

## Public open data against crisis? Case of Czech and EU Insolvency Registers

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**Abstract.** This paper discusses the role of public open data in the mitigation of the impacts of global financial and economic crisis and in systematic improvement of the overall institutional environment for business. We demonstrate our analysis using the example of Insolvency Registers in the EU and, specifically, in the Czech Republic. The Czech Insolvency Register is, unlike similar registries in other EU Member States, accessible free of charge becoming thus an efficient tool for courts, creditors, debtors and other economic agents. The paper shows that the implementation of the electronic version of the Insolvency Register has helped to decrease the uncertainty of stakeholders in the insolvency procedure by reducing the problems of asymmetric information and moral hazard that are inherently present in every insolvency procedure. The open Insolvency Register influences the efficiency of the insolvency procedure – especially the speed of the process and the size of insolvency recovery rate – and thus indirectly facilitates the return of productive assets back in the economy. The transparency of the creditor-debtor-court relations in insolvency procedures enhanced by the electronic free-of-charge Insolvency Register leads directly to improvement of the Czech business environment, which had been found as a significant weakness of country competitiveness. It is rather important feature given the ongoing global economic crisis. The public open data can thus successfully contribute to business and market development.

**Keywords:** insolvency register, e-Justice, stages model, open data, Czech Republic

### 1. Introduction

This paper shall discuss the role of openness of electronic data on business environment. We demonstrate on case of insolvency data in the Czech Republic and in Europe that the opening of public data may help to reduce some of the impacts of the economic crisis and contribute to improvement of overall institutional environment for business<sup>1</sup>. The aim of this article is to foment the interest of both policy makers and business leaders in data owned by public institutions and also to contribute to the discussion on how open data might be deployed for the benefits of global business environment.

The paper is divided as follows: firstly, it briefly summarizes the recent discussion on open data and their importance in policy-making and the global economy. Secondly, the paper focuses on the role of insolvency registries and the extent, to which these registries provide open data on insolvency proceedings in various EU Member States. Thirdly, the paper provides an evaluation of costs and benefits of the Czech electronic Insolvency Register for various groups of stakeholders in insolvency proceedings. Lastly, a summary of the

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<sup>1</sup> As a reasoning of downgrade of number of Eurozone countries Standard&Poors declared on January 13, 2012: “While we see a lack of fiscal prudence as having been a major contributing factor to high public debt levels in some countries, such as Greece, we believe that the key underlying issue for the Eurozone as a whole is one of a growing divergence in competitiveness between the core and the so-called “periphery.” Relatively good competitiveness of the Czech republic had been, however, weakened by poor institutional environment for business as indicated by Global Competitiveness of World Economic Forum 2010/2011.

key findings of the paper is provided together with some general implications of open data for global business and political leaders.

## 2. Role of open data in the economy

Public data and their greater openness – by which we mean their greater availability and accessibility has become due to modern internet technologies a very important global topic. As suggest [1], the open data can substantially contribute to value in business and shall be taken into account both by business leaders as well as by policy makers: “Leaders in every sector will have to grapple with the implications of big data, not just a few data-oriented managers. The increasing volume and detail of information captured by enterprises, the rise of multimedia, social media, and the Internet of Things will fuel exponential growth in data for the foreseeable future.” Another interesting study, which describes the positive impacts of open data on business are for instance [2] or [3].

The importance of open data for research and spread of knowledge was also identified by the various global and national public institutions. For example, [4] from OECD highlight the role of open data in the advancement of science and thus should be openly available to the maximum extent possible. The World Bank highlighted the open data issue by enabling access to its numerous databases and data sets<sup>2</sup> and by actively promoting their deployment and visualization.

[5] focus on the relationship between open-data and transparency and also on the features of what they call “open-data movement”. According to them [5] (p. 6), the open-data movement is “a new generation of tech-savvy activists and policy specialists who seek information that is both verifiable and usable-- inferable. Illustrative of this trend are the initiatives of governments in New Zealand, the U.K., and the U.S., who have provided data sets and other forms of open-data, as exemplified by the U.S. website, <http://data.gov>. The U.S. has launched a number of Open Government Partnerships, which ultimately aim to include more than 70 countries.”

There are numerous other studies focused on technical as well as economic aspects of public open data, however, in this paper, we shall confine our analysis only to one particular part of them – on data concerning insolvency proceedings and bankruptcies. In this area, open and accurate data are for entrepreneurs invaluable – as described in the following chapter.

## 3. Insolvency registers

The Insolvency Registers perform an important role in all stages of the insolvency proceeding because they enhance its transparency and reduce its risks (e.g. counterparty risks stemming from asymmetric information between debtor and creditor, moral hazard etc.). Depending on the quality of content and the form of a particular Insolvency Register its existence can substantially increase the speed of insolvency proceedings and thus – indirectly – reduce their costs (increasing the insolvency recovery rate, respectively).

The primary use of any Insolvency Register precedes the actual commencement of the insolvency proceedings. Any reliable Insolvency Register is – especially in times of a financial crisis – a valuable tool enabling its users to check whether their counterparty is undergoing an insolvency proceeding. Publication of such information is the first step in the reduction of moral hazard and counterparty risk present in the debtor-creditor relations.

In the stages following the commencement of insolvency proceedings the Insolvency Register becomes (again depending on the quality of its content and form) an important source of information about the situation of the debtor and of other creditors. The records published in the Insolvency Register make it possible for creditors (and other stakeholders) to at least to some extent reduce the asymmetric information concerning their relation to the debtor. The transparency of the whole insolvency proceedings also allows for greater public control and may lessen the probability of corruption and improper insolvency procedures.

In the ultimate stages of insolvency resolution the Insolvency Register shall above all facilitate the communication between the debtor, creditors, judge and insolvency trustee. Centralization and publication of all important documents related to the insolvency proceedings (bankruptcy or reorganization proceedings, respectively) reduces administrative costs of both court and stakeholders and enhances the fluency of the proceedings. Especially in the ultimate parts of the insolvency proceedings the Insolvency Register serves as an important tool for cheap and quick communication between different insolvency judges and contributes

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<sup>2</sup> <http://data.worldbank.org/>

thus to the harmonization of insolvency procedures. Throughout the whole insolvency proceedings the Insolvency Register enables potential investors and financing institutions to obtain data and information about the situation of the debtor, which enables them to adjust their activities and results in partial risk reduction.

## 4. Openness and other features of Insolvency Registers of EU Member States

### 4.1. Insolvency Registers in the EU - comparison

The Czech Insolvency Register is a relatively new public register launched in January 2008 as a pilot eJustice project of the Ministry of Justice. Compared to Insolvency Registries in other countries, the Czech Insolvency Register is fairly advanced. Apart from providing straightforward information about whether a company or an individual is currently undergoing insolvency proceedings or not, the Czech Insolvency Register contains electronic versions of all important documents related to the insolvency proceedings. These documents are downloadable free of charge. The qualitative benchmarking of the Czech electronic Insolvency Register with Insolvency Registers of selected EU countries is provided in the *Fig. 1* below.

| Feature of the Insolvency Register                                     | CZ             | UK             | IRL            | F | I | E | SK             | D              | DK             |
|--|----------------|----------------|----------------|---|---|---|----------------|----------------|----------------|
| Established by law (public)  | ✓              | ✓              | ✓              | X | X | X | X              | ✓              | ✓              |
| Managed by public entity   | ✓              | ✓              | ✓              | X | X | X | X <sup>f</sup> | ✓              | ✓              |
| Stand-alone register   | ✓              | ✓ <sup>d</sup> | X              | X | X | ✓ | ✓              | X <sup>h</sup> | X <sup>i</sup> |
| Insolvent companies  | ✓              | ✓ <sup>d</sup> | ✓ <sup>e</sup> | ✓ | ✓ | ✓ | X              | ✓              | ✓              |
| Insolvent individuals  | ✓              | ✓ <sup>d</sup> | X              | X | X | X | X              | X              | X              |
| Electronic version available   | ✓              | ✓              | ✓ <sup>e</sup> | ✓ | ✓ | ✓ | X              | ✓              | ✓              |
| Official electronic delivery   | ✓ <sup>a</sup> | X              | X              | X | X | X | X              | ✓              | ✓              |
| Basic services free-of-charge  | ✓              | ✓ <sup>d</sup> | ✓              | X | ✓ | ✓ | X              | ✓              | ✓              |
| Advanced services free-of-charge                                       | ✓ <sup>a</sup> | ✓ <sup>d</sup> | X              | X | X | X | X              | X              | X              |
| Watch dog services available   | X <sup>a</sup> | ✓              | X              | ✓ | ✓ | ✓ | X              | X              | X              |
| Statistics publicly available  | X              | ✓              | X              | ✓ | X | X | X              | X              | X              |
| Interactive communication with court                                   | X              | X              | X              | X | X | X | X              | X              | ✓              |
| Interlink with other registries  | ✓ <sup>b</sup> | ✓ <sup>d</sup> | ✓              | ✓ | ✓ | X | X              | ✓              | ✓              |
| Download of documents from debtors file                                | ✓              | ✓              | X              | X | X | X | X              | ✓              | ✓              |
| Possibility to fill in official documents electronically               | X              | ✓              | X              | X | X | X | X              | ✓              | ✓              |
| Possibility to exchange information with foreign insolvency registries | X <sup>c</sup> | X              | X              | X | X | X | X              | X              | X <sup>i</sup> |
| Possibility of print out of official records                           | X              | X              | X              | X | X | X | X <sup>f</sup> | ✓              | ✓              |
| E-score <sup>j</sup> (number of ✓ in columns from 4. – 17)             | 8              | 11             | 4              | 5 | 5 | 4 | 0              | 8              | 9              |

Fig. 1: Comparison of features of selected Insolvency Registers (qualitative benchmark)

a) The Czech Insolvency Register currently offers only free-of-charge support for interconnection of the Insolvency Register application with watch dog programs installed by users of Insolvency Register; the Czech Insolvency Register itself does not provide any watch dog services. Electronic delivery of official documents is possible only when allowed by the Insolvency Act.

b) As was already discussed, the Czech Insolvency Register is currently interconnected with the Czech Commercial Register.

c) The Czech Insolvency Register is in Czech only, nevertheless, the Czech Ministry of Justice states that the system is ready for future interconnection with other EU insolvency registries.

d) There are 2 separate Insolvency Registries in UK – the Companies House Register contains information about corporate insolvencies (other information about the company that is in the Czech Republic gathered by the Commercial Register), the Insolvency Service publishes information about individual insolvencies; both registries are free of charge and provide a broad variety of interactive services including filling of forms and petitions online; both registries cover only insolvencies in England and Wales, Scotland and Northern Ireland have their own register systems.

e) The Insolvency Register is part of the electronic Commercial Register.

f) The so called Central Register of Debtors is owned by a private company; according to its webpage it could be interconnected with similar registries in the EU and USA; among the services provided by the Central Register of Debtors there is also possibility to print out an official debt record.

h) Combined with the Commercial Register

i) Combined with the Commercial Register and with an eGovernment platform; in Danish only.

j) Number of features benchmarking the Czech Insolvency Register with other EU Insolvency Registers (based on method applied in [6]).

According to the study conducted by [6] two general groups of evaluation methods for eGovernment tools can be found in literature – hard measures (cost-benefit analysis, benchmarking) and soft measures (scoring method, eGovernment stages, sociological angle). In this paper, we conduct a qualitative cost-benefit analysis and the eGovernment stages method as we consider these methods to be the most appropriate for outlining this particular matter. Preliminary qualitative benchmarking is provided in *Chyba! Nenalezen zdroj odkazu* (E-score). The aim of application of both methods is to illustrate the relation between the Czech electronic Insolvency Register and the speed and quality of insolvency proceedings – especially the speed of the process and the size of insolvency recovery rate – and the Register indirectly facilitates the return of productive assets back in the economy.

A study conducted by the [7] focused on Business Registers suggests that the most important function of public registers is the dissemination of information both to public and private stakeholders. The benefits of the Czech electronic Insolvency Register can thus be grouped into following categories:

- transparency (legal watchdog)
- publicity (information for debtors and creditors)
- coordination (sharing of information between courts and insolvency trustees)
- policy tool for state administration (data for evaluation of policy changes)

#### 4.2. Benefits and costs of the Czech Insolvency Register

The Czech electronic Insolvency Register has brought benefits, which will most likely compensate for its initial and operational costs<sup>3</sup> (estimated initial and operational costs in 2008 about CZK 180 mil. – [8]). The Czech Insolvency Register is available free of charge on the Internet to anybody who is interested in a certain insolvency proceeding. This openness facilitates public control over insolvency proceedings, lessens space for corruption [9] and improves thus the transparency of the Czech business environment making it more attractive for Czech and foreign investors.

The accessibility of all important information about insolvency proceedings in electronic form from the Internet leads to significant decrease in costs of information collection (which means reduction of total costs of insolvency proceedings). Creditors and other stakeholders do not have to check for information in paper

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<sup>3</sup> The validity of this statement can be demonstrated with the use of fees of foreign paid registers (Italian, French etc.) as proxy variable. The fees for downloading of complete documentation about a company (as analogy top complete insolvency documentation) range between EUR 5 to 15. If for instance 10,000 companies would download annually complete insolvency documentation about 10 of their business partners and if they would pay EUR 10 (assumed average fee) per download, the initial costs of the Czech Insolvency Register (approx. CZK 150 mil., [8]) will be covered in 6 years. This calculation does not involve any of other benefits of the Register as listed in *Chyba! Nenalezen zdroj odkazu* that further decrease the payback period of the Czech Insolvency Register.

form in the seats of insolvency courts, which is a time-consuming and therefore expensive procedure, but have all information ready at hand on the webpage of the Czech Insolvency Register. Thanks to this feature the Insolvency courts and insolvency trustees can also check, how other insolvency courts proceeded in similar cases and coordinate informally insolvency procedures in analogous cases. The statistical functions of the Czech Insolvency Register enable the state administration to test real impacts of policies (policy tool function) – numbers of declared bankruptcies, reorganizations and insolvencies in progress can be used as proxy variables (see [9]).

Nonetheless, there is still a plenty of space for further improvement of the Czech electronic Insolvency Register. *Fig.2* describes the Czech Insolvency Register based on the stages as described by [6]. It shows that in terms of information dissemination (stage 1) the Czech Insolvency Register provides broad range of information to all stakeholders of insolvency proceedings. On the other side it does not provide any of the stage 2 – 4 services. From the stages model and also from the E-score benchmarking (see *Fig.1*) it follows that the lack of interactivity is one of the major deficiencies of the Czech Insolvency Register. The possibility to fill e.g. the latest financial results of debtors in the Insolvency Register electronically would enable the regulator as well as the insolvency courts and trustees to work further with such data, aggregate them, obtain statistics about insolvent companies, obtain feedback on changes of the Insolvency Act etc.

The authors of this paper believe that the Czech Insolvency Register could be developed to stage 2 or 3 (see *Fig.2*) and that such development would be beneficial for all stakeholders of insolvency proceedings.

| Stakeholders |                                 | Stage 1   | Stage 2   | Stage 3  | Stage 4  |   |   |   |
|--------------|---------------------------------|---|---|--|--|---|---|---|
| Internal     | Insolvency courts               | Coordination of practices among insolvency courts and judges, dissemination of information, electronic delivery | Basic web technology - board for posting of scanned documents | Electronic data interchange by email or electronic forms | Electronic signature, interoperable technology | Vertical and horizontal integration of technologies from stages 1,2,3, integration with other registers |   |   |
|              | Insolvency trustees             | Coordination of practices among insolvency trustees, dissemination of information                               |   |  |  |   | X | X |
|              | State administration            | Extraction of data about market exits, personal insolvencies for evaluation of policies                         |   |  |  |   | X | X |
| External     | Debtors                         | Information dissemination, possibility to quickly publish reactions on information in the register              | X   | X  |  |   |   |   |
|              | Creditors                       | Information dissemination about the debtor, other creditors etc.  | X   | X  |  |   |   |   |
|              | Public (potential stakeholders) | Information dissemination - catalogue of initiated and running insolvency proceedings                           | X   | X  |  |   |   |   |

Fig. 2: The Czech electronic Insolvency Register within 5 stages of eGovernment evolution, Modification of [10]

## 5. Conclusions

The insolvency law is an important part of regulation of the business environment. Application of insolvency law in the Czech Republic is facilitated by the electronic Insolvency Register that enables creditors, debtors, insolvency courts and trustees to access all important information in electronic form from the Internet. In comparison with selected Insolvency Registers from other EU Member States the Czech

Insolvency Register is one of the better ones. It provides a vast amount of documents for download – in this respect it is probably one of the most informative Insolvency Registers in EU.

From the point of view of cost-benefit analysis this paper shows that the Czech Insolvency Register is an efficient e-Justice tool – that its benefits (such as are e.g. its contributions to increase of legal certainty of stakeholders of insolvency proceedings, improved communication between insolvency courts and trustees and costs savings of collection of information about debtors and creditors) significantly outweigh its initial and operational costs.

In general, our analyzed case described that the publicity of the data from public institutions (such as are courts, public administration etc.) can substantially contribute to improvement of the business environment, which is a rather important feature given the ongoing global economic crisis. The findings of this paper shall serve as a basis for further research on open data and also as an important insight for entrepreneurs and policy-makers.

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