

Governance Patterns in Value Chains and their Development Impact

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Production by order of a lead firm that 'governs' its value chain by defining and enforcing standards without aspiring to gain ownership control of its suppliers is becoming a dominant form of industrial organisation. This trend has far-reaching consequences for developing countries, among others, affecting the degree of inclusion of poor producers, their income earning opportunities, the allocation of risks, and consumer prices. This paper serves a triple purpose. First, it tries to disentangle the multiple factors that determine the concrete form of value chain governance; second, it proposes a framework for the analysis of the developmental impacts of these different forms of value chain governance; and, third, it derives policy conclusions from this analysis.

La production d'une entreprise chef de file qui « gouverne » sa chaîne de valeur en définissant et imposant des normes sans aspirer à prendre le contrôle de ses fournisseurs devient une forme dominante d'organisation industrielle. Cette tendance induit des conséquences d'une portée considérable pour les pays en développement, entre autres, ayant une incidence sur le degré d'inclusion des producteurs pauvres, leur accès à une activité rémunérée, l'allocation des risques et les prix à la consommation. Cet article sert un triple objectif. Il essaie dans un premier temps de dénouer les multiples facteurs qui déterminent la forme concrète de la gouvernance de la chaîne de valeur; il propose ensuite un cadre à l'analyse des impacts, du point de vue du développement, de ces différentes formes de gouvernance de la chaîne de valeur; et enfin, il tire de cette analyse des conclusions en matière de politiques.

INTRODUCTION

Value chain structures have become more and more complex. The desire to make use of outsourcing for cost reduction without sacrificing control of production processes leads to patterns of industrial organisation which are increasingly placed between spot market exchanges and vertical integration: production by order of a lead firm that coordinates its value chain across borders and defines and enforces multiple product and process standards without aspiring to gain ownership control of its suppliers is becoming a dominant pattern of industrial organisation.

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The notion of value chain governance aims to conceptualise these intermediate patterns of industrial organisation between markets and vertical integration. It implies that 'some firms in the chain set and/or enforce the parameters under which others in the chain operate. . . governance refers to the inter-firm relationships and institutional mechanisms through which non-market. . . coordination of activities in the chain is achieved' (Humphrey and Schmitz, 2004: 96). Value chain governance thus describes a pattern of industrial organisation somewhere in-between the entirely market-intermediated organisation of production and vertical integration.

The firms that set the parameters in this new pattern of industrial organisation are termed 'lead firms'. Lead firms engage in quasi-hierarchical relationships with firms upstream and downstream in the value chain, which are legally independent but nevertheless to a high degree reliant on the lead firm's decisions. They fulfil a prominent role in the value chain as they identify dynamic rent opportunities, rearrange the production system accordingly, assign different roles to other firms and ensure integration of the whole production system. In addition to lead firms, certain governance tasks may be fulfilled by entities which are not part of the value chain, such as public and private institutions for standard-setting and certification (Kaplinsky, 2001: 12 f.).

The fact that trade is shifting from anonymous market-based exchange of products to more durable patterns of industrial organisation, with an increasingly prominent role of lead firms, has multiple implications for developing countries: minimum requirements for participation in value chains tend to rise as lead firms demand increasing scales of production as well as compliance with more sophisticated product and process standards; the competitiveness of the respective chain may rise or decline, hence also the viability of developing country firms in these chains; gains and risks will usually be renegotiated and redistributed among customers, retailers, traders, processors and suppliers; and, not least, the increasing or decreasing efficiency of value chains will affect the quality, availability and price level of goods and services. The latter aspect matters especially if the value chain provides goods and services for local markets, and poor people in particular.

This article serves a triple purpose. First, it tries to disentangle the multiple factors that determine the concrete form of value chain governance; second, it proposes a framework for the analysis of development impacts of different forms of value chain governance; and, third, it derives policy conclusions from this analysis.

The first section discusses in what circumstances firms engage in value chain governance. In doing so it draws on literature from different disciplines: *management sciences*, which focuses on the microeconomic logic of make-or-buy decisions and has been strongly influenced by transaction cost economics; *industrial economics*, which looks at the dynamics of industrial systems as a whole and addresses the welfare gains and losses of market and non-market forms of coordination; and *development studies*, which is concerned with entry barriers for small firms, the dynamics of technological learning and upgrading, and distributional issues.

Of course, we still lack a comprehensive theory of value chain governance. Whereas the make-or-buy question has generated a vast amount of literature, we still

do not have a convincing taxonomy of different patterns of value chain governance, and the questions of when firms opt for one or another pattern and how these patterns impact on development in terms of jobs, incomes, technological learning, risk mitigation and so on, remain largely unanswered. A recent proposal for a 'theory of value chain governance' by Gereffi, Humphrey and Sturgeon (2005) provides a useful typology of governance patterns, but does not capture the wide array of factors that determine the behaviour of firms with regard to sourcing and value chain coordination, and thus lacks predictive power. This article draws the attention to additional determinants of firm behaviour and discusses under what conditions these favour market-based solutions, vertical integration or intermediate forms of value chain governance.

The second section discusses the development effects of different forms of value chain governance. It proposes a framework that allows us to systematize the various implications of changes in value chain governance for poor country development. The analysis demonstrates the variety of possible development outcomes affecting different stakeholders at different points in time, and it identifies a number of trade-offs between these dimensions. Whereas some of the effects of increasing value chain governance have received considerable scientific attention (e.g. the effect of standards on the inclusion of poor farmers), others tend to be overlooked. This is especially true for the issue of risk allocation, but also for the question of how different forms of value chain governance affect the availability, quality and price of products for poor consumers.

The third section discusses how policy-makers and practitioners in developing countries can deal with this complexity. The section draws attention to the manifold trade-offs between different implications of value chain governance and highlights the character of value chains as political and economic subsystems which always imply diverse interests and specific power constellations. This complexity requires prudent policy design. Otherwise, well-intended measures, for example to protect domestic producers, may lead to severe inefficiencies undermining the long-term competitiveness of the respective sector, or put a heavy tax burden on poor consumers, or have other undesired side-effects.

WHEN DO FIRMS ENGAGE IN VALUE CHAIN GOVERNANCE?

Microeconomic literature has for a long time discussed the 'make-or-buy' question, that is, the factors that determine which processes are carried out within the boundaries of the own firm and which are mediated through markets. The traditional neo-classical perspective assumes markets to be more cost-effective than internal supply mainly because of competition. The cost of administrative coordination within the hierarchical organisation of a firm may be substantial and tends to increase as firms grow and their internal organisation becomes more complex. The fact that many firms choose vertical integration despite the assumed superiority of market-based procurement is traditionally explained by opportunistic behaviour to achieve anticompetitive effects, and therefore regarded as detrimental from a public welfare perspective (Bain, 1959). This view has been challenged by the New

Institutional Economics, and specifically transaction cost economics (Williamson, 1985; Arrow, 1974). Transaction cost economics draws attention to the fact that the cost of operating in competitive markets is not zero. In ‘arm’s-length’, or market-based procurement, firms have less control over the supply chain. This may jeopardise product quality, timeliness of delivery, and so on. Contracts between firms cannot assure this, because they are always incomplete, that is, not all contingencies can be anticipated and some aspects of the relationship cannot be codified, or the cost of codification, monitoring and enforcement would render the inter-firm relationship inefficient. Incomplete contracts create what Williamson calls the ‘contractual dilemma’:

The contractual dilemma is this: On the one hand, it may be prohibitively costly, if not infeasible, to specify contractually the full range of contingencies and stipulate appropriate responses between stages. On the other hand, if the contract is seriously incomplete in these respects but, once the original negotiations are settled, the contracting parties are locked into a bilateral exchange, the divergent interests between the parties will predictably lead to individually opportunistic behaviour and joint losses (Williamson, 1971: 116–17).

Firms thus have to balance aspects of cost and control. On the one hand, they have to determine whether the cost of market transactions between firms is higher than the cost of administering the same activities internally within a single firm. On the other hand, they need to control strategic assets in order to protect their competitive advantage and assure cooperation of key value-adding players. Such calculations should take future situations and learning trajectories into account: for example, the risk of losing competences which up to now have no commercial value but might generate economic returns in the future.¹

Whereas the academic discussion tends to contrast the ‘make’ vs. ‘buy’ options as two clearly distinguishable alternatives, the private sector increasingly turns towards hybrid forms of industrial organisation. Two empirical trends are clearly observable:

1. Enterprises increasingly outsource a number of activities which they had previously handled within their boundaries. The activities kept in-house are conceptualised as ‘core competences’, which depend on the management’s ability to consolidate corporate-wide technologies and production skills into competences that enable firms to gain an advantage over their competitors (Prahalad and Hamel, 1990). Non-core activities are increasingly bought from others. Production processes are therefore increasingly ‘sliced up’ and the certain ‘slices’ dislocated – in part to developing countries – in order to exploit specific factor endowments.
2. Lead firms increasingly engage in coordinating and shaping the way upstream and downstream firms organise their ‘slice’ of the value-adding process. This occurs for several reasons. First, lead firms permanently strive for new products which allow them to capture innovation rents. If they succeed in doing so they

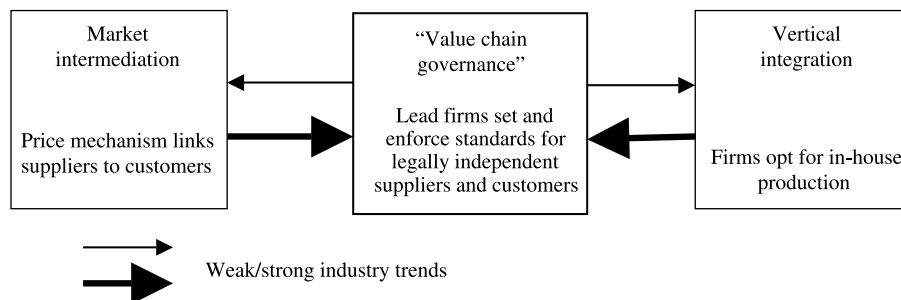
need to induce their business partners upstream and downstream to adapt their processes accordingly (Kaplinsky, 2001: 14). Second, increasing competitive pressure forces them to reduce costs, not only in their own operations but in all external activities upstream and downstream which impact on the overall cost of the final product. Third, consumers increasingly demand that quality and other attributes – including intangible aspects such as ‘organically grown’ which are not discernible in the product – can be proven. This requires the ability to assure attributes throughout the process and to trace orders back to the individual input suppliers.

Hence there is an overall shift away from vertical integration *and* away from arm’s-length transactions towards value chain governance – albeit certain obvious exceptions do occur (Figure 1). By and large, the empirical evidence suggests that in an increasing number of situations value chain governance without direct ownership control seems to be the best way of dealing with the trade-off between cost and control.²

There is a wide array of governance structures between spontaneous market intermediation and vertical integration. All of them imply the transmission of information on markets and standards and incentives along the value chain and some non-market mechanisms to coordinate production and assure certain parameters. Nevertheless, the intensity of interference by lead firms, the degree of formalisation of contracts, the power relations, the distribution of gains and risks among cooperating firms and other characteristics vary greatly. As will be shown later, these differences matter a great deal for development processes.

The challenge is therefore to understand the rationale that drives lead firms to choose one or another pattern of industrial organisation, and to be able to predict at least roughly how changes in incentives systems influence their decision-making. Unfortunately, a comprehensive analytical framework that allows us to categorise different forms of value chain governance and to explain in what conditions firms opt for one or another form of value chain governance is not yet available (Gibbon and Ponte, 2005: 94). Whereas the make-or-buy question – that is, the question under what conditions firms prefer vertical integration over market transaction – has

FIGURE 1
INCREASING RELEVANCE OF VALUE CHAIN GOVERNANCE



been debated for several decades, the question when external inputs are procured via anonymous markets and when firms see the need to invest in explicit coordination, or value chain governance, has received much less attention. One notable exception is Gereffi, Humphrey and Sturgeon (2005) who distinguish three types of value chain governance between market coordination and vertical integration and discuss under which conditions these types can be expected to arise:

- *Modular value chains* arise where suppliers are highly competent and it is possible to codify transactions. Suppliers make products to a customer's specifications and take full responsibility for producing certain stages in the value chain.
- *Relational value chains* are likely to be built up when it is difficult to codify the trade relation, which accentuates Williamson's 'contractual dilemma'. With complex interactions and highly incomplete contracts, inter-firm relations need to build to a considerable degree on trust and reputation. Relational value chains are also characterised by mutual interdependence and high levels of asset specificity.
- In *captive value chains* suppliers face high costs of switching to other customers, mainly due to relation-specific investments. They thus depend heavily on the lead firm. Furthermore, captive suppliers are assumed to have generally limited capabilities, and lead firms often interfere strongly in their operations.

According to the authors, three factors determine the lead firm's choice between one of these types: the complexity of information required for a transaction; the extent to which information can be codified; and the available capabilities in the supply-base.

Gereffi et al.'s 'theory of value chain governance' provides a useful typology and identifies some of the most important determinants of different forms of value chain governance. However, it omits several other important factors which likewise influence outsourcing and the degree of explicit value chain governance, such as the extent of market uncertainty, incentives to spread risks, consumer demands and the institutional environment which may make transactions more or less costly. The following discussion provides a more complete picture of the factors which determine (a) whether firms opt for vertical integration or external supply, and (b) whether external supply relies on arm's-length market coordination or tighter forms of explicit, non-market management:

1. *Core competences and complementarity of production.* Firms aim to build exceptional competences in order to gain innovation rents. These can only be sustained as long as competitors are unable to replicate the respective products or processes, enter the respective market and bid the extra profit away. Whether firms can generate and retain innovation rents depends on their ability to develop new technologies and skills and come up with new and superior combinations of production factors before competitors catch up. This calls for specialisation on those competences that differentiate the firm from any other

similar business. Hence there is an incentive (a) to outsource non-core activities; and (b) to avoid any leakage of core competences to suppliers. If there is a substantial risk that core competences may seep through to supply chain partners, then firms may prefer to produce in-house or, at least, to limit cooperation to a few trustworthy partners and restrict information flows. Unique core competences on the side of the supplier which have a strategic value for customers increase the supplier's bargaining position in the inter-firm relation.

2. *Supplier capabilities.* The availability of competent suppliers influences whether and to what degree lead firms outsource and to what extent they interfere in the production process of their business partners. The lack of competent suppliers seems to be the most important single factor that explains the weakness of value chain integration in developing countries. As a result, companies in locations with a weak entrepreneurial structure tend to be more vertically integrated. Supplier capabilities not only impact on the make-or-buy decision but also on the degree of lead firm interference in the supply base. The more competitive and reliable local partners are, the less lead firms need to interfere in order to ensure continuous high-quality supplies.
3. *Relationship-specific investments.* Firms often need to make specific investments in order to engage in or extend a certain trading relationship. Such relationship-specific investments are risky, as they are susceptible to ex-post bargaining and contractual problems. The problem is that once made, specific investments have a value in alternative uses that is less than the value in the use originally intended (Joskow, 2003: 6). Switching to other trading partners consequently involves an extra-cost. The established customer for whom the relationship-specific investment was made will usually be aware of the fact that the investment ties the supplier to him and may take advantage of this dependency to bargain better contractual conditions. As a result, relationship-specific investments have four effects on value chain relations. First, they strengthen the bargaining power of the party which has not incurred such investments. Second, they favour vertical integration because potential suppliers may not be willing to become dependent on their customers. Third, trust and reputation need to be built to safeguard against opportunistic behaviour. And fourth, specific investments erect entry barriers for newcomers because they enable the supplier to produce at lower cost than potential competitors who have not yet made these investments.
4. *Complexity of transactions.* The more complex a trade relation is, the higher are, *ceteris paribus*, the transaction costs. High transaction costs make in-house production relatively more profitable, under the assumption that hierarchical coordination within the firm avoids certain search and bargaining costs. However, different forms of value chain governance are an alternative to vertical integration when specialisation gains offset high transaction costs. In any case, it is unlikely that firms opt for arm's-length relations when transactions are complex.

5. *Extent to which transactions can be codified.* Not all properties of products and processes can easily be codified. The less this is possible, the higher the costs of writing, monitoring and enforcing contracts. Products and processes which require tacit knowledge thus tend to be kept in-house. If firms nevertheless decide to outsource such products or processes because the gain from outsourcing is greater than the costs of dealing with complex transactions, then they will usually require a high degree of explicit coordination to ensure frictionless supply.
6. *Market transparency and search costs.* Lack of market transparency may involve substantial costs to search for appropriate suppliers. Particularly foreign investors who are not familiar with the local business environment may find it difficult to identify and, more importantly, assess the reliability of local suppliers.
7. *Uncertainty about market development.* Market volatility may impact on make-or-buy decisions in different ways. If the availability of *inputs* is uncertain this creates an incentive for backward integration, assuming that in-house production helps to hedge against fluctuations in input availability and prices. On the other hand, if *output* markets are subject to strong fluctuations, producers tend to avoid investments in fixed assets, or at least limit their in-house capacities so as to satisfy high probability demand by themselves, and pass the low probability demand on to contractors (Carlton, 1979: 207). At the same time they may try to tie suppliers to them in order to be able to access sufficient supplies in case the market picks up again.
8. *The market structure.* Patterns of value chain organisation also depend on the level of concentration at different stages of the chain. On the one hand, a high number of small dispersed suppliers increases the transaction costs of procurement and creates an incentive to produce in-house or to support concentration processes among suppliers. On the other hand, concentration affects power relations and thus the distribution of gains and risks. In the most frequent case, buyer power is concentrated, whereas the level of competition among producers is high, thus situating the buyers in an advantageous position. The opposite situation of scarce supply is less common, but may occur for example for reasons of seasonality or crop failure in agricultural products.
9. *Institutional framework conditions.* Business transactions are highly dependent on institutional framework conditions. Both formal and informal institutions especially help to contain the opportunistic behaviour of contractual partners which may result from incomplete contracts. Among the formal institutions, commercial law, regulations on property rights, public standard-setting and verification bodies, and the tax system are highly relevant for the sourcing behaviour of firms. For example, restrictions on individual land ownership may render large-scale crop production impossible and therefore oblige lead firms to contract out production. The tax system may benefit or hinder supply chain relations, depending on whether it is based on sales taxes which are levied on

the basis of total turnover or value-added taxes. Sales taxes do not allow for deduction of taxes which have already been paid at the previous stage of the value chain. Value-added taxes are thus more conducive to inter-firm specialisation. In addition to the mere existence of formal rules, enforcement matters. Weak enforcement of property rights may prevent lead firms from outsourcing, given the inherent risk of illegal copying and other opportunistic behaviour. Furthermore, informal institutions, like trust, are often important substitutes for formal contracts, or at least lower transaction costs significantly in case of incomplete contracts. Strong social bonds are especially important in countries where the judicial system is unreliable and in cases of incomplete contracts.

10. *Capital intensity and the cost of capital.* If an activity requires considerable investments, buyers often prefer to source from independent suppliers. This allows them to operate at a larger scale without having to bear the related capital costs (e.g. of agricultural land). Outsourcing also enables the buyer to shift other capital costs (e.g. of warehousing) to their suppliers. The common practice to pay for inputs with several months of delay also serves the same aim. Thus it can be assumed that a high cost of capital works as an incentive for outsourcing.
11. *Consumer demand.* Consumers increasingly exert pressure on enterprises to comply with certain product and process standards with regard to social, environmental and safety standards. Especially companies which derive much of their profit from branded products depend on a positive brand image and thus cannot afford negative publicity. Some of the required standards need to be proven throughout the entire value chain. A high degree of explicit coordination is usually required to ensure compliance and to be able to trace charges back to their origin. Corporate Social Responsibility programmes serve to improve the profile of companies as good corporate citizens and to show commitment with the social development of the corporation's host country or region. Depending on the vulnerability towards critical consumerism and the corporate philosophy, lead firms may be more or less committed to different standards, and they may use different combinations of pressure and support to enforce these standards throughout their supply chain.

In sum, make-or-buy decisions and the choice of the optimal degree of ownership and process control depend on many aspects, are highly context-specific and fraught with trade-offs. As a result, firms adopt very diverse strategies depending on characteristics of the sub-sector, geographic factors, corporate strategy and other factors. This makes it difficult to categorise patterns of value chain governance, and even more complicated to predict how firms may react to specific changes in their incentive system. The typology proposed by Gereffi et al. is helpful as it highlights the differing degree of power asymmetries in value chains. However, it suggests certain combinations of characteristics which are not imperative (e.g. captive suppliers need not be less capable than other types

of suppliers). Captive relations mainly result from relation-specific investments. Hence highly capable and specialised second-tier auto parts suppliers may produce under more captive relations than relational producers in the garment industry. Likewise, the model suggests that relational relationships are less suitable for transactions which are easy to codify and require lower supplier capability than captive relations. Yet again, this need not be the case. Lead firms may opt for relational value chains because they are keen to avoid being associated with exploitative supplier relations, or because they want to retain the flexibility to source from different groups of suppliers, even if transactions are of the 'easy to codify/low supplier capability' type. It should also be noted that one single value chain may entail different types of governance at different stages of the production process.³

HOW DO DIFFERENT FORMS OF VALUE CHAIN GOVERNANCE IMPACT ON DEVELOPMENT?

The previous section discussed the pros and cons of different patterns of value chain organisation from the standpoint of an individual firm, especially a lead firm that takes relevant make-or-buy decisions. The most efficient outcome for that firm, however, need not be the most beneficial one for society at large. The individual firm may for example take measures to impede competition in order to keep consumer prices high and appropriate monopoly rents. It may abuse its market power to squeeze the margins of firms upstream and downstream in the value chain. It may try to protect its core competences avoiding any kind of knowledge transfer towards local firms. All this constrains economic and social development.

This section shows the multiple ways by which different patterns of value chain governance positively or negatively affect different groups of society in developing countries. Changes in governance patterns always affect different societal actors and entail some rather complex trade-offs. In order to assess the overall impact of different governance patterns on public welfare it is therefore important to look not only at the bilateral relationship between a single purchasing firm and its suppliers, as most available value chain studies do, but to also take the effects on consumers and competitors as well as the government's tax revenues from value chain activities into account.

A basic framework for the analysis of these development impacts is proposed in Table 1. The following sub-sections elaborate on each of the items addressed in the table. The framework provides a relatively complete picture of potential development effects of changes in value chain governance, and it helps to systematically disclose trade-offs between these dimensions. This is important to assess the likely impacts of policy interventions and to anticipate unintended side-effects. Given the qualitative nature of many changes, however, it is NOT possible to measure impacts exactly. It is also impossible to clearly attribute certain dimensions of development, e.g. the degree of social inclusion or the level of public revenues, to specific forms of industrial organisation. Only in some cases is it possible to make assumptions in this regard – for example it is quite likely that modular and relational suppliers are in a better position to bargain for higher selling

TABLE 1
 POTENTIAL DEVELOPMENT EFFECTS OF MAIN CHANGES IN VALUE CHAIN GOVERNANCE

Dimensions of development	Main potential development effects
Domestic consumer prices and quality of supply	<p>Prices tend to come down and supply tends to improve when lead firms foster more efficient production and encourage concentration.</p> <p>Risk of increasing prices and low quality where lead firms restrict competition and appropriate monopoly rents.</p>
Entry barriers and opportunities for inclusion	<p>Value chains become more exclusive as small-scale producers fail to meet rising scale and standards requirements.</p> <p>Established suppliers may benefit from barriers that prevent entry of new competitors.</p>
Income generation and distribution	<p>Lead firms squeeze margins of their suppliers, leading to lower wages and profits. Crowding out of less efficient suppliers provokes job losses.</p> <p>For those who manage to access global value chains or benefit from domestic concentration processes, increasing scales may more than compensate lower margins.</p>
Allocation of risks	<p>Stable inter-firm relations smoothen [] income flows and reduce investment risks compared to arms-length trade.</p> <p>Access to new value chains and markets diversifies risks.</p> <p>Incompleteness of contracts and information asymmetries give rise to opportunistic behaviour. Especially relationship-investments imply risks.</p> <p>Risks for lead firms arise from supplier failure and leakage of core capabilities.</p>
Learning and upgrading	<p>Trade links with lead firms enable partners to access cutting-edge technologies.</p> <p>Some lead firms transfer know-how that increases supply chain efficiency.</p> <p>Dependence on lead firms may restrict upgrading where it challenges the lead firm's core competence.</p>

Table 1 – *Continued*

Dimensions of development	Main potential development effects
Public revenues	<p>Increased turnover may raise government revenues.</p> <p>Enhanced competitiveness raises sustainability of tax base.</p> <p>Value chain integration may encourage formalisation of small enterprises, thereby broadening the tax base.</p> <p>Crowding out of traditional producers and concentration processes may reduce tax base.</p> <p>Increased bargaining power of lead firms may lead to tax exemptions and subsidies.</p>
Long-term competitiveness	<p>Consolidated value chains in developing countries are more likely to be sustainable in global competition.</p> <p>Take-over of domestic chains by global lead firms may undermine domestic learning processes.</p>

Source: own compilation.

prices than captive suppliers, whereas captive suppliers will usually receive more support from lead firms. But universally valid statements about how the two-fold shift from vertical integration and from market-based industrial organisation towards intermediate forms of value chain governance affects different aspects of development cannot be made.

Domestic Consumer Prices and Quality of Supply

Despite the fact that the value chain debate is focused on *global* chains, most value chains in developing countries serve domestic consumers. This applies to chains which are dominated by local firms as well as for those where market-seeking transnationals act as lead firms. How different forms of industrial organisation impact on the availability, quality and price of products is therefore a development issue, especially if goods are concerned which have a substantial share in the basket of goods of poor households. Even where value chains are largely export-oriented, production often affects domestic consumers indirectly, for example when export-oriented firms compete with local producers for inputs, or when they dump surplus production on the local market.

Policies which aim at protecting national value chains put a burden on local consumers if the protected industries perform worse than competitors. Direct trade restrictions as well as trade-related investment measures, such as local-content provisions and market reservation for small firms, entail a risk. Conversely, globalisation of value chains may be assumed to improve supply and bring consumer

prices down because it increases competition and allows firms to exploit economies of scale and source inputs at lower costs.

It should be noted that lower consumer prices and improved supply will only materialise if other restrictions on competition are also removed. Vertical integration as well as non-equity forms of lead firm interference in the value chain can lead to the foreclosure of competition in upstream or downstream markets and monopolistic pricing by the remaining firms (e.g. Hart and Tirole, 1990). Price effects thus depend on the way value chain governance influences the degree of competition at different stages of the chain.

The trade-off between protecting domestic producers and bringing consumer prices down is far from trivial. In some cases, the penetration of imports or foreign investment, for example in the form of globalised retail chains, has resulted in dramatic displacement of local retailers and their small-scale suppliers, with the corresponding job losses, while consumers have gained from better supply and abatements (Reardon and Berdegué, 2002). Policy-makers thus need to carefully balance producer and consumer interests. In doing so it is important to adopt a dynamic perspective that takes long-term trends of structural change, present and potential future competitive advantages, and learning opportunities of domestic producers into account.

Entry Barriers and Opportunities for Inclusion

Empirical evidence demonstrates that industry trends in general (such as concentration processes and trade liberalisation) and the shift towards governed value chains in particular, tend to raise entry barriers for new entrants and to crowd out less efficient firms. Four main reasons can be identified: first, increasing liberalisation of domestic markets enhances the importance of economies of scale. This leads to concentration at various levels of the chain. The most striking recent development in this regard is the rise of supermarkets in developing countries which again triggered concentration processes at the wholesalers' level and among producers (Reardon, 2005). Second, consumers demand compliance with increasingly sophisticated social, environmental, food safety and other standards. In order to verify compliance, information and traceability systems need to be in place, and firms have to bear substantial documentation and certification costs. Both the technical challenges and the costs of compliance may be prohibitive, especially for poor producers (see Henson and Jaffee in this Special Issue). Third, firms which participate in established value chains try to erect entry barriers to keep competitors out and obtain rents. This is being achieved through strategies of product differentiation, the introduction of brand names, and private standards. And, fourth, the more interfaces there are between firms, and the more multifarious the information that needs to be handled, the more sophisticated are the necessary logistics systems. These often entail considerable investments in transport equipment, cold storage facilities, Enterprise Resource Planning software, and the like (Weitz and Altenburg, 2001: 22 ff.).

On the positive side, the shift from vertically integrated production to different outsourcing models opens up new market channels for small independent producers

from developing countries. Contract farming with smallholders is a good example (see Stamm et al., 2006). Some value chains even guarantee exclusive rights to certain deprived producer groups, such as Fairtrade or regional labels ('Colombian Highland Coffee'). It seems quite unlikely, however, that these new market opportunities will be able to compensate for other trends in markets for mainstream products – rising scale and standards requirements – which tend to marginalise poor producer groups.

Income Generation and Distribution

One of the key development effects of value chains consists in their capacity to generate new income opportunities and to raise productivity and consequently profits and wages. The value chain perspective allows us to distinguish five options to increase profits. Firms may:

- increase the volume of sales, either by tapping into new markets, or selling at higher prices, or increasing their market share;
- increase productivity within the boundaries of the own firm;
- induce cost reduction in other firms upstream and downstream in the value chain;
- lower transaction costs within the supply chain;
- appropriate a larger share of the overall gains at the expense of firms upstream or downstream in the chain.

Assuming value chains with transnational lead firms and subordinate developing country firms it is important to recognise that some of these options create win-win situations whereas others may lead to shrinking margins, in all likelihood of the weaker firms in developing countries. This distinction is crucial for the design of policy interventions aimed at increasing the benefits from value chains in developing countries.

Firms in developing countries gain when new markets are opened up, for example, due to product or marketing innovations, and when productivity gains raise the market shares and sales volume for the respective value chain. Productivity gains may result either from own improvements, from efficiency gains in other firms in the value chain or from improved supply chain logistics. Lead firms play a crucial role in achieving all these improvements. This way firms in developing countries benefit from the lead firm's capability to coordinate their supply chain efficiently and to access new sources of rent.

On the other hand, negative effects prevail if lead firms manage to squeeze the margins of their business partners in developing countries or if they crowd out local producers. Putting pressure on partners upstream and downstream in the chain to reduce their margins is a common practice. Lead firms often manage to shift certain costs (e.g. for warehousing and transport) to their suppliers without raising the purchasing prices accordingly; car manufacturers regularly compel suppliers to disclose their production processes and cost structures, using this information to systematically reduce the supplier's margins; retail companies oblige suppliers to pay shelf-fees, and the like. It should be noted, however, that even a reduction

of margins may in some cases benefit the suppliers if it raises the competitiveness of the entire chain to such an extent that increasing sales more than compensates for decreasing margins.

Whether a value chain turns out to produce a win-win situation or whether lead firms consolidate their position mainly at the expense of subordinate firms depends on the factors laid out in the previous section. Three factors can be assumed to have the greatest impact: the degree of monopsonistic buyer power, the level of supplier capabilities and whether relationship-specific investments are needed. Unfavourable results for subordinate firms are thus most likely to occur in captive chains, where lead firms have a strong position due to monopsonistic market power or relationship-specific investments on the side of the suppliers. Captive suppliers are in an even worse situation if they lack specific capabilities, which means they can easily be substituted and thus have an especially weak bargaining power.

The Allocation of Risks

Well-established supplier relations enable small producers in developing countries to secure steady income flows, thereby reducing investment risks. For firms which have traditionally produced only for the local market, access to global value chains may furthermore create a second market outlet and in that way contribute to the diversification of risks. Due to the incompleteness of contracts (not all contingencies can be anticipated and codified at a reasonable cost), however, both lead firms and their subordinate partners (in most cases suppliers, but also distributors or service franchisees) face risks related to opportunistic behaviour and information asymmetries. In most cases, the risks are especially severe for the subordinate partners who often depend on a single customer. This is of great concern if poor producers are concerned, such as homeworkers, owners and employees of micro-enterprises and the small farm economy.

Risks for *dependent firms* arise as a consequence of information asymmetries. As a strategy for coping with fluctuations in demand, lead firms may invest in in-house capacities to the level where full capacity utilisation is secured and pass the low probability demand on to external suppliers. Or they may fully refrain from own production and encourage more external production than the market usually absorbs. This way they can ensure sufficient supply even for situations of high demand, whereas the risk of oversupply remains with the dependent partners. The latter often cannot judge the viability and risks involved in the business opportunities offered by large buyers. This problem is quite common in agriculture, where not only demand, but also supply conditions are often highly unpredictable due to product seasonality and crop failures. Likewise, fashion cycles in garment and shoe industries are short-lived and changeable, thus creating an incentive for buyers to shift the risk to producers.

The risks increase if the investments made by the supplier have no alternative commercial use, either because they are relationship-specific or because alternative customers are not easily accessible – for example in the case of perishable export-oriented crops in remote regions. Relationship-investments imply a double risk. First, the supplier may lose his investments if the specific customer does not

buy, or will have to sell to a different buyer at a lower price. Second, this one-sided dependence weakens his bargaining power vis-à-vis the customer and may lead to ex-post haggling and deteriorating contract conditions.

Risks may be greater for relational suppliers because the possibility to codify their transactions is low, and contracts are therefore highly incomplete and susceptible to ex-post bargaining. Trust relations are of particular importance to minimise the risks of this kind of relationship. Risks for the *lead firm* result from the possibility of supplier failure, especially if contracts cannot be enforced due to a weak judiciary or prohibitive transaction costs involved in dealing with many small-scale suppliers. Furthermore, when lead firms invest in supplier upgrading (e.g. training, certification) which is not relation-specific, it is uncertain to what extent the lead firm can appropriate the benefits of these improvements. Improved supplier efficiency may even be appropriated by competitors who free-ride on the lead firm's investments in supplier development. These risks are especially high in relational and modular value chains, where buyers and sellers are only loosely connected, whereas captive relationships are appropriate to reduce these risks. Finally, business partners may take advantage of inter-firm linkages to copy the lead firm's core capabilities in terms of technology or market access. This risk is greater when buyers and sellers frequently exchange information, which may be the case in all forms of value chain governance. Vertical integration or arm's-length trade would be the alternatives to reduce this risk. Again, this risk increases with weak institutional environments which cannot ensure the protection and enforcement of intellectual property rights.

Learning and Upgrading

Integration in value chains, especially those producing for demanding markets, often provides access to considerable stocks of knowledge and may help to build new competitive advantages. It has been shown that production processes become ever more demanding in terms of product quality, efficiency of product flows, labour, environmental, and other standards. Lead firms, especially brand owners, have a strong interest in ensuring high standards in order to maintain and improve their reputation. To confront this challenge, they have to either integrate vertically or engage in explicit value chain coordination. Arm's-length trade cannot ensure compliance unless standards are fully codified and can be certified by reliable service providers.

Value chain governance entails the transmission of information on relevant parameters of production combined with pressure on – and in some cases support for – business partners to meet the necessary standards. Three main learning mechanisms may be distinguished:

1. Learning through increased pressure.
2. Learning via deliberate knowledge transfer from lead firms.
3. Learning from unintended knowledge-spillovers.

When the required products or services can be sourced from competent firms, then lead firms will just specify the necessary parameters. They are unlikely

to incur costs of training and advisory of partners unless this is indispensable. In many cases it is not even necessary to verify compliance with the required standards because this will be handled by independent service providers paid for by the interested business partners. Nevertheless the sheer fact that lead firms demand higher standards and exert *pressure* to produce more cost-effectively often triggers substantial process improvements. This is especially the case if lead firms commit their suppliers to institutionalise learning routines, such as Statistical Process Control and Continuous Improvement Programmes (Altenburg et al., 1998: 40).

Lead firms will usually only engage in *deliberate knowledge transfer* to the benefit of their value chain partners if several conditions are met:⁴

1. The required product is currently unavailable.
2. Vertical integration is not efficient.
3. The lead firm has relevant expertise to offer. This cannot be taken for granted. Outsourcing usually occurs because firms want to specialise in their core competences (e.g. product development or marketing) and get rid of activities where they do not have specific advantages (e.g. manufacturing). As a consequence, lead firms often do not have superior competences in their supplier's main business. Some firms however engage in the transfer of generic know-how relating to aspects such as quality management, hygiene or logistics (Altenburg et al., 1998: 41).
4. The lead firm is able to appropriate the gains of its investment in knowledge transfer. This is most clearly the case in captive chains where relation-specific investments or contracts tie the supplier to the customer. Knowledge transfer in relational and modular value chains, in contrast, may ultimately benefit competitors as much as the own firm. Captive relationships, which are less desirable for suppliers because of the high degree of dependence from the lead firm, may therefore be more attractive in terms of accessing knowledge from the lead firm.
5. There is no risk that the supported partner upgrades to the extent that he can challenge the lead firm's competitive advantage. The lead firms may thus be interested in supporting the efficiency of suppliers within their currently performed complementary activities, but will do everything to avoid them to become competitors in the own field of expertise.

In sum, deliberate know-how transfer, for example in the form of corporate supplier development programmes, is by no means common practice. Even if all the conditions are satisfied, support from the lead firm will usually be limited in time until the suppliers have obtained the required capabilities or service providers have emerged who can take over the respective services on a commercial basis. In that case lead firms are likely to loosen the degree of interference in the value chain.

A number of empirical studies have pointed to the fact that lead firms pursue very different strategies with regard to technology transfer. This depends on several external factors, including characteristics of sectors, markets and the institutional framework, but also differences in the corporate culture. Moran (1999: 59ff.) for example shows how Asian subsidiaries of American, European and Japanese electronics companies pursue different sourcing and cooperation strategies which reflect features of the business culture in their respective home countries.

It should also be noted that certain knowledge transfers occur as *unintended side-effects* of cooperation. This is the case, for example, if innovative models of value chain governance are copied by local competitors. One example is the model of American fast-food franchises that served as a role model for domestic franchises in Asia (Chong and Goh, 1997: 52). Schmitz (in this issue) shows how producers who operate both in global and local value chains transfer experiences from one chain to the other. Research in Honduras shows that garment manufacturers who traditionally produced for the local market later engaged in export-oriented value chains where they learned to handle improved production flows and factory layouts. These new techniques of industrial organisation were then transferred to the old production plants which still produce for local demand (Altenburg, 1995). Suppliers in modular and relational chains have better prospects for this kind of learning because they tend to operate with different lead firms in different markets.

Government Revenues

Developing countries must be able to raise the revenues required to finance the services demanded by their citizens and the infrastructure that will enable them to escape poverty. Changes in industrial organisation as well as government policies aimed to strengthen value chains may have positive or negative effects on government revenues. Competitive value chains with a high local content generate economic growth and thereby additional taxable incomes. Contrariwise, the tax base will be reduced if the emergence of new patterns of value chain organisation substitutes traditional forms of production and destroys jobs.

Some countries use generous fiscal incentives to attract lead firms in key industries which are expected to induce secondary investments in upstream and/or downstream activities. This practice is particularly common in the automobile, semiconductor and steel industries. Typical incentives are a reduction of standard income tax rates, tax holidays, accelerated depreciation, investment/reinvestment allowances and deductions from social security contributions. Brazil for example offered an incentive package worth US\$133,000 per job created for Renault and US\$340,000 for Mercedes Benz, while India paid US\$420,000 in incentives per job to Ford (Mytelka and Barclay, 2004: 534). Such subsidies can only be justified if substantial improvements in terms of competitiveness and inclusiveness of the respective value chains can be expected. In any case it is essential to take effects on government revenues into consideration.

Long-term Competitiveness

The previous sub-sections provided an overview of different and closely interrelated development effects of different patterns of value chain governance. In appraising these development effects, the aspect of sustainability needs to be considered. Value chains must be competitive in order to sustain the incomes of producers at different stages, absorb more labour, reinvest in upgrading, ensure stable government revenues, etc. Although it is not possible to make universally valid judgements about the competitiveness of different forms of industrial organisation, the empirical trends suggest that in many sectors value chain governance seems to be superior to both markets and hierarchies.

However, obvious trade-offs exist between appropriating short-term benefits and ensuring long-term competitiveness. Suppliers for example have an incentive to negotiate more favourable purchasing prices and gain an increasing share of the value chain's overall profits. This increases income effects immediately and will in most cases render the income structure more equitable. Yet it may increase the price level of the final product and possibly lead to diminishing market shares. Conversely, cost reduction makes the chain more competitive but is often achieved at the expenses of the margins of suppliers. Increasing sales, however, may offset this effect and bring about higher profits despite lower margins. Similar trade-offs often exist between the policy goals of integrating poor and less efficient producers, increasing social and environmental standards, and raising government revenues on the one hand, and ensuring long-term competitiveness on the other.

Such interrelations become more important as competition increasingly takes place between value chains rather than between individual companies. The competitiveness of firms is increasingly contingent upon being embedded in a production system with competent corporate and institutional partners and being able to coordinate upstream and downstream relationships more efficiently than competitors do. Vertical integration as well as value chain governance with strong lead firm interference (especially in captive chains) may in extreme cases result in the foreclosure of competition in upstream or downstream markets. This may slow innovations down and thereby jeopardise long-term competitiveness. Relational and modular chains are often characterised by more symmetrical power distribution and thus less risk of anti-competitive behaviour.

CHALLENGES FOR NATIONAL POLICY-MAKERS AND DEVELOPMENT AGENCIES

The previous section has made clear how the shift towards new forms of industrial organisation affects the opportunities of poor countries in the global economy in many ways. Captive, relational and modular governance patterns have different development effects, although the concrete outcomes depend on many superposed factors. The desire to make value chains more socially inclusive and to strengthen the competitiveness, profits and wages in those activities which are carried out in developing countries thus ranks high on the agenda of policy-makers.

It has also been shown, however, that value chains are complex systems with manifold implications for development processes. Value chains entail many stakeholders with partly rivalling interests and asymmetric power relations. Furthermore, stakeholder constellations and negotiation processes vary significantly between different economic activities. All this makes it difficult to define clear policy targets and prioritise development action. The following section identifies some general challenges for policy-makers which result from the complexity of governance patterns in value chains. More specific instruments for pro-poor value chain development have been laid out elsewhere (see e.g. Altenburg, 2000; 2006).

Recognising and Dealing with Trade-offs and Conflicts of Interests

The previous analysis revealed a multiplicity of trade-offs, for example between:

- the need to exploit economies of scale and the inclusion of small-scale producers;
- the aim of increasing the profits and wages of local stakeholders and the need for cost reduction;
- maximising the incomes of local producers and keeping domestic consumer prices low;
- trade and investment liberalisation as a driver of competition and innovation and the need to protect less efficient producer groups.

Consequently, causal relationships between targeted policy interventions and impacts are highly complex, and any intervention will necessarily have unintended or even undesired side-effects. For example, well-intended measures to protect domestic producers may lead to severe inefficiencies undermining the long-term competitiveness of the respective sector and driving up domestic consumer prices. In the same vein, encouraging farmers and small enterprises to undertake relation-specific investments in order to engage in contract farming or manufacturing may put their families' livelihood at risk.

Furthermore, the political economy of value chains needs to be understood. Different patterns of value chain governance always imply diverse interests of the actors involved and specific power constellations. Value chain governance is about the distribution of rents, market foreclosure and opportunistic behaviour, and organisational changes will always produce winners and losers. It is thus much more than a purely technical matter of coordination. In their effort to promote value chain linkages, national policy-makers as well as development agencies tend to underestimate the conflicts of interests inherent in value chain promotion. Supplier development and partnership programmes often assume the prevalence of win-win situations and therefore promote vertical inter-firm relations and multi-stakeholder initiatives without addressing potential areas of conflict. In particular, two common assumptions need to be scrutinised.

First, that the interests of lead firms and their upstream and downstream partners coincide to a large extent. Lead firms have common interests with their suppliers as far as the overall efficiency of the supply chain is concerned, but they pursue different interests when it comes to negotiating quality standards, purchasing prices, terms

of payment and contractual obligations, in sum: the distribution of rents and risks. Furthermore, lead firms are interested in fostering competition among suppliers in order to enhance their own bargaining power. In other cases they encourage concentration processes among suppliers in order to keep the number of suppliers manageable and economise on transaction costs. Value chain leaders try to gain monopsonistic market power whereas suppliers are interested in creating competition at the buyer level in order to open up sales alternatives, thereby spreading risks and improving their own bargaining power. Lead firms may support business partners as long as these limit their activity to strictly complementary activities, but they have obvious incentives to prevent them from upgrading to the extent where they may emerge as competitors.

Second, that lead firms' interests largely correspond to those of their host regions. Having reliable low-cost and high-quality partners nearby benefits the lead firm, given that transport and transaction costs tend to be lower, especially if bulky or transaction-cost intensive supplies are concerned (UNCTAD, 2001: 129). This creates an incentive for lead firms to strengthen the local business community. In other cases, however, when transport costs are insignificant and goods or services highly standardised, proximity matters less. Buyers then prefer sourcing from the most competitive supplier worldwide, even if this means crowding out competitors in the host region. Schmitz (2004) documents a number of case studies where local clusters disintegrate as a result of global sourcing. Local firms and other stakeholders in contrast are interested in increasing the local content of value chains.

All this underlines the importance for policy-makers of understanding how value chains are coordinated, what the rules of the game are, who takes the relevant decisions and what these imply for the inclusion or exclusion of subordinate trading partners, their opportunities for technological learning, and the distribution of rents and risks. Kaplinsky and Morris (2000) and McCormick and Schmitz (2002) as well as several donor agencies⁵ have recently developed methodologies for value chain analysis which aim to identify entry points for policy interventions. These map the physical flow of commodities along the chain, the number of producers and output values at different stages of value chains, export market potentials, the regional spread of value chains, inter-firm cooperation, production efficiency, etc. Mapping of value chains helps to visualise value chain linkages but tells us relatively little about what the best available alternatives are with regard to social inclusion, income generation, learning and upgrading, about the distribution of gains and risks, and what needs to be done to ensure long-term competitiveness. Hence there is a need to develop proxies of these variables.

Some General Guidelines for Policy-makers

How, then, should interventions be designed? Given the complexity and difficulty in understanding causal relationships and predicting the impact of specific interventions, how can policy-makers enhance the competitiveness and inclusiveness of value chains without creating new distortions and provoking undesired side-effects? Three general guidelines for policy-makers can be derived from the above analysis:

First, policy-makers should pay more attention to generic policies aimed at bringing transaction costs down. When investors take make-or-buy decisions, they face a trade-off between lower costs of production and increasing transaction costs. In countries with weak contract enforcement, pervasive corruption, cumbersome bureaucratic procedures, multiple barriers to trade and poor infrastructure it is difficult to capitalise on the benefits of inter-firm specialisation. Contract risks as well as high transport and coordination cost all shift the balance towards vertical integration. If, for example, property rights are not guaranteed or contracts cannot be enforced due to deficiencies in the legal system, entrepreneurs will reduce inter-firm transactions as far as possible. In contrast, if investors are reasonably protected and courts work comparatively well, it is less risky to outsource production. In addition, unnecessary bureaucratic procedures and high administrative costs for the registration of small business may exclude the poor from doing business or induce them to stay informal which makes it difficult to take up business linkages with formal sector enterprises (World Bank/IFC, 2006). In general terms, 'thick' markets, with many participants and open trade relationships, reduce transaction costs (Pirrong, 1993). Setting up efficient standards, testing, and quality assurance systems, homogenising standards, and supplementary capacity-building for compliance are other key interventions for achieving lower transaction costs. All these generic policies are less distorting than targeted interventions to support individual value chains or economic sub-sectors. In addition, they reduce transaction costs throughout the entire economy and thus have much greater outreach.

Second, due to pervasive market failures in value chain organisation, sub-sector or even chain-specific interventions are nevertheless often justified. Market failure results from the fact that value chain governance by definition relies on asymmetric power relations that are fraught with information asymmetries, opportunistic behaviour and market foreclosure. This calls for corrective measures. The public sector and donor agencies may for example help to organise poor producers, provide them with finance and guarantee instruments, encourage technology transfer, build up specific infrastructure, and plead for socially exclusive private standards. The more policy intervenes in specific micro-level activity, however, the more increases the risk of undesired distortions, given that causal relationships are so complex and outcomes unpredictable. The point is by no means to rule out specific interventions altogether. Such interventions should be based on a comprehensive value chain analysis that takes the multiple potential outcomes of value chain governance into account. Moreover, they should be designed as participatory and open-ended policy processes in order to minimise negative spillovers. Consultation processes should for example integrate not only lead firms and their local business partners, but also other stakeholders, e.g. consumers, community organisations, labour organisations, and business organisations which bring in the perspective of competitors. Impact monitoring and proper feedback loops with the planning process help to continuously improve interventions and limit the risk of distortions.

Third, policies should actively involve lead firms and other change agents in the design and implementation of policies. The concept of value chain

governance highlights the prominent role of certain governance actors who set and/or enforce the parameters under which others in the chain operate. These are first of all the lead firms, but also some parties who are external to the value chain, such as public and private standard-setting bodies and policy institutions. Changes in the setup and performance of value chains accordingly depend to a high degree on these actors. They are the ones who are in command of technologies or brand names, control access to important markets, set sector-wide, or at least chain-wide, standards and influence other barriers to entry, and who select and sometimes support partner firms. Public programmes to promote the economy, and especially SME policy, should therefore involve lead firms in the programme design and establish partnerships with them. Matching grant funds and other forms of partnering with lead firms may help to resolve a broad range of development issues, e.g. to develop new markets for local products, to establish sector-wide labour and environmental standards and to develop local suppliers. Traditional programmes where government institutions provide the technologies or training courses *they* consider to be relevant, and where bureaucrats choose the candidates to take part in support programmes, often have a poor record, especially when their aim is to develop a national supplier base for international firms.⁶ However, partnerships with the private sector make sense only if the public contribution triggers an *additional* development impact that goes beyond the impact that the lead firm – in pursuance of its own interests – would have had anyhow, or that it is legally obliged to comply with.

NOTES

1. It should be considered, however, that transaction cost theory presupposes a rational choice between the advantages/disadvantages of internalising and the advantages/disadvantages of using the market. Yet in practice firms never possess all the necessary information to make this rational choice. Strategies therefore tend to evolve through historical precedent and custom.
2. See the case studies from very different activities in Gereffi and Korzeniewicz (1994); Gibbon and Ponte (2005); and in this Special Issue.
3. Gibbon and Ponte (2005: 78ff.) offer a more detailed critical discussion of Gereffi et al.'s approach.
4. See also Humphrey in this Special Issue.
5. E.g. The World Bank, FAO, ILO, GTZ and USAID. See Altenburg (2006) for an overview.
6. Cf. Altenburg et al. (1998: 84ff.) for the case of supplier development policies in Mexico. See also Battat, Frank and Shen (1996).

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