1. Title systems. Definition, history and types

A title system is a legal institution by which written evidence on the legal status of assets is systematically recorded. The written evidence mostly concerns acts of conveyances, providing data on the transfer of the asset, or on the vesting of partial rights, various interests or security rights on the asset. Their most prominent aim is to facilitate market circulation of assets by providing to potential buyers certainty about the legal status of the traded good. Often title systems serve also fiscal aims as they provide tax collectors with information on the wealth of taxpayers. The legal consequences of recordation can vary. Sometimes recordation is limited to the passive collection of conveyances and merely consists of a systematisation of already existing written evidence. Sometimes recordation has a deeper legal impact as the recordation implies also a procedure of checking the validity of written evidence and the rights and interests mentioned in it. In this case invalid rights and interests are purged from the asset (see further 4. Registration or recording system). In modern nation states title systems are most often organized by the government. They are a vital part of civil administration. As shown further, this was not always the case. Also nowadays recordation of rights and interests is often provided through private initiative. Major examples here are the registers of the title insurance companies in the USA and the Art Loss Register set up by major businesses from both the insurance and art industries.

As soon as trade expanded across the boundaries of small and informal groups, institutions, generating public knowledge on the legal status of the transferred assets emerged. The Athenians, for instance, posted a slab known as *horos* on land in order to signal that the land was under the charge of a security interest (Arrunadã, 2003, 6). In Roman law the transfer of land was sometimes operated through a court procedure in which the purchaser stated that the land was his. Because there was no opposition he was awarded ownership (*in iure cessio*). The simulated trial provided public knowledge on the transfer (Kaser, 1971). Also the other legal form of transfer, the *mancipatio*, involved ceremonies providing some publicity to the transfer (Garro, 2004, 13; Kaser, 1971). In Hellenistic Egypt recordation was particularly well developed. In each district a book, entering all transactions affecting land and slaves (*diastromata*) was kept. Certificates
on the legal status of land (katagraphé) were enacted by a public officer (agronomos) (Garro, 2004, 14). In feudal Europe land tenures were mostly transferred by a ceremony held in a public place such as a market, church or court (Garro, 2004, 18). After the Middle Ages attempts were made by the central state to organize title systems covering the whole country. The customary law of the most northern part of France (pays de nantissement) provided already a system of recordation of titles. By an Edict of Colbert this recordation system was introduced in the whole country. Fierce opposition by the nobility and the notaries forced Colbert to repeal the Edict in 1674. The former did not like disclosing the highly encumbered status of their land. The latter feared the loss of absolute control exercised in dealings with immovable property (Garro, 2004, 19). After the French Revolution title systems were introduced for the recordation of mortgages (Code Hypothécaire of 1795). These were, however, again abolished by the enactment of the Code Civil. The drafters of the Code, inspired by the natural law consensualistic doctrine on transfers, considered transfers as an exchange, merely affecting the legal position of the contracting parties and in which the wider public had no business at all. The negative impact of this was felt quite soon in the financing sector and credit financing supported by immovable property was grossly impaired (Garro, 2004, 22). To repair this deplorable situation the law on transcription of mortgages, providing also for the recordation of all transfers of land and the vesting of all property rights and interests (rights in rem) on land, was enacted in 1855.

Also in Germany recordation of land transactions was part of customary law in some regions. In 1783 Prussia enacted a General Ordinance on Mortgages and Bankruptcy, establishing land records giving public notice to land transfers and the creation of mortgages. This ordinance was the forerunner of the current Grundbuch-system, regulated by the BGB of 1900, art. 873–902 (Garro, 2004, 24).

Also in medieval England the transfer of rights in land occurred through a ceremony providing public knowledge to third parties. The transfer of a freehold estate, called feoffment, included the ceremony of livery of seisin, in which the transferor (feoffor) took the transferee (feoffee) to the concerned piece of land. There a stick, a piece of turf or a handful of soil were handed over (Garro, 2004, 28). A first attempt to establish a title system was the advent of ‘uses’, an equitable interest, recognized by the Lord Chancellor. In order to convert this equitable title into a legal one, registration of the deed of conveyance in a court of record of Westminster was required. However, this system failed. During the nineteenth century recordation initiatives were taken by the Parliament with the Land Registry Act of 1862. Among other reasons, the fact that the recordation had not been made compulsory but depended on the will of the purchaser,
resulted in a failure of the law. Together with a thorough simplification of land law in England a system of recordation was set up in 1925 (the Law of Property Act, the Land Registration Act). It is estimated that about 80 per cent of the land in England and Wales is recorded under this system (Garro, 2004, 34).

The early colonists in the English colonies of North America continued to practice the common law-transfer of livery of seisin. Quite soon, however, towns and states developed recordation practices which gradually supplanted the livery of seisin. The title systems in the US vary widely from state to state as concerning what has to be recorded, the way it is recorded, the legal consequences of it. Attempts to introduce more uniformity, such as the Uniform Simplification of Land Transfer Act of 1976 (USOLTA), failed (Garro, 2004, 38). Due to the archaic and incomplete character of many official recordation institutions, the private insurance sector developed title insurance, providing purchasers with additional certainty in return for a premium. The introduction of the so-called Torrens system provided an alternative to this combination of an official recording system with title insurance. The Englishman Robert Richard Torrens developed in Australia a registration system, in which the registrar acquired conclusive competences to check and validate evidence on title and to purge a title from apparent but, after checking, invalid rights and interests. Such a system, provided it was operated by able personnel, would make additional title insurance redundant. The system was introduced in Australia, the Canadian provinces Alberta, British Columbia, Manitoba and Saskatchewan, many African countries such as Tanzania, Uganda, Ethiopia, Kenya, Asian countries such as the United Arab Republic, Nepal, India, Sri Lanka, Malaysia, Thailand, Turkey and Iran (Garro, 2004, 44). The Torrens system became popular in the United States during the late nineteenth century. More than 20 states passed enabling acts for a Torrens system during the period 1895–1915. Prompted by the failure of three of four title insurance companies in the state of New York during the 1930s, the New York Law Society engaged R. Powell of Columbia University in order to study an eventual introduction of the Torrens system in the state of New York. His report was highly critical about such an introduction stating that the recordation system, then prevailing in the state of New York and in 16 other states, operated at lower cost than the Torrens system. His report gave a fatal blow to the hopes that the Torrens system would be generally accepted in the United States. Many states which had adopted the system repealed the statutes (Garro, 2004, 47). The discussion about the effectiveness and efficiency of both systems still looms in legal literature, also in the law-and-economics-literature (see further 4. Registration or recording system).
2. **Title systems as a critical factor of economic development**

Functional analysis of title systems, in classical legal doctrine as well as in law-and-economics, focuses on the provision of certainty in market transactions and the lowering of information costs (see further sections 3 and 4). De Soto (2000) lifted the economic function of a recordation system on the wider level of macro-economics and development economics. Recordation systems are considered as critical factors for the success of capitalist economies. While mere possession of an asset provides the holder with the immediate benefits of physical use, recordation converts the assets into genuine capital, allowing to the holder a much wider range of economic use. This conversion operates through six so-called property effects of recordation (De Soto, 2000, 49–62): 1) by recordation abstraction is made from the physical characteristics of the asset while the asset becomes represented within the conceptual universe of capital; 2) by recordation dispersed information on the potentialities of capital is integrated into one system; 3) recordation makes people accountable: individuals do not have to rely anymore on local arrangements to protect their property rights; 4) recordation makes assets fungible, i.e. assets are made able, to be fashioned to suit any transaction (for instance a single factory can be held by multiple owners); 5) recordation allows for the networking of people: by recordation assets such as buildings are legally attached to their owners which facilitates the integration into networks such as electricity provision, Internet, radio, TV and telephone cable networks; and 6) recordation protects transaction. Only the latter effect is taken into consideration by the current analysis of title systems. The larger and the poorer portion of the world population remains cut off from the benefits of the expansion of markets throughout the world because of the lack of an operational title system. The poorer urban masses within less developed countries (LDCs) dispose of a lot of entrepreneurial energy and also control many physical assets. Due to the lack of a title systems and the ensuing lack of formal protection of property rights, these poor are not able to integrate their potential into the wider network of the world market economy. They remain locked into large social pockets of economic stagnation, corruption and violence (De Soto, 2000, 18–28). Concerning the impact of De Soto’s analysis Calderon points out that the issuing of titles in Peru has increased and peaked at 400,000 in 2000, slowing down considerably since then (Calderon, 2003, 289–300). Field found that housing investment was 68 per cent higher in households with a title than in households without one (Field, 2003b, 281). Also prices increased considerably by the recordation of the property rights on housing. The Institute for Liberty and Democracy (ILD) and the Commission para la formalización de la Propiedad Informal (COFOPRI) estimated the price effect of titling at 25
per cent (ILD, 2006). The predicted effect concerning the use of recorded property as collateral, resulting in a better access to the credit market, remained, however, disappointing in the first years after the titling (ILD, 2006). Morris Guerinoni observes, however, a considerable increase of mortgages and loans during later years (Morris Guerinoni, 2004, 26). Jansen and Roquas perceive only a weak link between titling of land and access to the credit market in Honduras (Jansen and Roquas, 1998, 88). Field and Torero found that people with a title are more inclined to apply for loans and that such applicants enjoy also a higher approval rate from the public banks or a lower interest rate from private banks (Field and Torero, 2003, 5–11). Finally Field found that titling led to higher labour participation as people have to spend less time in protecting their property (Field, 2003a, 34; Field, 2003b, 19).

3. Security in transaction: the rule of possession or a title system

We have seen above that uncertainty plays an important role as one of the dominant cost factors in the transfer of assets and rights and these assets. In order to diminish uncertainty in markets legal systems develop what Hansmann and Kraakman call verification rules (Hansmann and Kraakman, 2002, 384). A possession rule is a common example of a verification rule. A simple possession rule establishes an absolute link between possession and ownership. To be certain the potential purchaser has only to check whether the vendor is in actual possession. Possession rules are often more sophisticated as they combine with a prescription rule (or limitation statute in the common law tradition). In this case certainty is only provided when the vendor is in possession of a good during the required prescription term. The elapse of this term avoids all possible other claims on the assets which might have been established prior to the acquisition by the vendor. In this case the potential purchaser has only to check whether the purchaser was in effective possession during the required prescription term. Recordation and title system are a different verification rule. In this case relevant information about the legal status of the asset is stored in a public register, so that potential purchasers are able to check about the rights’ situation of the asset they are envisaging to acquire. In legal systems both verification rules operate side by side but on other categories of goods. A very common distinction is the chattel-real estate one, whereby the possession rule rather prevails for chattel and title systems for real estate (Bouckaert and De Geest, 1998).

A cost-minimizing efficiency model should focus on the comparison between the costs of a possession-based property system and a title system. According to Baird and Jackson the latter is more costly to administer but reduces the likelihood of non-consensual transfer, while the former
facilitates transactions but not without raising the possibility of fraud and theft (Baird and Jackson, 1984).

Hansmann and Kraakman develop an efficiency model in order to explain the choice of the verification rule. Each verification rule has its user costs, i.e. the costs for the ones establishing the right (the purchaser, the mortgagee), nonuser costs, i.e. the costs for third persons not submitted to the established right (e.g. a purchaser checking whether there are no encumbrances on land he envisages to acquire), system costs, i.e. general, relatively fixed costs of establishing and maintaining a given verification rule for a particular right (e.g. the costs of establishing and maintaining a registry) (Hansmann and Kraakman, 2002, 396). A system is efficient when it maximizes the aggregate value of assets to right holders less the aggregate user, nonuser and system costs. According to Miceli the choice between a possession-based property system and a title system will depend on the magnitude of the different cost categories, which will be in turn determined by the characteristics of property (Miceli, 1997). Bouckaert and De Geest perceive the following determinants for the choice between a possession rule and the development of a title system: 1) durability of the good in question: as the costs of title systems are rather fixed, the more durable the good the lower the cost of a filing; 2) frequency of transfer: when goods are frequently transferred, the costs of filing is relatively higher; 3) the heterogeneity of a good: items with unique characteristics are cheaper to file than homogeneous goods for which an artificial uniqueness is necessary; and 4) the value of the good: as costs of filing are fixed filing is relatively cheaper for high-value goods than low-value ones. These determinants explain why title systems prevail for real estate and why possession systems prevail for low-value mobile goods. Path dependencies may explain why many legal systems did not develop title systems for high value, not too frequently transferred, and relatively durable mobile goods (e.g. cars) (Bouckaert and De Geest, 1998). Miceli perceives another determinant for the choice for a filing system. A possession rule cannot signal shared ownership and other multiple rights on one asset. Such rights cannot be visualised by possession (Miceli, 1997). Arruñada has a similar view concerning abstract rights, i.e. rights which exist only conceptually but are not actually practiced in a visually perceivable way. Only a title system allows such rights to be operational (Arruñada, 2003, 4). Arrunàda perceives another cost of title systems. Such systems are often set up for, or at least allow, closer control on the wealth of citizens and will ease fiscal collection. In how far this might lead to predatory taxation depends on the people’s capacity to control their government and impede excessive taxation (Arruñada, 2003, 5). Moreover, publicity about the wealth of citizens might attract rent seekers and criminals in low security countries (Arruñada, 2003, 5).
Arruñada also raises the question whether title systems and recordation require a territorial monopoly. As far as the certainty of the transaction between the parties is concerned, there is no need for such a monopoly. Parties should be able to choose on open markets by which instance and through which type of evidence they are willing to give their transaction more certainty. The costs of their choice are fully internalized. For this reason the oligopoly of the notaries public in many countries should be contested from efficiency concerns. The transaction between parties can, however, involve rights and interests of third parties. As they are not involved in the choice of the drafter of the conveyance and the way it is drafted, externalisation of costs is possible in this case. For this reason the established territorial monopolies of recording and registration systems, recording data on the transactions on real estate, mortgages and other security rights, even on mobile goods, can be defended on efficiency grounds. Also systems, which allow free choice at first sight and seem to contradict this argument, rely on single authorities when rights of third parties are involved. For the registers of financial assets the best practice seems to consist of having a single clearing agency and depository. For Internet Domains there is only one register for each top-level domain. The users can, however, freely choose among ‘registrars’. Protection for third parties \textit{ex post} is provided by enforcing the Uniform Domain-Name Dispute-Resolution Policy (UDRP) that applicants have to accept \textit{ex ante}. According to UDRP disputes are not decided by ‘registrars’ but by a panel of arbitrators approved by The Internet Corporation for Assigned Names and Numbers (ICANN) (Arruñada, 2003, 15–16).

4. Registration or recording system

As mentioned before title systems belong either to the type of a recording system or to the type of a registration system.

Under a recording system the only aim of recordation in the registers is to give public notice of a transfer or to the vesting of a right or an interest, by which the transfer or the vested right can be given effect to third parties. The transfer or the vesting of the right occurs through a contract, either made up by the parties themselves or drafted by an official, such as a notary public. Suppose A is the mortgagor and B the mortgagee. The mortgage is vested by an act, drafted by a notary public, as required in many civil law countries. Suppose A sells the mortgaged asset to C. Does C have to tolerate the mortgage on his asset and eventually be submitted to foreclosure when A, the former owner, defaults on his loan? The answer depends on the recordation. When the mortgage is recorded at the moment of the transfer from A to C, C has to tolerate the mortgage for he was able to check its existence at the registry. When not, the mortgage has no effect
for him. The ‘opposability’ towards third parties, effectuated by registry, does not entail anything about the validity of the recorded rights or interests. The recordation is not constitutive but merely declaratory. The recordation merely signals that parties expressed their will to transfer a right or to vest a right or interest. The recordation does not provide exclusive evidence about the validity of title. The registrar in a recording system has a merely passive role. The registry accepts the conveyances, drafted by the parties or by other officials without effectuating a search of possible legal defects. As a consequence the recordation does not result in a purge of possible defects of the title. Suppose A conveys a real estate to B and the act of conveyance is registered within a recording system. C, however, claims to be the true owner and files a successful claim to the court. C will obtain a valid title while B can obtain, depending on circumstances (e.g. good faith) damages from A. For C a property rule applies, for B only a liability rule (Arruñada, 2003, 13). As mentioned before the recording system prevails in most civil law countries, influenced by the French civil code (France, Belgium, Spain, Italy, Portugal and most Latin American countries) but also in most states of the USA (Garro, 2004, 55).

Under a registration system the aim of recordation is more thorough: recordation results in the constitution of a valid title. This means that a transfer or vesting of a right has only full legal effect at the moment of the recordation. In Germany for instance the sale of land occurs through the phases of consent (‘Einigung’), official conveyance by a notary public (‘Grundstückskaufvertrag’) and registration in the ‘Grundbuch’ (‘Eintragung’) (Garro, 2004, 53). Unlike recording systems the recordation results in a constitutive effect. The registrar is supposed to make a search into possible defects of the title. In case such defects are not found the title is purged and a valid title is awarded. Suppose A transfers land to B and the transfer is duly recorded under a registration system. C, though, files a claim against A and B. Even when the right of the seller (A) is overruled by the court the buyers’ right (B) is protected by the certificate of the registrar. B enjoys the protection of a property rule while C can eventually claim damages either against A or against the registrar. C is at most protected only by a liability rule.

The registration system operates in Germany and countries influenced by German civil law (Austria, Switzerland), in England and Wales since 1925, in the states under the Torrens system (Australia, western Canadian provinces, some states in the USA, several African and Asian countries) (Garro, 2004, 44, 55).

As the difference has serious legal consequences, law-and-economics literature spent some attention to the efficiency of the choice between the two types.
Miceli and Sirmans argue that an efficient title system should create proper incentives for landowners to invest in capital improvements prior to the appearance of adverse claims and provide compensation for wrongfully injured parties. A registration system satisfies this requirement as it stimulates *ex post*-efficiency by allocating the land to the highest valuing user. One may assume that land tenure involves an increase of subjective valuation of land above market value. By awarding the land to the current holder and compensating the claims of the legitimate holder at market value the value of land is maximized with regard to the enhancements that have been made previously by the holder. Registration also provides incentives for efficient investment in land *ex ante* by the landowner (Miceli and Sirmans, 1995a; Miceli and Turnbull, 1997).

A recording system on the other hand seems more likely to meet the requirements of *ex ante* efficiency as the risk of future expropriation will provide landowners with an incentive to optimize information on the validity of the title prior to investment. Owners, faced with the risk of expropriation will desire protection of their reliance interests through insurance. *Ex ante* efficiency is enhanced under a recording system by title insurance. Profit incentives of these companies will enforce efficiency in the title examination process, which extends beyond the reach of a governmentally administered registration indemnity fund, where the profit incentive is lacking. Miceli and Turnbull conclude that the recording system may have an advantage over the registration system (Miceli and Turnbull, 1997).

Arruñada researched the relationship between the number of rights *in rem*, allowed by the *numerus clausus* of the property right system and the prevailing title system. The prediction is that the number will be relatively low under a registration system as many rights *in rem* would render the task of the registrar, the final judge on possible claims, very complex. The number will be higher under a recording system as the costs of the complexity, following from this, will be shared between the recording instances and the courts, deciding *ex post* on the validity of titles. This prediction seems to be confirmed by an econometric model, involving data of 42 jurisdictions (Arruñada, 2003, 8–10). This conclusion could be challenged by the analysis of Hansmann and Kraakman, arguing that the *numerus clausus* does not reduce as such the complexity in the legal system, as the *numerus clausus* consists of abstract categories of rights, of which the concrete elements may vary considerably (Hansmann and Kraakman, 2002, 399).

In his cost-comparison of the two systems Arruñada starts from the classical position that the recording system is more cost-efficient while the registration system is more effective.
Concerning the higher cost-efficiency of the recording system Arruñada admits that many minor defects of title, which are not worth being purged, are insured either by the user or by his title insurer. Under a registration system these minor defects can result in hold-out situations. This efficiency advantage should, however, be nuanced, because competing title insurance systems trigger duplicate efforts of registering, and yield less economics of scale. On the suppliers’ side, also the efficiency advantages, linked with the profit incentive of the private title insurance companies should be nuanced as this sector is submitted to strong regulation concerning prices and entry barriers, which endangers the competitive level.

Concerning the higher effectiveness of the registration system, Arruñada admits that it provides a strong protection of title for the good faith-acquirers. Registration systems can nevertheless be highly inadequate. This depends on a variety of factors. Sometimes their performance is weak due to fixed salary bureaucracy (e.g. Cook County, Puerto Rico). When staff is paid out by the profits of his office performance seems to be higher. The slowness of the search by the registration office may create additional uncertainty and necessitate again title insurance. Finally, incompleteness of the scope of registration can undermine the credibility of the registration system. When some rights in re are not within this scope, the effectiveness of the system is undermined as users have to rely on additional searches. The incompleteness may be due to opposition by the conveyance market and by the courts. The latter may be tempted to deny the conclusiveness of the registration in order to protect their own competence. The latter is the case in the USA but not in Germany as judges are involved in the Gründbuchsysten (Arruñada, 2003, 18–20).

Baker, Miceli, Sirmans and Turnbull developed research on the optimal title search under recording systems in the USA (Baker et al., 2002). Although the aim of their research is not on efficiency comparison between recording and registration systems, the results of their research strengthen the efficiency argument in favour of the recording system. Under recording systems rules are developed on optimal search length. When this optimal search is matched and chain of title is established, claims stretching beyond the required search period are considered as extinguished, so that the optimal search period has an effect similar to a limitation statute. Guidelines on optimal search are provided statutorily by Marketable Title Acts or practically by local bars and insurers. In the model agents pursue title search until the marginal costs of search become higher than the benefits in terms of reduction of uncertainty. The model involves determinants such as the value of land, the next best investment in land, the land development rate. The empirical analysis carried out about the optimal search of title rules in 47 states, points to the efficiency of the search length. As
a consequence such rules act as substantive palliatives for the apparent defects of recording systems.

**Bibliography**


