Use of Publicly Available E-Information for Business

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Abstract. Publishing public administration data is starting to grow in Slovak republic. Although much of the data has been published in a more transparent form, it can be said that last year it was a breakthrough in data disclosure. The slovensko.digital (slovak.digital) platform has significantly contributed to this break-through. The article discusses how these data are published and how they can be used.

1 Introduction

Today's time is marked by an enormous amount of information. This information increase brings higher demands not only to managers but also to ordinary people who have to process this amount of information daily. Every production unit that wants to be competitive in the present day should be characterized by a suitable combination of needed productivity, flexibility and quality. [1] However, on the other hand, the recipient of the information has to deal with the fact that not all the information he receives is really appropriate and necessary to him and, moreover, they are not in the form he would need. Therefore, the most valuable information becomes those that are from official sources, but it is also necessary to consider whether the concerned subjects have a legal obligation to pass on the information and how that information is accurate. Access to information from official sources is so much valuable, since the data thus obtained is not only from the sample of respondents but from the basic set, i.e. all entities that are required to publish this information. In the past, it has been quite difficult to get this official information because it has been processed for a relatively long time and, moreover, it has not always been possible to obtain, for example, from Internet. On the other hand very important precondition for a successful company application in the business environment is its ability to archive relevant data in the long term on the basis of management quality systems, exactly according to the requirements specified in concrete conditions. [2] However, the pressure on public administration, increasing transparency requirements and the requirement to have the most accurate information in the shortest possible time, yielded results. As a result, publishing of public administration data is beginning to have a growing trend in Slovakia, although many data have been publicly disclosed in the past, although often with a time lag, it can be said that 2016 was a breakthrough in data disclosure. The main reason for this breakthrough was the launch of the slovensko.digital platform.

2 Data providers

Providers of publicly available data can be divided as follows:
1) state entities,
2) independent organizations,
3) enterprises.

2.1 State Administration

The State Administration is the first provider of publicly available data. It also determines what everything can be published. Act no. 211/2000 Coll. On Free Access to Information and on Amendments to Certain Laws (Freedom of Information Act) [3], states that the persons required by this Act to make information available are state authorities, municipalities, higher territorial units as well as those legal persons and natural persons to whom the law entrusts the power to decide on the rights and obligations of natural or legal persons in the field of public administration, and only to the extent of their decision-making activities. The largest sources of published data include the following:

a) National Agency for Network and Electronic Services
NASES operates the open data portal data.gov.sk. The Open Data Portal was created under the Open Government Initiative, which aims to improve governance and management of public matter through increasing transparency, efficiency and accountability. Data.gov.sk is a catalog containing various datasets from obligated persons in the Slovak republic. It is possible to collect data links from the site for private use, or search in published data. The open data portal is able to store a copy of the data or provide them with a database space along with basic visualization tools based on the type of data and the form of use. Specific datasets can be found at https://data.gov.sk/dataset.) There are 1114 different datasets from multiple organizations at present (May 2017). Fig. 1 shows homepage of the Central Public Services Portal for People. [4]

These datasets can be searched for and filtered by organizations, keywords and expressions, file formats, licenses, and the specified sequence on the portal,. Datasets are available in different file formats. The largest representation is CSV [5] and XML [6].
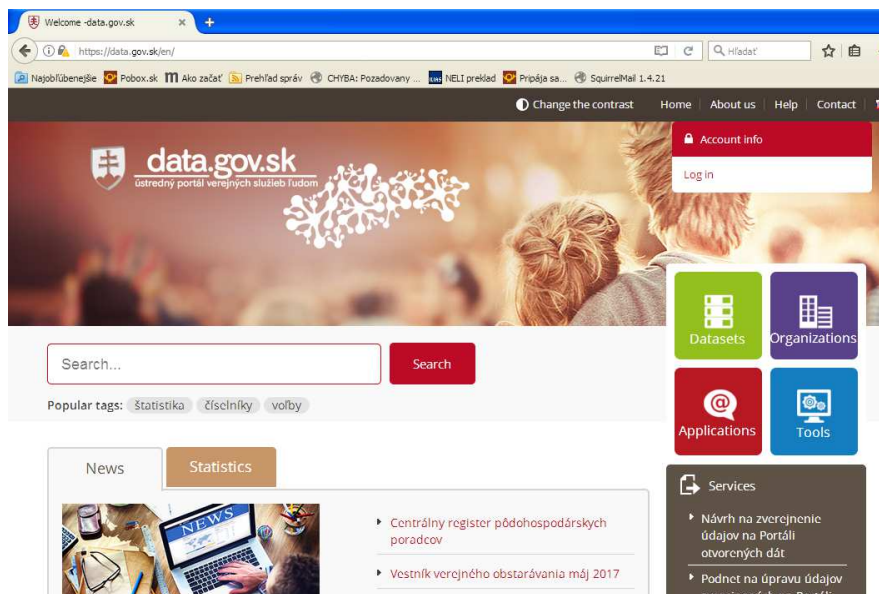
Fig. 1. Homepage of the Central Public Services Portal for People [4]

b) Commercial bulletin

The Commercial bulletin [7] is operated by the Ministry of Justice of the Slovak Republic. Provides the following data:

- Commercial register
- Collection of documents
- Notices of initiation of winding-up or co-operation proceedings without liquida-tion
- Bankruptcy and restructuring
- Claims of liquidators
- Other announcements
- Specification of received share of income tax paid
- Auctions
- Sale of property
- Management reports
- Mandatory published contracts

For the general public, this information is available in PDF format. The portal of the Ministry of Justice also has the opportunity to register for an account, to access structured data that can be subsequently processed by computer. Registration is free of charge. This option is used by many businesses and organizations. This creates complex databases of publicly available data. Updating data is every working day. Fig. 2 shows search page of the Commercial bulletin. [8]
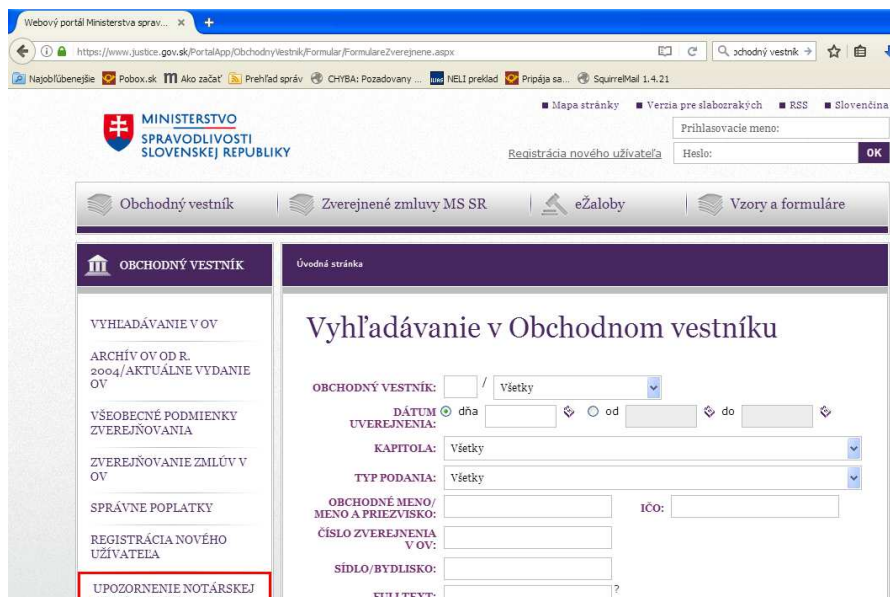
Fig. 2. Search page of the Commercial bulletin [8]

c) Social Insurance Agency

The Social Insurance Agency [9] provides only a database of debtors. Data is in two formats: TXT and CSV.

d) The Ministry of Finance of the Slovak Republic maintains a Register of financial statements [10]. It is possible to find complete accounts in the register by name, company registration number or tax ID and if the company was required to disclose both the annual report and the auditor's report, these are also available. However, a more in-depth investigation will show that not every company is likely to upload the requested data or submit it in the required format as some data shows "Data not available in a structured form." There is homepage of the Register of Financial Statements on the Fig.3. [10]
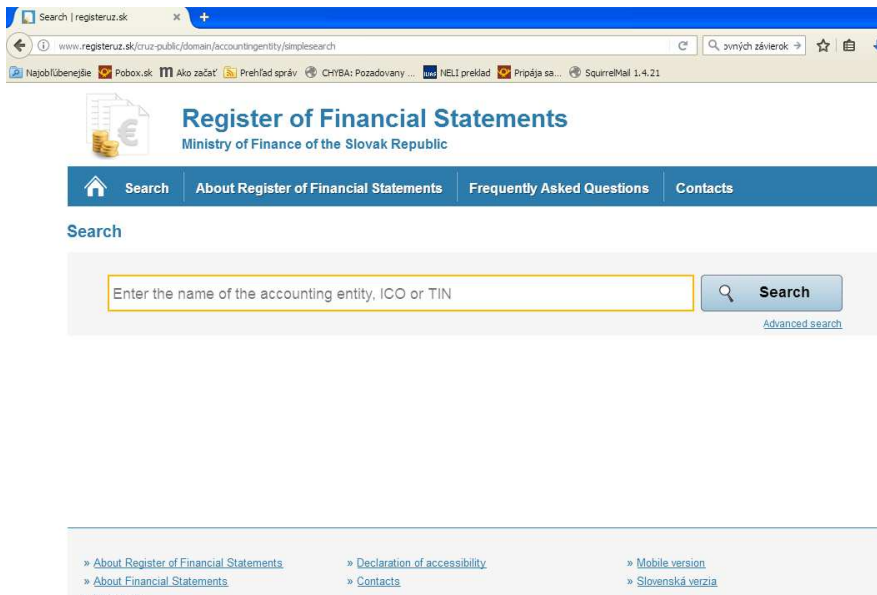
Fig. 3. Homepage of the Register of Financial Statements [10]

e) Central Register of Contracts

The Central Register of Contracts [11] is the website on which contracts concluded by the liable entity (pursuant to §5a of Act No. 211/2000 Coll.) are published. [3] A publicly disclosed contract involving the Ministry, the other central state administration body, a public body and a budgetary organization or a contributory organization established by them, which are liable pursuant to Article 2, shall be published in the Central Register of Contracts; The liable entity shall immediately send to the Office of the Government of the Slovak Republic a contract for publication. The Central Register of Contracts is a public list of mandatory contracts, which are maintained by the Office of the Government of the Slovak Republic in electronic form; Register is a public administration information system. In this register is today approx. 1,366,000 contracts (May 2017). Fig.4 shows English homepage of the Central Register of Contracts. [12]
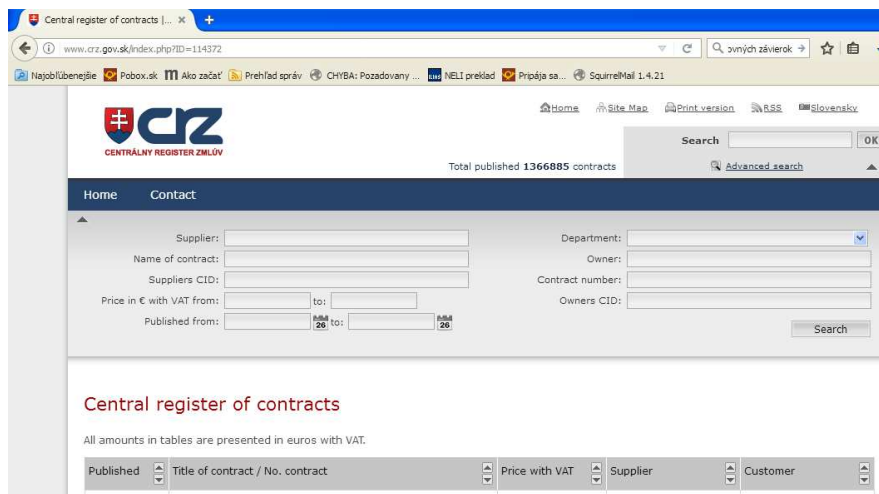
Fig. 4. English homepage of the Central Register of Contracts [12]

2.2 Independent organizations

These include organizations interested in giving the general public access to publicly available data in a transparent form or in the form of a suitable dataset for further processing. These organizations receive data from the state administration, trying to consolidate them. The most distinguished providers include:

a) Fair-play Alliance

The Fair-play Alliance is a standard non-profit and non-party civic association founded in 2002 by former journalist Zuzana Wienk [13]. The civic association manages the datanest.sk project [14], which offers various datasets (The English homepage of the Datanest is on the Fig.5). Regularly updated datasets include the Organization's Register, which currently contains over 1,400,000 entries.
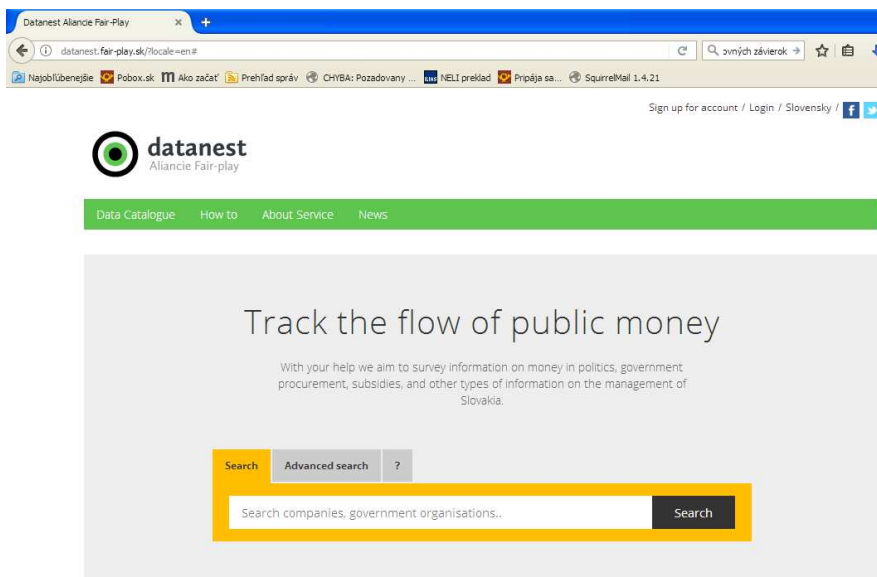
Fig. 5. The English homepage of the Datanest project managed by the Fair-Play Alliance [14]

b) Platform slovensko.digital (slovakia.digital)

Slovensko.digital is a civil association aimed at enhancing the quality of digital services in Slovakia. The members of the association are mainly IT specialists. Since the start of their foundation, they have launched more successful projects. In the area of public disclosure, this is the following:

• ekosystém.slovensko.digital [15] (ecosystem.slovakia.digital)

• verejne.digital [16] (public.digital)

Ecosystem.slovakia.digital [15]

This project is so far the most significant that the slovak.digital platform has put into operation. Includes services:

- Datahub [17]

The service provides access to consolidated and linked structured data via a simple REST API [18]. Using REST API [19] is beneficial for businesses as well as individuals who can use this data in their information systems. The user no longer has to rewrite the published data from the Internet; the service will be delivered automatically. However, the information system must be adapted to communicate with the web service. For advanced data analysis, it is also possible to access the SQL database. Registration is required here.

- Open data & API

Open data are in this case SQL databases that are really made available to the general public and are freely available for download. Currently there are the following databases:

• _Register of legal entities_ - database of legal persons, entrepreneurs and public authorities. There are more than 1.4 million legal entities with complete history.

Source: Register and identifier of legal entities, entrepreneurs and public authorities, Statistical Office of the Slovak Republic.

- *Central Register of Contracts* - database of contracts of the Central Register of Contracts since 2011.
Source: data.gov.sk, Central Register of Contracts, Office of the Government of the Slovak Republic.
- *Bulletin of Public Procurement* - Public procurement database from 2014.
Source: data.gov.sk, Bulletin of Public Procurement, Office for Public Procurement.
- *Commercial bulletin* – database of notices from Commercial bulletin since 2011.
Source: Commercial bulletin, Ministry of Justice of the Slovak Republic.
- *Register of Financial Statements* - database of accounting units of the Register of Financial Statements.
Source: Register of Financial Statements, Ministry of Finance of the Slovak Republic.
- *Debtors of the Social Insurance Agency* - a database of social insurance debts from 2014.
Source: Debtor Lists, Social Insurance Agency.
- *Debtors of the General Health Insurance Company* - Database of Debtors of the General Health Insurance Company from June 2016

Each of these databases is guided by practical and streamlined documentation (table and column descriptions). Each of them is also available with the REST API, which makes available consolidated and linked structured data in the JSON format. [20]

Public digital [16]

Homepage of Public digital is showed on the Fig.6. The service is made available in the form of a website. Its control is very intuitive and simple. Within this project there are two more:

- *links.public.digital* (prepojenia.verejne.digital) - the purpose of the service is to search for links between businesses and people
- *procurement.public.digital* (obstaravania.verejne.digital) - the purpose of the service is to identify and notify tenderers who should be involved in public procurement.
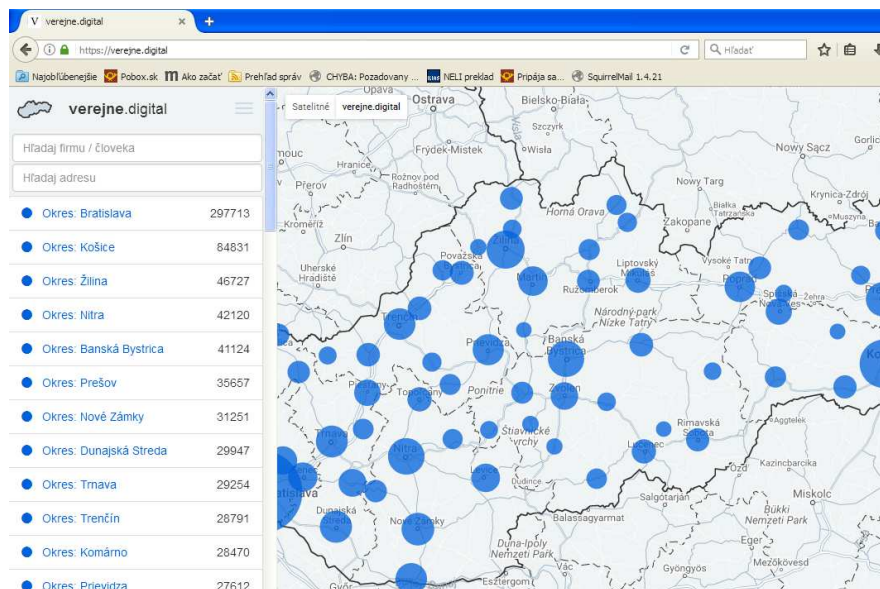

Fig. 6. Homepage of the Public.digital [16]

2.3 Enterprises

According to the Freedom of Information Act [3], disclosure of information may also be required by a separate legal act from another legal or natural person. This may give rise to a reporting obligation, for example, companies to whom the relevant law commits to publish financial statements or other financial information. In addition to the aforementioned Ministry of Finance, which publishes the financial statements, FinStat Ltd. is the other entity that publishes financial information about enterprises. The website [21] (Fig.7 – English homepage [22]) serves to the public since 2013 and the main data sources processed by the Business Journal, the Trade Register, Registry of Accounts, Lists of Debtors from insurers, Lists of the Financial Report and Court Decisions. They are gradually adding additional data sources, but only a few of these resources are free. The free information that the interested person receives is in a simplified form, and even if they are processed graphically, there is no possibility of finding a more detailed structure. If person concerned would like to buy, for example datasets, price is not published on the Internet, must contact the company.
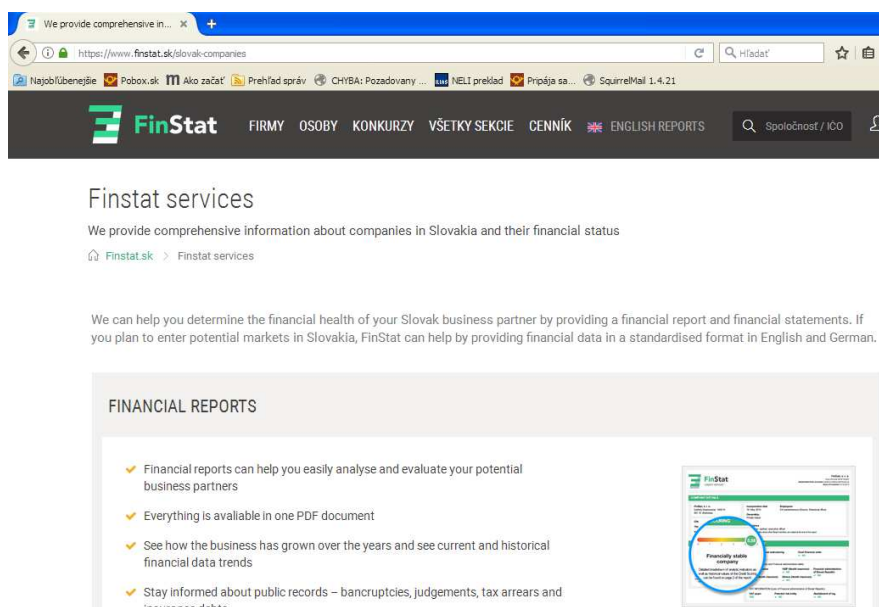

Fig. 7. The English homepage of the FinStat [22]

3   Use of Data Obtained

Data providers try to make these data available as much as possible, so the user has several options to find a potential business partner and to verify his credibility. The usual financial data (such as sales, assets and liabilities, profit...) are available without problems. However, if he needs to verify, for example, managing director or address, may find old information. For example in case of accidental search over public.digital it turned out that some data are older than a year, old information was not only about companies but also about the owners of real estate. It follows that the user needs to verify the information in multiple sources. Therefore,

the data needs to be verified, manually traversed and consolidated. If one of the providers offers it, these data are already paid because it is time consuming. The solution could be software that would allow data to be edited and supplemented by comments.

4   Conclusions

Increasing demands on entrepreneurs also increase their claims for information. In the past, the Statistical Office of the Slovak Republic was the main (and only) relevant source of statistical data. This data could be obtained in the form of the Statistical Yearbook with a relatively long delay. At present, the Statistical Office of the Slovak Republic is an important source of information because it is the legal obligation to submit statistical reports electronically to the reporting agents (legal entities, natural persons - entrepreneurs). In addition, they become the basis for Eurostat, the statistical office of the European Union. Eurostat collects all its data from organizations that are designated by specific Member States to collect statistical data on their territory (Statistical Office of the Slovak Republic is the authority of the SR). Eurostat is mainly concerned with the consolidation of these data and its translation into a comparable form. This consolidation causes sometimes different interpretations of the Statistical Office of the Slovak Republic and Eurostat data. But the data provided by the Statistical Office of the Slovak Republic is long enough for entrepreneurs. Thanks to fact, that other subjects started collect information and, in particular to publish for the general public, today there is not even problem of getting information but getting to the right, relevant and the most recent data, which will be free of charge (or at a reasonable price) . In 2000, a law on free access to information was adopted, which allowed public bodies to publish data that entrepreneurs have or might be interested in. However, these data need to be reviewed, updated, and often edited because they are not in the required form or need to be verified. The article introduced the largest providers of publicly available e-information but also points to the fact that the use of this data for business and finance can continue to be time consuming (or financially) demanding. Therefore, it is necessary in the future to consider the appropriate form of processing and consolidation of such data so that the user has the search as simple as possible.

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