UNIVERSITY OF

SUSSEX

AT BRIGHTON

DISCUSSION PAPERS IN ECONOMICS

DP 101

The gender effects of trade liberalisation in developing countries: a review of the literature

Marzia Fontana, *Department of Economics, University of Sussex*

October 2003

THE GENDER EFFECTS OF TRADE LIBERALISATION IN DEVELOPING COUNTRIES: A REVIEW OF THE LITERATURE

Marzia Fontana
Department of Economics
University of Sussex
Email: M.Fontana@sussex.ac.uk

October 2003

Abstract – This paper analyses recent evidence on changing patterns and conditions of employment, gender gaps in wages, and intra-household reallocation of resources that might result from trade liberalisation in developing countries. It finds that the employment effects of trade have been most favourable to women in countries that specialise in the production of labour-intensive manufactures. Less well-established property rights in land and other resources have limited the gains from trade for women in agriculture, especially in Africa. The evidence on the impact of trade on the gender gap in wages is inconclusive. Some studies suggest that the component of the gender wage gap attributable to discrimination is smaller in sectors exposed to trade than in other sectors. The component of the gender wage gap attributable to employment segregation appears, though, to be widening. The impact of trade liberalisation on the well-being of women and children within households seems to be more positive for women working in manufacturing than in agriculture, but this area is under-researched.

This paper draws on my DPhil thesis. Many valuable suggestions from Adrian Wood, Alan Winters and Sudha Narayanan are most gratefully acknowledged.

CONTENTS **Page Number**

1.	Introduction	1
2.	Does trade expansion increase employment opportunities for women relative to men?	4
3.	What is the impact of trade on the gender earnings gap?	9
4.	How does trade liberalisation affect intra-household dynamics?	14
5.	Conclusions	19
	References	21

1. Introduction

Trade policies, like any other economic policy, are likely to have gender differentiated effects because of women's and men's different access to, and control over, resources, and because of their different roles in both the market economy and the household. This paper reviews the literature on the impact of trade expansion on gender inequalities in developing countries. It focuses on the impact of increased trade in goods and services, and does not analyse studies in related areas such as financial liberalisation or labour standards.

Interest in the gender effects of trade policies has been growing. Since 1994, when the first comprehensive review of empirical evidence in this area was published (Joekes and Weston, 1994), several new initiatives have been promoted, in the form of lobbying, awareness campaigns (for example the activity of two D.C. based women's NGOs, Women's EDGE and Center of Concern), creation of worldwide networks (such as www.genderandtrade.com), and new research. Much of what has been written, however, is as yet either quite theoretical or mainly anecdotal. Reviews of existing literature abound (to name a few, Beneria and Lind, 1995; Cagatay, 2001; Fontana *et al.*, 1998; Joekes, 1999a; Gammage *et al.*, 2002) and vary in emphasis and tone (for example, Bell (2002) focuses mostly on studies documenting negative effects while El-Kogali and Nizalova (2002) overlook them). Despite an intense debate, sound empirical evidence is sparse. Analyses are still limited by the absence of gender-differentiated data in many areas and the difficulty of disentangling the effects of trade liberalisation from those of other simultaneous changes.

Does trade liberalisation reduce or reinforce gender inequalities? The rest of this section develops an analytical framework to help in answering this question.

Gender inequalities have various dimensions. A frequently used approach is that of distinguishing a 'macro', a 'meso' and a 'micro' level (Elson and Evers, 1996a). Macro-level analysis involves examining the gender division of the labour force between the different productive market sectors and the reproductive sectors. Meso-level analysis looks at the institutions that help structure the distribution of resources and activities at the micro-level. It involves examining gender inequalities in public

provision as well as gender biases in the rules of operation of labour, commodity and other markets. Micro-level analysis examines in greater detail the gender division of labour, resources and decision-making, particularly within the household.

Trade liberalisation alters the distribution of income between different social groups, and between women and men. The main mechanism through which it operates is changes in the relative prices of goods. These, by modifying incentives, induce reallocation of factors of production among sectors that use them with different intensities, and therefore changes in their employment and/or remuneration. The same variations in relative prices bring about changes in real incomes that affect groups differently, due to differences in their consumption patterns. Trade liberalisation is also likely to reduce tariff revenues, and this, in turn, may have group-specific effects on the size and composition of government expenditure.

Trade liberalisation can thus affect gender inequalities at all three levels. For example, gender gaps in market participation might narrow if the sectors that expand are more female-intensive than the sectors that contract (macro); public provision of social services that favour women (such as health and education) might be undermined, if loss of government revenue from reduced tariffs leads to cuts in such services (meso); female control over household spending is reduced or extended, depending on whether trade liberalisation destroys or creates sources of independent income for women (micro).

The effects of trade liberalisation on gender inequalities in a country may be either negative or positive. Many things mediate the effects and are important in determining final outcomes. They include resource endowments, labour market institutions, systems of property rights and other socio-economic characteristics.

Resource endowments matter because they influence which factor of production gains from trade. Asian and African countries have experienced divergent outcomes mainly because of differences in their comparative advantage, based on abundant labour in Asia and abundant natural resources in Africa (Wood, 1994). Whether women benefit from a country's greater exposure to trade depends on which factors of production experience a rise in demand, and what are the prevailing gender norms regulating

ownership of the factors that stand to gain. Women are more likely to benefit from increases in labour intensive production because women's rights over their own labour are less alienable than their rights over land and natural resources. Property rights in land are more relevant to the gender distribution of gains from trade in Africa than in Asia (Joekes 1999b).

Whether changes in output structure translate into changes in employment or in wages, or a mixture of both, will depend on the characteristics of the labour market.[1] The extent to which women will be able to relocate from contracting sectors to expanding sectors will depend on the level of gender segmentation between sectors and occupations, and the availability of re-training. The extent of change in women's relative wages will be determined also by the elasticity of their labour supply, the prevailing forms of wage determination (e.g. free markets or collective bargaining) and the existence and enforcement of anti-discrimination laws. Some of these factors might themselves be affected by trade liberalisation, for example when greater exposure to more egalitarian practices in other countries influences adoption of company codes of conduct.

The effects of trade are also likely to vary among women themselves. If new opportunities are created, women's ability to seize them will depend on their education, skills and their age, as well as the social norms and obligations prevailing in their households and communities. For example, mothers would be less likely to respond to new incentives than their daughters, and women with infants less than women with older children.

Another useful distinction when analysing the gender impact of trade policy is that between practical and strategic gender needs (Moser, 1989)**.** It is important not only to assess the impact on women's current material status, given their tasks and responsibilities under the established gender division of labour, but also to examine whether outcomes contribute to more egalitarian gender relations in the long term, by reducing the basis of women's economic disadvantage and widening women's options.

[1] The extent of price effects from trade liberalisation on the output structure may also vary and will depend on how easy is to reallocate resources between sectors.

The review of the evidence is organised around three questions (which combine elements of the conceptual frameworks outlined above). Section 2 asks whether trade expansion increases women's employment opportunities relative to men's. It further explores whether, when new jobs for women are created, these challenge the traditional division of labour in the market, and whether they provide stable and secure forms of employment in the long term. Section 3 reviews evidence on the effects of trade gender gaps in earnings and also asks whether trade expansion helps women gain greater control over the income they earn. Section 4 examines evidence on intra-household reallocation of resources, time and tasks that might result from trade liberalisation. Section 5 concludes.

2. Does trade expansion increase employment opportunities for women relative to men?

Women's participation in paid employment has risen in most countries in recent decades (Gammage and Mehra, 1999). While this trend has had causes other than trade, the increased openness of individual countries has contributed to it, although its effects on women's employment vary by sector and region. The formal manufacturing sector has been most studied empirically, partly due to data availability, and with the most clear-cut results. Trade liberalisation has led to the feminisation of the manufacturing labour force in developing countries. The greater the share of garments, textiles and electronics in a country's exports, the greater the employment-creating impact of trade has been for women. A cross-country study of formal sector employment in manufacturing in developed and developing countries over the period 1960-1985 (Wood, 1991) shows a strong relation between increased exports and increased female employment in manufacturing in the South. Similar trends continued until the mid-1990s, as described in Standing (1999).

Corroboration of these overall trends is found in many country case studies, mostly of export processing zones (EPZs), which account for much of export-oriented manufacturing. The contribution of EPZs to women's employment has been the subject of much debate (for comprehensive reviews, Baden and Joekes 1993, and Pearson, 1999). While some researchers have focused on the positive impact of the expansion of waged employment for women, others have raised questions about working conditions,

lack of training and promotion, and health hazards. The evidence is inconclusive on these points. Working conditions generally appear to be poor, although not usually worse than in most other jobs open to women. Some evidence also suggests that young single women, often new migrants to the cities, were the preferred workforce, at least initially, in Asia (Baden and Joekes, 1993). But trends are varied and changing, with higher proportions of older, married and better educated women in the labour force in some countries (Pearson, 1999).

The gains in manufacturing employment appear to have been particularly strong in Asia (especially the four East Asian 'tigers', but also Bangladesh and Sri Lanka in South Asia, and Malaysia, Indonesia, Thailand, and the Philippines in South East Asia), with limited expansion also in Latin America (most notably Mexico, but also Central America and the Caribbean). No other country in Sub-Saharan Africa has matched Mauritius, where employment in manufactures for export grew more than tenfold in seven years in the 1980s (Pearson, 1999).

Mauritius has a different economic structure, and different resource endowments, than the rest of sub-Saharan Africa (Wood and Mayer, 2001). Most recent evidence on the manufacturing sector of the African region reports declines in output and job losses due to import displacement. Most of the industries affected, however, were not large employers of female labour, so the negative impact has not been borne disproportionately by women. There is some evidence that import competition has damaged activities in which women are involved, such as basket weaving in Kenya (Joekes 1999a), the textile industry in South Africa (Valodia, 1996) and the informal sector in urban Zimbabwe (Kanji and Jazdowska, 1995). The information available is limited to specific cases, so no assessment of economy-wide gains or losses is possible.

The feminisation of employment through export-orientation appears to be more common in the manufacturing sector and in semi-industrialised economies than it is in agriculture-based economies. The agricultural export sector accounts for the bulk of women's trade-related economic activity in sub-Saharan Africa, but remains relatively under-researched. The sparse evidence, both from Africa and elsewhere, shows that the impact of expanding agricultural exports is generally less favourable to women, and varies according to prevailing socio-cultural factors governing the gender division of

labour (Joekes, 1999b). But the picture is mixed, with differences between traditional export crop production and newer exports, such as horticultural products and agro-industry. Many women have recently found employment in agro-industry, but this may not have improved their status as much as manufacturing.

Expansion of traditional agricultural exports has created employment in some cases, both on the field and in processing and trading activities associated with increased commercialisation. But the employment gains appear to be larger for men than for women. It is often found that women work less on the more commercialised crops than do men, and are also less likely to work as hired labourers, who are also mostly men (von Braun and Kennedy, 1994). Women farmers may find it difficult to become independently involved in the production of export crops because of limited access to credit, technology and marketing channels. Even if not directly involved, women often increase their time contributions to their husbands' crops, but are not paid for this work. The effects vary with the gender intensity of the crops that expand, but this may itself be endogenous. There is evidence that even when a crop is traditionally female intensive, commercialising it causes men to enter the sector and take over production (for example, groundnuts in Zambia (Wold, 1997) and rice in The Gambia (von Braun *et al.*,1994)).

Non-traditional agricultural exports (NTAEs)– comprising flowers, vegetables, and fruits, often produced on a contract basis for foreign buyers– are a significant growth area in African agriculture, but remain relatively small. NTAEs are developed in Kenya, Uganda, Zimbabwe and South Africa (and outside Africa in Chile, Ecuador and most Central America). The NTAE sector includes two distinct types of production: small farm contract growers and large scale commercial farms. In the former type, women work as family labour and own-account farmers and are subject to similar constraints as in traditional agriculture. On large farms, women work as 'modern' agricultural wage labour, and their ability to participate is unrelated to land rights. Their terms and conditions of employment are more akin to those of industrial workers.

There is some evidence that the expansion of exportable services is another source of employment for women, especially in the information processing sector, ranging from simple data entry to software programming, especially in India, the Caribbean and

some of the Newly Industrialising Countries (NICs) (Joekes,1995 and Mitter and Rowbotham, 1995), but this area is under-researched. Little is known also on the impact on the informal sector. It is likely that this is where the negative effects of trade expansion may be concentrated, through pressure of import competition from trade liberalisation. On the other hand, small workshops supplying work for larger export firms may be expanding in line with patterns in the formal sector and amplifying the employment creating effect.

These varying patterns of female employment across regions and sectors support the hypothesis that resource endowments and systems of property rights are key determinants of women's opportunities from trade. Women benefit the most in countries that are abundant in unskilled labour and have a comparative advantage in the production of basic manufactures. This is because women are disproportionately represented among unskilled workers, and because prevailing norms make their entitlements to the rewards from their own labour stronger than those of any other factor of production. Women's weaker property rights in land and other resources, and a rigid gender division of labour, have limited the gains from trade to women in Africa. These forces are also likely to have contributed to the weak supply response of African agriculture to export opportunities (Joekes, 1999b). Evidence that farm output from a given quantity of household labour is less than the maximum that could be produced can be found in Burkina Faso (Udry, 1996 and Smith and Chavas, 1999), Tanzania (Tijabuka, 1994) and Zambia (Wold, 1997).

Another constraint that prevents women from seizing new opportunities, both in agriculture and in waged employment, is the heavy burden of household responsibilities that falls disproportionately on them. Studies from settings as different as the cut flower industry in Ecuador (Newman, 2001), export processing zones in Malaysia (Kusago, 2000), the off-farm informal sector in Guatemala (Katz, 1995) and NTAEs in Kenya (McCulloch and Ota, 2002), all point to the presence of other female members in the household as a determinant of women's participation in new opportunities created by trade. These other female household members might be mothers or elder daughters, who are available to take on household duties relinquished by women who go out to work. Very little is known about the circumstances of these other females and the impact of trade on their welfare.

Do the newly created jobs for women challenge gender stereotypes? The sparse evidence available seems to suggest a negative answer to this question. Most of these jobs are very 'female' and do not appear to provide long lasting employment opportunities. Many (Standing, 1999, Barrientos and Dolan, 2003, Kabeer, 2003) emphasise growing flexibility and vulnerability in working conditions in export-oriented sectors.

Several studies (Tzannatos, 1999, Gammage and Mehra, 1999, United Nations, 1999) find little decline in employment segregation by gender over the last two decades. Female workers have remained confined to female jobs, with little opportunity to enter previously male dominated sectors and occupations. Women continue to be employed in low-skill and low-pay jobs. Within the manufacturing sector, women are concentrated in assembly line and production work that is semi-skilled and short-term.

There is evidence of a moderate decline in horizontal segregation in some countries. In the NICs, for example, women are increasingly employed in export-oriented services such as information processing, tourism and financial services (UN, 1999). But vertical segregation appears to be persistent and within sectors hierarchies have become more pronounced. Such is the case in Bangladesh (Paul-Majumdar and Begun, 2000), Madagascar (Nicita and Razzaz, 2003) and Mexico (Fleck, 2001), where women are increasingly occupying bottom occupations and men taking up supervisory roles.

In Bangladesh female employment in manufacturing has remained highly concentrated in one single activity, ready-made garments, while other textile subsectors are still predominantly male. In knitwear, for example, women constitute only 14 per cent of the labour force (Bhattarchaya, 1999). In Mexico, *maquila* employment for men has risen significantly more than for women in recent years, because of the increased importance of sectors such as transportation equipment. Women's share of the total labour force in EPZs declined from 77 per cent in 1980 to 57 per cent in 1998 (Fleck, 2001). Similar declining trends in the share of female employment in EPZs are found in Mauritius, South Korea, Malaysia and Singapore (Kusago and Tzannatos, 1998, Gammage and Mehra, 1999).

It is not always lack of skills that prevent women from benefiting from introduction of new technologies, upgrading and reorganisation of production. For example, the number of educated female workers is significant in Sri Lanka and Singapore, but there is evidence of increasing levels of unemployment among them (Malhotra and De Graff, 1997).

3. What is the impact of trade on the gender earnings gap?

Evidence on changes in female and male wages associated with trade liberalisation is even sparser than that on employment. It is limited to formal manufacturing and to a few (mainly middle-income) countries. Data exclude the informal sector and at times also small firms in the formal sector, which is where many women work, thus providing an incomplete picture even of the manufacturing sector. The information on wages is rarely comparable over time and across countries because of problems in definitions. Often (and surprisingly) wage data for males and females are not disaggregated by skill level. The effects of trade expansion on women's relative wages are not straightforward theoretically, for reasons outlined in section 1, and empirically no general conclusions from the few studies available can be drawn. Overall, the gender wage gap remains large in most countries, even surprisingly where there has been rapid growth in exports that relied on female labour, a fact for which different studies offer different interpretations.

In one of the few cross-country studies of female/male relative wages over the last twenty years, Tzannatos (1999) finds that in developing countries there has been a faster convergence between women's and men's wages than was experienced historically in industrialised countries. Tzannatos, however, looks at general trends and does not explicitly link wages to trade. It is not clear from this study whether the narrowing of the gender wage gap is mainly because of declining wage discrimination, or because the educational attainment of women has increased relative to men.

Trade liberalisation might affect wages by altering the relative demand for various types of workers or by influencing discriminatory practices. Most of the studies available investigate this latter aspect and can be grouped in two different schools of thought. Following Becker (1959), some researchers assert that globalisation is likely to

lead to competitive pressures that will reduce the scope for employers to discriminate, including discriminating against women. By contrast, others argue that increased competition might reduce the bargaining power of wage workers, and especially female workers, if they are disproportionately employed in sectors competing internationally on the basis of 'cheap' labour.

Consistently with the former school of thought, Oostendorp (2002) finds a negative association between openness (measured as either exports plus imports as a percentage of GDP or foreign direct investment net inflows as a percentage of GDP) and the size of the gender wage gap within occupational categories in a sample of both developed and developing countries between 1983 and 1999.[2] He further finds that the narrowing impact of openness on the occupational gender wage gap is confined to the tradable sectors, and is not discernible in the non-tradable sectors. The impact is however rather small.

Moreover, Oostendorp is not able to establish whether the narrowing of the gender gap results from men's wages declining or women's wages rising. This distinction is evidently of some importance. In Taiwan, for example, Berik (2000) finds that, after controlling for employment segregation by gender and other industry characteristics, greater export orientation is associated with smaller wage differentials between women and men. This result is due to the fact that export orientation has a larger adverse absolute impact on men's wages than women's wages.

In Mexico, Artecona and Cunningham (2002) find that the residual gender wage gap (after accounting for differences in human capital characteristics) declined in concentrated industries that were exposed to competing imports to a greater extent than in non-concentrated industries, over the period 1987-1993. The authors interpret this result as evidence supporting Becker's hypothesis that discrimination tends to be reduced in a more competitive environment. Their results, however, are not statistically significant. The authors also find that greater exposure to trade has increased the overall gender wage gap, in both concentrated and non concentrated industries. The gender wage gap only declined in non concentrated industries not exposed to trade.

[2] The author needs to make several adjustments to correct for inconsistencies in the ILO October Inquiry survey data used.

A study using the same data set (Ghiara, 1999) explores different aspects of the male-female wage differential, but arrives at findings consistent with Artecona and Cunningham's. Ghiara (1999) finds that the economy-wide wage differential between women and men workers fell only slightly in this period, with the proportion attributable to discrimination falling marginally and that attributable to endowment differences rising slightly. Further analysis of female wages in two selected industries – tradable machinery and non-tradable social services– show that the wage differential rose sharply in manufacturing, mainly due to changes in endowments of human capital between women and men. The human capital characteristics of female workers and male workers in the service industry remained equal as did their wages. The study emphasises differences in impact between unskilled and skilled women and concludes that while skilled women in the non-traded service sectors have become better off, unskilled women in manufacturing have become worse off.

Another study of Mexico (Fleck, 2001) finds that female/male wage ratios in the *maquila* sector vary greatly between industries. The gender wage gap is wider the higher the concentration of women in an industry and the greater its capital intensity. As regards the growing number of male workers relative to female workers in the *maquila* sector over time, Fleck suggests the cause could be lack of available female labour. This however seems improbable since other studies document declines in female/male wages, suggesting the phenomenon is more likely to be demand driven.

Evidence from Bangladesh (Bhattarchaya, 1999) and Morocco (Belghazi quoted in Joekes, 1999a) suggests that, in these countries, wage discrimination against women in the export textile industry was lower than in any other manufacturing sector in the early stages, and has declined over time more than in other sectors. In Bangladesh, trends in female/male wage differentials in garments indicate a narrowing of the gap from 1983 to 1990, but a widening from 1990 to 1997. This change is attributed to a higher proportion of men taking up high skilled jobs and an increase in the number of temporary workers among women (Zohir, 1998; Paul-Majumder and Begun, 2000). A similar trend towards widening of the gender wage gap for similar reasons is predicted in Madagascar (Nicita and Razzaz, 2003).

Few studies of East Asian countries explain pay discrimination as a result of the employer objective to maintain export competitiveness, predicting, and finding, that greater openness widens the gender wage gap.

For example, Seguino (2000) argues that divergent trends in the unadjusted gender wage ratio in Taiwan and Korea during 1981-1992 are related to differences in the nature of foreign direct investment flows in the two countries. Greater mobility of capital in Taiwan's female labour-intensive sectors leaves women workers more vulnerable to losses of bargaining power in wage negotiations. In Korea, an environment of lesser capital mobility encourages firms to maintain competitiveness by other strategies such as technological upgrading and improvement in product quality. Seguino (1997) finds that in Korea despite a strong demand for women's labour, female-male wage differentials have narrowed only marginally during 1975-1990. In principle this could have been because of the existence of surplus female labour, but this seems unlikely for Korea, where unemployment rates have been low.

Berik *et al.* (2002) find that increases in international competition in concentrated industries in both Taiwan and Korea during 1981-1999 are associated with widening wage gaps between men and women. The more robust regression results are for Taiwan. They show that rising import shares are associated with rising wage discrimination against women workers in concentrated industries such as textiles and electronics. For Korea, a slight decline in export orientation is weakly associated with a reduction in wage discrimination against female workers in concentrated industries.

It is difficult to draw general conclusions from these studies. It seems that while pure discrimination has been probably declining, the gender wage gap due to occupational segregation has been widening. One of the factors inhibiting the narrowing of the gender wage gap might be the informalisation of labour contracts through subcontracting and outsourcing (workers in these arrangements are mostly female). In other words, an increasing proportion of women's work in manufacturing may be being shifted into the informal sector where wages are significantly lower than for jobs in the formal sector (Balakrishnan, 2002).

The few studies of gender and earnings in agriculture do not examine the wage gap between women and men but instead explore issues of income control. These studies make more use of qualitative approaches and small *ad hoc* surveys than the other work. A study of tomato contract farming in Dominican Republic (Raynolds, 2001) finds that the expansion of non-traditional agriculture has enhanced women's ability to renegotiate household rights and obligations and helped them legitimise claims for compensation. Women who managed to claim wages for their contributions were from proletarian households and were involved to a significant extent in other income earning activities. However, other studies of NTAEs in Guatemala, Kenya and Uganda (Katz, 1995; von Braun and Immink, 1994; Dolan, 2001) find opposite effects, with women losing control over income and having a lesser say on household expenditures.

Being paid does not necessarily entail retaining significant control over income. Even in the manufacturing sector, there are accounts of women handing over a large proportion of their pay to other family members. A survey of over 800 women factory workers in Pakistan found that 48 per cent of them gave their income to their husbands (Hafez quoted in Elson, 1999). However, most of the evidence shows that women working in export-oriented industries retain some control over their earnings (Zohir, 1998; Kusago and Barham, 2001; Kabeer, 2000)

The type of employment matters for control as well as whether the cash is earned as a lump sum or in regular instalments. Women are likely to have greater control if they work in factories away from male relatives than if they are home based (Kabeer, 2000). It is important to consider the effect on all sources of income. Women may find that, once they are earning their own income, there is an offsetting reduction in income transfers from non-market sources, particularly from the fathers of their children (Katz, 1995). In agriculture, a key factor affecting control is whether women participate in the marketing of what they produce (Kiggundu, 1996).

Greater control over income enhances women's decision-making power within households. This might have important effects on what items are bought, and how what is bought is distributed among household members, with important implications for welfare. These aspects are examined in greater detail in the next section.

4. How does trade liberalisation affect intra-household dynamics?

By changing employment opportunities and earnings patterns of women and men, trade liberalisation is likely to influence the allocation of time and resources among household members. For example, an increase in the market value of a woman's time would lead her to spend more time on market-oriented activities, while her husband might reallocate some of his time into domestic work or other non-paid activities. More likely, she would be enduring a longer working day than her husband, because of strong social and cultural norms that prevent reallocation of household tasks between family members. Which food and non-food items are purchased, in what quantities, and how these are distributed among household members, will also be affected by who earns the income. Since women and men, younger and older people, have different needs and preferences (for example, for health care and nutrition) reallocation of both time and consumption goods will differently affect their welfare. Trade might also affect intra-household dynamics through changes in public provision of social services but no study of this seems to exist.

These dimensions are rarely included in analyses of trade impacts, perhaps because they are more difficult to assess than income and employment effects. Most of the studies that include analysis of nutrition, health and time allocation effects are in agriculture, a sector where the domestic sphere and market production appear to be more intertwined. It seems that the attention paid by these studies to women's work is motivated mainly by concerns about their role as providers of care to other family members, especially children. 'Women's time is valuable not only in agricultural cultivation but also for child nutrition—care in the form of breastfeeding practices, hygiene practices, and psychosocial stimulation has been shown to be as important as food and health for children' welfare.' (Paolisso *et al.*, 2002: 314) This emphasis is important but women's own well-being should also be given adequate attention.

The most comprehensive study to date of the impact of cash cropping on nutrition was carried out by IFPRI (von Braun and Kennedy, 1994) using a common research methodology in several countries undergoing agricultural commercialisation: Guatemala, Kenya, Philippines, the Gambia and Rwanda and, with a more limited coverage, Papua New Guinea, Malawi and Zambia. Not in all cases was

commercialisation directly linked to international trade, but the findings yield important general insights. The main strength of these case studies is their detailed assessments of the commercialisation-production-income-consumption-nutrition chain, getting closer than most other studies to a general equilibrium approach.[3] The studies are based on household-level surveys, including both participants and non-participants, conducted in the mid-1980s.

Despite reallocation of land to new cash crops, staple food production per capita was maintained or even increased in all countries – a challenge to the commonly held view that agricultural export production is at the expense of food production. Net income gains were generally less than gross income from the new cash crops, because of substitution within agricultural production and between agricultural and off-farm employment. These gains, however, were still significant, leading to increases in overall household income. Women's direct control over income from the new cash crops was much less than that of men. In none of the studies did women play a significant role as decision makers and managers of the more commercialised crop production, even when typical 'women's crops' were promoted (e.g. rice in The Gambia). In the Guatemala study (von Braun and Immink, 1994), reallocation of women's labour time towards the new contract for multinational exporters was at the expense of other off-farm activities, which had been a source of independently controlled income for them. In all countries for which information was available, women's income had a beneficial effect on household calorie consumption. Any tendency to spend less on food because of loss of income control by women was however generally small, with greater income from commercialisation still resulting in more food being purchased.

No effect (neither negative nor positive) of participation in commercialisation schemes on children's health was found, but this might be due to the relatively short time frame of the case studies. In Guatemala, membership in the export crop producing cooperative has a beneficial effect on children's health, but this seems to be because of a special package of health and social services funded from cooperative profits. An important finding from the Kenya study of expansion of sugar cane production (Kennedy, 1994)

[3] Even better than general equilibrium modelling, since all relationships are empirically estimated, not simulated.

is that increases in women's own income was associated with decreases in their body mass index. For many women energy expenditures increase as a result of the additional work involved in the increase in their income. This increase in the energy intensity of activities was greater than the concurrent increase in their caloric intake.

In a study of the impact of growing broccoli and snow peas in the central Highlands of Guatemala, Katz (1995) too finds a loss of control over income by females. She finds a statistically significantly greater incidence among export crop adopters of expenditures on several 'male' and 'joint' goods, and substantially lower purchases of 'female' goods such as pots and buckets. In this case, women's labour contributions to the new male-controlled crops are not at the expense of their own income generating activities but, rather, are made by sacrificing domestic production, which may in part be compensated by increased activity of older daughters. Daughters enable their mothers to devote time to the new crops either by relieving them of some of their domestic responsibilities or by directly contributing labour to their mothers' other income generating endeavours. One of the many valuable contributions of this study is that of differentiating children by age and thus drawing attention to the role of older children in sharing housework.[4]

A negative impact of NTAEs on young girls' use of time is found also in a study of Uganda (Elson and Evers, 1996b). Extra demands on women's labour time due to vanilla production is transferred to their daughters. Pollination by hand at critical stages in the growth cycle is often undertaken by girls at the expense of their schooling. In contrast to the results from the IFPRI studies, Elson and Evers (1996b) also find that NTAE damage children's health and nutrition. 'Increasing workloads of women have led to a decline in breastfeeding and worsening child care practices and food insecurity has been intensified, as families sell food to raise cash for basic family expenses'. But the evidence is mixed. Another recent study in selected villages of two Ugandan districts (Kasente *et al.*, 2002) finds that farmers are not compromising food security in response to NTAE incentives. However, this study too finds that men control over 90

[4] This study is also very valuable in highlighting factors affecting alternative choices of women for remunerated labour (for example, marketing activities that require women to be mobile are only undertaken by older women with no little children, independent agricultural activities are only undertaken by women with sons, etc.).

per cent of the income from vanilla and that women are more likely than men to spend their income on household needs, especially food.

Paolisso *et al.* (2002) analyse the impact on male and female time allocation patterns of commercialisation of vegetables and fruits in rural Nepal.[5] Compared with non-adopters, households participating in the scheme with more than one child below five years of age increase working time on vegetables and fruits at the expense of time devoted to other agricultural activities. This is true of both adult males and adult females in the household. Time spent on child care increases for women but declines for men. In households with only one preschooler, however, children receive less care from their parents, who work more, especially on vegetable crops, but also on food crops. The authors note that men's leisure (defined as the sum of time spent on social activities, recreation or being inactive) increases as a result of participation in the project, while women's leisure is unaffected. They suggest that '…in the short run there is perhaps scope for protecting childcare time by reducing time to leisure... At least VFC participation has not increased overall work time burdens'(Paolisso *et al,* 2002: 326). But the study takes into account only time allocation patterns of head adults (both female and male), neglecting other household members such as older daughters, whose time contributions to their mothers' activities might have increased as, for example, in Guaatemala (Katz,1995) and Uganda (Elson and Evers,1996b). Moreover, energy consumption might have increased for women because of more strenuous tasks, negatively affecting women's welfare, but not necessarily translating into declines in their leisure time.

A study of the effects of employment in the flower industry on the time allocation patterns of husband and wives in Ecuador (Newman, 2001) finds that husbands of wives working in the flower industry participate more in household work than either husbands of women working in other sectors and husbands of women not involved in paid employment. This positive effect on the gender distribution of household tasks appears to be stronger when men also work in the flower industry. The author suggests that this might arise because the gender gap in wages in the flower industry is smaller than in any other sector (a significant number of married women in the flower industry

[5] This study uses a combination of qualitative and quantitative methods and innovative collection techniques for time allocation data.

earn higher wages than their male counterparts), but this hypothesis is not tested directly. In households where both wife and husband work in the flower industry, overall time devoted to household tasks by both partners is less than in other households (299 minutes per day, compared with 348 minutes in families of the same villages but working in other sectors, and 393 minutes for families in the control group) and the share of men in total household work is 25 per cent, compared with 17 per cent for men in families working elsewhere and only 8 per cent in the control group. It should be noted however that, even in households where both partners work in the flower industry, the bulk of household work is still performed by women who spend more than three hours per day on it while men spend about one hour. This study, like the study of Nepal (Paolisso *et al.*, 2002), does not consider possible reallocation of household tasks to children.

Other studies have examined how the time allocation and work of individual household members responds to the activity patterns of other members of the same household (such as Jacoby,1993 and Skoufias,1993), but have not examined responses to trade liberalisation opportunities.

Fewer studies of the manufacturing sector have explored the impact of trade liberalisation on intra-household resource allocation. The studies available explore different dimensions than the studies of agriculture. There are several reasons for these differences in approach. The characteristics and circumstances of women working in export-oriented manufacturing are rather different from those of women involved in agricultural production. Female workers in manufacturing are mostly young and single (although not all of them) and often new migrants to the cities. They have left their families of origin and have not yet formed new ones. Their role in the household is mainly that of a daughter, with relatively few housework responsibilities. They have been able to leave their households partly because these have other females who could take up their household duties. The nature of the work in manufacturing is also different, with fewer direct linkages with food production and consumption decisions than in agriculture. Manufacturing is often located in urban areas, where market substitutes for social and household services are more easily available. As a result, the studies of export-oriented manufacturing and household impact focus more on

individual lifestyles– including women's ability to make independent choices, marriage and fertility decisions– and less on nutrition and children's health.

Most studies are of Bangladesh. Hewett and Amin (2000) find that female garment workers have a higher age at marriage and at first birth than women of similar socio-economic background who do not work in the garment sector. Some of the garment workers can even take decisions on whom to marry and have fewer children. They are more likely to have better quality housing conditions and access to modern infrastructure. Women working in the garment sector have a higher propensity than other women to spend their money on jewellery, entertainment, cosmetics and gifts (controlling for income level). The nutritional intake of garment workers appears to be quite high, but they are more likely than other women to suffer from a range of minor health problems. This is confirmed in other work (Zohir, 1998). According to Hewitt and Amin (2000) additional health indicators show that female garment workers do not suffer from major health problems and that the cause of the minor problems might be urban living rather than factory conditions.

Most studies (Kabeer, 2000; Zohir, 1998; Hewett and Amin, 2000) appear to agree that women working in factories feel that their status has improved. Garment work positively affected self-esteem and decision-making with benefits extended to other family members. Kusago and Barham (2001) report that migrant daughters in Malaysia sending remittances home to their mothers has increased their capacity to express preferences. Younger siblings in Bangladesh benefit because some garment workers gain a greater weight in decisions regarding the education of their sisters (Zohir, 1998). Some garment workers report that their husbands help them with household work (Zohir, 1998) and others have been able to escape from situations of domestic violence (Kabeer, 1995).

5. Conclusions

A comprehensive assessment of the gender effects of trade reform would analyse changing patterns and conditions of work, including paid and unpaid work; gender gaps in wages; patterns of ownership and control over assets; changes in consumption

patterns and gender-based power relations within households. Some of these dimensions have been explored in the literature more fully than others.

The employment effects of trade have been most favourable to women in countries that specialise in the production of labour-intensive manufactures. Less well-established property rights in land and other resources (than in labour) have limited the gains from trade for women in agriculture, especially in Africa. The new employment opportunities for women, though, do not often appear to challenge traditional gender roles in the labour market. There is evidence of a moderate decline in horizontal segregation, especially in some middle-income Asian countries, but vertical segregation seems to have become more pronounced.

Evidence on the impact of trade on the gender gap in wages is sparser than that on employment and does not permit any general conclusion. Some studies suggest that the component of the gender wage gap due to discrimination is smaller in sectors exposed to trade than in other sectors. The component of the gender wage gap due to employment segregation appears, though, to be widening.

Women gain greater control over their income when working in export-oriented factories, away from male relations, in most cases, but in agriculture often lose sources of independent income as a result of trade liberalisation. The impact on women's well-being and on that of their family members appears to be more positive for women working in manufacturing than in agriculture too, but this area is under-researched.

Several areas are still not sufficiently studied for lack of data. The gender effects of trade in manufacturing are better documented than the effects in other sectors, but this sector employs a relatively small number of women. Most women work in agriculture and the informal sector, of which very little is known. Gender disaggregated data on household labour, earnings and expenditures should be more systematically collected.

The studies reviewed use a variety of approaches, depending on the aspect examined, but most look at specific sectors or households in isolation and neglect economy wide effects. More integrated approaches to allow consideration of net impacts and interactions between different dimensions would be desirable.

References

Artecona, R. and Cunningham, W., 2002, 'Effects of trade liberalisation on the gender wage gap in Mexico', *Gender and Development Working Paper Series 21,* Washington D.C.: The World Bank

Baden, S., 1993, 'The impact of recession and structural adjustment on women's work in developing and developed countries', *IDP Women/WP-19*, Geneva: International Labour Office

Baden, S. and Joekes, S., 1993, 'Gender issues in the development of the Special Economic Zones and Open Areas in the People's Republic Of China', paper presented at a seminar on 'Women in the Economy,' Fudan University, Shanghai, April 15, Brighton: Institute of Development Studies

Balakrhisnan, R., 2002, *The hidden assembly line: gender dynamics of subcontracted work in a global economy*, Bloomfield: Kumarian Press

Barrientos, S. and Dolan, C., 2003, 'Labour flexibility in African horticulture', *ID21 Insights 47*, Brighton: Institute of Development Studies

Bell, E., 2002, 'Gender and economic globalisation', *BRIDGE Bibliography 12*, Brighton: Institute of Development Studies

Beneria, L. and Lind, K., 1995, 'Engendering international trade: concepts, policy, and action' *Gender and Sustainable Development (GSD) Working Paper Series 5,* Ithaca: Cornell University

Berik, G., 2000, 'Mature export-led growth and gender wage inequality in Taiwan', *Feminist Economics,* Vol 6 No 3

Berik, G., van der Meulen Rodgers, Y. and Zveglich, J.E., 2002, 'Does trade promote gender wage equity? Evidence from East Asia' *CEPA Working paper 2002-14* New York: New School University

Bhattacharya, D., 1999, 'The post-MFA challenges to the Bangladesh textile and clothing sector' in UNCTAD, *Trade, sustainable development and gender*, Geneva: United Nations

Cagatay, N., 2001, *Trade, gender and poverty,* New York: UNDP

Dolan, C., 2001, 'The 'Good Wife': struggles over resources in the Kenyan horticultural sector', *Journal of Development Studies*, Vol 37 No 3

El-Kogali, S. and Nizalova, E., 2002, 'Does trade liberalization have gender differentiated effects? PRMGE Washington D.C.: The World Bank. Mimeo

Elson, D., 1999, 'Labor markets as gendered institutions: equality, efficiency and empowerment issues' *World Development,* Vol 27 No 3

Elson, D. and Evers, B., 1996a, 'Gender aware country economic reports: concepts and sources'**,** *GENECON Unit Working Paper 1*, University of Manchester

Elson, D. and Evers, B., 1996b, 'Gender aware country economic reports: Uganda'**,** *GENECON Unit Working Paper 2*, University of Manchester

Fleck, S., 2001, 'A gender perspective on maquila employment and wages in Mexico' in Katz, E. and Correia, M., 2001, *The Economics of Gender in Mexico*, Washington D.C.: The World Bank

Fontana, M., Joekes, S. and Masika, R., 1998, 'Global trade expansion and liberalisation: gender issues and impacts', *BRIDGE Report 42*, Brighton: Institute of Development Studies

Gammage, S., Jorgensen, H. and McGill, E., 2002, 'Framework for gender assessments of trade and investment agreements', Washington D.C.: Women's EDGE. Mimeo

Gammage, S. and Mehra, R., 1999, 'Trends, countertrends, and gaps in women's employment', *World Development,* Vol 27 No 3

Ghiara, G., 1999, 'Impact of trade liberalisation on female wages in Mexico'*Development Policy Review* Vol 17 No 2

Hewett, P.and Amin, S., 2000, 'Assessing the impact of garment work on quality of life measures'. New York: Population Council. Mimeo

Joekes, S., 1999a, 'A gender-analytical perspective on trade and sustainable development' in UNCTAD, *Trade, sustainable development and gender*, Geneva: UNCTAD

Joekes, S., 1999b, 'Gender, property rights and trade: constraints to Africa growth' in King, K. and McGrath, S., eds., *Enterprise in Africa: between poverty and growth*, Oxford: Centre of African Studies.

Joekes, S., 1995, 'Trade-related employment for women in industry and services in developing countries', *UNRISD Occasional Paper 5*, Geneva: UNDP

Joekes, S. and Weston, A., 1994, *Women and the new trade agenda*, New York: UNIFEM

Kabeer, N., 2003, ' The poverty impacts of female employment', *ID21 Insights 47*, Brighton: Institute of Development Studies

Kabeer, N., 2000, *The power to choose: Bangladeshi women and labour market decisions in London and Dhaka*, London: Verso

Kabeer, N, 1995, 'Necessary, sufficient or irrelevant? Women, wages and intra-household power relations in urban Bangladesh, *IDS working paper 25,* Brighton: Institute of Development Studies

Kanji, N and Jazdowska, R., 1995, 'Gender, structural adjustment and employment in urban Zimbabwe', *Third World Political Review,* Vol 17 No 2

Kasente, D., Lockwood, M., Vivian, J. and Whitehead, A., 2002, 'Gender and the expansion of non-traditional agricultural exports in Uganda' in Razavi, S., ed., *Shifting burdens: gender and agrarian change under neoliberalism*, UNRISD: Kumarian Press.

Katz, E., 1995, 'Gender and trade within the household: observations from rural Guatemala', *World Development,* Vol.23 No 2

Kennedy, E., 1994, 'Effects of sugarcane production in Southwestern Kenya on income and nutrition', in von Braun, J. and Kennedy, E., eds., 1994, *Agricultural commercialisation, economic development and nutrition,* Baltimore: The Johns Hopkins University Press for IFPRI

Kiggundu, R., 1996, 'Gender and diversification' in Report of the Conference on Commodities: Africa and the World Market, Amsterdam, 26 September

Kumar, S.K., 1994, 'Adoption of hybrid maize in Zambia: effects on gender roles, food consumption and nutrition', *IFPRI Research Report 100,* Washington D.C.: International Food Policy Research Institute

Kusago, T., 2000,'Why did rural households permit their daughters to be urban factory workers? A case from rural Malay villages', *Labour and Management in Development Journal,* Vol 1 No 2, Canberra: Asia Pacific Press at Australian National University

Kusago, T. and Barham, B., 2001, 'Preference heterogeneity, power, and intrahousehold decision-making in rural Malaysia', *World Development,* Vol 29 No 7

Kusago, T. and Tzannatos, T., 1998, 'Export processing zones: a review in need of update', *HDDSP Discussion Paper 9802*, Washington D.C.: The World Bank

Malhotra, S. and De Graff, E., 1997,'Entry versus success in the labor force: young women's employment in Sri Lanka', *World Development*, Vol 25 No 3

McCulloch, N. and Ota, M., 2002, 'Export horticulture and poverty in Kenya' *IDS Working Paper 174*, Brighton: Institute of Development Studies

Mitter, S. and Rowbotham, S., 1995, *Women encounter technology: changing patterns of employment in the Third World*, London and New York: Routledge

Moser, C., 1989, 'Gender planning in the Third World: meeting practical and strategic gender needs', *World Development,* Vol 17 No 11

Newman, C., 2001, 'Gender, time use and change: impacts of agricultural export employment in Ecuador', *Gender and Development Working Paper Series 18,* Washington D.C.: The World Bank,

Nicita, A. and Razzaz, S., 2003,'Who benefits and how much? How gender affects welfare impacts of a booming textile industry in Madagascar', *World Bank Policy Research Working Paper 3029*, Washington D.C.: The World Bank

Oostendorp, R., 2002, 'Does globalization reduce the gender wage gap?', paper presented at the World Bank workshop on 'Gender, growth and poverty', 20 June 2002

Paolisso, M., Hallman, K., Haddad, L. and Regmi, S., 2002, 'Does cash crop adoption detract from childcare provision?', *Economic Development and Cultural Change*, Vol 50 No 2

Paul-Majumder,P. and Begum, A., 2000, 'The gender imbalances in the export oriented garment industry in Bangladesh' *Gender and Development Working Paper Series 12,* Washington D.C.: The World Bank

Pearson, R., 1999, ''Nimble fingers' revisited: reflections on women and Third World industrialisation in the late twentieth century' in Jackson, C. and Pearson, R.,eds., *Feminist visions of development,* London: Routledge

Raynolds, L., 2002, 'Wages for wives: renegotiating gender and production relations in contract farming in the Dominican republic', *World Development,* Vol 30 No 5

Seguino, S., 2000, 'The effects of structural change and economic liberalisation on gender wage differentials in South Korea and Taiwan', *Cambridge Journal of Economics,* Vol 24 No 4

Seguino, S., 1997, 'Gender wage inequality and export led growth in South Korea', *Journal of Development Studies,* Vol 34 No 2

Skoufias, E., 1993, 'Labour market opportunities and intra-family time allocation in rural household in South Asia', *Journal of Development Economics,* Vol 40 (April)

Smith, L. and Chavas, J., 1999, 'Supply response of West African agricultural households: implications of intra-household preference heterogeneity', *Food Consumption and Nutrition Division Discussion Paper 69*, Washington D.C.: International Food Policy Research Institute

Standing, G., 1999, 'Globalization through flexible labor: a theme revisited', *World Development,* Vol 27 No 3

Tibaijuka, A., 1994, 'The cost of differential gender roles in African agriculture: a case study of smallholder banana-coffee farms in the Kagera region, Tanzania', *Journal of Agricultural Economics*, Vol 45 No 1

Tzannatos, Z.,1999, 'Women and labour market changes in the global economy: growth helps, inequalities hurt and public policy matters', *World Development,* Vol 27 No 3

Udry, C., 1996, 'Gender, agricultural productivity and the theory of the household', *Journal of Political Economy,* Vol 104 No 5

United Nations, 1999, *1999 World survey on the role of women in development: globalization, gender and work*, New York: United Nations

Valodia, I., 1996,'Work' in Budlender, D., *The Women Budget*, Cape Twon: IDASA

von Braun, J. and Immink, M.D.C., 1994, 'Nontraditional vegetable crops and food security among smallholder farmers in Guatemala' in von Braun, J. and Kennedy, E. eds., 1994, *Agricultural commercialisation, economic development and nutrition,* Baltimore : The Johns Hopkins University Press for IFPRI

von Braun, J. and Kennedy, E. eds., 1994, *Agricultural commercialisation, economic development and nutrition,* Baltimore : The Johns Hopkins University Press for IFPRI

von Braun, J., John, K. and Puetz, D., 1994, 'Nutritional effects of commercialisation of a woman's crop: irrigated rice in The Gambia' in von Braun, J. and Kennedy, E. eds., 1994, *Agricultural commercialisation, economic development and nutrition,* Baltimore : The Johns Hopkins University Press for IFPRI

Wood, A., 1994, *North-South trade, employment and inequalities: changing fortunes in a skill-driven world*, Oxford: Oxford University Press

Wood, A., 1991, 'North-South trade and female labour in manufacturing: an asymmetry', *Journal of Development Studies*, Vol 27 No 2

Wood, A. and Mayer, J., 2001, 'Africa's export structure in a comparative perspective', *Cambridge Journal of Economics*, Vol 25 No 3

Zohir, S.C., 1998, 'Gender implications of industrial reforms and adjustment in the manufacturing sector of Bangladesh', Manchester: Economics and Social Studies, University of Manchester. Unpublished Ph.D. thesis