

Online piracy: an emergent segment of the shadow economy. Empirical insight from Poland

Online piracy

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Bogdan Mróz

*Department of Management and Finance,
Warsaw School of Economics, Warsaw, Poland*

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Abstract

Purpose – The purpose of this paper is to investigate the underlying causes, scale and scope as well as the effects of piracy as a form of the shadow economy throughout Poland, drawing on the findings of secondary studies and author's questionnaire survey conducted in summer 2013.

Design/methodology/approach – An online questionnaire survey was accomplished using the computer-assisted Web interview method and real-time sampling technique, in June 2013. The survey involved 1,000 persons aged 15 years and older.

Findings – Polish consumers use pirated content, products and services primarily for financial reasons: 73 per cent of respondents point out to high prices of original products, while more than half (56 per cent) points at low incomes of Polish consumers. A significant percentage of respondents (over one-third) indicates the easiness of access to pirated goods and services. The most common activity among Polish internet users is to copy pirated music files (almost 40 per cent of internet users admit to that) and films (including watching the series in the network to which approximately 35 per cent of respondents confess to). These two kinds of files are also copied the most often – about 20 per cent of the respondents copy them once a month or more often. One-fourth of the respondents admit to copying pirated computer programs. The findings from the survey reveal that young Polish internet users demonstrate a rather permissive attitude towards online piracy that involves downloading music files or video and sharing them with other network users.

Research limitations/implications – The questionnaire survey did not cover all aspects of online purchasing behaviour of Polish internet users. The findings of the survey should be approached with some caution, given the intricate and sensitive nature of the research problématique.

Practical implications – Regulations regarding online purchases of goods and services are not attuned to the digital reality, which is exploited by online intermediaries. The research findings highlighted the motivational and behavioural aspects of Poles' online consumer behaviour, thus providing useful tips to curb online piracy.

Social implications – The implementation of relevant regulations to ensure respect and protection for intellectual property rights on the internet in Polish as well as EU legislation has acquired a rare immediacy and may reduce the scope of online piracy and other manifestations of shadow economy in the cyberspace.

Originality/value – An empirical insight into the online piracy among Polish internet users providing first-hand knowledge regarding their motivation and behavioural patterns.

Keywords Poland, Shadow economy, Internet, Online piracy, Product counterfeiting

Paper type Research paper

JEL classification – H3, H26, O17, O34



1. Introduction

Piracy proves to be one of the key segments of the shadow economy occurring in varying forms and concerning diverse consumer goods (e.g. luxury goods, clothing, footwear, music, films and computer software). A spectacular growth of cutting-edge technologies combined with internet expansion provides new, previously unforeseen opportunities of unlawfully exploiting the fruits of other people's labour as well as producing and distributing pirated content.

Dynamics of shifts occurring in the net, the cross-border nature of internet and the huge number of transactions taking place in the internet environment give a vast area of activity for abuses related to copyright infringement, thereby obtaining unreported income.

According to the PriceWaterhouseCoopers report published in 2013, around 7.5 million Polish people (almost 30 per cent of all internet users) make use of illegal, pirate internet websites offering copied video content leading to budget losses estimated at euro 122-170 million annually (PriceWaterhouseCoopers, 2013, p. 21).

This paper attempts to give an account of internet piracy as a form of the shadow economy across Poland based on available sources and reports coupled with a display of the author's findings from empirical research conducted in June 2013.

The remainder of the paper is organised as follows. Section 2 will focus on the factors stimulating the expansion of the online piracy in a global context and taking into account specific Polish circumstances. Section 3 will cover the issues related to the computer piracy. In Section 4, the findings of the author's empirical survey conducted in 2013 will be presented and commented. Section 5 will focus on the attempts to curb piracy and internet shadow economy in Poland and on the recommendations for regulators and policy makers. In the final section, the conclusions are drawn summarising the author's point of view and major findings.

2. Factors conducive to the expansion of internet piracy – in a global context and with specific polish determinants

The practice of counterfeiting products manufactured by well-known brands has been commonplace for a long time. The counterfeited products may be divided into four categories:

- (1) not excessively complicated technical products of commonly recognisable brands;
- (2) expensive products technically advanced, e.g. computer games, entertainment industry products, vehicle and aircraft parts;
- (3) luxury, up-market, prestigious products of well-known and recognised brands, e.g. brand clothing, accessories, perfumes, expensive gifts; and
- (4) products being produced as a result of thorough scientific research and the application of cutting-edge and innovative technologies, e.g. pharmaceuticals, computer software, etc. (Mróz, 2011, p. 17).

In the remaining part of the paper, a focus will be mostly brought to internet piracy as well as its forms and aspects that originate from expansion of new information and communication technologies.

Free-of-charge downloading of music files from internet, sending them to friends and colleagues, as well as individuals producing records using digital computer recordings gains popularity among internet users. The technology of digital recording combined with broad access to numerous music works on the internet allows unrestrained private copying, and thereby posing a threat to copyright infringement. A traditional piracy practice was replaced by phonographical internet piracy.

The boom in internet piracy results from, among the others, a growing role of internet in business models adopted by film and record label producers, particularly in relation to distribution. In the recording industry, music expansion in the digital form yielded serious consequences by stimulating piracy growth. The first method of distributing music in a digital form free-of-charge was *peer-to-peer* (P2P) system. In 1999, a programme called Napster designed to share mp3 files through internet hit the market. When using P2P network, Napster users were able to download music files directly from other internet user's computers. Napster used to be very popular among students of the US higher education institutions which installed broadband internet connections in students dormitories on university campuses. At its popularity peak, the number of Napster users attained 26.4 million persons (Janowska, 2010, p. 193).

In 2002, following a string of litigation cases against copyright infringement, Napster was closed down (operation of the service was resumed following few years break, and it currently offers legal access to music files); yet, a variety of other file-sharing networks (e.g. eDonkey, Audiogalaxy, Gnutella, Kazaa, eMule) filled the void and thrived among online communities. However, in the face of persistent legal problems with copyright protection plaguing owners and users of file-sharing services, a new generation of P2P networks cropped up giving access to music with the use of encryption, e.g. Ants P2P, Rshare, Freenet, GUNet and Entropy. In essence, the application of encryption mechanisms made it hard to identify users of such networks and hold them legally accountable for copyright infringement (Janowska, 2010; Gałuszka, 2009).

It is over a decade since the birth of the first P2P services enabling sharing files or the debut of the first store selling music files (iTunes, 2002); in the meantime, a wide variety of similar services emerged operating on analogous principles, harnessing the unprecedented phenomenon of social media and implementing varied business models aimed to monetise gains from music. At the beginning, the major record labels (*majors*) were involved in fighting against portals making files accessible, accusing them of piracy and referring to copyright infringement. Though, as time passed, given the futility of their efforts made, majors in the recording industry began to slowly incorporate new trends and practices in consumer behaviours, driven by progress of information and communication technologies, into their marketing strategies and thus derive financial benefits.

Interesting insights are provided by the findings from GfK surveys which attempted to assess an impact of piracy on the film industry. It appeared that internet users who search in the net and download their favourite films also buy and legally watch just as many films. Interestingly, users of P2P services acquire film content more frequently than those refraining from watching pirated copies. In addition, pirate users attend cinemas more regularly than the remaining audience (Czubkowska, 2012; Anderson, 2009; Mróz, 2012a).

It is worthwhile mentioning the initiative taken by a renowned writer, Paulo Coelho, who placed the following announcement in the net: "Download my books for free and if

you like them buy a printed version. Let's show the industry that greed leads nowhere" and signed it as "Pirate Coelho" (Czubkowska, 2012).

In 2009, multiple social networking services integrated making it possible for users to communicate in real time, and location-based platforms such as Foursquare or Kickstarter were established enabling tracing of user's activity on an ongoing basis. After 2010, there was an exponential surge in sale of smartphones, tablets and diverse types of applications tailored to these devices.

Having access to major programmes, applications and principally social networking services, ushered in a new communication era; streaming services boosted as, among others, major recording labels (labelled *majors*) toned down their stance towards file sharing in the net. Streaming services (e.g. Deezer, Spotify) are music services offering music enthusiasts a new type of services involving access to multimillion tracks database for a monthly subscription fee lower than the price of one CD. After all, it appeared that responding to new consumers' trends may deliver substantial gains. In the aftermath of a considerable sales drop due to flourishing internet piracy and P2P networks facilitating file sharing among internet users, the music industry for the first time reported hefty income from licenses granted to streaming services. In 2012, income increased by 0.3 per cent following a few percentage point plunge (Muzyka w streamingu, 2014). In 2011, many shifts occurred in operations of social networking media – they became more personalised and attuned to recipient's needs, also in the context of privacy (including a change in the policy of Facebook). Furthermore, there was a rise in time devoted by mobile users to using the internet which is just one effect of the development of mobile applications and urge among internet users to be connected to net at any time and place.

A significant event that resonated in consumers' behaviours was the user-friendly service of *cloud computing* rolled out by Apple to synchronise files between various devices. Specifically, this is a service which does not require the purchase of a licence for any particular software, which thus provides a favourable basis for the advance of alternative forms of using various products and services, i.e. recording industry based on access over ownership.

Practices in the recording industry also take place in analogous forms in film production and distribution where new business models take shape starting from financing new projects and ventures (initiatives such as *crowdfunding*), ending with delivering a finished product to the final recipient. Films distributed via internet begin to outperform those recorded on traditional media. According to the most recent projections by PriceWaterhouseCoopers, global proceeds from services offering films in the Web, and films made available by paid TV operators via video on demand (VoD) will exceed the revenues from sale of DVD and Blu-ray in 2017. When we add proceeds from rent of films on media devices (showing a downward trend) to the film DVDs market, in 2017, the sale of films on media devices will still surpass the sale of film in the digital form, yet to an ever-decreasing extent. Accordingly, access to films in an electronic version will generate around US\$27 bn to the industry, whereas sale and rent of DVDs slightly above US\$31 bn (Lemańska, 2013).

In Poland, the principal drivers furthering internet piracy growth are as follows:

- growing penetration of broadband internet; in 2013, 66 per cent of households had access to the Web through landline broadband connection. It is projected that with the expansion of mobile internet in LTE technology, the rate should be close to the

average rate common for Western countries which stands at 80 per cent of households (PriceWaterhouseCoopers, 2013, p. 39 et seq.);

- increased number of mobile devices and development of mobile internet; in Poland, access to VOD via smartphones, in particular tablets gains popularity; in 2013, almost 10 per cent customers of mobile network used such devices;
- growing popularity of non-linear reception of content, that is a possibility of stopping, scrolling and watching programmes (images, films and music files) in selected sequence;
- enhanced relevance of online advertising; expenditures for online advertising in the second quarter 2013 soared by 16 per cent as compared to the analogues period in the previous year. According to estimates of PwC Media&Entertainment Outlook forecasted annual average pace of advertising market growth in internet is anticipated to account for almost 14 per cent over 2012-2017 (PriceWaterhouseCoopers, 2013, p. 40);
- speed of spreading and sharing information; expansion of social networking media bolstered the mechanism of recommendation and wide commenting on diverse content and sharing information how to reach the information. Thanks to the internet, consumers quickly learn about interesting content and desire to reach it as quickly as possible, using, among other sources, pirate internet networks;
- opportunity of downloading multimedia files; boosted capacity of personal computers and bandwidth enabled to transfer multimedia files with video content via internet. Persons sharing files do not want to pay for legal access to content, or the content is not yet available, for various reasons, in legal distribution channels; and
- immediate access; explicitly enhanced bandwidth of internet connections and progress of compression technologies made it possible to use video streaming which is an option to watch content in increasingly higher quality without the need to download video file to a local computer disc and without the necessity of waiting for downloading file (PriceWaterhouseCoopers, 2013, p. 40).

Alongside enumerated drivers concerned with expansion of new information and communication technologies, central to internet piracy growth across Poland are factors related to social and economic circumstances such as:

- lack of awareness or sense of minor harm when using networks offering illegal access to content;
- overtly meagre offer of internet networks giving legal access to content falling short of recipients' expectations; and
- unfavourable price to value relation in legal sources compared to services facilitating illegal access to content.

3. Computer piracy

Computer piracy involves illegal making and/or distributing unauthorised copies of software covered by copyright protection. Computer piracy may occur in the form of unauthorised making, downloading, sharing, selling or installing a single programme copy on more private or company computers than permitted by the licence.

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Five paramount types of computer piracy may be identified:

- (1) piracy among end users;
- (2) use of software on the server without access licence;
- (3) piracy in the internet;
- (4) sale of computers with illegal software installed; and
- (5) counterfeiting of software (Mróz, 2011, pp. 14-17).

Piracy among end users occurs when a user obtains unauthorised computer software in an unlawful manner.

This may assume the following forms:

- installing a programme from a single licensed copy on more computers than it is permitted;
- making copies of CD to install or distribute programmes;
- making use of opportunities for upgrading programme versions without legal software copy which is crucial for obtaining rights for upgrading; and
- exploiting software without respecting specific restraints with regard to software in educational version targeted to limited group of recipients or not intended for retail distribution (Mróz, 2011, p. 18).

Another type of piracy is unauthorised use of software on the server without an access licence. This is the case when too many employees working in the network use a major programme copy. For instance, this refers to the situation when a company has a local network and places programmes on the server used by a wide number of users. If software is operated by too many users than it is stipulated in terms and conditions of the licence, we also deal with a form of piracy, though it seems to be a minor abuse.

Internet piracy increasingly gains in importance which is attributed to rapid advance of information technologies and use of the network as a convenient platform for distribution of various goods and services as well as for communication with potential recipients and consumers. Internet piracy may come in the following forms:

- pirate websites providing free-of-charge access (or under a sharing scheme) for programmes to be downloaded;
- internet auctions offering counterfeited programmes or infringing copyrights in various manners; and
- file sharing networks such as *P2P* facilitating prohibited transfer of programmes protected by copyrights (Mróz, 2011, p. 18; Mróz, 2012a, pp. 72-73).

Another form of piracy is sale of computers with illegal software installed emerging when a company selling new computers installs illegal software copies on a hard disc with the aim of decreasing the price and making an offer more appealing to individual buyers. Also, this may apply to integrators selling and installing new programmes in companies.

Piracy may also include counterfeiting software consisting in illegal copying and selling copyrighted material and content. In retail sales, there are counterfeited copies of

CDs with pirated programmes alongside packages of extra materials (instructions, licence agreements, registration cards, labels and securities, etc.).

The use of pirated computer software presents a big problem in the era of development of internet and cutting-edge IT technologies. According to the Business Software Alliance report, a watchdog monitoring an unlicensed software market (compiled on the basis of the survey of 15,000 computer users in 33 countries) in 2011 around 42 per cent of PC software were used illegally throughout the world. The commercial value of the shadow market of pirated software surged from US\$58.8 bn in 2010 up to US\$63.4 bn in 2011 (Business Software Alliance, 2012; Shadow market, 2012). The piracy rate for PC software (that is percentage of software used illegally, without relevant licences and in breach of copyrights, in overall software sale) in developed economies stood at 24 per cent, whereas in emerging markets was as much as 68 per cent. For instance in the USA where the piracy rate tends to be low and accounted for 19 per cent in 2011, the value of the illegal software market attained US\$19 bn (compared to the legal sale at US\$42 bn), whereas in China where the piracy rate for software has been traditionally high at 77 per cent in 2011, its illegal software market was worth almost US\$9 bn in 2011 compared to the legal market below US\$3 bn (Business Software Alliance, 2012) (Tables I and II).

T1-T2

The piracy rate for software remains at a high level which experts ascribe to increasing number of copyright violation cases on large fast developing markets (China, Brazil and India). In Poland, losses caused by unlicensed software use are estimated at almost US\$620 m. Over recent few years, the situation slightly improved in this respect (Table III). In 2007, the piracy rate hovered at 57 per cent in 2013, and in 2013, it fell to 51 per cent; nevertheless, it remains at a high level.

T3

A global problem is also unauthorised deployment of *shareware* and *freeware* programmes for commercial use (Lemańska and Stróżyk, 2012; Kurowski, 2012). This type of software, though it is made accessible for free, is protected by copyrights on the same terms as commercial software. The scope of permitted use is specified in the licence content. Basically, it may, limit the right to use programmes solely for personal use which is typically reflected in the clause formulated as “a programme cannot be used for commercial purposes”. While using such applications, e.g. in the company, an entrepreneur infringes copyrights and runs the risk of civil and criminal liability.

Answers	Respondents' percentage
Always	5
Mostly	9
Occasionally	17
Rarely	26
Never	38
Refuse	5
In total	100

Note: Question: How often do you acquire pirated software of software that is not fully licensed?

Source: Business Software Alliance, 2012

Table I.
Percentage of respondents using pirated software in 2011 according to the business software alliance report

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Table II.

Estimate magnitude of pirated software sale and piracy rate across 20 countries in 2011

Country	Pirated software value (in US\$ million)	Legal software sale (in US\$ million)	Piracy rate (in %)
USA	9,773	41,664	19
China	8,902	2,569	77
Russia	3,227	1,895	63
India	2,930	1,721	63
Brazil	2,848	2,526	53
France	2,754	4,689	37
Germany	2,265	6,447	26
Italy	1,945	2,107	48
Great Britain	1,943	5,530	26
Japan	1,875	7,054	21
Indonesia	1,467	239	86
Mexico	1,249	942	57
Spain	1,216	1,548	44
Canada	1,141	3,085	27
Thailand	852	331	72
South Korea	815	1,223	40
Australia	763	2,554	23
Venezuela	668	91	88
Malaysia	657	538	55
Argentina	657	295	69

Source: As in Table I

Table III.

Piracy rate in Poland over 2007-2013

Year	Commercial value of unlicensed software (in US\$ million)	Piracy rate (in %)
2007	580	57
2008	648	56
2009	506	54
2010	553	54
2011	618	53
2013	563	51

Sources: As in Table I; available at: www.crn.pl/news/wydarzenia/prawo/2014/06/polowa-oprogramowania-uzywanego-w-polsce-jest-nielegalna (accessed 10 July 2014)

4. Piracy in Poland in the context of the findings from the author's empirical survey

4.1 Objective, extent and survey method

The objective of empirical survey conducted by the author was to identify attitudes among Polish internet users towards piracy and to specify the extent to which they make use of pirated products. It should be highlighted that the findings obtained in the survey should be approached with some caution, given the gentle and sensitive subject of the research. Internet piracy proves to be a specific area with not fully defined legal stance so that persons involved in the practice have many reasons and concerns holding

them back from providing reliable responses as to the scale of their activities (engagement) in this domain.

The survey covers the following issues:

- opinions about piracy and assessment of the malpractice;
- motives behind the use of pirated content, products and services;
- attitudes towards curbing the extent of piracy; and
- actions related to piracy, assessment of their legality and ethical aspects of such operations.

The survey was accomplished in June 2013 by means of an online questionnaire using the *computer-assisted Web interview* method and *real-time sampling* technique. The survey involved 1,000 persons aged 15 years and older. Invitations for the survey were displayed to website users with a total monthly reach encompassing over 70 per cent of Polish internet users.

The survey was based on stratified random sampling. The sample structure was corrected so as to correspond the structure of Polish internet users aged of 15 years and over in terms of key attributes related to the survey subject. The social and demographic variables such as gender, age, education and size of domiciled location as well as variables pertaining to widely understood lifestyle were taken into account.

4.2 Key survey findings

Principally, Polish internet users hold well-balanced views on piracy – they reckon that it is not a fully positive practice, yet in certain circumstances, it is acceptable. Younger internet users subscribe to more liberal views on piracy than older ones.

Respondents claim that financial considerations – high prices and low income primarily drive the use of pirated content, products and services by Polish consumers. In the same vein, the financial determinants are most likely to confine the scope of piracy.

Internet users mostly see currently escalated combat with piracy as appropriate – it should not be stepped up or diminished. They rather oppose more stringent measures – initiatives such as ACTA perceive negatively (mostly as an attempt to impose censorship on internet), and they are not keen proponents for aggravating penalties for pirates.

Making copies of music files and films (including TV series watched in internet) prove to be the most common activity related to piracy among internet users. Beyond that, making copies of computer software is fairly frequent, even though the use of software without a licence is regarded in most cases as illegal. On the whole, copying pirated files is more widespread among younger internet users.

4.3 Factors encouraging consumers to use pirated content, products and services

In opinions of the internet users, Polish consumers use pirated content, products and services primarily for financial reasons – nearly three-quarters of respondents have pointed out to high prices of original products (this factor is indicated particularly often by younger internet users, aged 15-24 years), while more than half points at low incomes of Polish consumers. A significant percentage of respondents (over one-third) indicates the easiness of access to pirated goods and services (mostly younger people) (Figure 1).

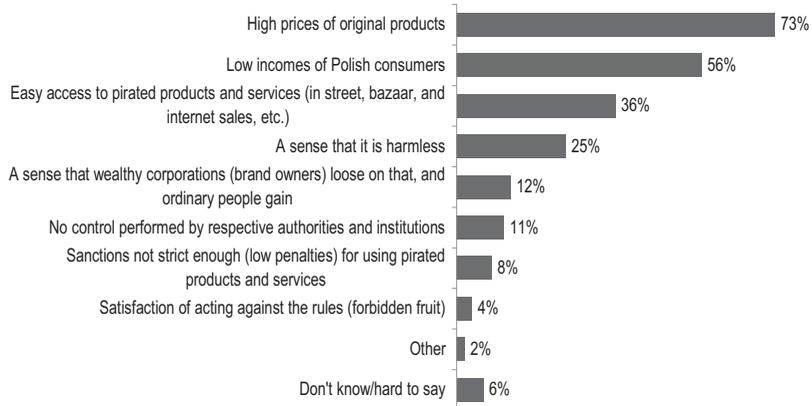


Figure 1.
The reasons for using pirated content, products and services

Notes: Question: What do you think encourages consumers to use pirated content, products and services? Multiple-choice question: respondents could choose more than one answer; *N* = 1,000; Polish internet users aged 15 years and more
Source: Own research study

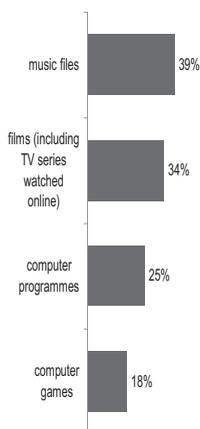
4.4 Using pirated products and assessment of legality of activities related to piracy

The most common activity among Polish internet users is to copy pirated music files (almost 40 per cent of internet users admit to that) and films (including watching the series in the network to which approximately 35 per cent of respondents confess to). These two kinds of files are also copied the most often – about 20 per cent of the respondents copy them once a month or more often. One-fourth of the respondents admit to copying pirated computer programs. Copying all of the surveyed products (music, movies and video games) is more common and occurs with greater frequency among younger internet users.

Copying pirated computer programs is relatively frequent, even though their use is usually perceived as illegal (by almost half of the internet users). Also, buying counterfeit branded goods is quite often considered as illegal (so think 37 per cent of respondents), selling at online auctions without recording and reporting, thus obtained income to the tax office (38 per cent of respondents answered this way), buying at auctions from retailers performing in this manner (such view is expressed by 34 per cent of respondents) and file downloads (movies, music and e-books) without payment of the required fees (opinion of 33 per cent of respondents).

Buying counterfeit clothing is declared by 20 per cent of respondents, while cosmetics and footwear – 16 per cent in both cases. Products from each of these three categories are most frequently purchased once a year or less. Males admit to copying pirated music, movies and computer games more often, while more females admit to buying counterfeit clothing, shoes and cosmetics (Figure 2).

Assessment of piracy by Polish internet users is mostly well-balanced – almost half of respondents entertain doubts regarding ethical aspects of the practice; however, it may be approved in certain cases. Three in every ten respondents declare that the practice is unacceptable under any circumstances, whereas one in ten has nothing against piracy. An attitude towards piracy is linked to the age of



Notes: Question: How often do you copy pirated products from the following categories: (the question with the possibility of indicating one answer for each item); *Products copied* (data aggregated for the response from a few times a week to once a year or less); $N = 1,000$; Polish internet users aged 15 years and over

Source: Own study

Figure 2.
Frequency of using pirated products

those surveyed. As mentioned previously, the younger generation embraces a more permissive approach to piracy than the older generation. Essentially, young persons typically raise no objections to piracy or accept it in certain situations, while older people, in general, perceive it as an unacceptable malpractice irrespective of circumstances.

A well-balanced opinion on piracy also prevails when enquiring about assessment of the specific behaviour – sending a purchased music file to a colleague – internet users largely think that the assessment of legality and ethical implications for such behaviour depend on the context of the specific situation (Figures 3 and 4).

The findings from the survey reveal that young Polish internet users demonstrate a rather permissive attitude towards online piracy that involves downloading music files or video and sharing them with other network users. The results from the study commissioned by the Polish Film Institute show that piracy prevails among the younger generation of Polish internet users when consuming cultural assets. Overall, they suggest that almost 60 per cent films and TV serials downloaded or watched on the internet come from illegal sources (Zielińska, 2013). These are also corroborated by the findings from the survey “A profile of current and future audiovisual audience” commissioned by the European Commission (PriceWaterhouseCoopers, 2013, p. 30). It found that the scale of the phenomenon is significantly larger in Poland than in other developed markets across Western Europe (cf. Table IV).

F3-F4

T4

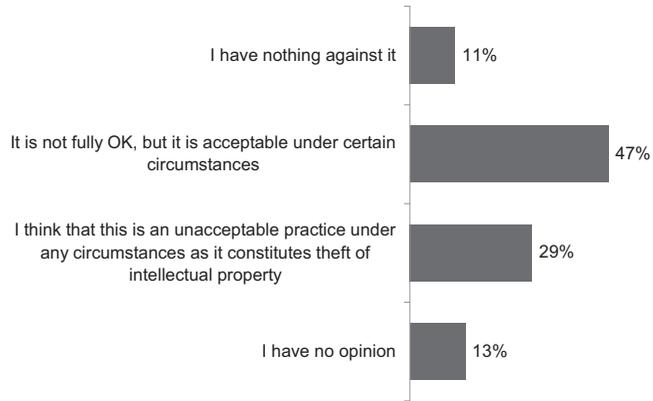


Figure 3.
Assessment of piracy
by Polish internet
users

Notes: Question: Which of the following sentences best reflects your opinion on piracy? Single answer question, respondents could only indicate one answer; $N = 1,000$, Polish internet users aged 15 years and above
Source: Own study

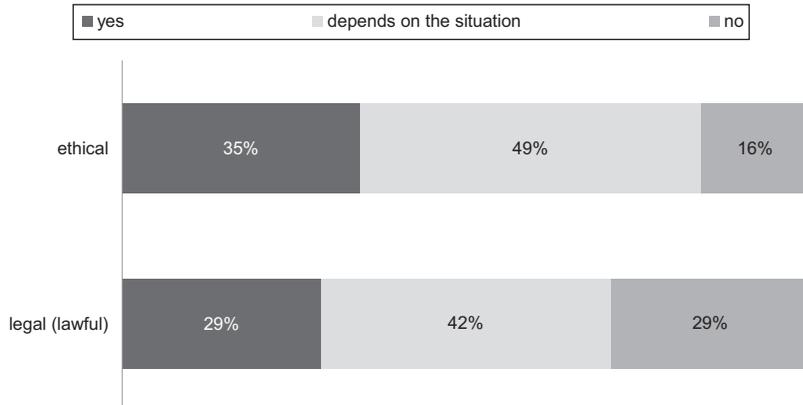


Figure 4.
Assessment of
ethical aspects of file
sharing among
internet users

Notes: Question: What do you think – whether sending purchased music file to a colleague is ethical and legal: Single answer question; respondents could only indicate one answer; $N = 1,000$, Polish internet users aged 15 years and over
Source: Own study

4.5 Curb on the piracy scope

Polish internet users mostly express moderate opinions on combating piracy – around one-third suggest that tackling this practice should be neither tightened nor alleviated. Persons who do not advocate mitigating the efforts against piracy principally reckon that decreased prices of branded goods would trigger reduced piracy (nearly three quarters of respondents). Half of respondents say that piracy is

Country	Percentage of film viewers using free downloads of files (all persons who did not marked the answer "never")	Percentage of film viewers using free downloads of files at least once a week
Lithuania	87	55
Poland	85	45
Croatia	82	42
Spain	79	43
Romania	78	47
Italy	69	34
Denmark	54	23
France	51	19
Great Britain	49	20
Germany	47	16

Table IV.
Scale of free-of-charge downloading files from internet across ten EU countries

Source: A profile of current and future audiovisual audience, a survey commissioned by the European Commission, as cited in: [PriceWaterhouseCoopers \(2013\)](#)

likely to be restricted through giving consumers free access to programmes, music, films, etc.

More stringent control and more severe penalties for committing piracy (16 per cent) received the least support, which implies a rather negative attitude to rigorous measures. This is well manifested in internet users' opinions on the initiatives such as ACTA which nearly half of respondents perceive as an attempt to censor the internet, while approximately one third of those surveyed regard them as actions aimed at securing profits of big corporations ([Figure 5-8](#)).

F5-F8

5. Attempts to limit piracy and internet shadow economy in Poland

A requirement to put in place more efficient measures designed to curtail the magnitude of piracy and shadow economy in internet is closer cooperation between fiscal audit units, financial institutions (banks, service providers of payment systems, etc). allowing for identification of suspicious behaviours in the market while applying cutting-edge technological solutions. Monitoring of behaviours displayed by business entities operating online in terms of transactions performed and funds sources would lead to not only early tracing but also preventing growth of piracy and other forms of online shadow economy. It seems that an important step in cracking down on online shadow economy would be seeking to gradually shrink cash payments in favour of electronic payments. Such conclusions are corroborated by the findings from the survey conducted by ([Schneider and Kearney, 2013](#)).

However, we should not be deluded that legislative changes and activities launched by relevant institutions, national and international agencies will eliminate the shadow economy in the internet environment. The internet as a supermedium of the twenty-first century provides unprecedented opportunities for generating unreported income and making free (and frequently unauthorised) use of the fruits of other persons labours. Film, music and software producers wrangle with pirates operating online which is almost unlikely to be controlled. On top of that, the fact that internet users expect instant access to films, music, software and other online

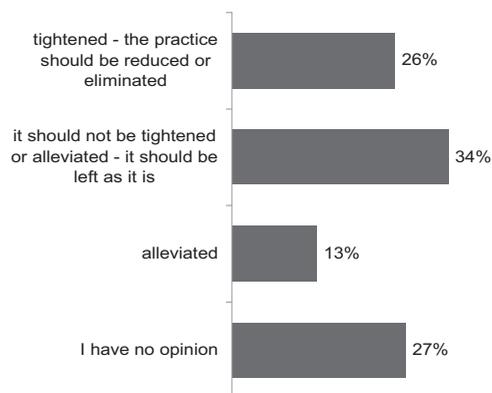


Figure 5.
Internet users'
opinions on curbing
piracy

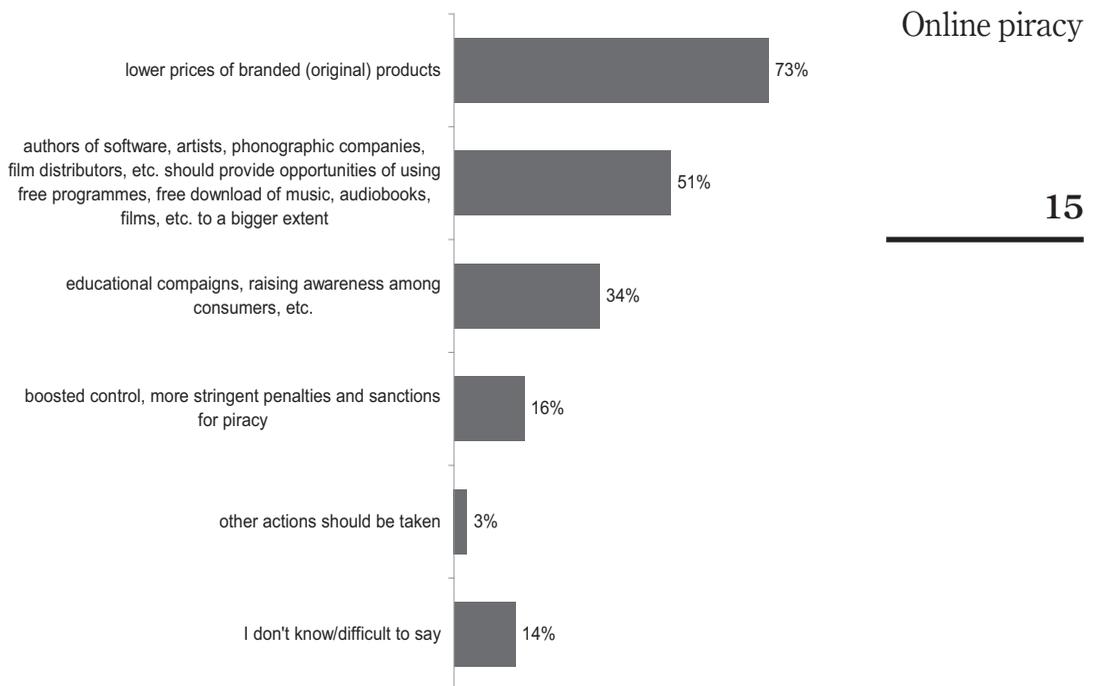
Notes: Question: Do you think that combat with piracy should be: Single answer question; respondents could only indicate one answer; $N = 1,000$, Polish internet users aged 15 years and over
Source: Own study

resources at any time or place and in a convenient form further aggravates the situation (Levin *et al.*, 2007; Glenny, 2010; Gelles, 2011). Furthermore, in emerging markets (including the Polish market) where online ventures require more time to gain a foothold and generate income, large corporations are vulnerable to losses in the form of lost profits standing at billions dollars. Across poorer countries, the paucity of legal options to acquire films, music or software at affordable prices is a driver encouraging customers to migrate to the shadow economy.

Polish regulations are not attuned to the digital reality, which is exploited by online intermediaries (Skwirowski, 2014). These are largely agile intermediaries operating online (e.g. pirate internet portals), not entrepreneurs, investors or artists that reap profits from content made accessible in internet (films, music, etc.). Though, it is hard to convince honest entrepreneurs to implement business models based on providing content from legal sources, as they are aware of the difficulties faced when competing with pirates' schemes using music, films and other content originating from illegal sources.

In this context, implementation of relevant regulations to ensure respect and protection for intellectual property rights on the internet in Polish as well as EU legislation has acquired a rare immediacy. It should be kept in mind that transactions performed on the internet "slip away" from national jurisdiction due to the cross-border nature of the global network.

On the whole, it will be paramount to depart from tested action schemes and to seek out new business models intended to reconcile the interests of large corporations operating online with the needs of ordinary internet users. Innovative business models combined with far-reaching educational campaigns raising an awareness of the need to respect intellectual property rights are likely to confine the scale of copyright infringements and rein in online piracy.



Notes: Question: Which requirements should be fulfilled, in your opinion, to curb the scope of piracy? Multiple-choice question; respondents could choose more than one answer; $N = 858$, Polish internet users aged 15 years and above who do not advocate alleviating combat with piracy.

Source: Own study

Online piracy

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Figure 6.
Circumstances
facilitating curb on
piracy

6. Conclusions

Globalisation and the spectacular advance of cutting-edge information and communication technologies foster the emergence and expansion of the new manifestations of the shadow economy, online piracy being one of them (Mróz, 2012b). The growing role of internet in business models adopted by companies operating in different sectors of the economy creates conducive environment for the emergence of online intermediaries/portals offering, in many cases, pirated content without respecting intellectual property rights.

The findings of the empirical research presented in this paper clearly indicate that online piracy is an emergent segment of the Poland's shadow economy. Polish internet users demonstrate rather permissive attitude towards online piracy. A significant percentage of respondents (over one-third) indicates the easiness of access to pirated goods and services, while almost 40 per cent of Polish internet users admit to copying pirated music files and 25 per cent of respondents admit to copying pirated computer programs. This calls for an urgent action aimed at reducing the scope of the online piracy through smart combination of "tough" (e.g. penalties) and "soft" measures (e.g. educational campaigns).

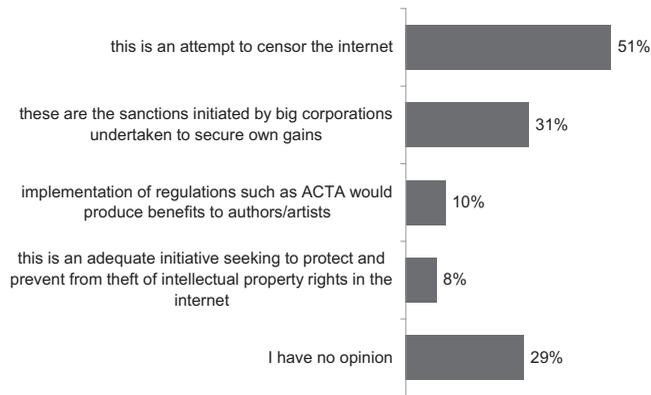


Figure 7.
Assessment of initiatives seeking to regulate intellectual property rights in internet

Notes: Question: How do you assess the initiatives such as ACTA seeking to regulate the use of music, films, books and other products available online? Multiple-choice question; respondents could choose more than one answer; $N = 1,000$, Polish internet users aged 15 years and over

Source: Own study

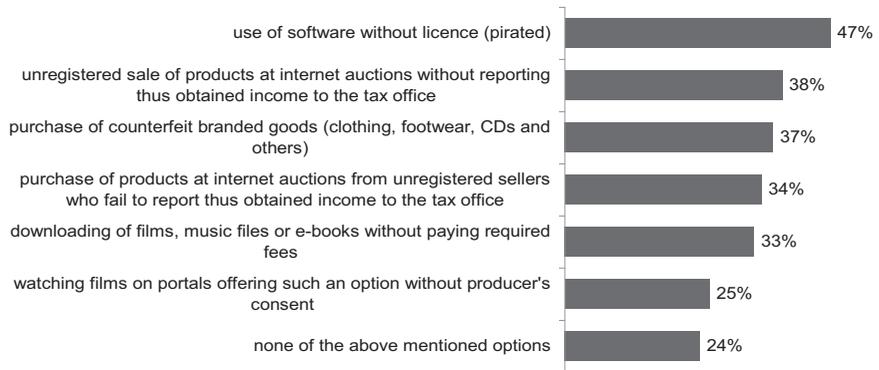


Figure 8.
Assessment of legality of selected forms of piracy by Polish internet users

Notes: Question: Which of the following you regard as unlawful: Multiple-choice question; respondents could choose more than one answer; $N = 1,000$, Polish internet users aged 15 years and over

Source: Own study

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About the author

Bogdan Mróz holds a PhD degree in economics and is a Full Professor at Warsaw School of Economics, Department of Finance and Management. He completed post-graduate studies in Milan and Ottawa. He is also an author of several books and numerous articles, both in Poland and abroad; he presented many papers at international conferences and congresses, including in the capacity of session chair and discussant. Professor Bogdan Mróz has been responsible for many research projects conducted in Poland, and he was also involved in international scientific cooperation programs, e.g., joint Polish-German and Polish-Japanese research projects. Recently, he worked as a national expert for EU-sponsored DOLCETA project focused on Web-supported consumer education. Prof. Mróz was invited as guest lecturer by universities in different countries; he was visiting professor in Italy, Germany, Japan and Canada. Bogdan Mróz can be contacted at: bogdan.mroz@sgh.waw.pl

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