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Gender Discrimination and the International Division of Labour

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Hamburgisches Welt-Wirtschafts-Archiv (HWWA)
Hamburg Institute of International Economics
Neuer Jungfernstieg 21 - 20347 Hamburg, Germany
Telefon: 040/428 34 355
Telefax: 040/428 34 451
e-mail: hwwa@hwwa.de
Internet: http://www.hwwa.de

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Hamburg Institute of International Economics (HWWA)
Neuer Jungfernstieg 21 - 20347 Hamburg, Germany
e-mail: hwwa@hwwa.de

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ABSTRACT

The paper empirically explores the international economic effects of gender discrimination, namely the linkages of gender inequality with comparative advantage (trade) and foreign direct investment flows. It discusses different forms and the extent of gender discrimination across countries and presents the results of empirical tests of those linkages. The results indicate that gender inequality is positively associated with comparative advantage in unskilled-labour-intensive goods, that is, commodities where the impact of gender bias is likely to be felt most strongly. In contrast, foreign direct investment is negatively linked with gender inequality. These results even hold for relatively poor developing countries.

JEL Classification: F11, F23, J71, J82

Key Words: Gender Discrimination, Trade, Comparative Advantage, FDI

Matthias Busse and Christian Spielmann

Author responsible for correspondence: Matthias Busse
Phone: +49-40-42834-435
Fax: +49-40-42834-451
E-mail: busse@hwwa.de

1. Introduction

The 20th century has been marked by a widespread movement towards gender equality. Though this has led to better opportunities for women, especially in industrialised countries, a sometimes shocking picture can be seen in a few developing countries where equality is still a faraway goal. The mortality rate for girls and women, for example, is much higher in South Asia and China in comparison to their male counterparts (Sen, 1989; Klasen, 1994). Especially in developing countries, education differs dramatically between genders, and pay gaps also exist (ILO, 2003a). To exemplify the gender-based wage gap, the United Nations Development Programme (UNDP, 1995) mentions Bangladesh, where female workers in the non-agricultural sector only earn 42 % of the wages of their male counterparts.

Apart from the sometimes severe human suffering of individual females that are subject to discrimination, the economic consequences for the country affected can be substantial. To begin with, gender bias may reduce economic growth rates. This link has been well established in the literature by Drèze and Sen (1989), Pritchett and Summers (1996), Dollar and Gatti (1999), and Klasen (2002). Above all, gender discrimination may discourage workers from entering a job to which they are best suited, thereby lowering the value of output. Also, a gender bias in education implies that females will be less well educated and, hence, less skilled. Lower human capital levels, in turn, are likely to affect GDP growth rates negatively.

Moreover, discrimination in access to resources and in particular in education may inhibit reductions in child mortality and fertility rates and prevents the expansion in education of the next generation. These important development policy goals are closely linked to the educational attainment levels of the female population (Summers, 1994; Murthi, Guio and Drèze, 1995; Thomas, 1997). To the extent that these linkages exist, gender bias in education may thus prevent progress in the improvement in well-being of the people in a considerable number of developing countries.

On the other hand, there is also concern that gender discrimination may affect the (cost) competitiveness of countries by lowering (female) wages, thereby influencing trade flows or attracting more foreign direct investment (FDI). Along these lines, gender inequality has been debated within a wider range of topics related to basic labour standards, which also include

child and forced labour as well as union rights. In particular, fears have been stated that there might be a "race to the bottom" on such standards (OECD, 2000). Rich countries like those of the European Union and the United States have insisted on the inclusion of binding rules within the World Trade Organisation (WTO) to ensure a level playing field and to deal effectively with fundamental workers' rights. The European Union tried to include that issue in the new WTO Doha Round of multilateral trade negotiations, but this attempt was discarded by developing countries. They fear that high-income countries are likely to excuse protectionist trade measures against foreign competition by accusing their low-cost competitors of abusing labour standards.

Despite the considerable attention these issues have gained in the public, there is very little empirical evidence on the linkage between the increasing international division of labour with respect to trade flows and FDI and gender inequality. So far, four studies have addressed that relationship. The first empirical attempt was made by Mah (1997), who found that export shares of GDP and the ratification of fundamental ILO conventions, including gender discrimination, are negatively correlated. However, he did not incorporate any indicator in his regressions that accounts for observance of rather than ratification of ILO conventions.[1]

Busse (2002) showed that trade flows and the female activity rate might be associated to some extent, but he focused his analysis more on basic labour standards. Seguino (2000a) analysed the link between gender wage inequality and export performance in South Korea and Taiwan. Her results indicate that gender discrimination may have contributed to the export success of both countries in the past. Finally, Kucera (2002) regressed a number of measures for gender equality on FDI inflows. Some of his results were statistically significant, but others were not. He concluded his findings by stating that "no evidence is found that countries with greater gender inequality have a comparative advantage in attracting FDI inflows, indeed all evidence of statistical significance suggests rather the opposite" (Kucera, 2002, p. 63). Summing up, the evidence available in the literature has been rather limited and inconclusive.[2]

[1] In addition to foreign investment and trade, nearly all of the empirical studies mentioned in this section have also explored the link between gender inequality and other economic variables like wages or other labour standards and FDI/trade. For the purpose of this paper, merely the findings with respect to gender discrimination and trade/FDI are reported.

[2] Other studies have analysed the impact of increasing globalisation on female employment. See, for instance, Wood (1991), Kucera and Milberg (2000) or Standing (1989, 1999).

There is some anecdotal evidence of international connections between gender inequality and FDI/trade. Rodrik (2000) reported that Mauritius set out on a development strategy that depended on operating an export-processing zone. The segmentation of the labour force along gender lines, with female workers predominately employed in the export-processing zone, was crucial, as it ensured a large additional pool of low-wage workers with fewer rights for export production. Male workers, in contrast, have been able to preserve their status in the remaining sectors of the economy. As another example, Bhattacharya and Rahman (1999) observed that women in Bangladesh are likely to be pushed into low-skilled/low-wage jobs in the ready-made garments industry, which might explain Bangladesh's export success in this sector. What is more, transnational corporations are often accused by non-governmental organisations of exploiting female workers in their oversees production facilities.[3]

Against this background, the paper deals with three issues: (1) how to measure gender discrimination; (2) whether gender inequality affects FDI flows; and (3) whether gender inequality is closely associated with the structure of trade flows, that is, comparative advantage in labour-intensive commodities. The paper is structured as follows: The next section shows how gender discrimination can be defined and introduces the corresponding conventions by the United Nations and the International Labour Organisation (ILO). Section 3 considers how to measure gender inequality and presents the indicators used in the regressions, while the results of the empirical analysis of the linkage between gender discrimination and FDI/comparative advantage are reported in Section 4. Finally, some policy implications and concluding remarks are found in Section 5.

2. Gender Discrimination: Definition, Appearance and Conventions

Discrimination occurs in various forms in everyday life. As defined by the ILO (2003a), "any distinction, exclusion or preference made on the basis of race, colour, sex, religion, political opinion, national extraction or social origin which has the effect of nullifying or impairing equality of opportunity and treatment in employment or occupation" is discriminatory.[4] Alongside racial discrimination, gender discrimination can be seen as one major form of

[3] See, for instance, reports by WTO Watch (2003) and Amnesty International (2002) on the actions of transnational corporations in developing countries.

discrimination. As this paper focuses on female inequality, the term discrimination will predominantly be used with regard to gender.

The ILO (2003a) distinguishes between direct and indirect discrimination. The first form arises if, without being less qualified, certain groups of society are explicitly excluded or disadvantaged by the legal framework due to characteristics such as gender. Indirect discrimination occurs if intrinsically neutral rules or laws negatively affect certain groups, e.g. female workers. Discrimination of part-time workers against full time employees is still present in nearly every country. As a major proportion of part-time workers are female, this disadvantages women as well.

According to the United Nations Development Programme (UNDP, 1995), intrinsic job requirements like physical attributes, political attitude, particular faith or simply efficiency can be reasons for a diverse treatment without being discriminatory. Furthermore, maternity or pregnancy protection and special measures to favour individuals with particular requirements are legitimate to promote equality. Focusing on inequality between men and women, the UNDP (1995) concentrates on the following four areas:

1. *Discrimination in education*: Unlike in developed countries, women in the developing world still suffer from serious differences in literacy rates and school enrolment. In 2001, South-Asian women, for instance, had a relative literacy rate of only 67 % of the male literate population.[5] Furthermore, developing countries lag behind those which are industrialised in access to primary education. For example, the relative female/male primary enrolment ratio in Yemen was only 58 % in 2000/2001 (UNDP, 2003).

2. *Discrimination in health opportunities*: Sen (1989), Klasen (1994) and Klasen and Wink (2002) have analysed the 'missing women concept', where a gender-based mortality bias was found. Actual sex ratios diverge from expected ones in developing countries, where special health needs for women are neglected. Due to a lack of such health provision, maternal mortality, for instance, is a serious problem in countries like Rwanda and Sierra Leone. In both countries, over 2,000 women died per 100,000 live births in 1995 (World Bank, 2003).

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[4] The quote is based on the ILO Convention No. 111; see ILO (2003b) for the authentic text of the convention.

3. Discrimination in economic opportunities: Discrimination can be both at entry to the labour market and during the contract. This means women participate less in the official labour market and tend to work in certain occupations. For instance, the relative female/male economic activity rate for individuals aged 15 and above, ranges from 41 % in Arab States to 82 % in East Asia and the Pacific (UNDP, 2003). Jobs occupied by women often show a tendency towards lower pay, difficult career opportunities and lower reputation (World Bank, 2001). Kuwait, for example, restricts female access to juridical careers because of cultural and religious tradition. Furthermore, over a certain career level, advancement is less likely for women than for men in both developed and developing countries. Bank credits and other production inputs are often not accessible for women. Working in the agricultural sector, rural women in many African countries produce about 80 % of total food consumption, but receive only 1% of all credits given to agriculture (UNDP, 1995).

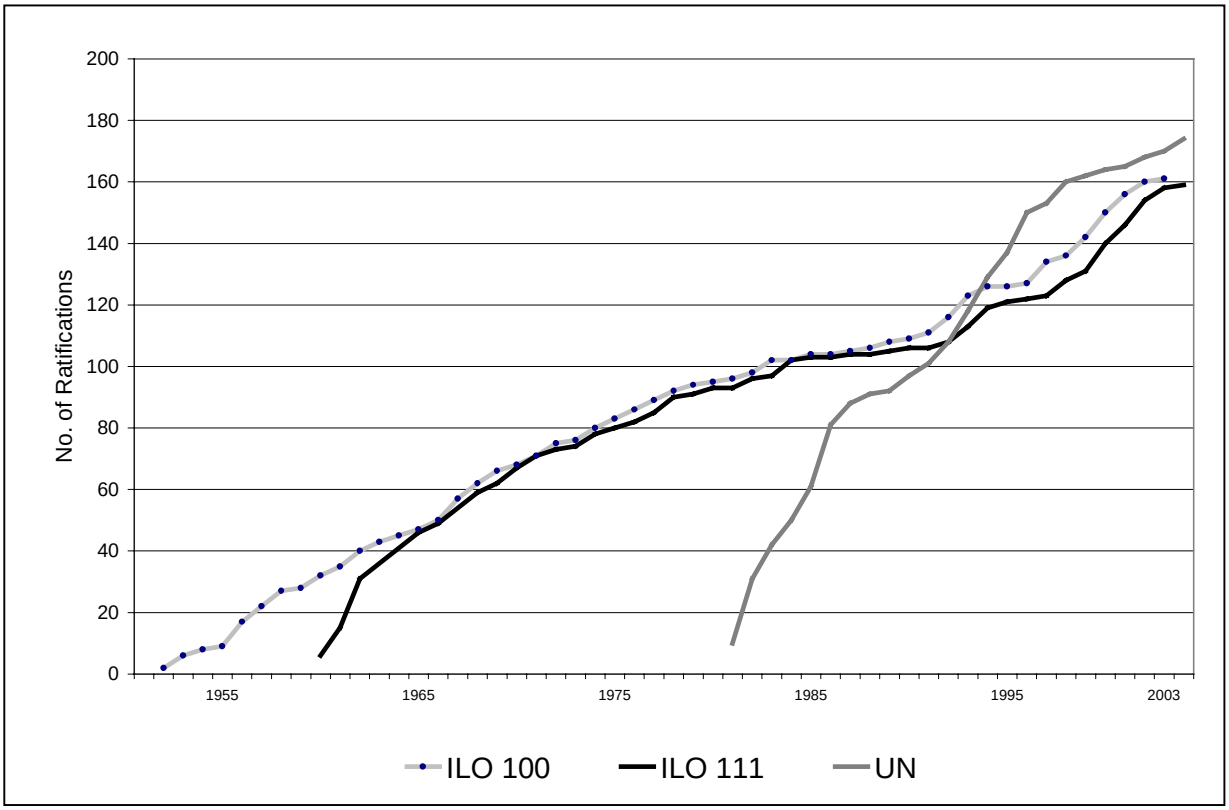
4. *Discrimination in political opportunities*: Not only the right to vote but also real female participation within parliament indicates women's involvement in the decision-making process. With 45.3 % female politicians, the Swedish parliament leads the ranking of female access to political bodies (UNDP, 2003). Where the gap between developed and developing countries seems to be rather small, the percentages within the groups do vary dramatically. For example, Greece, as an industrialised country, has a female parliamentary participation of 8.7 %, only a bit higher than Ethiopia's 7.8 %. On the other hand, Rwanda and Mozambique both have over 25 % women in their parliament, numbers which are similar to the ones in industrialised countries like Australia or Spain (UNDP, 2003).

Important global steps in the reduction of gender-based discrimination have been the two ILO Conventions Against Discrimination, No. 100 (from 1951) and No. 111 (from 1958). The Equal Remuneration Convention (No. 100) aims to ensure equal pay not just for similar work but also for work of equal value. This idea takes into account the fact that women and men tend to work in different occupations and calls for objective measures to compare the relative value of one job with another. The Discrimination (Employment and Occupation) Convention (No. 111) tries to ensure non-discriminatory treatment of all workers both in access to

[5] Though the developed world does not face any severe illiteracy problem, there is a lack of data for literacy rates in industrialised countries. It is assumed that in these countries all percentages are 99 % (UNDP, 2003).

employment and during the employment contract. This implies equality in educational and occupational opportunity as well as participation in employment organisations and career advancement. Employment-related welfare systems and job security should be equally accessible for both male and female workers. Both conventions are part of eight conventions which were put together in 1998 to form the Declaration on Fundamental Principles and Rights at Work.[6] This declaration induced an acceleration of ratification (Figure 1). As of 31 July 2003, Convention No. 100 has been ratified by 161 countries, whereas the same figure is 159 for Convention No. 111. Both are now among the most widely ratified ILO conventions (ILO, 2003c).

Figure 1: Ratification of UN and ILO Conventions, as of 31 July 2003



Sources: ILO (2003c) and UN (2003).

Furthermore, the UN Convention on Elimination of all Forms of Discrimination against Women, which was composed in 1979, can be seen as another important step on the way towards gender equality. It has the idea of equal remuneration for equal work embedded in it

[6] They are: Freedom of Association and the Right of Collective Bargaining (C87 and C98), The elimination of all Forms of Forced and Compulsory labour (C29 and C105), The Elimination of Discrimination in Respect of Employment and Occupation (C100 and C111) and the Effective Abolition of Child labour (C138 and C182), see ILO (1998).

as was introduced by ILO Convention No. 100. Moreover, it focuses on preventing discrimination in the legal system to ensure equality in all parts of working and public life. Often referred to as an international bill of rights for women, the UN convention focuses only on gender-based discrimination and therefore represents a more specified treaty than the ILO conventions. As of 31 July 2003, it has been ratified by 174 countries, or 90 % of all UN member states (Figure 1).

3. Measuring Female Discrimination

There have been several attempts to measure female discrimination across countries. In 1995, the UNDP introduced two indicators to quantify the degree of gender inequality: The Gender-related Development Index (GDI) and the Gender Empowerment Measure (GEM). The GDI is based on three variables, namely life expectancy at birth, educational attainment, which is measured by literacy rate and school enrolment, and access to resources in terms of GDP per capita converted at purchasing power parity exchange rates. These variables are also used to calculate the Human Development Index (HDI); however, the GDI adjusts the values for gender equality.[7] The GEM combines income shares, professional opportunities and participation in economic decision making[8] and parliamentary participation as shares of parliamentary seats for both males and females.

Common for both indicators is that they combine absolute values for the considered indicators with a penalty for inequality.[9] Bardhan and Klasen (1999), Oudhof (2001) and Dijkstra (2002) criticise the composition of both UNDP indices. In particular, they all worry about an over-weighted income variable, as GDI is strongly correlated with the absolute level of income. GDI and GEM, therefore, may underestimate gender inequality in richer countries. Dijkstra (2002) argues that these indicators do not just measure inequality, since they combine absolute achievement levels with a valuation of inequality. Moreover, relative income shares

[7] More precisely, a penalty is introduced to express the weight which is given to equality, assuming that countries have an aversion to inequality given by an aversion factor ε (Oudhof, 2001).

[8] This is measured by the proportion of male and female administrative, professional, technical and managerial positions (Bardhan and Klasen, 1999).

[9] For detailed derivation and discussion of both the GDI and the GEM, see UNDP (1995), Bardhan and Klasen (1999), Oudhof (2001) and Dijkstra (2002).

are difficult to measure due to a lack of wage data in quite a few developing countries (World Bank, 2003).

While various modifications have been suggested to overcome the shortages of the GDI and the GEM,[10] most of them cannot solve the problem with the income variable. Dijkstra (2002), however, composes a new index, the Standardised Index of Gender Equality (SIGE), by taking five variables from both GDI and GEM without incorporating any income variable. His SIGE consists of access to education, longevity, higher occupations,[11] and parliament and labour-market participation, all measured as relative female/male proportions or female proportions in per cent of the total.

As the SIGE avoids the problem with the income variable, it will form the basis for our gender-discrimination indicator for the following empirical analysis. Since the data is rare for occupational segregation in developing countries, we drop that variable and compose our own SIGE based on the following four variables:[12]

1. *Access to education*: Taken from the GDI, this is a combined measure of relative female/male literacy rates (which is weighted 2/3) and relative female/male gross-enrolment (weighted 1/3).[13] Dijkstra (2002) argues that the educational level is the most relevant measure of gender equality, even though some problems might evolve since enrolment does not always mean school attendance or quality performance.

2. Access to health: Like in the GDI, relative female/male life expectancy is taken as an approximation for relative female access to health services. It can be assumed that more sleep and leisure time as well as the provision of special health services for women result in higher life expectancy.

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[10] Alternatives are described in Oudhof (2001), Bardhan and Klasen (1999) and Dijkstra (2002). For example, one approach measures the GDI relative to the HDI, or the difference between the HDI and the GDI relative to the HDI.

[11] Higher occupations are technical and professional as well as administrative and management positions.

[12] Data sources for the four variables are the UNDP (2002) and World Bank (2003).

[13] Like in the GDI, we use primary (elementary school), secondary (at least four more years) and tertiary (university, teachers colleges, higher-level professional schools) gross enrolment.

3. *Labour market participation*: As an indicator for female access to the labour market, relative female/male activity rates for individuals of 15 years and above are employed.

4. *Share in parliament*: The GEM uses this variable to express female influence in decision making. However, the relevance of this variable may be limited since, for example, former communist countries like China and Cuba show a high female proportion but have only little power (Bardhan and Klasen, 1999).

To assure that all indicators enter the combined index with equal weights, we follow Dijkstra's suggestion of standardising all variables in a first step:

$$z_{ij} = \frac{(x_{ij} - \mu_j)}{\sigma_j} \tag{1}$$

where the standardised score (z) of country i on indicator j (1, 2, 3, 4) is derived from the actual score (x) minus the arithmetic mean of this indicator for all countries (μ) adjusted by the standard deviation (σ) of the indicator over all countries.

The standardised values are combined to form the SIGE by taking the unweighted arithmetic mean of the four scores:

$$SIGE_i = \frac{\sum_{j=1}^{4} z_{ij}}{4} \tag{2}$$

As all components of the SIGE are negatively related to gender inequality, the composed index shows a negative correlation, too. This implies that higher discrimination is represented by a lower value of the SIGE.

In the following analysis, we will apply a multiple indicator approach to measure the extent of discrimination. More precisely, we choose both the SIGE and the GDI.[14] In defiance of its disadvantages, the GDI also enters our regressions because of its prevalence in the literature. By using an additional indicator, we also test the robustness of the empirical results. As a

[14] See Appendix D for the computed values of the SIGE and the corresponding figures for the GDI.

third indicator, CONVENTION is added, which indicates whether a country has ratified none, one or both of the ILO conventions.[15] All indicators are based on data of the year 2000. Therefore, we omitted all ratifications after 31 December 2000. This does not represent a major problem, as only a few countries of our sample are affected by this cut-off point.

The ratification of the two ILO conventions seems to be a poor measure for the extent of gender discrimination, as the correlations with both the GDI and the SIGE are rather low (Table 1). The partial correlation between the SIGE and the ratification of the conventions even shows a negative sign, implying that in countries which have ratified the conventions, there is on average more discrimination. It seems to be that signing the ILO documents cannot always be converted into action.

Table 1: Correlation Matrix, Gender Inequality Indicators

Variable	GDI	SIGE	CONVENTION	GDP
GDI	1.00			
SIGE	0.64	1.00		
CONVENTION	0.14	-0.02	1.00	
ln (GDP)	0.90	0.55	-0.004	1.00

Note: GDP refers to Gross Domestic Product per capita in current US$ in 2000.

GDP is highly correlated with both discrimination indicators, meaning that richer countries face less discrimination. In the case of the GDI, one could argue that the high correlation may be caused by the income component of the GDI. But as the SIGE affirms at least medium correlation, a considerable link between income levels and discriminatory practices seems to exist.

4. Empirical Evidence

After the introduction of the three measures of the extent of gender discrimination, we focus next on the empirical relationship between these indicators and foreign investment and trade flows. We start with the linkage between gender inequality and foreign investment. As the

[15] The UN Convention on Elimination of all Forms of Discrimination against Women will not enter our index, as there is not very much variation in that indicator. It has been ratified by all countries included in the analysis except two.

dependent variable in the foreign investment regressions, average FDI inflows per capita during the period 1999 to 2001 have been chosen. The average of three years has been computed to incorporate the fact that FDI flows for a single country are likely to fluctuate considerably from year to year. Per capita FDI figures allow a control for the size of the country. Moreover, we use FDI flows rather than stocks, given that FDI stocks roughly represent flows over a longer period, but the indicators for gender inequality are all based on the year 2000.[16]

Regarding the independent variables of foreign investment, a standard procedure would be to use a common theoretical model for the determinants of FDI flows, integrate a gender inequality indicator and then estimate the effects. Unfortunately, we do not have such a model. Most researchers who undertake empirical work on the determinants of FDI flows use a rather ad-hoc specification, that is, they try various indicators that may explain differences in FDI flows across countries and use those that are most suitable for the purpose of their research. Table 2 presents the results for some of the most widely used indicators.[17] Evidently, some of the results are contradictory. For instance, the impact of labour costs on FDI flows is anything but clear. Yet we also observe that a considerable number of variables show relatively persistent results with respect to their influence on foreign investment.

Above all, market size is probably the most important factor in explaining foreign investment (Chakrabarti, 2001). The size of a particular market may indicate the attractiveness of a specific location for the investment, if the transnational corporation aims to produce for the local market (horizontal or market-seeking FDI). Though there are a few studies that indicate that the link between income levels and FDI may not be that close, a large majority of empirical studies do confirm the importance of that linkage. Likewise, high (GDP or GNI) growth rates may signal high investment returns and, hence, may attract further (foreign) investment. Yet we have to keep in mind that high growth rates may be boosted by FDI, indicating the problem of endogeneity in the empirical analysis (Carkovic and Levine, 2002).

[16] Importantly, the subsequent results do not change significantly if FDI stocks are used instead of flows, which points to the robustness of our results.

[17] Gastanaga et al. (1998), Chakrabarti (2001) and Asiedu (2002) provide more extensive surveys of the literature.

Table 2: Effects of Selected Variables on Foreign Direct Investment

Determinant of FDI	Negative	Positive	Insignificant
Market size (GDP or GNI)		Schneider & Frey (1985) Wheeler & Moody (1992) Tsai (1994) Jun & Singh (1996) Billington (1999) Lipsey (1999) Pistoresi (2000) Noorbakhsh, Paloni & Youssef (2001) Chakrabarti (2001) Garibaldi et al. (2001) Busse & Braun (2003)	Loree & Guisinger (1995) Wei (2000) Fernandez-Arias & Hausmann (2000)
Market growth rates (GDP or GNI growth rates)		Schneider & Frey (1985) Rodrik (1996) Billington (1999) Busse & Braun (2003)	Wheeler & Moody (1992) Tsai (1994) Asiedu (2002)
Openness to trade (Trade divided by GDP)		Edwards (1990) Jun & Singh (1996) Gastanaga et al. (1998) Fernandez-Arias & Hausmann (2000) Pistoresi (2000) Asiedu (2002) Busse & Braun (2003)	Harms & Ursprung (2002)
Labour costs	Schneider & Frey (1985) Jun & Singh (1996)	Wheeler & Moody (1992)	Tsai (1994) Loree & Guisinger (1995) Lipsey (1999)
Quality of infrastructure		Wheeler & Moody (1992) Kumar (1994) Loree & Guisinger (1995) Asiedu (2002)	
Political and country risk	Schneider & Frey (1985) Jun & Singh (1996) Brunetti & Weder (1998) Harms & Ursprung (2002)		Fernandez-Arias & Hausmann (2000) Asiedu (2002)

Note: Considering the extensive literature on the determinants of FDI, not all studies are listed above. Included are more recent studies as well as important earlier work.

Another determinant that is likely to have an impact on FDI is openness to trade, usually measured by the ratio of imports and exports to GDP. This ratio is often interpreted as a quantification of trade restrictions.[18] In general, the impact of openness to trade is linked to the type of foreign investment (Asiedu, 2002). Horizontal FDI may be attracted by higher trade barriers, as they also protect the output of the foreign investor in the local market against

imports of competitors (tariff-jumping hypothesis). Conversely, transnationals engaged in export-oriented investment, called vertical FDI, may favour investing in a relatively open economy, since trade barriers increase transaction costs. Also, trade restrictions may be linked to other forms of policy imperfections, particularly in developing countries, such as exchange-rate controls, corruption or government ineffectiveness, leading to reduced foreign investment inflows. Overall, openness to trade may thus be positively or negatively associated with FDI, depending on the country sample. The empirical evidence, on the other hand, suggests that a positive link is likely to be expected (Table 2).

The attraction of a particular market is further enhanced if a country provides a good infrastructure, such as the extent and quality of roads, railways, telecommunications, etc. A good infrastructure is likely to reduce transaction costs and may increase the productivity of investments and thus boost FDI (Asiedu, 2002). This link has been well established in the literature by a number of studies (Table 2). In contrast, the influence of political and country risk on FDI flows has been less clear. While Schneider and Frey (1985), Brunetti and Weder (1998) and Harms and Ursprung (2002) find that political risk has a negative impact on foreign investment, the findings by Fernandez-Arias and Hausmann (2000) and Asiedu (2002) suggest a rather insignificant influence. Nevertheless, according to the location criteria of managers of transnational corporations, political and country risk rank relatively high as important deterrents of FDI (Kucera, 2002).

Against this background, we use as the independent variables in the regressions all determinants of FDI flows mentioned above except labour costs. The remuneration of workers is the only indicator for which the empirical evidence is not clear at all, as positive, negative and insignificant influences on FDI have been reported. Moreover, reliable labour cost data for developing countries are hard to obtain. The inclusion of this indicator would reduce our country sample considerably. Hence, the benchmark regression consists of five variables:

- Market size (the variable is called GDP), quantified by GDP per capita in current US dollars

[18] See Gastanaga et al. (1998) for a discussion of different indicators to measure the degree of openness.

- Market growth (GROWTH), measured as average GDP per capita growth in the period 1995-2000
- Openness to trade (TRADE), representing the ratio of imports and exports to GDP
- Quality of infrastructure (INFRA), measured as the number of telephone lines per 1,000 inhabitants
- Political risk (RISK), quantified by the Political Risk Services indicator, that includes political and commercial risks related to investing in a country

Naturally, some of these variables are highly correlated with each other, indicating the problem of multicollinearity in the regression analysis. This seems to be particularly the case for the quality of the infrastructure and political risk versus income levels (Table 3) and has to be kept in mind for the interpretation of the results.

Table 3: Correlation Matrix for the Variables Used in the FDI Regressions

Variable	ln (FDI)	ln (GDP)	GROWTH	ln (TRADE)	ln (INFRA)	RISK
ln (FDI)	1.00					
ln (GDP)	0.87	1.00				
GROWTH	0.27	0.20	1.00			
ln (TRADE)	0.31	0.10	0.10	1.00		
ln (INFRA)	0.83	0.89	0.22	0.24	1.00	
RISK	0.78	0.84	0.29	0.17	0.75	1.00

To allow for regional characteristics, a set of regional dummy variables (REGIONAL DUMMIES) has also been inserted in the regressions. Included were all 115 countries that reported data for FDI and the five control variables. Base year for all variables is 2000, unless noted otherwise. Similar to most studies on FDI flows, a semi-log (or double-log) model has been used.[19] The specification of the FDI model is as follows:

$$(3) \quad \ln(FDI) = \alpha_0 + \alpha_1 \ln(GDP) + \alpha_2 GROWTH + \alpha_3 \ln(TRADE) + \alpha_4 \ln(INFRA) + \alpha_5 RISK + \alpha_6 REGIONAL\ DUMMIES + \alpha_7 Indicator\ for\ Gender\ Discrimination + e$$

where e is an error term and α_i are parameters. As can be seen from the results for the benchmark regression, presented in column 1 of Table 4, GDP, GROWTH and TRADE have

[19] Data sources and descriptive statistics for all variables are reported in Appendices A and B.

the expected positive sign and are statistically significant at the 1 per cent level. The quality of infrastructure and political risk, on the other hand, do not have a significant impact on foreign investment, even though both are highly correlated with FDI. The likely explanation for this result is the fact that INFRA and RISK are also highly correlated with GDP, and that the income level already catches a considerable part of variations in FDI.

Table 4: Gender Discrimination and Foreign Direct Investment, All Countries

Independent variables	Dependent variable: ln (FDI) (1)	(2)	(3)	(4)	(5)	(6)
Constant	-6.299***	-4.545***	-1.248	-5.948***	-4.225***	-5.837***
	(-5.903)	(-3.366)	(-1.189)	(-5.034)	(-3.962)	(-5.130)
ln (GDP)	0.781***	0.645***		0.566***		0.776***
	(5.169)	(3.551)		(2.947)		(5.143)
GROWTH	0.099***	0.038	0.027	0.089**	0.079**	0.100***
	(2.863)	(0.829)	(0.548)	(2.453)	(2.104)	(2.909)
ln (TRADE)	0.918***	0.744***	0.528***	0.778***	0.609***	0.932***
	(5.714)	(4.074)	(2.867)	(4.559)	(3.646)	(5.794)
RISK	0.689	1.643*	2.920***	1.298*	2.484***	0.529
	(0.965)	(1.907)	(3.485)	(1.634)	(3.490)	(0.729)
ln (INFRA)	0.087	-0.007	0.465***	0.098	0.274*	0.088
	(0.604)	(-0.040)	(3.631)	(0.593)	(1.717)	(0.614)
SIGE		0.574***	0.590***			
		(2.813)	(2.700)			
GDI				1.998	4.768***	
				(1.093)	(2.927)	
CONVENTION						-0.185
						(-1.159)
REGIONAL DUMMIES	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.86	0.86	0.84	0.86	0.85	0.86
F-value	71.0	51.4	48.3	60.6	61.0	64.9
No. of obs.	115	91	91	108	108	115

Notes: The coefficients for the regional dummy variables have not been reported due to reasons of space; t-values, reported in parentheses, are based on White's (1980) correction for heteroskedasticity; levels of statistical significance are indicated by asterisks: *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

In the remaining columns of Table 4, the coefficients for the three gender inequality indicators are shown. To see whether gender bias also influences FDI flows, each indicator is added one by one to the benchmark regression. Both the SIGE and the GDI have positive signs (columns 2 and 4), but only the SIGE is highly significant at the 1 per cent level. A possible explanation for this result may be that the GDI is highly correlated with GDP (see Table 1), which causes multicollinearity in the regression analysis.

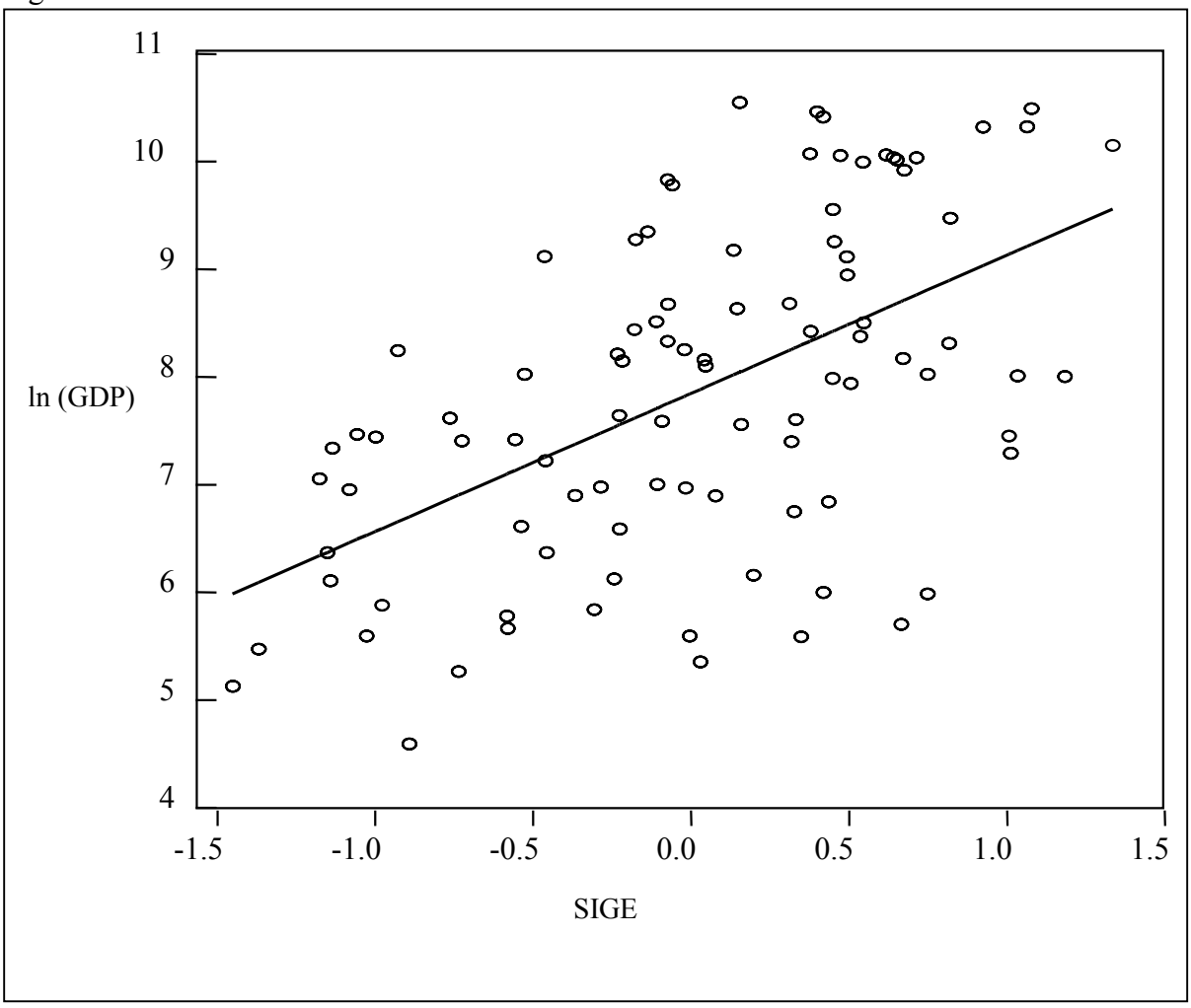
To avoid that problem, we excluded GDP in a further set of regressions for GDI, but also the SIGE.[20] While the significance of the SIGE does not change, the GDI reaches also the 1 per cent significance level. These results imply that the observed prevalence of gender discrimination is negatively associated with FDI flows. In other words: Countries with a lower level of gender inequality received more FDI per capita in the period 1999 to 2001 than would have been forecasted on the basis of the other country characteristics. CONVENTION, measuring the *de jure* ratification of both ILO conventions on child labour, does not significantly affect foreign investments. The coefficient is even negative, implying that countries that ratify the two ILO conventions on gender discrimination broadly receive less FDI.

The results might have been influenced by the fact that FDI flows are dominated by high-income countries and regions. In the period 1999-2001, high-income countries made up 84.5 per cent of global FDI inflows (World Bank, 2003). For that reason, sign and significance of the coefficients of the gender discrimination indicators might be biased.[21] To examine the robustness of the results, high-income countries have been excluded in a second set of regressions. Only low- and middle-income countries, namely countries with a GDP per capita in 2001 of 9,206 US dollars or less according to a definition by the World Bank (2003), were incorporated in the regressions. Along these lines, the focus is on relatively poor countries, where gender discrimination is likely to be a problem of higher importance in comparison to higher-income countries (Figure 2). In total, 90 developing countries have been singled out, representing an annual average of 170.5 billion US dollars or 15.5 per cent of total FDI inflows in the period 1999 to 2001.

[20] Though there is less evidence of collinearity between the SIGE and GDP, we have also run the same regression without GDP to see whether the results may change.

[21] This is particular true for the GDI, as absolute income levels influence its value.

Figure 2: Extent of Gender Discrimination and Income Levels



Notes: Both variables refer to the year 2000; the log-value for the income threshold of US $9,206 used in the second set of regressions is 9.1.

Table 5 shows the results of the further set of regressions on FDI flows. As we can see from the signs and statistical significance of all variables, the results are very similar to those of the previous set, even if the overall fit of the benchmark and the other regressions deteriorates to some extent.[22] The only difference is that the statistical significance of the SIGE and the GDI declines slightly from the 1 to the 5 per cent level in two of the regressions (columns 2 and 5). On the whole, these results confirm those of the first set of empirical estimates, that is, the extent of gender discrimination is negatively associated with FDI flows – whether the focus is on all countries or developing countries only.[23]

[22] Obviously, GDP has a considerable impact on FDI flows, measured by standardised (beta) coefficients in the regressions. This influence declines somewhat in the reduced country sample.

[23] Importantly, these results do not change much if the income threshold is set at a lower level, for instance, US $2,975 per capita, representing the income level for low- and lower-middle-income countries. To save space, the results have not been reported.

In contrast to the recurrent accusations of non-governmental organisations, it appears that – on average – transnational corporations do pay attention to their choice of foreign investment locations. They are more likely to invest in countries with higher income levels, growth rates and lower trade barriers, but also less discrimination against females. Conversely, this result may be partly caused by international campaigns of non-governmental organisations fighting transnationals that do not monitor fundamental principles regarding gender equality in their international factories. Yet without reliable data for longer periods, which are not available for a large majority of developing countries, we cannot perform any times-series analysis. Hence, the motives of transnational corporations' activities in developing countries with respect to gender equality cannot be answered conclusively.[24]

Table 5: Gender Discrimination and Foreign Direct Investment, Developing Countries

Independent variables	Dependent variable: ln (FDI) (1)	(2)	(3)	(4)	(5)	(6)
Constant	-5.309***	-2.649	0.208	–4.277**	-2.494	-4.989***
	(-3.249)	(-1.318)	(0.116)	(-2.403)	(-1.577)	(-2.096)
ln (GDP)	0.707***	0.600***		0.462**		0.714***
	(3.869)	(2.698)		(2.031)		(3.893)
GROWTH	0.111***	0.0.037	0.037	0.093**	0.091**	0.112***
	(2.793)	(0.694)	(0.666)	(2.165)	(2.058)	(2.806)
ln (TRADE)	0.834***	0.627***	0.505**	0.613***	0.483**	0.842***
	(4.052)	(2.656)	(2.067)	(2.713)	(2.183)	(4.074)
RISK	0.448	1.601	2.642***	1.144	1.956**	0.316
	(0.556)	(1.557)	(2.629)	(1.268)	(2.367)	(0.383)
ln (INFRA)	0.138	0.002	0.397***	0.150	0.296	0.135
	(0.839)	(2.655)	(2.507)	(0.771)	(1.609)	(0.824)
SIGE		0.569**	5.347***			
		(2.052)	(1.166)			
GDI				2.183	4.054**	
				(1.058)	(2.151)	
CONVENTION						-0.156
						(-0.794)
REGIONAL DUMMIES	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.76	0.76	0.74	0.75	0.74	0.76
F-value	29.8	20.8	20.0	23.8	24.7	27.0
No. of obs.	90	68	68	83	83	90

Note: Developing countries can be classified as low-middle and middle-income countries with a GDP per capita in 2000 of US $9,206 or less (World Bank, 2003); see Table 4 for further notes; *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

Next, the relationship between gender inequality and international trade will be explored. While gender discrimination is unlikely to affect significantly the overall export performance

of a country, the trade structure, that is, the composition of exports, may be changed.[25] Importantly, there is considerable evidence that females dominate certain export industries that are a relatively labour intensive, such as textiles and clothing (Table 6). Usually, these are sectors that employ a larger number of unskilled labourers and provide relatively low wages (Seguino, 2000b). Yet it is unclear whether females in developing and emerging market economies are working in these sectors due to a lack of other job opportunities or by choice. Nevertheless, the employment patterns do indicate considerable job segregation (Bhattacharya and Rahman, 1999).

Table 6: Proportion of Females in Textiles and Clothing in %, Selected Countries, 1984 and 1990

	Textiles		Clothing	
Country	1984	1990	1984	1990
Columbia	34.3	n.a.	79.8	n.a.
Cyprus	66.5	72.3	83.2	86.5
Hong Kong	47.1	42.2	69.1	68.3
Malaysia	63.7	57.8	89.4	85.3
Philippines	46.6	48.4	80.0	79.6
Singapore	66.8	58.4	88.2	87.1
South Korea	65.7	57.3	76.7	72.0
Sri Lanka	57.5	50.8	89.1	89.4
Taiwan	64.7	64.7	80.2	80.2
Thailand	75.0	75.6	93.0	81.9

Source: Seguino (2000b); n.a.: not available.

Moreover, gender inequality in education may further restrict job opportunities for females, as low-skilled workers are more likely to perform certain types of jobs, such as those in the textiles and clothing sectors. In sum, gender bias in education and job opportunities, measured by the SIGE (and to a lesser extent by the GDI), may lead to a larger endowment of unskilled females. Therefore, we restrict our trade analysis to unskilled-labour-intensive manufactures, since the impact of gender inequality will be felt most strongly in these sectors.

As an appropriate model to analyse these linkages, we use a standard Heckscher-Ohlin trade model. The two most important production factors are capital and labour, but we also distinguish two types of labour: skilled and unskilled labour. An increase in gender

[24] Unlike the data for FDI and some of the explanatory indicators, both the SIGE and the GDI cannot be computed or are not available for a longer period of time.

[25] Though Seguino (1997, 2000a) found that a gender bias had an impact on the trade performance of Taiwan and South Korea, it is unclear whether her results can be generalised for all developing countries. Specific circumstances in these two countries may have contributed to their export success.

discrimination is then likely to enhance the endowment of unskilled labour and expands or changes production possibilities with a bias towards unskilled-labour-intensive goods.[26] As the production of these goods increases relative to the other goods, the country improves (or gains in) its comparative advantage.[27]

As the dependent variable in the regression analysis, we use only those manufactured goods that have two characteristics in common: a high-labour and a low-technology intensity, such as toys, clothing, textiles, clothing, or footwear. These are goods that are typically unskilled-labour-intensive.[28] The relative labour intensity is above all influenced by value added per worker, while the OECD Science, Technology and Industry Scoreboard (OECD, 2001) provides information on technology intensities. The dependent variable, LABEXPORTS, is computed as the ratio of unskilled-labour-intensive exports to total exports.[29] As comparative advantage in a Heckscher-Ohlin framework is influenced by relative factor endowments, three control variables are used:

(1) LABDENSITY, measured as the total labour force in proportion to the land area, for the relative labour endowment
(2) EDUCATION, quantified by the UNDP educational attainment index of the, as a proxy for human capital levels
(3) CAPITAL, which stands for the relative capital endowment, computed by total investment in the period 1991 to 2000 divided by the land area

The first control variable is expected to be positively associated with comparative advantage in labour-intensive goods, whereas the last two are likely to be negatively correlated with LABEXPORTS. Similar to the FDI regressions, all countries reporting data for the four variables have been included in the data set. The exception is Singapore, which has an

[26] Modelling the effect of gender discrimination in this way is simply an application of the Rybczynski (1955) theorem.

[27] By modelling gender discrimination in this way, we do not consider any effect on welfare levels, as these depend on a number of assumptions that are not the main focus of this paper. In particular, gender inequality itself is not incorporated in the utility function. Such an approach is far beyond our methodology, and therefore excluded from the analysis.

[28] All commodities and the corresponding SITC numbers are listed in Appendix C. The data on labour-intensive commodities has been taken from Tyers et al. (1987).

[29] To check the robustness of the results, we also used several measures of revealed comparative advantage, for instance, by taking unskilled-labour-intensive imports and total imports into account. Importantly, the results do not differ much with respect to sign and significance of the estimated coefficients.

extremely high labour density as a city-state.[30] The specification of the trade model is as follows:

(4) $LABEXPORTS = \alpha_0 + \alpha_1 LABDENSITY + \alpha_2 EDUCATION + \alpha_3 CAPITAL + \alpha_4 REGIONAL\ DUMMIES + \alpha_5$ Indicator for Gender Discrimination + e

The results of the benchmark regression, reported in column 1 of Table 7, show that all three explanatory variables have the expected signs and are statistically significant at the 1 per cent level. The overall fit of the regression is relatively high for such as heterogeneous set of countries. Subsequently, each gender discrimination indicator is singly added to the regression, to see whether gender bias also has an impact on comparative advantage. Both variables that measure the observed extent of gender discrimination have a negative sign (columns 2 and 4) and are significant at the 1 or 10 per cent level. Yet both the SIGE and the GDI are closely linked to EDUCATION, as the partial correlations are 0.71 and 0.92, respectively. The reason is likely to be found in the definition of both gender inequality indicators, since both the SIGE and the GDI are partly based on relative educational attainment levels of females. Though both indicators take only relative attainment levels into account, there is evidence that gender inequality and educational attainment levels for males and females are correlated to some extent.

To avoid the problem of multicollinearity, we have excluded EDUCATION in additional regressions with the SIGE and the GDI. Now, both gender inequality variables still have a negative sign, but the significance of the SIGE improves to the 5 per cent level (column 3). Hence, a higher extent of gender discrimination is associated with an improved comparative advantage in unskilled-labour-intensive goods. The number of ratified ILO conventions on gender discrimination, on the other hand, seems not to influence significantly comparative advantage in exports of unskilled-labour-intensive goods. The coefficient for CONVENTION is negative, which implies that countries that ratify more conventions have a reduced comparative advantage, but the indicator is not statistically significant.

[30] Again, the base year for all variables is 2000. Regional dummy variables have also been added to all regressions.

Table 7: Gender Discrimination and Comparative Advantage, All Countries

Independent variables	Dependent variable: LABEXPORTS (1)	(2)	(3)	(4)	(5)	(6)
Constant	0.536***	0.1224	0.111***	0.893***	0.857***	0.658***
	(3.927)	(0.826)	(3.084)	(5.149)	(5.019)	(4.032)
LABDENSITY	1.004***	1.256***	1.260***	0.933***	0.946***	0.999***
	(4.590)	(5.853)	(6.077)	(4.094)	(4.148)	(4.586)
EDUCATION	-0.482***	-0.013		0.285		-0.525***
	(-3.430)	(-0.077)		(1.131)		(-3.661)
CAPITAL	-10.704***	-13.848***	-13.933***	-7.103**	-7.582**	-10.624***
	(-2.979)	(-4.267)	(-4.560)	(-1.971)	(-2.115)	(-2.970)
SIGE		-0.070*	-0.071**			
		(-1.798)	(-2.161)			
GDI				-1.215***	-0.874***	
				(-3.420)	(-4.662)	
CONVENTION						-0.042
						(-1.349)
REGIONAL DUMMIES	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.42	0.51	0.51	0.52	0.51	0.42
F-value	9.5	9.9	11.3	11.7	12.9	8.7
No. of obs.	96	79	79	91	91	96

Notes: See Table 4; *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

Similar to the FDI regressions, we have excluded high-income countries in a second set of regressions. In contrast to high-income OECD countries, exports of unskilled-labour-intensive commodities usually make up a considerable share of total exports in developing economies. To see whether there are important differences for relatively poor developing countries, we have again focused on countries with a GDP of US $9,206 or less. As can be seen from Table 8, the results do hold up. Sign and significance of the variables are very similar to the regressions for the full country sample.

The results regarding comparative advantage and gender inequality imply that industrialised countries do not have a problem with gender discrimination in developing countries; they may even “profit” from its occurrence due to possibly lower prices for unskilled-labour-intensive goods. Importantly, developing countries with less gender inequality might be negatively affected, as their comparative advantage in unskilled-labour-intensive commodities may erode if other countries with a similar factor endowment rely on unskilled females in their export sector.

Table 8: Gender Discrimination and Comparative Advantage, Developing Countries

Independent variables	Dependent variable: LABEXPORTS (1)	(2)	(3)	(4)	(5)	(6)
Constant	-1.217*	-1.094*	-1.104*	-0.665	-0.791	-0.925
	(-1.730)	(-1.717)	(-1.762)	(-0.961)	(-1.196)	(-1.233)
LABDENSITY	1.108***	1.439***	1.422***	0.927***	0.908***	1.113***
	(3.284)	(4.625)	(5.068)	(2.821)	(2.790)	(3.304)
EDUCATION	-0.504***	0.025		-0.197		-0.542***
	(-2.851)	(4.625)		(0.652)		(-3.014)
CAPITAL	46.460	17.424	18.925	45.505	49.341*	40.088
	(1.540)	(0.632)	(0.767)	(1.568)	(1.746)	(1.307)
SIGE		-0.095*	-0.092**			
		(-1.895)	(-2.094)			
GDI				-1.232***	-0.994***	
				(-2.809)	(-4.079)	
CONVENTION						-0.044
						(-1.100)
REGIONAL DUMMIES	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R^2	0.48	0.57	0.58	0.55	0.55	0.48
F-value	9.0	9.1	10.4	9.5	10.8	8.1
No. of obs.	69	56	56	65	65	69

Notes: See Tables 4 and 5; *** significant at 1% level; ** significant at 5% level; * significant at 10% level.

Summing up the empirical evidence, the results with respect to FDI and comparative advantage tend to pull in opposite directions. A possible explanation for this result could be that transnational corporations appear to be highly sensitive to host country characteristics such as labour standards, including gender discrimination. Along these lines, the findings presented in this paper confirm the results of Kucera (2002). Conversely, domestic firms may exploit their (national) comparative advantage in unskilled-labour-intensive goods by taking advantage of gender inequality and use females as unskilled-labour in the export sector. Also, our results do not contradict the empirical evidence on the negative link between economic growth and gender inequality.[31] Any likely impact on comparative advantage does not necessarily influence total exports. What is more, FDI will be concentrated on those countries that have less gender inequality, thereby preventing countries with a higher gender bias from being able to profit from the capital and know-how of transnational corporations. As a consequence, growth rates may not be negatively affected at best.

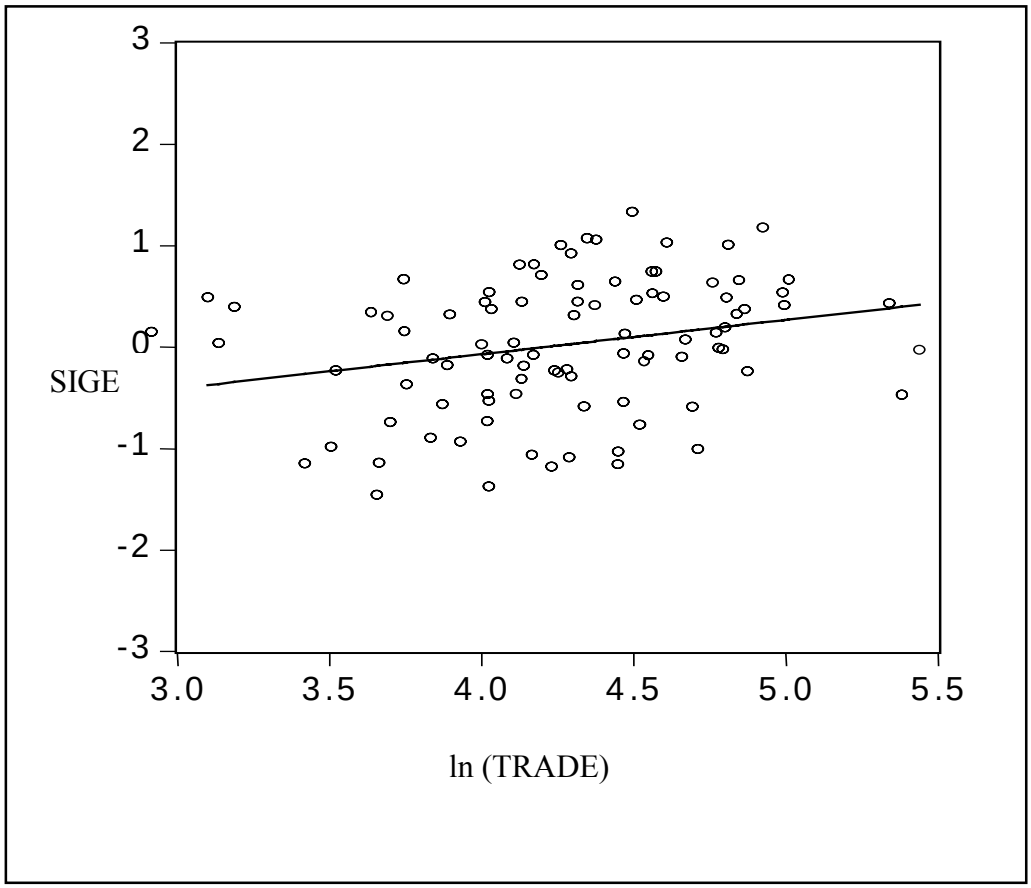
[31] See Drèze and Sen (1989), Pritchett and Summers (1996), Dollar and Gatti (1999), and Klasen (2002).

5. Policy Implications and Concluding Remarks

As transnational corporations on average do not invest in countries with increased gender inequality, there seems to be no problem with the link of FDI and gender discrimination. Rather there might be some cause for concern regarding the linkage between gender discrimination and comparative advantage in unskilled-labour-intensive goods. On an international level, it is sometimes argued that sanctions should be imposed on commodities from countries with poor labour standards, such as gender discrimination. Supporters of this position, which usually come from high-income OECD countries, argue for connecting trade and labour standards, if possible within the WTO framework, thereby punishing developing countries that do not observe basic standards and/or giving them an incentive to raise those standards.

Though sanctions are popular, the effectiveness of trade sanctions as an instrument is highly questionable. In a large number of cases, countries do not change their behaviour because sanctions have been imposed on them (Hufbauer and Elliot, 1999). What is more, this instrument focuses only on export industries and does not tackle gender bias in other areas. Trade sanctions may thus drive females to other sectors with potentially even lower labour standards. In addition, there is evidence that an enhanced integration into the world economy is associated with lower levels of gender inequality (Figure 3). The partial correlations between the degree of market integration, TRADE, and the SIGE is 0.26, indicate a positive correlation in the medium range. The positive correlation implies that the extent of gender inequality is negatively associated with openness to trade.

Figure 3: Gender Discrimination and Openness to Trade



If one accepts the negative relationship between gender discrimination and openness to trade, trade sanctions are ineffective or even counter-productive as a remedy to reduce gender bias. The inclusion of labour standards in the WTO framework is then not appropriate. Their enforcement may even be exploited by high-income countries to protect their markets against presumably "unfair" imports from poorer countries with lower standards.[32] This, in turn, may reduce GDP growth rates in developing countries, which then relates to more not less gender inequality.

[32] See Bhagwati (1996) for a discussion on the political economy of labour standards and international trade.

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Appendix A: Definition of Variables and Data Sources

Variable	Definition	Source
FDI	Foreign direct investment per capita, net inflows in current US dollars, annual average for the period 1999-2001	World Bank (2003)
GDP	GDP per capita in current US dollars ('000), 2000	World Bank (2003)
GROWTH	Growth of GDP per capita in per cent, annual average for the period 1995-2000	World Bank (2003)
TRADE	Total ex- and imports divided by GDP, 2000	World Bank (2003)
RISK	Country Risk, Political Risk Services indicator that combines political and commercial risks, February 2001	UNCTAD (2002)
INFRA	Indicator for Infrastructure, measured by telephone lines per 1,000 inhabitants, average 1998-2000	UNCTAD (2003)
LABEXPORTS	Exports of unskilled-labour-intensive manufactured goods divided by total exports of goods, 2000	ITC (2003)
LABDENSITY	Total labour force divided by land area (1,000 sq. km of land), 2000	World Bank (2003)
EDUCATION	Educational attainment index, based on average years of schooling in the above-25 population and illiteracy rate, index from 0-1, 2000	UNDP (2002)
CAPITAL	Total capital stock (investment in the period 1991-2000) divided by land area (1,000 sq. km of land)	World Bank (2003)
GDI	Gender-related development index	UNDP (2002)
SIGE	Standardised index of gender equality	Own compilation (see text and Appendix D)
CONVENTION	Number of ratifications of the two fundamental ILO conventions on female discrimination No. 100 and No. 111, 31 December 2000	ILO (2003c)
REGIONAL DUMMIES	Set of six regional dummy variables: (1) Sub-Saharan Africa, (2) Asia & the Pacific, (3) Middle East & North Africa, (4) Latin America & the Caribbean, (5) USA, Canada, Western Europe, Australia & New Zealand; (6) Central and Eastern Europe	

Appendix B: Descriptive Statistics of the Variables used in the Regressions

Variable	Mean	Standard deviation	Maximum	Minimum
FDI	3.98	2.10	8.41	-0.92
GDP	6,522	9,440	38,162	99
GROWTH	2.45	2.23	10.00	-5.01
TRADE	83.10	46.45	341.40	18.40
RISK	0.56	0.20	1.00	0.00
INFRA	237	443	4,441	2
LABEXPORTS	0.14	0.18	0.85	0.00
LABDENSITY	0.056	0.081	0.532	0.001
EDUCATION	0.777	0.195	0.990	0.160
CAPITAL	0.002	0.005	0.033	0.000
GDI	0.71	0.18	0.94	0.26
SIGE	0.03	0.65	1.33	-1.45
CONVENTION	0.81	0.52	2	0

Appendix C: Low Technology and Labour-intensive Goods

Commodity	SITC, Rev. 3
Textile yarn and fabric	65
Glass, glassware and pottery	664-666
Furniture and bedding	82
Travel goods and handbags	83
Apparel	84
Footwear	85
Baby carriages, games, toys, sporting goods	894

Sources: OECD (2001), Tyers et al. (1987) and own assembly; see text for explanation.

Appendix D: Country Sample and Gender Inequality Indicators

Countries	GDI (0-1)	SIGE	ILO Conventions No. 100 (0-1)	No. 111 (0-1)	CONVENTION (0-2)
Albania	0.729	-0.108	1	1	2
Algeria	0.679	-1.057	1	1	2
Angola	.	.	1	1	2
Argentina	0.836	0.494	1	1	2
Armenia	0.751	.	1	1	2
Australia	0.938	0.674	1	1	2
Austria	0.921	0.472	1	1	2
Azerbaijan	.	.	1	1	2
Bangladesh	0.468	-0.978	1	1	2
Barbados	.	.	1	1	2
Belarus	0.786	1.182	1	1	2
Belgium	0.933	.	1	1	2
Bolivia	0.645	-0.368	1	1	2
Botswana	0.566	0.045	1	1	2
Brazil	0.751	0.041	1	1	2
Bulgaria	0.778	1.011	1	1	2
Burkina Faso	0.312	-0.736	1	1	2
Cameroon	0.500	.	1	1	2
Canada	0.938	0.651	1	1	2
Chile	0.824	-0.181	1	1	2
China	0.724	0.325	1	0	1
Colombia	0.767	0.158	1	1	2
Congo, Rep.	0.506	-0.018	1	1	2
Costa Rica	0.814	-0.075	1	1	2
Cote d'Ivoire	0.411	-1.152	1	1	2
Croatia	0.806	0.534	1	1	2
Cyprus	0.879	-0.138	1	1	2
Czech Republic	0.846	0.545	1	1	2
Denmark	0.924	1.063	1	1	2
Dominican Republic	0.718	.	1	1	2
Ecuador	0.718	-0.287	1	1	2
Egypt, Arab Rep.	0.628	-1.136	1	1	2
El Salvador	0.696	.	1	1	2
Estonia	.	.	1	0	1
Ethiopia	0.313	-0.892	1	1	2
Finland	0.928	0.616	1	1	2
France	0.926	0.543	1	1	2
Gabon	.	.	1	1	2
Gambia, The	0.397	-0.584	1	1	2
Germany	0.920	0.713	1	1	2
Ghana	0.544	-0.006	1	1	2
Greece	0.879	-0.176	1	1	2
Guatemala	0.617	-0.558	1	1	2
Guinea	.	.	1	1	2
Guyana	0.698	0.435	1	1	2
Haiti	0.467	.	1	1	2
Honduras	0.628	.	1	1	2
Hungary	0.833	0.378	1	1	2
Iceland	0.934	0.924	1	1	2
India	0.560	-1.142	1	1	2
Indonesia	0.678	-0.226	1	1	2

Appendix D, cont'd.

Countries	GDI (0-1)	SIGE	ILO Conventions No. 100 (0-1)	No. 111 (0-1)	CONVENTION (0-2)
Iran, Islamic Rep.	0.703	-0.726	1	1	2
Ireland	0.917	.	1	1	2
Ireland	0.917	.	1	1	2
Israel	0.891	-0.060	1	1	2
Italy	0.907	-0.075	1	1	2
Jamaica	0.739	0.504	1	1	2
Japan	0.927	0.153	1	0	1
Jordan	0.701	-0.999	1	1	2
Kazakhstan	.	.	0	1	1
Kenya	0.511	-0.308	0	0	0
Korea, Rep.	0.875	0.134	1	1	2
Kuwait	0.804	.	0	1	1
Kyrgyz Rep.	.	.	1	1	2
Latvia	0.798	1.034	1	1	2
Lebanon	0.739	-0.929	1	1	2
Lithuania	0.806	0.748	1	1	2
Madagascar	0.463	.	1	1	2
Malawi	0.389	.	1	1	2
Malaysia	0.776	-0.022	1	0	1
Mali	0.378	.	1	1	2
Malta	0.860	-0.464	1	1	2
Mauritius	0.429	-0.234	0	0	0
Mexico	0.789	-0.074	1	1	2
Moldavia	0.698	0.664	1	1	2
Mongolia	0.653	0.419	1	1	2
Morocco	0.585	-1.176	1	1	2
Mozambique	0.307	0.028	1	1	2
Namibia	0.604	-0.093	0	0	0
Nepal	0.470	-1.370	1	1	2
Netherlands	0.930	0.640	1	1	2
New Zealand	0.914	0.820	1	1	2
Nicaragua	0.629	0.196	1	1	2
Niger	0.263	-1.451	1	1	2
Nigeria	0.449	.	1	1	1
Norway	0.941	1.077	1	1	2
Pakistan	0.468	.	0	1	1
Panama	0.784	-0.218	1	1	2
Papua New Guinea	0.530	-0.538	1	1	2
Paraguay	0.727	-0.461	1	1	2
Peru	0.729	-0.228	1	1	2
Philippines	0.751	0.076	1	1	2
Poland	0.831	0.816	1	1	2
Portugal	0.876	0.452	1	1	2
Romania	0.773	0.317	1	1	2
Russian Federation	0.780	1.006	1	1	2
Senegal	0.421	-0.245	1	1	2
Sierra Leone	.	.	1	1	2
Singapore	0.880	.	0	0	0
Slovakia	0.833	0.670	1	1	2
Slovenia	0.877	0.493	1	1	2
South Africa	0.689	0.447	1	1	2

Appendix D, cont'd.

Countries	GDI (0-1)	SIGE	ILO Conventions No. 100 (0-1)	No. 111 (0-1)	CONVENTION (0-2)
Spain	0.906	0.449	1	1	2
Sri Lanka	0.737	.	1	1	2
Sudan	0.478	.	1	1	2
Sweden	0.936	1.334	1	1	2
Switzerland	0.923	0.417	1	1	2
Syrian Arab Republic	0.669	-1.082	1	1	2
Tanzania	0.436	0.348	0	0	0
Thailand	0.760	0.331	1	0	1
Togo	0.475	-1.028	1	1	2
Trinidad and Tobago	0.798	0.145	1	1	2
Tunisia	0.709	-0.763	1	1	2
Turkey	0.734	-0.528	1	1	2
Uganda	0.437	.	0	0	0
Ukraine	0.744	.	1	1	2
United Kingdom	0.925	0.376	1	1	2
United States	0.937	0.398	0	0	0
Uruguay	0.828	0.311	1	1	2
Venezuela	0.764	-0.110	1	1	2
Vietnam	0.687	0.748	1	1	2
Zambia	0.424	-0.581	1	1	2
Zimbabwe	0.545	-0.458	1	1	2