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Gender and agricultural value chains – a review of current knowledge and practice and their policy implications¹

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Abstract: This paper introduces value chain analysis and development as tools for addressing gender inequities in markets. We describe how factors such as access to assets, gendered education differentials and the nature and value of economic activities affect the way in which men and women participate and gain in value chains, distinguishing among household, institutional and chain levels of analysis. Current empirical evidence for the role of upgrading in value chains in impacting gender inequities in markets is weakened by our as yet imperfect understanding of the issues. However, horizontal coordination can reduce gender-related disparities in bargaining and management power as a precursor to stronger vertical relationships. Improvements in processes, products and functional distribution in value chains can improve chain-level outcomes leading to women's empowerment and, ultimately, to improved household poverty outcomes. However, this progression from positive impacts to desirable outcomes is not a given and depends on often complex context-specific socio-cultural norms. In particular, the benefits of women's participation in agricultural value chains are determined by their control of productive resources and household level decisions. Where both sexes play a role in decision making generic interventions, or even those applied to men only, can benefit both sexes. Where women do not participate in spending decisions a more gender-specific approach that targets underlying gender issues in households and institutions is required. We illustrate that unsound gender analyses can miss the point, resulting in flawed understanding of the real issues and ineffective or even damaging interventions. We conclude that the universal application of packages of generic 'default' interventions risk doing harm and that upgrading strategies should be applied on a case by case basis and only after a thorough and robust analysis of causal factors. We outline for practitioners what a robust analysis should look like and present a menu of policy options for acting to promote gender equity and reduce poverty using the value chain analysis and development approach.

Keywords: Gender, agricultural value chains, policy, chain upgrading.

JEL: J16, O13, D13, L23

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Introduction

The value chain analysis and development approach, as widely applied to pro-poor economic development, is well suited to addressing gendered market development issues for two reasons. First, it has economic viability and sustainability at its core and aims for win-win outcomes for all participants. Second, it is a strong qualitative diagnostic tool that is capable, if employed skilfully, of identifying critical issues and blockages for specific target groups and then generating robust and effective policies and development strategies.

Value chains, then, are the framework that we employ in this paper to conceptualise the differential interaction of poor rural men and women with agricultural markets. In agricultural value chains, primary actors perform a selection of (primary) functions, which typically include input supply, production, processing, storage, wholesale (including export), retail and consumption. Actors who perform similar functions are regarded as occupying the same functional ‘node’, referred to as, for example, the input supply node, production node, retail node, and so on.

Secondary actors, or ancillary workers, perform (secondary) service roles that support primary functions, such as transportation, brokerage and service processing. As goods are exchanged and transformed they ‘flow downstream’ in a series of transactions that add value and costs to them. The metaphor used is of a stream running from the beginning of a production process downstream towards the final market – the sea.

Interventions to improve the efficiency and equity of the value chain, and thereby maximise the benefits received by its participants, are termed upgrading strategies. They are applied to chain actors and may be typified as follows:

- Process and product upgrading – improving chain efficiency and product quality, for example, the introduction of irrigation to rice paddies (process upgrading, von Braun and Webb, 1989) and the shift to organic cotton production (process and product upgrading, Bassett, 2009).
- Functional upgrading – changing the mix of functions performed, for example, cassava producers adding a primary processing function (table 2, case 1) and shortening the chain by removing intermediaries (USAID, 2006b).
- Horizontal coordination – development of relationships among actors within functional ‘nodes’, for example, formation of new fish traders’ groups (Walker, 2001) and strengthening of producers’ groups (Naved, 2000).
- Vertical coordination – developing relationships among actors between nodes, for example, farming to a contract (Raynolds, 2002) and employer’s development of pension scheme for agri-processing employees (USAID, 2007).
- Chain upgrading – applying existing skills in a new chain, for example, moving from mixed agriculture to fish farming (Naved, 2000).
- ‘Upgrading’ of the enabling environment – not strictly an upgrading strategy, which are applied to actors, but involves changes to policy, law, institutions, support organisations, for example, access to leasehold fish pond ownership and provision of credit services for women in smallholder groups (Naved, 2000) and revision of labour laws in plantations (USAID, 2007).

One of the additional strengths of value chain analysis and development’s holistic approach is its potential for consideration of men and women’s participation at every stage of agricultural

supply chains. For example, from the supply of production inputs to the retail of products that are marketed according to gendered socio-economic characteristics of consumer households.

There is an expanding methodological ‘toolbox’ for gendered value chain analysis providing ‘how to’ guidance for researchers (e.g. McCormick and Schmitz, 2001; Flores and Lindo, 2006; Mayoux and Mackie, 2008, and; Riisgaard et al., 2008). The prevalent approach of comparative gender analysis in value chains is the use of descriptive case studies and the growing literature that describes the gender dynamics in value chains reflects this (e.g. Laven et al., 2009).

However, although much has been written about gender and markets in general (summarised by USAID 2005 and 2006a), there is a paucity of robust empirical evidence for the efficacy of interventions designed to improve gender related outcomes in value chains. To help fill this gap we commissioned seven action research teams in Africa and Asia to identify gender issues² in a variety of natural resource based value chains and then to design, implement and measure the impacts of upgrading strategies on gender outcomes. In addition, we conducted a systematic review and synthesis of literature that describes interventions designed to improve gender related outcomes for rural, poor target groups.

This paper introduces our emerging conceptual framework on gender and value chains and then examines the available empirical evidence to answer the question “what effects does the application of upgrading strategies in value chains have on gender outcomes for the poor in poor regions of developing countries?” We pay particular attention to the way in which robust research and analytical approaches are linked with the generation of interventions and policies that maximise positive gender impacts. Finally, we outline how policy makers and practitioners may act to improve gender equity outcomes in markets using the value chain approach.

For this SOFA paper we focus explicitly upon the productive sectors of agriculture, livestock, forestry and forest products, fisheries, mariculture and aquaculture, hereafter referred to generically as ‘agriculture and fisheries’. We acknowledge that sometimes men – and particularly poor men - are disadvantaged in, and excluded from, value chains but we place particular emphasis on the overwhelmingly more common situation of inequities that disadvantage women.

² This three-year IDRC-funded project, administered by ODI, commissioned southern research teams to research the central question ‘what effects does applying upgrading strategies in value chains have on poverty, environment and gender issues for the poor in lagging rural regions of developing countries?’

The emerging conceptual framework on gender and agricultural and fisheries value chains

The current discourse on gender and value chains, as summarised by Laven et al. (2009), places the economic empowerment of women as a central issue. The authors use Kabeer's (1999) definition of 'empowerment' as "a process by which those who have been denied the ability to make strategic life choices acquire the ability to do so". Kabeer also distinguishes three 'dimensions' of empowerment: a) resources (human, material and social), serving to enhance the ability to make choices and shape one's life; b) agency, "the ability to define one's goals and act upon them", and; c) achievements, the manifestations or outcomes of the different choices, and the different shapes their lives take. Access to these resources, abilities and achievements for men and women is often inequitable.

In the context of value chain development, empowerment may be viewed as the process of reducing inequalities in people's capacity to make choices regarding their manner of participation on two levels. First, not everyone can freely choose to participate in value chains. Second, the extent to which participants gain from their involvement is governed by a complex set of factors, many of which are gender-related.

Gender dynamics in value chains play out along two main axes: first, that of scale, from individual interactions at the household level through clusters of horizontally linked households to the level of the value chain. Second, that of participation related issues versus factors that govern levels of gains from participation.

Each node in a value chain has barriers to entry – prerequisites for a) participation in, and b) competitiveness in a given market. Levels of participation and gains are shaped at the household scale by gendered divisions of labour, time budgets, and decision making, and at the value chain level by differential access chain to functions, services and resources, and by gender related power disparities in chain management.

These gender inequities arise from disparities in access to factors of production and education, from gender disparities inequities in time budgets ('time poverty'), gendered labour markets, and power imbalances or cultural norms that affect participation of individuals in decision making.

Gender-related determinants of participation in value chains

Actors make returns from their participation in value chains by exploiting and constructing economic returns (often called 'rents'), which can arise through scarcity of resources (barriers to entry) (Kaplinsky and Morris, 2001). Limiting participation of competitors by control of factors of production creates financial and (human and natural) resource rents (that is, access to these resources on better terms than one's competitors). In other words, people compete for the land, labour, capital and other assets that enable them to participate in, and gain from, functions across value chains.

Where men and women have unequal access to capital and property, women tend to participate in value addition activities as employees while men dominate management roles. The processing of agricultural commodities often involves equipment that represents considerable capital investment. Women are more likely to manage their own work and

income where capital barriers to entry are lower and where physical product transformation involves simple, relatively low cost equipment, such as knives and bowls in fisheries or 'rolling tables' for incense sticks.

Chain-level gender-specific patterns of access to functions are played out through community and societal level norms manifested at the household level. Land tenure, business and property arrangements dictate which household members have access to economic assets. In the developing world the exclusion of women from land ownership is widespread. Land tenure is a leverage point not only into acquiring the physical assets for chain activities but also into accessing chain services. Securing public finance, for example, is impossible without collateral or ownership deeds.

In Oromia, Ethiopia's chief coffee producing region, for example, only female heads of households can own land and married women may only access land through their husband's tenure. Under the Derg regime of 1974-87, only household heads were registered as members of peasant associations and, since the post-1974 land reform considered the household as a single unit, married women were, and still are, excluded from membership (Coles, unpublished data).

This is an example of the wider situation where women provide significant amounts of the household labour required in the production cycle but cannot join institutions (cooperatives in this case) and, therefore, have no access to chain management functions. This power imbalance is perpetuated by the situation where institutional members commonly enjoy access to training services that build human capacity in management and administration. In addition, without land they are not considered credit worthy and as 'non-growers' they cannot access finance available to farmers from private buyers.

That women are represented disproportionately in low value chains, and the lower value nodes within them, is an established feature of value chains, and is a particularly strong characteristic of globalised export chains, which are usually more lucrative than the traditionally feminised domestic markets (e.g. Dolan, 2001). Men tend to dominate functions with relatively high barriers to entry and correspondingly greater returns (rent), and to control chain management functions.

Strong gender differences in literacy rates that often, but not always, disfavour women mean that less educated individuals occupy lower skilled roles in value chains. A lack of education also disempowers individuals at the chain management level, reducing their ability to communicate with buyers and suppliers and limiting their bargaining power.

In some Hindu and Islamic societies that strictly enforce *purdah* women are excluded from participation in cultivation, direct negotiation in the market for labour and inputs and trading the produce (e.g. Naved, 2000). In other contexts certain crops are taboo. Activities that would take women away from the household and prevent them from performing reproductive and domestic work tend to be performed by men. For example, they do not participate in the production node of capture fisheries, which commonly requires time commitments of anything from multiple hours to several months. Similarly, where livestock production entails movements far from the home it tends to be dominated by men.

Wider generalisations regarding patterns of male and female participation in value chains and the various nodes within them are difficult to make – they are highly context specific even within the same value chain. For example, in Zanzibar, Tanzania, where seaweed production is a marginal, small scale and low intensity activity almost all farmers are women. In the

Philippines, however, where algal culture is a larger scale, commercially important activity, individual men, women and families own lines and labour is provided by the entire extended family during planting and harvesting periods (Arnold, 2008). Returns are far more attractive than in Zanzibar, where men regard the opportunity cost of shifting resources from agricultural and fishing activities to seaweed production as being too high.

Gender-related determinants of gains from household participation in value chains

At least as important as where and how men and women participate in value chains are the determinants of the extent to which they benefit. As with chain participation the factors that determine what benefits accrue to household members through involvement in economic activities operate both within the household and within the value chain itself. At chain level, the highest returns are enjoyed by individuals who can access the most lucrative functions. More fundamentally, the control of income and expenditure at household level may enable men and women to benefit from economic activities in which they don't directly participate.

What this means in practice is that participation does not necessarily produce gains – and also the corollary, that non-participation does not necessarily imply no gain. And because the gender power relations that determine who controls factors of production, outputs and income are governed by context-specific socio-cultural factors, patterns of gain are also highly context specific.

Theoretically, in Sub-Saharan Africa and Southern and South-East Asia, women generally have the right to dispose of the product and income from their own economic activities. However, “in practice they are often constrained to using them to meet their responsibilities for certain expenditures...that are determined by their husbands or by prevailing male-enforced norms” (Dey, 1992).

While employees in processing activities maybe low waged they may trade off higher potential gains for enterprise against security and reliability of income. This is particularly true where trading functions add risk to enterprises – the ownership of the commodity being sold, processed or transported introduces greater market exposure and the possibility of making higher losses as well as gains. Women household heads with dependent families may feel especially compelled to swap higher risk activities for more secure, low paid activities.

In supermarket-driven value chains, risks and costs are fed upstream from the retail node to suppliers and ultimately to labourers, many, if not the majority, of whom are women. Labourers are among the poorest chain actors, usually considerably poorer than the producers and processors they work for. Therefore, poverty among secondary actors is often a gendered issue and one that is being addressed through codes of conduct (e.g. Smith et al., 2001).

Dolan (2001) describes how traditional household income distribution arrangements in Meru District, Kenya permitted women to retain money from the sale of local food crops to spend on household subsistence needs. However, male appropriation of the new French bean income, sometimes through violence toward their wives, has resulted in a situation where women perform 72 percent of labour and obtain 38 percent of income. Francis (1988) asserts that male income control is based on land rights that grant men power in decisions over its allocation, use and distribution of its products and the derived income.

Gendered education systems affect the way men and women gain from their participation in value chains in several ways – firstly, women’s income is often limited by their occupancy of lower skilled roles; secondly, the less educated are less able to access training and thereby upgrade their skills and knowledge; thirdly, they are less able to access and process market and financial information. Thus, women, on aggregate tend to earn less than men even in similar roles (World Bank 2001 and 2007).

Current knowledge and practice

Systematic literature review

We conducted a systematic review of the available evidence for how the value chain approach is used to impact upon gender inequities in markets. To keep the review action-focussed and policy relevant we developed three selection criteria. Accepted studies must:

- Refer to the appropriate target group, the rural poor
- Include an actual or planned upgrading event (initiated either internally or externally)
- Report on actual or intended gender equity outcomes

We found 13 articles that fulfilled our selection criteria (annex 1). One study reported on an iterative process of interventions and monitoring of outcomes that was initiated by a processing company and analogous to action research. Five studies compared outcomes for the study group before and after upgrading events; three studies were comparisons of groups of poor actors who were either ‘beneficiaries’ of the upgrading event of interest or unaffected comparators; three reported on descriptive value chain analyses with recommended gender-based upgrading interventions.

It was striking how none of these studies applied the most scientifically rigorous methodologies to data collection and analysis. This matters because they risk missing the main point – most stop at their consideration of chain-level impacts without going on to consider what these changes mean at the ‘ultimate’ household level. For example, while authors routinely report changes in yields, prices, sales and incomes they rarely investigate whether these developments result in changes for individual household members or household units in aggregate. Conversely, by restricting their level of analysis to the value chain level they fail to identify the underlying issues that cause gender inequities.

Therefore, the knowledge base is weak and policy makers and practitioners are not receiving the robust advice that they require. Interventions are being made based upon flawed analyses. This is not just an academic failing – at best, interventions based on false premises are unlikely to achieve the desired outcomes, and at worst they may even be damaging.

Action research on upgrading and gender in value chains

We asked seven research teams to implement their proposals for value chain analysis and development projects to identify and address critical poverty, environmental and gender issues in each sector. Annex 2 details their approaches to gender issues; in summary:

- Six teams performed generalised (that is, non gender-specific) upgrading of actors or the enabling environment in nodes in which women in the target group were particularly active.
- Four intervened to increase female representation in the chain, including two at chain management level.
- Two improved access to credit services, one ‘investigated’ the possibility of introducing codes of conduct
- One took no specific actions that were designed to address gender issues.

Value chain analysis whilst commonly used in development economics, is not fully understood by all researchers. In addition, of the three kinds of impacts we asked our teams to examine, gender is perhaps the least well understood. The distribution of approaches in our programme is typical of the wider value chain development community and illustrates several points:

- First, interventions need not be from a specifically ‘gender based’ toolkit – standard upgrading of processes, products, functional mixes and value chains themselves can be strategically applied to actors in nodes where there are particular gender issues to leverage positive outcomes. For example, upgrading strategies applied to parts of the chain where women are numerous can enhance their terms of participation.
- Second, interventions in the enabling environment can similarly be non-gender-specific but address blockages that apply to all actors where the removal of a constraint is particularly advantageous to women. Alternatively, they may relate to laws, policies and power struggles that apply directly to women, such as land and property ownership statutes, labour codes and other discriminatory forms of governance.
- Third, even where the research methodology is relatively robust, flawed interpretation of information and failure to identify issues and analyse their root causes can lead to muddled thinking that leaves gender issues unaddressed or poorly tackled.
- Fourth, gendered value chain analysis is very much in its infancy and all researchers and practitioners are on a steep learning trajectory. A lack of female participation, for example, is sometimes held to mean ‘no gender issue’

Effectiveness of upgrading strategies in addressing gender issues

Having described the nature of approaches taken to improving gender equity outcomes using value chain analysis and development we now evaluate the effectiveness of upgrading strategies.

Horizontal coordination

The evidence base shows that horizontal organisation can be beneficial by increasing women’s market and social power, improving access to services and assets and helping to tackle some of the underlying gender inequities, such as low social status, that disempower women in value chains.

However, intervening in poorly understood existing horizontal networks can have damaging outcomes. In addition, women only groups may not be the best solution for all development problems. For example, an evaluation of a project introducing the new livelihood strategy of mud crab grow-out for supply to hotels in Unguja Island, Tanzania, for example, showed that

the exclusion of men from some producers groups created resentment and anger that manifested itself in acts of sabotage and, in comparison with mixed groups, introduced additional transaction and input costs for the group because women were reliant upon a small number of male fishers for seed stock and feedstuffs (Coles, unpublished data).

The formation of women's groups is one of the interventions often 'defaulted' to by support organisations. Our message, which applies to all upgrading strategies but particularly those that intervene within the local socio-cultural dynamics, is that generic menus of 'default' or 'favourite' interventions should be avoided and each action needs to be based upon the context and its underlying problem. In other words, in each instance policy makers and practitioners should understand a) what specific issue they are trying to address in group formation, and b) that using existing, sometimes informal, groups and networks has proven to be more successful than initiating them from scratch.

Vertical coordination

Both men and women can clearly benefit from increased and strengthened inter-nodal linkages; this can be in terms of increased income and access to credit on better terms or less tangible outcomes such as increased social status and prestige.

However, we have illustrated how participation in economic activities does not always result in equitable gains, which are contingent upon underlying issues such as the intra-household dynamics that govern income control. In situations where increased incomes through better terms of trade tend to result in the appropriation of activities by men a more fundamental change is required to achieve gender equity.

Strengthened vertical linkages, therefore, can actually reinforce existing inequities, as has been reported in some Fairtrade (Fairtrade Licensing Organisation, FLO) schemes (Ruben, Fort and Zuniga, 2008). The most successful forms of vertical coordination treat men and women as individuals and empower reward both for their participation – a good example of this is the 'Mama Card Scheme' of Papua New Guinea's palm oil industry (Koczberski, 2007).

Product and process upgrading

These strategies can be highly effective when applied to value chain products and processes in nodes in which women are already participating. Removal of chain level blockages to increased sales or value at these nodes can have direct impacts on returns to female participants.

Again, however, how those returns are used to benefit all household members depends upon the specific cultural context. As products become more valuable they tend to be the subject of conflicts among household members. The introduction of effective new processes can transform yields and incomes; this often has major implications for the household division of labour. For example, the introduction of irrigation to paddies in The Gambia caused a shift from female to male control of the crop, which was moved to communal fields and used for consumption resulting in lower marketable surplus and better nutritional outcomes within the household. Therefore, policy makers need to consider aggregate outcomes at the level of the entire household economy in addition to value chain level impacts.

Chain upgrading

There is a paucity of literature covering chain upgrading events to address gender inequities. The one example we found showed that women's benefits from newly introduced technologies that enabled them to participate in a new chain was determined by their control of productive assets, trading functions and, thereby, the resulting income. It also illustrated that the introduction of new economic activities can alter household food security and expenditure patterns in a positive manner.

Functional upgrading

In one study that advocated shortening the value chain to increase (women) producers' share of the final market value of their outputs it was not clear whether this could potentially translate into direct benefits to women because no analysis of intra-household dynamics was provided.

Functional upgrading rarely occurs in isolation from other upgrading strategies. In the Tanzanian cassava sector, for example, the research team addressed the issue of low female representation in chain management structures. This meant that they had greater likelihood of retaining the income they gained from functionally upgrading to perform primary processing.

Policies, institutions, laws and internal governance (chain management)

Removal of blockages in the enabling environment can quickly result in improved chain level outcomes, such as increased incomes through liberalised input sourcing and trading policies. However, as with other upgrading strategies, the extent to which men and women ultimately benefit depends upon underlying issues such as who controls resources and incomes.

Enabling environment interventions to improve gender equity fall into three main types: a) generic interventions that remove blockages in functions and nodes where women participate (or could participate) strongly; b) specifically gendered codes of practice applying to the way women participate, and; c) positive discrimination to make representation more equitable, for example increasing female presence in horizontal institutions such as producers' groups and committees.

Placing women in groups and committees can help to challenge power imbalances but the presence of women does not necessarily confirm their active participation. As with the case of Ghanaian fisheries, intervening in established social networks that people feel comfortable with can be potentially damaging.

Gender-sensitive codes of conduct can successfully address labour issues but their effectiveness can be limited if additional underlying issues are ignored; a two-year traditional research project on ethical trade and African horticulture concluded that social codes have not necessarily achieved better outcomes for women and informal workers because the economy itself is 'gendered' and it is only by addressing this that the conditions of all workers, including women, are likely to improve (Tallontire et al., 2005).

The implementation of laws based upon western notions of property ownership and collective working can have disastrous results – for example, westernised property rights reform has formalised the exclusion of women, and the imposition of inheritance laws in Ghana that

were designed to favour women have contributed to the destruction of powerful female-controlled networks.

Discussion and conclusions

One of the key points emerging from this analysis is that establishing who participates and gains in value chains on an individual basis is insufficient to achieve an understanding of the manner in which gender dynamics shape the benefits received by men and women. Categories such as ‘the household’, ‘men’ and ‘women’ need to be unpacked and understood in each individual context. This illustrates that even where women may not directly control assets and income they and their households can benefit from their engagement in value chains, for example through better nutritional outcomes and increased food security that result from increased aggregate household production and income.

We have illustrated that interventions do not necessarily have to be exogenous (that is, from outside the value chain); indeed, the best example of an iterative monitoring, learning and revision process in the reviewed literature came from a private sector actor within a value chain. We have discussed how generic value chain level interventions targeting nodes in which women participate are of limited effectiveness if issues at the institutional and household levels are not addressed.

We argue that rather than an end in itself, empowerment of women – increasing their ability to make strategic life choices – is an intermediate step toward improving poverty impacts for whole households and communities. The translation of chain and intermediate level improvements, including women’s empowerment, into ‘ultimate’ impacts is mediated by context-specific socio-cultural and intra-household dynamics in addition to political economies. Therefore, broader scale outcomes are not a given of a successful empowerment process.

In conclusion, although we are still developing our understanding, we know enough to be able to support a) policy makers seeking to maximize impacts of pro-poor value chain development initiatives, and b) practitioners in identifying and addressing root problems in order to avoid ineffective and damaging interventions. Our key points of advice are listed in the following section on policy implications.

Implications for policy and practice

What does a robust analysis look like?

Development interventions in agricultural value chains risk being, at best, ineffective and, at worst, highly disruptive and damaging without a robust analysis of: a) the chain level dynamics of participation and gain by men and women; b) the household level management of income and expenditure, and; c) the intermediate horizontal institutions in which households are arranged.

There are now several excellent comprehensive guides to incorporating gender issues into a value chain approach, notably the recent ILO handbook (Mayoux and Mackie. 2008). In addition, we offer the following guidance based upon our own experience:

- Action research – an iterative monitoring, evaluation and intervention process with built in controls to facilitate attribution of observed outcomes – is an approach that lends itself particularly well to gender based value chain development.
- Value chain analysis should be treated like any other form of economic and sociological research in terms of sampling design; that is, with sufficiently large, randomly selected, stratified samples that are representative of the population under study and analysed for endogeneity.
- Existing, commonly used and readily understood participatory research tools such as combinations of SWOT analysis, problem tree analysis, ‘five whys’ and weighted problem analysis (e.g. Dorward, Shepherd and Galpin, 2007) are highly suitable for establishing root causes and underlying issues.
- All ‘critical issues’ should be expressed in a manner that readily allows solutions to be devised. They should be written with the following three components made explicit:
 - What is the issue?
 - To whom (which actors in the chain) does it apply?
 - What are its implications?
- If in doubt whether tackling an underlying issue may be within the scope of a particular programme it may be useful to decide whether it constitutes a ‘key issue’ by asking:
 - What is the underlying issue?
 - What will be the outcome for the project and the community of failing to address it?
 - Do we have the resources (for example, time, money, political access and power) to address this issue?
- Upgrading strategies should address critical issues using the tripartite structure:
 - Eradication of the issue becomes the objective
 - The group to which it applies becomes the target group.
 - The implications suggest areas for outcome indicators.
- All gendered value chain analyses should include three levels – intra-household, institutional and value chain.

After the analysis: how to maximise the impact of upgrading in value chains on gender equity

Measure and evaluate impact at three levels:

- Value chain activities – for example, yield, production, prices, number of participants
- Intermediate impacts – for example, male and female empowerment, individual income, individual ownership of assets, intra-household power dynamics
- Household and community outcomes – for example, men and women’s health and mortality, food security, quality of life, well being, investment in education, men and women’s roles

This is particularly important because if monitoring ends with chain level or intermediate impacts we cannot know whether interventions and policies have resulted in fundamental changes to people’s lives. Value chain development is a phased process. For example, increasing a woman’s income may empower her, changing intra-household decision making processes and, ultimately, improving household poverty outcomes. Economic empowerment

of women often opens the door to improved gender relations, albeit through a transitory period that may include increased conflict as roles and relationships are renegotiated.

Consider applying two broad approaches to value chain development for better gender equity outcomes:

- Use a generic (non gender-specific) approach to act on sectors and nodes of value chains in which women are participating significantly. Where women have control of household budgets (for example in parts of South-East Asia) they will benefit from any generic improvement in incomes and other impacts.
 - Removal of non gender-specific policy and legislative blockages, such as taxation and trade laws
 - Introduce new functions to increase value added and improve processes and products in female dominated industries. Special consideration should be paid to anticipation and prevention of male appropriation as activities become more lucrative, for example securing equitable control of factors of production.
 - Improve vertical and horizontal coordination. The latter is often a prerequisite for the former – actors in organisations are better able to negotiate improved terms with buyers and suppliers. Institutional backing also increases women’s ability to negotiate within their households. Horizontal coordination works best with existing, functional and well-led organisations. Formal vertical contracting works best with indigenous crops that represent minimal investment, risks and implementation costs.
- Employ gender-specific interventions. These are most appropriate in situations where women do not have control over household income and decisions and do not necessarily benefit from generic approaches.
 - Address gender-specific policies and legislation, for example land tenure law, inheritance law and constitutional arrangements of institutions. Care should be taken: a) not to reinforce or formalise existing inequities, and; b) that policies and laws are appropriate to the context (not simply imported westernised models).
 - Address differential access to education, information and social and political capital that affect women’s ability to bargain and organise.
 - Address where men and, more commonly, women are not participating in economic activity by introducing new value chains that are appropriate to their available resources. Women, for example, are particularly time constrained.
 - Increase female representation in institutions to give them greater control of chain management. Special measures may be required in some contexts to ensure that attendance equates to participation.

Finally, it is necessary to acknowledge that some underlying issues driving gender dynamics in value chains are beyond the scope of a single value chain analysis and development programme. In these cases the initiating institutions will need to find ways of working with others to coordinate and scale up their impact.

What we don’t know

The role of gender in value chain analysis and development is slowly becoming better understood as successive ‘how to’ guides and case studies are published. However, the literature evaluating gender-based upgrading events is still very thin and dominated by

descriptive or anecdotal studies that use methodologies laden with assumptions. There are very few published accounts of the effectiveness of upgrading interventions in addressing gender issues that are based on robust scientific research methodology (make paired pre- and post-event comparisons with control groups.)

There is insufficient evidence to make general statements about gender dynamics in different kinds of value chains, for example public versus private sector driven, domestic versus export and patriarchal versus matriarchal chains.

In addition, we know very little about the role of information systems in gendered value chain dynamics, for example whether public access to market prices empowers women in intra-household negotiations.

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Annex 1: Summary of value chain studies that have addressed gender issues and suggested or implemented upgrading strategies to reduce inequities

| Value chain & location | Target/study group | Gender issue(s) | Upgrading strategies employed or suggested | Outcomes/comments |
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| Oil palm, Papua New Guinea. Koczberski (2007). | Women smallholders and their households | Low and uncertain remuneration of women's labour by their husbands creates a disincentive for their participation and limits household income. | <p>Process upgrading trials – a) improved transport and collection arrangements; b) collection nets were distributed.</p> <p>Vertical coordination/process upgrading; women were paid separately for labour on plots, directly into their bank account. The interventions were initiated by a processing company (internal to the chain).</p> <p>Vertical coordination and process upgrading – employment of female extension workers by the processor for producer technical support</p> <p>Enabling environment – woman smallholders joined growers' committee.</p> | <p>The first set of process upgrades had minimal impact – trials wrongly assumed that time and (chain level) technical constraints limited the harvest.</p> <p>The project then addressed (individual level) intra-household relations and economic disincentives for women in addition to technical constraints and chain management. After implementation, 26% of smallholder income was paid direct to women and overall household incomes increased by 5%. The scheme reduced domestic conflict and violence. Women were upgraded from 'household helpers' to producers in their own right.</p> |
| Rice, The Gambia. Von Braun | Rice farming households ('compounds') | The sexual division of labour in farming 'compounds' is one of several factors finely | Process upgrading – the introduction of water pump irrigation technology to increase | A group comparison study inferring that women's control over rice fields reduces parallel with increases in productivity. |

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| and Webb (1989). | | balanced in ‘cooperative conflict’. Shifts in this balance can move family and compound level relations from a state of shared progress and happiness to shared decline and dysfunction. | yields and lengthen the growing season. Enabling environment – women were given priority during official registration of plots in an attempt to maintain traditional use rights. | Through the introduction of the new technology rice shifts from being a woman’s individual crop to a communal crop. It has much higher variable input costs per land unit and moves under the authority of the male compound head. Women end up growing the crops with technologies that result in lower net returns for their labour time. In addition, they exhibit lower productivity levels through reduced access to labour saving technologies and time constraints, forcing them to cultivate smaller pieces of land. As women’s control of land and its crop declines the marketable surplus decreases, because the male controlled communal rice field output is used for consumption. Thus, although women lose in income terms, they and their children gain in food security as a result of the technological improvement. |
| Marine fish, Ghana. Walker (2001). | Women fish traders in Ghana’s Cape Coast | Women have limited access to formal credit services and originally widows did not automatically inherit their husband’s land. | Horizontal coordination – formation of new traders’ groups and formalisation of trading arrangements to suit donor requirements for credit cooperatives) Enabling environment – provision of microcredit services and changes to the matrilineal inheritance law to enable widows to inherit their husband’s property | A before and after evaluation of a project conceived under a Women in Development programme. In this value chain women dominate the trading nodes and own productive assets. The interventions changed existing power dynamics, trust relationships and trading networks to the extent that women began competing rather than collaborating resulting in a breakdown of functioning networks and competition so fierce that fish stocks began to degrade. |

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| Artichokes, Peru. USAID (2007). | Men and women producers and agro-processors | The processing node is highly feminised. Most processing jobs are informal and insecure, especially for women (84% of female and 79% of male jobs), meaning that these workers are vulnerable to redundancy and do not have access to social security and pension provision. Female workers earn 88% of male wage levels. | Suggested interventions: Vertical coordination - develop measures for workers to gain access to pension plans; Enabling environment – review and update labour laws, enhance state capacity, disseminate information on labour rights, increase number of labour inspectors. | A descriptive study with policy and action matrix. The matrix cites high levels of informality as a problem but doesn't unpack the gender issues and wage differentials are not included. No analysis is made of underlying causes of gender inequities, intra-household dynamics or where the issues fall along the individual-value chain scale. |
| Tomatoes for processing, Dominican Republic. Raynolds (2002). | Men and women in households holding tomato production contracts | In a patriarchal society most women have highly unequal and insecure domestic situations that result in no payment for their labour in contract tomato production or control over their income. Men tend to spend money outside the household whereas almost all women use any income they receive for household needs. | Vertical coordination – contract farming (male holds contract). | A descriptive study explaining how the advent of contract farming has led women to struggle against the unpaid appropriation of their labour. Around 50% of women have been successful in claiming payment for their labour by subtly renegotiating domestic and production relations without challenging male authority. The study presents data that explain factors determining which women are remunerated (for example their social status) but does not provide a comparator of aggregate household income before contracting occurred or with non-contracted groups. |
| Dairy, Ethiopia. Shapiro et al. (1998). | Dairying households with children aged 6 months | The project addressed household malnutrition and income deficiencies. Milk sales are made by men but | Process upgrading – introduction of cross-breed cattle with higher yields | A group comparison of intra-household allocations of food and income. Households with cross-breed cattle are reported to have higher incomes (both |

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| | to 6 years | women process butter, milk and cheese and retain that income for household use (including purchase of food and clothing). | | sexes) and spend more on food and inputs. Women retain control of their income in households with crossbred cattle. However, no attempt is made by the authors to examine systematic biases and, therefore, causality of the observed impacts is untested. |
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| Shrimps, Bangladesh. USAID (2006b). | Men and women shrimp farmers | Women farmers, processors and traders are seen as secondary earners due to their subordinate social status. They are more closely associated than men are with temporary, casual and flexible labour with lower incomes. Female intermediary traders, a relatively lucrative role, are very few. | Suggested interventions: Functional upgrading by reducing the number of intermediaries. Enabling environment and vertical coordination – formalisation and contracting. | A descriptive ‘gendered’ value chain analysis that maps patterns of participation and gain by men and women but does not examine how gender inequalities play out in terms of intra-household dynamics or address the wider underlying issues of women’s subordinate social status and role as caregivers. |
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| Poultry, Ethiopia. Aklilu et al. (2007). | Producer-sellers and traders of poultry | The proportion of men involved in poultry marketing increases as market access improves and benefits increase; women are more likely to control income and spend it on family needs when they do the selling themselves, meaning that families suffer through women’s lack of market access . | Suggested interventions: Functional upgrading - shortening of the chain by formation of marketing groups (horizontal coordination) for direct poultry sales, speculating that this may make more room for female participation. States that an understanding of why men appropriate trading functions with better market access would contribute to an appreciation of | A descriptive study that identifies gender inequities at the chain level and differences in income distribution and utilisation at the household level. Does not examine root causes and offers no evidence for assertion that direct marketing through horizontal coordination may benefit women. |

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| | | | how to enhance market access for marginalised households. | |
| Farmed fish and horticulture, Bangladesh. Naved (2000). | Women's producers' groups and their households | Poor women have low socioeconomic status. | Introduction of new value chains and technologies (vegetable production and fish farming) to female producers (chain upgrading). Enabling environment – access to leased ponds for poor women who otherwise would not own productive assets. Increased access to credit. Horizontal coordination – strengthening of women's groups | Using a trend analysis Naved argues that horizontal coordination has led to negotiations being held at a higher level than the household. The women are backed by an organisation and men do not have direct access to the income. The vegetable growing programme targeted individual women. Underlying socio-cultural norms meant that vegetable cultivation had to be performed on very small homestead plots, limiting outputs and income. The small increases in income that occurred were not retained by women because men controlled the land and its outputs. However, female nutrition improved as the result of consumption of the new vegetables. The success of the fish-farming initiative was determined by women's ability to retain control of the leases and the fish – in some cases men appropriated the trading function and kept sales incomes. |
| Fruit in South Africa, cut flowers in Kenya and vegetables | Farm and packhouse employees | There is wide variation in the living and working conditions of industry employees; of particular concern are temporary workers (disproportionately female), | Introduced codes of practice covering the themes of: <ul style="list-style-type: none"> • Security of employment • Working hours • Living wage | A survey of worker's opinion of the effectiveness of codes via a social auditing process. The results in companies where codes of practice were being implemented were that: Employment has become more permanent |

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| <p>and flowers in Zambia. Smith et al. (2004).</p> | | <p>who do not enjoy legislated and discretionary benefits, and women, whose terms of employment are often less favourable than those of their male counterparts.</p> | <ul style="list-style-type: none"> • Discrimination • Child labour • Health and safety • Harsh and Inhumane treatment • Freedom of association and the right to collective bargaining • Internal communication, grievance mechanisms and disciplinary procedures | <p>in all three countries, partly through pressure to implement codes (and partly through commercial pressures). Because women are more likely to be found in non-permanent employment this has had positive gender equity outcomes. Employers suggested that implementing codes for higher wages would force them out of business, with negative implications for all employees. Seasonal workers are beginning to receive many of the benefits enjoyed by permanent staff on a <i>pro rata</i> basis. However, paid maternity leave was rare and codes do not cover some of the benefits most valued by workers such as sick pay, medical care and (of particular importance to women) child care. Gender balanced recruitment panels help to address gender discrimination. Discrimination toward pregnant women contravenes all codes but is common practice. Task allocation remains gendered with men being preferred for higher skilled, positions that are usually permanent and better paid (meaning that men had higher average wages despite codes on equal pay for equal work being followed). However, women's higher productivity is being acknowledged by better remuneration in some cases. Women perceived little opportunity for career progression but skills development was</p> |
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| | | | | <p>beginning to receive greater attention in all countries.</p> <p>Codes governing exposure of women to chemicals (when pregnant or breast feeding) are not adhered to. Non-permanent workers (disproportionately likely to be women) were less likely to be issued with protective clothing.</p> <p>Non-permanent workers were more likely to suffer abuse from managers, including sexual harassment.</p> <p>Women were under-represented in trade unions and workers' committees despite being the majority workforce. Positive outcomes tended to be the result of unilateral, isolated measures within certain more progressive companies rather than as the direct result of codes.</p> <p>Internal representation and grievance procedures tend to exclude women because managers are predominantly male and temporary workers fear voicing their concerns.</p> |
| Fairtrade and non-Fairtrade bananas in Peru, Ghana and Costa Rica and coffee | Men and women producers' households | Fairtrade certification is not driven by gender-specific issues. | Vertical coordination, process and product upgrading (Fairtrade certification) | <p>The authors suggest that the dynamics within households engaged in Fairtrade value chains are more male dominated than those within non-Fairtrade households. They point out that gender dynamics are not considered in the Fairtrade certification process but that it often reinforces existing inequities.</p> |

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| <p>in Costa Rica. Ruben, Fort and Zuniga (2008).</p> | | | | <p>However, the site comparison approach they take conflates the binary Fairtrade status variable with poverty status – that is, the Fairtrade households in the sample tend to be located in poorer areas where women have less access to resources and education and have lower social status. In addition, the differences they report are not statistically significant.</p> |
| <p>Fairtrade and organic cotton in West Africa. Bassett (2009)</p> | <p>Smallholder cotton growers, particularly women</p> | <p>Women are typically excluded from conventional cotton growing because of discrimination by extension agents and men, and the high production costs</p> | <p>Product and process upgrading, vertical coordination – introduction of organic and Fairtrade cotton cultivation and marketing</p> | <p>An evaluation of organic and Fairtrade cotton schemes in West Africa. Although the author states that “Fairtrade cotton can increase women’s incomes and autonomy and promote greater gender equity” the evidence he cites seems to show the opposite. Men are attracted by the greater returns of the Fairtrade or organic crop and may use their wives’ names to apply for certification. Wives must hand the money they receive to their husbands in order to perform a cleansing ritual. It is then at the husband’s discretion how much he hands back to her. In Burkina Faso, female participation declined through “men’s desire to keep women subordinate” and the fundamental underlying issue of a lack of land – better off women tended to participate with poorer ones depending upon their husbands for access to assets.</p> |

Annex 2: Summary of a) gender issues and related upgrading strategies in value chains for poor rural target groups as identified and designed by seven action research teams, and evaluation of outcomes

| Value chain & location | Target group | Critical gender issue(s) | Upgrading strategies | Outcomes |
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| Processed, commercialised cassava, Tanzania | Poor subsistence cassava farmers in two rural regions | Chain level and household level imbalances in economic and management empowerment limit women's participation, income and control of household expenditure | Horizontal coordination and positive discrimination in group and committee composition (minimum quotas for producers' group and committee membership by women). Process and functional upgrading at production level (agronomic improvements and expanding activities to high quality primary processing), where women are active. | Placement of women in strategic organisational positions helped to correct household and chain power imbalances meaning that women have increased control of the value chain and its improved outputs. |
| Frozen <i>Pangasius</i> catfish, Viet Nam | Micro and small scale fingerling and out-grower farmers (all men) in rural districts of the Mekong Delta | Large numbers of women are employed in processing factories. 10% of the labour force of grow-out farms is women (earning \$70 a month, slightly less than their male counterparts). 90% of fish traders (for domestic consumption) are women. | These actors were not included in the target group and no gender issues were identified to be addressed. Upgrading strategies applied to the chain were process and product (certification of male operated farms), horizontal | Intra-household baseline studies indicate that women have significant control of the household income and expenditure budgets among the target group – so will benefit from any general uplift in incomes resulting from successful upgrading of grow-out farmers. Less volatile exports of |

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| | | Women control household income in Viet Nam. The analysis did not go beyond indentifying where women participate and what they earn. | and vertical coordination (farmers' groups and contracting) and chain upgrading (diversification of stocking for local markets by male micro-farmers | catfish will increase reliability of work in the processing factories. However, the interventions employed in this study do not seek to change gender relationships. |
| Processed commercialised fonio, Mali | Poor rural fonio producers and processors | Women processors receive low prices for their low volume, poor quality output and they are organised in weak horizontal structures with limited, weak vertical linkages, limiting their income. | Horizontal and vertical coordination to bulk output and build longer term relationships with buyers. Process upgrading at production level to increase productivity and raise volumes flowing to processors. Product upgrading via training in technological improvements with processing. | Women's processing union (CF) has been able to access finance and milling machines (reducing time for hand milling from 40 minutes per kg to 2kg per minute) and purchase paddy fonio. Women also have leading positions on the Board of the farmers union (UACT). No analysis of the intra-household dynamics that dictate how increased incomes are utilised by its members was performed. |
| Wet and processed kalamansi , Philippines | Poor rural kalamansi smallholders and landless labourers | Women farmers harvest more slowly than men and receive lower income because they are paid according to the weight of fruit gathered. | Process upgrading – technological solution that equalises harvesting capacity while improving quality | Men and women's incomes increased (women's proportionally more). This was the only gender issue identified. 73% of women have at least joint decision making power at household level and, therefore, in the majority of cases women retained control of their increased income. |
| Incense sticks, India | Poor, rural incense stick | <i>Batti</i> rollers produce small volumes of poor quality sticks | Process upgrading to improve quality, increase productivity | The time limitation is partly addressed by better productivity and income, and |

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| | producers (85% women) | with inappropriate processing equipment, damaging their health, and limiting their productivity and, ultimately, their income (average US\$0.80 per day FTE). Women occupy less profitable nodes in the value chain; there was only one woman running an incense stick enterprise at project inception. | and eliminate injuries Horizontal and vertical coordination to improve volume and stability of supply Lobbying for policy changes to improve sustainability of input supply. | reduced injury rates through technological fix. As a result of technological improvements, <i>batti</i> rollers have higher productivity, lower rejection rates and higher prices to reflect quality improvements. Incomes have increased by 60% and 500 new rollers have started work. Community enterprise structures are supporting women with life-skills training as well as <i>batti</i> -related technical skills. At the household level women no longer have to ask for money from their husbands – they are financially independent. Men realise the value of the extra income. |
| Bay leaves, India and Nepal | Poor, rural bay leaf collectors and cultivators | Collectors and cultivators, who tend to be women, are poorly organised, which limits their bargaining power and income. “Gender issues have been identified in the project location” but no further analysis. | Horizontal coordination among self-help groups in India (60% women members and female leadership) and equalised gender representation in Nepal. This is combined with access to market information, access to finance and training. Vertical coordination among groups and buyers. Improved service provision (micro credit) and policy lobbying | In India, where Bay leaves are collected from wild plants, the self help groups have brokered an innovative agreement with the Forestry Department to allow poor collectors to access state forests. Some SHGs are moving beyond collection to basic processing (packaging and powder), improving their incomes. |

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| Processed octopus for export from Senegal | Small scale fishers of octopus | Fishing communities have a strict gender division of labour. All fishers are men and men own the canoes and all fish capture assets. Women process (clean and dry) fish and market them locally. However, they are almost completely excluded from the octopus export value chain spending less than 2% of their time working with the fishery. | Integrate women into local fishery resource management committees (horizontal coordination) to make institutions more inclusive. | A good example of an intervention confusing (highly circumscribed) participation with gain. Women are being 'empowered' to participate in the governance of a value chain over which they are almost completely excluded. |

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