Informatisation of Land Registers in Poland and Other Member States of the European Union. A Comparative Overview

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Abstract: An efficient land registration system is of great significance for the development of real estate transactions at both national and European levels. In order to achieve this objective, the use of information and communication technologies is an essential precondition. Nowadays considerable progress of informatisation processes can be observed in the Member States of the European Union as regards keeping land registers and disclosing information therefrom as well as simplifying and speeding up the registration procedure. It is evidenced, for example, by the latest innovations introduced in Poland which have resulted mainly in ensuring public access to land and mortgage registers via the Internet and introducing the so-called electronic land and mortgage register proceedings. The above issues are the subject of a research project “Informatisation of land and mortgage registers” carried out under the direction of Prof. dr hab. Jacek Gołaczyński in the Research Centre for Legal and Economic Issues of Electronic Communication at the Faculty of Law, Administration and Economics of the University of Wroclaw, and supported financially by the Polish National Science Centre. The research project aims at examining the directions of development of electronic land registers in Poland and Europe-wide, including prospects for harmonisation of land registers. The crucial problems that need to be addressed in this context concern, on the one hand, looking for the best methods to develop and improve land registration systems and, on the other hand, ensuring the security of trading on the real estate market. One of important elements of the research project is a comparative analysis of regulations concerning informatisation of land registers in EU Member States. The present article aims to submit results of the research in this regard carried out so far by showing an overview of recent achievements in the field of modernisation of land registration systems in the jurisdictions within the European Union, with particular consideration of Polish land and mortgage registers.

Keywords: land registration, informatisation, Poland, European Union, comparative law

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Introduction

Public land registers traditionally play an essential role in ensuring security of real estate transactions, investment financing, spatial planning and performing other public administration tasks. The fulfillment of the above objectives is conditioned by the accessibility of reliable and up-to-date information regarding land as well as effective land registration proceedings. Nowadays possibilities to use land information resources are increased as a result of the application of new technologies in the field of land registration. In recent decades reforms aimed at modernising national land registers have been implemented throughout Europe. However, together with potential improvements innovative solutions introduced in the land registration systems entail some challenges. At the same time efforts have been undertaken to strengthen cooperation among land registry organisations in the European Union in order to lay the foundations for the interconnection of electronic land registers. What should be highlighted in this context is a wide variety of land registration models adopted in the European countries which affects the feasibility of harmonisation projects promoted by the EU institutions. The abovementioned factors demonstrate the need for a comprehensive comparative research with the purpose to identify current directions of development of land registration systems. On this basis postulates shall be formulated as to the methods of implementing information and communication technologies so as to, on the one hand, take advantage of the modernised land registers to the greatest extent possible and on the other hand guarantee security and legal certainty for the market participants.

The issues outlined above are covered by the research project “Informatisation of land and mortgage registers”, carried out at the Research Centre for Legal and Economic Issues of Electronic Communication at the Faculty of Law, Administration and Economics of the University of Wrocław, under the direction of Prof. dr hab. Jacek Gołączyński. The research project includes a comparative analysis of the electronic land registers operating in the EU Member States. For the purpose of the comparative study information regarding particular jurisdictions has been gathered, among others, by way of a questionnaire which has been sent to national land registries, ministries of justice and chambers of notaries. The survey was conducted in the period from June to November 2016***.

The present article is based on partial results of the comparative analysis and focuses on indicating general tendencies as regards innovations introduced in national land registration systems as well as assessing benefits and risks connected with the informatisation process in the light of examples from selected European jurisdictions, with particular consideration of Poland.

2. Diversity of land registration systems – a general picture

Land registration refers to recording the transfer of ownership and creation of interests in land (United Nations Economic Commission for Europe, 1996, p. 11) and as such is considered to be strongly rooted in national legal orders. Since it rests within the competences of individual states, it is not susceptible to harmonisation process in the EU (Woźniak, 2014, pp. 314 ff.; Kaczorowska, 2011, pp. 50–51; cf. Lodde, 2017, pp. 74 ff.). As a result, land registration systems functioning in European countries are characterised by a considerable diversity (Stawecki, 2002, pp. 167–208; Wudarski, 2016, pp. 23 ff.; Martinez Velencoso, 2017, pp. 3 ff.; Câmara Lapuente, 2005, pp. 798 ff.; Zevenbergen, 2002, pp. 47 ff.). Significant differences can be seen particularly between the two dominant legal traditions – the civil law (continental) tradition and the common law tradition. In comparative law a further distinction is commonly made among five legal families (circles), encompassing legal systems with similar features, developed under the influence of specific historical conditions: the Germanic legal family, with Austria, Germany and Switzerland; the Romanistic legal family, gathering countries of the Napoleonic Code – Belgium, France, Italy and Spain; the Anglo-American legal family, gathering Britain, the United States, Canada and Australia; the Socialist legal family, gathering former communist countries of Eastern Europe; and the Islamic legal family, gathering countries of the Islamic world.

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France, Italy, Luxembourg, Portugal, Spain; the Nordic legal family, including Denmark, Finland, Sweden, Norway, Iceland; the common law legal family, represented by England and Wales as well as Ireland; the former communist countries (Central and Eastern Europe transformation states), such as Poland, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Slovakia, Slovenia (e.g. Zweigert, Kötz, 2011, pp. 63 ff.; see also e.g. Stawecki, 2002, pp. 167 ff.; Blajer, 2015, pp. 65 ff.; Blajer, 2016, Z dziejów francuskiego modelu, pp. 89 ff.; Blajer, 2013, Historyczny rozwój, pp. 277 ff.; Sójka-Zielińska, 1997, pp. 118 ff.). In this context it is worth noting that the justification to distinguish former communist countries as a separate group is now put into question. The reason is that reforms introduced in the countries of Central and Eastern Europe after the formal collapse of communism with the aim to release their legislation from the destructive influences of the communist regime have gradually led to the redevelopment of national land law systems in such a way that in the present circumstances they no longer share common characteristics and thus can be grouped together with other systems representing different legal families (Schmid, Hertel, Wicke, 2005, pp. 9, 39). The above classification, however, shall not be applied directly to land law because legal solutions implemented in the jurisdictions traditionally associated with particular legal families differ considerably in respect of transmission of property rights and real estate registration (see further Cooke, 2003, New Law, pp. 4 ff.; Dekker, 2003, pp. 127–130; Schmid, Hertel, Wicke, 2005, pp. 27 ff.; Lodde, 2016, pp. 26 ff.; Pradi, 2015, pp. 1 ff.; Câmara Lapuente, 2005, pp. 798 ff.).

The divergences among land registration systems may be analysed in terms of various criteria, such as: the organisation of land registers, including the authority which is vested with competences to maintain a land register and the relation between the land register and the cadastre; the subject (content) and the format of registration; the legal effect of land registration; potential protection of good faith; the publicity of land registers. Among issues remaining outside the scope of the present analysis are e.g. the extent of territory covered by registration (completion of land registers) as well as the position of the notary in the land registration proceedings.

In regard to the organisation of land registers, a register may be maintained by a judicial authority (as it is e.g. in Poland, Austria, Croatia, Denmark, Estonia, Latvia, Germany, Slovenia) or an administrative body (e.g. in Belgium, the Czech Republic, England, France, Greece, Hungary, Ireland, Italy, Slovakia, Spain and Portugal). Furthermore, the land register – meant as property register or legal register, and the cadastre – being the physical register (land survey), showing the boundaries and location of land – may either be separate or integrated. Distinct rules of registration applicable to the information on the legal status of land and to cadastral information are in force in most Central European countries and countries of the Napoleonic Code as well as some Nordic countries – e.g. in Poland, Austria, Belgium, Denmark, France, Germany, Slovenia, Spain and Portugal. The two kinds of registers, although having separate functions, may constitute parts of the same agency. This is the case e.g. in Finland, Italy and Sweden. By contrast, the functions of land register and cadastre are combined within one register in the common law systems. In some jurisdictions, particularly in the countries of the Napoleonic Code, cadastres serve also tax purposes. Generally, as cadastral information constitutes a basis to identify land in the land register, there is a need to ensure coherency of information contained in the land register and the cadastre (Lodde, 2016, pp. 33–34).

According to the criterion of the subject of registration registers of titles (presumption of accuracy system) and registers of deeds (system based on non-opposability) are distinguished. Under the first system, existing e.g. in Poland, Austria, the Czech Republic, Croatia, Estonia, Finland, Germany, Hungary, Lithuania, Romania, Slovakia, Slovenia, but also in Denmark, England and Wales, Spain, Portugal, Sweden – rights on land (interests) are inscribed in the register upon prior examination of their legality. In case of the registration of deeds system documents regarding land transactions are registered, without the identification of the last genuine title-holder. It means that the register is merely a collection of documents pertaining to a property which only have to comply with formal requirements. Registers of documents operate e.g. in Belgium, Bulgaria, France, Italy, Luxembourg,
the Netherlands. Some land registers of the second type are well organised and improved, as shown by the examples of the French and Dutch land registers (Martínez Velencoso, 2017, pp. 9–12; Cámaralapuente, 2005, pp. 831 ff.).

The distinction between registration of titles and registration of deeds is connected with the way the registration is carried out, i.e. the format of registration, and consequently the way to consult the register. As a general rule the registration of titles system is based on the real folium which means that the land register is organised by the land registered. Accordingly, it is the property that is the object of research. Registration of deeds, in turn, is generally performed in the form of the personal folium, therefore, it is organised by the name of the respective proprietor. In practice, however, land registers using the system of personal folium are equipped with indices which assist in searching for ownership information and actually shall be considered as property registers (this is the case e.g. in France) (Lodde, 2016, p. 36; Cámaralapuente, 2005, pp. 832–833; Schmid, Hertel, Wicke, 2005, p. 32; Rupp, 2014, pp. 571 ff.).

When it comes to the legal effect of registration, it may be of a constitutive or a declaratory character. Constitutive registration is necessary and decisive to create or transfer a right on real estate and is characteristic e.g. for the German legal system. As regards the latter system, the registration is aimed only to disclose the legal status of real estate and make the transfer of a right opposable to third parties, which is a rule e.g. in France. In some legal orders, including the Polish and Italian ones, the registration of the transfer of ownership is declaratory, whereas the creation of limited real rights requires constitutive registration (Lodde, 2016, pp. 37–38; Cámaralapuente, 2005, pp. 809–812; Schmid, Hertel, Wicke, 2005, pp. 32–34; Rupp, 2014, pp. 576 ff.; Kuropatwiński, 2011, pp. 52 ff.).

The legal nature of land registration is correlated with the next criterion, i.e. the protection of persons acting in trust for the content of the land register. Basically, when registration has a constitutive effect, good faith in the register is protected (e.g. in Austria, the Czech Republic, England and Wales, Estonia, Germany, Hungary, Scotland), whereas in case of systems with merely declaratory registration the protection of good faith is not ensured (e.g. in Belgium, France). Nevertheless, also some legal systems with declaratory registration being a rule envisage the protection of good faith (e.g. in Poland, Denmark, Finland, Spain, Sweden) (Lodde, 2016, p. 38; Schmid, Hertel, Wicke, 2005, p. 34).

Different approaches have been adopted in particular jurisdictions also with regard to the accessibility of information from land registers. Most countries, like Poland, the Czech Republic, Croatia, Denmark, Estonia, Ireland, the Netherlands, Portugal and Sweden ensure public access to the land registers and allow everyone to consult them, whereas countries such as Belgium, Germany and Spain impose some restrictions in this respect and the register is accessible only upon demonstration of a legitimate interest. Broader access to land information is offered to some public entities (Lodde, 2016, p. 40; Schmid, Hertel, Wicke, 2005, p. 44; Rupp, C.S., 2014, pp. 573 ff.).

Moreover, it should be underlined that most European countries have one national, centralised land registration system but there also may be local systems based on different rules, like those of German federal states. Additionally, in some countries different types of land registers co-exist in specific parts of the territory, mainly for historical reasons or due to reforms of the applicable land registration systems. The first example would be France and Italy as distinct land registration systems are in force in the French Alsace-Moselle region and in some Italian provinces, so-called new provinces (Trieste, Gorizia, Trento, Bolzano), which were acquired, respectively, from Austria and Germany after the First World War. Also some Greek islands of Dodecanese, which were an Italian colony before the Second World War, follow the model of land registration of Austrian-German origin, different from the traditional system being in force in the country (e.g. Schmid, Hertel, Wicke, 2005, pp. 28, 40; Lodde, 2016, pp. 28, 33). Dual land registration systems can be found also in the British Isles. The reason is that
the system of registration of deeds which originally was adopted in common law has been subsequently complemented by a new one, based on registration of titles and resembling the so-called Torrens system (the Torrens system is a system of registration of titles, which has roots in German law and has been introduced in many Commonwealth countries, including Australia and New Zealand as well as in some US states; see e.g. Cooke, 2003, New Law, p. 11). In consequence, in Ireland, Scotland and Northern Ireland the new land registers operate alongside the traditional ones. By contrast, in England the old registration of deeds system has been replaced by registration of titles so that currently there operates a uniform land register (e.g. Blajer, 2013, Historyczny rozwój, pp. 277 ff.; Blajer, 2013, ‘Deeds recordation’, pp. 82 ff.; Brennan, 2015, pp. 142 ff.).

Taking into account the different ways in which land registration systems in Europe are shaped, several main types as well as hybrid forms of land registers can be identified. The five basic models are the following:

1) the classical Central European land register (land book – Grundbuch), operating in Austria, Germany as well as many former communist countries of Central and Eastern Europe – it is based on registration of rights, of a constitutive character, with protection of good faith and is kept by a court within non-contentious jurisdiction; the characteristic structure of a land book consists of three mandatory sections, regarding respectively the description of the land, the ownership and finally the rights of others on the land, burdens and mortgages;

2) the mortgage register (mortgage conservation – conservation des hypothèques), characteristic for some countries of the Napoleonic Code: Belgium, France, Luxembourg – it operates as a register of deeds, with a declaratory effect of registration and no protection of good faith and is kept by an administrative authority;

3) the Nordic land register, which is based on declaratory registration of rights but at the same time good faith is protected;

4) the new land register existing in the countries of the British Isles (England, Ireland, Northern Ireland, Scotland), following the system of registration of rights and kept by an independent governmental body; in this case the validity of registration does not depend on the validity of the underlying deed;

5) the classical common law register (still in force in Ireland, Northern Ireland and Scotland), being a register of deeds, with no protection of good faith.

Furthermore, some national land registers can be classified as subtypes of particular basic types mentioned above. This is the case of the Polish land registration system, which has most of the features of the Central European land book, i.e. it is the court authority to keep the register, the subject of registration are titles, good faith is protected and the land register has a typical structure of a land book (with four sections instead of three, the last one being reserved for entries of mortgages), but at the same time – as a rule – the registration is declaratory (except for juridical acts specified by law, regarding mainly limited real rights). A subgroup of the Central European land register is created by such countries as the Czech Republic, Hungary and Slovakia where the land registers are kept by an administrative body. The land register operating in Italy, in turn, combines the main features of the mortgage register and the constitutive effect of registration for mortgages, characteristic for the Central European model. Another example of a hybrid land register is the Greek one. It is kept by courts and the registration is of a constitutive character (which is typical for the Central European land book), nevertheless documents, and not titles, are registered, and there is no protection of good faith (which is derived from the mortgage register). Finally, a Hispanic subtype of mortgage register can be indicated. It is represented by the Spanish and Portuguese land registers, which, although characterised by a declaratory effect of registration, share the organisation (being kept by courts) and the subject of registration (rights) with the Central European land book (Schmid, Hertel, Wicke, 2005, pp. 9, 39–41).
From the above typological remarks it is clear that the models of land registers functioning in Europe are highly diverse and correspond only to a certain extent to the traditional division into legal families. Given the examples of dual land registration, the variety of solutions adopted in this sphere in particular European jurisdictions is even greater.

3. Directions of informatisation of land registration systems in a comparative perspective

3.1. Scope of the analysis

The ongoing technological development contributes to transformation of traditional legal institutions in various areas of law. Such a tendency can be observed also as regards the models of land registration. In view of the limited scope of the present analysis, only selected aspects of reforms implemented in this field will be discussed. The problems elaborated below shall nevertheless be regarded as illustrative since they refer to crucial factors determining effective functioning of land registers. The first issue to be considered is the form in which land registers operate in particular countries, i.e. a traditional paper form or an electronic one. Secondly, the degree of coordination between land registry data and cadastral data achieved through the application of new technologies will be examined. The next point regards new methods of access to land registers offered thanks to informatisation. Finally, the analysis will cover some innovations introduced in land registration proceedings, especially as regards the way of submitting applications for registration.

The comparative considerations are focused on the solutions adopted in the Member States of the European Union, encompassing jurisdictions with particular types of land registers mentioned in the previous paragraph and therefore representative for the European countries. By illustrating different ways of implementing information and communication technologies in national land registration systems conclusions will be drawn on the level of technological advancement in this respect within the EU, possible approaches to problems arising during the informatisation process as well as the influence of new technologies on reducing or else perpetuating divergences among the European countries.

The starting point of the comparison shall be the effects of modernisation of the Polish land registration system, governed by the Land and Mortgage Registers and Mortgage Act 1982 and the Code of Civil Procedure 1964, which have been amended in recent years. In this context it is worth emphasising that land registration in Poland has a long tradition. This is all the more so given that 2018 is a year of significant anniversaries. First of all, Poles celebrate the centenary of regaining independence after the period of partitions; moreover, the 550th anniversary of Polish parliamentarism is of particular importance. Among other anniversaries the 430th anniversary of enacting the first law introducing obligatory land registration and publicity of entries should also be noted (e.g. Kaczmarczyk, Leśnodorski, 1966, pp. 152–153, 291–292).

Technological achievements in the field of land registration in other EU Member States will be exemplified by solutions introduced in different jurisdictions representing the models of land registers identified above. In order to provide a more detailed characteristics of informatisation processes as regards particular points of the analysis, a broader approach is going to be taken, apart from the Polish land registration systems, to the German, French, Italian, Finnish, Swedish, English and Scottish ones.

3.1.1. Form of maintaining land registers

The Polish land register (land and mortgage register, perpetual book – księga wieczysta) operates in the electronic form. The process of migration, i.e. the transfer of the content of old paper land registers to the electronic ones started in 2003 and was completed in 2014, the existing structure of the land register being basically maintained. At the same time a central land registers’ database was established. The central database is maintained by the Minister of Justice and constitutes a national collection of electronic land registers. Under
the present legislation, as of 1 July 2016 all land registers in Poland are kept in the information technology data transmission system (before that date – the information technology system) (e.g. Gołaczyński, Klich, 2016, pp. 31 ff.; Gryszczyńska, 2011, pp. 182 ff.; Rękawek-Pachwicewicz, 2013).

Similarly to Poland, land registers are kept electronically e.g. in Austria, Belgium, the Czech Republic, Estonia, Finland, France, Great Britain, Hungary, Ireland, Italy, Lithuania, the Netherlands, Portugal, Slovakia, Slovenia, Sweden. In the abovementioned jurisdictions the content of previous paper land registers has been digitised and the land registers operate as databases. In Germany the process of implementation of electronic land book database by particular federal states shall be completed by 2020 (S. Dokoupilová, contribution to the survey from the Czech Office for Surveying, Mapping and Cadastre, 2016, November 4; K. Laud, contribution to the survey from the Estonian Ministry of Justice, 2016, July 1; K. Niemi, contribution to the survey from the National Land Survey of Finland, 2016, October 25; P. Lalande, contribution to the survey from Her Majesty’s Land Registry, 2016, July 14; C. Farrell, contribution to the survey from Land & Property Services, 2016, October 17; M. Corbett, contribution to the survey from the Registers of Scotland, 2016, September 20; G. Liotta, contribution to the survey from the National Council of Italian Notaries, 2016, November 30; A. Avižaitė, contribution to the survey from the Ministry of Justice of the Republic of Lithuania, 2016, September 30; J. Vos, contribution to the survey from the Dutch Kadaster, 2016, July 8; F. Rosa, contribution to the survey from the Portuguese Institute of Registries and Notaries, 2016, September 28; R. Jakubáč, contribution to the survey from the Geodesy, Cartography and Cadastre Authority of the Slovak Republic, 2016, November 30; N. Bogataj, contribution to the survey from the Supreme Court of the Republic of Slovenia, 2016, November 16; D. Fridlh, M. Andersson, contribution to the survey from the Swedish Lantmäteriet, 2016, September 9; W. Marx, contribution to the survey from the German Federal Chamber of Notaries, 2016, July 27; European e-Justice Portal: Information on land registers in Member States, 2017, August 11; see also e.g. Blajer, 2016, Elektroniczna „księga gruntowa”, pp. 15–16, 38; Blajer, 2016, Współczesny kształt title registration w krajach common law (Komputeryzacja), pp. 9 ff.; Blajer, 2016, Z dziejów francuskiego modelu, pp. 128–129; Zima, Balogh, 2012, pp. 496 ff., 511 ff.). Examples of countries in which land registers operate in both the paper form and the electronic form – due to the ongoing process of migration – are Bulgaria, Greece, Luxembourg, Spain and Romania (E. Markova, contribution to the survey from the Bulgarian Registry Agency, 2016, July 6; T. Feider, contribution to the survey from the Luxembourg Land Registration and Estates Department, 2016, August 10; J.C. Llopis Benlloch, contribution to the survey from the Council General of Spanish Notaries, 2016, November 17; the contribution to the survey from the Romanian National Agency for Cadastre and Land Registration, 2016, August 10; see also e.g. Blajer, 2016. Współczesny kształt hiszpańskiego registro, pp. 605, 618–619; Tzinieri, 2015).

3.1.2. Integration of land registry data and cadastral data

In Poland, alongside the land register, the roll of land and buildings (ewidencja gruntów i budynków), i.e. the cadastre, operates as a separate register. Cadastral data are the basis for the designation of immovable property in the land register. It should be noted that the present shape of the roll of land and buildings does not yet fully correspond to the model of a modern multipurpose cadastral system, therefore it is being progressively reformed. Currently works are under way to introduce the Integrated Land Information System that is supposed to encompass both land registers and the cadastre, ensuring interoperability of data and high quality e-services (Główny Urząd Geodezji i Kartografii, n.d.; Grzesiak, 2015, p. 47; Gryszczyńska, 2011, pp. 155 ff.; Radzio, Kapuściński, 2012, Part 1, pp. 6–11, Part 2, pp. 10–14). Measures undertaken in order to develop the above system serve to implement the INSPIRE directive 2007.

In many other EU Member States with separate land registers and the cadastre emphasis is put on the integration of data contained in both types of registers as well, which is evidenced by ongoing improvements introduced e.g. in Austria, Bulgaria, Denmark, Estonia, Germany (where the federal states are vested with respective
Competences) and Portugal. Thanks to the reforms introduced in recent years in these jurisdictions updating, synchronisation and automatic exchange of data have been ensured (C. Auinger, contribution to the survey from the Austrian Federal Ministry of Justice, 2016, June 23; E. Markova, contribution to the survey; P. Åbo Østergaard, contribution to the survey from the Danish Geodata Agency, 2016, November 30; K. Laud, contribution to the survey; W. Marx, contribution to the survey; C. Schall, contribution to the survey; see also Gryszczyńska, 2011, p. 181).

### 3.1.3. Publicity of electronic land registers

In terms of the access to land registers the Polish system can be considered as a liberal one as the land registers are available online and open to the public without restriction. The only requirement to be met in order to consult a land register online is to know the number of a land register kept for a particular immovable property. Moreover, when it is necessary in order to implement statutory tasks, public entities (including, among others, courts, public prosecutor’s offices, fiscal control authorities, court executive officers, notaries) are entitled to request for the consent of the Minister of Justice for manifold and unlimited in time searching for land registers in the central database. In such case the authorised entities may use both objective and subjective searching criteria, i.e. regarding both the real estate (e.g. a unique number of the plot of land or an address) and the title-holders. Information from land registers can be obtained also by applying for copies or excerpts that can be issued either in the paper form or in the electronic form. If the application for the above documents is submitted via the IT data transmission system it is possible to print thereof on one’s own and such print-outs have equal force to official documents issued by the court. Separate rules apply to the access to the land register files, i.e. the documents constituting the basis of entries – they are available basically provided that a legal interest is shown (Ministerstwo Sprawiedliwości, n.d.; see also e.g. Gniewek, 2017, pp. 769 ff.; Gryszczyńska, 2016, pp. 255 ff.; Rogacka-Tukasik, 2014, pp. 13 ff.; Bydłosz, 2011, pp. 14 ff.; Leśniak, 2010, pp. 21 ff.).

Common Internet access to land registers (in some cases upon payment) is also offered in such EU Member States as Bulgaria, Croatia, Denmark, Estonia, Ireland, Latvia, the Netherlands, Portugal, Slovakia as well as in Scotland. In other countries, like the Czech Republic, England and Wales, Finland, Hungary, Italy (including the so-called new provinces), Sweden and Northern Ireland, differentiation of access rules can be observed, depending on whether registration requirements are met. Accordingly, registered users (mainly professional ones) and other authorised (public) entities enjoy the possibility to consult the full content of land registers and are provided with online search services, based either on objective or subjective searching criteria, whereas citizens who are not registered can only access some basic information regarding a particular real estate. In Sweden, in turn, the land register is open to the general public upon payment and only registered owners can consult it for free. Moreover, as regards common online access to land registers, searching criteria may be restricted to the objective ones, which is the case e.g. in Denmark, Latvia, Portugal, Slovenia and Sweden (P. Åbo Østergaard, contribution to the survey; J. Dreimanis, K. Miļevska, contribution to the survey from the Court Administration and the Ministry of Justice of the Republic of Latvia, 2016, October 3; F. Rosa, contribution to the survey; N. Bogataj, contribution to the survey; D. Fridh, M. Andersson, contribution to the survey; European e-Justice Portal: Information on land registers in Member States, 2017, August 11). When it comes to countries where the availability of information from land registers is subject to the requirement of showing a legitimate interest, in Germany the possibility to review the register online is reserved mainly for the title-holders and entities authorised by them, e.g. banks, as well as for enforcement authorities. Unrestricted online access is ensured, in turn, for courts, government offices, notaries and land surveyors who can also take advantage of unlimited searching (e.g. Blajer, 2016, Elektroniczna „ksiega gruntowa”, pp. 20 ff.). By comparison, according to the rules adopted in Belgium and Spain land registers cannot be accessed and consulted directly via the Internet because it is the registrars who make land information available upon request which may be delivered electronically. A similar solution is characteristic for the French land registration system; in the Alsace-Moselle region, however, online access to land registers is ensured. So far, there is no Internet portal offering access to
land registers either in Cyprus, Greece Luxembourg and Malta (C. Charalambous, I. Anastasiou, contribution to the survey from the Department of Lands and Surveys of the Ministry of Interior of the Republic of Cyprus, 2016, November 30; T. Feider, contribution to the survey; European e-Justice Portal: Information on land registers in Member States, 2017, August 11; Blajer, 2016, Współczesny kształt hiszpańskiego registro, pp. 605–607).

In the majority of the Member States of the European Union copies and certificates from land registers can be obtained in both the traditional form and in the electronic form (contributions to the survey).

3.1.4. Technological improvements in land registration proceedings

Much progress has been made also in the area of informatisation of land registration proceedings which is demonstrated by the fact that applications for registration can now be submitted electronically. In the Polish land registration system notaries, court executive officers and heads of tax offices have a duty to submit applications for entry in the land register via the IT data transmission system, with the use of official forms and a qualified electronic signature (as regards the latter category of entities submitting applications, the above duty applies to sections III and IV of the land register). In such cases an automatic notice of the submitted application is made in the land register in real time. The notice has information and warning functions and is aimed at blocking any movements on the property until completion of the registration procedure. Unlike the application itself, notarial deeds, which are the basis for entry in the land register, cannot be drawn up electronically and are sent to the court within three days of submitting the application. For the time being the above procedure does not apply to other entitled entities but it is planned to extend the use of electronic applications in the near future (e.g. Biernacki, Mikołajczuk, 2017, pp. 6 ff., 74 ff.; Ciepła, Pytlewska-Smółka, 2018, pp. 22 ff.; Gniewek, 2017, pp. 833 ff.; Kościółek, 2017, pp. 234 ff.; Rękawek-Pachwicewicz, 2016, pp. 97 ff.).

Similar approach as regards modernising the way to initiate land registration proceedings, based on electronic submission of special forms (stylesheets) or documents (including notarial deeds) as well as on electronic signatures, can be found e.g. in Austria, Belgium, Denmark, England and Wales, Estonia, France, Hungary, Ireland, Italy, Latvia, Lithuania, the Netherlands, Portugal and Spain. For example, in Italy, when submitting applications for registration, notaries and other public officers are obliged to use the Uniform Electronic Form (Modello Unico Informatico – MUI), i.e. an XML file containing necessary information together with a document to be registered, in text format and the applications shall be transmitted via an Internet platform of the Italian Revenue Agency, called Sister (Sistema Interscambio Territorio). Documents in question are signed with a digital signature which certifies the identity of the notary and their capacity as a public officer (G. Liotta, contribution to the survey; Giurato, 2013; Agenzia delle Entrate, n.d.). In the Netherlands more than one third of deeds subject to registration are processed electronically, with the use of XML-based stylesheets accompanied by a PDF-document of the deed (J. Vos, contribution to the survey). Other examples of advanced ICT tools offered to notaries or conveyancers (lawyers representing the parties) would be the following systems and applications: Business e-Services in England and Wales (HM Land Registry, 2017, August 31), E-notar in Estonia (Registrite ja Infosüsteemide Keskus, n.d.), Télé@ctes and Intranet network REAL (Réseau Électronique Notarial) in France (Notaires de France, 2017, June 16), Public Electronic Service for Real Property Transactions (NETSVEP) in Lithuania (Registru centras, n.d.) as well as Automated Registration of Title to Land (ARTL) in Scotland (Registers of Scotland, n.d.). As indicated above, the new methods of digital communication are designed primarily for professionals involved in real estate transactions and registration proceedings. At the same time applicants, acting individually, can take advantage of traditional ways of lodging requests for registration. In Germany, Finland, England and Wales either paper or electronic applications can be submitted by notaries or lawyers representing the parties. For the time being, until completion of ongoing reforms, paper applications are commonly used in Croatia and Cyprus (W. Marx, contribution to the survey; C. Schall, contribution to the survey; K. Niemi, contribution to the survey; P. Lalande, contribution to the survey; M. Fučkar, contribution to the survey from the Ministry of Justice of the Republic of Croatia, 2016, October 18; B. Čmrlec-Kišić, F. Milak, contribution...
to the survey from the Croatian Notaries Chamber, 2016, October 11; C. Charalambous, I. Anastasiou, contribution to the survey).

Like in Poland, notices of submitted applications play an important role also under the laws in force e.g. in Austria, Croatia, the Czech Republic and Germany (e.g. Wudarski, Böttcher, 2015, pp. 129–161). In Scotland the intention to register a deed conveying a real right can be disclosed by registering an advance notice in the land register in order to give the benefitting party priority for a period of 35 days, whereas in England and Wales the potential buyers are provided with the possibility to request an official search with priority. This procedure enables them to obtain information relating to a title from a particular date as well as offers a period of 30 working days priority which prevents any adverse entries being made in the register during that period (HM Land Registry, 2003, October 13; see also Blajer, 2016, Współczesny kształt title registration w krajach common law (Organizacja), p. 24).

Against this background particular advancements can be seen in Finland where the system of electronic conveyancing has been successfully implemented. As of 2013 it is possible not only to initiate the registration proceedings but also to dispose of the ownership of land electronically. To this aim parties can log into an official Internet platform provided by the register authority (Property Transaction Service) and conclude the contract electronically once they have undergone the identification and authorisation procedures. The conveyance takes place in a closed electronic system, i.e. the electronic trading system and not in the open Internet. The platform is connected with the official registers and the registrar can control the text of the conveyance contract so the registration begins automatically and immediately when the parties have accepted the final text of the transaction on the website (Niemi, M.I., 2017, pp. 32 ff.; Maanmittauslaitos, n.d.).

Considerable progress in the field of developing e-conveyancing systems has been achieved also in Ireland and Scotland. Works to introduce such innovations have been carried out in England and Wales as well but they have been suspended for financial reasons and also because of concerns about the security (e.g. Blajer, 2016, Współczesny kształt title registration w krajach common law (Komputeryzacja), pp. 11–22; Brennan, 2015, pp. 74 ff.; Cooke, 2003, E-conveyancing, pp. 277–293; Bogusz, 2002, pp. 556 ff.).

A further step that can be taken in developing electronic land registration is the use of blockchain technology which would entail the automatization of registration procedure. Distributed ledger technology underlying blockchain is expected to offer a secure architecture to store land transactions with the use of cryptographic protocol and thus bring advantages of increased trust and processing efficiency as well as reduction of costs. At the same time, however, blockchain transactions are characterised by the fact that they are irreversible and carried out without intermediaries. This means the lack of any external control and independent verification of the transactions to be recorded. Blockchain-based land registration is now being tested in several countries throughout the world, including e.g. Sweden (e.g. Nogueroles Peiró, Martínez García, 2017, pp. 293–320; Thomas, 2017, pp. 361–391; Vos, 2015; Savelyev, 2017, p. 119; Sklaroff, 2017, pp. 272 ff.).

Examples of technological developments in national land registration systems included in the comparison are presented in the table below.

<table>
<thead>
<tr>
<th>Specification</th>
<th>Poland</th>
<th>Germany</th>
<th>France</th>
<th>Italy</th>
<th>Finland</th>
<th>Sweden</th>
<th>England and Wales</th>
<th>Scotland</th>
</tr>
</thead>
</table>

Informatisation of land registers in selected EU Member States – current state of play
<table>
<thead>
<tr>
<th>Form of land registers</th>
<th>electronic</th>
<th>electronic</th>
<th>electronic</th>
<th>electronic</th>
<th>electronic</th>
<th>electronic</th>
<th>electronic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration of land registry data and cadastral data</td>
<td>separate cadastre; ongoing integration process</td>
<td>separate cadastre</td>
<td>land register and cadastre integrated / partially integrated (so-called new provinces)</td>
<td>separate cadastre; electronic land information system</td>
<td>land register and cadastre integrated within one database</td>
<td>no cadastral system; land registries provide information on both legal and physical status of land</td>
<td></td>
</tr>
<tr>
<td>Publicity of land registers</td>
<td>online access for anyone who knows the land register number; manifold and unlimited in time searching for public entities (e.g. notaries, courts, public prosecutor’s offices), objective and subjective searching criteria</td>
<td>no online access / online access for registered users (Alsace-Moselle)</td>
<td>online access for registered users; subjective and objective searching criteria / online access for subscribers, free access for judges and civil servants (so-called new provinces)</td>
<td>online access upon payment for the general public, free for the owners; objective searching criteria</td>
<td>online access for registered users and for citizens; objective searching criteria</td>
<td>common online access; objective and subjective searching criteria</td>
<td></td>
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<tr>
<td></td>
<td>paper or electronic copies</td>
<td>paper or electronic copies</td>
<td>paper or electronic copies</td>
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<td>paper or electronic copies</td>
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<tr>
<td>Informatization of land registration proceedings</td>
<td>notaries, court executive officers and heads of tax offices obliged to submit electronic applications for registration</td>
<td>notaries submit either paper or electronic applications for registration / electronic applications for registration (Alsace-Moselle)</td>
<td>notaries and other public officers obliged to submit electronic applications for registration / paper or electronic applications (so-called new provinces)</td>
<td>electronic transactions in the Property Transaction Service or paper applications for registration; participatio n of a notary not required; blockchain-based land registration being tested</td>
<td>parties submit either paper or electronic applications for registration; participatio n of a notary not required; blockchain-based land registration being tested</td>
<td>lawyers submit either paper or electronic applications for registration; electronic conveyancin g at the planning stage</td>
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<td>paper or electronic copies</td>
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4. Impact of technological developments on land registration – general tendencies, opportunities and challenges

The above brief comparative overview gives grounds to identify some common tendencies with regard to the way of modernising land registration systems in the Member States of the EU. Against this background positive and disadvantageous aspects of informatisation of land registers can be indicated.

As a result of reforms that have been introduced in the last decades in almost all jurisdictions subject to the analysis the process of transferring data from traditional land registers into electronic databases has been completed which is the case of Polish electronic land registers. This has brought about reduction of costs as well as improvement of the quality of information contained in the land registers. Moreover, a tendency can be noted towards the integration of land registry data and cadastral data with the aim to provide complete and updated land information. It is crucial not only for the development of real estate market but also for fulfilling different tasks of the state in the field of land management. Such activities can be exemplified, again, by the Integrated Land Information System project currently in progress in Poland.

As illustrated by the examples presented within the comparative analysis, one of the effects of informatisation of land registers is also that since they were transformed into databases they can be searched according to both objective and subjective criteria, irrespective of the format of registration adopted in a particular system. In consequence, the traditional distinction between the real folium and the personal folium has become blurred and has lost its importance (Wudarski, 2014, p. 451; Martínez Velencoso, 2017, p. 17). What is more, thanks to the informatisation process land registers are easily accessible now which on one hand fosters real estate transactions but on the other hand the greater extent of publicity of land registers poses a risk of infringement of the right to privacy by making personal data contained in the land registers available online as they may be processed in a manner contrary to the purpose for which they were collected. A conflict arises between the private interest (information autonomy) and the public interest, i.e. guaranteeing transparency and certainty of transactions. As indicated above, in Poland full content of land registers is available online, however, just due to the above doubts limiting the scope of displayed data is under consideration. Possible solutions could be to establish a requirement of identification of users who take advantage of the electronic access to land registers or to restrict the scope of data disclosed online (e.g. Gołaczyński, Klich, 2016, pp. 53–54; Gryszczyńska, 2016, pp. 308–309; Wudarski, 2014, p. 452). By comparison, in Austria or Lithuania Internet access to land registers is offered too but personal data are accessible online only upon showing a legitimate (or, respectively, legal) interest (C. Auinger, contribution to the survey; A. Avižaité, contribution to the survey). In turn, the English title register, which can be inspected by any person, does not include the index of names and in practice searching by name is subject to strict conditions, whereas in Scotland it is recommended that the level of privacy protection should be enhanced, e.g. through introducing a general legitimate interest test for access to the land register (Arthur, 2018, pp. 99 ff.; see also Wudarski, 2010, pp. 642–663; Rupp, 2014, pp. 573 ff.). The above matter is particularly vital in view of the new rules of data protection provided for in the General Data Protection Regulation 2016 which is applicable from 25 May 2018.

The use of modern technological solutions leads also to simplifying and speeding up the land registration proceedings as well as increasing the certainty of registration, e.g. by introducing such instruments as electronic identification and mechanisms of automated data processing, which is confirmed by the Polish example. For the
time being the application of such facilities in most cases is limited to the professional users performing necessary activities in the land registration proceedings. The above achievements provide a basis for the development of e-conveyancing systems or even blockchain-based land registers. At the same time, however, tendencies towards automation in the area of land registration may cause problems concerning security of real estate transactions because of the risk of errors or frauds. It is doubtful therefore whether new technologies could indeed completely replace professional legal services provided during the land registration process.

As regards e-conveyancing, it is emphasised that registration of titles is more appropriate for the purposes of electronic real estate transactions than the model of registration of documents (Niemi, 2017, pp. 27–28). This falls within a tendency to give preference to the former system as more effective one which can be illustrated by the reforms implemented e.g. in Scotland and Greece where the deeds registration system is gradually being replaced by title registration (M. Corbett, contribution to the survey; Steven, 2014, pp. 37–42; Papadimopoulos, 2016, pp. 637 ff.; see also Raff, 2003, pp. 8 ff.).

Some of the symptoms outlined above, demonstrating common directions followed by the Member States in the area of informatisation of land registers, could be considered as favouring integration plans in the field of land registration in the European Union by facilitating cross-border conveyancing. Nevertheless, despite progress made with respect to accessibility of land information and streamlining land registration proceedings, significant dissimilarities among national regulations remain valid. This is because the core rules underlying land registration and transfer of immovables adopted in particular jurisdictions, based on different theoretical concepts, are still unchanged. Taking into account the existing complexity of legal solutions in the sphere of land law, including serious linguistic differences, the possibility to meet the objectives of closer integration of land registers in Europe should be viewed sceptically, not to mention that such initiatives raise doubts because of limited legislative competences of the EU in the field of private law and particularly property law (see further Wudarski, 2014, pp. 467–468; Ploeger, van Loenen, 2003, pp. 379–387; Kaczorowska, 2011, pp. 40 ff.; Kaczorowska, 2015, pp. 99–101). The above argument is supported by the fact that harmonisation projects in the sphere of land registration promoted by the European Commission, such as the European Land Information Service (EULIS), have not proved successful. EULIS, which was designed as an Internet portal providing easy transnational access to land information from participating national land registers, has been operative since 2006, gathering only a few European countries with the status of full members. Recently it has been decided that the EULIS project shall not continue and eventually the portal was closed in 2017. Instead, a new user group for land registers interconnection is going to be established (e.g. Wouters, 2017).

5. Conclusion

In the light of the comparative analysis of current state of informatisation in the field of land registration in the European Union it should be stated that ICT-based initiatives implemented in particular jurisdictions have indeed contributed to improving access to information on land and increasing the effectiveness of the registration procedure, albeit in varying degrees. Progress achieved so far provides a good basis for developing domestic real estate markets and improving land management. What should be underlined is that the group of EU Member States in which such modernisation processes are most advanced includes Poland as well as other countries of Central and Eastern Europe. Contrary to expectations expressed by the EU institutions, however, the progressive informatisation so far appears not to be sufficient to deepen the harmonisation of land registers in the Member States.

At the same time, the above considerations demonstrate some risks resulting from the technological development, in particular connected with availability of personal data from land registers and processing land registry data by automatic means. It is symptomatic that in several European countries, instead of further
extending the publicity of land registers, effective ways of limiting access to the electronic records are being sought in order to protect privacy. This confirms the need to rethink some of the assumptions underlying contemporary reforms of land registration systems in the framework of a wide-ranging discussion involving both scholars and practitioners in the field of land transactions. In this context confronting experiences of particular jurisdictions in addressing such problematic issues may be of relevance, with due regard to the specificity of different land registration models existing in Europe.

References

**Literature**


**Legal acts**


**Webpages**


**Other sources**
