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Roberto Álvarez Luis Opazo

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Agustinas 1180
Teléfono: (56-2) 6702475; Fax: (56-2) 6702231

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CHINESE PENETRATION AND IMPORTER COUNTRY WAGES: MICROEVIDENCE FROM CHILE

Roberto Álvarez
Gerencia de Investigación Económica
Banco Central de Chile

Luis Opazo
Gerencia de Estabilidad Financiera
Banco Central de Chile

Resumen

La creciente importancia de China en el comercio mundial plantea importantes preguntas sobre el impacto de sus importaciones. Este artículo estudia cómo las importaciones desde China han afectado los salarios de la industria manufacturera en Chile. Empleando datos a nivel de planta para el período 1996-2005, encontramos que las crecientes importaciones de China han tendido a reducir los salarios reales en las plantas manufactureras. Este efecto negativo sobre los salarios de los trabajadores es heterogéneo. La evidencia señala que las firmas en industrias intensivas en trabajo y de menor tamaño han sido cuantitativamente más afectadas por la competencia de las importaciones chinas. Estos resultados son robustos a corrección por selección de muestra y medidas alternativas para la competencia asociada a importaciones desde otros países con bajos salarios.

Abstract

The increasing importance of China in the world trade raises important questions on its impact on importing countries. This paper studies how import competition from China has affected wages in the Chilean Manufacturing Industry. Using plant-level data for the period 1996-2005, we find that increasing imports from China have tended to depress real wages in manufacturing plants. This negative effect on manufacturing workers is heterogeneous. We find that firms in labor-intensive industries and smaller firms have been quantitatively more affected by Chinese competition. These results hold to correction for sample selection and alternative measures of import competition from low-wages countries.

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1. Introduction

For most of nations around the world China is becoming the main trading partner. In 1983 China only represented 1.2 percent of worldwide exports, but in 2006 it explained more than 8.0 percent (UNCTAD, 2007). In the U.S., imports from China were not in the top-five origins in 1983. In 1993 it had climbed to the fourth place slightly behind Mexico. By 2003 it was already the top-two source of imports, representing 12.5 percent of the U.S. imports. This increasing importance of China in the world trade has generated several questions on the effects of this phenomenon. Particularly for industrial countries, there have been significant concerns about the effects on wages and income inequality (Freeman. 1995). This is, however, not a new concern. There is an abundant previous literature analyzing the relationship between trade and wage inequality (Lawrence and Slaughter, 1993; Leamer, 1997; Haskel and Slaughter, 2003)[1].

The impact of increasing trade with China, and in general with low-income countries, is not only relevant for industrial economies but also for other developing countries facing an increasing competition with Chinese products in domestic and third markets. According to the Heckscher-Ohlin model, an important consequence of the irruption of China into the international markets is the expected reduction in wages for

[1] A recent work by the IMF looks at the impact of trade with low-wages countries on labor compensation in developed countries (WEO, 2007).

poor-skilled workers. Given its abundance of unskilled workers, the price of products using intensively this factor is lower in China than in the rest of the world. Then, the reduction in prices for labor-intensive products would have as consequence a reduction in the compensation of unskilled workers. This happens because these jobs are in direct competition with Chinese products. The negative implication for unskilled workers is the main message behind the simple two-factor and two-goods Stolper-Samuelson theorem of international trade.

It has been shown, however, that these implications are not so clear when more factors and goods are considered. Leamer (1987) shows that in a 3 factors and n goods model, for example, natural resources abundant countries should not fear to Chinese competition because they are in a different diversification cone, producing resources-intensive good and not competing directly with low-wages countries. The data, however, shows that even resources abundant countries have active presence in goods where they do not have apparent comparative advantage. For example, in apparel and textiles, a mineral abundant country like Chile concentrated 7.1 percent of manufacturing plants and 10.2 percent of the manufacturing employment[2].

The existence of production in these labor-intensive goods challenges the view that unskilled workers in resource-abundant countries could not be affected by Chinese

[2] This is the average share in the period 1996-2005. Between both years this share these sector has been decreasing from 14.3 to 6.9 percent in the case of employment, and from 8.6 to 5.7 percent in the total number of manufacturing plants.

competition. However, there are two dimensions to be considered to evaluate the wage effects of competition with low-wage countries. First, industries can differ across countries in the use of production factors. Apparel in some countries may be produced with higher intensity of human and physical capital, while in China it is produced intensively with unskilled labor (Schott, 2003). Then, active production in traditionally labor-intensive industries does not imply direct competition with Chinese products. Second, there is a lot of within-industry heterogeneity in a same country. In the apparel sector, for example, we can find firms producing goods with labor intensive technologies and firms producing highly sophisticated products. These last firms would not compete directly with Chinese products.

There are several questions that could be potentially addressed regarding the impact of Chinese competition. Some previous has investigated how domestic firms adjust to this growing competition. Bernard *et* al. (2006) analyze how import penetration from low-wage countries has affected plant closures, industry switching and employment growth in the U.S. manufacturing industry. They find that increasing imports from low-wage countries has increased the probability of death, reduced employment growth and generated a significant reallocation toward more capital intensive industries. Alvarez and Claro (2007) find similar effects for manufacturing Chilean plants.

In this paper, we try to complement previous evidence by analyzing the impact of Chinese competition on Chilean manufacturing wages. This is relevant from several perspectives. First, the Chilean economy has experienced a reduction in the unemployment rate without strong pressures on wages. It can be argued than competition form low-wage countries may depress wages in the domestic economy. Second, there is a large and disputed literature about the effects of trade liberalization on wage inequality. In this case, we show novel evidence on how wages respond to growing international competition, especially for competition from low-wage countries[3]. Finally, the evidence presented in this paper is useful to evaluate consequences of Chinese competition in resources-abundant countries.

In methodological grounds, we follow Bernard *et* al (2006) by assuming that plants produce different bundles of products. In such a case, Chinese import competition could be more intense for plants producing goods similar to those imported from China. Who are these firms and in which sectors are located is an empirical question that we address linking industry-level import penetration and real wages.

We employ plant-level information during the period 1996-2005, where imports from China have experienced a significant increase. Our results show that the greater penetration of Chinese imports has had a negative effect on real wages. We find

[3] We cannot, however, to analyze issues related to wage inequality. In our data, the distinction of workers skills is too broad to be useful. Indeed, we have estimated the effect of China imports on wages for blue-collar and white collar workers, and the results tend to be similar.

evidence that these effects have been different across industries and firms. The larger estimated impact is on smaller firms and labor-intensive industries, which are the ones that would be in more direct competition with Chinese products. The impact is also significant in economic terms. In some sectors, for example apparel, Chinese imports have generated reductions in real wages of about 14 percent between 1996 and 2005.

The remainder of the paper is structured in three sections. The following section presents some relevant stylized facts on the dynamics of import penetration across manufacturing sectors. The third section presents the data. Section four describes the econometric approach and presents the results. The final section summarizes the main conclusions.

2. Stylized Facts

The first evident fact in the Chilean economy is the strong increase in imports. As share of apparent consumption, imports have continuously grown form 35 to 65 percent between 1992 and 2007 (Figure 1). This increasing competition from imported goods could reconcile the recent reduction in unemployment rates without strong increases in labor costs that has been observed in the Chilean economy during the last few years. The idea is that wages pressures would have been limited by international competition.

For the manufacturing sector, however, import penetration has not shown a clear trend (Figure 2). In fact, the import share on consumption has fluctuated between 25 and 35 percent, although a notable increase from 25 to 37 percent between 2002 and 2005 should be noted. As it can be appreciated in Figure 3, with some minor exceptions, the evidence is similar across manufacturing sectors.

By contrast, import penetration from China in the manufacturing industry has increased steadily from 1 to 4 percent in the same period (Figure 4). This figure is not especially high, but, as expected, Chinese import penetration has been especially significant in several sectors (Figure 5). In fact, the displacement of other trading partners has allowed China to constitute the main origin in various sectors of the

manufacturing industry. For example, Figures 6 and 7 present the import penetration of China face to face the other countries for apparel and leather industries, respectively.

The coincidental inspection of the evolution of the wages suggests that the degree of import penetration of China would be able to have influenced in the wage dynamics. Figures 8 and 9 present the average wage for two industries: apparel (high penetration) and non-ferrous metal basic industries (low penetration). It can be observed a relative stagnation of wages in apparel since approximately the year 2000, while in the non-ferrous metal sector the wages grow continuously. All of this evidence suggests that import penetration form China could have generated significant effects on wages. The formal analysis of this issue is presented in the following sections.

3. Data

We use information from two sources. Plant-level data is obtained from the Annual National Industrial Survey (ENIA) carried out by the National Institute of Statistics of Chile (INE), and data on sector-level production, imports and exports are obtained from the National Account Department at the Central Bank of Chile. We use annual data for the period 1996 to 2005 which is the latest panel version available for the ENIA and we can compute a consistent measure of import penetration from different sources across industries and over time.

The ENIA is a representative survey of Chilean manufacturing plants with 10 or more workers. A plant is not necessarily a firm, however, a significant percentage of firms in the survey is actually single-plant firms. The INE updates the survey annually by incorporating plants that started operating each year and excluding those plants that stopped operating for any reason. For each plant and year, the ENIA collects data on production, value added, sales, employment and wages (production and non-production), exports, investment, depreciation, energy use, foreign licenses, and other plant characteristics. In addition, plants are classified according to the International Standard Industrial Classification (ISIC) rev 2. Using industry-level price deflators, all monetary variables were converted to constant pesos of 2005.

Import penetration is computed as the ratio of sectoral imports from China (Pen_China) and the rest of the World (Pen_Rest) to apparent sector-specific consumption in each year. Analytically:

$$Pen\_China_{jt} = \frac{M_{jt}^{Ch}}{(M_{jt} + Q_{jt} - X_{jt})} \qquad (1)$$

$$Pen\_Rest_{jt} = \frac{M_{jt} - M_{jt}^{Ch}}{(M_{jt} + Q_{jt} - X_{jt})} \qquad (2)$$

where M_{jt}^{Ch} denotes imports from China in sector j in year t, M_{jt} is the value of total imports (including China) in sector j in year t, Q_{jt} is domestic production, and X_{jt} represents Chile's exports.

4. Empirical Model

Our empirical approach is aimed to estimate the effect of Chinese import penetration on real wages. Then, we follow previous evidence and assume that average wages in a manufacturing firm depends on some firm and industry characteristics, and variable related to import penetration. Specifically, we estimate several versions of the following equation:

$$Ln(w_{ijt}) = \alpha_i + \beta_1 Pen\_China_{jt} + \delta Z_{jt} + \lambda X_{it} + \varepsilon_{it} \quad (3)$$

where $Ln(w_{ijt})$ is the average real wage in plant i in sector j during year t, $PChina_{jt}$ is import penetration from China defined above, Z_j is a vector of industry characteristics, and X_i is a vector of firm characteristics. The firm-specific effect (α_i) represent unobserved and time-invariant firm characteristics[4]. We include import penetration from the rest of the world in the vector Z to differentiate Chinese competition from the effects of overall imports penetration.

The inclusion of import penetration variables and not directly prices of imported goods, as suggested by the implications of the neoclassical trade theory, is that prices indexes for imported goods are not available. Nevertheless, as it has been argued for Bernard *et* al (2006), this quantitative measure is useful to analyze the effect

[4] In all of the specifications we include a year-specific effect capturing common temporal shocks affecting all firms.

of changes in the origin of the imports. This is a relevant variable to capture the idea that low-income countries –like China - are specialized in labor-intensive goods and low-quality (low-price) varieties of these goods in comparison to imported varieties from high-income countries (Schott, 2003). In such sense, the hypothesis is that a larger import penetration from China reduces the prices of labor-intensive goods and wages salaries concordantly.

In the vector X several plant characteristics are included to control for workers qualification and plant productivity heterogeneity. Specifically, we include the following variables. (i) size (total employment measured in logarithm) to capture the idea that larger plants pay higher wages. (ii) exporter: dummy variable for exporting plants (1 for export plants and 0 otherwise). (iii) Foreign: dummy variable for foreign owned plants (1 for foreign owned plants and 0 otherwise). These last two variables are included to control for the fact that exporters and foreign firms are found to be more capital intensive and to pay higher wages (Bernard and Jensen, 1999; and Aitken, et. al., 2006). (iv) Labor productivity (value-added per worker measured in logarithm) because there is an expected relationship between wages and workers productivity.

We also included interaction terms for Chinese import penetration and size to capture the potential heterogeneous effects of the Chinese competition. In fact, following Bernard et. al. (2006), the within-industries heterogeneity makes likely that

not all firms are in direct competition with imports from low-wages countries. Our variable size captures the type of goods produced by a firm. If larger plants do not compete directly with Chinese products, because they produce high-quality goods, then the potential negative effect on wages would tend to be smaller.

4.1 Main Results

The estimation of equation (3) is shown in Table 1. The main results are:

(i) Impact of Chinese Penetration on Wages. The evidence shows that this variable is statistically significant and affects negatively to wages. This result is robust across different specifications. The negative effect holds when plant characteristics are controlled for (column 2), and also when interaction between import penetration and size is included (columns 3 and 4)

(ii) Impact of Chinese Penetration on the Wage Elasticity. As it can be appreciated from columns (3) and (4), the interaction between penetration of China and size is positive and statistically significant. This is consistent with the hypothesis that the negative effect on wages is mostly felt by firms that compete more directly with Chinese products, and these would be the smallest plants[5].

[5] It can be argued that size could also capture access to credit of the firms. In such a case, the effect on larger firms could be lower because they may have better access to capital markets to deal with imports competition. In unreported results, but available upon request, we estimate the model including several measures of credit access and the interaction term holds its significance.

(iii) The effect of all the other variables, with the exception of size and foreign ownership, is according to the expected[6]. We find that workers in exporting and more productive firms receive higher wages.

4.2 Robustness

We have to deal with several potential econometric problems. First, there is a concern regarding endogeneity of Chinese import penetration. An industry affected by a negative productivity shock may experience jointly a reduction of wages and an increase in import penetration. Also, import penetration may be larger in labor-intensive goods where wages are lower. We have studied this potential endogeneity by using the Haussman test and industry-specific transport costs as instruments[7]. The main result is that the hypothesis of exogeneity can not be rejected. In other words, the endogeneity is not an element of first importance for our estimations[8].

Second, we face a sample selection problem due to the fact that wages are only observed for surviving firms. To deal with this problem, we use the common approach of estimating a Heckman selection model. We estimate jointly the outcome and selection equations using a maximum likelihood procedure. The selection equation

[6] Note, however, that in column (5) these signs are reverted when a correction for sample selection is made.

[7] The identifying assumption is that lower transport costs increase import penetration, and not wages directly.

[8] To confirm these results, we control for other industry-specific shocks that may by driving the relationship between wages and import penetration. We estimate the wage equation controlling also for industry average productivity, relative costs of raw materials and relative cost of energy. The results are robust to include these variables.

includes the same covariates as the wage regression. Additionally, following Griffith et. al. (2006), we add investment (as percentage of sales) to capture the idea that more capital-intensive plants face larger exit costs and hence are more likely to survive.[9] The inclusion of this variable in the selection equation is useful as an exclusion restriction; otherwise the model is identified solely on distributional assumptions or based on the model's non-linearity.

The results are shown in the fifth column of Table 1 for the wage equation and in the sixth column for the survival equation. Regarding selection, we find sensible results for the covariates. More productive and larger firms are more likely to survive. After controlling for these variables, we find that foreign ownership and exporting are not related to survival. The effect of Chinese import penetration is expected: the probability of survival is negatively correlated with greater imports from China.

Regarding the wage equation, in general, the main results are unchanged. Correcting by sample selection, we find that the magnitude of Chinese import penetration effect is lower, but its significance is not removed. Interestingly, the effect of size changes from negative to positive which is more consistent with the idea that larger plants pay higher wages.

[9] We also tried with other several other specifications – including higher order terms for investment and access to credit - for the selection equation, and the results were very similar to those presented here.

A third problems is that the effect of Chinese import competition may be different across industries. One alternative is to estimate a different parameter for each industry. However, some industries have a reduced number of plants, and we could finish with a low degree of freedom to estimate a large number of parameters. To shed light on these issues, we assume that the effect can be different depending on how far is the industry of the median manufacturing wage. To do that, we define a variable as the difference between the median wage of the entire manufacturing sector and the median wage of the industry (Diff-Industry). Following the idea that industries with higher wages may be less affected by import penetration from low-wages countries, we expect a negative parameter for this variable. The results of this estimation - shown in Table 2 – show a negative relationship, but the effect is not significant. Moreover, with the exception of foreign ownership and exporting, the sign and coefficient for the other covariates is unchanged. Then, our results that Chinese imports depress wages do not seem driven by industry-specific response to import penetration.

4.3 Extensions: Income Content of Imports

The link between Chinese imports and wages is directly related to the fact that these imports are based on low-wages. Obviously, this argument can also be extended to imports from other low-income countries. To deal with this point, an alternative is to calculate the import penetration from low-income countries. However, this approach

requires imposing an arbitrary threshold to classify a country as low-income[10]. To avoid this problem, we compute the following index for income content of imports[11]:

$$I_{jt} = \sum_{n} gdp_{nt} \cdot \frac{M_{jnt}}{M_{jt}} \qquad (4)$$

where gdp_{nt} corresponds to the per-capita *GDP* of country n=1,...N in year t, M_{jnt} are the imports of sector j from country n=1,...N in year t, M_{jt} are total imports of sector j in year t. The source for GDP is The World Bank and Central Bank of Chile for imports.

Given that this variable only captures the effects of changes in import composition, we also control for import penetration (Pen_All). To better capture the idea that import penetration would depress wages in more magnitude when it is coming mainly form low-wages countries we include and interaction terms between both variables. The results - shown in Table 3 – reveal evidence on this sense. Column (1) is consistent with the idea that a higher import penetration tends to reduce wages, but the impact is lower for industries where imports are coming from countries with higher per-capita income (lower value of our index for income content of imports). Columns (2) and (3) add an interaction terms between the index and size without and with

[10] Bernard et. al. (2006) classify a country as low-wage if its per capita GDP is less than 5 percent of U.S. per capita GDP.

[11] A similar index for the income content of export was developed by Hausmann et. al. (2006).

control by survival, respectively. If we control by survival, the interaction is positive and statistical significant, which is consistent with our previous findings.

4.4 Quantification of the Impact on Wages

Given that the magnitude of the associated effect of Chinese import penetration depends on the changes across industries and plant characteristics, we show in Table 4 a summary of the magnitude of these effects. In column 1, we show the change in import penetration between 1996 and 2005. The columns 2 through 4 show the effect on wages using the parameters estimated in the sample selection model (Column 5 in Table 1). To illustrate the differences of the impact by plant size, we present the results for the first and tenth percentile of each sector (smallest and biggest firms, respectively).

In these sectors, the increase of imports as proportion of consumption has increased from 3.1 percentage points in textiles to 23 percentage points in wearing apparel. According to our results, this has depressed real wages in about 2 and 13 percent depending on the industry. The last two columns of Table 4 show differences according to firm size. For small firms (first percentile of firms according to size), wages have decreased by 2 and 15 percent. Large firms have a lower impact, but the differences are not economically significant. In fact, the depressing effect of Chinese imports is in a similar range of 1.6 and 11.9 percent. In other words, even tough the

size is statistically significant, its implication in terms of differentiates the numerical impact of penetration on wages is not.

In some sense, the fact that the main driver of the impact on wages is a common variable across sectors (i.e., penetration) suggests the existence of a high degree of price competition in the manufacturing sector, because beyond the characteristics of each firm (size, productivity, etc.) the impact on prices – and therefore wages – is similar in each sector.

5. Conclusions

The penetration of Chinese import has increased significantly in some sectors of the Chilean manufacturing industry, a phenomenon that has been also present in developed and developing countries. In this paper, we evaluate empirically how this import penetration has impacted wages in manufacturing plants. Our results show a significant reduction of real wages associated to imports from China ranging between 2 and 13 percent for the average firm.

This effect, however, tend to be statistically significant but of small magnitude for firms with different size. In fact, our estimations show that the difference on the magnitude of impact controlling by size is lower than 1.0 percent between firms of different size for a selected group of sectors. In this sense, the main driver behind the negative impact on wages derived from low-income country imports is the import

penetration in each sector. Finally, we find that changes in import penetration from other sources tend not to be statistically significant for the determination of wages in manufacturing plants. In this sense, changes in import composition generate not trivial effects on firm performance and earnings of workers.

The partial equilibrium scope of our approach, however, does not allow us to have a complete picture of the total adjustment of manufacturing firms. Workers displaced for Chinese competition or experiencing wages depression may find jobs in other industries, making the adjustment process less costly. Unfortunately, with this data source is difficult to advance in answering these types of questions, but this research opens interesting questions on how developing countries are dealing with Chinese competition.

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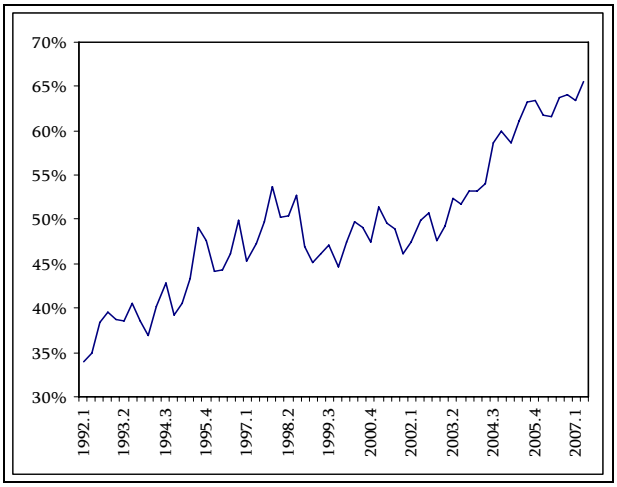
Figure 1

Imports /Consumption

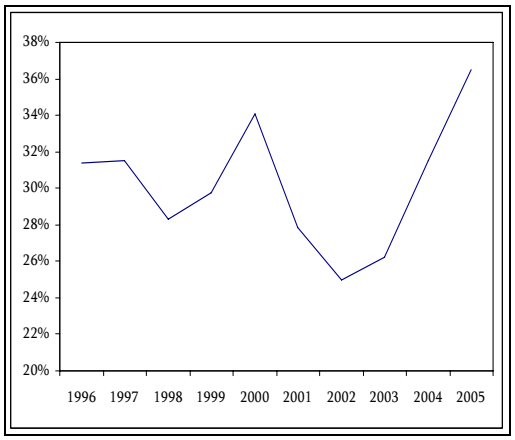


Note: Authors elaboration based on Central Bank of Chile information.

Figure 2

Import Penetration

Manufacturing Industry

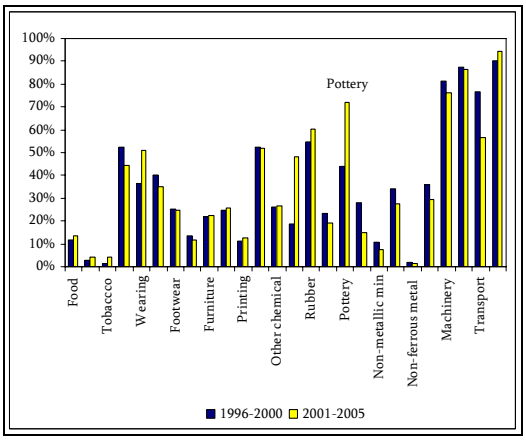


Note: Authors elaboration based on Central Bank of Chile information.

Figure 3

Change in Import Penetration

Several Industries

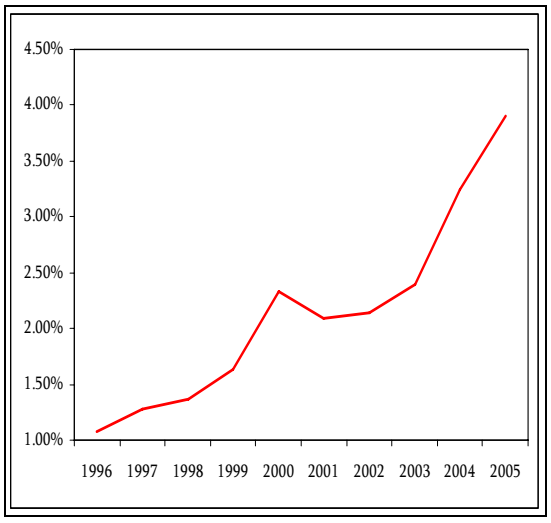


Note: Authors elaboration based on Central Bank of Chile information.

Figure 4

Chinese Import Penetration

Manufacturing Industry

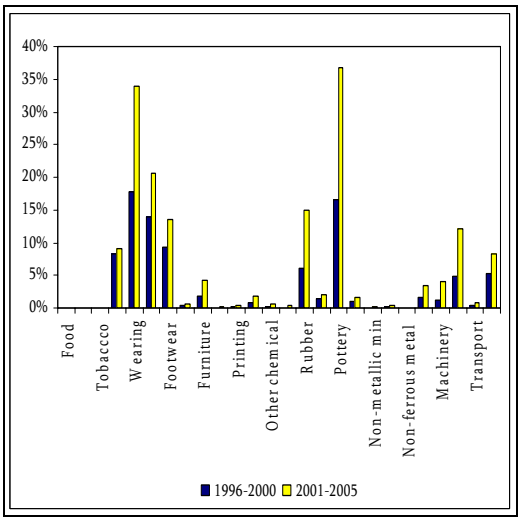


Note: Authors elaboration based on Central Bank of Chile information.

Figure 5

Change in Chinese Import Penetration

Manufacturing Industry

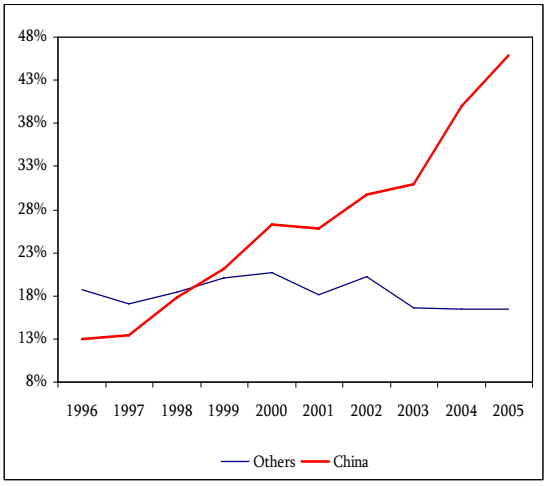


Note: Authors elaboration based on Central Bank of Chile information.

Figure 6

Apparel

Chinese and Others Penetration

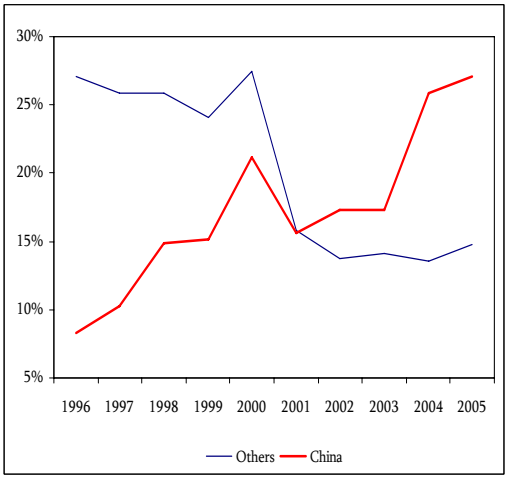


Note: Authors elaboration based on Central Bank of Chile information.

Figure 7

Leather and Products of Leather

Chinese and Others Penetration

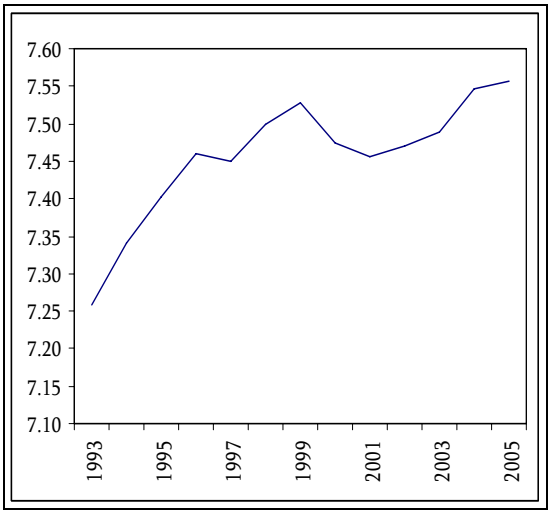


Note: Authors elaboration based on Central Bank of Chile information.

Figure 8

Apparel

Log (Wage)

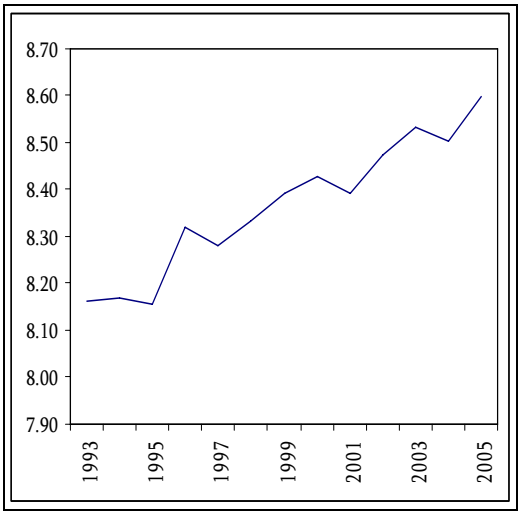


Note: Authors elaboration based on ENIA.

Figure 9

Non-Ferrous Metal Basic Industries

Log (Wage)



Note: Authors elaboration based on ENIA.

Table 1: **Effects of Chinese Import Penetration**

Dependent Variable: Ln ($Wages_{ijt}$)

Period: 1996-2005

	Wage Equation					*Survival Equation*
	(1)	(2)	(3)	(4)	(5)	(6)
Pen_China	-0.299	-0.391	-0.951	-0.958	-0.770	-0.379
	(3.54)**	(3.92)**	(4.42)**	(4.31)**	(6.19)**	(3.24)**
Pen_Resto	-0.055	-0.041	-0.042	0.096	-0.029	-0.040
	(1.08)	(0.61)	(0.62)	(0.90)	(0.52)	(0.87)
Size		-0.138	-0.145	-0.138	0.078	0.097
		(9.32)**	(9.15)**	(7.27)**	(14.78)**	(8.62)**
Exporter		0.028	0.028	0.028	0.049	-0.019
		(3.00)**	(3.04)**	(3.04)**	(7.31)**	(0.64)
Foreign		-0.008	-0.007	-0.007	0.155	-0.081
		(0.34)	(0.29)	(0.31)	(12.62)**	(1.37)
Productivity		0.105	0.105	0.105	0.302	0.179
		(18.83)**	(18.93)**	(18.75)**	(65.70)**	(13.94)**
Pen_China*Size			0.166	0.167	0.127	
			(3.14)**	(3.04)**	(4.63)**	
Pen_Resto*Size				-0.036	0.006	
				(1.54)	(0.54)	
Investment						0.160
						(3.48)**
Constant	7.666	7.266	7.290	7.264	4.644	-0.432
	(413.47)**	(141.80)**	(137.05)**	(134.89)**	(103.98)**	(4.13)**
Observations	40930	40423	40423	40423	44029	44029
R-squared	0.03	0.10	0.10	0.10	-	-

Robust t statistics in parentheses. * significant at 5%; ** significant at 1%

Table 2: **Effects of Chinese Import Penetration and Industry Wages**

Dependent Variable: Ln ($Wages_{ijt}$)

Period: 1996-2005

	Wage Equation		*Survival Equation*
	(1)	(2)	(3)
Pen_China	-0.753	-0.593	-0.380
	(2.27)*	(3.53)**	(3.24)**
Pen_Rest	0.087	-0.035	-0.040
	(0.83)	(0.62)	(0.86)
Size	-0.138	0.078	0.097
	(7.25)**	(14.75)**	(8.62)**
Exporter	0.028	0.049	-0.019
	(3.03)**	(7.30)**	(0.64)
Foreign	-0.007	0.155	-0.081
	(0.31)	(12.62)**	(1.37)
Productivity	0.105	0.302	0.179
	(18.75)**	(65.70)**	(13.94)**
Pen_China*Size	0.160	0.125	
	(2.98)**	(4.56)**	
Pen_Resto*Size	-0.035	0.007	
	(1.48)	(0.61)	
Pen_China*Diff-Industry (DW)	-0.848	-0.750	
	(1.22)	(1.69)	
Investment			0.160
			(3.48)**
Constant	7.263	4.644	-0.432
	(134.38)**	(104.01)**	(4.13)**
Observations	40423	44029	44029
R-squared	0.10	-	-

Robust t statistics in parentheses. * significant at 5%; ** significant at 1%

Table 3: Wages and Low-Wage Imports

Dependent Variable: Ln ($Wages_{ijt}$)

Period: 1996-2005

	Wage Equation			*Survival Equation*
	(1)	(2)	(3)	(4)
Index (log)	-0.014	-0.023	-0.077	
	(0.75)	(0.68)	(3.94)**	
Pen_all	-2.073	-2.073	-1.524	
	(2.90)**	(2.92)**	(3.99)**	
Pen_all*Index	0.212	0.212	0.157	
	(2.85)**	(2.86)**	(3.87)**	
Size	-0.139	-0.162	-0.086	0.097
	(9.30)**	(2.48)*	(3.39)**	(8.57)**
Exporter	0.028	0.028	0.048	-0.019
	(2.99)**	(2.96)**	(7.10)**	(0.64)
Foreign	-0.008	-0.008	0.151	-0.082
	(0.35)	(0.36)	(12.23)**	(1.38)
Productivity	0.105	0.105	0.302	0.178
	(18.55)**	(18.55)**	(66.08)**	(13.92)**
Index*Size		0.002	0.019	
		(0.33)	(6.42)**	
Pen_China				-0.356
				(3.06)**
Pen_Resto				-0.043
				(0.92)
Investment				0.160
				(3.48)**
Constant	7.405	7.495	5.370	-0.428
	(42.91)**	(24.19)**	(31.10)**	(4.11)**
Observations	40423	40423	44029	44029
R-squared	0.10	0.10	-	-

Robust t statistics in parentheses. * significant at 5%; ** significant at 1%

Table 4: Real Wages Effects in Selected Industries

Sector	*Change in Chinese Import Penetration*	*Change in Real Wages*		
		Average	Small (P10)	Large (P90)
Textiles	3.1	-1.7	-2.0	-1.5
Metallic products	3.9	-2.1	-2.5	-1.9
Professional Eq.	4.0	-2.2	-2.6	-2.0
Machinery	6.0	-3.3	-3.8	-3.1
Electric Machinery	7.8	-4.1	-4.9	-3.7
Rubber products	8.4	-4.5	-5.3	-4.2
Apparel	23.0	-12.3	-14.7	-11.7

Source: Author´s elaboration based on results in Table 1, column (5)

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