

# **Globalization and Working Conditions: Evidence from Honduras**

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**Abstract:** Like many other developing countries, Honduras has experienced a dramatic move towards liberalization that has included significant foreign direct investment and a shift from agriculture towards export-oriented manufacturing. This chapter describes the Honduran globalization experience, and, using household surveys, estimates wage differentials for garment workers. The results suggest that, controlling for other demographic characteristics, workers in the apparel sector earn 10-20% more than the average Honduran wage.

Honduras is one of the poorest Latin American countries, with a 2006 GDP per capita of approximately US\$2900. Although relatively small (a population of 7.3 million in 2006), Honduras attracted particular attention during the debate over the Central American Free Trade Agreement between 2003 and 2005. Working conditions were one of the main concerns in the debate and continue to be an important issue in Honduran domestic and international relations.

Honduras ratified the Central American Free Trade Agreement on April 1, 2006, taking a significant step along its path of trade liberalization. The last 20 years have been a period of significant change in Honduran exposure to foreign markets. Like many developing countries, Honduras began to transition from a relatively closed economy in the late 1980s.<sup>1</sup> Like many other Latin American countries, Honduras has reduced its reliance on exports of primary products and has increased exports in manufacturing. This switch has induced a shift in employment from agriculture towards industry and services. The World Bank's World Development Indicators indicate that 59% of the population was engaged in agriculture in 1980, but that number fell to 39% by 2005. In particular, capital flows and trade liberalization have caused a boom in apparel assembly, dramatically changing the job prospects of young women. Emigration of workers has disrupted families but also spurred remittances that may well change consumption, labor supply, and investment (particularly in health, schooling, housing and microenterprises).

This paper surveys various dimensions of globalization but concentrates on the combination of trade and investment. One of the dominating characteristics of Honduran trade is the importance of the maquila sector. Following from the Spanish word *maquilar*, which means to assemble, firms in the maquila industry import parts for assembly and re-export. In Honduras, the maquila sector primarily consists of apparel. The textile/apparel sector has the highest rates of foreign investment (except cigars). Enterprise surveys suggest that this foreign investment is dominated by exporting firms. Trade datasets that exclude maquila operations suggest Honduras mainly exports agricultural goods and food products and imports fuels, machinery, and equipment. When assembly operations are included, however, apparel dominates the trade accounts. Morley (2006) shows that the ratio of maquila exports to total exports in 2002 was the highest

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<sup>1</sup> It might be said that Honduras actually started its path towards liberalization in the 1970s when it established its first free trade zone. Country-wide liberalization measures, however, began in earnest in the 1980s.

(over 60%) in all of Central America.<sup>2</sup> Furthermore, Morley states that in Honduras the maquila sector comprises 20% of industrial employment and 39% of GDP. Household surveys show employment rising dramatically in apparel between 1992 and 2004, coinciding with the decline in agricultural employment.

To analyze the link between globalization and working conditions, this paper first provides an overview of globalization, describing the Honduran path of liberalization. The remaining sections focus on working conditions. Working conditions are determined by institutions and economics. Section two focuses on institutions and non-wage aspects of working conditions in two parts. The first part is qualitative and provides an overview of labor law and the struggle over working conditions in Honduras. The second part uses an enterprise survey to analyze non-wage aspects of working conditions. This survey suggests that there is no systematic difference in non-wage pecuniary benefits across sectors.

The third section and fourth sections focus more on the economic determinants of working conditions using a quantitative analysis of wages. Trejos and Gindling (2004) analyze wage inequality in Central America during the period of rising globalization and find mixed results for Honduras that are sensitive to the choice of inequality measures. These results may imply that industry-specific wages play a significant role in explaining wage changes in Honduras. This paper takes an alternative approach by focusing on economy-wide inter-industry wage differentials. This approach pays particular attention to the textile/apparel sector because it stands out as a large, growing, and internationally integrated sector. Controlling for personal characteristics, workers in textiles and apparel consistently earn an above-average wage for workers with similar characteristics. This premium has been maintained as employment in the sector has grown. Given the lack of evidence of significant differences in non-wage working conditions in section 2, there is little evidence that the wage premiums apparel workers receive are compensating them for otherwise worse working conditions.

Section four compares earnings of garment finishers to earnings of other workers in the manufacturing sector, excluding the self-employed and public sector workers. The results suggest that, after controlling for age, schooling, and gender, garment finishers earn significantly more than workers with the same characteristics in other sectors. That

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<sup>2</sup> El Salvador was second with just over 57%, and Nicaragua was least with just under 40%.

premium, however, vanishes when we do not control for personal characteristics. In other words, apparel firms are paying relatively high wages to workers drawn from the low end of the wage distribution. The final section concludes.

## **1. Globalization in Honduras**

### **1.1 Overview of Globalization Policies**

Globalization can be measured by outcomes in terms of trade, foreign investment, and remittances, but the notion of “liberalization” gives priority to changes in policy. Honduras, like many Latin American countries, pursued a relatively closed economy model between the 1950s and 1970s. The main exception was the Central American Common Market, signed by Costa Rica, El Salvador, Guatemala, Nicaragua, and Honduras on December 15, 1960. This attempt at forming a common market was interrupted by the 1969 “Soccer War” between Honduras and El Salvador. Like the rest of Latin America, Honduras was significantly and adversely affected by the debt crisis of the 1980s.

Following the debt crisis, Honduras took its main steps towards an open-economy model in the 1990s. Honduras acceded to the General Agreement on Tariffs and Trade (GATT) in 1994 and lowered most-favored nation (MFN) tariffs. Relative to its Central American neighbors, Honduras started the 1990s with both higher average tariff levels (41.9%) and higher tariff dispersion (21.8). El Salvador, for example, had an average tariff level of 16% and dispersion of 8.6% in 1990. By 1997, however, Honduran average tariffs and dispersion were as low as or lower than other Central American countries (Morley 2006). The World Trade Organization documents a fall in the simple average applied MFN tariff from around 17 per cent in 1993 to 6 per cent in 2003 (WTO 2003).<sup>3</sup>

Perhaps as important as domestic tariff liberalization was the tariff treatment Honduras received from its trading partners (especially the United States). In 1982 U.S. president Ronald Reagan proposed the Caribbean Basin Initiative. These trade preferences were given to Caribbean Basin countries, including Central America, by the Caribbean Basin Economic Recovery Act (CBERA) starting January 1, 1984. While this act did not grant

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<sup>3</sup> The WTO (2003) further notes this fall does not necessarily reflect an increase in the use of non-tariff barriers.

textiles tariff-free access to the U.S., it did exempt them from the Multi-fiber Agreement (MFA)<sup>4</sup> as long as they were assembled using U.S. inputs. This system created the incentives for the rapid growth of the maquila sector in Honduras. This act, and its extension (The Caribbean Basin Economic Recovery Expansion Act, CBEREA) in 1990, gave Central America a tariff advantage over Mexico that lasted until the North American Free Trade Agreement in 1994. This unintended effect was addressed with the US-Caribbean Basin Trade Partnership Act (CBTPA) in 2000, which granted the same duty-free access to U.S. markets as Mexico enjoyed under the NAFTA (Morely 2006).

Perhaps in an attempt to solidify the benefits of the CBTPA after its planned expiration on September 30, 2008, Central America started negotiating the Central American Free Trade Agreement (CAFTA) in 2002. The five Central American countries signed the agreement with the United States on May 28, 2004. Honduras ratified the treaty, thus bringing it into effect, on April 1, 2006. Several reports, such as Jansen et al. (2007) analyze the potential effects of the CAFTA on Central American exports, especially in the maquiladora sector. While the maquila sector had preferential access to U.S. markets, restrictive rules of origin and other U.S. actions raised concerns among Hondurans.<sup>5</sup> One of the main concerns Jansen et al. (2007) focus on whether the net effect of the end of the MFA-ACT in 2005 (which would potentially reduce Honduran textile/apparel exports) and the CAFTA (which would potentially increase Honduran textile/apparel exports) is positive or negative. One of the main reasons that the report focuses on the maquila sector in Honduras is that the maquila sector has been one of, if not the, main, sources of employment growth in Honduras since the 1980s.<sup>6</sup>

Maquiladoras and Export Processing Zones (EPZs) play a very important role in Honduras. Singa Boyenge (2007) reports that Asia and Central America lead employment generation in EPZs and that Honduras in particular has 24 EPZs with a total employment of 353,624. The 204 firms cited are divided among textiles/apparel, footwear, equipment assembly, services, food processing, and electronics. Of these, the textile/apparel sector dominates in terms of number of firms. Applebaum (2005) notes that in 2003, only 17%

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<sup>4</sup> The last chapter of this volume contains a detailed history of the MFA.

<sup>5</sup> For example, in testimony to the House Ways and Means Committee March 12, 2003, Ambassador Mario M. Canahuati suggested that “protectionist companies and groups in the U.S. textile and apparel industry...undercut the pro-trade provisions” (of the CBTPA).

<sup>6</sup> Indeed, on page 1 Jansen et al. (2007) write “(The textile and clothing sector (often referred to as *maquila*) has been responsible for most of the growth of manufactured exports and foreign exchange earnings, as well as for most of the employment generated since the late 1980s.”

of workers were employed in Honduras garment factories were employed in factories owned by Hondurans. The largest foreign employers were the United States (53%) and Korea (15%). Maquiladora firms are generally considered to be large, “formal” sector firms. Largely as a result of preferential treatment, the maquila industry is very closely integrated with the United States (Jansen et al. (2007)). The U.S. programs encourage Honduran imports of U.S.-yarn-based cloth and assembling them into clothing.

These statistics suggest that globalization in Honduras during the past 20 years has been dominated by the rise of foreign investment into the maquila sector (and primarily textiles/apparel). In the next section, we illustrate the importance of textile/apparel trade, foreign investment, and remittances that have coincided with Honduran steps towards economic liberalization.

## **1.2 Basic Indicators of Globalization**

One way to gauge international economic integration is to measure outcomes: changes in trade, in foreign investment, and in remittances from workers abroad. Some of the results of the Honduran liberalization policy are shown in Table 1. Table 1 presents relevant data drawn from the 2007 edition of World Development Indicators. Several key aspects of the Honduran globalization experience are evident. The shares of both exports and imports rise significantly between 1990 and 2005. This is to be expected after a move from a relatively closed economy. Imports rise faster than exports, generating a growing trade deficit. These imports must be financed with financial inflows. The two most significant of these are foreign direct investment (FDI) and worker remittances.

Net inflows of foreign direct investment were significantly higher at the end of the period than at the beginning, with an upward spike in 2000. Both as a percentage of Gross Domestic Product and in millions of dollars, the rise in FDI is quite large (with nominal FDI increasing by nearly a factor of 10 between 1990 and 2005). The dramatic drop in 1998 is due to Hurricane Mitch, which lasted from October 22 to November 5, 1998. Following Mitch, however, foreign investment sharply increased. As mentioned earlier, much of this investment has been targeted towards the maquila sector to create firms intending to produce for export.

Even more striking, however, is the dramatic rise in worker remittances. Real remittances in 2005 were 23 times larger than remittances in 1990. In 1991, remittances roughly equaled FDI, but by 2005 remittances were almost four times as great as FDI.

The effects of remittances are currently a subject of intense debate. One concern about rising remittances is the effect on the real exchange rate. Rising remittances increase the demand for the domestic currency, causing the real exchange rate to appreciate. When the real exchange rate appreciates, this potentially depresses exports and increases imports. Figure 1 shows the change in the Honduran real exchange rate (calculated as the US dollar/lempira nominal rate times the ratio of the Honduran and US current price indices). The data suggest a steady real appreciation of the since the mid-1990s. This appreciation is consistent with the rise in migration and remittances, possibly suggesting one of the potentially adverse effects of increased remittances.

### **1.3 Trade Flows by Sector**

The picture of Honduran trade patterns depends critically on the inclusion or exclusion of maquila statistics. The Honduran government's Instituto Nacional de Estadística<sup>7</sup> aggregates trade volumes at the two-digit level of the Harmonized Tariff Schedule (HS). Their export data show significant export growth, perhaps in part reflecting recovery after Hurricane Mitch of October 1998. Categories 01 through 04, covering animal and vegetable products and tobacco, account for over half of all exports in 2005. Reported exports of textiles and apparel are modest and apparently exclude maquila trade.

Excluding maquila imports shows significant import growth, particularly in imports of mineral products, which include petroleum derivatives and fuels. These products dominate in terms of shares of total imports, followed by machinery and equipment and then chemical products, a classification that includes pharmaceuticals, fertilizers, and dyes.<sup>8</sup> Again, the category of textiles and clothing appears to be relatively insignificant. Data from the WTO paint a similar picture. WTO data suggest that food products dominate exports, although the share falls from 86.9% in 1995 to 63.1% in 2001. Coffee, bananas and other fruit, and shellfish are particularly important. Banana exports fell

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<sup>7</sup> These data are available for download from at <http://www.ine-hn.org>.

<sup>8</sup> Although these may be used as inputs in maquila production, maquila inputs are usually officially separately registered.

dramatically in the aftermath of Hurricane Mitch, but later recovered. Coffee exports are unstable.

The problem, of course, is that trade data that exclude maquila statistics are quite misleading. Possibly the most complete trade data are managed by the United Nations. The United Nations Commodity Trade Statistics Database (UN Comtrade) contains annual trade data that does not systematically exclude, or differentiate, maquila trade. The data are available at several different levels of aggregation, but, for our purposes, we group industries into the principle Harmonized System categories.

Figure 2 contains constant-dollar (base year 2000) Honduran imports by sector from all countries for several key sectors. Several trends are immediately apparent. First, Honduras principally imports capital-intensive goods (chemicals, machinery, transportation equipment), which is expected for a labor-abundant country. Second, the imports of foodstuffs significantly increase over the sample period, which is consistent with a falling domestic value added (and employment share) in agriculture. Third, textile imports remain relatively constant between 1995 and 2005, even while other sectors experience a significant increase in imports. This is consistent with the hypothesis that textile trade is not consumption based.

Figure 3 contains Honduran exports, again from the UN Comtrade database, for several key sectors. In 1991, trade was dominated by the first three agricultural sectors (mainly vegetable products, including coffee). In 1991, these three sectors make up 68% of Honduran exports. The agricultural sectors grow slowly over time, more slowly than total exports, and by 2005 these three sectors make up only 26% of total exports. The main change over this period, of course, is the exports of textiles (which, in these statistics, includes apparel). In 1991, the textile sector makes up 23% of total exports. By 2005, textiles make up 59% of total exports. Again, it is important to point out that these changes are not because of the fall in agricultural exports: the real value of agricultural exports is 42% higher in 2005 than in 1991. The fall in agricultural share of total exports is due in large part to the 868% rise in the measured real value of textile exports.

Since Honduras mainly trades with the United States, U.S. import data provide another view of Honduran trade. Table 2 includes U.S. imports from Honduras between 2002 and 2006. Just two end-use apparel sectors (apparel and household goods – cotton and

apparel and household goods –other textiles) made of 67% of Honduran exports to the U.S. in 2006, down from 75.6% in 2002. This decline may be partially due to the rise of China in the global textile trade (Hanson and Robertson, 2008). Nevertheless, Honduras remains the top CAFTA supplier of textiles to the United States.

Figure 4 illustrates the changes in the textile share of exports and FDI over time. These two rise significantly over the sample period, which simply highlights the fact that much of the Honduran globalization experience has been characterized by an increase in foreign investment. From 1990 to 2005, real dollar net FDI inflows quadrupled, passing \$400 million. Most of the FDI is concentrated in the textile/apparel sector. The World Bank's 2003 *Productividad y Ambiente de Inversión* survey shows that, of the manufacturing firms in the survey, 40% of the apparel firms and 37.5% of the textile firms reported that they were entirely owned by foreign capital. In all other sectors but tobacco products, less than 5% of the firms were wholly foreign-owned. Furthermore, exports accounted on average for 57% of the sales of apparel firms and 46% of the sales of textile firms, again far higher shares than those of all other surveyed sectors except tobacco products. Clearly, textiles and apparel are among the most internationally integrated sectors of the Honduran economy, at least in terms of manufacturing.

Official trade statistics present Honduras as an exporter of agricultural and food products and an importer of fuels, machinery, and equipment. These statistics may be misleading, however, because when assembly operations are included in trade, clothing and accessories become by far the largest category for both imports and exports. During the 1990s, exports of clothing and accessories grew from \$120 million to \$2.3 billion, inducing a shift in resources towards textile/apparel production and exports. These results suggest that it is important to be mindful of the textile/apparel sector when analyzing working conditions in Honduras.

## **2. Working Conditions in Honduras**

During the debate over the Central American Free Trade Agreement, working conditions in Honduras (and in Central America generally) attracted much attention. When analyzing wages and working conditions in Honduras, it is very important to clearly state the frame of reference. “Low” (such as wages) and “poor” (such as working conditions) are both relative terms. There are two possible standards with which one might evaluate wages and working conditions: foreign or domestic. In the sections that follow, we

choose the latter, which implies that we focus the discussion on wage and working conditions within Honduras rather than comparing wages and working conditions in Honduras with other countries. The main reason for this is that starting to address concerns about differences between countries would have to begin with changes within countries. This focus implies that domestic institutions play a very important role. In fact, much of the debate around working conditions in Central America focused on the perceived difference between laws that were in place and enforcement of these laws. This section provides an overview of regulations currently in place in Honduras and places the debate over the enforcement in the context of globalization.

## **2.1 Work-related Laws and Regulations**

In Honduras, institutions affecting working conditions include government regulation, enforcement, and foreign pressure from governments and non-governmental organizations (NGOs). The roots of modern labor law in Honduras can be traced to the 1950s. In the context of a banana worker strike in 1954 and two authoritarian administrations, Honduras joined the International Labor Organization in 1955. Soon after, Honduras adopted several labor codes and established the Ministry of Labor in 1959. Table 3 shows the dates Honduras ratified the ILO “core” labor standards. The earliest were in 1956 (Conventions 87, 98, and 100). Honduras ratified the core labor standards pertaining to child labor in 1980 and 2001. Honduras adopted 14 additional ILO conventions that are listed in Table 4. While most were adopted in the 1960s, several were adopted in the 1980s.

Together, ratification of these conventions, provisions in the Honduran constitution, and Honduran Labor Code form legal standards for working conditions that are considered relatively high for developing countries. Honduran law specifies freedom of association (in unions), a right to collective bargaining, and guaranteed rights to strike. Unlike all other Central American countries except Nicaragua, Honduras has no minimum percentage of workers that a union must represent to engage in collective bargaining). The minimum legal work age in Honduras is 16 (14 if in school), which is also the minimum age for hazardous or potentially unhealthy work. Minors may not work more than 30 hours per week, and Honduras has established programs to focus on child labor issues.

Labor law also includes minimum wages. In fact, minimum wages may be one of the most important labor market regulations in Honduras. Gindling and Terrel (2006) and Gindling and Terrel (2007) present two of the most recent comprehensive studies of the effects of minimum wages in Honduras. Honduras has over 22 different minimum wages and, although legally they apply to all private-sector employees, Gindling and Terrel (2006) find that compliance is limited to large private firms.

The effects of minimum wages in Honduras are significant. Gindling and Terrel (2006) find that a 10% increase in the minimum wage in Honduras reduces the probability of being in extreme poverty by 1.8%. The effect of minimum wages on poverty is concentrated in large, formal-sector firms, possibly because enforcement of minimum wages is concentrated on these firms. This is not to say that minimum wages come without costs, however. Gindling and Terrel (2007) find that there is a tradeoff between employment and minimum wages in Honduras. Using data covering the 1990-2004 period, they find that the minimum wage is correlated with a fall in employment. Since they find that the (negative) employment effect is greater than the (positive) wage effect, they conclude that minimum wages have resulted in a net welfare loss to workers. Enforcement of minimum wages plays a prominent role in these studies.

Concerns about the efficacy of enforcement extend to other dimensions of working conditions as well. Concerns about human rights and labor conditions are not limited to the export sector. The U.S. Department of State reports several human rights problems, including extrajudicial killings by members of the police, impunity for human rights violations, lack of government funding, institutional weakness, and judicial corruption, and lack of enforcement of labor laws.<sup>9</sup> These reports signal a potential problem that probably exists with or without globalization.

Non-governmental organizations have made several attempts to address these concerns. Frundt (2004) describes the experience of Equipo de Monitoreo Independiente de Honduras (EMI), a group formed by the National Labor Committee that brought together the Honduran Committee for the Defense of Human Rights, the Honduran Women's Collective (Colective de Mujeres Hondurenas) and the Jesuits in El Progreso. The EMI was formed to address a struggle at Kimi, a plant that contracted with JC Penny. EMI

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<sup>9</sup> See U.S. Department of State, Country Reports on Human Rights Practices, 2005, released by the Bureau of Democracy, Human Rights, and Labor March 8, 2006, available at <http://www.state.gov/g/drl/rls/hrrpt/2005/61732.htm>.

had mixed success, apparently due to how it handled the politics within the plant, but learned that success depends on widespread participation from several interested groups, including the government, non-government organizations, and the private sector.

International NGOs have also played an important role, such as the Maquila Solidarity Network. For example, in December 2003, the Canadian Labor Congress (CLC) and the Independent Federation of Honduran Workers (FITH) filed a complaint against a Canadian factory for the unjust firing of workers possibly associated with union activity.<sup>10</sup> In 2006, the complaint was resolved enough for the CLC and FITH to drop their complaint, providing an example of international pressure on foreign factories to at least maintain working conditions at “acceptable” standards. The buyer-driven nature of the assembly chain in Honduras (see Jansen et al. (2007)) makes foreign firms susceptible to consumer pressure for “acceptable” standards in ways that do not apply to Honduran firms that do not participate in international markets.

Jansen et al. (2007) provide specific examples of the importance of international engagement in raising working conditions. They suggest that poor labor conditions in Honduran plants have led to boycotts from U.S. consumers. In response, U.S. employers have monitored plants and have responded to inadequate improvements in conditions by canceling contracts. Furthermore, Jansen et al. (2007) note that many employers believe that certification by the Worldwide Responsible Apparel Production (WRAP) organization increases orders and may help firms avoid damaging negative press coverage. This motivation for certification and concern about boycotts would not apply to Honduran firms that were not exporting to foreign markets.

## **2.2 Non-Wage Characteristics of Employment**

One of the most significant problems of measuring non-wage working conditions in Honduras is the lack of systematic data, especially by industry.<sup>11</sup> One potential source of data is the World Bank’s 2003 Investment Climate survey *Productividad y Ambiente de Inversión en Honduras*. Data come from 450 firms spread across eleven manufacturing sectors. Table 5 notes particularly relevant variables and shows the mean response across firms in each sector. These firms are all considered to be formal sector firms.

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<sup>10</sup> See “MSN Closes the books on Honduras complaint” from [Maquilasolidarity.org](http://Maquilasolidarity.org), December 31, 2006.

<sup>11</sup> For example, the ILO’s LABORSTA database has very few observations at the 2-digit industry level for Honduras for injuries, days lost, and strikes.

With the exception of the cigar industry, the apparel and textile firms have the highest rates of foreign ownership and export sales. Apparel and textiles are at the bottom of the list in terms of the percentage of their workers who are eventuales or on special contracts; at another point the survey defines eventuales as workers hired for less than one year with no guarantee of renewal. To the extent that temporary workers experience more job insecurity and are potentially more susceptible to employer demands (because of employment insecurity), these data do not support the hypothesis that these dimensions of working conditions are worse in textile and apparel firms (although, of course, concerns could exist in less-measurable dimensions).

In addition, Table 5 suggests that there is no systematic difference between the apparel and textile firms and others with respect to social benefits (thirteenth month, vacation, social security and other benefits) as a percent of total labor costs, either for skilled production workers or for unskilled production workers.

One concern that does emerge from Table 5 is the low rates of unionization present in textile and apparel firms in the survey. When compared to firms in other Honduran industries, however, the textile and apparel firms are not unusual. The important point here is that low unionization may be a problem in Honduras, but it is not a problem that is unique to globally-engaged firms.

The apparel and textile sector is in the middle of the pack in terms of offering formal training to employees. This training may complement other programs as well. Jansen et al. (2007) note that the Honduran Manufactures Association provides training for managers and workers without charge. Training is important because wages are often based on productivity, and processes may change when styles change.

In any case, it is possible that the 450 firms in the survey are not representative. It is also conceivable that respondents in apparel and textiles skewed their answers differently than respondents in other sectors. At face value, however, there is little evidence suggesting that garment workers have lower non-wage benefits than workers in other manufacturing sectors. If anything, the data raise concern about the other highly internationalized sector, cigar-making.

### **3. Employment and Inter-Industry Wage Differentials**

Trade changes an economy's output mix. Theory suggests that this will raise the real return to the factors of production used intensively in the country's export sectors. When factors are not perfectly mobile across sectors, this may well lead to inter-industry wage differentials, differences across sectors in the wage paid to observationally equivalent workers. In this section of the paper we first examine trends in the composition of employment, and then estimate a full set of interindustry wage differentials, paying particular attention to wages in the textile/apparel (which is dominated by exports and FDI) and other, less globally-engaged industries.

### **3.1 Labor Force Participation and the Remittance Effect**

Remittances can affect working conditions in several ways. Possibly one of the first ways would be through reservation wages. By providing an alternative source of income, remittances can raise reservation wages, which effectively reduces labor supply. As a result, firms would have to increase wages to attract workers. One key indicator of this effect would be a systematic difference in labor force participation between workers receiving remittances and workers who do not.

The Instituto Nacional de Estadística's Permanent Household Survey permits calculation of labor force participation rates for most years over the period 1990 to 2004. Figure 5 shows, separately for men and for women, the proportion of those aged 16 through 65 who worked for compensation during the reference period ("employed") and the proportion who worked for compensation, worked without pay, had a job to which they expected to return, or looked for work ("active"). The percentages were calculated after applying the appropriate expansion factors to the individually reported data. Significant differences between the percent active and the percent employed should not be interpreted as open unemployment. Most of the difference is accounted for by people who report either working without pay or having a job to which they would soon return.

There is some evidence that remittances from family members working abroad affect labor force participation. We investigate the effect by estimating a probit model. The model estimates the impact of personal characteristics including remittances on the probability of being active in the labor force. The dependent variable is labor force activity, defined as above. The independent variables are being female, one's age and

age-squared, years of study, and monthly household income from remittances from abroad. All data come from the 2004 Encuesta Permanente de Hogares.

Remittances are recorded as the total remittances received by the household each month in Honduran currency (lempiras). In general, household remittances are larger than a given household member's monthly earnings. In fact, 57.12% of workers in households receiving remittances report a value of remittances greater than that worker's monthly income, and 41.18% report receiving a value of remittances that are more than double that worker's wage.

There are several ways that remittances might enter an estimation equation of remittances on labor force activity. Table 6 lists the marginal effects of the independent variables, with the absolute values of the z-statistics in parentheses, of four different specifications of remittances. Columns (2) and (3) use the natural log of remittances and columns (1) and (4) use the level value. Since there are many households receiving no remittances, and the natural log of zero is not defined, column (2) includes the natural log of (1+ remittances), which becomes zero for households without remittances. Alternatively, column (3) defines remittances as simply the natural log of remittances, dropping all households with no remittances. Column (4) uses the same definition of remittances as column (1), but restricts the sample to households receiving remittances.

In all specifications, all the independent variables are statistically significant (with 95% confidence). The magnitude of the remittance effect in columns (1) and (4) (when remittances are measured in levels) appears to be quite small, suggesting that remittances may have little meaningful effect on labor force participation.<sup>12</sup> Using the natural log of remittances does not change this result very much in the full sample: a 10% increase in remittances reduces the probability of being active in the labor market by about six percentage points. When restricting the sample to just households receiving remittances, however, the results are much larger, suggesting that a 10% increase in remittances would reduce the probability of being active in the labor market by about twenty seven percentage points.

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<sup>12</sup> Unfortunately, the surveys contains little additional information that would help identify the participation decision apart from factors that would also contribute to earnings, making selection corrections impossible in the subsequent analysis.

These results should not be taken as definitive, however, because endogeneity is potentially a significant problem. Families with members who are unable to participate in the labor market may be more likely to send someone abroad to work. Similarly, family members may decide to send the “best” workers abroad where they could earn the highest income. Nevertheless, these results are similar to the literature that finds significant negative labor force participation effects (for a recent example, see Acosta 2006).

### **3.2 Sectoral Composition of Employment**

Table 7 shows the sectoral composition of employment in Honduras in 2004. The data come from the Encuesta Permanente de Hogares, and the appropriate expansion factors have been applied. The table includes all workers aged 16 through 65 who had some income from labor in their principal occupation during the reference period. Some are in the private sector, others in the public sector. Some are wage workers, others are self-employed.

Note the importance of the textile and apparel industry for employment of women. More women are employed in this subsector than in all other manufacturing sectors combined. Moreover, the number of women in manufacturing is about as large as the number in wholesale and retail trade, although this is not clear from Table 11, where the industrial classification adds employment in hotels and restaurants to employment in wholesale and retail trade.

### **3.3 Inter-Industry Wage Differentials**

Table 8 reports a complete set of wage regressions<sup>13</sup> for the years 2001 through 2004. As before, workers aged 16 through 65 with some income from labor have been included, whether they are wage workers or self-employed, private sector or public sector workers. Primary personal characteristics are included in the regression. The remaining

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<sup>13</sup> One might consider using a Heckman-style selection model to control for selection effects. As discussed in the technical appendix earlier in this volume, this approach requires variables to identify the participation equation that are independent from the wage equation. The survey data used here do not contain data on good candidates for these variables, making the Heckman approach infeasible.

coefficients measure the unexplained log wage differential, above or below the sample mean, for workers in each of the industries.

Six of the seventeen industries have wage differentials significant at the 1% level in each of the four years. Those who work raising food crops always earn less than the mean, controlling for personal characteristics. It is not much of a surprise that workers in public administration, FIRE and business services, and transport and communication earn above the mean. More interestingly, workers in the wholesale/retail/hotels/restaurants group and in the apparel/textiles/leather group also consistently earn a premium above the average hourly wage, controlling for personal characteristics. Since the coefficient is a difference in the log of the hourly wage, a 0.20 coefficient for the apparel industry can be interpreted as a 20% wage premium.

We cannot run precisely the same regression for earlier years because of a modification in the industrial classification. Table 9, however, shows wage differentials that are based on the earlier ISIC rev.2 categories. Again, what is remarkable is the positive premium earned in both 1992 and 1996 by working textiles, apparel, and leather goods. This premium seems to be quite stable over time, which may seem at odds with rising foreign investment. One possible explanation could be that an important alternative sector, agriculture, collapsed during the sample period. Both in terms of the share of workers and in terms of inter-industry wage differentials, the agriculture sector demonstrates a significant decline over the sample period. This could have created a significant supply shock for the maquila sector. As workers left agriculture and increased the supply of workers for apparel, the increase in supply could have offset the otherwise positive effect of rising demand for these workers.<sup>14</sup>

### **3.4 Trade and Labor Income**

The relatively constant wage premium in the textile industry does not imply that trade and foreign investment have not affected workers. On the contrary, Table 10 documents marked expansion of employment in the industry. The conclusion ought to be that through globalization far more people were drawn into this group that consistently earns a 20% wage premium. If these workers were drawn from agriculture (which is possible, given the marked decline in the agricultural share of the population since 1990), workers

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<sup>14</sup> This supply shock would be mitigated by the extent that remittances reduced labor supply.

would have moved from an industry that paid nearly 63% below the average wage to an industry that paid nearly 20% above the average wage. If non-wage working conditions were constant in these two sectors, the move from agriculture to textiles would imply a significant improvement in working conditions (when wages are included as a measure of working conditions).<sup>15</sup>

One might like to test directly for correlation between the estimated wage premiums, at least those that are consistently statistically significant, and some appropriate measure of exposure to international trade. In principle one can link domestic industrial activity to trade in goods and services. The major problem with this approach for the Honduran case is there are not enough years of data to generate a consistent series of inter-industry wage differentials that would be required to match with trade or foreign investment data. This exercise is left for future work. Nevertheless, the results do paint a consistent picture. The first section of this paper documented the surge in shipments from the Honduran garment industry. Here we have documented a corresponding boom in employment in the textile and apparel industry. One major impact of globalization has been to draw workers into this industry, where, controlling for personal characteristics, workers earn about 20% more than average hourly earnings.

#### **4. Low-Wage Work?**

The previous section documented a persistent wage premium associated with work in the textile and apparel industry. On the other hand, the industry also has a persistent reputation for paying low wages. For example, Jansen et al. (2007) note that the wages in maquilas are just enough to bring workers from “misery to poverty.” Behind this apparent contradiction lies a crucial question: to whom should apparel workers be compared?

The wage regressions of the previous section compared average hourly earnings in the apparel industry to average hourly earnings of all workers in all sectors. The regressions also controlled for the individual’s schooling, age, sex, and place of residence, which seems to be the appropriate comparison. It compares a worker’s earnings in the

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<sup>15</sup> One might suggest that the gender differences between agriculture (mostly male) and apparel (mostly female) raise doubts that workers are leaving agriculture and moving to apparel. It is possible, however, that it is the women who are leaving agriculture in response to the increased demand for apparel workers, even if most of the workers in agriculture are male.

internationally integrated apparel sector to the average earnings of similar workers across all other sectors. Comparing these workers to other manufacturing workers or not taking personal characteristics into account might generate contrary results to the extent that, within the scope of this constrained comparison, garment finishing may indeed appear to be low-wage work.

#### **4.1 Illustrating the Issue: Earnings and Characteristics of Garment Finishers**

The point can easily be illustrated by isolating the earnings and personal characteristics of workers who list their occupation as *acabador(a) de prendas de vestir* or garment finisher. Compare these workers to other wage workers in the private sector, dropping out the self-employed and public-sector workers. Consider only monetary earnings from the principal occupation, and limit the analysis to manufacturing industries. Table 11 shows the result. Median monthly earnings for garment finishers lag behind those of other manufacturing workers in two of the four surveys. Mean monthly earnings lag much farther behind. These statistics suggest that garment finishing is low wage work. Of course, garment finishers are also on average younger, less schooled, and far more likely to be female than other manufacturing workers.

#### **4.2 Wage Regression in the Restricted Sample**

A series of wage regressions makes the point more succinctly. Data come from the 2004 Encuesta Permanente de Hogares. The sample is limited to employees of private sector firms that operate in the manufacturing sector. Self-employed workers are excluded as are non-manufacturing workers. Only workers 16 through 65 years of age are included. Two new dummies appear. “Garment finisher” takes the value 1 if the worker reports that his or her principal occupation is *acabador(a) de prendas de vestir*. “Cigar maker” takes the value 1 if the worker’s principal occupation falls into the range 8282 to 8308 of the ISIC rev. 3.

Regression A in Table 12 shows that, controlling for personal characteristics, garment finishers earn a statistically significant wage premium of about 10% over all other manufacturing workers (the previous estimate was a 20% premium over the average wage of workers in all sectors). However, if we drop the dummy for the worker’s being female, the premium becomes statistically insignificant. If we drop schooling and age as well, the sign of the point estimate becomes negative, although the negative estimate is

significant only at the 85% level. Just for comparison purposes, we did a similar analysis for cigar makers, who also work in an internationalized sector. Unlike garment finishers, cigar makers earn lower wages than other manufacturing workers even when one controls for individual characteristics.

Perhaps the coefficients in Table 12 can explain the contradiction between estimated wage premiums and the perception that garment work is low-wage. The wage premium emerges when one takes schooling, experience, and gender into account. Garment workers earn more in this industry than similar workers earn elsewhere. It is also true, however, that the garment industry draws workers whose personal characteristics are generally associated with low wages.

Section 3 of this paper documents a positive wage premium with work in the apparel, textile, and leather industries. The positive premium does not sit well with the perception that the garment industry offers only low-wage work. In this section of the paper we have shown that, while garment finishers earn a wage premium relative to all workers with similar personal characteristics and even relative to other manufacturing workers with similar personal characteristics, the premium vanishes if we do not control for personal characteristics. In bold strokes, young women with little schooling do better in the apparel industry than such workers do on average in the economy and even in manufacturing. Since the apparel industry employs many such people, however, its average wage could still be low relative to average wages in some other manufacturing sectors.

## **5. Conclusion**

Globalization in Honduras includes capital inflows, labor outflows, and exchange of goods. Dramatic growth in FDI, exports, and remittances all illustrate increasing globalization in Honduras. Increasing globalization can be linked to changes in institutions and economic conditions that affect working conditions. Anecdotal evidence and qualitative assessments suggest that increased attention to the apparel sector by foreign consumers, governments, and organizations seems to have led to improved conditions in exporting sectors. Relative to other sectors, the main exporting sector, apparel, pays a significant wage premium. Contraction in agriculture may have contributed to rising migration and movement into apparel. The increase in FDI and export opportunities also drew workers into the apparel industry, where, controlling for

personal characteristics, workers earn about 20% more than average earnings in other employment, suggesting that overall globalization has been contributing to improvements in working conditions in Honduras.

If the apparel industry pays a wage premium, why is it perceived to offer low-wage jobs? We have shown that garment finishers earn a wage premium relative to other manufacturing workers with similar personal characteristics. The premium vanishes, however, if we do not control for personal characteristics. In bold strokes, young women with little schooling do better in the apparel industry than such workers do on average. However, since the apparel industry is paying relatively high wages to workers drawn from the low end of the wage distribution, its average wage could still be low.

Data from an enterprise survey allow us to complement the wage picture. A very low proportion of those working in the apparel and textile sectors are temporary employees. There is no tendency for these firms to pay lower non-wage benefits than those paid in other sectors. More than half these firms provide formal training for their workers. Few workers in the sector are unionized, but that is also true of most sectors in Honduras.

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**Table 1. Basic Indicators of International Integration**

<b>Year</b>	<b>Exports of Goods and Services % of GDP</b>	<b>Imports of Goods and Services % of GDP</b>	<b>Merchandise Trade Balance (millions of constant US\$)</b>	<b>FDI Net Inflows % of GDP</b>	<b>FDI Net Inflows (millions of constant US\$)</b>	<b>Worker Remittances (millions of constant US\$)</b>
<b>1990</b>	36.60	39.95	-124.24	1.43	57.31	65.88
<b>1991</b>	33.50	37.58	-156.27	1.70	65.87	65.74
<b>1992</b>	30.63	36.28	-235.78	1.39	58.42	73.64
<b>1993</b>	35.70	43.70	-326.88	0.77	31.82	71.50
<b>1994</b>	40.32	49.86	-369.73	1.01	40.44	98.77
<b>1995</b>	42.43	48.08	-245.76	1.28	56.50	135.59
<b>1996</b>	44.31	51.97	-364.27	2.25	99.76	140.92
<b>1997</b>	45.22	51.82	-343.22	2.61	130.36	171.66
<b>1998</b>	46.55	54.08	-414.44	1.90	104.59	232.42
<b>1999</b>	41.45	55.98	-807.87	4.42	245.28	330.76
<b>2000</b>	42.09	55.22	-776.52	4.73	281.88	409.60
<b>2001</b>	38.72	54.27	-946.27	3.05	187.76	518.93
<b>2002</b>	39.06	53.32	-876.18	2.69	167.82	680.89
<b>2003</b>	39.47	54.43	-954.04	3.60	231.30	805.22
<b>2004</b>	42.18	60.09	-1204.58	4.35	295.93	1042.59
<b>2005</b>	41.80	61.41	-1418.14	5.60	409.03	1576.78
<b>2006</b>	n.a.	66.79	n.a.	n.a.	n.a.	n.a.

**Notes:** n.a. Not Available. Source: *World Development Indicators* 2007. Nominal values from the World Development Indicators were converted to constant U.S. dollars using the U.S. Consumer Price Index for all Urban Consumers (base year 2000).

**Table 2: Principle U.S. Imports from Honduras 2002-2006**

End-Use Code	(40000) Apparel and household goods-cotton		(40020) Apparel and household goods-other textiles	
	<u>Value (\$K)</u>	<u>Share</u>	<u>Value (\$K)</u>	<u>Share</u>
<b>2002</b>	1,735,765	53.2%	730,321	22.4%
<b>2003</b>	1,851,511	55.9%	673,844	20.3%
<b>2004</b>	1,954,899	53.7%	745,627	20.5%
<b>2005</b>	1,910,585	51.0%	733,548	19.6%
<b>2006</b>	1,810,574	48.7%	679,981	18.3%

**Notes:** Source: *FTDWebMaster, Foreign Trade Division, U.S. Census Bureau, Washington, D.C. 20233*  
 Location: *MAIN: STATISTICS:PRODUCT TRADE DATA: END-USE IMPORTS.* Created: *March 15, 2007*  
 Last modified: *15 March 2007 at 09:12:17 AM* Share represents portion of total U.S. imports from Honduras for each end-use category.

**Table 3: Honduras: Adoption of Core ILO Labor Standards**

<b>Convention</b>	<b>Description</b>	<b>Date Ratified</b>
Conv. 87	Freedom of Association and Protection of the Right to Organise Convention, 1948	27/06/1956
Conv. 98	Right to Organise and Collective Bargaining Convention, 1949	27/06/1956
Conv. 29	Forced Labour Convention, 1930	21/02/1957
Conv. 105	Abolition of Forced Labour Convention, 1957	04/08/1958
Conv. 100	Equal Remuneration Convention, 1951	09/08/1956
Conv. 111	Discrimination (Employment and Occupation) Convention, 1958	20/06/1960
Conv. 138	Minimum Age Convention, 1973	09/06/1980
Conv. 182	Worst Forms of Child Labour Convention, 1999	25/10/2001

**Table 4: Additional ILO Conventions Ratified by Honduras**

<b>Convention</b>	<b>Description</b>	<b>Date Ratified (Day,Month,Year)</b>
45	Underground Work (Women) Convention, 1935	20/06/1960
78	Medical Examination of Young Persons (Non-Industrial Occupations) Convention, 1946	20/06/1960
95	Protection of Wages Convention, 1949	20/06/1960
106	Weekly Rest (Commerce and Offices) Convention, 1957	20/06/1960
108	Seafarers' Identity Documents Convention, 1958	20/06/1960
14	Weekly Rest (Industry) Convention, 1921	17/11/1964
32	Protection against Accidents (Dockers) Convention (Revised), 1932	17/11/1964
42	Workmen's Compensation (Occupational Diseases) Convention (Revised), 1934	17/11/1964
62	Safety Provisions (Building) Convention, 1937	17/11/1964
116	Final Articles Revision Convention, 1961	17/11/1964
27	Marking of Weight (Packages Transported by Vessels) Convention, 1929	9/6/1980
122	Employment Policy Convention, 1964	9/6/1980
81	Labour Inspection Convention, 1947	6/5/1983
169	Indigenous and Tribal Peoples Convention, 1989	28/03/1995

**Table 5. Mean Responses of Manufacturing Firms  
Productivity and Investment Climate Survey 2003**

	<b>Total Employees</b>	<b>Percent Foreign Ownership</b>	<b>Exports as Percent of Sales</b>	<b>Percent Temp Workers</b>	<b>Percent Benefits Skilled Workers</b>	<b>Percent Benefits Unskilled Workers</b>	<b>Percent Workers in Labor Union</b>	<b>Percent of Firms Offering Training</b>
<b>Apparel</b>	456	43	57	3	15	13	3	66
<b>Textiles</b>	308	37	46	4	14	14	0	56
<b>Tobacco</b>	278	57	99	11	14	5	17	45
<b>Food Products</b>	158	5	15	21	11	11	1	49
<b>Rubber/Plastic</b>	106	11	21	4	19	22	3	71
<b>Wood Products</b>	52	3	16	16	13	9	0	42
<b>Beverages</b>	47	6	2	12	15	10	8	43
<b>Chemical Prod.</b>	39	8	6	11	21	15	0	79
<b>Furniture</b>	38	2	9	11	11	7	0	39
<b>Metal Prod.</b>	35	5	7	16	14	9	0	0
<b>Nonmetal Min</b>	16	2	2	19	8	7	0	31

**Table 6. Remittances and Participation: Probit Results 2004**  
 Dependent variable: Active

	(1)	(2)	(3)	(4)
<b>Female</b>	-0.441 (54.37)**	-0.441 (54.27)**	-0.404 (17.39)**	-0.404 (17.40)**
<b>Age</b>	0.052 (28.17)**	0.052 (28.04)**	0.058 (11.17)**	0.059 (11.32)**
<b>Age-squared</b>	-0.001 (25.60)**	-0.001 (25.46)**	-0.001 (10.24)**	-0.001 (10.41)**
<b>Years of schooling</b>	0.008 (7.83)**	0.008 (7.89)**	0.012 (3.74)**	0.012 (3.61)**
<b>Monthly household income from remittances from abroad</b>	-0.000 (3.99)**			-0.000 (2.46)*
<b>Ln(1+remittances)</b>		-0.006 (4.23)**		
<b>Ln(remittances)</b>			-0.027 (3.02)**	
<b>Observations</b>	15317	15317	2053	2053

**Notes:** Absolute value of z statistics in parentheses. Coefficient estimates reflect the Marginal Effect on Probability.

\* significant at 5%; \*\* significant at 1%

**Table 7. Employment by Sector, 2004**

	<b>Men</b>		<b>Women</b>	
<b>Agriculture: food crops</b>	431,891	34.5%	26,470	3.9%
<b>Husbandry and fishing</b>	47,805	3.8%	5470	0.8%
<b>Forestry</b>	9415	0.8%	1522	0.2%
<b>Mining and Quarrying</b>	5706	0.5%	216	0.0%
<b>Manufacturing</b>				
<b>Manufacture of food, beverages, and tobacco</b>	49,849	4.0%	65,387	9.6%
<b>Manufacture of textiles, apparel, and leather</b>	58,326	4.7%	86,724	12.7%
<b>Manufacture of wood products</b>	12,206	1.0%	2113	0.3%
<b>Other manufacturing</b>	62,591	5.0%	11,325	1.7%
<b>Electricity, gas and water</b>	7861	0.6%	1484	0.2%
<b>Construction</b>	135,676	10.8%	2373	0.3%
<b>Wholesale and retail trade, hotels</b>	200,556	16.0%	220,334	32.4%
<b>Transport, storage and communications</b>	69,864	5.6%	7553	1.1%
<b>FIRE and business services</b>	41,737	3.3%	25,048	3.7%
<b>Public administration</b>	36,902	2.9%	24,756	3.6%
<b>Other social services</b>	68,188	5.4%	163,661	24.0%
<b>Other services and n.e.s.</b>	13,315	1.1%	36,203	5.3%
	1,251,888	100.0%	680,639	100.0%

**Notes:** Data from *Encuesta Permanente de Hogares*, expansion factors applied.

**Table 8. Inter-Industry Wage Differentials**

Dependent variable: log of hourly labor income from principal occupation

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
Years schooling	0.103 (46.43)**	0.101 (66.21)**	0.101 (65.07)**	0.104 (35.04)**
Age	0.054 (12.72)**	0.052 (19.46)**	0.055 (20.18)**	0.046 (8.60)**
Age-squared	-0.001 (9.45)**	-0.001 (14.02)**	-0.001 (14.68)**	-0.0004 (6.24)**
Female	-0.303 (14.56)**	-0.224 (17.10)**	-0.191 (14.61)**	-0.215 (8.36)**
Urban resident	0.248 (11.33)**	0.142 (9.98)**	0.201 (14.16)**	0.241 (8.63)**
<b>Agriculture: food crops</b>	-0.627 (24.22)**	-0.459 (32.41)**	-0.490 (33.41)**	-0.680 (22.71)**
Agriculture: other	-1.263 (14.28)**	0.821 (1.35)		
Husbandry and fishing	0.208 (3.48)**	0.229 (6.62)**	0.244 (7.75)**	0.105 (1.42)
Forestry	0.070 (0.47)	-0.206 (2.60)**	-0.158 (1.92)	-0.319 (1.90)
Mining and quarrying	0.390 (1.67)	-0.031 (0.22)	-0.335 (2.98)**	-0.032 (0.16)
Manufacture of food, beverage and tobacco products	0.004 (0.11)	0.050 (2.18)*	-0.059 (2.78)**	0.125 (2.86)**
<b>Manufacture of textiles, apparel, and leather goods</b>	0.188 (5.98)**	0.180 (10.22)**	0.109 (6.25)**	0.215 (6.09)**
Manufacture of wood products	-0.416 (4.53)**	-0.210 (3.05)**	-0.208 (2.90)**	0.100 (0.77)
Other manufacturing	0.123 (3.13)**	0.115 (4.60)**	-0.017 (0.70)	0.080 (1.58)
Electricity, gas, and water	0.320 (2.37)*	0.216 (2.71)**	0.435 (6.01)**	0.412 (3.06)**
Construction	0.189 (5.59)**	0.233 (11.45)**	-0.000 (0.02)	0.103 (2.53)*
<b>Wholesale and retail trade, hotels</b>	0.095 (6.34)**	0.078 (7.58)**	0.210 (20.60)**	0.061 (3.13)**

continues ....

<b>Transport and communications</b>	0.248 (5.88)**	0.154 (6.24)**	0.101 (4.09)**	0.213 (4.35)**
<b>Finance, real estate, business services</b>	0.199 (4.47)**	0.159 (6.12)**	0.128 (4.76)**	0.226 (4.44)**
<b>Public administration and defense</b>	0.323 (7.56)**	0.222 (8.38)**	0.159 (5.42)**	0.299 (5.55)**
Social services (private)	0.060 (2.55)*	0.018 (1.14)	0.087 (5.58)**	0.175 (6.00)**
Other services	0.034 (0.70)	0.025 (0.70)	-0.077 (2.20)*	0.036 (0.51)
Constant	0.345 (4.57)**	0.549 (11.59)**	0.538 (11.26)**	0.606 (6.43)**
Observations	9878	25427	24622	8817
* sig at 5%, ** sig at 1%				

**Note:** t-statistics in parentheses; data from *Encuesta Permanente de Hogares*

**Table 9. Inter-Industry Differentials, Earlier Years**  
dependent variable: log of hourly earnings from principal occupation

	<b>1992</b>	<b>1996</b>
<b>Years schooling</b>	0.108 (36.53)**	0.116 (51.54)**
<b>Age</b>	0.064 (9.91)**	0.059 (13.07)**
<b>Age-squared</b>	-0.001 (6.86)**	-0.001 (9.02)**
<b>Female</b>	-0.318 (10.94)**	-0.273 (13.00)**
<b>Agriculture, Hunting, Forestry, Fishing</b>	-0.266 (8.03)**	-0.193 (8.81)**
<b>Mining and Quarrying</b>	-0.241 (0.49)	. .
<b>Manufactures: Food, Beverages, Tobacco Products</b>	0.128 (2.28)*	0.058 (1.55)
<b>Manufactures: Textiles, Apparel, Leather</b>	0.223 (4.51)**	0.324 (10.84)**
<b>Manufactures: Wood and Furniture</b>	-0.080 (0.99)	0.109 (1.89)
<b>Manufactures: Other</b>	0.162 (3.24)**	0.171 (4.42)**
<b>Electricity, Gas, and Water</b>	0.270 (2.32)*	0.268 (2.83)**
<b>Construction</b>	0.003 (0.05)	0.225 (5.98)**
<b>Wholesale and Retail Trade and Restaurants and Hotels</b>	-0.022 (0.70)	-0.081 (3.36)**
<b>Transport, Storage and Communication</b>	0.126 (2.27)*	0.009 (0.19)
<b>Financing, Insurance, Real Estate and Business Services</b>	0.319 (5.21)**	0.136 (3.28)**
<b>Community, Social and Personal Services</b>	-0.027 (1.43)	-0.063 (4.31)**
<b>Constant</b>	-1.064 (9.87)**	-0.402 (5.39)**
<b>Observations</b>	4567	5553

**Notes:** t-statistics in parentheses; data from *Encuesta Permanente de Hogares*

**Table 10. Employment in Textile Manufacturing**  
ISIC rev. 2, 3220, for 1992 and 1996  
ISIC rev.3, 1810, for 2001 and 2004

	<b>Men</b>	<b>Women</b>
<b>1992</b>	7495	24,987
<b>1995</b>	12,250	30,568
<b>2001</b>	34,352	59,171
<b>2004</b>	46,713	76,082

**Table 11. Descriptive Statistics  
Garment Finishers and other Manufacturing Workers**

	<b>2001</b>	<b>2002</b>	<b>2003</b>	<b>2004</b>
<u>Acabadores(as)</u>				
Median monthly earnings	2000	2400	2400	2560
Mean monthly earnings	2338	2487	2496	2773
Mean weekly hours	48	48	47	48
Mean years school	6.3	6.4	6.4	6.5
Mean age	24.7	25.0	25.5	26.2
Percent female	71	73	71	64
<u>Other manufacturing workers</u>				
Median monthly earnings	2400	2400	2400	2800
Mean monthly earnings	3097	3488	3451	3650
Mean weekly hours	49	51	48	50
Mean years school	7.0	7.7	7.6	7.8
Mean age	28.9	29.0	29.5	29.3
Percent female	29	32	28	31

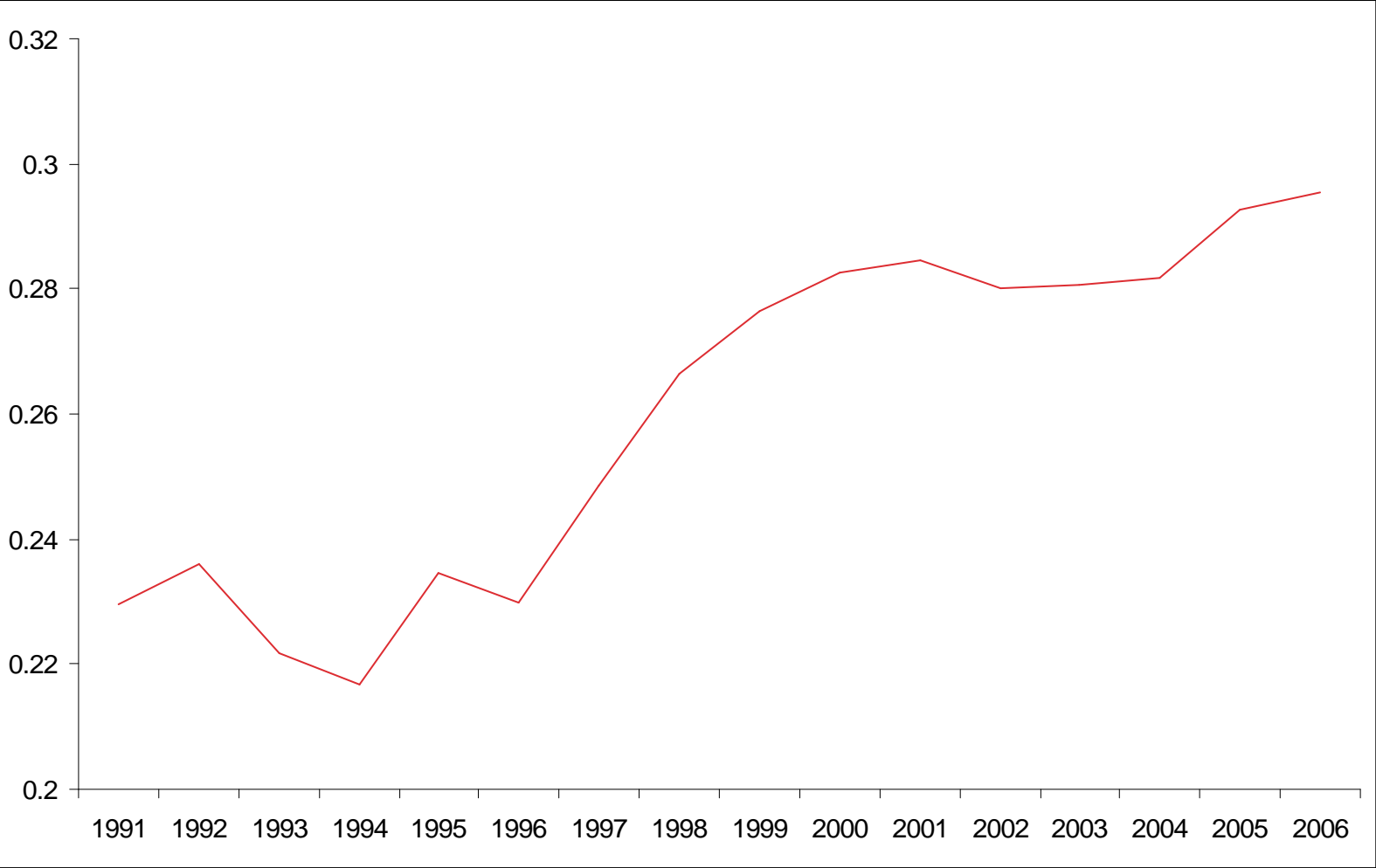
**Notes:** INE, *Encuesta Permanente de Hogares*

**Table 12. Wage Regressions Restricted to Manufacturing Workers**  
 Dependent Variable: Log Hourly Earnings 2004

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
Years schooling	0.084 (17.43)**	0.083 (17.29)**		0.081 (17.18)**	0.080 (17.12)**	
Age	0.060 (5.47)**	0.060 (5.40)**		0.061 (5.50)**	0.060 (5.43)**	
Age-squared	-0.001 (4.45)**	-0.001 (4.38)**		-0.001 (4.55)**	-0.001 (4.47)**	
Female	-0.072 (2.04)*			-0.047 (1.38)		
Garment Finisher	0.097 (2.29)*	0.074 (1.81)	-0.066 (1.46)			
Cigar Maker				-0.371 (3.13)**	-0.377 (3.17)**	-0.518 (3.83)**
Constant	0.936 (5.41)**	0.933 (5.39)**	2.643 (123.93)**	0.983 (5.68)**	0.980 (5.66)**	2.639 (139.66)**
Observations	1226	1226	1226	1226	1226	1226
R-squared	0.24	0.24	0.00	0.24	0.24	0.01

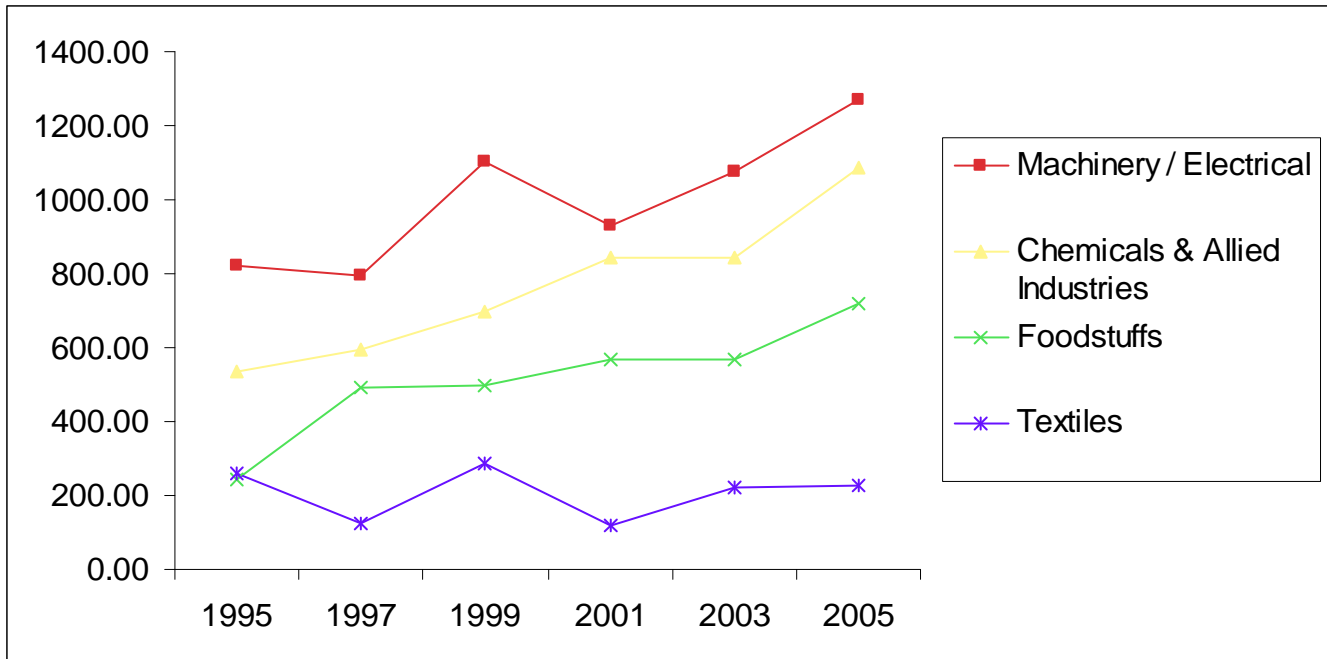
**Notes:** Absolute value of t statistics in parentheses

**Figure 1: Honduran Real Exchange Rate**



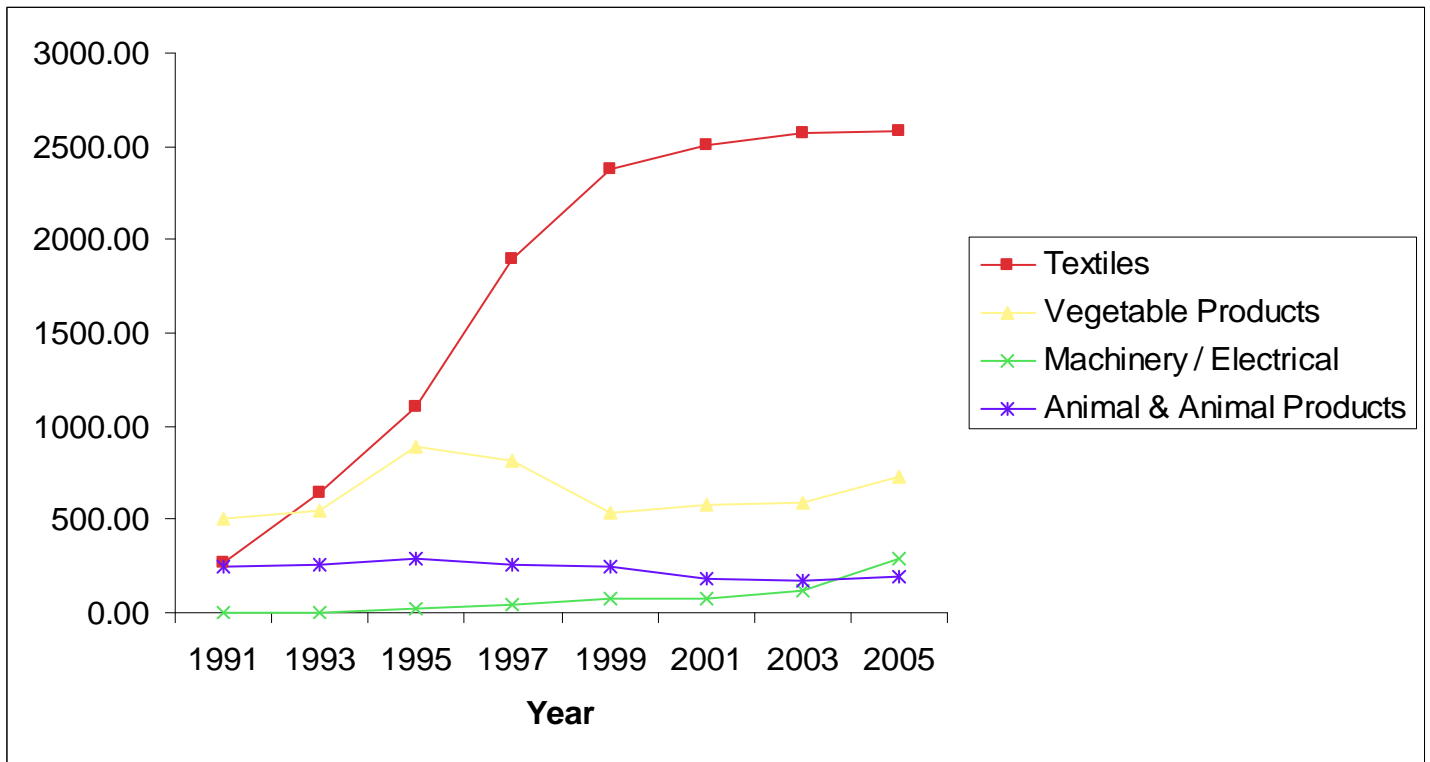
**Notes:** The real exchange rate is calculated as the nominal exchange rate (in dollars per limpera) multiplied by the ratio of the Honduran/US Current Price Indices. Series is calculated by the authors using data from the World Development Indicators.

**Figure 2: Honduran Imports by Sector  
(Millions Constant US dollars)**



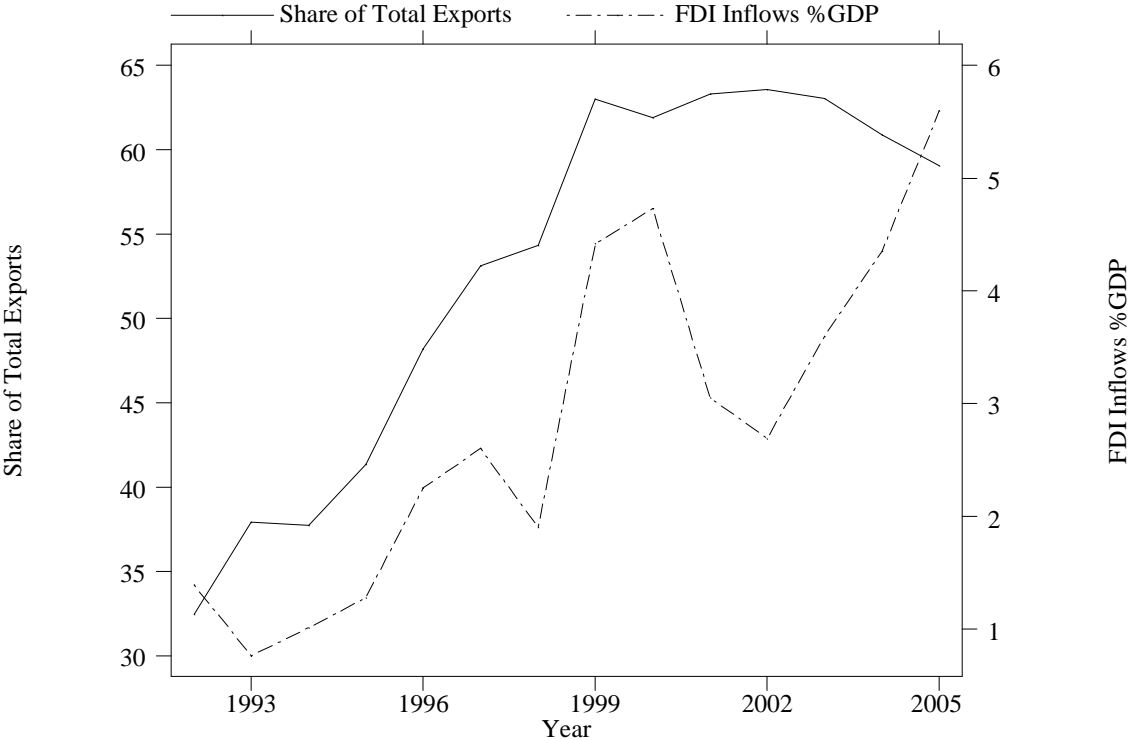
**Notes:** Source: UN COMTRADE database. Conversion to real values uses the U.S. Consumer Price Index for all urban consumers using 2000 as the base year.

**Figure 3: Honduran Exports by Sector  
(Millions Constant US Dollars)**

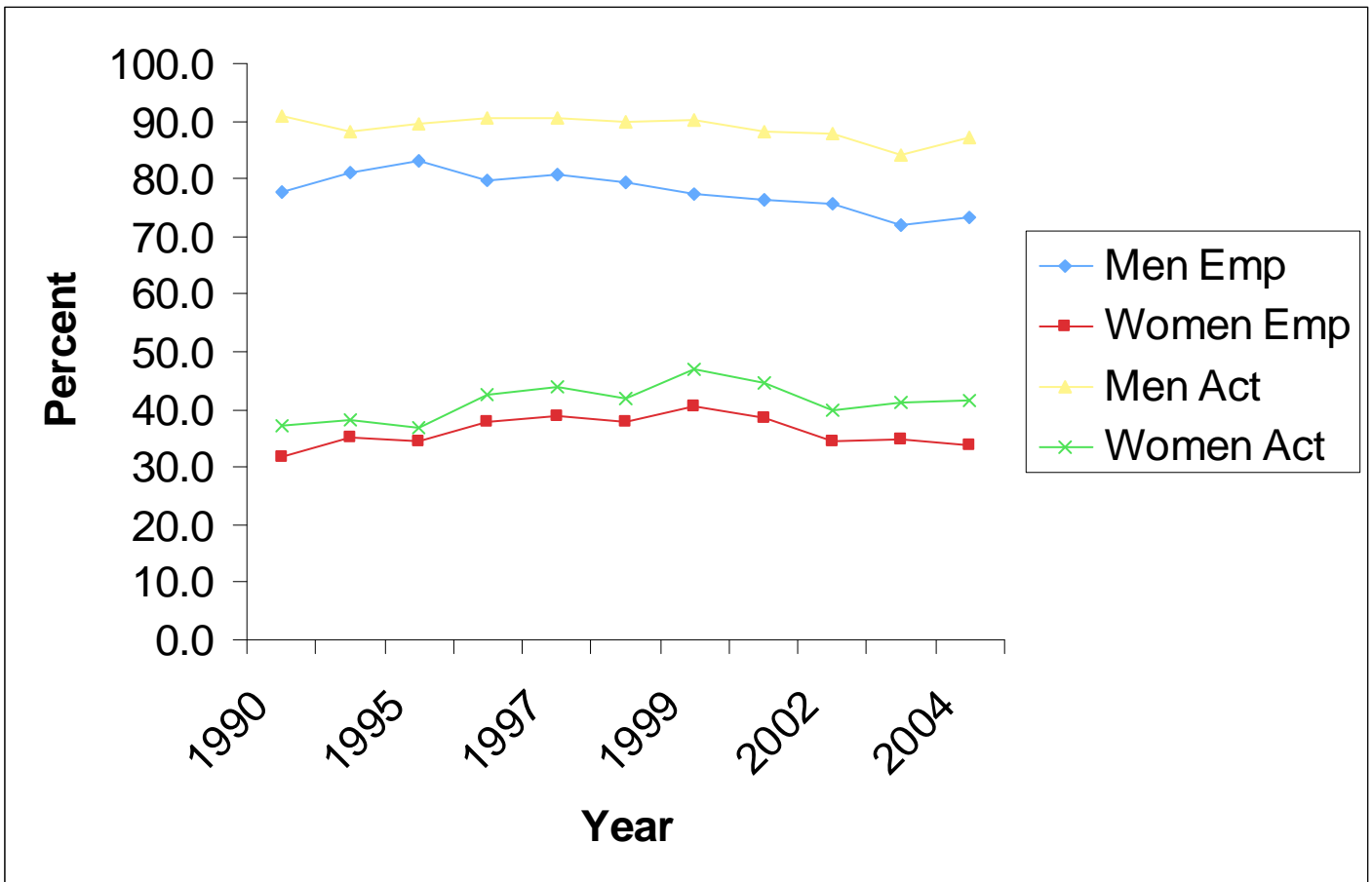


**Notes:** Source: UN COMTRADE database. Conversion to real values uses the U.S. Consumer Price Index for all urban consumers using 2000 as the base year.

**Figure 4: Textile Share of Total Honduran Exports and FDI Inflows**



**Figure 5: Labor Force Statistics by Gender**



**Notes:** Based on authors' calculations using data from Encuesta Permanente de Hogares, expansion factors applied. "Emp" refers to percent employed, and "Act" refers to percent economically active.