

# Online Appendix to the paper

## Finance and Employment

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This appendix present details on the data, descriptive statistics and additional results described in the paper Finance and Employment, (2012), *Economic Policy*, Volume 27, Issue 69, pp. 5-55.

### A1. List of countries in the UNIDO data set

Australia	Germany	Nigeria
Austria	Greece	Norway
Bangladesh	Honduras	Pakistan
Barbados	Iceland	Panama
Belgium	India	Paraguay
Bolivia	Indonesia	Philippines
Cameroon	Iran (Islamic Republic of)	Portugal
Canada	Ireland	Singapore
Chile	Israel	South Africa
Colombia	Italy	Spain
Costa Rica	Jamaica	Sri Lanka
Cote d'Ivoire	Japan	Swaziland
Cyprus	Jordan	Sweden
Denmark	Kenya	Syrian Arab Republic
Ecuador	Korea	Trinidad and Tobago
Egypt	Malaysia	Tunisia
El Salvador	Malta	Turkey
Fiji	Mauritius	United Kingdom
Finland	Mexico	Uruguay
France	Netherlands	Venezuela
Gabon	New Zealand	Zimbabwe

## A2. List of industries in the UNIDO data set

Apparel	Machinery	Printing and
Beverages	Metal products	Professional equipment
Electrical machinery	Non-ferrous metal	Refineries
Food products	Non-metal products	Rubber products
Footwear	Other chemical products	Textiles
Furniture	Other manufacturing	Tobacco
Glass and products	Paper products	Transport equipment
Industrial chemicals	Petroleum and coal	Wood products
Iron and steel	Plastic products	
Leather	Pottery	

## A3. Descriptive statistics

The data span from 1970 to 2003. Data on value added, employment and wages are obtained from the UNIDO INDSTAT3 database. The ratio of stock market capitalization to GDP (averaged over the period 1980-1995) and the ratio of claims of banks and other financial institutions to GDP (averaged over the period 1980-1995) is taken from Guiso, Jappelli, Padula and Pagano (2004). External dependence is taken from Rajan and Zingales (1998). Sectoral return indices are drawn from Datastream (details on sectors conversion is available from the authors upon request). The Employment Protection Legislation index is an un-weighted average of the scores for advance notice and severance pay from the *FRDB Database of Structural Reforms: Employment Protection Legislation*, available at [www.frd.org](http://www.frd.org).

	<i>No. of observ.</i>	<i>Mean</i>	<i>Std. Dev.</i>
<b>Sector-country level variables</b>			
Value added growth	45,929	0.0411	0.3730
Employment growth	44,069	0.0193	0.2393
Wage growth	42,890	0.0190	0.2146
Change in equity return index (continental level)	26,162	0.0998	0.2962
<b>Country level variables</b>			
Stock market capitalization (80-95) to GDP	43,218	0.2508	0.2901
Claims of banks and other financial institutions (80-95) to GDP	45,929	0.5217	0.3206
Employment Protection Legislation	8,645	2.43	1.03
Bank crisis dummy	31,458	0.0956	0.2941
Financial stress	10,052	0.0378	1.0974
<b>Sector level variables</b>			
<b>External dependence</b>	45,929	0.2401	0.3190

#### A4. Effects of financial development on output, employment and wage growth: IV regressions

<i>Dependent variable:</i>	<i>Growth of Value Added</i>		<i>Employment Growth</i>		<i>Wage Growth</i>		<i>Labor Productivity</i>	
	<b>Panel A: Full sample</b>							
	<i>First stage regression (dependent variable: External dependence × Financial Development)</i>							
English legal origin	0.291*** (0.041)	-0.007 (0.052)	0.292*** (0.042)	-0.006 (0.053)	0.327*** (0.044)	0.009 (0.053)	0.296*** (0.042)	-0.001 (0.053)
French legal origin	0.097*** (0.030)	-0.042 (0.057)	0.086*** (0.029)	-0.037 (0.058)	0.103*** (0.031)	-0.039 (0.059)	0.085*** (0.028)	-0.027 (0.058)
German legal origin	0.141** (0.059)	0.435*** (0.092)	0.141** (0.059)	0.434*** (0.092)	0.122** (0.056)	0.403*** (0.088)	0.120** (0.056)	0.406*** (0.088)
Property rights index	0.080*** (0.011)	0.134*** (0.010)	0.080*** (0.011)	0.134*** (0.010)	0.083*** (0.012)	0.131*** (0.010)	0.081*** (0.011)	0.137*** (0.010)
F-test of excluded instruments	29.48	118.50	31.46	118.49	29.68	115.53	31.27	120.78
	<i>Second stage regression</i>							
Initial conditions in 1970	-0.158*** (0.029)	-0.207*** (0.026)	-0.144*** (0.026)	-0.168*** (0.029)	-0.020*** (0.003)	-0.022*** (0.002)	-0.002*** (0.001)	-0.002*** (0.001)
External dependence × stock market capitalization (80-95)	0.046* (0.027)		0.070** (0.034)		0.000 (0.008)		0.011 (0.020)	
External dependence × claims of banks and other fin. inst. (80-95)		0.047** (0.019)		0.063*** (0.018)		0.008 (0.005)		-0.006 (0.016)
Observations	1533	1637	1447	1526	1293	1370	1428	1505
	<b>Panel B: OECD countries</b>							
	<i>First stage regression (dependent variable: External dependence × Financial Development)</i>							
English legal origin	0.254*** (0.034)	-0.009 (0.052)	0.255*** (0.034)	-0.007 (0.052)	0.255*** (0.034)	-0.006 (0.053)	0.255*** (0.035)	-0.007 (0.053)
French legal origin	-0.005 (0.040)	0.067 (0.105)	-0.001 (0.040)	0.070 (0.106)	0.004 (0.040)	0.038 (0.109)	0.008 (0.038)	0.085 (0.105)
German legal origin	0.115** (0.053)	0.448*** (0.093)	0.115** (0.054)	0.448*** (0.094)	0.102** (0.052)	0.427*** (0.089)	0.103** (0.051)	0.428*** (0.090)
Property rights index	.030 (0.027)	0.163** (0.065)	.032 (0.027)	0.168*** (0.065)	.040 (0.026)	0.175*** (0.063)	.040 (0.026)	0.180*** (0.063)
F-test of excluded instruments	24.31	16.09	24.38	16.04	25.05	25.86	24.71	17.64
	<i>Second stage regression</i>							
Initial conditions in 1970	-0.218*** (0.053)	-0.232*** (0.056)	-0.155*** (0.043)	-0.161*** (0.045)	-0.021*** (0.004)	-0.022*** (0.004)	-0.001 (0.001)	-0.001 (0.001)
External dependence × stock market capitalization (80-95)	-0.001 (0.029)		0.021 (0.021)		-0.042*** (0.016)		-0.026 (0.024)	
External dependence × claims of banks and other fin. inst. (80-95)		0.025 (0.017)		0.023* (0.013)		0.007* (0.004)		-0.002 (0.007)
Observations	628	628	624	624	594	594	622	622

**A4. (continued)**

<b>Panel C: NON-OECD countries</b>								
<i>First stage regression (dependent variable: External dependence × Financial Development)</i>								
English legal origin	0.169*** (0.045)	0.077*** (0.024)	0.184*** (0.045)	0.075*** (0.024)	0.191*** (0.049)	0.075*** (0.026)	0.189*** (0.046)	0.072*** (0.024)
French legal origin	-	-	-	-	-	-	-	-
German legal origin	-	-	-	-	-	-	-	-
Property rights index	0.113*** (0.019)	0.109*** (0.009)	0.110*** (0.020)	0.110*** (0.009)	0.135*** (0.022)	0.120*** (0.009)	0.112*** (0.021)	0.114*** (0.009)
F-test of excluded instruments	21.14	79.48	20.98	78.92	22.14	88.70	20.80	84.52
<i>Second stage regression</i>								
Initial conditions in 1970	-0.163*** (0.032)	-0.212*** (0.029)	-0.166*** (0.032)	-0.184*** (0.036)	-0.021*** (0.003)	-0.023*** (0.003)	-0.003*** (0.001)	-0.003*** (0.001)
External dependence × stock market capitalization (80-95)	0.054 (0.037)		0.083* (0.044)		0.013 (0.008)		0.025 (0.024)	
External dependence × claims of banks and other fin. inst. (80-95)		0.072* (0.043)		0.110** (0.044)		0.011 (0.011)		0.010 (0.030)
<b>Observations</b>	905	1009	823	902	699	776	806	883

**Note:** All columns are estimated using instrumental variables. Instruments for financial development are legal origin dummies and a property rights index. Estimation period: 1970-2003. Initial conditions in 1970 refers to the 1970 industry share of total value added (columns 1-2); the 1970 industry share of employment (columns 3-4); the 1970 ratio of industry to average wage (columns 5-6); the 1970 ratio of industry to average labor productivity (columns 7-8). Robust standard errors are reported in parentheses. One, two and three asterisks denote coefficients significant at 10, 5 and 1 percent, respectively.

## A5. Finance and employment growth: the 1970s

	Growth of Value Added	Growth of Value Added	Employ- ment Growth	Employ- ment Growth	Wage growth	Wage growth
<b>Full sample</b>						
Initial conditions in 1970	-0.936*** (0.310)	-0.274*** (0.065)	-0.485*** (0.169)	-0.218*** (0.040)	-0.045*** (0.012)	-0.033*** (0.005)
External dependence × stock market capitalization (decade average)	-0.268 (0.190)		-0.035 (0.173)		-0.066 (0.074)	
External dependence × claims of banks and other financial inst. (decade average)		0.071* (0.038)		0.078** (0.032)		-0.002 (0.008)
Observations	422	1745	392	1595	390	1439
R-squared	0.39	0.27	0.45	0.30	0.63	0.73
<b>OECD countries</b>						
Initial conditions in 1970	-0.787*** (0.247)	-0.196*** (0.053)	-0.440*** (0.157)	-0.144*** (0.034)	-0.034*** (0.011)	-0.027*** (0.008)
External dependence × stock market capitalization (decade average)	-0.279 (0.299)		-0.104 (0.368)		-0.014 (0.121)	
External dependence × claims of banks and other financial inst. (decade average)		0.006 (0.021)		0.021 (0.018)		0.003 (0.005)
Observations	128	614	124	610	124	582
R-squared	0.66	0.57	0.50	0.55	0.85	0.85
<b>NON-OECD countries</b>						
Initial conditions in 1970	-0.960*** (0.336)	-0.280*** (0.079)	-0.496** (0.196)	-0.255*** (0.056)	-0.047*** (0.015)	-0.035*** (0.005)
External dependence × stock market capitalization (decade average)	-0.309 (0.250)		-0.045 (0.224)		-0.086 (0.092)	
External dependence × claims of banks and other financial inst. (decade average)		0.245*** (0.092)		0.208*** (0.076)		-0.005 (0.019)
Observations	294	1131	268	985	266	857
R-squared	0.39	0.26	0.46	0.24	0.53	0.68

**Note:** The estimation period is 1970-1979. Initial conditions in 1970 refers to the 1970 industry share of total value added (columns 1-2); the 1970 industry share of employment (columns 3-4); the 1970 ratio of industry to average wage (columns 5-6). Robust standard errors are reported in parentheses. One, two and three asterisks denote coefficients significant at 10, 5 and 1 percent, respectively.

## A6. Finance and employment growth: the 1980s

	Growth of Value Added	Growth of Value Added	Employ- ment Growth	Employ- ment Growth	Wage growth	Wage growth
<b>Full sample</b>						
Initial conditions in 1980	-0.176** (0.072)	-0.091 (0.065)	-0.108** (0.044)	-0.136** (0.055)	-0.007 (0.014)	-0.006 (0.008)
External dependence × stock market capitalization (decade average)	0.062*** (0.020)		0.056*** (0.013)		-0.005 (0.005)	
External dependence × claims of banks and other financial inst. (decade average)		0.050* (0.030)		0.067*** (0.020)		-0.018 (0.012)
Observations	1177	1920	1205	1895	1152	1833
R-squared	0.35	0.34	0.38	0.27	0.67	0.70
<b>OECD countries</b>						
Initial conditions in 1980	-0.081 (0.065)	-0.072 (0.055)	-0.106** (0.045)	-0.110*** (0.039)	-0.026*** (0.006)	-0.004 (0.012)
External dependence × stock market capitalization (decade average)	0.009 (0.017)		0.026*** (0.009)		-0.004 (0.003)	
External dependence × claims of banks and other financial inst. (decade average)		-0.002 (0.031)		0.010 (0.016)		-0.009 (0.014)
Observations	577	694	577	694	574	691
R-squared	0.40	0.40	0.48	0.41	0.83	0.78
<b>NON-OECD countries</b>						
Initial conditions in 1980	-0.330** (0.129)	-0.144* (0.081)	-0.129* (0.066)	-0.169** (0.073)	-0.008 (0.018)	-0.007 (0.010)
External dependence × stock market capitalization (decade average)	0.132*** (0.036)		0.082*** (0.025)		-0.006 (0.011)	
External dependence × claims of banks and other financial inst. (decade average)		0.110** (0.050)		0.117*** (0.035)		-0.020 (0.020)
Observations	600	1226	628	1201	578	1142
R-squared	0.36	0.35	0.33	0.25	0.59	0.66

**Note:** The estimation period is 1980-1989. Initial conditions in 1980 refers to the 1980 industry share of total value added (columns 1-2); the 1980 industry share of employment (columns 3-4); the 1980 ratio of industry to average wage (columns 5-6). Robust standard errors are reported in parentheses. One, two and three asterisks denote coefficients significant at 10, 5 and 1 percent, respectively.

## A7. Finance and employment growth: the 1990s

	Growth of Value Added	Growth of Value Added	Employ- ment Growth	Employ- ment Growth	Wage growth	Wage growth
<b>Full sample</b>						
Initial conditions in 1990	0.023 (0.071)	0.056 (0.068)	-0.038 (0.040)	-0.074 (0.047)	0.105 (0.073)	0.091 (0.066)
External dependence × stock market capitalization (decade average)	0.009 (0.019)		-0.001 (0.013)		0.017 (0.015)	
External dependence × claims of banks and other financial inst. (decade average)		0.019 (0.029)		0.034* (0.019)		-0.012 (0.020)
Observations	1721	1858	1674	1807	1622	1751
R-squared	0.18	0.25	0.22	0.17	0.49	0.54
<b>OECD countries</b>						
Initial conditions in 1990	-0.127 (0.146)	-0.106 (0.150)	-0.092* (0.055)	-0.090 (0.056)	0.283*** (0.034)	0.282*** (0.036)
External dependence × stock market capitalization (decade average)	0.032 (0.037)		0.002 (0.018)		0.040* (0.024)	
External dependence × claims of banks and other financial inst. (decade average)		0.004 (0.021)		0.002 (0.014)		0.033 (0.021)
Observations	693	700	691	698	642	649
R-squared	0.11	0.11	0.19	0.19	0.74	0.73
<b>NON-OECD countries</b>						
Initial conditions in 1990	0.042 (0.086)	0.083 (0.083)	-0.058 (0.050)	-0.094 (0.060)	-0.018*** (0.007)	-0.009 (0.009)
External dependence × stock market capitalization (decade average)	-0.000 (0.025)		-0.006 (0.015)		0.008 (0.015)	
External dependence × claims of banks and other financial inst. (decade average)		0.027 (0.058)		0.061 (0.039)		-0.005 (0.031)
Observations	1028	1158	983	1109	980	1102
R-squared	0.25	0.30	0.25	0.17	0.57	0.61

**Note:** The estimation period is 1990-2003. Initial conditions in 1990 refers to the 1990 industry share of total value added (columns 1-2); the 1990 industry share of employment (columns 3-4); the 1990 ratio of industry to average wage (columns 5-6). Robust standard errors are reported in parentheses. One, two and three asterisks denote coefficients significant at 10, 5 and 1 percent, respectively.

# A8. Labour market effects of financial structure and financial openness

<i>Dependent variable:</i>	<i>Employment Growth</i>		<i>Labour productivity</i>		<i>Wage Growth</i>	
Initial conditions in 1970	−0.144*** (0.027)	−0.129*** (0.027)	−0.002*** (0.001)	−0.002*** (0.001)	−0.021*** (0.003)	−0.021*** (0.003)
External dependence × stock market capitalization (80-95)	−0.002 (0.010)	−0.010 (0.010)	0.010 (0.009)	0.010 (0.009)	−0.001 (0.004)	−0.001 (0.004)
External dependence × claims of banks and other financial inst. (80-95)	0.060*** (0.015)	0.050*** (0.014)	−0.014 (0.014)	−0.014 (0.014)	0.003 (0.004)	0.003 (0.004)
External dependence × (foreign assets + foreign liabilities) / GDP (70-03)		0.010*** (0.003)		0.000 (0.002)		−0.000 (0.001)
Observations	1423	1377	1407	1362	1272	1227
R-squared	0.42	0.44	0.29	0.26	0.72	0.70

**Note:** Estimation period: 1970-2003. Initial conditions in 1970 refers to the 1970 industry share of total value added (columns 1-2); the 1970 industry share of employment (columns 3-4); the 1970 ratio of industry to average wage (columns 5-6). Robust standard errors are reported in parentheses. One, two and three asterisks denote coefficients significant at 10, 5 and 1 percent, respectively.