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The Effect of Trade and FDI on Inter-industry Wage Differentials: The Case of Mexico*

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Abstract

Taking advantage of the liberalization process under NAFTA, this paper assesses the relative importance of the degree of trade openness and Foreign Direct Investment (FDI) in explaining inter-industry wage differentials for the case of Mexico. Using INEGI's National Survey of Urban Employment for the period 1994-2004, the empirical analysis is conducted on two stages. In the first stage, individual wages are regressed on worker characteristics, job and firm attributes, informality and a set of industry indicators. In the second stage, inter-industry wage differentials (derived from the coefficient estimates of the industry indicators) are regressed on trade and FDI variables. The main findings show that trade openness does not have a robust and statistically significant effect on inter-industry wage differentials, whereas for the case of FDI, a positive nonlinear relationship is found to exist.
Keywords: Wage Inequality; Trade Liberalization; Foreign Direct Investment; NAFTA.
JEL Classification: F16, G31, J23, M52.

Resumen

Tomando ventaja del proceso de liberalización bajo el TLCAN, este documento evalúa la importancia relativa del grado de apertura comercial y de la inversión extranjera directa (IED) en explicar los diferenciales de salario inter-industriales para el caso de México. Usando la Encuesta Nacional de Empleo Urbano del INEGI para el período 1994-2004, el análisis empírico se lleva a cabo en dos etapas. En la primera etapa, se estiman regresiones de los salarios de los individuos sobre las características de los trabajadores, atributos de su empleo y empresas para las cuales laboran, informalidad e indicadores de industria. En la segunda etapa, se estiman regresiones de los diferenciales de salarios inter-industriales (que se derivan de los coeficientes estimados de los indicadores de industria) sobre variables de comercio y de IED. Los resultados principales muestran que la apertura comercial no tiene un efecto robusto y estadísticamente significativo sobre los diferenciales de salarios inter-industriales; mientras que para el caso de la IED, se encuentra que existe una relación no lineal positiva.
Palabras Clave: Desigualdad Salarial; Liberalización Comercial; Inversión Extranjera Directa; TLCAN.

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I. Introduction

The dispersion of wages across industries, for workers with apparently the same occupation and the same socio-demographic characteristics, is now a well established fact. Over the last 30 years, the following stylized facts on inter-industry wage differentials have emerged from the literature:[1] 1) inter-industry wage differentials are stable across time and countries; 2) they are highly correlated across occupations: in industries where one occupation is highly paid, all occupations tend to be highly paid; and, perhaps most remarkably, 3) after controlling for worker and job characteristics, industry indicators account for a significant degree of wage variation.[2] The causes of inter-industry wage differentials, however, remain a challenge to researchers.

A number of theories have been developed to try to explain inter-industry wage differentials. Broadly speaking, there are two main groups: those theories formulated from competitive foundations, in which inter-industry wage differentials are explained by compensating differentials and/or unobserved labor characteristics (e.g. equalizing differences, sorting models, and human capital theories)[3]; and those theories emphasizing a non-competitive view, in which wage differentials are explained by efficiency, rent-sharing issues or segmentation (e.g. efficiency wage theory, rent-sharing/bargaining models, and segmentation theory).[4,5]

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[1] See for example the following seminal studies: Krueger and Summers (1986, 1988); Katz and Summers (1989a) and Groshen (1991a).

[2] According to Groshen (1991b), industry indicators account for a minimum of 12% to 58% of wage variation, while Lane, Salmon and Spletzer (2007) suggest industry indicators account for approximately 21%.

[3] For example, Murphy and Topel (1987) argue that unobserved differences in abilities and jobs account for much of inter-industry wage differentials; for theories of equalizing differences, see Smith (1979) and Brown (1980); for sorting models, see Abraham and Farber (1987); and for human capital theories, see Gibbons and Katz (1989).

[4] For efficiency wage theories, see, for example, Yellen (1984), Krueger and Summers (1988) and Romanguera (1991); for rent-sharing/bargaining Models, see Dickens and Katz (1987) and Du Caju, Kátay,

Some of these theories have been empirically tested by investigating the extent to which inter-industry wage differentials can be associated to employee, job, employer and/or sectoral characteristics.[6] Gannon and Nolan (2004) analyze the case of Ireland and find that inter-industry wage differentials are partly explained by firm size and sectoral profits, which appeal to efficiency wage and rent-sharing theories. Rycx (2002) studies the case of Belgium and finds that the organisational and technological characteristics of the establishments determine wage differentials. He also finds a negative relationship between inter-industry wage differentials and the degree of corporatism, a result recurrently observed in the literature.[7,8] Du Caju, Kátay, Lamo, Nicolitsas and Poelhekke (2010) investigate the causes of inter-industry wage differentials in 8 European Union countries for the period 1995-2002 and find that: 1.) industry rents are positively associated to inter-industry wage differentials, supporting the view that industries share rents with their workers; 2.) rent sharing is more intense, the higher the percentage of firms with a firm-level collective agreement in the industry and the higher the collective agreement coverage; and 3.) sector level competition is negatively associated with inter-industry wage differentials.

Lamo, Nicolitsas and Poelhekke (2010); and for segmentation theories, see Osterman (1975) and McNabb (1987).

[5] For an overview of the competitive and non-competitive theories, see Groshen (1991a), and Osburn (2000).

[6] This investigation has ignited a debate between those studies that argue, from the competitive framework, that unobserved differences in abilities and jobs account for much of these wage differentials (Murphy and Topel (1987)) versus those that argue that efficiency wage and rent-sharing frameworks explain them (Krueger and Summers (1988)).

[7] According to Rycx(2002) corporatism refers to the level of centralization of collective bargaining, as well as the degree of co-ordination between social partners.

[8] Gittleman and Wolf (1993) analyze the case of 14 OECD countries for the period 1970-1985 and find, among other results, a negative relationship between levels of unionization and inter-industry wage differentials.

A less investigated issue, however, is the extent to which trade and/or Foreign Direct Investment (FDI) liberalization can explain inter-industry wage differentials. Table 1 presents a summary of the studies that have analyzed the impact of trade and/or FDI liberalization on inter-industry wage differentials.

Table 1. Empirical Results on the Impact of Trade and/or FDI on Inter-Industry Wage Differentials

Author	Country, year or period analyzed	Findings
Katz and Summers (1989b)	United States (US), 1984	Export industries generate more rents than those that compete with imports. Export-intensive industries employ more skilled workers and are associated with higher levels of research and development than import-intensive industries. After controlling for skill differences, wages in export-intensive industries were 11% above average, whereas wages in import-intensive industries were 15% below
Grey (1993)	Canada, 1985	Exports have a positive effect on wage premiums; while imports, a negative effect.
Gaston and Trefler (1994)	US, 1983	Tariffs have a large negative wage effect; non-tariffs have no significant effects; exports have a positive wage effect; while imports, a smaller negative wage effect.
Goldberg and Pavcnik (2001)	Colombia, 1984-1998	Tariffs have a positive and statistically significant effect on inter-industry wage differentials, when controlling for fixed effects.
Choi (2003)	US, 1987-1992	Two analyses are presented: 1.) in the cross section analysis, it is found that higher presence of foreign firms led to higher local wages after controlling for workers´ observable characteristics. 2.) In the panel data analysis, it is found that inward FDI is negatively linked to industry wage premiums of workers with more than a high school education.
Lundin and Yun (2004)	Sweden, 1996-2000	Import competition from low income countries led to lower wage premiums, while technological progress enhanced wage premiums.
Pavcnik, Blom, Goldberg and Schady (2004)	Brazil, 1987-1998	There is no significant link between trade policy and in inter-industry wage differentials.
AlAzzawi and Said (2009)	Egypt, 1998-2006	Tariffs have a negative effect on wages, but it is not statistically significant. Export orientation have a positive effect on wages and a negative impact on job quality indices.* Industries with the highest import penetration levels have the lowest job quality.

*Job quality indices refer to social security, medical insurance, a contract, paid causal leave, paid sick leave, and w hether the w orker is a member of a trade union.

As can be seen from Table 1, there is a lack of studies comparing the effect of trade versus the effect of FDI and/or technological progress on inter-industry wage differentials. Lundin and Yun (2004), for the case of Sweden, is the only study that assesses both the impact of trade and investment in R&D on inter-industry wage differentials. The focus of most studies is only on trade as a determinant of inter-industry wage differentials. An exception is Choi (2003), who instead centres on the impact of inward FDI on wage differentials. Table 1 also shows that the existing literature has generally found: 1.) mixed results as regards the relationship between tariffs and inter-industry wage differentials (a positive relationship between tariffs and inter-industry wage differentials in some studies, and a negative relationship in others); 2.) a positive effect of exports on inter-industry wage differentials; 3.) a negative effect of imports on inter-industry wage differentials; and 4.) no clear conclusion has yet emerged as regards the impact of FDI on wage differentials.

The effect of trade and/or FDI liberalization on inter-industry wage differentials is a subject of utmost importance given the current phase of global integration and the controversy that has emerged on the distributional effects of such reforms, particularly on wage inequality between skilled and unskilled workers (AlAzzawi and Said (2009)).

The Heckscher-Ohlin-Samuelson model suggests that a trade liberalization process in developing countries will lead to an increase in the demand for unskilled workers (developing countries will export goods that utilize their abundant and relatively cheap factor of production (unskilled labor)) and, to a decline in the relative price of the skilled-labor intensive imported good since trade barriers will decrease (developing countries will import goods that utilize their scarce factor (skilled labor)). Therefore, the price of unskilled labor will increase, while the price of skilled labor will decrease, leading to a reduction in wage inequality between both types of workers. The empirical evidence, however, has shown that wage differentials between skilled and unskilled workers have increased once developing countries have opened to trade.[9,10]

As regards the FDI liberalization process, it is well known that FDI contributes to economic growth since "it provides access to advanced technologies and spill-overs, technological or otherwise" (p. 1, Andreas (2008)). However, this can lead to an increase in wage inequality between skilled and unskilled workers since capital flows have generally been related to a higher demand for skilled workers. The bias of FDI liberalization towards skilled workers, known as Skill-Biased Technological Change (SBTC), occurs due to an increase of capital inflows into developing countries that has shifted production towards the relatively skilled intensive goods and has therefore favoured the demand for this type of workers.[11]

Based on this previous evidence, this paper considers the relative importance of trade and FDI in explaining inter-industry wage differentials using Mexican data for the

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[9] See for example, Crag and Epelbaum (1996) and Hanson and Harrison (1999) for the case of Mexico; Attanasio, Goldberg and Pavcnik (2004) for the case of Colombia and, Pavcnik, Blom, Goldberg, and Shady (2004) for the case of Brazil.

[10] Goldberg and Pavcnik (2007) suggest that the increase in wage inequality and the rise in the skill premium are consistent with the Stolper-Samuelson theorem if it is considered that, before the trade liberalization process, the unskilled-labor intensive industries in these countries were the most protected sectors and, consequently, the sectors that experienced the largest tariff reductions.

[11] On the SBTC, see Autor *et al.* (1998) and Berman *et al.* (1998).

period 1994-2004.[12] In addition, this paper aims to contribute to the debate between trade and FDI as determinants of wage inequality.[13]

Mexico seems an appropriate case to study these issues since it has gone through a period of substantial trade and FDI liberalization. Mexico´s liberalization process began in the mid-1980s, when it became a member of the General Agreement on Tariffs and Trade (GATT) in 1986; continued in 1989, when it eliminated part of the restrictions to foreign capital; and culminated in the 1990s, when the North American Free Trade Agreement (NAFTA) was signed with the United States (US) and Canada and implemented in 1994. Furthermore, Mexico currently has free trade agreements with 43 nations, covering a potential market of 1,090.885 millions of consumers worldwide.[14]

In the context of this paper, differences between industries in the wages paid can be suggestive of two strategies undertaken by industrial sectors: 1.) either they are attempting to increase the workers' productivity by paying higher wages and/or; 2.) they are attempting to accumulate more specific human capital, also by paying higher wages.

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[12] The current study cannot be theoretically based on the Heckscher-Ohlin Samuelson model since it assumes perfectly competitive markets and perfect factor mobility, which would eliminate any inter-industry wage differential. On the other hand, it can be based on the immobile factors model or the specific factors model, since both approaches assume that labor cannot be easily reallocated during a trade liberalization process. In developing countries, according to Goldberg and Pavcnik (2004), labor reallocation across sectors is dampened due to labor market rigidities.

[13] Falzoni, Venturini and Villosio (2005) suggest trade is the most important cause of wage inequality, whereas Esquivel and Rodríguez-López (2003) and Onaran and Stockhammer (2007) suggest is FDI. Baldwin and Rafiquzzaman (1998) and Avalos and Savvides (2003) suggest both trade and technological progress affect wage inequality.

[14] ProMexico with data from the Mexican Ministry of Economics and the World Economic Outlook Database 2009.

The first strategy can be explained by the fact that trade liberalization under NAFTA (reduction of import tariffs) exposes the manufacturing sector to higher competition, requiring employers to become more efficient (to increase production per unit of labor).[15] This strategy can be associated to the sorting models, which assume that some workers are more productive than others and that employers only hire high, average or low skill workers depending on the factors affecting their competitive strategy. If employers face competition and are required to cut costs, then they hire low skilled workers and pay lower wages; however, if they face competition and are required to increase productivity, then they hire high skilled workers and pay higher wages. Sorting models also assume that technologies are sensitive to the workers' abilities. Therefore, employers with ability-sensitive technologies hire more skilled workers and pay higher wages; while employers with insensitive technologies hire a greater proportion of unskilled workers and pay lower wages.[16]

The second strategy can be explained by the fact that FDI liberalization under NAFTA exposes the country to new technologies (and competition), requiring employers to accumulate more specific human capital.[17] This strategy can be associated to the sorting models and/or the human capital theory. The latter theory suggests that wage differentials exist because human capital stocks differ among workers. If human capital

[15] This strategy should not be confused with the efficiency wage models, where employers pay above competitive wages in order to reduce shirking, turnover, attract high skilled workers, or to convince workers they are being fairly paid. In these models, the workers´ effort depends on the wages paid.
[16] Groshen (1991a).
[17] The empirical analysis in this study controls for differences in education levels (primary school, secondary school, etc.), which are measured and available in the survey used. However, it may occur that workers acquire specific human capital during their working life in order to be able to use new technologies, and such information is not controlled for in the empirics since it is still not measured and therefore, not available in the data.

stocks differ among workers, productivity levels also differ and so do wages, to the extent that productivity changes are passed onto wages. In this sense, workers with higher levels of skills or training earn more, because skills improve human capital stocks and also productivity. Finally, this second strategy can also be related to the SBTC, since the introduction of new technologies in a certain industry increases the demand for skilled workers. Skilled workers are considered complements of these new technologies and therefore, the SBTC not only generates a shift in labor composition but also in wages.

The econometric analysis in this paper follows Goldberg and Pavcnik (2001)[18] and is conducted in two stages. In the first stage, individual wages are regressed on worker characteristics, job and firm attributes, informality and a set of industry indicators. In the second stage, inter-industry wage differentials (derived from the estimated industry indicators) are mainly regressed on tariffs and FDI.

The data used in the analysis covers the period 1994-2004 and is representative of the 45 largest urban areas in Mexico. The data is based on household surveys or in-person interviews conducted by the National Institute of Statistics, Geography and Informatics (*INEGI*) in this country. The survey covers topics such as family composition, level of education, laboral characteristics (type of job, occupation, industry, earnings, hours worked per week) and workplace characteristics (informal sector indicators, size of establishment indicators and type of establishment indicators).

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[18]They study the impact of trade on inter-industry wage differentials for the case of Colombia and the period 1984-1998.

The first-stage regression results show that older workers, men, married, head of households and people living in Mexico City earn relatively more. As regards the occupation indicators, the results show that, except for managers, other occupation categories earn relatively less than the professional/technical category. The first-stage findings also reveal that people with higher educational attainment, employers, people who work for the government or private firms, those who work in the formal sector and/or those who work in bigger establishments earn relatively more.

The second-stage regression results show that trade openness does not have a robust and statistically significant effect on inter-industry wage differentials. In the case of the FDI liberalization process, the results show a positive non-linear relationship between FDI and inter-industry wage differentials, which is statistically significant.

This paper therefore contributes to the literature on inter-industry wage differentials in two main aspects: 1.) we specifically focus on the role of FDI, a variable typically ignored by the majority of inter-industry wage differentials studies, and 2.) we consider the relative importance of FDI with respect to trade. Thus, it contributes to the ongoing trade versus FDI debate as determinants of wage inequality. There is a substantial empirical literature that has studied the determinants of wage inequality between skilled and unskilled workers.[19] However, we add to the debate by taking an inter-industry wage

[19] For the case of Mexico, see for example, Feenstra and Hanson (2005); Hanson and Harrison (1995); Cragg and Epelbaum (1996); Meza González (1999); Cortez (2001); Airola and Juhn (2005); Robertson (2000); and Cañonero and Werner (2007).

differential approach. The results suggest, at least for the case of Mexico, that inflows of FDI are much more important than trade liberalization in generating inter-industry wage differentials.

The remainder of the paper is organized as follows. Section 2 discusses the econometric specification. Section 3 introduces the data and undertakes the data description. Section 4 presents the econometric results. Section 5 concludes.

2. Econometric specification

This analysis is based on a two-stage estimation method following Goldberg and Pavcnik (2001). In the first stage, the logarithm of worker $i's$ wages $\ln(w_i)$ is regressed on worker $i's$ characteristics (H_i) and on j industry dummies (I_{ij}):

$$\ln(w_{ij}) = \beta_H H_{ij} + \beta_j I_{ij} + \varepsilon_{ij} \qquad (1)$$

Where:

H_{ij} comprehends the worker $i's$ age, gender, marital status, level of education, literacy rate, occupation, whether he/she is an employer, self-employed or employee, whether he/she works for the government, the private sector or any other establishment with name, whether he/she works for the formal or the informal sector, and or/whether he/she works on an establishment with few people or with a bigger number of people.

I_{ij} controls for the worker $i's$ industry affiliation and its coefficient is the wage premium, described in the literature (Gastron and Trefler (1994); Goldber and Pavcnik (2001)) as the portion of the wages that cannot be explained by the worker´s characteristics (demographics, occupation, etc.) but that can be explained by the characteristics of the worker´s industry.[20]

Equation (1) is estimated for each cross section in the sample, using two different specifications:

First Specification: *Wages = f (work experience (age and its square), demographic characteristics (gender, marital status, education, literacy, location, occupation and job type categories) and industry indicators)*[21]

Second Specification: *Wages = f (work experience, demographic characteristics, work place characteristics (informal sector and size of establishment) and industry indicators)*

The estimated coefficients on the industry dummies from the previous two specifications, β_j, are then expressed as deviations from the employment-weighted average wage premium, given by $\bar{\beta} = \sum_{j=1}^{J} \frac{n_j}{N} \beta_j$. Goldberg and Pavcnik (2001) interpret

[20] Regression (1) is estimated with an intercept term and $j-1$ industries. The men and women serial apparel industry is considered the reference group, it is dropped and it is assumed that it has a zero wage premium.
[21] The variables age and its square are included in both specifications to take into account the non-linear effects of experience on earnings: in the first part of an individual´s life, earnings increase with age, while in the second part of his/her life, earnings decrease. This strategy is based on the life cycle theory of income, consumption and wealth accumulation.

these inter-industry wage differentials as the difference in wages for a worker in a given industry relative to an average worker in all industries with the same observable characteristics. These wage differentials are identified as $WD1$ and $WD2$, respectively, in the following stage.[22]

In the second stage, the calculated inter-industry wage differentials are pooled over time and regressed on the variables of interest in this study, mainly tariffs and FDI:

$$WD_{jt} = T_{jt}\beta_T + F_{jt}\beta_F + D_t\beta_D + u_{jt} \tag{2}$$

Where:

T_{jt} stands for tariff levels in industry *j* at time t. As mentioned in the introduction, the empirical literature has registered mixed results as regards the impact of this trade policy variable on inter-industry wage differentials: some studies have found a positive relationship between trade protection and wages[23], whereas other studies, a negative link.[24]

F_{jt} stands for FDI as a percentage of output in industry *j* at time t. A non-linear effect of FDI on inter-industry wage differentials is expected since this relationship changes

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[22] This calculation is also made taking into account $j-1$ industries considered in equation (1).
[23] See Goldberg and Pavcnik (2001).
[24] See Gaston and Trefler (1994).

over time.[25] Therefore, F_{jt} and its square are introduced into equation (2). Furthermore, in order to control for the fact that the FDI effect on inter-industry wage differentials may not be immediate, this variable enters the equation lagged once.

D_t in equation (2) are time dummies capturing time specific shocks common to all firms.

In order not to limit this exercise to the impact of protection (tariffs) on inter-industry wage differentials, additional trade variables such as exports, imports, export consumption (exports/output+imports-exports), export orientation (export/output), import penetration (imports/consumption) and/or trade (export+imports/output) are also considered in the analysis. These trade variables (except tariffs) also enter equation (2) lagged once for the same reason as FDI does.

The two-stage estimation approach is used in this paper in order to first control for the workers' characteristic (education or skills), for job and firm attributes, as well as for the workers' affiliation and, then, to analyze the effect of trade and FDI liberalization on inter-industry wage differentials. If a direct approach was follow in the sense that average wages were regressed on tariffs or FDI, the results would be biased. As Goldberg and Pavcnik (2001) and Gaston and Trefler (1994) suggest, the negative impact of imports on average wages found in the literature, for example, would be overestimated

[25] Figini and Gorg (2006) analyze the impact of FDI on wage inequality for two different groups of countries: OECD (developed) countries and non-OECD (developing) countries. Their findings show, for the case of the developing countries, that the relationship between wage inequality and FDI depicts an inverted U shape. In the short run, wage inequality increases because firms augment their demand for skilled labor in order to use the new technology. In the long run, however, all the firms catch up with the utilization of the new technology and wage inequality therefore decreases.

since, in general, low-skilled workers are employed in low-wage industries and, without controlling for this fact, we would be attributing the whole fall in wages to the trade variable mentioned. Therefore, in order not to generate these biases, a two-stage estimation approach is followed in the empirical analysis.

Finally, equation (2) is estimated using the Generalized Method of Moments (GMM) approach to allow for a lagged dependent variable on the right hand side of the equation (dynamic component in the model) and to control for possible cases of endogeneity. It may be the case that FDI is a function of wage differentials rather than a determinant of it or, that exports and imports depend on wage costs, making these trade variables endogenous.[26] Furthermore, GMM is known "to be efficient within the class of instrumental variable estimators" (p.15, Nucci and Pozzolo, (2010)). In particular, following Arellano and Bover (1995) and Blundell and Bond (1998), equation (2) is estimated by System GMM using STATA´s xtabond2 command written by David Roodman (2006).[27] Finally, to account for general forms of heteroskedasticity and serial correlation in the error term, robust standard errors are computed and registered together with the estimated results (see Section 4).

[26] Gaston and Trefler (1994) mention that not just trade variables such as exports and imports may be endogenous, but also tariffs, since policy-makers may consider average industry wages when deciding which industry to protect. In the same vein, Attanasio, Goldberg and Pavcnik (2004), in their analysis on the impact of tariff reductions on wage distribution in Colombia, also control for the potential endogeneity of tariffs, apart from trade flows' endogeneity.

[27] System GMM consists on adding the original equations in levels to a system of equations in first differences. In this sense, the variables in first differences are instrumented with lags of their own levels, while the variables in levels in the second set of equations are instrumented with lags of their own first differences. This method not only improves the precision of the estimator given it uses a higher number of moment conditions, but it also reduces the finite sample bias that emerges in the First Differenced GMM estimator, when the lagged levels of the series are only weakly correlated with subsequent first differences.

3. Data

The data on worker characteristics and job attributes come from *INEGI*'s National Survey of Urban Employment (*Encuesta Nacional de Empleo Urbano*, *ENEU* in Spanish) and covers the period 1994-2004. This Survey is quarterly and is characterized for having a rotating panel structure, which means that the sample is divided into 5 independent panels and each panel stays in the sample for five quarters only.

ENEU covers topics such as civil status, level of education, place of birth, housing characteristics (type of housing, size of it, the materials used to build it, services in it, the housing age, etc.), household characteristics (if a person is head of household or not, family composition), labor characteristics (type of job, occupation, industry affiliation, earnings, hours worked per week) and workplace characteristics (informal sector indicator, size of establishment indicators and type of establishment indicator). The sampling unit in the survey is the household (*hogar* in Spanish) and the population under study is constituted by those of 12 years of age or more. However, this study focuses on potential wage earners and only individuals between 15 and 65 years of age are considered in the empirical analysis.

Two different questionnaires were used in the empirical analysis, since some variables were eliminated and some were included in the third quarter of 1994: the "old questionnaire", which was used to examine the dataset for the first and second quarter of 1994; and the "new questionnaire", which was used to analyse the data from the third quarter of 1994 onwards. In addition, new variables were incorporated in the first quarter of 2000 but the variables in this year were similar to those generated by the "new questionnaire" so a third set of questions was not required. Appendix 1 explains the construction of the indicators used in the regressions.

Finally, it should be mentioned that it was not possible to pool all the quarters for the period 1994-2004 into a single dataset since the total number of observations summed to more than one million (1,095,386 observations) and the computer memory capacity was insufficient to work with the whole sample. Therefore, for each year, the four quarters were pooled into a single dataset and then analyzed in different sub-samples to obtain some summary statistics. Tables 1-7 from Appendix 2 present some summary statistics for selected years (1995, 1996, 1998, 1999, 2001, 2003 and 2004) in the period under analysis. The industry sectors in the sample have been grouped for data management convenience. Each of these industry groups are described in the Tables. In particular, these Tables show that: 1) there are more men than women in most of the industry groups under analysis (except for industry groups B and L, in which the opposite occurs for certain years). 2.) Around 55% of the people working in the manufacturing sector is married. 3) Almost 50% of the population has a technical career, university studies or postgraduate studies in the first three years considered. This percentage, however, decreases in the following years. 4) The average age of the people working in the manufacturing sector ranges between 31 and 33 years old. 5.) As expected, there is an important heterogeneity of wages and education levels among industries. The industry groups that have a larger percentage of their workers with a technical career, university studies or postgraduate studies (E, F and I) are the sectors that pay a higher wage to their employees.

Data on tariffs come from the document "*Tratado de Libre Comercio de América del Norte",* particularly from *Sección B-Aranceles*, *Artículo 302, Anexo 302.2*, where one can find the following two texts: *Eliminación Arancelaria* and *Lista de Desgravación de México.* This document can be found in the Mexican Ministry of Economics. The first text, *Eliminación Arancelaria,* presents the tariff phase out schedule under NAFTA for different levels of tariffs, while the text *Lista de Desgravación de México* shows the tariff level in each Mexican industry before the implementation of NAFTA and, the tariff phase out schedule assigned to each of them. Under NAFTA, trade barriers have been eliminated gradually and the trans-border movement of goods facilitated. Table 8 in Appendix 2 shows the tariff phase out schedule followed by the Mexican manufacturing industry under this Free Trade Agreement. Textile goods follow the same tariff phase out schedule as described in Table 8 of Appendix 2 except for a group of textiles, namely, those classified as B6. The tariff phase out schedule for this specific group of textiles is shown in Table 9 of the same Appendix. Both tables show that the tariff levels in 1993 ranged between 5% and 20% but, by 1999 and 2003, tariffs were 0% in the specific group of textiles mentioned and the rest of the manufacturing industry, respectively. Table 10 from Appendix 2 shows the industries considered in the analysis, as well as the tariff phase out schedule each of them followed. In this study, both the sectorial variation and the time variation in tariffs are considered rather than just concentrating on the elimination of tariffs in time.

As regards FDI, NAFTA also eliminated barriers and established non-discrimination rules so that foreign investors were given the same treatment as that provided to nationals. The result of these measures was a substantial increase of FDI flows into Mexico.[28] Table 11 in Appendix 2 shows that FDI flows into Mexico increased 133.1% in the period 1994-2004 (from 10,646.9 million dollars (md) in 1994 to 24,818.0 md in 2004), and, 84.3% in the period 1994-2010 (19,626.5 md entered into Mexico as FDI in 2010). This outcome is supported by an empirical analysis on the influence of Free Trade Agreement membership on FDI inflows, conducted by Lederman et al. (2003), who finds that joining a trading block leads to higher inflows. Table 11 also shows that the industrial and services sectors receive the largest FDI inflows and, within the industrial sector, manufactures. FDI inflows into manufactures increased 135.8% in the period 1994-2004 (from 5,882.3 md in 1994 to 13,872.4 md in 2004) and 92.4% in the period 1994-2010 (the FDI figure for 2010 is 11,318.2 md). Table 12 in the same Appendix shows that the United States is the country sending more FDI flows into Mexico, almost 60% in the period 1994-2004 and 52% in 1994-2010, followed by Spain and the Netherlands. Finally, Figure 1 in Appendix 2 shows that that FDI flows into Mexico, per economic sector, have had a positive trend along the period 1994-2010, except the flows into the agriculture and fishing sector, which have not grown as in the other sectors.

[28] Hanson (2003) suggests that FDI flows into Mexico increased due, in part, to the fact that NAFTA raised the investors´ confidence in this country´s commitment to free trade.

In the empirical analysis, data on FDI inflows are obtained from the Mexican Ministry of Economics, while data on exports, imports and production from INEGI; these data are deflated and expressed in thousands of pesos.

4. Estimation and results

4.1 First Stage

As discussed in the previous section, equation (1) is estimated by OLS for each cross section of the household survey using the following two specifications:

First Specification: *Wages = f (work experience (age and its square), demographic characteristics (gender, marital status, education, literacy, location, occupation and job type categories) and industry indicators)*

Second Specification: *Wages = f (work experience, demographic characteristics, work place characteristics (informal sector and size of establishment) and industry indicators)*

Tables 1-4 from Appendix 3 present the first-stage results based on these two specifications. The Tables correspond to the years 1994, 1998, 2001 and 2004, which are representative of the period analyzed and no specific criterion was followed in their selection.[29]

[29] Tables corresponding to the rest of the years are available from the author upon request.

The results show that older workers, men, married, head of households, and people living in Mexico City earn relatively more. As regards occupation indicators, the results show that, except for managers, other occupation categories earn relatively less than the professional/technical category (the omitted category). The findings also show that people with higher educational attainment, employers, people who work for the government or private firms, those who work in the formal sector and/or those who work in bigger establishments also earn relatively more. These same results are obtained in the rest of the years analyzed.

Tables 1 to 4 from Appendix 3 also show an F-test for the global significance of the estimated regression and, in all the cases, the null hypothesis that establishes that all the coefficients, except the intercept, are equal to zero is rejected. An F-test is also presented to check for the significance of the industry dummies introduced in the regression. The results show that the null hypothesis that establishes that all the coefficients are equal to zero is rejected in all the cases. These Tables finally show an R-squared to indicate the explanatory power of the model (goodness of fit of the model) and as it can be seen it lies between 0.3304 and 0.3902, similar to the results in Goldberg and Pavcnik (2001).

4.2 Second Stage

In the second stage of the empirical analysis, the estimated wage premiums from the first stage regressions are then expressed as deviations from the employment-weighted average wage premium, in order to work with proportional differences in wages for a worker in a given industry relative to an average worker in all industries with the same observable characteristics. These differences, WD_{jt}, are then pooled over time and regressed on the liberalization variables (vector T and F in equation (2)). For simplification, equation (2) is reproduced here:

$$WD_{jt} = T_{jt}\beta_T + F_{jt}\beta_F + D_t\beta_D + u_{jt}$$

Equation (2) is estimated by System GMM and general forms of heteroskedasticity and serial correlation in the error term are controlled for by computing robust standard errors. The second stage results are presented in Tables 5 and 6 from Appendix 3. The wage differential obtained from specification 1 (WD1) is the dependent variable in Table 5, while the wage differential obtained from specification 2 (WD2), which also includes work place characteristics, is the dependent variable in Table 6.

Both tables show that the coefficient estimate of the lagged dependent variable is positive and statistically significant, which confirms that it is appropriate to consider a dynamic component in the model. By introducing the lagged wage differential we are allowing for persistence in this variable.

Regressions 1, 2 and 3 in Tables 5 and 6 show that the coefficient estimate of the variable tariff is negative, which suggest that workers in industries with higher tariffs receive lower wages than workers with identical observable characteristics in industries with lower tariffs. However, this finding is not statistically significant. It differs from that found in Goldberg and Pavcnik (2001) for the case of Colombia, when they controlled for fixed effects, but it is similar to that found in AlAzzawi and Said (2009) for the case of Egypt.

The coefficient estimate of FDI/output is positive and statistically significant in all the specifications in Tables 5 and 6 (except for regression 2 in Table 5), while the coefficient estimate of $(FDI/output)^2$ is negative and statistically significant in all the regressions in the same Tables. These results suggest that there is an inverted U pattern for the relationship between FDI/output and inter-industry wage differentials. However, given the maximum level of this function, the only relevant area for our analysis is that where inter-industry wage differentials are increasing.[30] In this area, the relationship between FDI/output and inter-industry wage differentials is relatively strong at low levels of FDI flows; but as FDI inflows increase, this relationship weakens.

Regressions 2 and 3 in Tables 5 and 6 also analyze the impact of trade and FDI on inter-industry wage differentials, but include as additional explanatory variables lagged imports, lagged exports, lagged import penetration and/or lagged export consumption. The coefficient estimates of lagged imports (Regression 2 in both Tables) and lagged import penetration (Regression 3 in both Tables) are negative (except for regression 3 in Table 5) as expected, but are not statistically significant (except for the coefficient estimate in regression 2 of Table 6).

[30] For example, according to the coefficient estimates of both, FDI/output and $(FDI/output)^2$ in the first regression of Table 5, the maximum level of the relationship between inter-industry wage differentials and FDI/output is achieved when log (FDI/output) is equal to 0.55.

The variables exports (Regression 2 in both Tables) and export consumption (Regression 3 in both Tables) are positive as expected (except for regression 3 in Table 5), but only statistically significant in regression 2 of Table 6. This significant coefficient estimate implies that a 1% increase in exports leads to a 0.0000003% increase in inter-industry wage differentials. It suggests that wages in exporting industries are higher than wages in other type of industries.

Regression 4 in both Tables includes the lag of the variable exports/output apart from tariffs and the FDI indicators. This regressor is positive but it is only statistically significant in Table 5, which indicates that a 1% increase in exports leads to an increase of 0.009% in inter-industry wage differentials.

Finally, regression 5 in both Tables includes the lag of the variable trade apart from tariffs and the FDI indicators.[31] This variable has also a positive effect on inter-industry wage differentials but it is not statistically significant in neither of the two Tables.

All the regressions in Tables 5 and 6 include yearly time indicators to control for common macroeconomic shocks, so a test for the joint null hypothesis that the coefficients of these year indicators are equal to zero is presented. The results from this test show that the null hypothesis is rejected in all the regressions of both tables (except for regression 5 in Table 5), which means that the time indicators are jointly significant.

[31] Trade, as it has already been mentioned, is equal to (exports + imports) / production.

As regards the specification tests, Tables 5 and 6 present an F-test for the joint null hypothesis that all the coefficients, except the intercept, are equal to zero. The null hypothesis is rejected in all the regressions, which means that the coefficient estimates in each of them are jointly significant.

Finally, Tables 5 and 6 also show the Arellano-Bond test for first and second order autocorrelation in the first differenced residuals and the Hansen Test for the exogeneity of the instruments. The null hypothesis for no first order autocorrelation in the first differenced residuals in the Arellano Bond test is rejected in both Tables, while the null hypothesis for no second order autocorrelation in the first differenced residuals is not rejected in any of the two Tables, as expected. Furthermore, the null hypothesis in the Hansen Test for over-identifying restrictions, which is a test for the exogeneity of the set of instruments, is not rejected in any of the regressions in both Tables.

5. Conclusions

This paper analyzes the impact of trade and FDI liberalization on inter-industry wage differentials in Mexico, over the period 1994-2004. To our knowledge there are no studies for Mexico on this subject and it is one of the few, at an international level, that investigates both, the effect of trade and FDI liberalization on inter-industry wage differentials.

The econometric analysis follows Goldberg and Pavcnik (2001) and is based on a two-stage estimation. In the first stage, individual wages are first regressed on worker characteristics, job and firm attributes, informality and a set of industry indicators. In the second stage, regressions of wage premiums (derived from the coefficient estimates of the industry indicators) on liberalization variables, mainly tariffs and FDI indicators, are conducted by System GMM.

The first-stage results show that older workers, men, married, head of households and people living in Mexico City earn relatively more. As regards the occupation indicators, the results show that, except for managers, other occupation categories earn relatively less than the professional/technical category. First-stage findings also reveal that people with higher educational attainment, employers, people who work for the government or private firms, those who work for the formal sector and/or those who work in bigger establishments earn relatively more.

The second-stage results show that tariffs have a negative effect on inter-industry wage differentials, but they are not statistically significant. However, the results confirm that there is a positive and statistically significant non-linear relationship between FDI/output and inter-industry wage differentials. At low levels of FDI/output, the relationship between this variable and inter-industry wage differentials is relatively strong, while as FDI/output increases, this relationship weakens.

As regards other controls for trade liberalization apart from tariffs, the results show that exports, exports/consumption and exports/output have a positive effect on inter-industry wage differentials but only in some cases are these effects statistically significant. These findings suggest that wages in exporting industries are higher than wages in other type of industries. Imports and import penetration have a negative effect on inter-industry wage differentials, but it is not statistically significant (except for one case). The variable trade has a positive effect on inter-industry wage differentials but it is also not statistically significant.

These findings can be explained as follows: 1) Trade liberalization under NAFTA exposed the manufacturing sector to higher competition, requiring employers to become more efficient. This fact led employers to increase their workers' productivity by paying higher wages. This explanation can be associated to sorting models. 2) FDI liberalization under NAFTA exposed the country to new technologies (and competition), requiring employers to accumulate more specific human capital. Employers therefore pay higher wages to attract or hire more skilled workers. This second explanation can be associated to sorting models and human capital theories.

This paper contributes to the literature on inter-industry wage differentials in two main aspects: 1.) we specifically focus on the role of FDI, a variable typically ignored by the majority of inter-industry wage differentials studies due to lack of data availability, and 2.) we consider the relative importance of FDI with respect to trade. Thus, it contributes to the ongoing trade versus FDI debate as determinants of wage inequality.

There is a substantial empirical literature that has studied the determinants of wage inequality between skilled and unskilled workers. However, we add to the debate by taking an inter-industry wage differential approach. Our results suggest, at least for the case of Mexico, that FDI liberalization is much more important than trade liberalization in generating inter-industry wage differentials. Similar results are found in Esquivel and Rodríguez-López (2003), for the case of Mexico, and in Onaran and Stockhammer (2007), for the case of the Czech Republic, Hungary, Poland, Slovakia, and Slovenia, in the wage inequality literature. Lundin and Yun (2004) find similar results for the case of Sweden in the inter-industry wage differentials literature.

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Appendix 1

Construction of Variables for the Empirical Analysis

This annex describes the variables included in the empirical evidence.

- **Wages:** An hourly wage is constructed using the reported earnings and the number of hours worked per week. The earnings are monthly so the hours worked per week are multiplied by the factor 4.3, following Cragg and Epelbaum (1996), in order to obtain the hourly wage as the ratio of monthly earnings to 4.3*weekly-hours.

- **Dummies:**

  a.) Using data on demographic characteristics, a dummy was created to indicate if the individual was male or female, another dummy to show if he/she was married or not, and a third dummy to show if he/she was head of household or not.

  b.) Using data on education, the following dummies were defined: 1.) a dummy to indicate if the individual was literate or not, 2.) a dummy to show if the individual had an incomplete schooling (the omitted category) or not, and four indicators to show if the individual had completed levels of education (primary school, junior high, high school, and university).

  c.) A dummy was constructed in order to control for whether the individual lived in Mexico City or not.

d.) Nine dummies were included in order to distinguish between occupation categories: 1.) the "professional/technical" category stands for individuals with a profession or a technical education (the omitted category); 2.) the "management" category, for managers; 3.) the "industry supervisors" category, for supervisors in different industries; 4.) the "industry workers" category, for blue-collar industry workers; 5.) the "industry auxiliary" category, for individuals who help blue-collar industry workers; 6.) the "conductor machinery" category, for individuals working with machinery and equipment; 7.) the "personnel" category, for individuals doing administrative tasks; 8.) the "sales" category, for those in the sales department, and 9.) the "servant" category, for those cooking, cleaning, opening doors, etc.

e.) Some dummies were generated to indicate if an individual is: 1.) the owner of a business (*patron* is the omitted category); 2.) self-employed; 3.) an employee who receives a commission per task done, or an employee who receives a percentage of the gains in the business where he/she works (employee with commission); 4.) an employee with a fixed wage per month (fixed wage employee), or 5.) an individual who works for a cooperative (cooperative employee).

f.) This analysis also control for whether an individual works for the government, the private sector, belongs to a union or works in any other establishment with a certain name and is registered. The omitted category is the individual that owns or works for an establishment that has no name and/or is not registered.

g.) Finally, the analysis includes a dummy for informality and four indicators to show whether an individual works in an establishment with one person (the omitted category), with 2 to 5 people, with 6 to 10 people or with 11 or more people. In particular, the dummy for informality indicates whether an individual works in a permanent establishment\building, as opposed to outdoors, kiosk, home, etc. Both, the indicator for informality and the three included dummies on the number of people that work in an establishment, control for differences in the quality of the workplace across industries. Working in a permanent establishment or in a large firm is positively related with job training, satisfaction in the workplace, positive employee relations, etc.

Appendix 2

Table 1. Summary Statistics, National Survey of Urban Employment: 1995

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other		
	% of total no. of observations						Average	
							Years	Pesos
A	29.3	70.7	54.8	45.3	50.1	49.9	32.5	1,290.1
B	43.9	56.1	46.8	53.2	52.7	47.3	31.8	1,072.2
C	6.0	94.0	54.6	45.4	48.4	51.7	32.6	1,241.4
D	22.8	77.2	54.1	46.0	52.4	47.6	32.1	1,704.0
E	19.3	80.7	60.1	39.9	57.4	42.6	35.6	2,254.3
F	23.1	76.9	66.1	33.9	62.4	37.6	33.9	2,378.5
G	29.8	70.2	49.1	50.9	49.7	50.4	30.1	1,471.6
H	19.4	80.7	56.7	43.3	50.0	50.0	31.3	1,914.1
I	11.4	88.6	67.0	33.0	64.6	35.4	34.3	2,944.4
J	6.4	93.6	63.9	36.1	51.5	48.5	32.9	1,616.5
K	38.4	61.7	45.6	54.4	47.7	52.3	28.7	1,667.1
L	59.4	40.6	36.6	63.4	51.0	49.1	27.0	1,402.2
M	29.2	70.8	48.2	51.8	52.8	47.2	28.1	1,603.9
N	7.5	92.5	75.5	24.5	56.3	43.7	36.6	2,893.0

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 2. Summary Statistics, National Survey of Urban Employment: 1996

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other		
	% of total no. of observations						Average	
							Years	Pesos
A	30.4	69.6	54.4	45.7	48.9	51.1	32.5	1,509.0
B	44.4	55.6	47.0	53.1	51.1	48.9	31.5	1,292.4
C	6.9	93.1	52.7	47.3	46.9	53.1	32.2	1,445.0
D	24.7	75.4	51.6	48.4	52.2	47.9	32.0	1,806.0
E	13.7	86.3	64.5	35.5	57.2	42.8	36.3	2,873.2
F	22.1	77.9	65.3	34.7	56.1	43.9	33.5	2,508.7
G	29.4	70.7	51.1	49.0	55.9	44.1	30.5	1,731.3
H	17.0	83.0	58.7	41.3	48.5	51.6	31.1	2,185.0
I	8.6	91.4	72.2	27.8	65.7	34.3	34.2	3,811.0
J	6.7	93.3	62.6	37.4	52.2	47.8	33.0	2,001.7
K	37.2	62.8	45.2	54.8	49.9	50.1	28.4	1,948.8
L	58.2	41.8	36.7	63.3	51.1	48.9	27.0	1,770.6
M	29.0	71.0	49.2	50.8	49.6	50.4	28.3	1,940.9
N	9.1	90.7	65.8	34.2	59.3	40.7	35.6	2,528.7

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 3. Summary Statistics, National Survey of Urban Employment: 1998

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other		
	% of total no. of observations						Average	
							Years	Pesos
A	31.6	68.4	53.5	46.5	46.9	53.1	32.1	2,075.1
B	47.4	52.6	44.8	55.2	48.8	51.2	30.8	1,742.9
C	8.1	91.9	52.7	47.3	45.9	54.2	32.2	1,972.2
D	26.7	73.3	51.1	48.9	50.6	49.4	31.8	2,555.9
E	16.8	83.3	67.0	33.0	54.2	45.8	38.1	4,745.2
F	22.8	77.2	60.6	39.4	55.4	44.6	32.6	3,475.8
G	25.3	74.7	49.0	51.0	49.9	50.1	29.6	2,516.1
H	22.9	77.1	53.8	46.3	42.9	57.1	30.3	2,573.4
I	10.8	89.2	66.4	33.6	64.0	36.0	33.7	4,609.8
J	8.1	91.9	57.6	42.4	48.1	51.9	32.7	2,480.1
K	34.3	65.7	47.0	53.0	47.5	52.5	28.3	2,508.1
L	53.9	46.2	36.4	63.6	49.0	51.0	27.2	2,700.1
M	24.8	75.2	51.4	48.6	49.7	50.3	29.1	2,843.6
N	9.4	90.6	65.5	34.5	55.3	44.7	36.8	3,277.2

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 4. Summary Statistics, National Survey of Urban Employment: 1999

Industry Group	Gender: Women	Gender: Men	Civil Status: Married	Civil Status: Other	Education: Person with technical career, university or postgraduate studies	Education: Other	Age	Monthly Net Income
	% of total no. of observations						Average: Years	Average: Pesos
A	32.1	68.0	53.3	46.7	46.6	53.4	32.4	2,521.4
B	48.7	51.3	44.2	55.8	48.1	51.9	30.7	2,133.0
C	8.2	91.8	52.1	47.9	44.3	55.7	32.6	2,338.7
D	27.3	72.7	50.9	49.1	51.3	48.7	32.1	2,953.8
E	18.1	82.0	72.0	28.0	54.2	45.9	38.3	5,812.9
F	22.1	77.9	60.3	39.7	55.8	44.2	33.1	4,123.4
G	28.0	72.0	49.96	50.04	46.3	53.7	29.8	2,681.7
H	18.7	81.1	54.7	45.3	46.6	53.4	31.0	3,440.0
I	9.3	90.7	68.9	31.1	57.8	42.2	33.8	4,743.8
J	7.8	92.2	58.1	41.9	46.4	53.6	32.9	2,959.4
K	33.7	66.3	45.8	54.2	44.3	55.7	29.3	3,043.0
L	51.7	38.3	36.3	63.7	45.8	54.2	27.7	3,068.0
M	24.9	75.1	53.0	47.0	47.2	52.8	29.4	3,385.7
N	8.8	91.3	67.8	32.2	54.2	45.8	36.5	3,580.3

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 5. Summary Statistics, National Survey of Urban Employment: 2001

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other		
	% of total no. of observations						Average Years	Average Pesos
A	34.7	65.3	52.2	47.9	44.7	55.3	32.8	3,258.2
B	54.4	45.6	44.2	55.9	45.4	54.6	31.4	2,560.0
C	10.7	89.3	53.4	46.6	42.7	57.3	34.1	3,127.4
D	28.0	72.0	50.8	49.2	47.6	52.4	32.5	3,971.0
E	16.6	83.4	69.3	30.7	51.2	48.8	38.2	7,765.2
F	25.8	74.2	60.6	39.4	53.2	46.8	33.5	5,555.9
G	26.9	73.1	53.5	46.7	44.4	55.6	31.2	3,956.6
H	16.6	83.4	54.8	45.2	48.8	51.2	31.9	4,327.4
I	7.2	92.8	66.1	33.9	54.3	45.7	34.7	5,418.8
J	8.4	91.6	57.5	42.5	44.8	55.2	33.1	4,022.4
K	35.2	64.8	47.6	52.5	45.8	54.2	29.3	4,242.2
L	50.9	49.1	39.0	61.0	44.9	55.2	28.6	4,147.6
M	30.1	69.9	51.6	48.4	45.3	54.7	29.5	4,308.6
N	7.4	92.6	62.1	37.9	46.7	53.3	36.5	4,029.1

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 6. Summary Statistics, National Survey of Urban Employment: 2003

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other		
	% of total no. of observations						Average	
							Years	Pesos
A	36.8	63.2	52.1	47.9	43.1	56.9	33.6	3,543.2
B	53.2	46.8	45.8	54.2	44.4	55.6	32.6	2,923.0
C	9.0	91.0	55.4	44.7	39.3	60.7	34.4	3,490.7
D	28.5	71.5	50.5	49.5	46.4	53.6	33.5	4,375.4
E	18.6	81.4	69.6	30.4	52.8	47.2	38.6	9,421.0
F	25.5	74.5	61.3	38.7	53.0	47.0	34.9	6,365.2
G	30.2	69.8	52.2	47.9	46.4	53.6	31.2	4,105.2
H	18.4	81.6	53.7	46.3	44.3	55.7	32.0	4,534.2
I	9.2	90.8	65.6	34.5	51.3	48.7	35.3	6,854.8
J	7.9	92.1	58.9	41.1	43.9	56.1	34.5	4,355.7
K	36.0	64.0	49.6	50.4	41.7	58.3	30.9	4,382.6
L	47.6	52.4	39.5	60.6	42.5	57.5	29.8	4,564.7
M	30.7	69.3	51.6	48.4	42.3	57.7	30.3	4,603.0
N	5.4	94.6	67.3	32.7	46.8	53.2	38.4	4,462.0

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 7. Summary Statistics, National Survey of Urban Employment: 2004

Industry Group	Gender		Civil Status		Education		Age	Monthly Net Income
	Women	Men	Married	Other	Person with technical career, university or postgraduate studies	Other	Average	
	% of total no. of observations						Years	Pesos
A	38.1	61.9	50.9	49.1	40.5	59.5	33.6	3,596.4
B	52.9	47.1	45.3	54.7	42.8	57.2	32.6	2,940.7
C	10.0	90.0	54.6	45.4	39.6	60.4	34.4	3,772.7
D	28.1	71.9	50.0	50.0	45.8	54.2	33.4	4,419.9
E	16.6	83.4	63.4	36.6	50.7	49.3	38.5	9,124.3
F	26.5	73.5	57.7	42.3	47.7	52.3	34.1	5,642.1
G	26.6	73.5	52.0	48.0	40.2	59.8	30.9	4,612.7
H	20.8	79.2	56.1	43.9	43.9	56.1	33.3	4,756.2
I	9.8	90.2	61.7	38.4	53.0	47.0	36.4	8,027.2
J	7.8	92.2	58.2	41.8	40.4	59.6	34.7	4,589.5
K	34.2	65.8	52.0	48.0	37.2	62.8	31.3	4,648.4
L	49.8	50.2	37.4	62.7	37.9	62.1	29.5	4,544.4
M	33.5	66.5	50.6	49.4	40.8	59.2	30.6	4,959.6
N	3.0	97.0	66.9	33.1	45.4	54.6	37.5	4,172.7

Source: Own construction with data from the National Survey of Urban Employment.

Note: Industry Group A stands for the following sectors: meat, fruit and vegetables, wheat milling, maize flour, coffee, sugar, fat and oil, animal food, miscellaneous food products, drinks and tobacco processing. Industry Group B stands for knitting of soft fibers, knitting of hard fibers; other textile industries, men and women serial apparel and shoes. Industry Group C stands for veneer and wooden articles. Industry Group D stands for: paper, cardboard, printing and publishing. Industry Group E stands for petrol. Industry Group F stands for: basic chemicals, synthetic resins and artificial fibers, pharmaceutical articles and medicines and other chemical products. Industry Group G stands for rubber and plastic Industry Group H stands for glass. Industry Group I stands for cement. Industry Group J stands for: steel and iron, non-ferrous metals, metallic furniture and accessories, metallic structures, other metallic products except machinery. Industry Group K stands for electric machinery and appliances and household electric appliances. Industry Group L stands for: electronic equipment and appliances. Industry Group M stands for automobiles. Industry Group N stands for: coal, non-ferrous metallic minerals, clay and other non-metal minerals.

Table 8. Tariff Phase Out Schedule Under NAFTA in the Mexican Industry (except Textiles)

Mexican Base Rate	20%			15%			10%			5%		
	C	B	A	C	B	A	C	B	A	C	B	A
1994	18.0%	16.0%	Free	13.5%	12.0%	Free	9.0%	8.0%	Free	4.5%	4.0%	Free
1995	16.0%	12.0%		12.0%	9.0%		8.0%	6.0%		4.0%	3.0%	
1996	14.0%	8.0%		10.5%	6.0%		7.0%	4.0%		3.5%	2.0%	
1997	12.0%	4.0%		9.0%	3.0%		6.0%	2.0%		3.0%	1.0%	
1998	10.0%	Free		7.5%	Free		5.0%	Free		2.5%	Free	
1999	8.0%			6.0%			4.0%			2.0%		
2000	6.0%			4.5%			3.0%			1.5%		
2001	4.0%			3.0%			2.0%			1.0%		
2002	2.0%			1.5%			1.0%			0.5%		
2003	Free			Free			Free			Free		

Source: NAFTA document, found in the Mexican Ministry of Economics.

Note: Products classified as A experienced an immediate tariff elimination once NAFTA was implemented; products classified as B were assigned a tariff phase out schedule of five years (the tariffs were reduced in equal portions across the subsequent five years after the NAFTA implementation); while products classified as C, were assigned a tariff phase out schedule of 10 years (the tariffs were reduced in equal portions across the subsequent 10 years). Textiles are classified as A, B6 or C. A and C remain as before, while goods classified as B6 were assinged a tariff phase out schedule of 6 years.

Table 9. Tariff Phase Out Schedule for Textile Goods Classified as B6

Mexican Base Rate	20%	15%	10%	5%
1994	16.0%	12.75%	9.00%	4.75%
1995	12.8%	10.20%	7.20%	3.80%
1996	9.6%	7.65%	5.40%	2.85%
1997	6.4%	5.10%	3.60%	1.90%
1998	3.2%	2.55%	1.80%	0.95%
1999	Free	Free	Free	Free

Source: NAFTA document found in the Mexican Ministry of Economics.

Note: In the first year, the tariff experienced a reduction equal, in percentage terms, to its base rate (if the tariff base rate is 20%, the tariff elimination in the first year is 20%); in the following 5 years, the tariff was reduced in equal portions across the remaining period, with the textile becoming duty free in 1999.

Table 10. Tariff Phase Out Schedule of Manufacturing Industries in Mexico

Industry	Tariff Phase Out Schedule
Coal	A
Non-Ferrous Metallic Minerals	A
Clay	C
Other Non-Metal Minerals	B
Meat	C
Fruit and Vegetables	A
Wheat Milling	C
Maize Flour	C
Coffee	C
Sugar	C
Fat and Oil	C
Animal Food	C
Miscellaneous Food Products	C
Drinks	C
Tobacco Processing	C
Knitting of Soft Fibers	B6
Knitting of Hard Fibers	A
Other Textile Industries	B6
Men and Women Serial Apparel	B6
Shoes	A
Veneer	C
Wooden Articles	B
Paper and Cardboard	B
Printing and Publishing	A
Petrol	A
Basic Chemicals	A
Synthetic Resins and Artifical Fibers	B6
Pharmaceutical Articles and Medicines	C
Other Chemical Products	C
Rubber Articles	C
Plastic Articles	C
Glass	C
Cement	B
Steel and Iron	C
Non-Ferrous Metals	C
Metallic Furniture and Accessories	A
Metallic Structures	C
Other Metallic Products except Machinery	C
Electric Machinery and Appliances	C
Household Electric Appliances	B
Electronic Equipment and Appliances	A
Automobiles	C

Source: Own construction with data from the NAFTA document, Mexican Ministry of Economics.

Table 11. FDI Flows into Mexico (million dollars)

	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
TOTAL	**10,646.9**	**8,374.6**	**7,847.9**	**12,145.6**	**8,373.5**	**13,879.5**	**18,110.0**	**29,858.6**	**23,913.0**	**16,246.2**	**24,818.0**	**24,280.4**	**19,951.0**	**30,069.7**	**26,948.0**	**15,575.2**	**19,626.5**
Agriculture and Fishing	**10.3**	**10.0**	**31.7**	**9.5**	**27.6**	**88.5**	**97.5**	**95.2**	**98.7**	**15.0**	**33.0**	**15.7**	**21.2**	**143.5**	**40.8**	**24.1**	**62.1**
Industry	**6,236.3**	**4,493.3**	**4,442.5**	**6,831.7**	**4,959.9**	**9,778.4**	**10,510.1**	**6,620.6**	**9,921.1**	**7,963.9**	**14,894.4**	**11,697.5**	**10,761.9**	**17,393.6**	**14,444.2**	**7,008.1**	**12,377.6**
Mining	92.9	71.2	79.9	124.1	46.9	246.1	166.2	12.4	265.1	139.0	302.6	212.0	432.8	1,682.8	4,734.1	725.6	933.2
Electricity and Water	14.4	1.9	1.0	4.9	23.8	150.3	134.0	333.4	446.7	339.6	261.6	195.0	-85.3	179.6	460.8	60.6	4.2
Construction	246.6	44.3	24.2	104.9	129.5	206.0	217.1	337.4	513.1	141.4	457.8	294.1	427.5	1,976.1	1,350.7	702.8	122.0
Manufactures	5,882.3	4,375.9	4,337.4	6,597.8	4,759.6	9,175.9	9,992.8	5,937.3	8,696.2	7,343.8	13,872.4	10,996.5	9,986.9	13,555.0	7,898.6	5,519.2	11,318.2
Services	**4,400.4**	**3,871.4**	**3,373.6**	**5,304.4**	**3,386.0**	**4,012.7**	**7,502.4**	**23,142.8**	**13,893.3**	**8,267.3**	**9,890.6**	**12,567.2**	**9,168.0**	**12,532.6**	**12,463.1**	**8,543.0**	**7,186.8**
Trade	1,189.0	911.3	677.0	1,768.2	986.6	1,457.7	2,477.4	2,348.5	1,821.8	1,523.7	1,347.9	2,885.9	682.2	1,542.0	1,867.9	1,520.8	2,695.3
Transports	683.3	788.7	385.2	652.0	417.3	344.1	82.2	149.8	635.5	366.9	99.7	1,654.1	-180.0	296.4	381.3	101.1	159.0
Info. in Massive Media	561.5	430.0	402.9	623.6	451.4	328.9	-1,702.8	3,011.7	3,447.7	2,298.0	1,716.7	1,603.5	676.6	300.5	1,486.8	161.4	187.6
Financial Services	855.0	841.8	1,029.7	1,013.5	665.0	413.4	4,467.2	16,040.4	6,593.0	2,723.4	5,563.0	2,254.7	3,910.4	6,338.9	4,154.8	2,445.7	1,796.3
Letting and State Agent Services	134.1	145.0	164.7	151.3	99.3	293.4	425.7	212.0	409.0	179.6	284.3	1,174.6	1,132.3	1,189.1	1,510.2	901.9	1,178.2
Professional Services	221.1	173.9	163.0	252.2	173.9	62.8	110.3	368.5	184.1	342.5	73.0	127.4	701.3	348.9	2,545.1	374.7	228.6
Services to support businesses	464.0	365.0	342.0	529.3	372.2	683.0	1,109.3	613.8	344.3	222.4	107.1	2,015.7	1,427.2	914.8	521.1	2,873.9	641.5
Education	8.3	6.5	6.1	9.5	6.5	2.7	38.5	5.1	-21.2	1.6	3.6	17.6	1.3	39.4	107.9	1.6	7.3
Health Services	4.7	3.7	5.2	5.4	3.7	10.2	1.1	-0.1	2.1	12.6	8.7	3.8	4.9	25.2	26.4	17.1	4.0
Amusement	19.2	15.1	14.2	21.9	15.1	72.9	13.2	6.6	16.2	1.8	3.2	38.1	54.6	250.5	-17.6	4.7	31.2
Accommodation	238.7	176.0	164.9	255.2	176.0	329.2	448.3	388.6	402.5	437.9	666.7	776.5	759.7	1,243.1	-166.4	67.7	179.1
Other Services	21.4	14.4	18.6	22.2	19.0	14.3	32.1	-2.2	58.2	157.0	16.6	15.2	-2.5	43.8	45.5	72.3	78.6

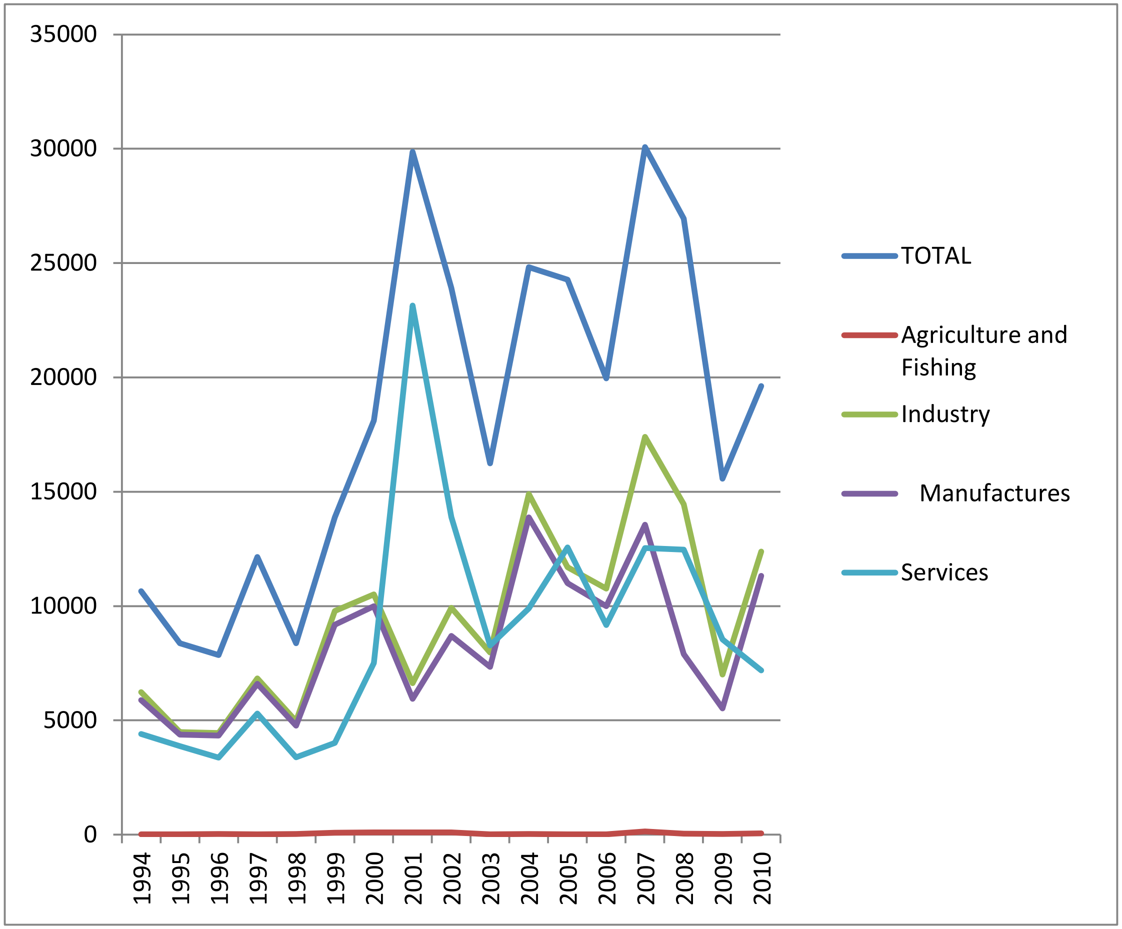
Source: Mexican Ministry of Economics. General Directorate of Foreign Investment.

Table 12. FDI Flows into Mexico per Origin Country (%)

	1994-2004	1994-2010
TOTAL	**100.00**	**100.00**
GERMANY	2.38	2.15
ARGENTINA	0.04	0.21
BAHAMAS	0.23	0.15
BELGIUM	0.37	0.44
BERMUDAS	0.16	0.28
BRAZIL	0.09	0.28
CANADA	3.15	4.13
CHILE	0.08	0.16
CHINA	0.05	0.06
DENMARK	0.69	0.51
SPAIN	13.05	12.94
UNITED STATES	58.46	52.19
FINLAND	0.25	0.22
FRANCE	-0.14	0.34
HUNGARY	0.91	0.51
IRELAND	0.06	0.16
CAIMAN ISLANDS	0.64	0.34
VIRGIN ISLANDS	0.28	1.75
ITALY	0.23	0.21
JAPAN	2.28	1.18
THE NETHERLANDS	9.01	13.30
PANAMA	0.31	0.35
PUERTO RICO	0.23	0.14
UNITED KINGDOM	3.32	3.48
KOREA	0.42	0.45
SINGAPOUR	0.35	0.37
SWEDEN	0.50	0.57
SWITZERLAND	1.39	1.50
OTHER COUNTRIES	1.23	1.63

Note: Own calculation with data from the Mexican Ministry of Economics.
General Directorate of Foreign Investment.

Figure 1. FDI Flows into Mexico per Economic Sector (million dollars), 1994-2010.



Source: Mexican Ministry of Economics. General Directorate of Foreign Investment.

Appendix 3. Empirical Results

Table 1. First Stage Regression, 1994: Ordinary Least Squares

Dependent Variable: Logarithm of Wages				
	Specification1		Specification 2	
Independent Variables:	Coefficient	Std. Error	Coefficient	Std. Error
Age	0.040***	(0.001)	0.039***	(0.001)
Age Square	-0.0005***	(0.000)	-0.0005***	(0.000)
Male	0.120***	(0.005)	0.123***	(0.005)
Married	0.080***	(0.005)	0.077***	(0.005)
Head of Household	0.065***	(0.005)	0.063***	(0.005)
Literate	0.095***	(0.024)	0.095***	(0.024)
Primary	0.162***	(0.015)	0.163***	(0.015)
Junior High	0.219***	(0.016)	0.219***	(0.016)
High School	0.254***	(0.016)	0.254***	(0.015)
University	0.363***	(0.015)	0.362***	(0.015)
Mexico City	0.012***	(0.004)	0.013***	(0.004)
Management	0.683***	(0.013)	0.680***	(0.013)
Industry supervisors	-0.037***	(0.010)	-0.039***	(0.010)
Industry w orkers	-0.381***	(0.009)	-0.377***	(0.009)
Industry auxiliary	-0.495***	(0.008)	-0.496***	(0.008)
Machinery conductor	-0.406***	(0.014)	-0.409***	(0.014)
Personnel	-0.086***	(0.010)	-0.089***	(0.010)
Sales	-0.363***	(0.011)	-0.356***	(0.011)
Servants	-0.612***	(0.015)	-0.611***	(0.015)
Self-employed	-0.127***	(0.013)	-0.131***	(0.015)
Employee w ith commission	-0.263***	(0.013)	-0.302***	(0.013)
Fixed w age employee	-0.431***	(0.011)	-0.482***	(0.012)
Cooperative employee	-0.421**	(0.169)	-0.443***	(0.169)
Government	0.216***	(0.023)	0.145***	(0.024)
Private firm	0.217***	(0.010)	0.134***	(0.012)
Union	0.086*	(0.049)	0.010	(0.049)
Any other establishment w ith name	0.052***	(0.009)	0.033***	(0.010)
Informal sector			-0.058***	(0.006)
Establishment w ith 2-5 people			0.002	(0.013)
Establishment w ith 6-10 people			0.030*	(0.015)
Establishment w ith 11 or more people			0.081***	(0.015)
Constant	-4.123***	(0.028)	-4.050***	(0.032)
Industry Indicators	Yes		Yes	
Joint significance of all the industry indicators	F-statistic= 65.01 Prob>F= 0.000		F-statistic= 62.11 Prob>F= 0.000	
Joint significance of all the variables in the specification	F-statistic= 711.23 Prob>F= 0.000		F-statistic= 676.19 Prob>F= 0.000	
R-squared	0.3752		0.3768	
No. of observations	80,590		80,590	

Note: ***p<0.01; **p<0.05; *p<0.1

Table 2. First Stage Regression, 1998: Ordinary Least Squares

Dependent Variable: Logarithm of Wages				
	Specification1		**Specification 2**	
Independent Variables:	**Coefficient**	**Std. Error**	**Coefficient**	**Std. Error**
Age	0.037***	(0.001)	0.035***	(0.001)
Age Square	-0.0005***	(0.000)	-0.0004	(0.000)
Male	0.122***	(0.005)	0.125***	(0.005)
Married	0.076***	(0.004)	0.071***	(0.004)
Head of Household	0.078***	(0.005)	0.074***	(0.005)
Literate	0.145***	(0.023)	0.138***	(0.023)
Primary	0.216***	(0.016)	0.213***	(0.016)
Junior High	0.212***	(0.015)	0.210***	(0.015)
High School	0.229***	(0.015)	0.223***	(0.015)
University	0.300***	(0.015)	0.296***	(0.015)
Mexico City	0.052***	(0.004)	0.051***	(0.004)
Management	0.632***	(0.013)	0.632***	(0.013)
Industry supervisors	-0.095***	(0.009)	-0.100***	(0.009)
Industry w orkers	-0.444***	(0.008)	-0.437***	(0.008)
Industry auxiliary	-0.535***	(0.008)	-0.537***	(0.008)
Machinery conductor	-0.508***	(0.013)	-0.511***	(0.013)
Personnel	-0.135***	(0.009)	-0.141***	(0.009)
Sales	-0.469***	(0.011)	-0.455***	(0.011)
Servants	-0.656***	(0.014)	-0.652***	(0.014)
Self-employed	-0.184***	(0.012)	-0.179***	(0.015)
Employee w ith commission	-0.333***	(0.012)	-0.386***	(0.012)
Fixed w age employee	-0.425***	(0.011)	-0.497***	(0.011)
Cooperative employee	-0.522**	(0.221)	-0.532**	(0.220)
Government	0.483***	(0.023)	0.364***	(0.024)
Private firm	0.355***	(0.009)	0.200***	(0.012)
Union	0.155**	(0.052)	0.013	(0.053)
Any other establishment w ith name	0.106***	(0.008)	0.076***	(0.008)
Informal sector			-0.120	(0.006)
Establishment w ith 2-5 people			0.0236815*	(0.013)
Establishment w ith 6-10 people			0.067***	(0.016)
Establishment w ith 11 or more people			0.131***	(0.017)
Constant	-4.44	(0.026)	-4.292***	(0.030)
Industry Indicators	Yes		Yes	
Joint significance of all the industry indicators	F-statistic= 89.60 Prob>F= 0.000		F-statistic= 87.81 Prob>F= 0.000	
Joint significance of all the variables in the specification	F-statistic= 816.72 Prob>F= 0.000		F-statistic= 784.67 Prob>F= 0.000	
R-squared	0.3724		0.3764	
No. of observations	93,661		93,661	

Note: ***p<0.01; **p<0.05; *p<0.1

Table 3. First Stage Regression, 2001: Ordinary Least Squares

Dependent Variable: Logarithm of Wages				
	Specification1		Specification 2	
Independent Variables:	Coefficient	Std. Error	Coefficient	Std. Error
Age	0.034***	(0.000)	0.033***	(0.001)
Age Square	-0.0004***	(0.000)	-0.0004***	(0.000)
Male	0.181***	(0.004)	0.181***	(0.004)
Married	0.046***	(0.003)	0.044***	(0.003)
Head of Household	0.091***	(0.004)	0.089***	(0.004)
Literate	0.285***	(0.019)	0.283***	(0.019)
Primary	0.367***	(0.012)	0.363***	(0.012)
Junior High	0.360***	(0.011)	0.357***	(0.011)
High School	0.387***	(0.010)	0.381***	(0.010)
University	0.461***	(0.010)	0.458***	(0.010)
Mexico City	0.029***	(0.003)	0.027***	(0.003)
Management	0.582***	(0.012)	0.586***	(0.012)
Industry supervisors	-0.107***	(0.008)	-0.112***	(0.008)
Industry w orkers	-0.417***	(0.007)	-0.416***	(0.007)
Industry auxiliary	-0.525***	(0.006)	-0.527***	(0.006)
Machinery conductor	-0.470***	(0.011)	-0.475***	(0.011)
Personnel	-0.150***	(0.008)	-0.154***	(0.008)
Sales	-0.467***	(0.009)	-0.458***	(0.009)
Servants	-0.630***	(0.012)	-0.629***	(0.012)
Self-employed	-0.241***	(0.010)	-0.242***	(0.013)
Employee w ith commission	-0.437***	(0.011)	-0.460***	(0.011)
Fixed w age employee	-0.418***	(0.009)	-0.471***	(0.010)
Cooperative employee	-0.698***	(0.099)	-0.713***	(0.099)
Government	0.607***	(0.019)	0.598***	(0.021)
Private firm	0.507***	(0.007)	0.464***	(0.011)
Union	0.357***	(0.046)	0.323***	(0.046)
Any other establishment w ith name	0.254***	(0.007)	0.232***	(0.007)
Informal sector			-0.127***	(0.005)
Establishment w ith 2-5 people			0.015	(0.010)
Establishment w ith 6-10 people			0.066***	(0.013)
Establishment w ith 11 or more people			-0.022	(0.014)
Constant	-4.562***	(0.021)	-4.398***	(0.024)
Industry Indicators	Yes		Yes	
Joint significance of all the industry indicators	F-statistic= 163.29 Prob>F= 0.000		F-statistic= 167.01 Prob>F= 0.000	
Joint significance of all the variables in the specification	F-statistic= 1314.97 Prob>F= 0.000		F-statistic= 1256.58 Prob>F= 0.000	
R-squared	0.3874		0.3902	
No. of observations	141,483		141,483	

Note: ***p<0.01; **p<0.05; *p<0.1

Table 4. First Stage Regression, 2004: Ordinary Least Squares

Dependent Variable: Logarithm of Wages				
	Specification1		Specification 2	
Independent Variables:	**Coefficient**	**Std. Error**	**Coefficient**	**Std. Error**
Age	0.034***	(0.001)	0.032***	(0.001)
Age Square	-0.0004***	(0.000)	-0.0004***	(0.000)
Male	0.180***	(0.006)	0.179***	(0.006)
Married	0.058***	(0.005)	0.054***	(0.005)
Head of Household	0.086***	(0.006)	0.082***	(0.006)
Literate	0.325***	(0.030)	0.325***	(0.325)
Primary	0.394***	(0.018)	0.392***	(0.018)
Junior High	0.397***	(0.017)	0.397***	(0.017)
High School	0.415***	(0.015)	0.412***	(0.015)
University	0.491***	(0.015)	0.492***	(0.015)
Mexico City	0.028***	(0.005)	0.026***	(0.005)
Management	0.493***	(0.021)	0.494***	(0.021)
Industry supervisors	-0.066***	(0.014)	-0.072***	(0.013)
Industry w orkers	-0.388***	(0.012)	-0.384***	(0.012)
Industry auxiliary	-0.473***	(0.011)	-0.473***	(0.011)
Machinery conductor	-0.382***	(0.017)	-0.385***	(0.017)
Personnel	-0.121***	(0.013)	-0.127***	(0.013)
Sales	-0.425***	(0.015)	-0.410***	(0.015)
Servants	-0.572***	(0.019)	-0.565***	(0.019)
Self-employed	-0.334***	(0.015)	-0.260***	(0.019)
Employee w ith commission	-0.407***	(0.016)	-0.444***	(0.016)
Fixed w age employee	-0.419***	(0.014)	-0.477***	(0.014)
Cooperative employee	-0.601***	(0.181)	-0.585***	(0.180)
Government	0.476***	(0.032)	0.387***	(0.034)
Private firm	0.361***	(0.011)	0.228***	(0.017)
Union	0.274***	(0.046)	0.171***	(0.048)
Any other establishment w ith name	0.167***	(0.010)	0.136***	(0.010)
Informal sector			-0.124***	(0.008)
Establishment w ith 2-5 people			0.115***	(0.0159
Establishment w ith 6-10 people			0.173***	(0.018)
Establishment w ith 11 or more people			0.178***	(0.021)
Constant	-4.511***	(0.032)	-4.436***	(0.037)
Industry Indicators	Yes		Yes	
Joint significance of all the industry indicators	F-statistic= 63.86		F-statistic= 64.79	
	Prob>F= 0.000		Prob>F= 0.000	
Joint significance of all the variables in the specification	F-statistic= 430.06		F-statistic= 414.08	
	Prob>F= 0.000		Prob>F= 0.000	
R-squared	0.3304		0.3347	
No. of observations	59,327		59,327	

Note: ***p<0.01; **p<0.05; *p<0.1

Table 5. Second Stage Regression: System GMM

Dependent Variable: Wage Differential obtained from Specification 1 (WD1)					
	Reg. 1	**Reg. 2**	**Reg. 3**	**Reg. 4**	**Reg. 5**
Independent Variables:	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**
Wage Differential $_{t-1}$	0.747***	0.679***	0.742***	0.661***	0.676***
	(0.096)	(0.107)	(0.097)	(0.121)	(0.131)
Tariff	-0.0003	-0.0001	-0.0001		
	(0.001)	(0.001)	(0.001)		
(FDI/GDP) $_{t-1}$	0.100*	0.103	0.110**	0.096*	0.151***
	(0.057)	(0.064)	(0.051)	(0.057)	(0.054)
$((FDI/GDP)^2)_{t-1}$	-0.090**	-0.089**	-0.096***	-0.085**	-0.116***
	(0.036)	(0.043)	(0.034)	(0.032)	(0.033)
Imports $_{t-1}$		-0.00000005			
		(0.000)			
Exports $_{t-1}$		0.0000			
		(0.000)			
Import Penetration $_{t-1}$			0.003		
			(0.021)		
Export Consumption $_{t-1}$			-0.0005		
			(0.004)		
(Export/GDP) $_{t-1}$				0.009**	
				(0.004)	
Trade $_{t-1}$					0.005
					(0.005)
Constant	-0.01	-0.02	-0.01	-0.015	-0.008
	(0.012)	(0.012)	(0.017)	(0.013)	(0.013)
Year Indicators	Yes	Yes	Yes	Yes	Yes
Joint significant test: F-statistic	2.46	3.28	2.90	2.760	1.600
Prob>F:	0.025	0.004	0.010	0.013	0.150
F-statistic=	21.14	20.43	37.57	99.41	28.33
Prob>F=	0.000	0.000	0.000	0.000	0.000
Arellano-Bond test for AR(1) in first differences	z=3.35 Pr>z=0.001	z=3.11 Pr>z=0.002	z= -3.32 Pr>z= 0.001	z= -3.09 Pr>z= 0.002	z= -3.09 Pr>z= 0.002
Arellano-Bond test for AR(2) in first differences	z=1.10 Pr>z=0.272	z=1.08 Pr>z=0.281	z= 1.09 Pr>z= 0.277	z= 1.07 Pr>z= 0.285	z= 0.96 Pr>z= 0.339
Hansen test of overidentifying Restrictions	chi2(4)= 3.32 Pr>chi2=0.677	chi2(6)= 4.53 Pr>chi2=0.606	chi2(6)= 3.43 Pr>chi2= 0.754	chi2(5)=2.16 Pr>chi2= 0.826	hi2(13)= 13.24 Pr>chi2= 0.42
No of groups	41	41	41	41	41
No. of observations	383	383	383	383	383

Note: Robust standard errors are presented in parenthesis.
***p<0.01; **p<0.05; *p<0.1

Table 6. Second Stage Regression: System GMM

Dependent Variable: Wage Differential obtained from Specification 2 (WD2)					
	Reg. 1	**Reg. 2**	**Reg. 3**	**Reg. 4**	**Reg. 5**
Independent Variables:	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**	**Coefficient**
Wage Differential $_{t-1}$	0.783***	0.712***	0.761***	0.671***	0.689***
	(0.076)	(0.109)	(0.071)	(0.120)	0.123
Tariff	-0.0005	-0.0011	-0.0003		
	(0.001)	(0.001)	(0.001)		
(FDI/GDP) $_{t-1}$	0.109*	0.297***	0.123**	0.117*	0.129**
	(0.056)	(0.102)	(0.053)	(0.059)	0.053
((FDI/GDP)^2) $_{t-1}$	-0.096***	-0.222***	-0.105***	-0.098***	-0.105***
	(0.035)	(0.073)	(0.034)	(0.033)	0.030
Imports $_{t-1}$		-0.0000001**			
		(0.000)			
Exports $_{t-1}$		0.0000003**			
		(0.000)			
Import Penetration $_{t-1}$			-0.004		
			(0.021)		
Export Consumption $_{t-1}$			0.0007		
			(0.004)		
(Export/GDP) $_{t-1}$				0.009	
				(0.004)	
Trade $_{t-1}$					0.006
					0.004
Constant	-0.001	-0.023	-0.004	-0.017	-0.020
	(0.012)	(0.015)	(0.017)	(0.014)	0.015
Year Indicators	Yes	Yes	Yes	Yes	Yes
Joint significant test: F-statistic	2.39	2.16	2.84	2.640	2.480
Prob>F:	0.028	0.047	0.011	0.017	0.024
F-statistic=	36.25	13.73	63.92	77.40	46.02
Prob>F=	0.000	0.000	0.000	0.000	0.000
Arellano-Bond test for AR(1) in first differences	z= -3.41 Pr>z= 0.001	z= -3.28 Pr>z= 0.001	z= -3.38 Pr>z= 0.001	z= -3.16 Pr>z= 0.002	z= -3.17 Pr>z= 0.002
Arellano-Bond test for AR(2) in first differences	z= 1.20 Pr>z= 0.230	z=1.01 Pr>z= 0.312	z= 1.20 Pr>z= 0.232	z= 1.14 Pr>z= 0.252	z= 1.14 Pr>z= 0.253
Hansen test of overidentifying Restrictions	chi2(3)= 0.61 Pr>chi2= 0.895	chi2(35)= 28.15 Pr>chi2= 0.787	chi2(5)=1.55 Pr>chi2= 0.907	chi2(4)= 1.46 Pr>chi2= 0.834	chi2(5)= 1.56 Pr>chi2= 0.906
No of groups	41	41	41	41	41
No. of observations	383	383	383	383	383

Note: Robust standard errors are presented in parenthesis.
***p<0.01; **p<0.05; *p<0.1