

Table 1. Industry piracy statistics

	Business Software Alliance	International Federation of the Phonographic Industry	Entertainment Software Alliance	Motion Picture Association
Coverage (countries and territories)	97	73	Varies ⁽¹⁾	22 ⁽²⁾
Precision of statistics	2 digits, eg, “37%”	Bands (< 10%, 10-24%, 25-50%, >50%)	2 digits, eg, “37%”	2 digits, eg, “37%”
Frequency	annual	annual	annual	2004 only
Methodology	Disclosed in detail	Disclosed broadly	Disclosed broadly	Disclosed broadly
Raw data	Not disclosed	Not disclosed	Not disclosed	Not disclosed
Data sources	Internal (software sales) and external (computer sales)	Internal (member associations)	Internal and external (consumer survey)	Internal and external (consumer survey)
Compilation and analysis	Third party (International Data Corp)	Association itself	Association itself	Third party (LEK)

Notes:

1. The Entertainment Software Alliance published statistics only for countries subject to potential investigation under Special 301.
2. The Motion Picture Association study estimated piracy in an additional 42 countries by projection from survey results in 22 countries.

Table 2. BSA change of consultant and methodology

VARIABLES	(i) Years - all OLS	(ii) Trend - all OLS	(iii) Years - all	(iv) Trend - all	(v) Years - balanced	(vi) Trend - balanced
yr98	-1.756 (3.045)		-1.756*** (0.296)		-1.765*** (0.300)	
yr99	-5.098* (3.045)		-5.098*** (0.414)		-5.160*** (0.415)	
yr00	-7.463** (3.035)		-7.553*** (0.594)		-7.617*** (0.599)	
yr01	-8.533*** (3.009)		-8.595*** (0.713)		-8.667*** (0.719)	
yr02	-10.579*** (3.009)		-10.641*** (0.812)		-10.716*** (0.824)	
yr03	-5.781* (2.968)		-8.324*** (1.035)		-8.247*** (1.032)	
yr04	-4.730 (2.925)		-8.097*** (1.141)		-8.222*** (1.152)	
yr05	-4.223 (2.898)		-8.552*** (1.177)		-8.605*** (1.193)	
yr06	-5.065* (2.898)		-9.394*** (1.207)		-9.395*** (1.231)	
yr07	-6.758** (2.898)		-10.568*** (1.231)		-10.519*** (1.270)	
Pre-change trend		-2.032*** (0.484)		-2.034*** (0.155)		-2.064*** (0.160)
Post-change trend		-0.733*** (0.224)		-1.138*** (0.133)		-1.148*** (0.137)
Constant	65.451*** (2.153)	66.886*** (1.881)	67.302*** (0.719)	68.703*** (0.811)	65.815*** (0.689)	67.279*** (0.800)
Observations	992	992	992	992	891	891
R-squared	0.019	0.017	0.302	0.285	0.300	0.285
No. of countries			103	103	81	81

*** p<0.01, ** p<0.05, * p<0.1

Robust cluster standard errors in parentheses; regressions (iii)-(vi) included fixed effects.

Table 3. Descriptive statistics

	Units	Source	Observations	Mean	Std dev	Min.	Max.
Business software piracy	%	BSA	992	59.98	19.59	20	98
GDP per capita (income)	'000 USD (2000 prices)	World Bank	998	9.331	11.029	0.300	54.178
Exports per capita	'000 USD (2000 prices)	World Bank	934	4.745	9.696	0.0397	99.255
Residential electricity consumption per capita	kWh per capita	GMID ^(a)	980	1.280	1.466	0.021	7.955
Individualism		Hofstede (1983, 2001)	726	44.333	23.622	6.000	91.000
Rule of law		Kauffman et al. (2007)	818	0.285	0.991	-1.677	2.051
PC users per capita		GMID ^(a)	945	0.163	0.180	0.002	0.767
Literacy rate	%	GMID ^(a)	1042	88.550	14.376	34.600	99.900

^(a) Euromonitor, Global Market Information Database

Table 4. Correlations

	Piracy	GDP per capita	Exports per capita	Residential electricity consumption per capita	Individualism	Rule of law	PC users per capita	Literacy rate
Piracy	1.000							
GDP per capita	-0.815	1.000						
Exports per capita	-0.586	0.758	1.000					
Residential electricity consumption per capita	-0.589	0.765	0.524	1.000				
Individualism	-0.767	0.720	0.499	0.568	1.000			
Rule of law	-0.842	0.850	0.644	0.671	0.777	1.000		
PC users per capita	-0.802	0.879	0.632	0.653	0.706	0.827	1.000	
Literacy rate	-0.440	0.464	0.313	0.309	0.386	0.489	0.515	1.000

Table 5. Endogeneity of income

(Dependent variable: Legitimate consumption rate)

VARIABLES	(i) OLS	(ii) 1st stage Post-change income	(iii) 2nd stage	(iv) 2SLS Instrument: electricity	(v) 2SLS Instrument: exports
Income (GDP per capita)	1.309*** (0.307)	-3.145*** (0.851)	1.438*** (0.305)	1.438*** (0.280)	1.336*** (0.301)
Post-change income	0.052*** (0.013)	0.987*** (0.049)		0.095*** (0.026)	0.060*** (0.013)
Pre-change trend	0.057*** (0.011)	-0.051*** (0.017)	0.059*** (0.010)	0.059*** (0.010)	0.057*** (0.010)
Post-change trend	-0.040** (0.017)	1.040*** (0.021)	-0.081*** (0.028)	-0.081*** (0.028)	-0.049*** (0.017)
Post-change residential electricity consumption per capita			0.095*** (0.026)		
1 st stage residuals			-0.058** (0.025)		
Constant	-7.722*** (2.571)	27.021*** (7.179)	-8.918*** (2.576)		
Observations	727	765	765	765	727
Number of countries	75	77	77	77	75
R-squared	0.360	0.972	0.378	0.345	0.359

*** p<0.01, ** p<0.05, * p<0.1

Robust cluster standard errors in parentheses;
all regressions included fixed effects

Table 6. Robustness tests(Dependent variable: Legitimate consumption rate;
Instrument: Residential electricity consumption)

VARIABLES	(a) Individualism	(b) Rule of law	(c) PC Users	(d) Literacy
Income (GDP per capita)	0.275*** (0.063)	0.380* (0.218)	1.405*** (0.317)	1.437*** (0.304)
Post-change income	0.028 (0.022)	0.046*** (0.012)	0.068*** (0.013)	0.077*** (0.016)
Pre-change trend	0.068*** (0.009)	0.048*** (0.011)	0.041*** (0.012)	0.050*** (0.012)
Post-change trend	0.004 (0.025)	-0.022* (0.012)	-0.071*** (0.017)	-0.074*** (0.024)
Individualism	0.190** (0.084)			
Rule of law		0.042* (0.025)		
PC users per capita			0.104 (0.081)	
Literacy rate				2.351 (1.934)
Constant	0.306 (0.458)			
Observations	595	292	708	693
Number of countries		47	73	73
R-squared	0.595	0.280	0.372	0.381

*** p<0.01, ** p<0.05, * p<0.1

Robust cluster standard errors in parentheses;
regressions (b), (c) and (d) included fixed effects

Figure 1. Average piracy rate

