Why the United Kingdom does not have a cadastre – and does it matter?

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SUMMARY

The UK does not have a cadastre which makes it unusual amongst major economies. This raises the question as to whether the absence of a cadastre undermines the efficiency of its property market, particularly land registration and the workings of the mortgage market, or whether the UK has developed other ways of protecting property rights. Its land law does not have a concept of ownership of the land itself but rather of rights over land. These are called estates and these are the building blocks of the land administration system rather than parcels. Estates are four-dimensional constructs that include time as a dimension. They can also overlay each other as rights to undertake or prevent different activities can be owned by different persons for the same physical space. Although the UK has compulsory land registration and proof of title is through entry in a Torrens-style land register, there is no central record of the precise location of boundaries. Instead a general boundaries rule exists. Ordnance Survey maps boundary features but has no power to determine private boundaries. Boundaries can be determined using map evidence in conjunction with other sources. Boundaries and boundary disputes are viewed as being a private matter between landowners and not of public interest. This system works because the UK is an old-settled country with a history of re-using boundaries over time. There are common law rules that help the interpretation of boundaries and the doctrine of adverse possession puts a limit as to how far back in time evidence of encroachment is valid. There is no evidence that the absence of a cadastre harms either the economy or the workings of the property market. The British economy is one of the largest in the world and the property market is active and efficient. Factors like the prevalence of the rule of law, protection of property rights, good standards of corporate and professional governance, and the openness and transparency of the property market may be more significant than whether a country has a cadastre or not. The value added by a cadastre in the UK would be small relative to its cost. However, the absence of a cadastre has probably less to do with issues of efficiency than the philosophy of where property rights came from and how they should be legitimised. There is no concept in land law that property rights are granted by the crown. Therefore the notion that state permission is required to change boundaries or to divide or unite plots is an alien one.

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1. INTRODUCTION

Cadastres are often seen as being one of the pillars of modern land administration systems alongside efficient land registration, property valuation, real estate taxation, and land use management systems. An effective land administration system, it is conventionally argued, is seen as being an essential prerequisite for an efficient property market. Such a system should include ways of ensuring that property rights are protected and that trading in land, the transfer of property rights, and the raising of capital by pledging property as security can take place efficiently. In order to achieve these ends modern land administration systems have land registration to record property rights, their ownership and transfer and cadastres to map property rights and record their geo-co-ordinates. International aid bodies and aid donors have promoted the creation of land registration and cadastre systems as prerequisites for economic development. Such measures are argued to promote the fungibility of real estate through the ability to raise capital secured against it, argued by de Soto (2000) as the reason why capitalism has succeeded in the west.

It may therefore be something of a shock to discover that one of the five largest economies in the world – that of the United Kingdom – lacks what is often seen as being a key element of an efficient land administration system, namely it has no cadastre. The concept of a cadastre is so alien that few British surveyors are familiar with the term and in discussions with them it is usually necessary to explain what a cadastre is. Although the Royal Institution of Chartered Surveyors does list cadastre as one of the competencies that candidates can offer to be examined on as part of their Assessment of Professional Competence in order to obtain membership, very few candidates have ever taken this subject.

The absence of a cadastre in the UK does raise important questions about the role of the cadastre in modern land administration systems. If a major economy does not have a cadastre, is creating a one essential for economic development? Does the absence of a cadastre damage the British economy and the functioning of its property market? Or is the absence of a cadastre just another example of Britain's eccentricity, like driving on the left, drinking warm beer, playing cricket, and calculating petrol consumption in miles per litre? In other words not something that anyone with any sense would dream of copying! Or is Britain's lack of a cadastre a historical anomaly – the result of not being invaded by French troops after 1791 and of being an imperial power rather than one of the colonised? Or does the absence of a cadastre raise fundamental questions about what a cadastre is for, whether cadastres are the only or most effective means of achieving these ends, or whether there are more important factors in determining the efficiency of property markets than those that cadastres contribute to? Can, for example, property rights be adequately protected in the absence of a cadastre? The absence of a cadastre does raise questions about the philosophy behind property rights

and how they are legitimised by a society. The absence of a cadastre could suggest that Britain has chosen a solution to this question that is different from many other countries.

2. LAND ADMINISTRATION IN THE UK

This section examines the system of land administration found in the UK and how it functions in the absence of a conventional cadastre. However, before doing so, one should be clear about what is meant by a cadastre. FIG in its *Statement on the Cadastre* states that

> A cadastre is normally a parcel based and up-to-date land information system containing a record of interests in land (eg rights, restrictions and responsibilities). It usually includes a geometric description of land parcels linked to other records describing the nature of the interests, the ownership or control of those interests, and often the value of the parcel and its improvements.

The UK has records of interests in land, their ownership and control, and their value. What it does not really have is either a genuinely parcel-based system or one that accurately records geometric descriptions of the areas under the ownership or control of the different interests in land.

The land administration system is built around the notion of proprietary estates rather than land as a physical reality. The idea of an estate is the relationship between the landholder and his land. English law does not have a concept of *dominium* or direct ownership of the land itself. Rather, proprietors own estates in (that is to say, rights over) land. The concept of an estate may sound to be cumbersome but it has two important advantages. An estate is a four-dimensional construct – length, breadth, height/depth and time. Rights and powers may be executed for a period of time and then give way to other estates. A series of estates can (and often do) exist for the same physical entity, with rights that are currently capable of being exercised, contingent rights that may come into existence if certain events take place, and reversionary interests for when certain estates come to the end of their life. Estates can also physically overlay each other. Thus, for example, the right to graze woodland or hunt over it can belong to a different estate to that of the proprietor who has the right to cut the timber. The fishing rights over a river bank may be owned by a different person from the one whose cattle can graze the land and drink from the river. Rights may be exercisable at certain times, for example, the right to grazed pigs in an oak woodland area after the acorns have fallen but not at other times of the year. Land can be farmed or grazed in common with others.

Land rights require multi-dimensional means to record them. Systems for doing so had evolved in Britain during the millennium before there were means of measuring longitude or the theodolite came into use, and have proved to be remarkably difficult for modern cadastres to dislodge. These systems are capable of describing property rights in three dimensions as well as over time and of recording a number of different rights that co-exist in a given physical space. The ability to unbundle the bundle of rights has proved to be more useful than the ability to map accurately their precise geo-co-ordinates.

The concept of estate means that it is of limited value to organise data by parcel. Ownership of the parcel is, in any case, impossible as one can only own interests in it. Rather, the only sound way to organise data is by proprietary estates. Whilst many proprietary estate comprise a single parcel, others may consist of a number of parcels. An individual can have more than one proprietary estate so the data is organised according to the physical location of the estates. The link between the cerebral concept of an estate and the physical reality on the ground can be provided, in practice, by what is known in British real estate taxes as a *hereditament*, though this is not a term used in land registration. A hereditament is a property that forms a single economic unit for real estate tax purposes with a single occupier comprising a single geographical unit, being capable of separate occupation and put to a single use. A hereditament could comprise several parcels. It brings together the concept of an estate (the rights and interests) and the physical area over which they are exercised.

The second issue concerns the geo-co-ordinates of the properties. There is no government record of legal boundaries of properties and therefore no official geometric description of the property. The Ordnance Survey maps boundaries and the features that comprise them. Since 1841 it has been required to show boundaries. However, it has no legal power to fix *private* boundaries. Land Registry maps, which identify the location of a property, demarcate a "general boundary" but do not determine the exact line of the boundary. This could be on one side or the other of the boundary or down the middle or not follow what is recorded on the map at all but is quite obvious from a site inspection. Other evidence than the map is required to determine the exact boundary and this may involve common law rules as to how boundaries are to be interpreted to demarcate areas under different ownership. For example, how the boundary is constructed may enable the line of ownership demarcation to be identified using common law rules. In the case of a hedge and ditch boundary, for example, the line of ownership is presumed to lie on the edge of the ditch on the far side of the hedge on the basis that the ditch digger dug to the end of his land and then planted the hedge on top of the earth excavated. In modern walls and fences, ownership of the boundary may be indicated by on whose land columns and supports are located.

HM Land Registry does offer a dispute resolution service to try to resolve boundary disputes. If these go to court, they often result in the bankruptcy of both parties, providing a strong disincentive to pursue them. Boundary disputes do occur, sometimes with tragic consequences if neighbours come to physical blows. Occasionally surveyors make mistakes about boundaries, for example, by failing to realise that a defective retaining wall belongs to a property. However, one should not exaggerate their frequency. The idea of general boundaries does not produce an infinite number of disputes because the law contains a doctrine that terminates potential claims after a period of time. This is the doctrine of adverse possession. An occupier can claim ownership of land if he has been in peaceful possession of the property for a period of time. The interval of time needed to sustain such a claim has varied over the years and is related to the general limitation period within which legal action must be started after an event has taken place. In most cases, it is 12 years. This means that legal action must be started within this time to eject a squatter or fight encroachment, or it is possible that the property may be lost.

2.1 Land Registration

Land registration varies slightly between the different parts of the UK for which there is devolved government. This section focuses on the situation in England. Land registration is currently governed by the Land Registration Act 2002. This act ensures that eventually all land will be covered by a Torrens-style land registry with ownership being proved through entry in the land register rather than, as historically was the case, by title deed. It has also enabled electronic conveyancing to take place and the land register to become a document that can be directly searched by enquirers through the internet rather than by enquiry to a land registry office. The land register (HM Land Registry 2008) comprises:

- **Property register**, which identifies the location of the property, its extent, and any rights that benefit the land, and is supported by a title plan, which shows the approximate location and boundaries.

- **Proprietorship register**, which specifies the quality of the title, the names and addresses of the legal owners, and any restrictions on their power to sell, mortgage or deal with the land. It also records the sum of money said to have been paid by the current proprietor.

- **Charges register**, which includes details of mortgages and financial burdens, but not the amount involved. It also identifies other rights and interests to which the property is subject, such as leases, rights of way and covenants.

The current position is one of compulsory land registration. However, this has been on a sporadic basis. Mandatory first registration is triggered by certain events, such as the transfer of a freehold or leasehold with more than seven years to run, the creation of a lease of more than seven years, and the creation of a mortgage. The process of compulsory land registration has been going on since 1926, though voluntary land registration has existed since 1887. Initially it only applied to specified geographical areas. Since 1990 it has covered the whole country and 59% of England and Wales is now registered land (HM Land Registry 2007). The plan is to complete land registration by 2012. The situation is, in practice, better than this figure indicates as about 85% of titles are registered. There are a few large landlords, typically owning large areas of rural land, who have not experienced one of the trigger events that make land registration mandatory. These include a number of government bodies, other institutions like parts of the Church of England, and some, mainly aristocratic, private owners whose land is held by trusts. As these bodies are all immortal, transfer on the death of the owner has not been a trigger event for land registration. There is currently a campaign being run by HM Land Registry to encourage owners of unregistered land to register this by offering a discount on the normal fee and this has brought into registration significant areas of previously unregistered land. Registration offers significant advantages to owners in defending their land against trespass and encroachment, as well as providing a cross check for organisations when drawing up their balance sheets. Failure to register landholding by any public body is indefensible given the potential exposure to loss from encroachment when compared with the minimal costs of registration.

Proprietary interests are divided into major and minor interests, though this terminology is not used in the legislation (Gray & Gray 2005). Major ones are principally freeholds and leaseholds of more than seven years. Their first registration gives rise to a uniquely assigned title number. Most other sorts of proprietary interest, such as mortgages, and rights of entry, are then entered against the title number of the estate burdened by them and often also against the title number of the estate that benefits from them. It is possible for there to be both registered and unregistered interests in a parcel where, for example, a long lease has been registered but the freehold has not.

Proof of ownership is by entry in the land register. HM Land Registry back this by an indemnity fund providing compensation for fraud or error. Historically proof of title was by means of title deed. Only two areas in England, Middlesex (a major part of London) and Yorkshire, had deeds registers. Purchasers had to carry out due diligence through searches for deeds. The problem with a deeds system is that title is passed from one purchaser to the next and any break in the chain can potentially undermine the claim to possession. Under a common law system there is no absolute proof of ownership, just a claim to possession that is better than that of any current challenger. A land registry system, by contrast, offers absolute certainty of ownership of registered land, particularly if it is supported by a government guarantee of compensation in the event of error. Where proof of possession is through title deeds, there is a significant cost of due diligence when purchasing a property of checking the documents, particularly if there is no deeds register. However, a backstop exists on searches because of the doctrine of adverse possession. Under this rule, a period of undisturbed occupancy of land without challenge to possession (normally 12 years) enables the occupier to claim ownership. With mortgages, the lender used to take physical possession of the title deeds, which would not be released until the mortgage was repaid.

Before compulsory registration began in 1926 the system was not quite as disorganised as one might have thought. Evidence of the confidence in the system is that, unlike USA, there has never been any significant amount of title insurance in Britain, partly because conveyancing is mainly by solicitors who have professional indemnity insurance. Until 1925 many owners of real estate possessed a tenure called copyhold rather than freehold. Under legislation passed in 1925, copyholds were converted into freeholds. Copyhold is the tenure derived from villeinage (serfdom). The copyholder proved title through a copy of the deed of entry recorded in the manorial register by the lord of the manor. Copyholders paid an entry fee when they took possession of the land and also paid an annual quit rent. Both of these were nominal sums by modern standards, typically having been fixed by custom in the fourteenth or fifteenth century. However, these payments obliged the lord of the manor to defend the copyholder's possession of the land as the lord had accepted the copyholder as his feudal tenant. Manorial courts were held to collect these sums, to register new entrants, and take action against those who broke customary land laws. The conversion of copyhold to freehold meant that the government had to replace the private manorial court registers with a state one if it was to provide a similar level of assurance about title as the former copyholders had previously enjoyed.

The legislation of 1925 listed those estates recognised by statute. Not all estates at that time were recognised in the new law, but other estates could still exist. Their owners had an equity right rather than a legal one. The move from a common law tenure system to one based on statute law therefore has implications for property rights as not all rights may be recognised by statute even though they can still be enforced. Similarly the change from a deeds system to land registration may mean that certain rights, particularly those not recognised in statute, may not be capable of being registered. Land registration law defines which estates and rights can be registered. For example, since 1925 a minor cannot own a legal estate, although a minor can hold an equitable interest in a trust set up to exercise legal ownership on his behalf. The maximum number of co-owners who can hold a legal estate was set at four. Additional owners may exist but they have an equitable and not a legal right. The interests that had to agree to a transfer of land after 1925 was limited to the owner in fee simple and excluded those with reversionary interests in tail. Rights which are not recognised as legal rights and ones that cannot be registered are potentially more difficult to maintain and enforce than statutory rights that have been registered. It is likely that over time many unregistered rights not recognised by statute will wither away and the main unregistered right that will continue to exist will be leases of less than seven years. Customary rights can survive as registered rights in the form of easements or because land is registered as common land or because rights are appurtenant (that is attached) to other registered land. However, many types of estate that are not regarded as being legal estates recognised by statute and cannot be registered are likely to disappear in the way that the many local customary variants of copyhold and freehold did with the development of a statutory based system.

One particular casualty of change in the future is likely to be the doctrine of adverse possession. The UK government lost the case of *J A Pye (Oxford) Ltd v UK* in the European Court of Human Rights in 2005[1]. The Court ruled that as a result of land registration rules the government (and not the squatter) had unfairly deprive Pye of its property. Land registration rules were changed so that notice has to be given to the owner of the squatter's intention to claim adverse possession. This in effect gives the owner two years to start legal action to oust the squatter and frustrate the claim that there has been peaceful occupancy for the required period. Successful adverse possession claims for registered property are likely to become very rare but owners of unregistered land are vulnerable to such claims unless they take steps to protect their property.

Land registration has subtly changed the concept of ownership of real estate from the common law position of being the person with the best claim to possession towards an absolute claim of ownership by virtue of entry in the land register. There have been losers in the change to a land registration system but the losses have been relatively minor, though, as with the adverse possession rules, important modifications have had to be made to avoid undue hardship. The benefits have been speedier, cheaper and more reliable conveyances, an open land register that is easy for anyone with internet access and a credit card to search 24/7, and improvements in the protection given to lenders of mortgages by signalling to the world that the property is encumbered with a charge. The efficient transfer of property and

[1] http://www.echr.coe.int/Eng/Press/2005/Nov/ChamberjudgmentJAPye(Oxford)LtdvtheUnited_Kingdom151105.htm

protection of property rights through a land register have come to be accepted as a public good that benefits all. These advantages have overcome the traditional resistance that British property owners have had towards government interference in their property rights. In 2008 the government introduced a Home Information Pack. Vendors are required to supply buyers with specified information about the property. The intention was to speed up purchases of residential property by eliminating the delays that occur whilst the purchaser's solicitor waits to receive key information from the vendor's solicitor and from local authorities. There has been criticism of the scheme and its cost even though most of the information is what the vendor would have to supply anyway. The supposed advantages have yet to win over some sceptical interested parties like mortgage banks, who refuse to accept some of the information that was intended to be in the pack, like a survey and valuation, and have insisted on retaining their own.

2.2 Mapping

The official mapping agency in the UK is the Ordnance Survey. As the name suggests, its origin was military. The 1745 Scottish Rebellion brought home to the government the need for detailed maps identifying which roads and bridges were capable of taking artillery and this resulted in the mapping of the Scotland Highlands by William Roy. Roy's proposals to extend mapping to the whole of the country were not acted upon. Threat of invasion by France after 1791 led to large scale mapping of the southern England coastal counties using a new Ramsden theodolite. Large scale civilian mapping began in 1841 when the Ordnance Survey was granted the right to enter land and the map boundaries. Before this date many private maps had been produced but the spur to public mapping was the realisation that urbanisation and the new transport and other networks that resulted required accurate large scale maps. By 1895 it had completed the mapping of the country at a scale of 25 inches to one mile.

Military involvement in the Ordnance Survey ceased in 1983. Since 1990 it has been an executive agency of government. It functions as a self-funding body. This means that it is expected to finance its activities from fee income paid by users rather than government grant. Digitisation was completed by 1995. Since 2001 the Ordnance Survey has maintained a Master Map geo-spatial database to which layers of information can be added, including ones by outside users. Postal addresses can be linked to the map. There are 440 million TOIDS to which other data can be linked[2]. A wide range of outside users have produced their own customised map-based digital databases. For example, police forces map crime incidents. Local authorities also add layers to help them plan and provide public services for example census data, listed heritage buildings and trees, and town planning applications.

2.3 Cadastres in the UK

Strictly speaking, it is not correct to say that the UK does not have a cadastre. Rather what it has are two types of cadastre that fulfil very specific functions. What the UK does not have is

[2] See the Ordnance Survey's website http://www.ordnancesurvey.co.uk/oswebsite/media/features/introos/index.html

a *general* cadastre. The two types of cadastre are those for agricultural land and for real estate taxes. These have been created to enable the government to fulfil specific functions.

2.3.1 The Rural Land Register

The Rural Land Register has been created in order to implement the changes made in the EU's Common Agricultural Policy made between 2003 and 2005. This has seen the EU move from a system of agricultural subsidies in the form of guaranteed prices for particular products to one in which subsidies are paid according to the agricultural land occupied (FAO 2006). The aim was to bring an end to the system by which farmers were paid to produce products that were surplus to requirements whilst still providing subsidies to support rural areas. The change has required modifications to the Integrated Administration and Control System (IACS) used to ensure that correct payments are made to farmers and that there is traceability of payments. In order to make the payments, Member States had to create and maintain a database of agricultural land parcels with their sizes and geo-references, which is linked to records of farmers and their aid applications. Each parcel in the Utilised Agricultural Area (UAA) has to be correctly identified and measured and records kept of the persons who are permitted to make claims. Checks on claims are needed to ensure that the land is part of the UAA and that multiple claims are not made for any parcel. As land can be transferred between farmers, removed from agricultural production, or parcels can be joined together or divided, the register has to be capable of being updated. The EU has set tolerances for the accuracy of measurement of 5% or 1.5 metres to the perimeter, with a maximum tolerance of for each parcel of one hectare.

The introduction of the new system resulted in significant problems in England (though not the rest of the UK), with serious delays in making payments to farmers (NAO 2006). Partly this was because England chose the most complex option for payments to farmers, but problems were also encountered with inaccurate maps and the time it took to resolve these. The Rural Payments Agency, responsible for operating the system, is an executive agency of government. The problems proved to be so serious that the management was disciplined. In other words in classic New Public Management style, the managers had the powers to achieve the task devolved to them and were incentivised to achieve them, in this case, by being disciplined for failure rather than rewarded for success. The cost of establishing the Rural Land Register for England was £16.1 million compared with an estimate of £6.8 million, and this included £9.8 million being spent on mapping applicants' land. One significant aspect of the Rural Land Register is that agricultural land is exempt from annual real estate taxes. There is therefore no fiscal cadastre for agricultural land.

2.3.2 Fiscal cadastres

There are two annual taxes on the value of real estate; the non-domestic national business rate is levied on non-residential property and the council tax falls on residential property. These taxes require the compilation and maintenance of fiscal cadastres.

Business rates fall on the annual or rental value of non-domestic property. The tax rate is set each year by central government for England and by the devolved governments in other parts of the UK for their areas. The tax is a hypothecated one with the revenue being used to support local government. Local authorities collect the tax and remit it centrally and receive a share of the total tax yield according to their population. This means that their share does not reflect the amount of tax revenue collected from their area. The formal incidence of the tax is on the occupier. The tax is based upon the open market value of the property and not the current rent passing between the tenant and the landlord. The valuation model used to estimate the open market value assumes that the premises are vacant and to let, are in good repair, are used for the current and not highest and best use, the tenant is responsible for the usual tenant's rates and taxes and bears the cost of repairs, insurance and other expenses to maintain the property, and that the tenancy is an annual lease. The real situation for any individual property may be very different from the assumptions in the valuation model, for example the property may belong to an owner occupier. There is a revaluation every five years which is carried out by the Valuation Office Agency (VOA), the government's valuers. They update the fiscal cadastre by requiring property owners to provide them with details of any alterations and improvements since the last revaluation, rents, rent reviews, lease terms, outgoings, and ownership. The VOA therefore has a vast database of comparable evidence from which to estimate current market rents and thus to assess rateable values. There are approximately 1.7 million business properties. There are a very few exemptions from business rates other than agricultural land and premises and fish farms, places of public worship, and parks. There is no exemption for government or local government properties, such as schools, hospitals and prisons, which are taxed on their open market value in existing use. The fiscal cadastre is a public document accessible through the internet. For most types of property it is possible to see how the VOA has arrived at the tax valuation.

The council tax is an annual tax on residential property which is based on its open market capital value. The capital value is estimated by the VOA using evidence from property sales. Properties are placed in bands which determine the amount of tax rather than the tax being levied as a percentage of the value. Each local authority sets it own council tax rate and is responsible for collecting the tax revenue, which forms part of its income. The tax has been levied since 1993 but there has been no revaluation of the tax during this time. The result is that the tax is based upon 1991 values which are now seriously out of date. Some properties ought to be in higher bands than they are currently placed in whilst others ought to be in lower ones. Not all properties in a band have experienced the same rate of capital growth since 1991. Moreover, since the tax was never intended to be revalued, the VOA was not required to maintain up to date records of the features of the property as distinct from an up to date record of which properties exist. Properties that have been constructed since 1991 have been added to the fiscal cadastre but at their 1991 values. The government has decided that revaluation should take place though it has postponed the actual date for political reasons after a revaluation in Wales revealed that there would be more potential losers than gainers. There are approximately 23 million domestic properties in England and Wales and the VOA has been working on how to revalue them using mass appraisal systems with the remote capture of data about their characteristics. Sources for the latter include the particulars of properties sold through internet estate agents. One of these, Rightmove, has developed a

proprietary Automatic Valuation Method for valuing residential property using its database. This system is currently sold to estate agents, valuers, and mortgage banks and its data is expected to be one of the sources used by VOA when council tax revaluation finally takes place.

The fiscal cadastres for business rates and the council tax together with the Rural Land Register include almost all properties with a few minor exceptions such as places of public worship. Whilst the RLR has of necessity to include geo-co-ordinates as payments to farmers are based upon land area, both the tax cadastres use a general boundaries approach. The value of properties in many cases will be more influenced by characteristics of the property and its usable economic area than by its precise boundaries. It is possible to make changes within a building's footprint that can have significant implications for value without there being any change to the boundaries, for example the construction of a mezzanine floor in a retail warehouse.

A tradition in UK real estate taxes is that the tax liability falls on the occupier and not the owner. This is for pragmatic reasons. It is often difficult to trace the beneficial ownership of property where it can be hidden behind layers of nominee holdings. Owners may reside outside the jurisdiction of the courts making sanctions against them difficult to enforce. By contrast, the occupier lives or runs a business from the property. In the event of non-payment of taxes it is possible to distrain upon the occupier and seize his moveable property to sell to satisfy the tax debt. A tenant may be able to shift the effective tax burden on to his landlord by negotiating a lower rent. Although the formal (legal) incidence of the tax is on the occupier, the real impact may be on others. The implication of taxing the occupier is that British fiscal cadastres are records of occupation and not of ownership. Similarly the Rural Land Register records the person who is entitled to receive the subsidy on agricultural land, not who owns it. The fiscal and agricultural land cadastres are therefore only partial records of interests in real estate although almost every parcel should be entered on one or other of them.

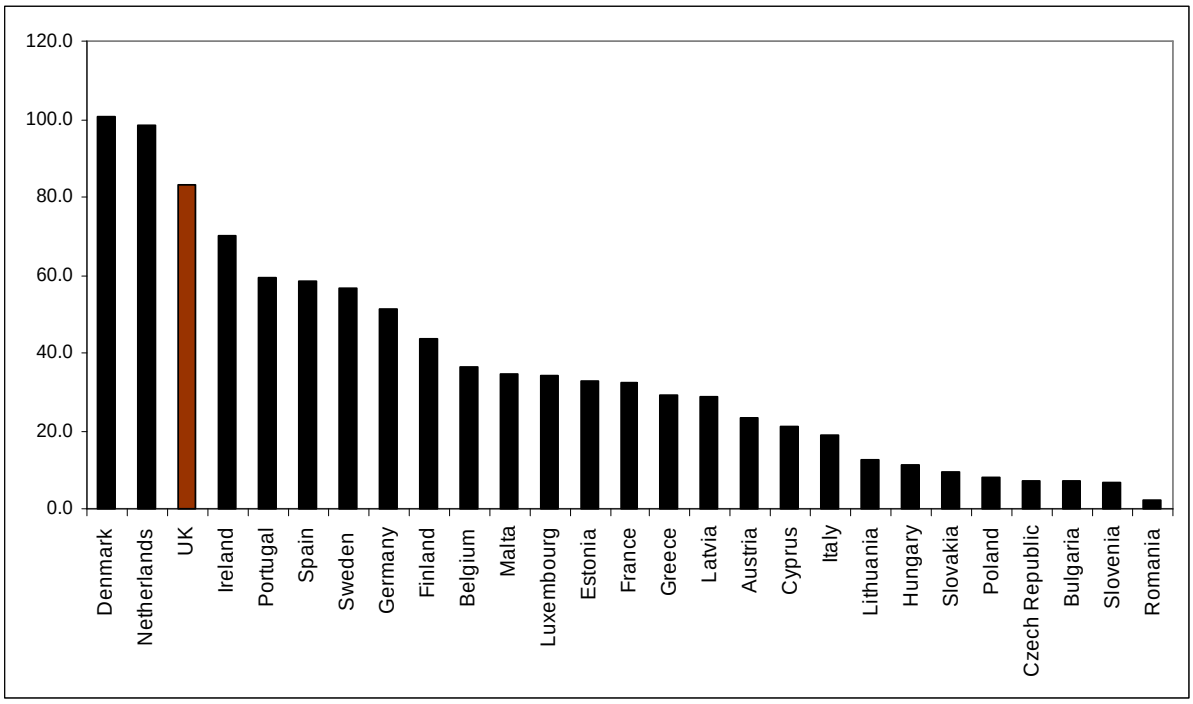
3. THE EFFICIENCY OF THE UK PROPERTY MARKET

Does the absence of a cadastre cause problems for the British property market? There is little evidence to suggest that it does. It is one of the most open and active in the world and has proved to be an attractive destination for investment from many parts of the world. Jones Lang LaSalle (2006) in its Real Estate Transparency Index places the UK in 5th position out of 56 countries surveyed in terms of market transparency behind Australia, USA, New Zealand, and Canada. It is one of 10 countries placed in the top tier using as criteria the availability of data about investment performance and market fundamentals, financial disclosure and governance of listed vehicles, regulatory and legal factors, and professional and ethical standards. The UK scores highly for rule of law and ease of doing business in both the World Bank and Institute of Economic Freedom surveys (World Bank 2006, World

Bank 2008, Gwartrey & Lawson 2008) suggesting that property rights enjoy a high level of protection and that the property market infrastructure functions efficiently.

The UK has a relatively high level of dependence upon real estate taxes with 11% of net tax revenues come from taxes on the value of real estate, which is approximately 4% of the Gross Domestic Product (calculated from HM Treasury 2008). Business rates and the council tax, which are annual taxes on the value of non-domestic and residential property respectively, produced 4.3% and 4.6% of net tax revenue in 2006/07. The absence of a general cadastre does not seem to present problems in creating and maintaining fiscal cadastres for tax purposes.

Figure 1 Residential Mortgage Debt as a percentage of the Gross Domestic Product in the European Union, 2006



Source: European Mortgage Federation (2007)

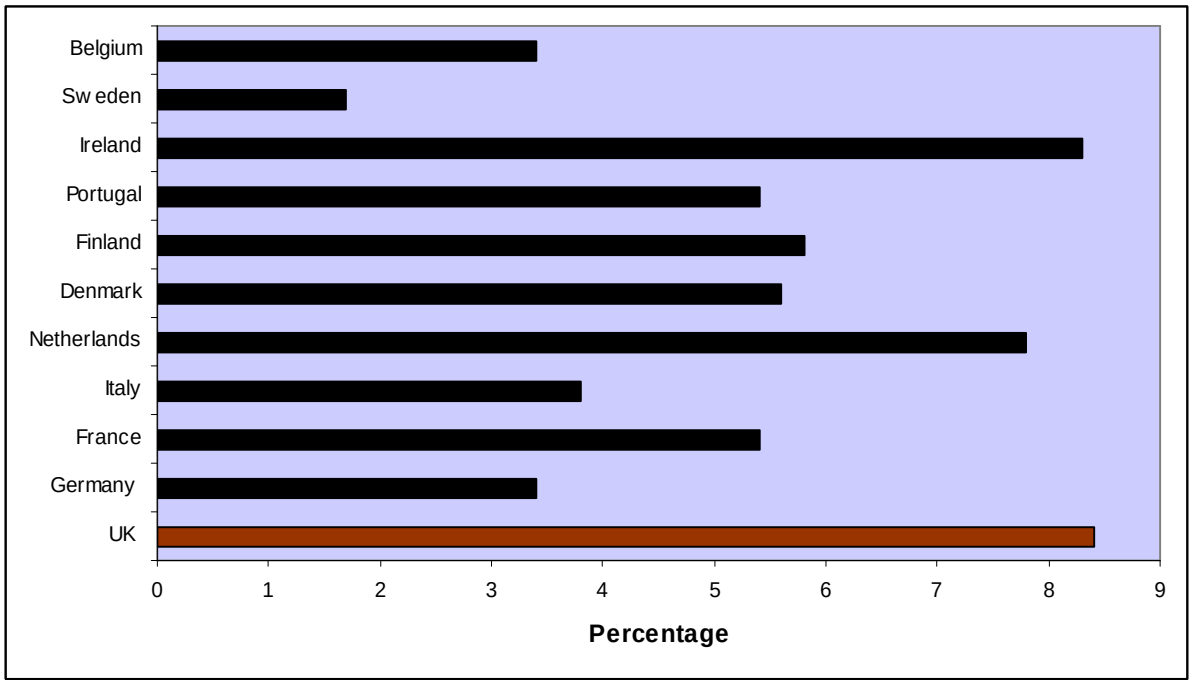
The UK has a very highly developed mortgage market. At 83.4% (2006) it has one of the highest levels of residential mortgage debt relative to its gross domestic product in the European Union as figure 1 shows. Mortgage equity withdrawal is a key feature of the UK economy. Households are able to remortgage their properties in order to release rises in their value. The sums released can be used for consumption or investment, including financing the setting up of new businesses. Between 1979 and 1999 mortgage equity withdrawal in the UK averaged 3% of household disposable income. By contrast in Germany, France and Italy the average *injection* (not withdrawal!) into housing average 6% of household income (HM Treasury 2003). Companies also use their real estate as security to raise capital. This can be by commercial mortgages but also by using other forms of loan secured against real estate assets, such as debenture stock and financial leases. The value of company shares tends to

reflect the value of the underlying assets. Companies can use equity withdrawal to generate investment funds. The absence of a cadastre does not appear to limit the workings of the mortgage market or the ability of companies or households to use real estate assets to raise capital secured against these. The liberalisation of the mortgage market in the 1980s has made the market extremely competitive.

The UK has a highly developed property valuation infrastructure that enables lenders to have a high degree of confidence in the value of the assets against which loans are secured. The Royal Institution of Chartered Surveyors has emerged as the single professional body for valuers. Whilst there is no legal restriction on non-members calling themselves valuers or offering valuation services, the financial institutions are unwilling to accept valuations from non-members. The RICS sets standards for entry to the profession and continuing professional development. It also enforces professional and ethical standards. It sets valuation standards which are enforced through inspections of samples of valuations. The number of professionally qualified valuers is high in the UK. In the UK there is approximately one qualified valuer for every 2000 persons. By contrast for Romania it is estimated at 1:8,000 and in Hungary 1:18,000.

The UK has a relatively high level of housing transactions compared to other European countries as figure 2 shows. At 8.4% this is higher than any of the other economies for which data was obtained. Again, the absence of a cadastre does not seem to undermine the efficiency of the housing market. Of course a cadastre could improve the efficiency of the property market but the market is already an efficient one with a high level of openness and transparency and relatively low transactions costs (excluding taxation of transfers).

Figure 2 Housing transactions as percentage of owner occupied housing stock, 2000



Source: HM Treasury (2003)

4. IS A CADASTRE NECESSARY?

From time to time individuals have argued that Britain needs a cadastre. For example, in the 1836 R K Dawson, a Royal Engineers officer on secondment to the Tithe Commission to organise the tithe surveys put forward a well-argued case for a cadastre and how it might be accomplished (Kain & Prince 1985, chapter 3). Tithes are a tax on the produce of real estate levied at 10% on a parish by parish basis and used to support the Church of England. Under the Tithe Commutation Act 1836 tithes in kind were replaced by a fluctuating money payment. This required the determination of the boundaries for each parish or district for which tithes were payable. It also required the tithe payment within each parish to be apportioned between landed estates according the value of the produce they produced. This meant that most parishes in England and Wales, other than urban ones, had to be mapped using a large scale so that legal boundaries could be recorded and areas measured, and the land valued. Dawson used civilian surveyors for this task and produced detailed instructions for them and carried out quality checks on their work. He argued that this work could become the basis for a cadastre and that Britain should follow continental practice in this respect. In particular he argued that this would lead to a reduction in boundary disputes and make for easier transfer of real estate. However, there was strong political opposition to the proposal to such an extent that the legislation was amended to prevent the tithe surveys for being used in this way. Dawson lost the power to determine the scale of the plans produced and to control the level of accuracy.

In 1909 a radical Liberal government introduced a tax of 20% on the increase in value of land between 1909 and the date on which it was sold, a long lease granted or on the death of the owner (Short 1997). The legislation provoked a constitutional crisis that pitted the elected House of Commons against the hereditary House of Lords, which resulted in the latter losing many of its powers. Implementing it required the government to draw up a fiscal cadastre on a parcel by parcel basis identifying the ownership of each area using Ordnance Survey maps for this purpose. The government had to create a valuation service to do this that eventually became the Valuation Office Agency. The opposition to the tax was so great that the tax was never collected and no other use was made of the cadastral data assembled.

Any government now seeking to introduce a cadastre would be faced with the difficult task of persuading the public that one was necessary. It would be an immensely expensive undertaking. The efficiency of the property market and the high normal level of transactions would suggest that a cadastre would add limited value and that this would be unlikely to justify the cost. Greater certainty over boundaries than the current general boundaries doctrine supported by common law rules and adverse possession would, in a limited number of cases, increase the security of property rights. However, the UK is a country in which property rights are strongly protected and the rule of law prevails. It has a strong infrastructure to support the workings of the property market, including an efficient land registration system, a high level of market transparency, well-developed valuations, a liberal but regulated finance market, good standards of corporate governance, and a high level of professional and ethical standards amongst the lawyers and valuers working in the property

market enforced by professional bodies. A cadastre can help reinforce these human and regulatory supports for the property market but is not a substitute for them.

Land tenure is essentially a social phenomenon comprising "rules invented by society to regulate behaviour" (UN FAO 2002). Property "is not a thing but a *power relationship* – a relationship of social and legal legitimacy existing between a person and a valued resource" (Gray & Gray 2005). It legitimises access to land and natural resources by individuals and groups and provides the validation by society of claims to land and land rights. The social legitimisation of land rights means that tenurial systems reflect the social structures of different societies, together with their norms, values, and belief systems, and the shared experiences of the society. At the heart of the absence of a cadastre lies a philosophy of how land rights were derived and are legitimised in British society and the role of the state in this.

The feudal theory was that tenants-in-chief held their land from the monarch. Inferior tenants held their land in turn from the tenants-in-chief. Once sub-infeudation was prohibited so that land could only be disposed of by sale, gift, or bequest rather than the creation of a new inferior feudal tenant, the complex chain of inferior tenancies became eroded over time. The 1925 legislation removed the last elements of this as well as making copyholders into freeholders. Therefore the latter no longer held their land from a lord of the manor. Instead, in effect, all freeholders became tenants-in-chief and hold their land direct from the monarch. Thus, land owners in England came to hold land immediately of the monarch and not mediately (via an intermediate lord) as before. Does the ultimate ownership of the land lie with the crown with rights and boundaries granted by the state? A modern fiction did develop in the seventeenth and eighteenth centuries that made such claims. Rather the crown had territorial sovereignty over the land which ultimately in the absence of heirs would revert to it to be reallocated. But this is not proprietary title and provides no beneficial ownership to the crown. The medieval monarchs drew a clear distinction between their personal land – the demesne land – over which they had a proprietary interest and other land in their realm. These ideas have been tested in modern courts in aboriginal land claim cases, such as Mabo and others v Queensland (No2) (1992) (www.austlii.law.uts) where the decisions have been that the British crown acquired sovereignty over the land but not a proprietary interest and so did not extinguish existing aboriginal tenures. The implication of this is that the government can register land rights but does not determine them. Boundaries are just one aspect of property rights. The government does not have the right to require property owners to seek its permission to change them, or to subdivide land or join it together. Parliament is sovereign and could change this position through legislation. Gaining the necessary public support for doing so from a skeptical electorate would be quite another matter.

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BIOGRAPHICAL NOTES

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