

Exchange Rates and Wages in an Integrated World

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Web Appendix

Wage data

The statistics on wages are from the ILO's Key Indicators of the Labor Market (KILM). The ILO reports average earnings per worker or, in some cases, average wage rates. Some of the series cover wage earners (i.e., manual or production workers) only, while others refer to salaried employees (i.e., non-manual workers), or all employees (i.e., wage earners and salaried employees). The series cover workers of both sexes, irrespective of age.³⁸

The concept of earnings relates to remuneration in cash and in kind paid to employees, as a rule at regular intervals, for time worked or work done together with remuneration for time not worked, such as for annual vacation, other paid leave or holidays. In general, earnings exclude employers' contributions in respect of their employees paid to social security and pension schemes and also the benefits received by employees under these schemes. However, some countries report any such payments made. Earnings also exclude severance and termination pay. Statistics on earnings relate to employees' gross remuneration, i.e., the total before any deduction is made by the employer in respect of taxes, contributions of employees to social security and pension schemes, life insurance premiums, union dues and other obligations of employees.

Specifically, earnings include: direct wages and salaries, remuneration for time not worked (excluding severance and termination pay), bonuses and gratuities and housing and family allowances paid by the employer directly to this employee. The detailed components are as follows: (a) direct wages and salaries for time worked, or work done, cover: (i) straight time pay of time-rated workers; (ii)

³⁸ See also Hassett and Mathur (2008), who provide details on the ILO wage data.

incentive pay of time-rated workers; (iii) earnings of piece workers (excluding overtime premiums); (iv) premium pay for overtime, shift, night and holiday work; (v) commissions paid to sales and other personnel. Included are premiums for seniority and special skills, geographical zone differentials, responsibility premiums, dirt, danger and discomfort allowances, payments under guaranteed wage systems, cost-of-living allowances and other regular allowances. (b) Remuneration for time not worked comprises direct payments to employees in respect of public holidays, annual vacations and other time off with pay granted by the employer. (c) Bonuses and gratuities cover seasonal and end-of-year bonuses, additional payments in respect of vacation period (supplementary to normal pay) and profit-sharing bonuses. (ii) Statistics on earnings distinguish cash earnings from payments in kind. Wage rates: These include basic wages, cost-of-living allowances and other guaranteed and regularly paid allowances, but exclude overtime payments, bonuses and gratuities, family allowances and other social security payments made by employers. Ex gratia payments in kind, supplementary to normal wage rates, are also excluded.

The coverage of the data differs for countries because of the following reasons (1) whether the reported statistic is wages or earnings; (2) whether it covers employees, wage earners or salaried employees; and (3) whether it includes social security contributions by employer. When we studied the descriptions more closely, we found that certain countries like Chile, Turkey, Colombia, Ecuador, Kenya, Kyrgyzstan, Mexico, Malaysia, Panama and Ukraine included social security contributions by employers in the earnings data. Another difference arises because the industrial classification changed during this period. Since the beginning of the 1990s, an increasing number of countries have made a switchover in their data reporting systems for industrial statistics from Revision 2 to Revision 3 of the International Standard Classification (ISIC). We include country fixed effects to allow for all these differences in coverage in the panel regression.

Data on Migration

The main sources of the OECD migration statistics are population registers, residence or work permits, censuses and surveys. However, a wide variety of other data sources (e.g., special surveys, counts at border crossings, analysis of landing cards) are also used.

In the data, the immigrant population is usually defined in one of two ways. Some countries, including European countries, Japan, and Korea, have traditionally defined immigrants as foreign *nationals* living in the country whilst others, including Australia, Canada, New Zealand and the United States, define immigrants as *foreign-born* living in the country. This difference in definition relates in part to the nature and the history of immigration systems and legislation on citizenship and naturalization.

The foreign-born population can be viewed as representing first-generation migrants, and may consist of both foreign and nationalized citizens. The size and composition of the foreign-born population is influenced by the history of migration flows and mortality amongst the foreign-born. For example, where inflows have been declining over time, the stock of the foreign-born will tend to age and represent an increasingly established community.

On the other hand, the population of foreign nationals may represent second and higher generations as well as first generations of migrants. The characteristics of the population of foreign nationals depend on a number of factors including (i) the history of migration flows, (ii) the natural increase in the foreign population, and (iii) the naturalization rate. Higher generations of immigrants arise in situations where they retain their foreign citizenship even when native-born. The nature of legislation on citizenship and the incentives foreigners have to naturalize both play a role in determining the extent to which this occurs in practice. In some countries, such as the United States, those who are native born but who are foreign nationals are a non-existent or negligible group as legislation is such that birth within the country usually entitles individuals to citizenship.

In addition to the problem of the comparability of statistics, there is the difficulty of

the partial coverage of illegal migrants. Part of this population can be counted through censuses. The number of immigrants who entered legally but then overstay after their residence permits (or visa) have expired can be calculated from permit statistics, but without it being possible to determine what the number of these immigrants that have left the country. Regularization programs, when they exist, make it possible to account for a far from negligible fraction of illegal immigrants after the fact. In terms of measurement, this makes it possible better to evaluate the volume of the foreign population at a given time, although it is not always possible to classify these immigrants by the year when they entered the country.

Derivation of labor demand

The labor demand in equation (1) can be derived from a Cobb-Douglas production function and a standard Keynesian framework. Given the production function $Y = L^\alpha K^{1-\alpha}$, the demand for labor

is $L^d = \alpha \frac{P}{w} Y$ where P is the price of output. In a very simple macro framework, aggregate demand

is $Y^d = C + G + I + NX \left(\frac{eP^*}{P} \right)$, which can re-written as $Y^d = \frac{1}{1-\beta} \left[\left(\bar{C} + G + I + NX \left(\frac{eP^*}{P} \right) \right) \right]$

where β is the marginal propensity to consume. C, G are private and government consumption respectively. I is investment demand.

Putting together aggregate demand and the production functions yields:

$L^d = \alpha \frac{P}{w} Y = \left(\frac{P}{w} \right) \frac{\alpha}{1-\beta} \left[\bar{C} + G + I + NX \left(\frac{eP^*}{P} \right) \right]$ or $L^d = \left(\frac{P}{w} \right) \alpha \left[\bar{D} + NX \left(\frac{eP^*}{P} \right) \right]$ which forms

the basis for the labor demand presented in the text in Equation (1): $L^d = \left(\frac{w}{P} \right)^{-\alpha} \left[NX \left(\frac{eP^*}{P} \right) \right]^\eta \bar{D}$.

Note that we allow for a richer specification than Cobb-Douglas production function, which imposes $\alpha=1$.³⁹

Derivation of labor supply

The labor supply presented in equation (2) can be derived from the following household utility

function $U = C - \frac{1}{\delta} \left(L^{s^\eta} + \sum_{i=1}^N \frac{1}{\phi_i} L_i^\eta \right)^{\frac{\delta}{\eta}}$ with $\eta < 1$, $\delta > 1$, and the constraint $L^s + \sum_{i=1}^N L_i \leq \bar{L}$ where L^s is

the domestic labor supply and L_i is the labor supply by nationals abroad in country i . This

functional form is an extension of the form $U = C - \frac{1}{\delta} L^\delta$ which is used in macro models of (labor-

closed) economies with the resulting labor supply $L^s = \left(\frac{w}{p} \right)^{\frac{1}{\delta-1}}$. The parameter $\frac{1}{\phi_i}$ measures the

disutility from working in country i . The maximization problem for the household is:

$$\max_{L^s, L^C} U \equiv C - \frac{1}{\delta} \left(L^{s^\eta} + \sum_{i=1}^N \frac{1}{\phi_i} L_i^\eta \right)^{\frac{\delta}{\eta}} \quad s.t. \quad PC = wL^s + \sum_{i=1}^N e_i w_i L_i$$

Maximizing with respect to L^s and L_i yields:⁴⁰

$$L^s = \left(\frac{w}{P} \frac{1}{\bar{P} \left(\frac{\phi_i e_i w_i}{P_i} \right)} \right)^{\frac{1}{\delta-1}} \quad \text{where } \bar{P} \left(\frac{\phi_i e_i w_i}{P_i} \right) \text{ is the standard price index in CES functions}$$

³⁹ In additional robustness checks, we include household consumption, government consumption expenditure and investment (measured by gross fixed capital formation) expenditures in all the regressions in Table 2. The results (available upon request) are qualitatively very similar to Table 2.

⁴⁰ This is an approximation under the assumption that the number of foreign countries is large.

This motivates the empirical specification used in the text.

Derivation of the relationship between wages of immigrants in the U.S. and labor market integration with the U.S.

Consider two countries, the U.S. and the origin country of immigrants (i). Assume that labor is homogenous and that the labor market in the U.S. is segmented according to the nationality of immigrants.

Labor demand for immigrants from country i in the U.S.

As discussed in the text, we assume that immigrant workers are imperfect substitutes for domestic workers. The resulting labor demand for immigrant workers from country i is:

$$L_i^{d,US} = \left(\frac{w_i^{US}}{P^{US}}\right)^{-\beta} X^{d,US} \quad (A1)$$

Where $L_i^{d,US}$ is the labor demand for immigrants from country i in the U.S., w_i^{US} is the nominal wage of immigrants from country i in the U.S., P^{US} is the price index in the U.S., $X^{d,US}$ is a composite term that captures the other factors like income in the U.S., which affect labor demand.

Labor supply of immigrants from country i in the U.S.

Labor supply of immigrants in the U.S. is specified as follows.

$$L_i^{s,US} = \left(\frac{w_i^{US}}{P_i}\right) * e_i^{\delta_{i,US}} X^{s,i} X^{s,US} \quad (A2)$$

Where $L_i^{s,US}$ is the labor supply of immigrants in the U.S. from origin country i ; P_i is the domestic price in origin country i and e_i is the nominal exchange rate in local currency units per US\$ in

origin country i .⁴¹ $X^{s,US}$ and $X^{s,i}$ are composite terms that reflect other factors respectively in the U.S. and in the origin country, affecting labor supply of immigrants in the U.S.. These capture the push and pull factors that are likely to affect labor supply of immigrants in the U.S.. The key innovation once again in the paper is to introduce $I_{i,US}$ in the labor supply equation. We assume $\delta > 0$, i.e., ceteris paribus, an increase in the real exchange rate in the origin country increases the labor supply of immigrants in the U.S. Moreover, higher is the degree of integration of the labor market with the U.S., a given increase in the real exchange rate leads to a bigger increase in labor supply. In equilibrium, assuming segmented labor markets for immigrants in the U.S.,

$$L_i^{d,US} = L_i^{s,US} \quad (\text{A3})$$

Taking logs of (A3) and simplifying:

$$\ln \frac{w_i^{US}}{P^{US}} = -f(I_{i,US}) * \ln \frac{e_i}{P_i} + x^{US} + x^i \quad (\text{A4})$$

Where $f(I_{i,US}) = \frac{\delta I_{i,US}}{\beta + \delta I_{i,US}} > 0$; $f'(I_{i,US}) > 0$; x^{US} and x^i are control variables in the U.S. and origin

country i respectively that affect real wages of migrants in the U.S.. Equation (A4) forms the basis of our empirical specification with real wages of immigrants in the U.S. as the dependent variable.

Equation (A4) implies that the higher the degree of labor market integration of an origin country with the U.S., a given change in real exchange rate leads to a larger drop in wages.

⁴¹ Note that for simplicity we are deflating wages in the U.S. by origin country price index; in other words, we assume that a migrant even if he works in the U.S. consumes his wage in the origin country. If we assume that only a share of wages earned abroad β is spent at home and the rest is spent in the U.S., the labor supply equation can be modified as

$$L_i^{s,US} = \left(\frac{w_i^{US}}{P_i^\beta (P^{US})^{1-\beta}} * e_i \right)^{\delta I_{i,US}} X^{s,i} X^{s,US} .$$

While all results go through, we prefer to keep the simple notation in Equation (A2).

Table A1. Countries in the Sample and Top Destination Countries, 1981-2005 (share of migrants in parentheses)

Origin Country	First Destination	Second Destination	Third Destination	Fourth Destination	Fifth Destination
Australia	US (46)	UK (37)	Japan (6)	Germany (4)	Ireland (2)
Austria	Germany (61)	US (22)	Switzerland (10)	Italy (3)	Netherlands (1)
Azerbaijan	Greece (84)	Poland (55)	Italy (31)		
Belgium	US (23)	Netherlands (20)	Germany (18)	Luxembourg (12)	Spain (10)
Bolivia	US (96)	Italy (3)	Sweden (2)	Netherlands (.3)	
Botswana	Netherlands (82)	Italy (18)			
Brazil	Japan (49)	US (33)	Portugal (10)	Italy (4)	Spain (2)
Bulgaria	Turkey (89)	Germany (40)	Greece (17)	Italy (12)	Czech Rep (4)
Canada	US (89)	UK (3)	Australia (3)	Germany (1)	Greece (1)
Chile	US (61)	Australia (20)	Sweden (8)	Spain (5)	Italy (2)
China	US (44)	Japan (17)	Canada (15)	Australia (7)	Korea (3)
Colombia	US (89)	Spain (8)	Italy (2)	Norway (.6)	Netherlands (.3)
Costa Rica	US (99)	Italy (.6)	Netherlands (.2)		
Croatia	Germany (55)	Australia (14)	Austria (13)	Switzerland (11)	Italy (4)
Cyprus	Australia (56)	Turkey (26)	Greece (17)	Hungary (.8)	Italy (.4)
Czech Rep	US (51)	Germany (33)	Slovak Rep (6)	Italy (5)	Netherlands (2)
Denmark	Sweden (25)	Germany (20)	US (19)	Norway (18)	Spain (6)
Dominican Rep	US (94)	Spain (4)	Italy (2)	Netherlands (.2)	Greece (.0)
Ecuador	US (79)	Spain (17)	Italy (4)	Netherlands (.1)	
El Salvador	US (99)	Mexico (.8)	Italy (.4)	Sweden (.1)	Netherlands (.0)
Estonia	Finland (84)	Sweden (12)	Italy (2)	Poland (2.)	
Finland	Sweden (61)	US (18)	Germany (10)	Norway (4)	Belgium (2)
France	US (26)	Germany (14)	Belgium (14)	UK (10)	Canada (9)
Germany	US (57)	Canada (9)	Austria (6)	Australia (6)	Switzerland (6)
Ghana	US (65)	UK (20)	Italy (13)	Netherlands (2)	Greece (.3)
Guatemala	US (99)	Mexico (3)	Italy (.1)	Netherlands (.0)	
Hungary	US (31)	Germany (21)	Canada (18)	Australia (9)	Austria (9)
Iceland	Denmark (40)	Sweden (28)	Norway (27)	Netherlands (3)	Luxembourg (2)
Israel	US (89)	Italy (3)	Netherlands (2.)	Denmark (2)	Hungary (1)
Jamaica	US (73)	Canada (20)	UK (8)	Netherlands (.0)	Italy (.0)
Japan	US (82)	Germany (6)	UK (5)	Korea (2)	New Zealand (1)
Kazakhstan	Greece (98)	Poland (41)	Italy (23)	Hungary (7)	
Kenya	US (93)	New Zealand (2)	Italy (2)	Sweden (1)	Netherlands (.8)
Korea	US (55)	Japan (39)	Australia (3)	Germany (1)	New Zealand (1)
Kyrgyz Rep	Greece (65)	Italy (26)	Hungary (9)		
Latvia	US (84)	Ireland (8)	Sweden (4)	Italy (3)	Poland (.5)
Lithuania	US (91)	Ireland (4)	Sweden (2)	Poland (2)	Italy (2)
Macedonia	Switzerland (30)	Germany (3)	Australia (25)	Italy (13)	Sweden (.9)
Malaysia	Australia (49)	US (26)	UK (15)	New Zealand (7)	Japan (5)
Mauritius	Italy (99)	Netherlands (.8)			
Mexico	US (99)	Germany (.1)	Italy (.1)	Netherlands (.0)	Sweden (.0)
Netherlands	Canada (19)	Germany (18)	Belgium (15)	Australia (15)	US (13)
New Zealand	Australia (86)	UK (9)	US (4)	Ireland (.3)	Netherlands (.2)

Nicaragua	US (99.832)	Italy (.1)	Netherlands (.0)		
Norway	Sweden (44)	US (22)	Denmark (17)	Germany (10.)	Netherlands (3)
Pakistan	US (55)	UK (20)	Germany (8)	Italy (5)	Spain (3)
Panama	US (99)	Italy (.5)	Greece (.2)	Netherlands (.0)	
Philippines	US (67)	Canada (12)	Japan (8)	Australia (6)	Italy (3)
Poland	US (36)	Germany (27)	Canada (15)	Australia (6)	Austria (4)
Portugal	France (44)	US (15)	Canada (14)	Switzerland (13)	Germany (12)
Romania	Italy (23)	Germany (21)	US (17)	Hungary (11)	Austria (9)
Russia	US (68)	Germany (19)	Finland (3)	Greece (3)	Italy (2)
Singapore	Australia (57)	US (36)	New Zealand (6)	Netherlands (1)	Italy (.2)
Slovak Rep	Czech Rep (46)	US (34)	Germany (14)	Italy (3)	Hungary (2)
Slovenia	Germany (46)	Austria (37)	Italy (9)	Switzerland (6)	Sweden (1)
South Africa	US (31)	Australia (30)	UK (23)	New Zealand (9)	Portugal (4)
Spain	Germany (27)	US (22)	Switzerland (17)	Belgium (10)	UK (9)
St Vincent Gr	Greece (92)	Netherlands (6)	Italy (1.6)		
Switzerland	Germany (31)	US (28)	Italy (13)	Portugal (11)	Spain (6)
Thailand	US (73)	Japan (15)	Sweden (3)	New Zealand (2)	Denmark (2)
Trinidad Tob	US (99)	Netherlands (.1)	Italy (.0)		
Turkey	Germany (70)	France (8)	Austria (.6)	Netherlands (4)	US (4.)
UK	Australia (37)	US (24)	Canada (20)	New Zealand (7)	Germany (4)
US	Canada (30)	UK (19)	Germany (14)	Australia (7)	Japan (6)
Ukraine	US (46)	Germany (21)	Portugal (12)	Czech Rep (11)	Italy (3)
Zimbabwe	UK (85)	New Zealand (12)	Greece (2)	Netherlands (.6)	Italy (.4)

Notes. For each country, the share of migrants corresponds to the year in the period 1981-2005 with the maximum number of destination countries. Migrants in the OECD countries are defined by nationality or country of birth.

Table A2. Emigration Rates to the OECD 1995-2005

country	Emigration rate in 2005	country	Emigration rate in 1995
Jamaica	24.88	Jamaica	27.54
El Salvador	16.64	Portugal	13.32
Trinidad Tob	13.90	El Salvador	12.65
New Zealand	12.53	New Zealand	9.59
Portugal	12.12	Trinidad Tob	8.49
Mexico	10.73	Mexico	7.64
Croatia	8.94	Dominican Rep	6.94
Dominican Rep	8.79	Nicaragua	5.50
Macedonia	8.59	UK	5.21
Ecuador	5.73	Iceland	4.85
Iceland	5.38	Turkey	4.60
Guatemala	4.56	Croatia	4.40
Cyprus	4.30	Austria	3.56
Romania	3.96	Cyprus	3.50
UK	3.86	Netherlands	3.45
Nicaragua	3.59	Canada	3.25
Turkey	3.53	Guatemala	3.21
Austria	3.43	Poland	3.16
Poland	3.30	Korea	2.86
Netherlands	3.26	Finland	2.70
Canada	3.04	Macedonia	2.49
Korea	3.00	Hungary	2.38
Panama	2.79	Germany	2.25
Finland	2.61	Philippines	2.21
Philippines	2.59	Panama	2.15
Germany	2.24	Denmark	1.86
Norway	2.23	Ecuador	1.83
Hungary	2.11	Israel	1.79
Slovenia	2.06	Spain	1.53
Slovak Rep	1.92	Switzerland	1.38
Denmark	1.85	Costa Rica	1.38
Israel	1.80	Norway	1.36
Spain	1.66	Romania	1.13
Singapore	1.56	France	1.12
Colombia	1.56	Slovenia	1.07
Switzerland	1.56	Singapore	1.07
Ukraine	1.45	Colombia	0.96
Costa Rica	1.33	Belgium	0.92
Estonia	1.32	Slovak Rep	0.81
Belgium	1.30	Latvia	0.74
Bulgaria	1.26	Estonia	0.66

France	1.15	Malaysia	0.65
Latvia	1.01	Bulgaria	0.61
Australia	0.93	Chile	0.59
Ghana	0.83	Australia	0.47
Malaysia	0.79	Mauritius	0.46
Chile	0.75	Japan	0.38
Mauritius	0.75	Bolivia	0.35
Lithuania	0.67	Russia	0.34
Bolivia	0.64	Lithuania	0.31
Russia	0.58	South Africa	0.31
South Africa	0.58	Thailand	0.31
Czech Rep	0.58	US	0.27
Zimbabwe	0.52	Ukraine	0.20
Japan	0.46	Brazil	0.19
Thailand	0.44	Czech Rep	0.16
Brazil	0.43	Pakistan	0.14
Pakistan	0.29	Ghana	0.13
China	0.19	China	0.10
US	0.19	Kenya	0.02
Kenya	0.19	St Vincent Gr	0.01
St Vincent Gr	0.00	Botswana	0.00
Botswana	0.00	Kyrgyz Rep	0.00
Kazakhstan	0.00	Kazakhstan	0.00
Kyrgyz Rep	0.00	Zimbabwe	0.00

Emigration rates are calculated by the total stock of migrants in the OECD (defined by nationality or birth) as ratio of the population in the source country.

**Table A3. Years in the Sample. 1981-
2005**

Year	Number of observations
1981	22
1982	24
1983	22
1984	22
1985	20
1986	25
1987	24
1988	24
1989	25
1990	25
1991	27
1992	29
1993	29
1994	28
1995	29
1996	38
1997	48
1998	48
1999	49
2000	50
2001	39
2002	40
2003	26
2004	22
2005	5
Total	740

Table A4. Summary Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Real wage per hour (local currency units)	378	2.62	4.89	0.01	33.79
Lag migration-weighted real exchange rate (initial sample weights)	378	-3.02	2.61	-12.30	3.41
Lag emigration rate to the OECD	378	1.24	2.14	0.00	17.55
Lag exports / GDP	378	26.16	19.80	4.75	148.25
Lag imports/GDP	378	29.74	20.47	5.24	147.33
Lag per capita real GDP growth	378	0.05	0.03	-0.10	0.16
Lag unemployment rate	378	8.36	4.62	0.90	25.20
Lag tax wedge	378	41.78	13.99	6.93	82.94
Lag FDI/GDP	378	2.87	3.25	0.00	22.43
Migration-weighted nominal wage per hour in the OECD (local currency units)	378	720	3,777	0.26	33,577
Migration-weighted CPI in the OECD	378	82.26	21.50	6.18	113.86
Lag real exchange rate (local currency units per US\$)	378	1.24	3.10	0.00	30.77
Lag real migration-weighted exchange rate (time-varying weights)	378	2.88	9.08	0.00	118.83
Lag real migration-weighted exchange rate (sample average weights)	378	0.72	2.23	0.00	28.91
Lag real migration-weighted exchange rate (1995 weights)	378	0.80	2.38	0.00	29.37
Lag real trade-weighted exchange rate	378	5.79	62.82	0.74	1,173
Lag Remittances/GDP	295	1.36	2.21	0.04	13.40
Lag stock of migrants in the OECD (in '000)	378	235.22	477.16	0.08	5,896
Share of capital-intensive exports in overall (in percent)	378	45.41	14.13	21.47	86.73
Share of capital-intensive imports in overall (in percent)	378	43.56	7.04	31.59	69.52
Real wage from IFS (index number)	208	89.70	28.75	6.45	274.46
Real wage per month; Freeman-Oostendorp (local currency units)	151	2,411	12,725	4.26	132,243
Low-skill real wage per month; Freeman-Oostendorp database (local currency units)	151	1,977	9,916	3.94	95,869
High-skill real wage per month; Freeman-Oostendorp database (local currency units)	151	3,064	17,219	4.85	189,400
Real wage per hour of immigrants in the United States	264	5.60	3.51	0.31	24.63
Lag emigration rate to the US	264	1.95	3.59	0.03	25.52

Table A5. Panel Unit Root and Cointegration Tests

	Ln (real wage)	Ln (real exchange rate)	1 % critical values	5% critical values
Unit Root Tests (Null=Unit Root, Large negative values imply rejection)				
Bootstrapped Im, Pesaran & Shin ADF statistic	-0.01	0.20	-1.28	-1.64
Bai-Ng (2004) with orthogonalized data Im, Pesaran & Shin ADF statistic	0.48	1.35	-1.28	-1.64
Pesaran (2007) cross-sectionally augmented ADF statistic	-2.34	-2.00	-5.01	-4.01
Cointegration Tests (Null=No Cointegration, Large negative values imply rejection)				
Pooled Phillips-Perron statistic		-1.63	-1.28	-1.64
Pooled ADF statistic		-3.26	-1.28	-1.64
Group mean Phillips-Perron statistic		-0.41	-1.28	-1.64
Group mean ADF statistic		-3.40	-1.28	-1.64
Number of countries	53	53		
Number of periods	25	25		

Notes. We drop countries with less than 10 years of data. The missing values for intermediate years have been interpolated to apply the unit root and cointegration tests. All reported test statistics (except for Pesaran (2007) test statistic) are distributed $N(0,1)$ under null of unit root or no cointegration. The reported values of test statistics shown in the table are calculated assuming 3 lags. The values are similar if we use 4, 5 or 6 lags.

Table A6. Effect of Exchange Rates on Wages-Interaction of Exchange Rates with Labor-DD

Dependent variable: ln(real wage)				
	[1]	[2]	[3]	[4]
Ln migration-weighted real exchange rate _{t-1}	-0.079 (0.284)	0.385 (0.365)	0.156 (0.322)	0.203 (0.307)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.044** (0.021)	0.051** (0.023)	0.053** (0.022)	0.051** (0.022)
Ln emigration rate _{t-1}	0.128*** (0.040)	0.140*** (0.044)	0.144*** (0.043)	0.131*** (0.044)
Ln (exports/GDP) _{t-1}	0.552* (0.291)	0.225 (0.278)	0.846*** (0.272)	0.864*** (0.247)
Ln (imports/GDP) _{t-1}	-0.478** (0.215)	-0.405* (0.236)	-0.922*** (0.262)	-1.055*** (0.282)
Growth in real GDP per capita _{t-1}	-0.294 (0.958)	-0.244 (0.947)	-0.5 (0.995)	-0.812 (1.230)
Ln unemployment rate _{t-1}	-0.141* (0.084)	-0.141 (0.086)	-0.143* (0.082)	-0.408*** (0.131)
Ln tax wedge _{t-1}	-0.268** (0.122)	-0.257** (0.122)	-0.251** (0.123)	0.118 (0.214)
Ln (FDI/GDP) _{t-1}	0.04 (0.028)	0.026 (0.027)	0.033 (0.028)	-0.065* (0.039)
Ln migration-weighted OECD wage _{t-1}	0.056 (0.081)	0.066 (0.082)	0.07 (0.081)	-0.042 (0.080)
Ln migration-weighted OECD price _{t-1}	-0.115 (0.073)	-0.088 (0.072)	-0.127* (0.077)	0.071 (0.074)
Ln (exports/GDP) _{t-1} *Ln migration-weighted real exchange rate _{t-1}	0.149** (0.068)		0.227*** (0.087)	0.286*** (0.073)
Ln (imports/GDP) _{t-1} *Ln migration-weighted real exchange rate _{t-1}		-0.014 (0.090)	-0.18 (0.114)	-0.239** (0.097)
Growth in real GDP per capita _{t-1} *Ln migration-weighted real exchange rate _{t-1}				-0.001 (0.236)
Ln unemployment rate _{t-1} *Ln migration-weighted real exchange rate _{t-1}				-0.106*** (0.032)
Ln tax wedge _{t-1} *Ln migration-weighted real exchange rate _{t-1}				0.136** (0.063)
Ln (FDI/GDP) _{t-1} *Ln migration-weighted real exchange rate _{t-1}				-0.033*** (0.010)
Ln migration-weighted OECD wage _{t-1} *Ln migration-weighted real exchange rate _{t-1}				-0.064** (0.030)
Ln migration-weighted OECD price _{t-1} *Ln migration-weighted real exchange rate _{t-1}				0.039* (0.020)

Country fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Observations	378	378	378	378
Number of countries	44	44	44	44

Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses.

All variables refer to the origin country of migrants except wages and prices in OECD.

Table A7. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration: Consistent Sample

	Dependent variable: ln(real wage)					
	[1]	[2]	[3]	[4]	[5]	[6]
Ln migration-weighted real exchange rate _{t-1}	0.360*	0.362*	0.346	0.346	0.349	0.35
	(0.216)	(0.217)	(0.216)	(0.216)	(0.215)	(0.215)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.046**	0.046**	0.047**	0.050**	0.050**	0.050**
	(0.020)	(0.020)	(0.021)	(0.021)	(0.020)	(0.021)
Ln emigration rate _{t-1}	0.124***	0.123***	0.126***	0.139***	0.138***	0.139***
	(0.040)	(0.040)	(0.041)	(0.040)	(0.040)	(0.041)
Ln (exports/GDP) _{t-1}	0.094	0.094	0.204	0.191	0.194	0.215
	(0.256)	(0.257)	(0.304)	(0.304)	(0.303)	(0.311)
Ln (imports/GDP) _{t-1}	-0.402*	-0.411*	-0.489*	-0.394	-0.393	-0.374
	(0.239)	(0.225)	(0.249)	(0.264)	(0.263)	(0.253)
Growth in real GDP per capita _{t-1}		0.114	-0.009	-0.143	-0.207	-0.23
		(0.891)	(0.901)	(0.913)	(0.904)	(0.938)
Ln unemployment rate _{t-1}			-0.146*	-0.134	-0.137*	-0.141
			(0.083)	(0.083)	(0.083)	(0.086)
Ln tax wedge _{t-1}				-0.268**	-0.262**	-0.259**
				(0.119)	(0.119)	(0.122)
Ln (FDI/GDP) _{t-1}					0.029	0.027
					(0.027)	(0.028)
Ln average OECD wage _{t-1}						0.065
						(0.082)
Ln average OECD price _{t-1}						-0.088
						(0.072)
Country fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
Observations	378	378	378	378	378	378
Number of countries	44	44	44	44	44	44

Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

**Table A8. Effect of Exchange Rates on Wages-Interactions-Developing Countries:
Consistent Sample**

	Dependent variable: ln(real wage)			
	[1]	[2]	[3]	[4]
Ln migration-weighted real exchange rate _{t-1}	0.186 (0.203)	0.186 (0.204)	0.179 (0.202)	0.18 (0.202)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.022** (0.010)	0.022** (0.010)	0.027*** (0.010)	0.027*** (0.010)
Ln migration-weighted real exchange rate _{t-1} * Ln emigration rate _{t-1} * developing	0.051** (0.025)	0.051** (0.025)	0.050** (0.025)	0.050** (0.025)
Ln emigration rate _{t-1}	0.131*** (0.037)	0.131*** (0.037)	0.147*** (0.038)	0.146*** (0.039)
Ln (exports/GDP) _{t-1}	0.238 (0.267)	0.237 (0.269)	0.323 (0.314)	0.339 (0.322)
Ln (imports/GDP) _{t-1}	-0.425* (0.252)	-0.427* (0.238)	-0.397 (0.273)	-0.377 (0.263)
Dummy for crisis _{t-1}		0.022 (0.887)	-0.292 (0.894)	-0.286 (0.925)
Ln unemployment rate _{t-1}			-0.123 (0.079)	-0.123 (0.082)
Ln tax wedge _{t-1}			-0.274** (0.116)	-0.269** (0.119)
Ln (FDI/GDP) _{t-1}			0.03 (0.026)	0.027 (0.027)
Ln average OECD wage _{t-1}				0.066 (0.080)
Ln average OECD price _{t-1}				-0.062 (0.069)
Country fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Observations	378	378	378	378
Number of countries	44	44	44	44

Notes. significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

**Table A9. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration:
Differential Effect Across Regions**

Dependent variable: ln(real wage)				
	Asia	Europe	America	Africa/ME
	[1]	[2]	[3]	[4]
Ln migration-weighted real exchange rate _{t-1}	0.485*** (0.102)	-0.163 (0.335)	0.72 (0.484)	2.444*** (0.624)
Ln migration-weighted real exchange rate_{t-1} * ln emigration rate_{t-1}	0.059** (0.022)	0.183* (0.099)	0.055* (0.036)	0.223*** (0.058)
Ln emigration rate _{t-1}	0.321*** (0.071)	0.037 (0.171)	0.160* (0.088)	1.089*** (0.338)
Ln (exports/GDP) _{t-1}	-0.393 (0.233)	1.889*** (0.506)	-0.940* (0.500)	-1.007** (0.356)
Ln (imports/GDP) _{t-1}	0.112 (0.228)	-1.542*** (0.477)	0.565 (0.609)	-0.520* (0.240)
Growth in real GDP per capita _{t-1}	-0.744 (0.679)	0.53 (1.503)	-1.065 (2.420)	
Ln unemployment rate _{t-1}	0.006 (0.079)	-0.377*** (0.135)	0.504 (0.331)	
Ln tax wedge _{t-1}	-0.205 (0.283)	-0.23 (0.187)	-0.003 (0.430)	
Ln (FDI/GDP) _{t-1}	0.001 (0.019)	0.018 (0.052)	0.261 (0.168)	
Ln migration-weighted OECD wage _{t-1}	0.007 (0.024)	0.146 (0.104)	-0.409** (0.197)	
Ln migration-weighted OECD price _{t-1}	-0.039 (0.063)	-0.058 (0.106)	0.1 (0.210)	
Country fixed effects	Y			
Year fixed effects	Y			
Observations	62	207	95	35
Number of countries	7	23	11	7

Notes. * significant at 15%; * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A10. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration -- Drop Outliers

Dependent variable: ln(real wage)		
	Drop Mexico and Philipines	Drop countries which send 90% of migrants to US
	[1]	[2]
Ln migration-weighted real exchange rate _{t-1}	0.314 (0.238)	0.183 (0.227)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.043** (0.020)	0.022+ (0.014)
Ln emigration rate _{t-1}	0.088* (0.050)	-0.026 (0.069)
Ln (exports/GDP) _{t-1}	0.352 (0.363)	0.553 (0.411)
Ln (imports/GDP) _{t-1}	-0.382 (0.296)	-0.301 (0.288)
Growth in real GDP per capita _{t-1}	-0.229 (0.989)	-0.252 (0.953)
Ln unemployment rate _{t-1}	-0.150* (0.090)	-0.174* (0.101)
Ln tax wedge _{t-1}	-0.360*** (0.120)	-0.282** (0.120)
Ln (FDI/GDP) _{t-1}	0.026 (0.030)	0.031 (0.029)
Ln migration-weighted OECD wage _{t-1}	0.067 (0.082)	0.079 (0.098)
Ln migration-weighted OECD price _{t-1}	-0.088 (0.074)	-0.105 (0.085)
Country fixed effects	Y	Y
Year fixed effects	Y	Y
Observations	359	345
Number of countries	42	38

Notes. + significant at 15%; * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

**Table A11. Effect of Exchange Rates on Wages-Interaction With Labor Market
Integration: Split Samples by Trend Growth**

Dependent variable: ln(real wage)				
	High growth [1]	Low growth [2]	High growth [3]	Low growth [4]
Ln migration-weighted real exchange rate _{t-1}	-1.159** (0.530)	0.318* (0.190)	0.426 (0.359)	0.338* (0.189)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	-0.157*** (0.053)	0.043* (0.022)	0.067 (0.080)	0.036* (0.020)
Ln emigration rate _{t-1}	-0.275** (0.112)	0.026 (0.104)	0.187 (0.149)	0.061 (0.123)
Ln (exports/GDP) _{t-1}	-0.093 (0.559)	0.14 (0.261)	0.373 (0.493)	0.008 (0.247)
Ln (imports/GDP) _{t-1}	1.359 (0.86)	-0.261 (0.273)	-0.494 (0.659)	-0.118 (0.235)
Growth in real GDP per capita _{t-1}	-2.236 (2.107)	0.089 (0.867)	-1.062 (1.705)	0.754 (0.590)
Ln unemployment rate _{t-1}	0.007 (0.413)	-0.108 (0.084)	-0.349 (0.217)	-0.018 (0.063)
Ln tax wedge _{t-1}	0.175 (0.456)	-0.235 (0.155)	-0.145 (0.264)	-0.399*** (0.127)
Ln (FDI/GDP) _{t-1}	-0.134 (0.14)	0.036 (0.027)	0.018 (0.086)	0.045* (0.023)
Ln migration-weighted OECD wage _{t-1}	-0.112 (0.186)	0.156* (0.085)	0.018 (0.119)	0.162*** (0.053)
Ln migration-weighted OECD price _{t-1}	-0.038 (0.143)	-0.214** (0.098)	-0.014 (0.183)	-0.126* (0.072)
Country fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Observations	90	285	183	192
Number of countries	14	29	26	17

The regression sample corresponding to Table 2, column [6] are split by trend growth. In the first two columns, they are defined by those above and below the 75th percentile; in the last two columns, countries with high and low trend growth are defined by those above and below the median. Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A12. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration - Control for Composition of Trade

Dependent variable: ln(real wage)				
	[1]	[2]	[3]	[4]
Ln migration-weighted real exchange rate _{t-1}	0.324*** (0.112)	0.338 (0.212)	0.361*** (0.122)	0.327 (0.214)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.012** (0.005)	0.046** (0.021)	0.015** (0.006)	0.048** (0.020)
Ln emigration rate _{t-1}	0.022 (0.019)	0.118** (0.049)	0.050*** (0.019)	0.124*** (0.044)
Ln (exports/GDP) _{t-1}	-1.414 (1.543)	-0.35 (3.045)	0.07 (0.132)	0.275 (0.327)
Ln (imports/GDP) _{t-1}	-5.490*** (1.617)	-3.833** (1.724)	-0.941** (0.368)	-1.359* (0.731)
Growth in real GDP per capita _{t-1}		-0.134 (0.896)		0.118 (0.818)
Ln unemployment rate _{t-1}		-0.146* (0.086)		-0.102 (0.083)
Ln tax wedge _{t-1}		-0.316*** (0.115)		-0.226* (0.127)
Ln (FDI/GDP) _{t-1}		0.033 (0.029)		0.034 (0.029)
Ln migration-weighted OECD wage _{t-1}		0.057 (0.081)		0.041 (0.084)
Ln migration-weighted OECD price _{t-1}		-0.077 (0.071)		-0.016 (0.074)
Ln (exports/GDP) _{t-1} * Share of capital-intensive exports	0.37 (0.390)	0.147 (0.789)		
Ln (imports/GDP) _{t-1} * Share of capital-intensive imports	1.335*** (0.416)	0.907** (0.453)		
Share of intermediates in overall imports			-3.871* (2.154)	-8.421 (5.720)
Ln (imports/GDP) _{t-1} * Share of intermediates in overall imports			1.072* (0.647)	2.149 (1.540)
Country fixed effects	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y
Observations	740	378	729	378
Number of countries	66	44	63	44

Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A13. Effect of Exchange Rates on Wages-Interaction of Labor-DD With Labor Market Integration

	Dependent variable: ln(real wage)					
	[1]	[2]	[3]	[4]	[5]	[6]
Ln migration-weighted real exchange rate _{t-1}	0.295*** (0.113)	0.172 (0.108)	0.14 (0.129)	0.144 (0.167)	0.134 (0.176)	0.145 (0.188)
Ln migration-weighted real exchange rate_{t-1} * ln emigration rate_{t-1}	0.012** (0.005)	0.014** (0.006)	0.014* (0.008)	0.030** (0.014)	0.033* (0.017)	0.034* (0.019)
Ln emigration rate _{t-1}	0.153 (0.095)	0.144 (0.093)	0.285** (0.130)	0.309 (0.274)	0.152 (0.329)	0.184 (0.355)
Ln (exports/GDP) _{t-1}	0.123 (0.134)	0.021 (0.106)	0.179 (0.177)	0.179 (0.244)	0.309 (0.279)	0.459 (0.307)
Ln (imports/GDP) _{t-1}	-0.490*** (0.119)	-0.370*** (0.120)	-0.499** (0.201)	-0.433* (0.225)	-0.439* (0.249)	-0.552** (0.252)
Gth in real GDP per cap. ₁		1.774 (1.188)	1.624 (1.513)	-0.332 (1.021)	-0.899 (1.132)	-1.078 (1.135)
Ln unemployment rate _{t-1}			-0.085* (0.047)	-0.065 (0.071)	-0.082 (0.078)	-0.138 (0.084)
Ln tax wedge _{t-1}				-0.312*** (0.120)	-0.323** (0.127)	-0.264** (0.122)
Ln (FDI/GDP) _{t-1}					0.014 (0.029)	-0.001 (0.031)
Ln migration-weighted OECD wage _{t-1}						0.063 (0.084)
Ln migration-weighted OECD price _{t-1}						-0.047 (0.075)
Ln (exports/GDP) _{t-1} * ln emigration rate _{t-1}	0.037 (0.029)	0.038 (0.029)	0.029 (0.035)	0.073 (0.089)	0.097 (0.086)	0.106 (0.086)
Ln (imports/GDP) _{t-1} * ln emigration rate _{t-1}	-0.068** (0.033)	-0.065* (0.034)	-0.100** (0.045)	-0.125*** (0.047)	-0.087 (0.066)	-0.104 (0.069)
Country fixed effects	Y	Y	Y	Y	Y	Y
Year fixed effects	Y	Y	Y	Y	Y	Y
Observations	740	710	574	419	393	378
Number of countries	66	66	58	47	44	44

Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A14. List of Occupations: Freeman-Oostendorp Occupational Wages Around the World Database

Occupation	Skill	Occupation	Skill	Occupation	Skill
Farm supervisor	Skilled	Mixing- and blending-machine operator	Unskilled	Bus conductor	Unskilled
Field crop farm worker	Unskilled	Labourer	Unskilled	Automobile mechanic	Unskilled
Plantation supervisor	Skilled	Mixing- and blending-machine operator	Unskilled	Motor bus driver	Unskilled
Plantation worker	Unskilled	Packer	Unskilled	Urban motor truck driver	Unskilled
Forest supervisor	Skilled	Labourer	Unskilled	Long-distance motor truck driver	Unskilled
Forestry worker	Unskilled	Controlman	Unskilled	Ship's chief engineer	Skilled
Logger	Unskilled	Occupational health nurse	Skilled	Ship's steward (passenger)	Unskilled
Tree feller and buckler	Unskilled	Blast furnaceman (ore smelting)	Unskilled	Able seaman	Unskilled
Deep-sea fisherman	Unskilled	Hot-roller (steel)	Unskilled	Dock worker	Unskilled
Inshore (coastal) maritime fisherman	Unskilled	Metal melter	Unskilled	Air transport pilot	Skilled
Coalmining engineer	Skilled	Labourer	Unskilled	Flight operations officer	Skilled
Miner	Skilled	Metalworking machine setter	Unskilled	Airline ground receptionist	Skilled
Underground helper, loader	Unskilled	Welder	Unskilled	Aircraft cabin attendant	Skilled
Petroleum and natural gas engineer	Skilled	Bench moulder (metal)	Unskilled	Aircraft engine mechanic	Unskilled
Petroleum and natural gas extraction technician	Skilled	Machinery fitter-assembler	Unskilled	Aircraft loader	Unskilled
Supervisor or general foreman	Skilled	Labourer	Unskilled	Air traffic controller	Skilled
Derrickman	Unskilled	Electronics draughtsman	Unskilled	Aircraft accident fire-fighter	Skilled
Miner	Skilled	Electronics engineering technician	Unskilled	Post office counter clerk	Skilled
Quarryman	Unskilled	Electronics fitter	Unskilled	Postman	Skilled
Butcher	Unskilled	Electronic equipment assembler	Unskilled	Telephone switchboard operator	Skilled
Packer	Unskilled	Ship plater	Unskilled	Accountant	Skilled
Dairy product processor	Unskilled	Power distribution and transmission engineer	Skilled	Stenographer-typist	Skilled
Grain miller	Unskilled	Office clerk	Skilled	Bank teller	Skilled
Baker (ovenman)	Unskilled	Electric power lineman	Unskilled	Book-keeping machine operator	Skilled
Thread and yarn spinner	Unskilled	Power-generating machinery operator	Unskilled	Computer programmer	Skilled

Loom fixer, tuner	Unskilled	Labourer	Unskilled	Stenographer-typist	Skilled
Cloth weaver (machine)	Unskilled	Building electrician	Unskilled	Card- and tape-punching- machine operator	Skilled
Labourer	Unskilled	Plumber	Unskilled	Insurance agent	Skilled
Garment cutter	Unskilled	Constructional steel erector	Unskilled	Clerk of works	Skilled
Sewing-machine operator	Unskilled	Building painter	Unskilled	Computer programmer	Skilled
Tanner	Unskilled	Bricklayer (construction)	Unskilled	Government executive official:	Skilled
Leather goods maker	Unskilled	Reinforced concreter	Unskilled	Stenographer-typist	Skilled
Clicker cutter (machine)	Unskilled	Cement finisher	Unskilled	Card- and tape-punching- machine operator	Skilled
Laster	Unskilled	Construction carpenter	Unskilled	Office clerk	Skilled
Shoe sewer (machine)	Unskilled	Plasterer	Unskilled	Fire-fighter	Skilled
Sawmill sawyer	Unskilled	Labourer	Unskilled	Refuse collector	Unskilled
Veneer cutter	Unskilled	Stenographer-typist	Skilled	Mathematics teacher (third level)	Skilled
Plywood press operator	Unskilled	Stock records clerk	Skilled	Teacher in languages and literature (third level)	Skilled
Furniture upholsterer	Unskilled	Salesperson	Skilled	Teacher in languages and literature (second level)	Skilled
Cabinetmaker	Unskilled	Book-keeper	Skilled	Mathematics teacher (second level)	Skilled
Wooden furniture finisher	Unskilled	Cash desk cashier	Skilled	Technical education teacher (second level)	Skilled
Wood grinder	Unskilled	Salesperson	Skilled	First-level education teacher	Skilled
Paper-making-machine operator (wet end)	Unskilled	Hotel receptionist	Skilled	Kindergarten teacher	Skilled
Journalist	Skilled	Cook	Unskilled	General physician	Skilled
Stenographer-typist	Skilled	Waiter	Unskilled	Dentist (general)	Skilled
Office clerk	Skilled	Room attendant or chambermaid	Unskilled	Professional nurse (general)	Skilled
Hand compositor	Skilled	Ticket seller (cash desk cashier)	Skilled	Auxiliary nurse	Skilled
Machine compositor	Skilled	Railway services supervisor	Skilled	Physiotherapist	Skilled
Printing pressman	Skilled	Railway passenger train guard	Unskilled	Medical X-ray technician	Skilled
Bookbinder (machine)	Skilled	Railway vehicle loader	Unskilled	Ambulance driver	Unskilled
Labourer	Unskilled	Railway engine-driver	Unskilled	Automobile mechanic	Unskilled
Chemical engineer	Skilled	Railway steam-engine fireman	Unskilled	Pattern makers (wood)	Unskilled

Chemistry technician	Skilled	Railway signalman	Unskilled	Permanent way labourers	Unskilled
Supervisor or general foreman	Skilled	Road transport services supervisor	Skilled	Labourers (unskilled, public parks and gardens)	Unskilled

Source: <http://www.nber.org/oww/>

Table A15. Effect of Exchange Rates on Wages-Low and High Skill Wages

	Dependent variable			
	ln(low-skill real wage)	ln(high-skill real wage)	ln(low-skill real wage)	ln(high-skill real wage)
Ln migration-weighted real exchange rate _{t-1}	3.880*** (1.099)	3.923*** (1.043)	0.182 (0.128)	-0.395 (0.405)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.579*** (0.062)	0.577*** (0.058)		
Ln migration-weighted real exchange rate_{t-1} * Ln low-skill emigration rate_{t-1}			0.237** (0.107)	
Ln migration-weighted real exchange rate_{t-1} * Ln high-skill emigration rate_{t-1}				0.362** (0.176)
Ln emigration rate _{t-1}	1.122*** (0.164)	1.107*** (0.156)		
Ln low-skill emigration rate _{t-1}			0.212 (0.243)	
Ln high-skill emigration rate _{t-1}				1.326 (0.882)
Ln (exports/GDP) _{t-1}	0.089 (0.800)	-0.054 (0.755)	1.022 (0.836)	1.018 (1.072)
Ln (imports/GDP) _{t-1}	-3.930*** (1.366)	-3.810*** (1.269)	-0.1 (0.772)	-0.957 (1.235)
Growth in real GDP per capita _{t-1}	-1.709 (3.857)	-1.631 (3.729)	-3.539 (9.543)	-1.594 (10.032)
Ln unemployment rate _{t-1}	-0.42 (0.296)	-0.464* (0.277)	-0.32 (0.380)	-0.633 (0.426)
Ln tax wedge _{t-1}	1.565 (1.279)	1.441 (1.183)	-0.085 (0.586)	-0.427 (0.563)

Ln (FDI/GDP) _{t-1}	-0.304*** (0.093)	-0.270*** (0.088)	-0.784*** (0.255)	-0.875*** (0.278)
Ln migration-weighted OECD wage _{t-1}	-0.560* (0.324)	-0.510* (0.305)	0.228*** (0.086)	0.477*** (0.098)
Ln migration-weighted OECD price _{t-1}	0.514 (1.504)	0.264 (1.384)	3.597 (2.200)	3.029 (2.088)
Country fixed effects	Y	Y	N	N
Year fixed effects	Y	Y	Y	Y
Observations	151	151	151	151
Number of countries	30	30	30	30

Notes. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A16. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration: Split Samples Pre and Post 1993

Dependent variable: ln(real wage)		
	Pre-1993	Post 1993
	[1]	[2]
Ln migration-weighted real exchange rate _{t-1}	0.136 (0.104)	0.136 (0.292)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.013* (0.008)	0.12*** (0.045)
Ln emigration rate _{t-1}	0.082** (0.075)	0.316*** (0.101)
Ln (exports/GDP) _{t-1}	-0.345** (0.147)	0.118 (0.425)
Ln (imports/GDP) _{t-1}	0.226 (0.216)	-0.002 (0.436)
Growth in real GDP per capita _{t-1}	0.163 (0.681)	0.009 (1.047)
Ln unemployment rate _{t-1}	0.102*** (0.034)	-0.159 (0.125)
Ln tax wedge _{t-1}	-0.15* (0.075)	-0.118 (0.187)
Ln (FDI/GDP) _{t-1}	-0.008 (0.023)	0.034 (0.035)
Ln migration-weighted OECD wage _{t-1}	0.137 (0.111)	0.082 (0.094)
Ln migration-weighted OECD price _{t-1}	0.065 (0.047)	-0.089 (0.107)
Country fixed effects	Y	Y
Year fixed effects	Y	Y
Observations	110	268
Number of countries	22	17

The regression sample corresponding to Table 2, column [6] are split by same period. Post-1993 includes 1993. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.

Table A17. Effect of Exchange Rates on Wages-Interaction With Labor Market Integration: Split Samples by Remittances

Dependent variable: ln(real wage)		
	High remittance [1]	Low remittance [2]
Ln migration-weighted real exchange rate _{t-1}	0.551 (0.339)	0.105 (0.248)
Ln migration-weighted real exchange rate_{t-1} * Ln emigration rate_{t-1}	0.075* (0.038)	-0.187 (0.116)
Ln emigration rate _{t-1}	0.175** (0.078)	-0.375 (0.509)
Ln (exports/GDP) _{t-1}	0.011 (0.327)	-0.34 (0.504)
Ln (imports/GDP) _{t-1}	-0.588 (0.411)	0.793 (0.484)
Growth in real GDP per capita _{t-1}	-2.279 (1.461)	0.584 (1.021)
Ln unemployment rate _{t-1}	-0.289 (0.197)	0.117 (0.108)
Ln tax wedge _{t-1}	-0.06 (0.299)	-0.118 (0.229)
Ln (FDI/GDP) _{t-1}	-0.028 (0.064)	0.012 (0.038)
Ln migration-weighted OECD wage _{t-1}	-0.013 (0.171)	-0.164* (0.091)
Ln migration-weighted OECD price _{t-1}	-0.111 (0.180)	0.247 (0.219)
Country fixed effects	Y	Y
Year fixed effects	Y	Y
Observations	157	153
Number of countries	22	17

The regression sample corresponding to Table 2, column [6] are split by remittances. Countries with high and low trend (log) remittances are defined by those above and below the median. * significant at 10%; ** significant at 5%, *** significant at 1%. Robust standard errors in parentheses. All variables refer to the origin country of migrants except wages and prices in OECD.