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Supply on infobrokering services market in Poland in view of empirical studies

Keywords: information services, infobrokering services in Poland, supply on infobrokering services market
Słowa kluczowe: usługi informacyjne, usługi infobrokerskie w Polsce, podaż na rynku usług infobrokerskich

Introduction

Currently, the dominant trends combining both acquisition and aggregation of information together with services which are provided in the multimodal *e*-nvironment have induced the development of infobrokering services. These services are defined as professional and commercial information services, involving mediation between information resources and individual, institutional and business entities in need for data and information (Cisek, 2007a; MPiPS, 2010). Since infobrokering services in Poland are emerging ones, their market is to be recognized and analyzed.

The reflections on the topic of this paper are focused on the number of infobrokering enterprises in Poland. The main thesis of the article is that the supply side of the infobrokering services market in Poland is unsteady. Firstly, the idea of infobrokering services is presented. Secondly, the number of infobrokering enterprises in Poland is established. Furthermore, the comparison of primary research to the secondary research is performed so that the thesis can be empirically confirmed. The paper is elaborated on English and Polish literature studies available both in print and online as well as the primary and secondary research on infobrokering enterprises in Poland conducted between 2014 and 2016.

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The Outline of Infobrokering Services

The revolution in the information and communication technologies (ICT) has implied the development of digital and mobile devices together with improved, accelerated and predominantly wireless Internet access, the expansion of interactive communication through social media, the universality of city monitoring, and the Internet of Things. In turn it catalyzes the double upsurge in the size of the digital universe every two years. Therefore, between 2013 and 2020 the amount of presumed data is to increase tenfold and will reach the level of 44 ZB, which translates to more than 5 TB (5,000 GB) for each person on Earth. According to IDC, the number of devices or objects that can be computerized and connected to the Internet, is approaching 200 billion, and 7% of them (14 billion) are already interacting online. The data generated by these devices currently represents 2% of the world data and the IDC's predictions state that by 2020 the number of network-connected devices will have multiplied to reach the level of 32 billion and will have produced 10% of the world data (IDC, 2014).

Consequently, relevant, aggregated, and verified information is difficult to obtain. Hence, the importance of *information brokers*¹, professionals possessing interdisciplinary knowledge together with advanced searching, digital, and analytic skills, increases. The need for the occupation was recognized in the 1990s and was induced by the Internet expansion and diminishing costs of data storage. Vast amount of data has begun to be gathered, collected, analyzed, processed, stored, and transferred while public and private sources of information such as statistical data, census information, government records, social networking sites, and even web browsing histories have become possible to be searched.

The Polish Classification of Occupations and Specializations for Labor Market Needs (Klasyfikacja Zawodów i Specjalności) categorizes an infobrokering profession as 262204 *An Information Broker (Researcher)* and situates it in the major group 2: *Professionals*, and the minor group 2622: *Library Scientists and Information Managers* (MPiPS, 2010, p. 44). In view of Polish legislative framework, infobrokering services can be provided either as freelancing, sole proprietorship or full-time employment in an infobrokering enterprise. However, there are four *sine qua non* conditions which should be met by a professional infobroker:

- a) being a mediator between information resources and clients (individual consumers, organizations or enterprises in need of data and information);
- b) providing commercial services based on the outsourcing principle (fee);
- c) selling the information service not information as such;

¹ Also: *knowledge brokers, cyberians, freelance librarians, independent information professionals, independent researchers, data dealers, info-entrepreneurs.*

d) applying appropriate skills and knowledge and being guided by professional ethics (Cisek, 2007a).

The infobroker's responsibilities include: the implementation of advanced searching strategies and data processing in order to acquire information; the evaluation and the verification of the obtained results; the assurance of information efficiency and its relevance in view of consumer's needs; the information aggregation and interpretation; the preparation of a final infobrokering elaboration in form of either a presentation, a report or a database depending on the client's requirements (Bates, 2007; Grala, Kozakiewicz, 2007). Therefore, infobrokers use the professional skills of librarians, private investigators, database searchers, market researchers, competitive intelligence researchers, indexers, analysts, IT specialists, and writers in their work.

The Infobrokering Enterprises on Polish Information Services Market

The exploration of supply on Polish infobrokering services market was carried out between 2014 and 2016. Firstly, a search strategy based on a Big6™ Skills model and its operationalization prepared by Nizioł (2010) was implemented. The numbers of the search results in the relevant information sources correlated with search terms used in each source are presented in Table 1.

Table 1. Environment information sources and implemented search terms

| | Infobroker | Infobrokering | "Information broker" | "Infobrokering agency" | "Infobrokering enterprise" | Infobrokering center" | "Information search" | "Information acquisition" | Total |
|------------------------------|------------|---------------|----------------------|------------------------|----------------------------|-----------------------|----------------------|---------------------------|-------|
| Google.pl* | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 80 |
| Firmy.net Catalogue | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| ODI.PL Catalogue | 43 | 22 | 11 | 7 | 2 | 1 | 30 | 7 | 123 |
| PanoramaFirm Catalogue | 5 | 3 | 23 | 0 | 0 | 0 | 45 | 98 | 174 |
| Polska Baza Firm HBI | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| Polskie Książki Telefoniczne | 1 | 1 | 3 | 3 | 0 | 0 | 0 | 0 | 8 |
| RynekInformacji.pl** | 32 | | | | | | | | 32 |
| Teleadreson.pl | 5 | 6 | 2 | 5 | 0 | 1 | 10 | 7 | 36 |
| Yellow Pages | 19 | 15 | 25 | 7 | 4 | 18 099*** | 24 | 19 | 113 |
| Total | 115 | 57 | 85 | 32 | 16 | 12 | 120 | 141 | 578 |

* Search on Google.pl was narrowed down to the first ten results.

** Search on RynekInformacji.pl resulted in a list of 32 infobrokering enterprises.

*** The number is not included in the search results.

Source: own elaboration based on Google.pl (2015); Firmy.net Catalogue (2015); ODI.PL Catalogue (2015); PanoramaFirm Catalogue (2015); Polska Baza Firm HBI (2015); Polskie Książki Telefoniczne (2015); RynekInformacji.pl (2014); Teleadreson.pl (2015); Yellow Pages (2015).

Subsequently, the doubling infobrokering entities were excluded so that the total number was narrowed down to 318 enterprises which define their business activity as *information brokering*. A further evaluation, namely: 1. confirmation of telephone/address/website data, and 2. examination of business activities according to *The Code List of Classification of Business Activities in Poland (Polska Klasyfikacja Działalności, PKD) 2007 (MR, 2007)*, revealed two issues. Firstly, the studied enterprises can be divided into four classes (Table 2), and secondly, out of 318 enterprises investigated only 18 can be classified as *identified infobrokering enterprises in the strict sense*, for which information brokerage is the only or main business activity (Table 3).

Table 2. Classification of the business entities describing their activity as infobrokering in 2015

| Class | Number | Percentage | Description |
|---|--------|------------|---|
| Identified infobrokering enterprises in the strict sense | 18 | 5.66 | Infobrokering services are the only one or the main business activity. Business activities according to PKD 2007: 63.99.Z and 62.01.Z, 62.09.Z, 63.11.Z, 63.91.Z, 70.22.Z, 73.20.Z*. Accessible and current website |
| Unidentified infobrokering enterprises | 49 | 15.41 | Identification impossible because: 1. there is no information about the enterprise in the Central Register and Information on Economic Activity (CEIDG), 2. the enterprise's website does not exist |
| Enterprises for which infobrokering is a subsidiary activity | 126 | 39.63 | Enterprises offering: media monitoring, business intelligence, advertising services, detective services, translating and interpreting services, travel services, and insurance brokerage services |
| Enterprises which are not connected with infobrokering services | 125 | 39.30 | Real estate agencies, employment agencies, marriage bureaus, accounting offices |
| Total | 318 | 100.00 | |

* PKD 2007 Codes: 62.01.Z – computer programming activities; 62.09.Z – other information technology and computer service activities; 63.11.Z – data processing, hosting and related activities; 63.91.Z – news agency activities; 63.99.Z – other information service activities not elsewhere classified; 70.22.Z – business and other management consultancy activities; 73.20.Z – market research and public opinion polling.

Source: own elaboration based on Waligórska-Kotfas (2017).

Table 3. Infobrokering enterprises in the strict sense identified in the primary research in 2015

| No. | Enterprise | Owner | Established | Contact data |
|-----|-------------------------|----------------------|-------------|---|
| 1 | 2 | 3 | 4 | 5 |
| 1 | CO-INFO | Anna Mazur-Biczyccka | 2008 | 40-750 Katowice, 60B Hierowskiego St phone: +48 661 413 771 e-mail: anna.biczyccka@coinfo.pl http://www.coinfo.pl |
| 2 | Cyprowski Infobrokering | Filip Cyprowski | 2013 | 64-500 Szczuczyn, 44 Szamotulska St phone: +48 518 633 027 e-mail: f.cyprowski@gmail.com http://infobrokering.blogspot.com |

| 1 | 2 | 3 | 4 | 5 |
|----|---|---------------------------|-------|---|
| 3 | e-infobrokers | Mateusz Roclawski | 2011 | 60-412 Poznań, 8A Niemeńska St phone: +48 608 133 323 e-mail: info@e-infobrokers http://www.e-infobrokers.pl |
| 4 | Enigma | Marek Rosiak | 2011 | 58-304 Wałbrzych, 1C Ludowa St phone: (+48) 74 84 812 17, +48 509 938 556, fax: (+48) 74 84 812 17 e-mail: enigmarosiak@gmail.com http://www.enigma-rosiak.pl/index.html |
| 5 | FHU InfoConnect | Agnieszka Podrazik | 2010 | 30-010 Kraków, 12/23 Składowa St phone: (+48) 12 63 396 22, +48 666 383 231 e-mail: biuro@infoconnect.pl http://www.infoconnect.pl |
| 6 | HESPER INFOBROKER | Alina Janusz | 2006 | 32-031 Mogilany, 43 Myślenicka St phone: +48 12 37 893 77, +48 880 783 610 e-mail: biuro@hesper.pl http://www.hesper.pl |
| 7 | InfoBrokering | Sebastian Stencel | 2004 | 80-180 Gdańsk, 66/11 Kazimierza Porębskiego St phone: +48 530 272 072 e-mail: info@infobrokering.com.pl http://www.infobrokering.com.pl |
| 8 | INFOBROKERSKA.PL | Patrycja Hrabiec-Hojda | 2006 | 31-031 Kraków, 97/9a Józefa Dietla St phone: +48 12 37 647 07, +48 503 666 166 fax: +48 12 37 647 06 e-mail: info@infobrokerska.pl http://www.infobrokerska.pl |
| 9 | INFOPOINT.PL | Artur Machlarz | 2006 | 53-029 Wrocław, 11/2 Rodzinna St phone: +48 71 72 342 98, +48 502 951 569 e-mail: infopoint@infopoint.pl http://www.infopoint.pl |
| 10 | Info-Prof | Łukasz Długosz | 2006 | 31-060 Kraków, 13/10 Wolnica Sq. phone: +48 12 39 822 64, +48 668 338 500 e-mail: kontakt@infoprof.pl http://www.infoprof.pl |
| 11 | infoSource Infobroker's Agency | Agnieszka Piwowarczyk | 2009 | 31-231 Kraków, 4C/8 Bociana St phone: +48 66 34 926 88, +48 509 01 2532 skype: infosource-biuro e-mail: biuro@infosource.pl http://infosource.pl |
| 12 | INFOTIMES - BALTIC GRIFFIN | Krzysztof Kurpiecki | 2007 | 14-202 Łława, 29/35 Skłodowskiej-Curie St phone: +48 89 67 970 53, +48 504 637 052, fax: +48 89 67 902 38 skype: infotimes.pl e-mail: infotimes@infotimes.pl http://www.infotimes.pl |
| 13 | Kancelaria Profesjonalnej Informacji | Ireneusz Wojas | 2003* | 27-600 Sandomierz, 15/6 Opatowska St phone: +48 15 83 276 42, +48 601 595 303 e-mail: kancelaria@infobroker.dll.pl http://www.infobroker.dll.pl |
| 14 | MCODE Sp. z o.o. | Ewa Giedyk-Oziębłowska | 2012 | 25-127 Kielce, 5 Na Stadion Ave phone: +48 609 446 202, +48 727 492 777 e-mail: mcode@mcode.eu http://mcode.eu |

| 1 | 2 | 3 | 4 | 5 |
|----|----------------------------------|---------------------|------|---|
| 15 | MIIS | Marcin Meller | 2014 | 14-200 Itawa, 5/21 Odnowiciela St skype: mediaquestPL e-mail: biuro@mediaquest.pl http://www.mediaquest.pl |
| 16 | TriC | Paweł Chmielowski | 2010 | 62-081 Przeźmierowo, 41 Aleja Ptasia St phone: +48 61 22 567 71, +48 512 960 460 e-mail: tric@tric.pl http://tric.pl |
| 17 | Yaspert Agencja Infobrokerska | Barbara Jaszczyńska | 1995 | 32-700 Bochnia, 20 Brzeska St phone: +48 604 702 548 e-mail: info@yaspert.pl http://www.yaspert.pl |
| 18 | Żurek Infobroker | Janusz Żurek | 1997 | 43-211 Piasek k. Pszczyny, 18 Szkolna St phone: +48 32 21 147 98, +48 601 517 216 e-mail: kontakt@jzurek.com http://www.jzurek.com |

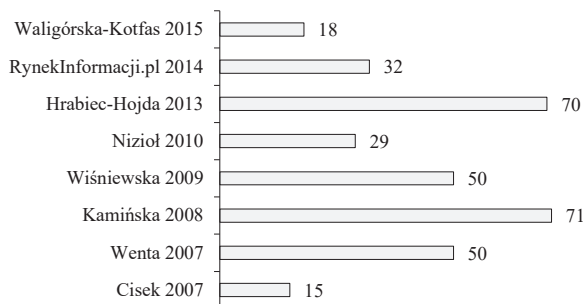
* Data based on Internet Archive Wayback Machine (2015).

Source: own elaboration based on Waligórska-Kotfas (2017).

Infobrokering Enterprises in Poland in view of Primary and Secondary Research

The number of infobrokering enterprises in the strict sense obtained in the primary research was compared with the numbers resulting from the existing studies (Figure 1).

Figure 1. Number of infobrokering enterprises in primary and secondary research



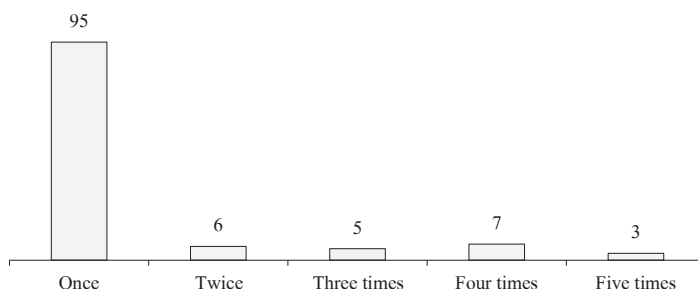
Source: Cisek (2007b), Wenta (2007), Kamińska (2008), Wiśniewska (2009), Nizioł (2010), Hrabiec-Hojda (2013), RynekInformacji.pl (2014), Waligórska-Kotfas (2017).

Further detailed analysis was based on the studies in which the infobrokering enterprises were enumerated, namely: Cisek (2007b): 15 enterprises; Kamińska (2008): 71 enterprises; Nizioł (2010): 29 enterprises; RynekInformacji.pl (2014): 32 enterprises; Waligórska-Kotfas (2017): 18 enterprises. The conclusion of the analysis comprising 165

infobrokering entities listed in five studies was that only 3 infobrokering enterprises were mentioned in each analyzed study, while 95 enterprises were noted only in a single study (Figure 2).

The noticed variability shows the instability of supply on infobrokering services market in Poland. Ununiform research methodologies may be one cause of observed alterations. Additionally, the infobrokering service market is in its initial stage and a lot of infobrokering enterprises are set up by Information Science graduates, who are professionally trained to provide highly specialized infobrokering services in multimodal *e*-nvironment but lack the basic knowledge of running a business, let alone attract potential customers, or create a competitive advantage.

Figure 2. Frequency of infobrokering enterprises in primary and secondary research

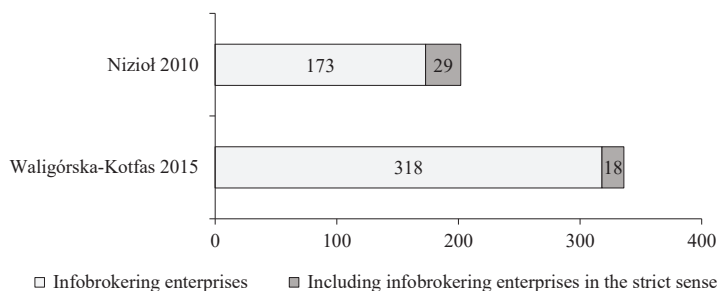


Source: Cisek (2007b), Kamińska (2008), Nizioł (2010), RynekInformacji.pl (2014), Waligórska-Kotfas (2017).

Since the methodology and its operationalization implemented in the primary research was compatible with the Nizioł's study, the further comparison was carried out between these two studies and led to the four following conclusions. Firstly, the number of enterprises defining their business activity as *infobrokering* increased apparently between 2010 and 2015 (Nizioł: 173 enterprises; Waligórska-Kotfas: 318; increase by 83,82%). However, the number of infobrokering enterprises in the strict sense decreased (Nizioł: 29 enterprises, which was 16,76% of $N = 173$; Waligórska-Kotfas: 18 enterprises, which was 5,66% of $N = 318$; decrease by 37,93%) (Figure 3).

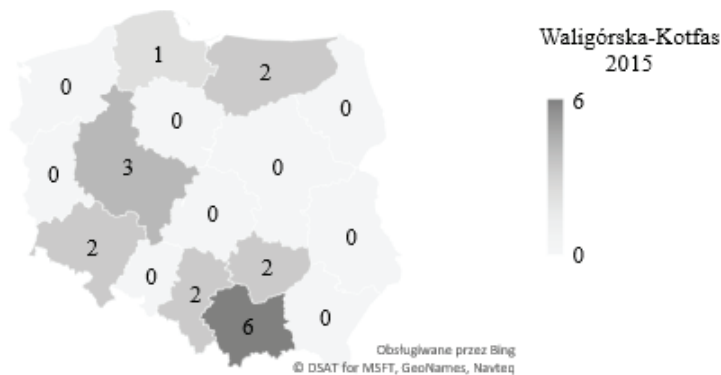
Secondly, the analysis in respect to the location of identified enterprises ($N = 18$) revealed a leading voivodship – Małopolskie. 6 enterprises (33,33% of $N = 18$) are located there (Figure 4). A similar location pattern was recognized in Nizioł's study. In 2010 5 infobrokering enterprises in the strict sense were also located in Małopolskie voivodship. Additionally, there were 5 entities in two other voivodships, namely Śląskie, and Mazowieckie (Figure 5).

Figure 3. Infobrokering enterprises and infobrokering enterprises in the strict sense in the Nizioł's study (2010) and the Waligórska-Kotfas's research (2017)



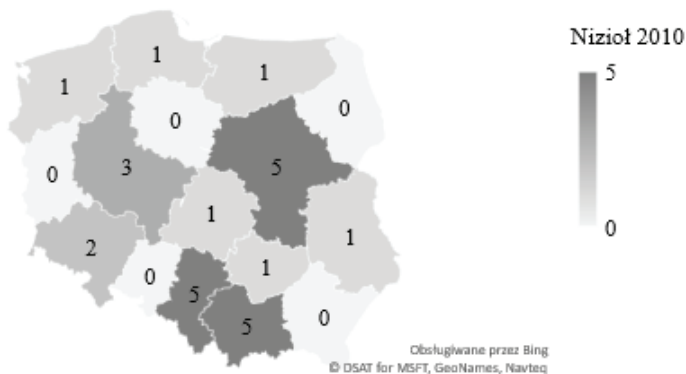
Source: Nizioł (2010), Waligórska-Kotfas (2017).

Figure 4. The location of infobrokering enterprises in the strict sense in the Waligórska-Kotfas research (2017)



Source: Waligórska-Kotfas (2017).

Figure 5. The location of infobrokering enterprises in the strict sense in the Nizioł's study (2010)

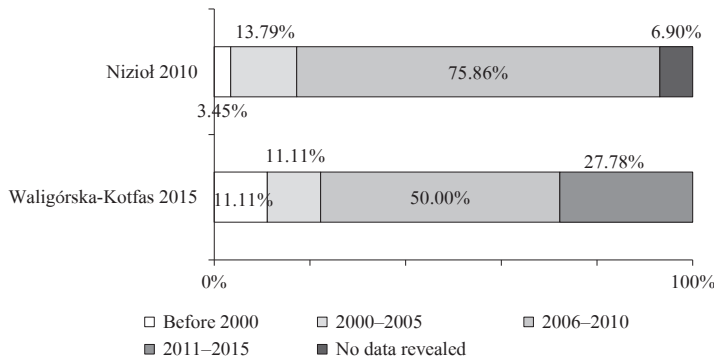


Source: Nizioł (2010).

Thirdly, the majority of identified enterprises (N = 18) have been providing infobrokering services for less than ten years (Figure 6). 9 enterprises were founded between 2006 and 2010, and 5 more in the next five years (50,00% and 27,78% of N = 18 respectively). This is comparable with the Nizioł's study according to which 22 infobrokering enterprises (75,86% of N = 29) were set up between 2006 and 2010.

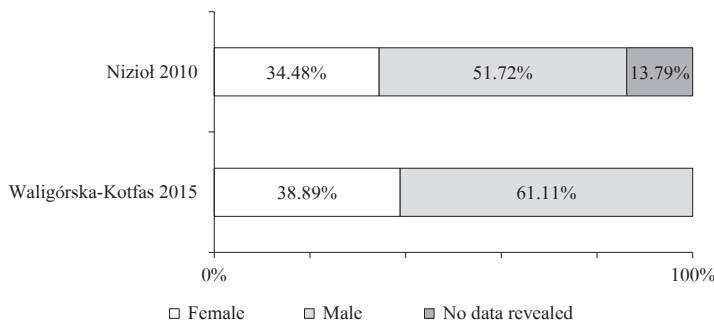
Fourthly, the infobrokering enterprises in the strict sense are more often established by males than females (Figure 7). 7 infobrokering enterprises are owned by females while 11 entities belong to males (38,89% and 61,11% of N = 18 respectively). This finding is corresponding with the Nizioł's results, namely females run 10 enterprises, males – 15 enterprises (34,48% and 51,72% of N = 29 respectively).

Figure 6. Infobrokering enterprises in the strict sense in the Nizioł's study (2010) and the Waligórska-Kotfas research (2017) by the year of foundation



Source: Nizioł (2010), Waligórska-Kotfas (2017).

Figure 7. Infobrokering enterprises in the strict sense in the Nizioł's study (2010) and the Waligórska-Kotfas research (2017) by sex of the owner



Source: Nizioł (2010), Waligórska-Kotfas (2017).

Conclusion

To sum up, the provision of infobrokering services on Polish information services market is emergent. Although, the primary research shows an increase in the number of enterprises which define their business activity as *information brokerage*, the thorough analysis of enterprises' contact data together with the verification of their business activity codes reveal that the observed growth is apparent. The vast number of enterprises identifies themselves using the term *infobrokering* mainly because it is perceived either as a chance to reflect and follow innovative marketing trends or as an instrument to be associated with cutting-edge ICT and multimodal *e-nvironment*. Simultaneously, infobrokering enterprises enter the market only to leave it shortly since their founders lack the basic business skills. Therefore, the instability of the supply side of the infobrokering services market in Poland is empirically confirmed.

However, the comparison of the primary research (N = 18) with the Nizioł's study (N = 29) revealed three analogies. The first similarity concerns the geographic location of infobrokering enterprises within the administrative division in Poland and indicates their accumulation in the south of Poland. The second parallel is found in the fact that infobrokering enterprises are mainly established after 2005. The third resemblance refers to the structure of infobrokering enterprises regarding sex of the owner and leads to the conclusion that males more often than females establish and run infobrokering businesses.

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Abstract

The revolution in information and communication technologies (ICT) has implied the emergence of new information services, namely information brokerage services, which provide commercial acquisition, aggregation, and accreditation of information. The reflections on the topic of this paper are firstly focused on the infobrokering services provision. Furthermore, the results of primary research concerning supply on infobrokering services market in Poland are shown. Subsequently, the comparison of the primary and secondary research is conducted, so that the instability of the supply is confirmed.

Podaż na rynku usług infobrokerskich w Polsce w świetle badań empirycznych

Rewolucja w zakresie technologii informacyjno-komunikacyjnych (ICT) implikuje powstawanie nowych usług informacyjnych, mianowicie usług infobrokerskich, które są usługami świadczonymi na zasadzie outsourcingu i polegają na akwizycji, agregacji i akredytacji informacji. W pierwszej części artykułu zarysowano istotę usług infobrokerskich. Następnie przedstawiono wyniki badań własnych w zakresie podaży na rynku usług infobrokerskich w Polsce. W ostatniej części publikacji skoncentrowano się na porównaniu wyników badań własnych i badań zastanych. Konkluzją jest empiryczne zweryfikowanie tezy o chwiejności podaży na badanym rynku.