

08 PIRACY STUDY

IN BRIEF

Working together, governments, software companies, and the Business Software Alliance (BSA) are making progress in stopping the illegal theft and use of PC software products. But piracy remains a serious problem in all countries, and the challenge is greatest in the world's fastest growing markets. The key findings of this study are:

- Piracy down in many nations:** The rate of personal computer (PC) software piracy dropped in 2008 in about half (57) of the 110 countries studied, remained the same in about a third (36), and rose in just 16.*
- Piracy up on a global basis:** However, the worldwide PC software piracy rate rose for the second year in a row, from 38 percent to 41 percent, largely because PC shipments grew fastest in high-piracy countries such as China and India.
- Dollar losses up:** The retail value of unlicensed software — representing revenue losses to software companies — broke the \$50 billion level for the first time in 2008. Worldwide losses grew by 11 percent to \$53.0 billion. Excluding the effect of exchange rates, losses grew by 5 percent to \$50.2 billion.

* THE SUBSETS DO NOT ADD UP TO 110 BECAUSE THERE IS NO PRIOR YEAR DATA FOR GEORGIA.

HIGHEST PIRACY RATES 2008

RANK	COUNTRY	RATE
1	Georgia	95%
2	Bangladesh	92%
3	Armenia	92%
4	Zimbabwe	92%
5	Sri Lanka	90%
6	Azerbaijan	90%
7	Moldova	90%
8	Yemen	89%
9	Libya	87%
10	Pakistan	86%
11	Venezuela	86%
12	Indonesia	85%
13	Vietnam	85%
14	Iraq	85%
15	Ukraine	84%
16	Algeria	84%
17	Montenegro	83%
18	Paraguay	83%
19	Cameroon	83%
20	Nigeria	83%

HIGHEST PIRACY LOSSES 2008

RANK	COUNTRY	LOSSES \$M
1	United States	\$9,143
2	China	\$6,677
3	Russia	\$4,215
4	India	\$2,768
5	France	\$2,760
6	United Kingdom	\$2,181
7	Germany	\$2,152
8	Italy	\$1,895
9	Brazil	\$1,645
10	Japan	\$1,495
11	Canada	\$1,222
12	Spain	\$1,029
13	Mexico	\$823
14	Poland	\$648
15	South Korea	\$622
16	Australia	\$613
17	Thailand	\$609
18	Netherlands	\$563
19	Indonesia	\$544
20	Ukraine	\$534

MOST IMPROVED PIRACY RATES 2004-2008

RANK	COUNTRY	RATE CHANGE
1	Russia	-19%
2	Qatar	-11%
	Tunisia	-11%
3	China	-10%
4	Romania	-8%
5	Vietnam	-7%
	Ukraine	-7%
	Costa Rica	-7%
	Kuwait	-7%
	Japan	-7%
	Kazakhstan	-7%
	Bahrain	-7%
6	Serbia	-6%
	Brazil	-6%
	Mexico	-6%
	Egypt	-6%
	Jordan	-6%
	Australia	-6%
	Singapore	-6%
	India	-6%
	Morocco	-6%

PC Software Piracy Rates and Losses, 2004–2008

	PIRACY RATES					PIRACY LOSSES				
	2008	2007	2006	2005	2004	2008 \$M	2007 \$M	2006 \$M	2005 \$M	2004 \$M
Asia Pacific										
Australia	26%	28%	29%	31%	32%	\$613	\$492	\$515	\$361	\$409
Bangladesh	92%	92%	92%	—	—	\$102	\$92	\$90	—	—
Brunei	68%	67%	—	—	—	\$15	\$13	—	—	—
China	80%	82%	82%	86%	90%	\$6,677	\$6,664	\$5,429	\$3,884	\$3,565
Hong Kong	48%	51%	53%	54%	52%	\$225	\$224	\$180	\$112	\$116
India	68%	69%	71%	72%	74%	\$2,768	\$2,025	\$1,275	\$566	\$519
Indonesia	85%	84%	85%	87%	87%	\$544	\$411	\$350	\$280	\$183
Japan	21%	23%	25%	28%	28%	\$1,495	\$1,791	\$1,781	\$1,621	\$1,787
Malaysia	59%	59%	60%	60%	61%	\$368	\$311	\$289	\$149	\$134
New Zealand	22%	22%	22%	23%	23%	\$75	\$55	\$49	\$30	\$25
Pakistan	86%	84%	86%	86%	82%	\$159	\$125	\$143	\$48	\$26
Philippines	69%	69%	71%	71%	71%	\$202	\$147	\$119	\$76	\$69
Singapore	36%	37%	39%	40%	42%	\$163	\$159	\$125	\$86	\$96
South Korea	43%	43%	45%	46%	46%	\$622	\$549	\$440	\$400	\$506
Sri Lanka	90%	90%	90%	—	—	\$97	\$93	\$86	—	—
Taiwan	39%	40%	41%	43%	43%	\$201	\$215	\$182	\$111	\$161
Thailand	76%	78%	80%	80%	79%	\$609	\$468	\$421	\$259	\$183
Vietnam	85%	85%	88%	90%	92%	\$257	\$200	\$96	\$38	\$55
Other AP	91%	91%	86%	82%	76%	\$69	\$56	\$148	\$29	\$63
TOTAL AP	61%	59%	55%	54%	53%	\$15,261	\$14,090	\$11,718	\$8,050	\$7,897
Central and Eastern Europe										
Albania	77%	78%	77%	76%	77%	\$9	\$11	\$11	\$9	\$7
Armenia	92%	93%	95%	95%	—	\$7	\$8	\$8	\$7	—
Azerbaijan	90%	92%	94%	94%	—	\$55	\$50	\$51	\$40	—
Bosnia	67%	68%	68%	69%	70%	\$15	\$13	\$14	\$13	\$12
Bulgaria	68%	68%	69%	71%	71%	\$139	\$63	\$50	\$41	\$33
Croatia	54%	54%	55%	57%	58%	\$77	\$68	\$62	\$51	\$50
Czech Republic	38%	39%	39%	40%	41%	\$168	\$161	\$147	\$121	\$132
Estonia	50%	51%	52%	54%	55%	\$21	\$20	\$16	\$18	\$17
FYROM	68%	68%	69%	70%	72%	\$14	\$11	\$10	\$9	\$8
Georgia	95%	—	—	—	—	\$59	—	—	—	—
Hungary	42%	42%	42%	42%	44%	\$146	\$125	\$111	\$106	\$126
Kazakhstan	78%	79%	81%	85%	85%	\$125	\$110	\$85	\$69	\$57
Latvia	56%	56%	56%	57%	58%	\$31	\$29	\$26	\$20	\$19
Lithuania	54%	56%	57%	57%	58%	\$40	\$37	\$31	\$25	\$21
Moldova	90%	92%	94%	96%	—	\$40	\$43	\$56	\$44	—
Montenegro	83%	83%	82%	83%	83%	\$8	\$7	\$6	\$9	\$8
Poland	56%	57%	57%	58%	59%	\$648	\$580	\$484	\$388	\$379
Romania	66%	68%	69%	72%	74%	\$249	\$151	\$114	\$111	\$62
Russia	68%	73%	80%	83%	87%	\$4,215	\$4,123	\$2,197	\$1,625	\$1,362
Serbia	74%	76%	78%	80%	80%	\$99	\$72	\$59	\$95	\$85
Slovakia	43%	45%	45%	47%	48%	\$62	\$54	\$47	\$44	\$48
Slovenia	47%	48%	48%	50%	51%	\$51	\$39	\$36	\$33	\$37
Ukraine	84%	83%	84%	85%	91%	\$534	\$403	\$337	\$239	\$107
Rest of CEE	88%	88%	90%	92%	88%	\$191	\$173	\$166	\$145	\$112
TOTAL CEE	66%	68%	68%	69%	71%	\$7,003	\$6,351	\$4,124	\$3,262	\$2,682
Latin America										
Argentina	73%	74%	75%	77%	75%	\$339	\$370	\$303	\$182	\$108
Bolivia	81%	82%	82%	83%	80%	\$20	\$19	\$15	\$10	\$9
Brazil	58%	59%	60%	64%	64%	\$1,645	\$1,617	\$1,148	\$766	\$659
Chile	67%	66%	68%	66%	64%	\$202	\$187	\$163	\$109	\$87
Colombia	56%	58%	59%	57%	55%	\$136	\$127	\$111	\$90	\$81
Costa Rica	60%	61%	64%	66%	67%	\$24	\$22	\$27	\$19	\$16
Dominican Republic	79%	79%	79%	77%	77%	\$43	\$39	\$19	\$8	\$4
Ecuador	66%	66%	67%	69%	70%	\$37	\$33	\$30	\$17	\$13
El Salvador	80%	81%	82%	81%	80%	\$28	\$28	\$18	\$8	\$5
Guatemala	81%	80%	81%	81%	78%	\$49	\$41	\$26	\$14	\$10
Honduras	74%	74%	75%	75%	75%	\$9	\$8	\$7	\$4	\$3
Mexico	59%	61%	63%	65%	65%	\$823	\$836	\$748	\$525	\$407
Nicaragua	79%	80%	80%	80%	80%	\$4	\$4	\$4	\$2	\$1
Panama	73%	74%	74%	71%	70%	\$24	\$22	\$18	\$8	\$4
Paraguay	83%	82%	82%	83%	83%	\$16	\$13	\$10	\$10	\$11
Peru	71%	71%	71%	73%	73%	\$84	\$75	\$59	\$40	\$39
Uruguay	69%	69%	70%	70%	71%	\$25	\$23	\$16	\$9	\$12
Venezuela	86%	87%	86%	82%	79%	\$484	\$464	\$307	\$173	\$71
Other LA	84%	83%	83%	82%	79%	\$319	\$195	\$96	\$32	\$6
TOTAL LA	65%	65%	66%	68%	66%	\$4,311	\$4,123	\$3,125	\$2,026	\$1,546

	PIRACY RATES					PIRACY LOSSES				
	2008	2007	2006	2005	2004	2008 \$M	2007 \$M	2006 \$M	2005 \$M	2004 \$M
Middle East and Africa										
Algeria	84%	84%	84%	83%	83%	\$96	\$86	\$62	\$66	\$67
Bahrain	55%	57%	60%	60%	62%	\$27	\$27	\$23	\$22	\$19
Botswana	80%	82%	81%	82%	84%	\$14	\$14	\$12	\$12	—
Cameroon	83%	84%	84%	84%	84%	\$6	\$5	\$5	\$5	—
Egypt	59%	60%	63%	64%	65%	\$158	\$131	\$88	\$80	\$50
Iraq	85%	85%	—	—	—	\$205	\$124	—	—	—
Israel	32%	32%	32%	32%	33%	\$172	\$121	\$102	\$84	\$66
Ivory Coast	80%	81%	82%	82%	84%	\$15	\$15	\$16	\$23	—
Jordan	58%	60%	61%	63%	64%	\$22	\$20	\$19	\$19	\$16
Kenya	80%	81%	80%	81%	83%	\$31	\$28	\$22	\$20	\$16
Kuwait	61%	62%	64%	66%	68%	\$69	\$61	\$60	\$65	\$48
Lebanon	74%	73%	73%	73%	75%	\$49	\$44	\$39	\$34	\$26
Libya	87%	88%	—	—	—	\$22	\$22	—	—	—
Mauritius	57%	57%	59%	60%	60%	\$5	\$4	\$3	\$3	\$4
Morocco	66%	67%	66%	68%	72%	\$70	\$66	\$53	\$55	\$65
Nigeria	83%	82%	82%	82%	84%	\$132	\$114	\$100	\$82	\$54
Oman	62%	61%	62%	63%	64%	\$26	\$23	\$25	\$22	\$13
Qatar	51%	54%	58%	60%	62%	\$26	\$25	\$23	\$21	\$16
Reunion	40%	40%	40%	40%	40%	\$1	\$1	\$0	\$1	\$1
Saudi Arabia	52%	51%	52%	52%	52%	\$272	\$170	\$195	\$178	\$125
Senegal	79%	80%	81%	82%	84%	\$7	\$6	\$6	\$6	—
South Africa	35%	34%	35%	36%	37%	\$335	\$284	\$225	\$212	\$196
Tunisia	73%	76%	79%	81%	84%	\$48	\$54	\$55	\$54	\$38
Turkey	64%	65%	64%	65%	66%	\$468	\$365	\$314	\$268	\$182
UAE	36%	35%	35%	34%	34%	\$170	\$94	\$62	\$45	\$34
Yemen	89%	89%	—	—	—	\$14	\$13	—	—	—
Zambia	82%	82%	82%	83%	84%	\$2	\$2	\$2	\$2	—
Zimbabwe	92%	91%	91%	90%	90%	\$4	\$3	\$2	\$6	\$9
Other Africa	86%	85%	85%	84%	84%	\$95	\$76	\$49	\$63	\$124
Other ME	87%	87%	89%	91%	93%	\$438	\$448	\$423	\$154	\$70
TOTAL MEA	59%	60%	60%	57%	58%	\$2,999	\$2,446	\$1,985	\$1,602	\$1,239
North America										
Canada	32%	33%	34%	33%	36%	\$1,222	\$1,071	\$784	\$779	\$889
Puerto Rico	44%	44%	45%	47%	46%	\$36	\$33	\$31	\$12	\$15
United States	20%	20%	21%	21%	21%	\$9,143	\$8,040	\$7,289	\$6,895	\$6,645
TOTAL NA	21%	21%	22%	22%	22%	\$10,401	\$9,144	\$8,104	\$7,686	\$7,549
Western Europe										
Austria	24%	25%	26%	26%	25%	\$184	\$157	\$147	\$131	\$128
Belgium	25%	25%	27%	28%	29%	\$269	\$223	\$222	\$257	\$309
Cyprus	50%	50%	52%	52%	53%	\$15	\$14	\$12	\$13	\$9
Denmark	25%	25%	25%	27%	27%	\$215	\$193	\$183	\$199	\$226
Finland	26%	25%	27%	26%	29%	\$194	\$160	\$149	\$156	\$177
France	41%	42%	45%	47%	45%	\$2,760	\$2,601	\$2,676	\$3,191	\$2,928
Germany	27%	27%	28%	27%	29%	\$2,152	\$1,937	\$1,642	\$1,920	\$2,286
Greece	57%	58%	61%	64%	62%	\$238	\$198	\$165	\$157	\$106
Iceland	46%	48%	53%	57%	—	\$23	\$33	\$32	\$18	—
Ireland	34%	34%	36%	37%	38%	\$118	\$106	\$92	\$93	\$89
Italy	48%	49%	51%	53%	50%	\$1,895	\$1,779	\$1,403	\$1,564	\$1,500
Luxembourg	21%	21%	—	—	—	\$21	\$16	—	—	—
Malta	45%	46%	45%	45%	47%	\$8	\$7	\$7	\$5	\$3
Netherlands	28%	28%	29%	30%	30%	\$563	\$502	\$419	\$596	\$628
Norway	28%	29%	29%	30%	31%	\$229	\$195	\$181	\$169	\$184
Portugal	42%	43%	43%	43%	40%	\$212	\$167	\$140	\$104	\$82
Spain	42%	43%	46%	46%	43%	\$1,029	\$903	\$865	\$765	\$634
Sweden	25%	25%	26%	27%	26%	\$372	\$324	\$313	\$340	\$304
Switzerland	25%	25%	26%	27%	28%	\$345	\$303	\$324	\$376	\$309
United Kingdom	27%	26%	27%	27%	27%	\$2,181	\$1,837	\$1,670	\$1,802	\$1,963
TOTAL WE	33%	33%	34%	35%	34%	\$13,023	\$11,655	\$10,642	\$11,856	\$11,865
TOTAL WORLDWIDE	41%	38%	35%	35%	35%	\$52,998	\$47,809	\$39,698	\$34,482	\$32,778
European Union	35%	35%	36%	36%	35%	\$13,981	\$12,383	\$11,003	\$12,048	\$12,151
BRIC Countries	73%	75%	77%	81%	85%	\$15,305	\$14,429	\$10,049	\$6,841	\$6,105

BRIC Countries are Brazil, Russia, India, and China.

Negative Impacts of Software Piracy

PC software piracy affects much more than just the global software industry.

- **Jobs:** For every \$1 of PC software sold in a country, there is another \$3 to \$4 of revenues for local IT service and distribution firms. A 2008 study predicted that lowering PC software piracy by 10 points over four years would create 600,000 additional new jobs worldwide (www.bsa.org/idcstudy). That projection has been confirmed by actual experience in China and Russia, the new study says.
- **Tax revenues:** Software piracy also lowers tax revenues at a time of increased pressure on governments to provide essential services such as health care and public safety. According to the 2008 study noted above, reducing piracy by 10 points would generate \$24 billion in higher government revenues without a tax increase.
- **Cyber crime:** PC software piracy also increases the risk of cyber crime and security problems. For example, the recent spread of the “Conficker” virus was attributed in part to the lack of automatic security updates for unlicensed software. In a 2006 study, IDC found that 29 percent of Web sites and 61 percent of peer-to-peer sites offering pirated software tried to infect test computers with “Trojans,” spyware, and other tools of identity theft.

Proven Blueprint for Reducing Piracy

Experience has shown that businesses, governments and consumers can work together to reduce PC software piracy and reap the economic benefits.

- **Proven anti-piracy strategy:** The proven “blueprint” for reducing PC software piracy is a combination of consumer education, strong intellectual property policies, effective law enforcement, and legalization assistance programs run by software companies and government agencies. The progress seen in so many nations is proof that this anti-piracy blueprint works — and that local governments, businesses, and consumers all benefit.

How IDC Calculates Software Piracy

The BSA-IDC Global Software Piracy Study was commissioned by BSA and conducted independently by IDC, the information technology industry’s leading global market research and forecasting firm.

A complete description of the methodology is found in the report. Briefly summarized, the methodology is:

1. Determine how much packaged PC software has been installed during the year. This is done by multiplying the number of PCs receiving software in a given country times the average amount of software loaded per PC. This produces the number of software units installed.
2. Determine how much packaged PC software has been paid for during the year. This is done by dividing software market revenue by the average system price for all the PC software in the country. This produces the number of legitimate software units sold.
3. Subtract result #2 from result #1 to obtain the number of software units obtained illegally (“pirated”). Then divide the number of software units pirated by the number of software units installed to obtain the PC software piracy rate.

Revenue losses are expressed in terms of the retail value of the legitimate software being replaced by pirated software. This is done by multiplying the number of software units pirated times the average system price.

For more information:

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