, China, Vicenza, Italy, and other jewelry clusters, the need to adhere to codes of conduct was likely to come to the fore in response to the demands of international retailers and distributors who have established an ethical sourcing council (Pyke, 2009). In Chiapas, Mexico, international norms for organic coffee farming provided, together with the promise of access to high value markets, the incentives for a cluster of 1,300 small farmers to upgrade their growing practices, and significantly reduced rural poverty. Yields increased as did prices obtained (Damiani, 2008).

Private sector codes of conduct coming down international value chains and international trade agreements stipulating labor (and other) standards compliance are very important and have been much studied (Barrientos and Smith, 2007, Ruwanpura and Wrigley, 2011; Egels-Zandén, 2014; Lund-Thomsen and Lindgreen, 2014). The consensus view in this

literature appears to be that private codes of conduct may be helpful in terms of ensuring compliance with “tangible” product standards such as the payment of minimum wages, overtime dues, and reducing the number of industrial accidents at production sites. However, their ability to address more complex process standards such as freedom of association and the right to collective bargaining has been more circumscribed (ETI 2006). Moreover, the effects of private codes of conduct beyond first tier suppliers, in respect of the latter’s own supply chains of small and micro enterprises is less certain (Chan and Nadvi, 2014).

However, a rich and increasingly extensive analytical and empirical literature on regulatory renaissance in the context of labor standards and their enforcement in particular industries and clusters in the developing world suggests that public regulations and public inspections in combination with private regulatory initiatives may under certain conditions be more effective in facilitating social upgrading processes in local industries than the “isolated” implementation of private codes of conduct (Bartley 2007; Pires 2008; Piore and Schrank 2008; Amengual 2010, Levy-Faur, 2010; Locke 2013; Coslovsky 2014; Posthuma and Bignami, 2014). Moreover, findings from this literature suggest that combining the enforcement of labor standards with the offer of technical assistance to help enterprises comply with regulations in a manner conducive to long term competitiveness could be particularly relevant in the context of small enterprises in clusters where the opportunities for economic upgrading and challenges related to social upgrading are particularly apparent. For example, Pires (2008) argues that (small and medium-sized) firms in developing countries often lack the capacity to improve their products and production processes. Hence, simply using sanctions against such firms in the case of their failing to comply with local labor legislation may be counterproductive. Instead, using a combination of sanctions and advice/assistance through the work of local labor inspectors is likely to be more effective in ensuring sustained compliance with national labor legislation. Posthuma and Bignami (2014), writing in the context of Brazil, underscore the above point by arguing that integration into global value chains may form the backdrop for national-level labor compliance initiatives undertaken by labor legislators working together with local industry associations and firms to find innovative ways of enhancing production processes and labor standards compliance simultaneously. In contrast, other authors, such as Locke (2013), argue that although public and private regulation of labor conditions in local factories could enhance each other, they could alternatively have the opposite effect. Consequently, it is necessary to examine specific micro-level processes to understand which public-private regulatory approaches may (or may not) work to secure social upgrading. This, they argue, tends to vary across issue areas and national contexts.

Even though government labor inspectors can help to enforce standards and raise social conditions, often in developing countries this does not happen. This may relate to the economic function labor laws are being asked to play. In fact, labor regulations are an essential part of all governments’ economic strategies, whether those regulations be strong or weak, for example providing workers with strong or alternatively weak employment protection. And the readiness or not to enforce labor laws is an inherent part of an economic, and related labor regulation, strategy (Pyke, 2015).

In general, in recent years there has been a widespread global movement to “deregulate” labor markets, with countries providing labor protection sometimes being accused of being “anti-competitive” or of providing a poor environment for business (Utting, 2005). In such deregulated contexts it might be that the labor regulatory role of the state has been understudied by academics, because government might appear to not be doing much. Such a conclusion would be mistaken (Piore and Shrank, 2008). In fact, in our view, decisions not to promote laws or standards in respect of employment protection, or trade union organization, or minimum wages, or not to enforce those labor laws that do exist, are in themselves significant regulatory policies which impact on an enterprise’s enabling environment.

In some cases the design of robust regulations and their enforcement have been used as integral to an economic development strategy. In the case of Germany, over the decades after the Second World War, a series of robust labor regulatory measures relating to aspects such as collective bargaining, working conditions, and worker dismissal, are reported to have acted as a “productivity whip”, preventing enterprises operating on a lower wage competitive basis. The institutionalization of strong skills development further promoted productivity and functional flexibility, compensating for restrictions on use of numerical flexibility or more casual employment practices (Chang et al., 2013).

In other contexts, governments might maintain weak labor regulations or low enforcement of those which exist, perhaps in the name of encouraging flexible labor markets (Khan and Lund-Thomsen, 2011). In China, a country where a major element in the country’s growth strategy has been the promotion of clusters competing mainly on a basis of low cost (often Chinese migrant) labor, “neo-liberal deregulation” in the 1980s and especially in the 1990s led to “a dramatic rise in job casualization and labor market informalisation” (Chan, 2014). This movement was enabled by the 1994 Labor Law, which, according to Lee (2014), established fixed term contracts as normal. Tenuous employment security was accompanied by a situation where social conditions in workplaces were often poor, especially for migrants (Chan, 2014), and where labor law enforcement was weak, with most local governments reportedly favoring business over migrant workers (Li and Freeman, 2014). Local governments competed with one another to lower labor wages and standards in order to attract inward investors, with local governments turning “a blind eye to violations of China’s own labor regulations and laws” (Chan, 2003). Moreover, at the same time migrant workers suffered restrictions on their ability to exercise exit strategies by changing employers if they did not like conditions, and were prohibited by hukou laws in accessing social benefits (Chan and Ross, 2003). Further, there are doubts about the efficacy of trade unions in China in protecting members’ interests, with laws limiting the establishment of independent trade unions or the right to strike (Chan, 2003; Chan, 2014; Chan and Nadvi 2014). It seems a particular set of labor regulations together with weak enforcement enabled the pursuit of an economic strategy of “growth at all costs”, the costs being poor environmental and social conditions.

In Pakistan, labor regulations enforcement has also been weak, while successive governments have limited, or have actually sought to undermine, the development of

trade unions and have done little to promote the spread of labor rights in key export-industries (Candland, 2007; Shaheed, 2007). In respect specifically of the Sialkot, Pakistan, football cluster, government enforcement of labor regulations there has been almost totally absent. In fact, during the 2000s, the provincial government of Punjab (which incorporates Sialkot) decided to abandon all labor inspections in factories within the province (PILER, 2009).

The experiences in Sialkot are reminiscent of what Tandler (2002) calls the “devil’s deal”; a situation in which local politicians block the enforcement of labor and environmental laws out of their own and local entrepreneurs’ fear that the enforcement of these laws may prove very costly for microenterprises and SMEs, driving them out of business. Further, the experiences of Pakistan and China support Pyke’s suggestion that governments might decide to pursue a business-first decent work-later strategy, possibly seeing good social conditions as costs or inhibitors, or maybe reasoning that the first priority is to ensure that businesses thrive and grow – even at a possible trade off cost of poor social and environmental conditions (Pyke, 2015). Consistent with this idea is the general absence of social protection issues from cluster and broader economic conceptual frameworks as taught in universities (Cichon and Scholz, 2009). An alternative to the business-first decent work-later view is to see social protection, and good social conditions generally, as crucial inputs to productivity and long term growth. This would be very much in line with the argument of Locke and Romis (2007) and Locke (2013) that posits that reorganizing production organization and employment practices in export-oriented factories might both help in increasing productivity and improving work conditions. In the “decent work first” view, good social conditions including social protection are not luxuries; they are investments and important enabling conditions for productive growth (Pyke, 2015).

## *2.2 Monetary and fiscal policies*

Fiscal policies comprise both public revenues as raised through taxation, and expenditures as expressed in the government budget. How much the state should spend and on what, how and from where it should raise tax revenues, or how much it should cut back on and where, can have profound employment, welfare, and growth implications (Easterly, 1993). Taxation and subsidy policies might not only have an immediate direct effect on social upgrading, in the sense that people might immediately have more (or less) money to spend on their wellbeing. Such policies can also have very important indirect effects on the capacity of clusters, and the broader economy, to raise productivity and to be able to afford higher standards. This indirect effect can occur in different forms, such as, for example, when government targets tax rebates or subsidies at particular clusters conditional upon investments in productivity raising machinery or perhaps in scientific research, or to encourage investment that fills gaps in the value chain (Pyke, 2010).

In China, in the case of the Xiqiao textiles cluster the local government has had a goal of completing the cluster by filling in upstream and downstream gaps in the local value chain, to which end inward investment has been encouraged by various means that include fiscal incentives such as exemptions from business tax for the first two years,

followed by reduced rates for three years (Wang and Yue, 2010). Fiscal policy can also indirectly affect cluster growth and social standards when cutbacks in public spending on social protection increase poverty and thereby risk reducing capacities for learning, threaten health, or reduce investments by the self-employed in equipment, all of which are likely over time to undermine a cluster's aggregate levels of productivity. Moreover, decisions to reduce social expenditures or raise taxes can have important implications for economic demand and thereby the capacity for businesses to sell their wares (Pyke, 2015).

Monetary policy is also highly significant and includes policy on interest rates, exchange rates and money supply (Easterly, 1993). The money supply is important for maintaining or boosting aggregate demand (and thereby jobs), while interest rates affect lending. International exchange rates can be particularly significant for exporting clusters (in that they lower export prices), and also potentially for encouraging increases in productivity (such as by maintaining a high exchange rate which makes it less easy to raise competitiveness by simply devaluing the currency) (Pyke, 2010). Managing the money supply, interest rates, and exchange rates are important government tools (Blanchard, 2012). In the cluster context, a tendency by researchers to focus on micro issues has meant that the roles of monetary and fiscal policies in cluster development have not been strongly researched, but, nevertheless, some important insights exist (Pyke, 2010). For example, in the case of the Sinos Valley footwear cluster (Schmitz, 1998;1999), one of the factors that made business difficult in the 1990s was the effect of government anti-inflationary policies in pushing up the value of the Brazilian currency and so making exporting more difficult. In Italy, the introduction of a fixed exchange rate for the Euro in the 1990s removed access to a traditional Italian strategy of promoting exports through Lire devaluation, and may, together with other conditions, have encouraged outsourcing abroad. Equally, the removal of the devaluation mechanism might have encouraged Italy's clusters to seek out more productive and higher value adding ways of manufacturing (Tattara, 2010).

For China, a low exchange rate for the renminbi vis-a-vis the US dollar and the European Euro may have benefited the country's export oriented clusters (Pyke, 2010). In Mexico, the appreciation of the Peso and subsequent increases in import costs contributed to the decline of the Chipilo furniture cluster (Pietrobelli and Rabellotti, 2004), while an earlier depreciation of the peso is reported to have played a part in helping the Guadalajara shoe cluster (Rabellotti, 1999). In Pakistan, despite significant monetary devaluation (following a decision to adhere to a floating exchange rate) exports from the (strongly export oriented) football cluster in Sialkot did not increase, and indeed the consequences of such monetary policy for an industry strongly reliant on imported raw materials might have been higher costs and reduced competitiveness, while imported consumer goods for workers might also have been pricier (Afraz et al., 2014). Moreover, Pakistan has experienced sustained inflation over the last decade which has contributed to eroding the real wages of many workers, especially hand-stitchers, in the Sialkot football manufacturing cluster (Lund-Thomsen, 2013).

### *2.3 Other forms of government regulation*

Inside national borders, government regulation may address common issues which affect cluster and non-cluster contexts alike, such as respect for property rights and the rule of contract law (Pyke, 2010). There may also be specific policies and regulations tailored to the particular needs and upgrading strategies of individual clusters, such as the provision of import and export controls for particular products, materials or technologies; place of origin regulations and targeted tariffs. The subject of tariffs is particularly controversial. Some argue they might protect inefficient industries and reduce the incentive to raise productivity levels, while possibly raising import costs for crucial components or consumer durables. In consequence, economic growth and employment expansion could be reduced while real living costs might rise (Kaplinsky, 2005). In contrast, others argue that targeted tariffs can be an important tool for protecting infant industries against (temporarily) more advanced competitors, without which local businesses and jobs might be destroyed. The strategic use of tariffs for particular inputs or outputs, possibly changing over time, and possibly differing for part products and complete products, can provide incentives, and, when needed, valuable protection. Developing countries in particular are thought to potentially benefit from an appropriate tariffs policy (Tewari and Pillai, 2005).

In practice, some forms of regulation appear to have been particularly significant for the growth of clusters. These include both tariffs and intra-regional outsourcing rules (Pyke, 2010). For example, some clusters have developed subsequent to the formulation of regional regulatory frameworks that favour outsourcing, such as the Blue Jeans cluster in Torreon, Mexico (Bair and Gereffi, 2001). As for tariffs, in Guadalajara, Mexico, protectionist measures, along with monetary action to devalue the peso, appear to have helped the cluster revive (Rabellotti, 1999). In India, export-oriented clusters, in particular, have operated in the context of an array of regulatory constraints and incentives (Tewari and Pillai, 2005). This has been the case, for example for the textiles and garment clusters of Kannur and Tirupur. In the case of the Chennai, India, auto-cluster, it has been asserted that state incentives such as tax cuts, easy acquisition of land, and speedy project implementation have been instrumental in attracting inward investment (Bhargau, 2012). In China, various regulations, tariffs, subsidies, import quotas and other incentives such as local content requirements have been used by national and local governments and have formed an important background to cluster development. For example, in respect of the automobile industry protective tariff rates for imported vehicles reached 200% in the 1980s, and 80-100% in the 1990s, falling to 25% by 2006. In the early 2000s subassemblies were given the same tariff as entire vehicles with the aim of encouraging vehicle manufacturers to increase the localisation of assemblies and parts (Oliver et al., 2009).

In sum, the examples above have shown how monetary, fiscal, and regulatory policies may contribute significantly to a cluster's enabling environment and as such have important consequences for economic growth prospects and whether that growth is accompanied by the upgrading of social conditions. Influences on the environment have been shown to emanate from both national and international sources, while the content of policies and regulations might be shaped by the conceptual economic growth

frameworks, ideologies, and beliefs employed by policymakers. However, the effects of the enabling environment on economic growth and social conditions might not necessarily be direct, to the extent that there is mediation by the actions of cluster governance actors. That is to say, the enabling environment creates an important context which incentivises, facilitates or constrains, but actual outcomes may depend on the actions of cluster actors.

The roles of key governance actors and how they affect prospects for economic growth and social upgrading in the context of specific policy and regulatory environments is the subject of the next section.

### **3.0 Key Actors in Local Cluster Governance for Social Upgrading**

The array of representative organizations, institutions, businesses, and government, and the way they interact and orient towards a cluster, constitute a governance system. Such a system is key to cluster growth and upgrading strategies (Pyke, 2010). In this section we discuss the role of government, employers' associations, workers' organizations, and community organizations in the promotion of economic growth and social upgrading within developing country industrial clusters.

#### *3.1 Government*

Government or the state has a crucial role to play in cluster development. One of its most important roles is the enacting of legislation and formulation of policies, including the enforcement or not of regulations, which serve to contribute to a cluster's enabling environment, as described in Section 2. Government and its agencies also may provide a range of public services, ranging from advice on technologies, to information on markets and international regulatory requirements, to provision of transport and infrastructural facilities.

Government can also be the facilitator of joint action. To effectively address a broad development agenda it might be necessary to bring together an array of public and private, both local and global, actors. It is through such multi-stakeholder initiatives that various inputs can be effectively integrated into a growth and upgrading strategy (Lund-Thomsen and Nadvi, 2010b). Government - especially local or regional government – can act to facilitate social dialogue and partnership amongst stakeholders. For this, top down bureaucratic practices may be replaced by decentralized facilitating ones (Pyke, 2010).

In the case of the Sinos Valley footwear cluster in Southern Brazil, the potential for government to act to promote cluster governance was implied when it was noted that there was a crucial failure on the part of government to facilitate collaboration and consensus amongst key associations behind a new cluster-wide upgrading strategy, known as the “Shoes from Brazil Programme” (Schmitz, 1999). In the 1980s, the Sinos Valley shoe cluster had grown to over 1,000 shoe manufacturers and sub-contractors, plus a full range of supply industries including tanneries, component makers, and machinery manufacturers, providing in total jobs for around 150,000 people. In the 1990s growth slowed down. “The Shoes from Brazil Program” was an attempt by five

employers' associations to engage in joint action to develop a cluster wide strategy for upgrading, and move away from a dependency on price competition. This included targeting new markets, raising the image of "Made in Brazil", eradicating child labor, joint participation in fairs, and creating a local design capacity (Schmitz, 1998). However, the program did not materialize because of conflicts of interest. In particular, certain leading enterprises had an interest in allying with a powerful major international customer, rather than with the rest of the cluster. Even so, the program might still have been saved if government authorities had not failed to mediate and promote an upgrading consensus. The failure of "The Shoes from Brazil Program" put back the prospects of the cluster growing by moving away from labor-intensive export manufacturing and differentiating itself from international competitors (Schmitz, 1999).

### *3.2 Employers Organizations*

Employers' organizations exist first and foremost to promote their members' interests. Their actions might include combining together to regulate wage rates and social conditions, possibly through negotiation with trade unions, and/or in a context where cutthroat competition would otherwise break out. In China, faced with very high labour turnover and workers' unrest in response to alleged late payment of wages and perceived cheating on wages, enterprises in the woollen sweater cluster in Wenling City, Zhejiang, sought to set standard rates through their sectoral employers association in negotiation with local trade unions (Lee, 2013). In Sialkot, Pakistan, an employers' association played a key role in the development and implementation of the multi-stakeholder initiative combating child labour in the football cluster known as the Atlanta Agreement, which led to social upgrading and also helped firms in the cluster access key markets. But then the association also made sure that calls from Western NGOs and brands for a broad introduction of labour rights for home-based football stitchers, such as full-time contracts, minimum wages, overtime payments, and social protection, were not implemented (A. Khan, 2007).

Employers may also combine together, possibly collaborating in public-private partnerships and/or with other organizations such as trade unions or community associations, to engage in joint cluster growth or productivity raising activities (Schmitz and Nadvi, 1999). In many cluster studies groups of employers, often organized into associations, have been cited as being active, providing members with services, engaging in joint enterprise activities, partnering with the public sector, and representing members' interests at various levels of government (Nadvi and Barrientos, 2004). In Sialkot, action by an entrepreneurial association, with public support, resulted in a surgical instruments cluster achieving crucial international quality standards which enabled it to retain important markets, and may have helped it move along an upgrading path and avert going down a low quality, low cost route (Nadvi, 1999). As a result of this action, the vast majority of SMEs in the cluster were able to comply with international standards, so averting a situation where most small firms would have had to close given that the United States and the European Union accounted for over 90% of the cluster's sales (Nadvi and Barrientos, 2004).

In India, the Tirupur Exporters Association (TEA) has (in 2013) 720 knitwear exporters as registered members. TEA is involved in arranging buyer-seller meetings and international fairs for SMEs, helps SMEs access financial assistance, and provides members with a range of information. TEA has also been involved in a series of infrastructure projects, including the Tirupur Export Knitwear Complex, an Inland Container Depot, the TEA Knitwear Fashion Institute, the TEATEX Processing and Production Centre, and the TEA Public School (SupportBiz, 2013). In Mexico, the Chiapas Organic Coffee Cluster is notable for the leading role of a farmer's association in mediating between buyers and farmers, and providing a range of services (Damiani, 2008). In Los Lagos, collective initiatives by an entrepreneurial association and also by public-private partnerships have been central to the salmon cluster's growth (UNCTAD, 2006). Employers' associations have also been noted as being particularly active in the Riviera del Brenta footwear cluster in Italy; and the Guadalajara footwear cluster in Mexico (Rabellotti, 1999; 2001; 2003). In contrast, in some cases, such as in Sialkot, Chipilo, Lake Victoria, and Sinos Valley, failure to act collectively on key issues is said to have threatened further development (McCormick, 1998; Schmitz, 1999; Nadvi, 1999; Pietrobelli and Rabellotti, 2004).

Employers organizations at various local, national, and international levels might also seek to influence policies and regulations legislation. For example, in the case of China, moves towards legislating for collective bargaining were opposed, with some effect, by employers associations in Hong Kong and by chambers of commerce in the U.S.A. (Chan, 2014). Within countries, employers' associations might participate, possibly alongside workers' organizations and others, in national consultative committees set up to advise governments in particular policy areas.

### *3.3 Workers Organizations*

The role of labor and labor organizations has received much less attention in cluster research and analysis (Das, 2005). But in fact labor organizations can have a big influence on a cluster's trajectory. In cluster settings, a new literature has recently emerged to describe how workers are able to influence their conditions at work (Carswell and De Neve, 2013). This is the literature on labor agency in industrial clusters which understands "agency" in two different ways. First, labor agency may be conceived in the sense of the use of "voice" through collective labor organizations such as trade unions that directly seek to influence employers, mostly in formal sector enterprises, through the use of collective bargaining and freedom of association strategies (Lund-Thomsen, 2013). Second, labor agency has also been understood as the ability of workers to influence working conditions through their choice of occupation and employment decision, engaging in "entry" and "exit" strategies, for example, by exercising their choice of employers to work for (Coe and Hess, 2013).

However, we can suggest that the actual ability of workers to affect their conditions in clusters or elsewhere through voice and exit strategies will depend on the labor regulatory environment in respect of factors such as the ease of trade union organization, or the ability to engage in strike action, or in respect of employment security legislation, minimum wage setting, or unemployment protection (Posthuma and Nathan, 2010). Also the quantity of labor available in the market for particular job positions matters when it

comes to the efficacy of exit strategies. At times of labor shortage workers' bargaining power increases and, as happened in China in recent years, the exercise of "voice" and collective action is encouraged (Chan and Nadvi, 2014). Moreover, simply the threat of worker exit can be enough to induce employers to offer better pay and conditions. Equally, a labor surplus can act to dampen wages and conditions. Further, a plethora of cheap flexible labor might encourage employers to focus on price competitive strategies, reducing the incentive to raise productivity through better work organization, higher value products and greater technological investment (Pyke, 2015).

An example of a workers' collective action affecting cluster outcomes is that of the frequent trade union led strikes in the early 1970s amongst stitchers in the Sialkot, Pakistan, football cluster, where the aim was to improve conditions in the factories. In response, the Sialkot-based football entrepreneurs decided to transfer the process of football stitching out of the factories and into workers' houses (F. Khan, 2007). Hence, as a result of this move, a subcontracting system involving thousands of contractors (mainly former factory-based workers) and a new labor force consisting of thousands of home-based male, female, and child workers was institutionalized in the cluster (Lund-Thomsen, 2013). The structure and character of the cluster was fundamentally changed.

This decentralisation and reorganisation of the football cluster had important implications for social conditions. On the one hand, there was increasing access for female home-based football stitchers who were able to increase their earnings while simultaneously take care of their household and child rearing duties (F. Khan, 2004). On the other hand, home-based football stitchers were not formally recognized as workers under Pakistani labour law. Hence, they had no right to minimum wages, overtime payments, and social insurance in general (Lund-Thomsen 2013). At the same time, a large number of child workers came to be involved in football stitching as a way of supporting their poor parents' income (A. Khan, 2007). While this trend was later partly reversed as a result of the multi-stakeholder Atlanta Agreement that significantly reduced the number of children involved in football stitching in Sialkot, football stitchers labouring in the stitching centres and home-based units in Sialkot continue to be denied any meaningful form of labour rights to this date (Lund-Thomsen et al., 2012).

Consequently, while it might be argued that trade union militancy failed in its original objectives, it cannot be said that worker action (and employer reaction) was without effects. In the longer term, the cluster would as a consequence of the decentralisation face the negative repercussions of consumer objections to child labour, while a continuing problem of low technological investment and low productivity would remain to be solved.

Trade unions cannot only act to protect wages and conditions, whether through collective bargaining or through the pressure of threatening strike action; they can also actively campaign for competitive strategies consistent with rising standards (Coe and Jordhus-Lier, 2011). They can act in partnership with employers' organizations, government and others in local jobs pacts and in the promotion of productivity improvements and value adding development strategies that help to move enterprises away from price driven

cheap labor strategies (Posthuma and Nathan, 2010). Unions can also become specifically engaged in training and in encouraging workplace learning. In Italy, Emilia Romagna is a region with an economy characterized by industrial clusters. In the 1990s the “Standing Conference of Economy and Labor” was established in order to promote dialogue amongst employers and trade union organizations in respect of the region’s general development aims and to encourage them to participate in strategic decision making (Cossentino, 1996). In the USA, the Garment Industrial Development Corporation (GIDC) is an intermediary institution established to help New York’s cluster of garment manufacturers compete along higher value adding lines. Trade unions joined employers’ organizations and government on the supervisory board of GIDC, which carried out a range of measures such as promoting fast response, fashion consciousness and training (Fashion & Sourcing Network, 2014).

### *3.4 Community Organizations*

Community organizations cover a broad range of economic and social associations, including various forms of self-help organizations and associations catering for informal sector groups, the self-employed, and micro-entrepreneurs. These important economic actors not generally represented by formal employers and trade union organizations. Non-government organizations, religious groups, housing associations, women’s groups, youth organizations, and ad hoc groups formed for specific purposes such as to combat an environmental threat might also be included under this heading (Pyke, 2010).

The role of community organizations in cluster competitiveness, participation in local governance structures, and contributions to growth has been badly neglected in cluster research and policy recommendations. However, clusters do not exist in isolation but are hosted by specific communities. This is something that was recognized in the 1980s and 1990s by ILO research into clusters or “industrial districts” in Italy, which were explicitly recognized as socio-economic phenomena (See, for example, Pyke et al., 1990). Moreover, there is good reason to argue that if the use of the concept of social upgrading tends to relate to conditions in the world of employment it nevertheless ought to also encompass community conditions. This is because in practice the worlds of employment and community life often overlap, especially, perhaps, in developing countries (Coe and Jordhus-Lier, 2011).

The overlapping of the social, community and economic spheres occurs on various dimensions. For example, in developing countries especially, much work is carried out in the home and so physical living conditions impact on working productivity (Pyke, 2009). Moreover, financially, micro-entrepreneurs might not differentiate between money and bills pertaining to living costs and those pertaining to running a small or micro enterprise, meaning that depletions in one deplete the other. This highlights the importance of the role of social protection as not just a defender of living standards but also as a contributor to, or safeguard of, capital needed for small scale activities, and thereby to aggregate economic growth (Pyke, 2015).

The community environment also might matter when it comes to decisions where to establish new businesses or in which locations to look for work, as a source of consumer

demand for the products of business, and for participation in labor markets (Carswell and De Neve, 2013). Poverty in the community can have significant implications for educational and training attainment, human capital embellishment, and in the long term for aggregate economic growth (Perry et al., 2006). Labour market participation is influenced by factors such as the availability of social protection, child care facilities, and various cultural inducements or inhibitors. Overall, community conditions have the nature of a public good, the effects of which are long term and developmental in nature (Lund-Thomsen, 2013).

A substantial amount has been written about the relevance of community organizations, and the social context more generally, for social cohesion, for enabling inter-firm collaboration, and for encouraging good industrial relations inside the firm (see, for example, Nadvi and Schmitz, 1994). Research in Italy reported that social relationships outside the enterprise influenced the attitudes workers brought to work in the industrial districts or clusters of Emilia Romagna, and determined whether they would “give of their best” to make the enterprise a success. Strong social and economic disparities undermine social cohesion and a readiness to work in partnership. Strains may particularly surface at times of economic crisis and rising unemployment (Brusco, 1996).

However, little has been written about community representative organizations as active agents and potential contributors to a cluster governance system. An exception has been where the more active governance role for community organizations has been described in the few works which refer to “cluster committees”. These are committees which encompass a range of interest groups, such as educational establishments, housing associations, trade associations and more, and which address both enterprise and community issues. For example, a District (Cluster) Committee was established to serve the Manzano chair industrial district (cluster) in North East Italy (Pyke, 2003). Other community focused actions by organizations involved in clusters are beginning to be written about. Tewari (2010) reports on an NGO working with an SME association to provide crèches for women working in small firms in garment clusters around Chennai; while in the garment clusters in Bengaluru, the New Trade Union Initiative has been partnering with a non-profit organization to reorganize laundry facilities in the community for garment workers already working long hours in factories. More generally, Holgate (2014) refers to a growing trend for community organizations to work alongside or in coalition with trade unions, pursuing issues such as living wages or green jobs.

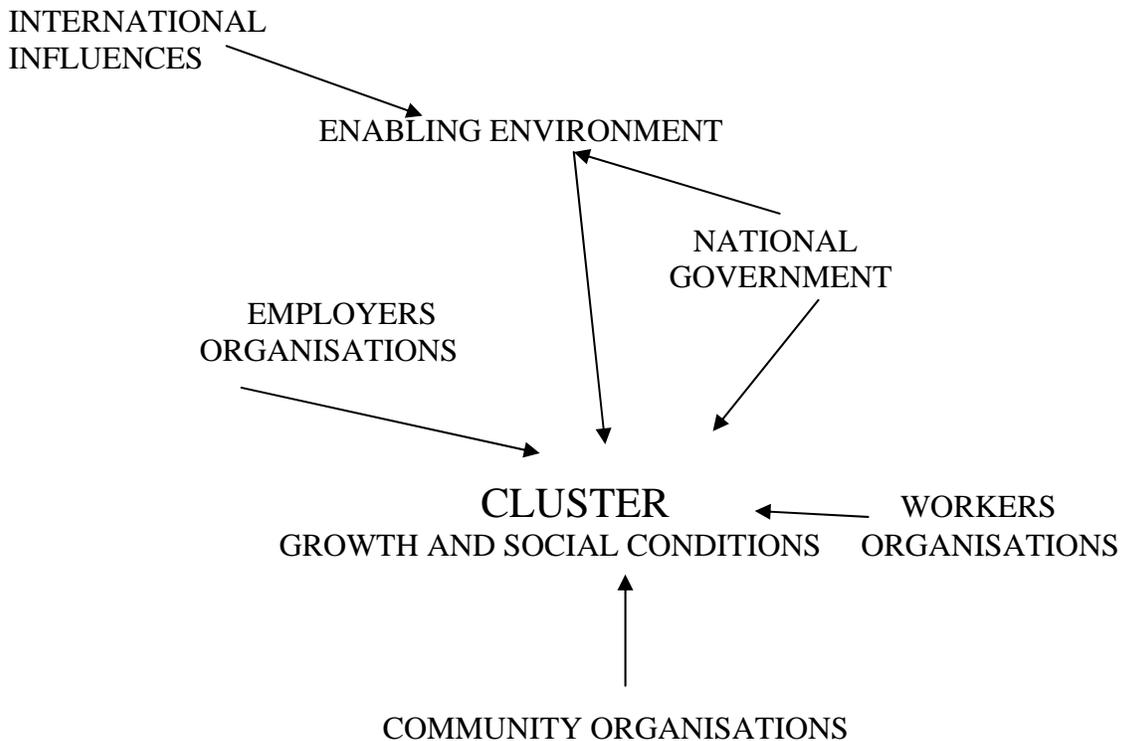
In this section we have shown that cluster governance actors play crucial roles in facilitating or hindering economic growth and social upgrading, and for this they mediate the effects of policies and regulations. In many of the examples highlighted it is clear that the actions taken were explicitly or implicitly influenced – incentivized, facilitated, or constrained – by the enabling environment. Thus, for example, we saw governments might leverage weak labor standards and/or weak enforcement to pursue cheap labor competitive strategies, as happened in China. Or employers might collaborate with one another to respond to government fiscal incentives to introduce new technologies, or outsource to production units less covered by labor regulations, or collaborate with other stakeholders to address a specific standards challenge such as the international

requirement expressed in Sialkot to eradicate child labor. And it was seen that workers’ capacity to use collective “voice” or individual “exit” strategies depends on the existence of an enabling regulatory environment – such as legislation permitting independent trade unions and/or the right to strike, and that community organizations’ ability to voice their concerns might be improved if the government creates institutions such as cluster committees.

#### 4.0 Towards an Analytical Framework

Our findings that both the enabling environment and the actions of cluster governance actors are important for economic growth and social upgrading imply that these influences should be part of an analytical framework. This section proposes the outlines of such a framework, one that allows for variability in the enabling environment and the influences on it, and also differences in the participation of cluster governance actors and how they mediate the effects of policies and regulations. See figure 1, below.

**Figure 1: The Influence of the Enabling Environment and Cluster Governance on Cluster Growth and Social Conditions**



In figure 1, we show a cluster’s capacity to grow and provide good social conditions being affected by the actions of governance actors, and also by the cluster’s economic and regulatory enabling environment. The enabling environment is then also shown to be subject to both national and international influences. We suggest that various combinations of differing environments, influences on those environments, sets of

governance actors, and how those actors mediate the effects of policies and regulations, form the key components of our analytical framework.

*a) The Enabling Environment*

The enabling environment includes a range of monetary, fiscal, and regulatory policies, some of which have been formulated specifically for particular sectors or clusters, and some of which are of a more general kind affecting all parts of an economy. The identification of the components of the enabling environment and how they might relate to a cluster's prospects for growth and social conditions is an essential part of an explanatory framework. In this, a distinction might be drawn between socially protective aims of policies and regulations (such as protecting the environment, or people's health, or people's rights), and economic aims as when policies and regulations have the function of promoting particular growth strategies such as using minimum wage legislation to raise labor costs in order to incentivize greater productivity, or introducing tariff policies to protect infant industries, or raising social protection levels in order to expand consumer demand, or devaluing currencies to expand exports. Particular ideologies, theories, or beliefs driving the policies and regulations could be taken into account.

*b) Influencers on the Enabling Environment*

It is also important to understand the possibly multiple sources of policies and regulations influencing the enabling environment, some of which are domestic while others might be international in origin. Important international influencers could include, for example: supra-national political authorities such as the European Union or the North American Free Trade Area; private sector codes in respect of quality, hygiene, labor, environmental, or other aspects; international employers and workers associations and transnational collective bargaining agreements; international trade agreements; and pressures or rules coming from international institutions and agencies, such as the International Labor Organisation, the World Trade Organisation, the International Monetary Fund, international development banks, and international non-government organizations. The extent to which enterprises in clusters will be subject to such external influences will differ, but in a globalised world, and the fact that many clusters are export oriented, means that external international pressures (to raise or lower standards) could be significant.

*c) The Role of Cluster Governance Actors*

The actual efficacy of policies and regulations will depend on how they are mediated by cluster governance actors, amongst which we have highlighted: government and its agencies; employers' organisations; trade unions; and community organisations. Labour regulations, for example, may be enforced or not enforced, and if there is enforcement it may occur in different ways. Government officials might be competent or not, corrupt or not, ready to advise on best ways of implementation or not. Community organisations, such as self-employed associations might advise members on, and/or use government subsidies to assist members on, issues such as housing/homework conditions, childcare, education, small business activities, and more. Similarly, the achievement of quality standards might be achieved by enterprises one by one, or as part of collective efforts between an employers' association and a training institute. Fiscal incentives to introduce

new technologies again might be responded to on an individual basis or, alternatively, be the subject of a collective bargaining process between a cluster employers' association and a trade union. In short, governance actors, acting alone or in combination, play important parts in a cluster's prospects for growth and good social conditions, with the enabling environment acting as a crucial incentivisor or facilitator of, or constraint on, behaviour.

In any specific cluster there will occur particular configurations of national and international influences on the enabling environment - resulting in particular types of policies and regulations -, and actions by cluster governance bodies, either individually or in combination with others. Our analytical framework encompasses the variability that might occur amongst clusters and so act to help explain different consequences for economic growth and social conditions.

## **5.0 Conclusions and Policy Implications**

In this article, we sought to make a contribution to the literature on social upgrading in industrial clusters in developing countries. Our review of the literature indicates that clusters are capable of growing strongly and providing many jobs, but that is not always the case, and neither is it necessarily the case that clusters, growing or not, are accompanied by good social conditions.

Our key question has been under what conditions will economic growth occur in such a way that it is accompanied by social upgrading? Our review has indicated, first, the importance of the role played by the cluster environment, and second, the importance of the key actors in cluster governance. The effects of the policies and regulations of the enabling environment are mediated by the actions of the governance actors, who find themselves incentivized, enabled, or constrained in their behavior, while the actors, especially government, are also involved in setting policies and regulations that create that environment.

Our review has found that monetary, fiscal, and social policies and regulations, on the one hand, and the actions of governance actors, on the other, are important for cluster growth and social upgrading. Hitherto, the influence on clusters and social upgrading of international sources has been documented, but surprisingly little research has been carried out on the effects of national policies and regulations – albeit that recent interest in a regulatory renaissance has focused some attention on government labor inspection practices. Moreover, in the cluster context, relatively little attention has been paid to the effects of a range of governance actors, with research on the influence of trade unions and community associations being particularly absent.

However, key actions are taken locally, and in this employers organizations, trade unions, community actors, and government play important roles. Of these, possibly government is of particular importance in that it is responsible for setting regulatory framework rules which are likely to affect more than those established by international players. In fact, it might be argued that some international rule setting, such as private sector codes of

conduct, might not be necessary, or at least less necessary, if national regulations were robust and adequately enforced. But, as we showed, national labor codes vary, and the degree of their enforcement also varies.

Our findings suggest that the content of national labor codes and how they are enforced might be related to the particular economic conceptual frameworks being used by government, and how the role of social conditions fit in. Often government behavior seems to be consistent with the assumption that policies (including regulations) should firstly promote business and then later social conditions, or even diminish social conditions in order to promote business growth. We can speculate that clusters competing on a cheap labor, price-driven basis may be particularly likely recipients of this approach. An alternative view would be to see poor social conditions as inhibitors of long-term sustainable growth on a basis of science, knowledge and technology, productivity enhancement, value adding, or differentiation.

One important policy implication is that those wishing to see good social conditions integrated into economic promotion strategies might first and foremost need to persuade national and regional governments of the wisdom of that approach. This implies a need both for more research demonstrating a positive relationship between good social conditions and business and broader economic growth, and also the development of convincing conceptual socio-economic frameworks that can guide government policy making.

For the future, we suggest researchers should study the roles of the key components we have highlighted, using the analytical framework proposed in Section 4. Perhaps particular attention should be paid to the role of the state as key formulator of the cluster environment, and to the conceptual frameworks that guide its policies. Where do social considerations fit into their frameworks? Are good social conditions seen as inhibitors to business growth or long term enablers?

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<sup>i</sup>Our definition is very similar to that of the International Labour Organisation's (ILO) decent work concept. For example, Posthuma and Nathan, 2010, refer to decent work as: "a concept which promotes opportunities for productive work and fair remuneration, with social protection and under conditions of safety in the workplace and having the freedom to organise and participate in the decisions that affect their lives". Other sources, including references to the ILO's "decent work agenda", imply a slightly broader definition, including qualities such as employment security (ETUC, 2007; ILO 2015a), an absence of child or forced labour, and aspects of working conditions such as rest periods and opportunities for personal improvement through skills development (ILO, 2015a; ILO, 2015b). We include all the above components in our definition.

<sup>ii</sup>In terms of quantitative outcomes, there are clearly some clusters which have been relatively stagnant, have hardly grown, and have created relatively few jobs. For example, in Africa, the Enugu furniture clusters in Nigeria have experienced limited growth and only employ about 700 people (Uzor, 2004); and the Eastlands garment cluster in Kenya only employs about 2,000 (McCormick, 1998).

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