

---

# Index

---

- 2010 Joint Strategic Plan on Intellectual Property Enforcement (IPEC) 91  
2D codes 469, 478  
3D printing 19, 47–9, 358  
4Shared.com 369–70
- Administrative Measures for Online Trading (China) 129–31  
advertising 350, 367, 372–3, 379, 455  
adware 372  
Agora 182, 371  
Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) 37  
Al Qaida 47  
alcohol 98, 115–16, 117, 483  
Alibaba Group (China) 124, 125, 145, 246, 449  
Allen, Elizabeth 246  
Allied Domecq 483  
alternative dispute resolution, China 145  
Amazon Marketplace 280  
Amazon Video 368  
Amcor 236  
America Invents Act (AIA, 2011) 88  
American Society of Composers, Authors and Publishers (ASCAP) 268, 270, 327–8  
Anderson, A. 182  
Andrés, A.R. 408  
'ant smuggling' 230  
anti-counterfeiting strategies (ACS), strategic effectiveness 404–6, 426–8  
    academic recognition of subject 425–6, 428  
    conditional effectiveness 421–3  
    future research 428  
    holistic critique of studies 423–6  
    mixed strategy effectiveness 419–21  
    review of studies 406–7, 408–11  
    stakeholder-based strategies 407, 412–16  
    stakeholder-controlled effectiveness 416–19  
Arms Trade Treaty 42  
Arnum, Patricia Van 175  
ARPANET 267  
Asongu, S.A. 408  
asset confiscation 37–8  
Australia, illicit tobacco trade 237–8, 241  
Australian Customs and Border Protection Service 238  
authentication methods, detecting counterfeits in supply chain 459–60, 482–3  
    components of authentication system 463  
    covert features 464, 465, 467–9  
    devices 464–5, 466–7, 469–70  
    digital features 464, 465, 469–70  
    examiners 460–62, 466–7, 475–6, 481–2  
    holograms 462–3, 465, 466, 467  
    inspection points in supply chain 479–82  
    international and domestic supply chains 477–9  
IPM database (World Customs Organization, WCO) 476–7  
overt features 464, 465, 466–7  
pharmaceuticals 184–5  
prevention of counterfeits not possible 462–3  
smartphones 472–6  
tax stamps 239–40, 475  
tools 467–8  
track and trace 470–72, 473, 475–6  
Authorized Economic Operator (AEO) initiative 116–17, 120, 437, 439, 441  
automatic content recognition (ACR) technology 444–5  
automotive industry 360–61, 420  
Avastin 157  
aviation industry 436, 481  
awareness of counterfeiting and illicit trading  
    consumers 22, 30, 182–3, 194–5, 357, 378–9, 396–7, 409, 447–8  
    law enforcement community and policy-makers 22, 25, 33
- Baltic Tobacco Factory (BTF) 229  
Banerjee, D.S. 416  
Bank for International Settlements (BIS) 54–5, 58  
Banking Trojans 346  
banks  
    regulation, use of soft law to coordinate 53–5  
    trade-based money laundering, difficulty in identifying 61–2  
    World Bank 56, 57  
Bartlett, J. 292  
Bate, Roger 225, 226, 227, 229, 235, 239, 251, 282–3  
Beard, Dr. Tim 238  
Berman, B. 211

- BeSafeRx campaign 183  
 Bitcoin 188, 330  
 BitTorrent 262, 368–9, 448, 449  
 Blockai 330  
 blockchain 329–30, 336  
 Bogachev, Evgeniy Mikhailovich 373  
 Book, R. 327–8  
 books, and Internet piracy 263–4  
 Bosworth, D. 195  
 botnets 269, 372, 375, 376–8  
 Botox 163, 164  
 Bowater Holographics 184  
 Boys, K.A. 212, 408  
 brand protection, online, *see* online brand protection  
 Brandwatch 285  
 Brightman, H. 241  
 BrightPlanet 370  
 Bryce, J. 279, 290  
 BSA Survey 268  
 Buckley, G. 158–9, 166, 167  
 Bulletin Board Systems 262  
 Burkitt, Laurie 172  
 Busby, J. 408  
 Bush, R.F. 207, 209  
 Business Action to Stop Counterfeiting and Piracy (BASCAP) 37, 40, 280–81, 432, 433, 439, 451–2  
 Business Email Compromise (BEC) 347  
 Business Email Spoofing (BES) 347  
 Business Software Alliance (BSA) 378
- ‘Camel Curve’ 236  
 Caremark 66–7  
 Carlow, Michael 171  
 Casio 422  
 CDs, and music piracy 325  
 Center for Safe Internet Pharmacies (CSIP) 178, 182–3  
 Cesareo, L. 199, 201, 205, 212–14  
 Chatterjee, Patralekha 157  
 Chaudhry, P.E. 79–80, 409  
   anti-counterfeiting actions 210–11, 212, 297, 410, 411, 417  
   consumer complicity 291–2, 378  
   counterfeit pharmaceuticals 82, 158, 176, 177, 179, 180, 408  
   managerial solutions to counterfeiting 209  
   measuring scale of illicit trade 224  
   size of global counterfeit market 283  
 ‘cheap whites’ (cigarettes) 227–9, 232–3  
 Chen, Z. 408  
 China  
   anti-counterfeiting effectiveness (ACE) 418  
   anti-piracy strategies 210, 211  
   brand protection 354  
   counterfeit pharmaceuticals 171–2, 174  
   scale of product counterfeiting 285–6, 293  
 China, initiatives to stem illicit trade (e-commerce) 123–6  
   actors in e-commerce 124–6  
   government-led initiatives and criminal enforcement policy 136–44, 150–53  
   gross merchandise value (GMV) structure 125  
   growth of e-commerce 123  
   inter-agency coordination 138–41  
   legislative and regulatory framework 126–35  
   private sector initiatives 144–9  
 China Food and Drug Administration (CFDA) 138  
 Chinese General Administration of Quality Supervision, Inspection and Quarantine (AQSIQ) 145, 151, 153  
 Chiu, H.-C. 410, 419  
 Chivers, C.J. 292  
 Chu, K. 169  
 Cisco 368  
 civil liability 66–7, 135  
 Clift, C. 388  
*Columbia Journal of World Business* 209  
 Comité Colbert (France) 214, 216, 217  
 communication-related consumer-directed anti-counterfeiting measures (CAMs) 396–7  
 compliance programs 63–4, 65, 66–8  
 component suppliers 434–5, 440, 479, 480, 481  
 Computer Fraud and Abuse Act (CFAA, 2003) 267  
 computers, personal 260–62  
 confiscation, assets 37–8  
 “Confiscation of the Proceeds of IP Crime” (UNICRI and BASCAP) 37  
 consumer awareness 22, 30, 182–3, 194–5, 355, 357, 378–9, 396–7, 409, 447–8  
 consumer demand, anti-counterfeiting tactics to diffuse 387–9, 398–9  
   companies’ strategies 394–8, 415  
   consumer behavior 389–94, 396, 447–8  
 consumer demand, for counterfeit products 279, 290–92  
   factors influencing 200–206, 389–94, 418–19  
   significance of addressing 425  
   tobacco 243–5, 247–9, 250  
   *see also* social media, and intellectual property rights (IPRs) (study)  
 consumer-directed anti-counterfeiting measures (CAMs) 388, 395–9, 419  
 consumer profiles, counterfeit luxury goods 205–6

- consumer protection, China 126, 127, 128, 130, 132
- Consumer Protection Officers (CPOs) 461
- consumerism 17, 202, 391
- Container Control Program 41
- Cooper, S. 211
- coordination, institutions 39–40
- copyright
  - automated tools 444–5
  - China 127, 139
  - consumer awareness 396, 447–8
  - Digital Millennium Copyright Act (DMCA, 2001) 268–9, 336, 356, 446
  - enforcement and regulation, outdated 268–9
  - Federation Against Copyright Theft (FACT) 285, 293–4, 298
  - and Internet piracy 263–4, 271–3
  - legislation, need for new 376
  - ‘six-strike’ initiative 265–6
  - and social media 293–4
  - U.S. Copyright Office 91–2
  - website blocking 448–9
  - see also* Internet, piracy on; music piracy
- Copyright Alert System 265–6
- Cote, Judge Denise 327–8
- Council of Europe Convention on the Counterfeiting of Medical Products and Similar Crimes Involving Threats to Public Health (MEDICRIME Convention) 42, 181
- Council of Fashion Designers of America (CFDA) 214, 215
- Council’s Opinion on Strengthening Governance of Internet Infringements and Counterfeiting on the Internet* (2015, China) 136–7
- Counterfeit Culture* 289
- Counterfeit Detection Device (CD3) 184
- Counterfeit Drug Penalty Enhancement Act (2011) 180
- counterfeiters
  - behavior types 415–16
  - partnerships with 422
- counterfeiting
  - definition of 387
  - as global problem 424, 432
  - summary of 343–4
- Creative Content UK 447
- credit systems, China 130, 151
- crime prevention 22–3
- crimeware 346
- criminal liability 62–6
- Crosse, Marcia 169
- Crupnick, Russ 326
- Cukier, K. 323
- ‘culpability score’ 64–5
- cultural acceptance, counterfeit products 17–18, 118, 200–201, 203–4, 234–5
- cultural artefacts 46
- currency counterfeiting 86, 466, 474
- customs, and transport operators 441
- Customs and Border Protection (CBP, United States) 85, 241
- cyberlockers 345, 369–70
- cybersquatting 351
- Danaher, B. 408
- Dark Web 347–8, 366, 370
- Darknet 348, 370, 371, 375–6
- Darkrode 374, 375, 376
- D’Astous, A. 410
- data
  - accuracy of 106
  - analysis 66, 449
  - availability of 25, 418
  - backing up 357
  - limited value of, seizures 281, 283, 286, 425
  - on piracy 356
  - and validity of studies 425
- data matrix codes 469, 475
- Deep Web 347–8, 370
- Defense Distributed 48
- defensive strategy (anti-counterfeiting), studies on 407
- demand, *see* consumer demand, anti-counterfeiting tactics to diffuse; consumer demand, for counterfeit products
- Demos 293
- DesignsFauxReal.com campaign 396, 397
- detection 19–20, 38; *see also* authentication methods, detecting counterfeits in supply chain
- deterrence theory 265
- DHL 449
- Digital Citizens Alliance 370–71, 373, 376
- Digital Millennium Copyright Act (DMCA, 2001) 268–9, 336, 356, 446
- Digital Rights Management (DRM) 322
- disruption schemes (Internet piracy) 266
- distribution 18, 21, 209
- distribution-related consumer-directed anti-counterfeiting measures (CAMs) 398
- domains 178, 341–2, 343, 350–53, 452, 453–4
- Dredge, Stuart 298
- drug cultivation, provision of alternatives 41–2
- Drug Supply Chain Security Act (DSCSA, 2013) 180–81, 478
- drugs, illegal 58, 59, 264, 373; *see also* pharmaceuticals, counterfeit

- due diligence  
 and customers 436–7, 438  
 Internet infrastructure providers 453  
 Internet sites, platforms and portals 452–3  
 and payment service providers 455  
 and suppliers 435–6, 438, 456  
 and transport 440–41
- Eban, K. 165  
 eBay 214, 215, 294, 297, 298, 305  
 Eckstein, G.M. 211  
 Edwards, C. 32  
 Ehrenberg, Rachel 173  
 Eijk, N. van 387  
 Eisend, M. 201  
 Electronic Frontier Foundation (EFF) 297  
 email blocking 357  
 email scams 347  
 enforcement issues, illicit trade in goods 30–31  
 asset confiscation 37–8  
 and broader security agenda 46–7  
 economic and trade factors 40–41  
 future possibilities 46–50  
 institutional factors 39–40  
 intelligence, use of 38–9, 449  
 international treaties 35–7, 39, 42, 47  
 legislation 33–5, 37–8  
 organized crime 31–2, 34–5, 172, 233–5, 245, 248  
 penalties 33–4  
 private–public partnerships 42–6, 107  
 social factors 41–2  
 stereotypes and perceptions 32–3  
 entertainment industry, online brand  
 protection case study 361–2  
 ‘ePharmony’ 183  
 Espinel, Victoria 91  
 ethics, consumers 388–9  
 Euromonitor International 224, 226, 230, 237, 243  
 European Anti-Fraud Office (OLAF) 226, 227, 243, 246, 251  
 European Commission (EC) 282, 288, 290, 447  
 European Commission Eurobarometer Survey 248  
 European Union Intellectual Property Office (EUIPO) 42–3, 281, 290–91, 297  
 Europol 375, 376  
 evidence, digital, difficulty in collecting 142  
 excise tax, Mexico 106, 115, 117–18  
 Executive Office of the President of the United States 90–91
- Facebook 284–5, 290, 292–3, 294, 295, 298, 299, 300–302, 305–6, 308–9, 368–9
- Fake Britain* 287, 296  
*Fake Trade* 287  
 fashion industry 214, 215, 292  
 FATF-Style Regional Bodies (FSRBs) 56–7  
 Federal Bureau of Investigation (FBI, United States) 89–90, 371, 373, 374, 375–6, 378  
 Federation Against Copyright Theft (FACT) 285, 293–4, 298  
 Fejes, Z.L. 17  
 file sharing 332–4, 345, 387, 396  
 music 322, 323, 326  
 film industry 366, 379, 408, 410, 417  
 and Internet piracy 263, 271, 272  
 Financial Action Task Force (FATF) 46, 52, 68  
 Best Practices Paper 65–6  
 recommendations 53, 55–9, 62  
 fines, ‘culpability score’ 64–5  
 ‘fingerprinting’ 468  
 firearms 42, 48  
 Flynn, Stephen 57  
 food industry 138, 439  
 Force, Carl Mark, IV 373  
 forensic analysis 464–5  
 France, anti-counterfeiting campaign 214, 216, 217  
 fraudcasting 357  
 Free Trade Zones (FTZs) 40, 41  
 Fried, Stephen 157  
 Frontier Economics 432  
 Fryxell, G.E. 410, 415, 418
- Gates, Bill 260, 262  
 General Administration for Foreign Trade Audit (AGACE, Mexico) 101–3  
 enforcement programs 104–7  
 future opportunities and priorities 120, 121  
 international collaboration 109  
 outcomes 110–18  
 General Trade-Related Index of Counterfeiting for products (GTRIC-p) 80, 224, 225  
 George, Sallie 250  
 Giles, M. 329  
 Global Intellectual Property Center (GIPC) 280, 287  
 Gols, T. 387  
 goods, sub-valuation of 105–6, 115  
 Google 263, 286, 292, 300–301, 305, 336, 368–9, 445, 449  
 Gopal, R.D. 407  
 Gostin, L. 158–9, 166, 167  
 government  
 coordination role 457  
 costs of counterfeiting 15  
 effectiveness of 417–18, 424  
 role in protecting rights of citizens 97, 102–3

- GOZ 375  
 Granzin, K.L. 209, 420  
 Grossman, G.M. 194–5  
 GS1 469–70  
*Guardian* 234  
*Guidelines for Regulating the Standard Terms of Online Trading Platform Contracts* (2014, China) 131–2  
 Guido, Ron 1, 157  
 Gupta, Sanjay 171
- ‘Hard to Find Rx’ 169, 170  
 Harris, Justine 20–21  
 Harvey, M.G. 207, 411, 415  
 health and safety risks, counterfeits 14, 32–3, 82, 83, 98, 158, 162–3, 234–5, 436  
 Heap, Imogen 329  
 Heinonen, Justin A. 13–14, 18, 19, 20, 23  
 Her Majesty’s Revenue and Customs (HMRC, United Kingdom) 227, 229, 231–2, 234, 241, 244, 246, 247, 248, 249–50, 286  
 Herrington, Jim 173  
 Herstein, R. 408, 418–19  
 Hoecht, A. 408, 410  
 Hofmann, Margarete 251  
 holographic images 184, 185, 239–40, 462–3, 465, 466, 467, 477–8  
 Homeland Security Investigations (HSI, United States) 85–6  
 Hong Kong Customs 48–9  
 Hopkins, D.M. 288, 309
- illicit trade, nature of 1, 97–9  
 ‘illicit whites’ (cigarettes) 227–9, 232–3  
 Immigration and Customs Enforcement (ICE, United States) 85–6, 108–9, 230  
 imports, non-return of temporary 105  
 information sharing 44, 45–6, 65, 108–9, 119–20, 457  
 injunctions 148  
 inks 467, 468  
 Instagram 283, 292, 369  
 Institute of Medicine (IOM, United States) 158–9, 165  
 Institute of Research Against Counterfeit Medicines (IRACM) 175  
 institutions, and illicit trade 39–40  
 intellectual capital, illicit trade in 49–50  
 Intellectual Property Office (IPO, United Kingdom) 276, 281, 296, 300  
 intellectual property rights (IPR) protection  
 China 133–6, 137, 138–44, 146–9, 150–53, 211  
 United States, principal agencies 83–5
- see also* copyright; Internet, piracy on; music piracy; social media, and intellectual property rights (IPRs) (study)  
 Intellectual Property Rights Unit (IPRU, United States) 89  
 intelligence, use of 38–9, 449  
 Interactive Policy Making (IPM) tool 42  
 intermediaries, role in stopping counterfeiting and piracy 432–4  
 BASCAP initiatives 439, 451–2  
 best practices, suggested 440–42, 451–7  
 customers, knowing 436–7, 438, 440, 456  
 industry standards and codes of practice 437, 439, 456  
 landlords 441–2  
 online intermediaries 442–56  
 physical intermediaries 434–42  
 suppliers, knowing 435–7, 438, 440, 456  
 transport operators 440–41  
 International AntiCounterfeiting Coalition (IACC) 450  
 International Convention for the Suppression of the Financing of Terrorism (1999) 47  
 International Federation of the Phonographic Industry (IFPI) 450–51  
 International Monetary Fund (IMF) 56  
 International Tax and Investment Center (ITIC) 246  
 international trade system, vulnerability of 57–8  
 Internet 19  
 Dark and Deep Web 347–8, 366, 370  
 growth of 340–41, 367–8  
 infrastructure providers 443, 453–4  
 online intermediaries 442–56  
 online safety, awareness of 378–9  
 sites, platforms and portals 442–3, 452–3  
 threat, growth of 216, 219  
 traffic patterns 368–9  
*see also* Internet, piracy on; Internet Service Providers (ISPs)
- Internet, illicit trade on 366–7, 443  
 identifying masterminds of 373–4  
 illicit supply chain ecosystems, creating 369–73  
 strategies to impede 375–9  
 tobacco 241  
*see also* China, initiatives to stem illicit trade (e-commerce); social media, and intellectual property rights (IPRs) (study)
- Internet, piracy on 259–60, 344–5, 366, 369–70, 443  
 business models, alternative 270

- consumer behavior and motivation 389–91,  
 392, 393–4, 396  
 curbing, alternative approaches to 268–70  
 current state of 263–4  
 definition of piracy 387–8  
 factors supporting illicit activity 267  
 future of 271–3  
 history of 260–62  
 legislation 268–9  
 motivation 266  
 nature of pirated products 390–91  
 responses to 265–70, 355–6, 379, 394–6, 398,  
 444–57  
 scale of 432  
 terminating repeat infringers 446–7, 453–4,  
 455  
 website blocking 448–9, 453–4  
*see also* copyright; music piracy; online  
 brand protection
- Internet Corporation for Assigned Names and  
 Numbers (ICANN) 178, 342, 343, 452,  
 453
- Internet Service Providers (ISPs)  
 best practices 454  
 and copyright 265–6  
 notice and takedown schemes 445–6  
 terminating repeat infringers 446–7, 454  
 website blocking 433, 448–9, 454
- Internet World Stats 367
- INTERPOL**  
 awareness raising 33  
 illicit tobacco trade 225, 226, 227, 231,  
 233–4, 235, 245, 247, 250  
 information sharing 44  
 Internet, problem of 241  
 pharmaceutical crime 36, 160, 163, 172, 173,  
 186
- investigations  
 China 139–42, 152  
 illicit trade 34–5, 38–9  
 intelligence-driven 38–9  
 joint investigative teams (JITs) 37  
 and online brand protection 357–8  
 organized crime 34–5  
 private sector, role of 43–4  
 product counterfeiting 20–21, 38
- IPM (Interface Public-Members) 476–7
- Ireland, illicit tobacco trade 244, 249
- ISIL 46
- Ismail, M. 478
- Israelite, David 328
- Jacobs, L. 209–10
- James, Barry 366
- Japan Tobacco International (JTI) 224
- Jeffray, C. 32
- Jin Ling 228–9, 233
- Johnny Walker Scotch whisky 462
- Johnson & Johnson 471, 472, 473
- joint investigative teams (JITs) 37
- Kaikati, J.G. 207
- Kasteler, J. 311
- Kent, G. 420
- Keupp, M.M. 211
- Kindle 271
- Kinghorn, Rodney 16
- know your customer (KYC) programs 436–7,  
 438, 440, 456
- know your supplier (KYS) programs 436–7,  
 438, 440, 456
- KPMG 226, 227, 229, 231, 237–8, 241, 245
- Krasodomski-Jones, Alex 293
- Krechevsky, C. 209
- La Salada 41–2
- LaGarce, R. 207
- Lancet* 157
- landlords 435, 441–2
- Leisen, B. 411
- Lennard, D. 165
- Li, L. 212
- liability  
 China 134–5, 144  
 civil 66–7, 135  
 criminal 62–6
- licensing 422–3
- LinkedIn 357
- Linshi, J. 328
- Lomas, Natasha 293
- Luna, D. 79
- luxury goods, counterfeit 193–4  
 academic literature on 199–200  
 companies' responses to 206–19  
 consumer demand, role of 200–206  
 effect on original brands 197, 199  
 global statistics 196–7, 198  
 and social media 292  
 spectrum of 194–6
- Lybecker, K.M. 410, 420
- Madrigal, A.C. 284
- Majmundar, M. 244
- Malaysia, pharmaceuticals authentication  
 system 477–8, 479
- malvertising 372–3
- malware 264, 346, 349, 366–7, 370–72, 375
- Manufacturing, Maquila and Export Service  
 (IMMEX) companies 105, 111
- MarketLine 159

- MarkMonitor 187–8, 279, 287, 290, 294, 345  
 Marti, D. 79  
 Matlis, D. 165  
 Mayer-Schoenberger, V. 323  
 McNulty Memo 65  
 Meditag 477–8  
 Memorandum Regarding Principles of Federal  
   Prosecution of Business Organizations  
   (2006) 65  
 Mexican Tax Administration Service (SAT)  
   100–101  
   future opportunities and priorities 120,  
   121  
   international collaboration 108–10  
   outcomes 110–18  
   Strategic Plan, 2014–2018 103–4  
 Mexico, initiatives to stem illicit trade 97–9  
   audits 112, 113–14  
   capacity building 107–8  
   certification programs 116–18, 121  
   current regime 100–103  
   customs brokers patents 112  
   customs enforcement 111  
   future opportunities and priorities 118–21  
   history 99–100  
   international collaboration 108–10, 114–15,  
   119–20  
   main programs implemented 103–10  
   outcomes 110–18  
   post-clearance audit enforcement 111  
   public–private partnerships 107, 115–16  
   risk operations 111  
   seizures 111, 113  
 Microsoft 260, 262, 263, 269, 270, 379  
 Microsoft Digital Crimes Unit (DCU) 269  
 mobile apps 349  
 Modern Distribution Management 166  
 money laundering, *see* trade-based money  
   laundering and terrorist financing  
 Morales, A.C. 291, 310  
 Moss, T. 169  
 MP3 325–6  
 music industry  
   and blockchain 329–31, 336  
   business models 270, 327, 328–9, 335, 395,  
   398  
   digital music, future of 329–31  
   future of 272–3  
   pricing 271  
   recent changes in 326–9  
   revenues 322, 323, 334–5  
 music piracy 322–4, 409, 410  
   attitudes towards 322, 392, 394, 396  
   and blockchain 330–31, 336  
   copyright 268, 271  
   future possibilities 331–5  
   history of 324–6  
   and Internet 263, 288, 374  
   and payment services 450–51  
   remedies for 335–7, 396, 417, 447–8  
   and streaming 328–9, 331–5, 336  
   website blocking 448  
 mutual legal assistance (MLA) 36  
 Naim, M. 282, 292  
 Nakamoto, S. 329, 330  
 Napster 324  
 Nasheri, Hedieh 13  
 National Association of Boards of Pharmacy  
   (NABP, United States) 169, 171, 178,  
   182  
 National Cyber Security Alliance (NCSA)  
   378–9  
 National Intellectual Property Rights  
   Coordination Center (IPR Center, United  
   States) 86, 296  
 National Leading Group (China) 136, 150–51  
 national security risks 15–16  
 National White Collar Crime Center (NW3C,  
   United States) 93  
 Naylor, R.T. 23  
 Netflix 368–9, 379, 380  
 NetNames 279–80, 285, 287, 295, 369–70  
 Newton, Paul 158  
 Nill, A. 411  
 Noble, Ronald 157  
 notice and takedown schemes 445–6; *see also*  
   takedown  
 OECD (Organization for Economic  
   Cooperation and Development) 109, 224,  
   225, 280–81, 290, 432  
 Ofcom 284, 291  
 offensive strategy (anti-counterfeiting), studies  
   on 407, 415  
 Office for Harmonization in the Internal  
   Market (OHIM) 281, 282, 288, 290  
 Office of Criminal Investigations (OCI, United  
   States) 175–6  
 Office of Intellectual Property Enforcement  
   (IPE, United States) 90  
 Office of Intellectual Property Rights (OIPR,  
   United States) 87  
 Office of the U.S. Intellectual Property  
   Enforcement Coordinator (IPEC) 90–91  
 Office of the U.S. Trade Representative  
   (USTR) 90  
 oil 46  
 Oldknow, Chris 293, 298–9  
 Olsen, J.E. 209, 420

- online brand protection 340
  - anti-fraud actions 356–7
  - anti-piracy programs 355–6
  - best practices 350–58
  - challenges 342–50
  - domains 341–2, 343, 350–53
  - future of 358
  - industry examples and case studies 359–63
  - and offline 357–8
  - online landscape growth 340–41
  - trademarks 341
- online pharmacies
  - illegal 166, 169–71, 173, 182–3, 186–8
  - legal 171, 178
- ‘Operation Onymous’ 182
- Opinions on Strengthening Coordination of the Supervision of Domestic Internet Trading Websites and Actively Promoting E-Commerce Development* (2014, China) 137–8
- Opinions on Striving to Develop E-Commerce to Speed Up the Cultivation of New Economic Driving Force* (2015, China) 138
- organizations
  - civil liability 66–7
  - compliance programs 63–4, 65, 66–8
  - criminal liability 63–6
- organized crime
  - asset confiscation 37–8
  - China 144
  - illicit trade 31–2, 34–5
  - international treaties 35–7, 39
  - La Salada 41–2
  - legislation 34–5
  - pharmaceuticals 172
  - product counterfeiting 15
  - tobacco 233–5, 245, 248
- Orme, T. 408
- Ossola, Alexandra 157–8, 165
- Pacific Alliance 120
- packaging 415, 421, 424, 466
  - tobacco 226–7, 235–9, 240
  - see also* holographic images
- Pandora 270, 327–8, 329, 371
- Parker, Sean 292
- Partnair 436
- partner compliance, brand damage 344, 354
- ‘passable products’ 466
- Pastore, A. 212, 213
- patents 87–8, 153
- pay-per-click ads 350
- payment mechanisms 188, 330–31, 449, 450–51, 455–6
- penalties 33–4
- asset confiscation 37–8
- China 129, 131, 143, 144
- counterfeit pharmaceuticals 180
- ‘culpability score’ 64–5
- deterrence theory 265
- illicit tobacco trade 246–7
- Internet piracy 265
- product counterfeiting 19, 20–21
- sentencing 62–3
- Penz, E. 393
- personal computers 260–62
- petroleum 46
- Pew Center 284
- Pfizer 183, 187
- Pharmaceutical Security Institute (PSI) 160–61, 162
- pharmaceuticals, counterfeit 157–8
  - agencies designed to combat 175–8
  - anti-counterfeiting tactics, evolution of 179–88
  - authentication and tracking 184–5, 471, 472, 473, 477–9, 481
  - consumer awareness 182–3
  - criminal groups 36, 171–5
  - definition of 158–9
  - detection of 461, 462
  - distribution network, legitimate 166, 167–8
  - future research 188–9
  - growth in illicit trade 160–62
  - health and safety risks 14, 158, 162–3
  - international treaties 42
  - low barriers to entry 173–4
  - measuring harm to consumers 162–3
  - online brand protection, case study 359–60
  - opportunities, reasons for 1
  - payment mechanisms, working with 188
  - profits 173
  - safety features, European Union 45
  - seizures and takedowns 81, 82, 83, 186–8
  - supply chain 21, 163, 165–9, 171, 180–81, 184
  - synopsis of licit market 159–60
- pharmacies, online
  - illegal 166, 169–71, 173, 182–3, 186–8
  - legal 171, 178
- Phillips, T. 297
- phishing 345–6, 362–3, 409
- piracy, *see* intermediaries, role in stopping counterfeiting and piracy; Internet, piracy on; music piracy; software piracy
- Pirate Bay 267, 373–4, 376, 377
- pledge models 270
- Poddar, A. 291
- Poland, illicit tobacco trade 231
- ports 40–41



- Power, G. 235
- Prabhakar, H. 297
- price-related consumer-directed anti-counterfeiting measures (CAMs) 398
- PricewaterhouseCoopers (PwC) 18, 372
- private–public partnerships, *see* public–private partnerships
- product codes 469–70
- IPM database (World Customs Organization, WCO) 476
  - pharmaceuticals 478
  - and smartphones 469, 472–3, 475–6
  - track and trace 470–72, 473, 475–6
- product counterfeiting
- 3D printing 19, 47–9, 358
  - case studies (online brand protection) 359–62
  - consequences of 14–16, 98–9, 288, 289, 309–11, 436
  - consumer demand, factors influencing 200–206, 290–92, 389–94, 396, 415, 418–19
  - factors shaping criminal opportunity for 16–22
  - future research 24–5
  - growth of 13, 18
  - identification of counterfeit products 42–3, 48–9, 194–5, 206, 290, 421, 424
  - and Internet 264
  - La Salada 41–2
  - markets, types of 194–5
  - nature of 13, 22–5
  - product assembly close to point of sale 38
  - scale of 19–20, 24, 79, 196–7, 224, 225, 280–81, 283, 432
  - spectrum of deception 195–6
  - types, examples of 13–14
  - see also* anti-counterfeiting strategies (ACS), strategic effectiveness; authentication methods, detecting counterfeits in supply chain; consumer demand, anti-counterfeiting tactics to diffuse; intermediaries, role in stopping counterfeiting and piracy; luxury goods, counterfeit; pharmaceuticals, counterfeit; social media, and intellectual property rights (IPRs) (study); tobacco, illicit trade in
- product-related consumer-directed anti-counterfeiting measures (CAMs) 395–6
- profits
- pharmaceuticals, counterfeit 173
  - product counterfeiting 18
  - tobacco, illicit 229, 230, 245–6
- PROTECT IP Act (Preventing Real Online Threats To Economic Creativity and Theft of Intellectual Property Act, PIPA, 2011) 323
- Protocol against the Illicit Manufacturing of and Trafficking in Firearms, Their Parts and Components and Ammunition, supplementing UNTOC 42
- Protocol to Eliminate Illicit Trade in Tobacco Products 37, 45
- Public Health Action (United Kingdom) 237
- public–private partnerships
- countering illicit trade 42–6, 107, 115–16
  - e-commerce, China 145, 146–9
- Puddephat, Richard 483
- punishments, *see* penalties
- Purkait, S. 409
- Pykalainen, T. 409
- QR codes 469, 475
- Racketeer Influenced and Corrupt Organizations (RICO) Act 269
- radio frequency identification (RFID) technology 184
- Ranking Digital Rights (RDR) Corporate Accountability Index 297
- ransomware 346, 371
- Raustiala, K. 291
- raw materials suppliers 434–5, 440
- record players 324
- redirects (domains) 352
- regulation, finance and banking 53–5
- Remote Access Trojans (RATs) 346, 372
- reporting of counterfeiting 22
- Resendez, Mariano 100
- Reuter, P. 244
- Rifkin, J. 276
- risk-reward structure, product counterfeiting 19–21
- RogueBlock program 450
- Roles and Responsibilities of Intermediaries: Fighting Counterfeiting and Piracy in the Global Supply Chain* (2015, BASCAP) 433
- Romero, Matias 100
- Ronkainen, I.A. 207, 411
- Rosin, Larry 322
- Roth, John 176
- Rousseau, Jean Jacques 97
- Royal United Services Institute (RUSI, United Kingdom) 243, 246
- royalties 268, 327–9, 336
- Rutter, J. 279, 290

- Safeguarding America's Pharmaceuticals Act (2011) 180
- Sanders, G.L. 407
- Sandvine 368–9
- Saporito, B. 209, 411
- Schuchert-Güler, P. 201
- Schweizer, Kristen 173
- Scott, G. 264
- search engines 454–5
- Secret Service (United States) 86, 466
- seizures
  - decline, significance of 282
  - limited value of data 281, 283, 286, 425
  - Mexico 111, 113
  - pharmaceuticals, counterfeit 81, 82, 83, 186, 187
  - social media study 303
  - tobacco, illicit 241, 249–50
  - types of goods 197, 198
  - United States 80–83
  - value of 264
- sentencing 62–3
- Seychelles Economic Development Act 57
- Shapiro, C. 194–5
- shopping environment 392–3
- Shultz, C.J., II 209, 411
- 'Silk Road' 166, 169, 182, 264, 370, 371, 373, 376
- Singer, J. 88
- Sisario, B. 328
- 'six-strike' initiative (copyright) 265–6
- Sklamberg, Howard 163, 165
- Small Arms Survey 48
- smartphones 469, 472–6
- Snapchat 369
- social factors, demand for counterfeit products 203–4, 244, 391–2, 396
- social media 147, 348–9
  - and Internet traffic patterns 368–9
  - online abuse 293, 297
  - terms and conditions 291, 297
  - use of 283–5, 304–5, 341
- social media, and intellectual property rights (IPRs) (study) 276
  - aims and objectives 276–7
  - alternative approaches 311–13
  - behavior, influence of social media on 311
  - behavioral economics approach 311
  - characteristics of infringement 289–96
  - consumer survey 278, 306–9
  - consumer tracker and survey results 302–6
  - drivers for complicit behavior 312
  - economic assessment 278–9, 308–11, 312
  - future, recommendations for 315–16
  - impact of infringement 286–9
  - industry and trade bodies' responses 285–6
  - methodology 277
  - network effects 311–12
  - opportunities for protecting IP 296–302
  - research outcomes 279–85, 313–15
  - research structure 277–9
- soft law, finance and banking regulation 53–5
- softlifting 388
- software piracy 260, 262, 263, 264, 268, 378, 388, 395–6
- Solomon, E. 230
- SONGS Music Publishing 329
- Sonmez, M. 409, 421
- source economies, goods seizures 81–2
- Southeast Asia, counterfeit pharmaceuticals 174–5
- Spink, John 18
- Spire Research and Consulting 290, 296
- Spotify 270, 328
- Sprigman, C. 291
- spyware 346
- Staake, T. 409
- State Administration for Industry and Commerce of the PRC (SAIC, China) 137–8, 139, 142, 152–3
- State Council (China) 136–7, 138, 153, 154
- Stevenson, M. 408
- Stop the Piracy Act (SOPA, 2011) 323
- Stöttinger, B. 205, 393
- Strategy Targeting Organized Piracy (STOPfakes program, United States) 92–3
- Stroppa, A. 292
- Stumpf, S. 176, 177, 180, 378, 399, 408, 409, 415
- sub-valuation of goods 105–6, 115
- substandard, spurious, falsely labeled, falsified and counterfeit (SSFFC) medical products 161–2
- Sudler, H. 409
- Sullivan, Brandon A. 15–16, 283
- Sunde, Peter 374
- suppliers 434–5, 440
  - components 434–5, 440, 479, 480, 481
  - know your supplier (KYS) programs 436–7, 438, 440, 456
- supply chain
  - complexity 21, 32
  - distribution-related consumer-directed anti-counterfeiting measures (CAMs) 398
  - pharmaceuticals 21, 163, 165–9, 171, 180–81, 184
  - security, technological solutions 44–6
  - tobacco 45, 227, 229–30
  - see also* authentication methods, detecting counterfeits in supply chain;

- intermediaries, role in stopping counterfeiting and piracy
- Supreme People's Procuratorate (China) 139–40, 141, 143
- Sutton, Warner P. 100
- Swiss Watch Industry 216, 218
- Syria 230
  
- taggants 468
- takedowns 147, 186–7, 263, 269, 298, 299, 336, 445–6, 452, 454, 455
- Tamiflu 173, 174
- Taobao (China) 134, 135, 142, 148
- tape recorders 325
- tax stamps 239–40, 475
- taxation, Mexico, *see* Mexican Tax Administration Service (SAT)
- Taylor, S.A. 409
- technology
  - advances, and product counterfeiters 19, 48
  - anti-counterfeiting and anti-piracy 212, 395, 415, 421, 444–5, 452–3, 456
  - authentication of pharmaceuticals 184–5
  - e-commerce platforms 146–7
  - identification of counterfeit products 48–9
  - labeling 209
  - luxury goods companies 214
  - online brand protection 354–5
  - and supply chain security 44–6
  - tobacco, illicit 235, 236, 239–40
  - see also* authentication methods, detecting counterfeits in supply chain
- telecom industry, online brand protection case study 362–3
- terms and conditions, social media 291, 297
- terrorist groups 15–16, 46–7, 233–4, 241; *see also* trade-based money laundering and terrorist financing
- Texas Instruments 422
- Tiku, N. 298
- Titcomb, James 285
- tobacco, illicit trade in 223–4
  - affordability, consumer 243–5
  - asset confiscation 37
  - consumer complicity 247–9
  - factors contributing to 241–50
  - geographic characteristics 249–50
  - nature and characteristics of global market 231–3
  - organized crime 233–5, 245, 248
  - packaging as deterrent 236–9, 240
  - penalties 246–7
  - product types 226–30
  - profits 245–6
  - responses to 251
  - scale of market 224–6
  - supply chain 45, 227, 229–30
  - tax stamps, role of 239–40, 475
  - tobacco as 'ideal smuggled product' 250
  - use of Internet for distribution 241
- Tor 348, 370, 371, 376
- track and trace 470–72, 473, 475–6
- trade-based money laundering and terrorist financing 52–3, 67–8
  - civil liability, reducing 66–7
  - criminal liability, reducing 62–6
  - definition of trade-based money laundering 60
  - Financial Action Task Force (FATF) recommendations 55–9, 62
  - identification of 60–62
  - soft law, use in coordination of finance and banking regulation 53–5
- trade data analysis 66
- Trade Transparency Unit (TTU) 108–9, 114–15
- Trademark Counterfeiting Act (1984) 38
- trademarks 17, 38, 341
  - China 128, 135, 142, 143, 146, 147
  - consumer awareness 447
  - and domains 351, 352
  - and Facebook 301–2
  - and Google 300–301
  - importance of registering 207
  - international registration 353
  - over-reliance on 291
  - and Twitter 302
  - U.S. Patent and Trademark Office (USPTO) 87–8
- Trading Standards 281–2, 286, 295–6, 297, 300, 301
- training, counterfeit detection 461, 481–2
- Transcrime 226, 230, 231, 245, 249
- transport 40–41, 82–3, 434, 435, 437, 439, 440–41
- treaties, international 35–7, 39, 42, 47
- Trojans 346, 366, 372
- Trott, P. 408, 410
- Twitter 286, 293, 294, 298, 299, 302
  
- U.K. Home Affairs Committee 247
- U.K., illicit tobacco trade 231–3, 234–5, 237, 239, 241, 243, 244, 246, 247, 249–50
- Ulbricht, Ross 373
- United Nations Convention against Corruption (UNCAC) 37
- United Nations Convention against Transnational Organized Crime (UNTOC) 35–7, 39

- United Nations Interregional Crime and Justice Research Institute (UNICRI) 33, 46
- United Nations Office on Drugs and Crime (UNODC) 171–2, 174
- United States, initiatives to stem illicit trade 79–80
- coordination of agencies 92–3
  - Department of Commerce (DOC) 86–8
  - Department of Homeland Security (DHS) 85–6, 160
  - Department of Justice (DOJ) 89–90, 371, 375, 376, 377–8
  - Department of State 90, 227, 234, 245, 246, 247
  - Executive Office of the President of the United States 90–91
  - incidence of counterfeit trade 80–83
  - Library of Congress 91–2
  - and Mexico 108–9, 114–15
  - principal agencies 83–5
  - seizures 80–83
- Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act (USA PATRIOT Act) 53, 62, 63–4
- Universal Product Codes (UPCs) 469–70
- U.S. Chamber of Commerce (USCC) 280, 376–7
- U.S. Commercial Service (USCS) 87
- U.S. Copyright Office 91–2
- U.S. Department of Commerce (DOC) 86–8
- U.S. Department of Homeland Security (DHS) 85–6, 160
- U.S. Department of Justice (DOJ) 89–90, 371, 375, 376, 377–8
- U.S. Department of State 90, 227, 234, 245, 246, 247
- U.S. Federal Aviation Administration (FAA) 436
- U.S. Food and Drug Administration (FDA) 163–5, 175–7, 181, 183, 184, 186, 187
- U.S. Government Accountability Office (GAO) 169, 264, 280, 281, 287–8
- U.S. Internal Revenue Service (IRS) 346
- U.S. Library of Congress 91–2
- U.S. Patent and Trademark Office (USPTO) 87–8
- Vagg, Jon 20–21
- Vaughn, Stephen 90
- Veblen, Thorstein 193
- Viagra 183, 187
- video streaming 345, 370, 379
- Vienna Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances (1988) 58
- VisiCalc 260
- Voluntary Industry Distributor Accreditation Program (VIDAP, United States) 436
- Walsh, M.G. 209
- Wang, C.-C. 409, 419
- Warez scene 374, 375
- Warren, Jim 262
- Waterman, D. 410
- websites
- best practices 452
  - blocking 433, 448–9, 453–4
  - production of 259
  - and track and trace 475–6
  - see also* takedowns
- Wells, David 379
- white-collar crime 23, 93
- WHO Framework Convention on Tobacco Control (FCTC) 251
- Wijk, J. van 411
- Wilcock, A.E. 212, 408
- Wilcox, K. 201
- Wilson, Jeremy M. 13–14, 16, 20, 21, 25, 283
- Witt, Stephen 374
- World Bank 56, 57
- World Customs Organization (WCO) 109, 110, 476–7
- World Health Organization (WHO) 158, 161–2, 251
- World Intellectual Property Organization (WIPO) 88
- Yang, D. 210, 211, 410, 411, 415, 416, 417, 418, 420, 421, 422
- Yellow Brand 295, 298
- YouTube 183, 268, 272, 368–9, 444
- YouWatch.org 369, 370
- Zimmerman, A. 212, 224, 283, 291–2, 297