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DETERMINANTS OF UNREPORTED INCOME IN LATIN AMERICAN COMPANIES: A BUSINESS PERSPECTIVE

Table A1   Countries and region profile

PANEL A: General country profile	LAC	Argentina	Bolivia	Ecuador	Paraguay	Peru	Uruguay
GNI per capita, Atlas method (current US$)	8,272	11,970	3,070	5,800	5,950	4,060	15,230
GDP (current US$) (billions)	5,319.55	545.48	33.81	98.61	192.21	27.42	52.42
GDP growth[a]	–0.70	–2.20	4.30	–1.60	3.90	4.00	1.50
Inflation, GDP deflator[a]	3.70	40.70	–1.70	0.90	3.60	5.30	7.00
Agriculture, value-added[b]	6	8	14	10	8	20	7
Industry, value-added[b]	27	27	31	35	33	30	29
Services, value-added[b]	67	66	55	55	60	50	64
Time required to start a business (days)	31	24	45	49	27	35	7
Domestic credit provided by financial sector[b]	79.70	38.80	76.60	36.10	---	45.20	35.20
Tax revenue[b]	13.50	12.40	---	---	13.80	12.60	23.80
PANEL B: Country profile by construct	LAC	Argentina	Bolivia	Ecuador	Paraguay	Peru	Uruguay
Corruption							
Percent of population that perceives corruption as being widespread in the country	79	78	---	---	74	83	54
Anti-corruption policy[c]	5.12	5	---	---	5	5.12	9
Quality/efficiency of public and government services							
Infrastructure							
Civil service merit[d]	45	---	---	---	40	53	73[k]
Percent of people that expresses being 'satisfied' or 'very satisfied' with public education	53.8	56	---	---	43.7	36.4	52[i]
Percent of people that expresses being 'satisfied' or 'very satisfied' with public hospitals	40.7	55.4	---	---	33.2	32	66.5[i]
Percent of people that perceive citizen security as being 'good' or 'very good'	16	7.4	---	---	5.2	8.9	21.8[i]

Notes: Abbr.: N/A: not applicable, GNI: gross national income, GDP: gross domestic product, LAC: Latin America and the Caribbean.
[a]Annual percent; [b]percent of GDP; [c]from 1 to 10 being, 10 successful in corresponding topic; [d]from 1 to 100 being 100 the best score; [e]from –2.5 (weak) to 2.5 (strong); [f]from 1 to 10 where 10 means 'evading taxes is totally justifiable'; [g]among 190 countries; [h]from 0 to 6, with 6 being the most restrictive regulation; date of the data: without indication 2016, [i]2015 and [j]2013 and [k]2012–2015. In LAC column, data whit l corresponds to South America.

Source: Own elaboration based on World Development Indicators (2016) (Panel A), OECD et al. (2018), and PwC and World Bank Group (2018) (Panel B)

Table A1 Countries and region profile (continued)

PANEL B: Country profile by construct							
Quality/efficiency of public and government services							
Legal system, justice and police services							
Rule of law[e]	−0.37	−0.8	---	---	−0.7	−0.5	0.68[i]
Impartial public administration[c]	3.68	6	---	---	---	3.93	5.41
Percent of population that expresses confidence in the country's judicial system and courts	34	31	---	---	28	21	41
Government effectiveness[e]	−0.17	−0.09	---	---	−0.95	−0.28	0.54[i]
Taxes and bureaucracy							
Tax morale weighted index[f]	7.94	8.9	---	---	7.56	7.85	8.91[i]
Percent of population that declares tax evasion as never justifiable	48.1	66.4	---	---	35.2	31.7	71.37[i]
Overall paying taxes ranking[g]	*N/A*	176	186	145	127	121	106
Total tax and contribution rate	*52.6*	106	83.7	32.5	35	35.6	41.8
Time to comply (hours)	*547*	312	1025	666	378	260	190
Number of payments	*22.8*	9	42	10	20	9	20
Post-filing index[d]	*41.7*	47.94	50	49.54	46.56	19.24	49.54
Regulation							
Regulatory quality[e]	−0.05	−0.96	---	---	−0.27	0.49	0.45[i]
Economy-wide product market regulation[h]	2.4	3.11	---	---	2.45	1.66	2.57[j]
Political instability							
Political stability and absence of violence[e]	−0.09	−0.07	---	---	−0.02	−0.51	0.99[i]

Notes: Abbr.: N/A: not applicable, GNI: gross national income, GDP: gross domestic product, LAC: Latin America and the Caribbean.
[a]Annual percent; [b]percent of GDP; [c]from 1 to 10 being, 10 successful in corresponding topic; [d]from 1 to 100 being 100 the best score; [e]from −2.5 (weak) to 2.5 (strong); [f]from 1 to 10 where 10 means 'evading taxes is totally justifiable'; [g]among 190 countries; [h]from 0 to 6, with 6 being the most restrictive regulation; date of the data: without indication 2016, [i]2015 and [j]2013 and [k]2012–2015. In LAC column, data whit l corresponds to South America.

Source: Own elaboration based on World Development Indicators (2016) (Panel A), OECD et al. (2018), and PwC and World Bank Group (2018) (Panel B)

Table A2   Variable definition

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
1 Firm and entrepreneur's characteristics		
Size		
Annual sales (USD thou.)	Establishment total annual sales in the last fiscal year (thousand of dollars).	Created from d2
Ln annual sales	Natural logarithm of establishment total annual sales in the last fiscal year (thousand of dollars).	Created from d2
Number of employees	Number of permanent full time workers in the establishment at the end of the last fiscal year.	l1
Ln number of employees	Natural logarithm of number of permanent full time workers in the establishment at the end of the last fiscal year.	Created from l1
Labour cost	Total annual labour cost including salaries, bonuses, social security contributions in the last fiscal year (thousand of dollars).	Created from n2a
Ln labour cost	Natural logarithm of total annual labour cost including salaries, bonuses, social security contributions in the last fiscal year (thousand of dollars).	Created from n2a
Micro firm (< 10 employees)	Dummy variable that takes a value of one if the firm has 10 or less permanent full time workers at the end of the last fiscal year, zero otherwise.	Created from l1
Small firm (11–50 employees)	Dummy variable that takes a value of one if the firm has between 11 and 50 permanent full time workers at the end of the last fiscal year, zero otherwise.	Created from l1
Medium firm (51–200 employees)	Dummy variable that takes a value of one if the firm has between 51 and 200 permanent full time workers at the end of the last fiscal year, zero otherwise.	Created from l1
Big firm (> 200 employees)	Dummy variable that takes a value of one if the firm has more than 200 permanent full time workers at the end of the last fiscal year, zero otherwise.	Created from l1
Sector		
Manufacture	Dummy variable that takes a value of one if the establishment's main activity at the end of the last fiscal year was manufacture, zero otherwise.	Created from d1a1a
Commercial	Dummy variable that takes a value of one if the establishment's main activity at the end of the last fiscal year was Retail or wholesale, zero otherwise.	Created from d1a1a
Construction	Dummy variable that takes a value of one if the establishment's main activity at the end of the last fiscal year was construction, zero otherwise.	Created from d1a1a
Services	Dummy variable that takes a value of one if the establishment's main activity at the end of the last fiscal year was provision of a service (including hotel trade and restaurants), zero otherwise.	Created from d1a1a
Age		
Firm age (years)	Firm age since this establishment began operations up to 2017.	Created from b5
Registered from the beginning	Dummy variable that takes a value of one if the establishment was formally registered when it began operations, zero otherwise.	b6a

Source: Own elaboration based on World Bank Group (2018)

Table A2   Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
1 Firm and entrepreneur's characteristics		
Legal status		
Limited partnership	Dummy variable that takes a value of one if the firm's current legal status is shareholding company with trade/non-traded shares or shares traded privately or a limited partnership, zero otherwise.	Created from b1
Sole proprietorship	Dummy variable that takes a value of one if the firm's current legal status is sole proprietorship, zero otherwise.	Created from b1
Partnership	Dummy variable that takes a value of one if the firm's current legal status is partnership, zero otherwise.	Created from b1
Ownership structure		
Ownership concentration	Percentage of firm property held by largest owner or owners.	b3
Private domestic ownership	Percentage of firm property held by private domestic individuals, companies or organisations.	b2a
Market		
Local sales	Dummy variable that takes a value of one if the local market (same district) was the main one in which in which this establishment sold its main product during the last fiscal year, zero otherwise.	Created from e1
National sales	Dummy variable that takes a value of one if the national market (across the country) was the main one in which this establishment sold its main product during the last fiscal year, zero otherwise.	Created from e1
Domestic market	Dummy variable that takes a value of one if the local or national markets were the main ones in which this establishment sold its main product during the last fiscal year, zero otherwise.	Created from e1
External market	Dummy variable that takes a value of one if the international market was the main one in which this establishment sold its main product during the last fiscal year, zero otherwise.	Created from e1
Exports	Percentage of the establishment's sales that were direct or indirect exports (sold domestically to third party that exports products) in the last fiscal year.	d3b + d3c
Financing		
Current/savings account	Dummy variable that takes a value of one if the establishment has a checking (current) or savings account at this time, zero otherwise.	k6
Overdraft facility	Dummy variable that takes a value of one if the establishment has an overdraft facility at this time, zero otherwise.	k7
Current line of credit	Dummy variable that takes a value of one if the establishment has a line of credit or a loan from a financial institution at this time, zero otherwise.	k8
Collateral in credit line	Dummy variable that takes a value of one if financing of the most recent credit/loan line required collateral, zero otherwise.	k13
Owners' personal loans	Dummy variable that takes a value of one if the owner/s of the establishment has/have any outstanding personal loans that are used to finance this establishment's business activities, zero otherwise.	k15d

Source: Own elaboration based on World Bank Group (2018)

Table A2   Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
1 Firm and entrepreneur's characteristics		
Financing		
Apply to credit	Dummy variable that takes a value of one if the establishment applied for any lines of credit or loans in the last fiscal year, zero otherwise.	k16
Working capital financed by bank loans	Proportion of this establishment's working capital that was financed by banks and non-bank financial institutions (microfinance institutions, credit cooperatives, credit unions, or finance companies) during the last fiscal year.	k3bc + k3e
Fixed assets financed by bank loans	Proportion of this establishment's fixed assets that was financed by banks and non-bank financial institutions (microfinance institutions, credit cooperatives, credit unions, or finance companies) during the last fiscal year.	k5bc + k5e
Growth		
Purchased FA last fiscal year	Dummy variable that takes a value of one if the establishment purchased any new or used fixed assets in the last fiscal year, zero otherwise.	k4
Purchased FA 2 previous fiscal years	Dummy variable that takes a value of one if the establishment purchased any new or used fixed assets in the penultimate fiscal year, zero otherwise.	k4b
Type of establishment		
Larger firm	Dummy variable that takes a value of one if the establishment is part of a larger firm (larger firms involve several distinct locations or establishments, including branch offices or production, distribution, or sales sites), zero otherwise.	a7
Headquarters location	Dummy variable that takes a value of one if the establishment is the headquarters location, zero otherwise.	a7b
Own buildings	Dummy variable that takes a value of one if the buildings occupied by this establishment are owned, zero otherwise.	Created from g6a
Rented buildings	Dummy variable that takes a value of one if the buildings occupied by this establishment are rented or leased, zero otherwise.	Created from g6b
International quality certification	Dummy variable that takes a value of one if the establishment has an internationally recognised quality certification, zero otherwise.	b8
Entrepreneur's experience		
Top manager experience (years)	Years of experience of the top manager in the sector (if less than 1 year = 1).	b7
Entrepreneur's gender		
Female owners	Dummy variable that takes a value of one if the firm has any female owner/s, zero otherwise.	b4
Female top manager	Dummy variable that takes a value of one if the top manager is female, zero otherwise.	b7a
Entrepreneur information level		
Spend time with business associations	Dummy variable that takes a value of one if the senior management of the establishment (or the firm to which it belongs) regularly spends time interacting with an association, zero otherwise.	ASCj19

Source: Own elaboration based on World Bank Group (2018)

Table A2   Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
1 Firm and entrepreneur's characteristics		
Entrepreneur information level		
Association provides information	Dummy variable that takes a value of one if the association provides information to members about market trends, new technologies or new products, zero otherwise.	ASCj20a
Association engages in political activity	Dummy variable that takes a value of one if the association engages in lobbying and other political activities to influence laws and regulations that affect firm industry, zero otherwise.	ASCj20d
2 Costs of informality		
Corruption		
Informal payment in tax inspections	Dummy variable that takes a value of one if a gift or informal payment was expected or requested in tax inspections/meeting during the last fiscal year, zero otherwise.	j5
Corruption obstacle	Dummy variable that takes a value of one if the establishment considers corruption as a major or very severe obstacle to business operations, zero otherwise.	created from j30f
Corruption biggest obstacle	Dummy variable that takes a value of one if corruption represents the biggest obstacle faced by the establishment, zero otherwise.	created from m1a
Informal payment in import license	Dummy variable that takes a value of one if a gift or informal payment was expected or requested in an application for an import license, zero otherwise.	j12
Informal payment in operating license	Dummy variable that takes a value of one if a gift or informal payment was expected or requested in an application for an operating license, zero otherwise.	j14
Quality/efficiency of public and government services		
Power outages	Dummy variable that takes a value of one if the establishment experienced power outages during the last fiscal year, zero otherwise.	c6
Insufficient water supply	Dummy variable that takes a value of one if the establishment experienced insufficient water supply for production during the last fiscal year, zero otherwise.	c15
Legal system effectiveness – suppliers	Dummy variable that takes a value of one if the establishment considers the legal system very or extremely effective in resolving or preventing problems when making agreements with suppliers, zero otherwise.	Created from ASCd9f
Government officials effectiveness – suppliers	Dummy variable that takes a value of one if the establishment considers the assistance of government officials very or extremely effective in resolving or preventing problems when making agreements with suppliers, zero otherwise.	Created from ASCd9e
Legal system effectiveness – clients	Dummy variable that takes a value of one if the establishment considers the legal system very or extremely effective in resolving or preventing problems when making agreements with clients, zero otherwise.	Created from ASCd18f

Source: Own elaboration based on World Bank Group (2018)

Table A2   Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
2 Costs of informality		
Quality/efficiency of public and government services		
Government officials effectiveness – clients	Dummy variable that takes a value of one if the establishment considers the assistance of government officials very or extremely effective in resolving or preventing problems when making agreements with clients, zero otherwise.	Created from ASCd18e
Fair court system	Dummy variable that takes a value of one if the establishment tends to agree or strongly agree with the statement 'the court system is fair, impartial and uncorrupted', zero otherwise.	h7a
Courts obstacle	Dummy variable that takes a value of one if the establishment considers courts as a major or very severe obstacle to business operations, zero otherwise.	Created from h30
Paid for security	Dummy variable that takes a value of one if the establishment paid for security (example equipment, personnel, or professional security services including internet security) in the last fiscal year, zero otherwise.	i1
Losses for crime	Dummy variable that takes a value of one if the establishment experienced losses as a result of theft, robbery, vandalism, arson on this establishment's premises or from internet hacking or internet fraudulent transactions in the last fiscal year, zero otherwise.	i3
Penalty and detection probability		
Fiscal inspection	Dummy variable that takes value one if the firm was visited or inspected by tax officials or required to meet with them during the last fiscal year, zero otherwise	j3
Region (categorical)	Categorical variable: Represents the regions of origin of the companies surveyed in each country: Buenos Aires, Rosario, Córdoba, Mendoza, Tucumán; Chaco (Argentina), Santa Cruz, La Paz, Cochabamba (Bolivia), Guayas, Pichincha, Azuay (Ecuador), Asunción, Central (Paraguay), Lima, Arequipa, Trujillo, Chiclayo, Piura (Perú), Montevideo, Canelones (Uruguay).	a2
Access to finance		
Government-supported program credit	Dummy variable that takes a value of one if the most recent line of credit/loan was granted as part of a government-supported program, zero otherwise.	ASCk9
State-owned banks/government agency credit	Dummy variable that takes a value of one if the most recent line of credit/loan was granted by state-owned banks or government agency, zero otherwise.	Created from k9
Access to finance biggest obstacle	Dummy variable that takes a value of one if the establishment considers courts as a major or very severe obstacle to business operations, zero otherwise.	Created from m1a
Access to finance obstacle	Dummy variable that takes a value of one if the establishment considers access to finance as a major or very severe obstacle to business operations, zero otherwise.	Created from k30
Did not apply to credit – no need	Dummy variable that takes a value of one if lack of need was the main reason why this establishment did not apply for any line of credit or loan, zero otherwise.	Created from k17

Source: Own elaboration based on World Bank Group (2018)

Table A2 Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
2 Costs of informality		
Access to finance		
Did not apply to credit – complex procedures	Dummy variable that takes a value of one if complex application procedures were the main reason why this establishment did not apply for any line of credit or loan, zero otherwise.	Created from k17
Did not apply to credit – high cost	Dummy variable that takes a value of one if unfavourable interest rates were the main reason why this establishment did not apply for any line of credit or loan, zero otherwise.	Created from k17
Did not apply to credit – others	Dummy variable that takes a value of one if others causes were the main reason why this establishment did not apply for any line of credit or loan, zero otherwise.	Created from k17
Business control		
Certified financial statements	Dummy variable that takes a value of one if the establishment has its annual financial statements checked and certified by an external auditor, zero otherwise.	k21
3 Benefits of informality		
Tax		
Tax administration obstacle	Dummy variable that takes a value of one if the establishment considers tax administration as a major or very severe obstacle to business operations, zero otherwise.	Created from j30b
Tax rate obstacle	Dummy variable that takes a value of one if the establishment considers tax rates as a major or very severe obstacle to business operations, zero otherwise.	Created from j30a
Change in process by taxes/regulation cost	Dummy variable that takes a value of one if changes in taxes or the cost of regulation were the main reason of change in sale product/service prices, zero otherwise.	Created from ASCn5
Tax administration biggest obstacle	Dummy variable that takes a value of one if tax administration represents the biggest obstacle faced by the establishment, zero otherwise.	Created from m1a
Tax rates biggest obstacle	Dummy variable that takes a value of one if tax rates represent the biggest obstacle faced by the establishment, zero otherwise.	Created from m1a
Bureaucracy		
Business licensing and permits	Dummy variable that takes a value of one if the establishment considers business licensing and permits as a major or very severe obstacle to business operations, zero otherwise.	Created from j30c
Fiscal inspection/meeting	Dummy variable that takes a value of one if the establishment was visited or inspected by tax officials or required to meet with them during the last fiscal year, zero otherwise.	j3
Bureaucratic procedures (weekly hours)	Senior management hours spent dealing with regulations (typical week of the last year).	j2
Regulation		
Customs/trade regulations obstacle	Dummy variable that takes a value of one if the establishment considers customs and trade regulations as a major or very severe obstacle to business operations, zero otherwise.	Created from d30b

Source: Own elaboration based on World Bank Group (2018)

Table A2   Variable definition (continued)

Variable short name (by group and construct)	Variable definition	WBES origin/adaptation code
3 Benefits of informality		
Regulation		
Labour regulations obstacle	Dummy variable that takes a value of one if the establishment considers labour regulations as a major or very severe obstacle to business operations, zero otherwise.	Created from l30a
Labour regulations biggest obstacle	Dummy variable that takes a value of one if labour regulations represent the biggest obstacle faced by the establishment, zero otherwise.	Created from m1a
Sector informality		
Unregistered or informal competitors	Dummy variable that takes a value of one if the establishment competes against unregistered or informal firms, zero otherwise.	e11
Tax avoidance from IS competitors	Dummy variable that takes a value of one if the practice of unregistered or informal firms that affects the establishment the most is tax avoidance, zero otherwise.	Created from ASCe12
Undercutting prices from IS competitors	Dummy variable that takes a value of one if the practice of unregistered or informal firms that affects the establishment the most is undercutting prices, zero otherwise.	Created from ASCe12
Informal workers hired by IS competitors	Dummy variable that takes a value of one if the establishment competes against registered firms hiring workers without formal contracts, zero otherwise.	ASCe14
IS competitors practices obstacle	Dummy variable that takes a value of one if the establishment considers practices of competitors in the informal sector as a major or very severe obstacle to business operations, zero otherwise.	Created from e30
IS competitors practices biggest obstacle	Dummy variable that takes a value of one if political instability represents the biggest obstacle faced by the establishment, zero otherwise.	Created from m1a
Political instability		
Political instability obstacle	Dummy variable that takes a value of one if the establishment considers political instability as a major or very severe obstacle to business operations, zero otherwise.	Created from j30e
Political instability biggest obstacle	Dummy variable that takes a value of one if political instability represents the biggest obstacle faced by the establishment, zero otherwise.	Created from m1a
4 Control variables		
Country		
Argentina	Dummy variable that takes a value of one if the firm is from Argentina, zero otherwise.	Created from a1
Bolivia	Dummy variable that takes a value of one if the firm is from Bolivia, zero otherwise.	Created from a2
Ecuador	Dummy variable that takes a value of one if the firm is from Ecuador, zero otherwise.	Created from a3
Paraguay	Dummy variable that takes a value of one if the firm is from Paraguay, zero otherwise.	Created from a4
Peru	Dummy variable that takes a value of one if the firm is from Peru, zero otherwise.	Created from a5
Uruguay	Dummy variable that takes a value of one if the firm is from Uruguay, zero otherwise.	Created from a6

Source: Own elaboration based on World Bank Group (2018)