Briefing Paper

Property Rights and Development:

Property Rights and Economic Growth

Anna Locke

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Overseas Development Institute
203 Blackfriars Road, London, SE1 8NJ

Tel: +44 (0)20 7922 0300
Fax: +44 (0)20 7922 0399
www.odi.org.uk

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Executive summary

This Briefing Paper presents the debate on the impact of formalised land rights on economic growth through the vectors of increased investment, credit and efficiency. At the request of DfID, the paper also considers the impact of titling on the distribution of control of property and of growth. Drawing on this debate, it identifies key research questions and weighs up the evidence to answer these questions, discussing the nature of the evidence available and highlighting gaps in current evidence that need to be tackled through further research.

Overall, the evidence reviewed on the link between secure property rights and growth focuses mainly on the impact on investment and productivity. **While there is a medium/large body of evidence of mainly high quality supporting the link, there are also a high number of studies that question this link and the strength of the evidence, mainly on methodological issues.**

Contradictory evidence is put forward that identifies factors other than property rights as being of primary importance for growth, such as skills, while a criticism is that the analysis fails to recognise the "cluster of institutions" that drive growth. Analysis of the relevance of other drivers of growth is based on the same dataset as used to support the link, while other analysis adjusts the dataset slightly and finds that the positive link no longer holds, particularly for developing countries. Other concerns include the difficulty of proving causality between secure property rights and growth as opposed to correlation, and the direction of that causality. Finally, concerns are raised that the measures commonly used for property rights in the cross-country literature are not adequate proxies for institutions.

While there is more substantial literature looking at effects at **household** level of different drivers of growth, such as credit and allocative efficiency, there is not much literature that looks at this at a larger firm, or cross-country, level.

Several research gaps were identified in this study:

- Collection and analysis of more and better quality micro level data on the impact of secure property rights on firms' investment decisions within countries to complement and test the results from cross-country analysis.
- Collection and analysis of data on the impact of secure property rights on collateral-based finance at a macro/large firm level.
- Collection and analysis of data on the impact of secure property rights on allocative efficiency at a macro/large firm level.
- Collection and analysis of data on the impact of more formal property rights on the distribution of property and benefits from growth at a national/cross-country level.

1 Background and objectives

This Briefing Paper aims to look at the state of evidence on the link between secure property rights and development in the case of rural households, with an emphasis on recent evidence in African countries, and identify where there are significant gaps that need to be plugged by further research. In line with DfID's definition of a Literature Review, this is designed to be a "review of main literature in the field including all major research studies".[1]

This Briefing Paper forms part of a wider study commissioned by DfID to contribute to debates on the link between property rights and development in two principal arenas:

- The Golden Thread narrative of the UK government, which emphasises secure property rights as a key element of promoting economic growth and development: "A genuine golden thread would tie together economic, social and political progress in countries the world over… Only then will people escape the fear of seeing their homes bulldozed just because they don't have property rights." Such rights would be underpinned by mapping and formal cadastre systems "…using satellite photos to map plots of land that will facilitate the creation of property rights" (Cameron 2012).
- DfID country programmes on property rights, which have ranged from support to land administration systems to funding individual and community titling in different countries.

Underpinning this is a broad agreement that secure property rights are necessary for development, expressed in terms of equitable growth, household welfare, and social and political engagement. Implicit in such discussions is the view that private, individual tenure is the most appropriate form for guaranteeing security of property rights. However, others argue for promoting tenure security under different mechanisms rather than private land ownership. This is particularly the case in sub-Saharan Africa where forms of customary tenure emphasise membership of communities as the basis for access to land and therefore prioritise territorial control by collective units over private conceptions of property rights.

In parallel, there is a discussion on how the link between property rights and development is influenced by a range of other factors that may be equally, or more, important that property rights *per se*.

[1] Summary table of evidence products – DfID 2012.

2 Approach and methodology

A team of five researchers carried out the overall literature review, with the support of a research assistant. A senior review team, comprising mainly external academics specialising in the themes covered in this study, provided input into the conceptualisation of the research questions and search strategy, suggested additional literature and reviewed the draft and final reports.

The general study looks at the role of property rights in promoting development in five areas agreed between DfID and ODI:

- Property rights and economic growth at a macro level
- Land property rights and rural household welfare
- Water rights and rural household welfare
- Property rights and urban household welfare
- Property rights and social, political and economic empowerment

The evidence assessed by the review team is presented for each theme in the form of a Briefing Paper, comprising:[2]

- Discussion of the conceptual framework, context and theory of change;
- Assessment of evidence for each research question; and
- Identification of research gaps.

Using DfID's theory of change framework (Vogel 2012), we look at the links for each component between property rights and development to: identify endpoint outcomes and how they would be measured; key determinants of such outcomes; and the central transmission mechanisms between secure property rights and each outcome.

In each theme, we define a set of research questions that help us to test the hypothesis presented in the theory of change. Identifying and assessing such evidence inevitably involves a discussion on the *form* that such property rights need to take and the influence of *other factors* on the link.

An important point of orientation for the study was DfID's Rapid Review on the "Golden Thread of International Development",[3] which explores the evidence on different pathways to the triple objectives of growth, poverty reduction and civil liberties, and DfID's rapid review of the literature on property rights (Selvetti 2012).

2.1 Search strategy

The literature review combined three tracks of literature searches:

1. Bibliographic database search of academic databases and journals, using consistent search strings that have been tested beforehand and a set of inclusion criteria, and conducting forward and backward searches on key references. Three main databases were used for the search: Scopus, Google Scholar and Web of Science. These were complemented by searches of key institutional databases, particularly World Bank, FAO Agris and DfID's R4D website.

[2] In the case of the rural and urban household papers and the growth paper, an overview is provided drawing out common and contrasting findings.
[3] DFID Research and Evidence Division: The research evidence relating to a "golden thread of international development": a rapid review (undated)

2. Snowball technique of contacting experts in the field (see Annex 1) to ask them recommendations for important studies on the research question as well as insights into the key propositions.

3. Hand-searching specific websites for relevant studies using similar search terms as for the bibliographic databases.

The strategy focused on literature on Africa produced from 2000, using literature produced between 1990 and 2000 where recommended by the senior review team or where such references were frequently cited in the more recent literature. The search strategy focused on literature published mainly in peer review journals and principally in the English language, partly because of the way that the databases operate and partly due to the criteria in DfID's draft guidelines for assessing evidence quality.

Table 1 presents an example of the results of the search conducted through Scopus for the five themes covered. To these were added other references picked up in the search process. The review team then screened all references to identify the most relevant material.

Table 1: Studies downloaded from Scopus

Searches	Rural	Growth	Urban	Water	Social and Political Empowerment
Number of variations searched	16	12	5	12	8
Abstracts downloaded	86	50*	19	39	44
Titles forward/ backwards searched	9	7	2	4	0
Full titles downloaded from Scopus	**47**	**43**	**21**	**40**	**39**

2.2 Derivation of the evidence base

In this section, we discuss the potential impact of the search strategy and evidence quality assessment criteria in deriving the evidence base that underpins the key finding of the Briefing Papers.

Issues raised by the search strategy

Although the strategy was designed to do a wide-ranging search and include as many relevant studies as possible, the results of the search process highlighted some potential bias towards particular types of studies and evidence, namely:

Literature published in journals

While efforts were made to include other types of papers, including working papers, conference papers and other reports, most of the papers selected and analysed were journal articles or working papers intended for publication, and excluded books (including edited volumes and monographs). This is due mainly to the greater visibility and accessibility of journal articles through database searches as they generally include full metadata which is picked up by search engines. Such articles are also more likely to be cited and referenced in other studies.

Explicitly empirical and economic-based papers

The explicit focus on 'evidence' in the review process is likely to have led to bias towards papers which emphasise their methodology or use of data. On the whole, papers from the economics discipline were more likely to include more details on their use of 'data' and 'evidence', although a loose application of search terms (i.e. relaxing use of 'data' or 'evidence' was consciously used in order to include other terms. As a result, perspectives from some disciplines are not fully represented, notably history, politics, anthropology, cultural studies and sociology.

Impact of the methodology to assess quality of evidence

The exclusion of particular types of evidence by the search strategy is compounded by the criteria for assessing the quality of the evidence that could be considered, provided in DfID's draft Guidelines (*Assessing the Quality of Social Science Research Evidence: Summary*)[4] a revised version of which was subsequently published online. This emphasises measurement aspects of evidence, in the principles of validity and reliability, implying a preference for quantitative studies over qualitative studies using inductive methods.

Focus on particular types of evidence

In the context of research on property rights, the implicit preference for quantitative studies runs the risk of excluding a significant body of work relevant to the issue and providing only for a partial review of the evidence. The different standards of emphasis on, and transparency of, research design and methods in different disciplines may also mean that research produced by those disciplines that bring design and methodology to the fore are likely to be given higher quality scores.

An additional concern is that the inclusion of the number of studies as a factor in assessing the strength of the evidence may mean that the numbers can be influenced by concentrated research efforts in particular places run by particular research groups (for example, in the land case, highland Ethiopia by the World Bank/IFPRI). The contextual factors of the location and the wider issues of knowledge building that are associated with particular research efforts (which may have disciplinary or policy biases) are, as a result, downplayed.

Resource implications

The criteria provided in the summary guidelines could be seen as a first hurdle for most peer-reviewed articles to be accepted into a journal without distinguishing further between the quality of different articles. Publication in a peer-reviewed journal would normally be taken as a minimum threshold for quality assurance and has been used as such in this study.

If the peer review process is not seen to be adequate and further verification is deemed necessary, this implies that a much greater volume of resources would be needed as it can take a lot of time to delve deeply into the methodology of individual studies to assess how well they fulfil the different assessment criteria. For example, in the literature looking at the link between secure property rights and economic growth, there are articles published (and used in the literature review) that discuss in great depth a single parameter used in one model compared to another (e.g., the instrumental variable), an exercise that could not be reproduced with the scope of work and budget provided for the literature review. Indeed, a thorough assessment would imply verifying primary data, which is not always available, and again, would be extremely resource intensive for a wide-ranging literature review which uses broad inclusion criteria.

The guidelines appear to privilege experimental design but it can be difficult to work out, for example, whether a study was really quasi-experimental or whether it was intended to be an experimental design but was not done strictly according to criteria for this. There may also be academic disputes about whether conditions in the area of study created a natural experiment or not. Requiring the reviewer to make a judgement on the debates is time-consuming, and the reviewer may not be equipped to do this in the context of a broad literature review. This means that a very brief summary of the state of evidence is risky to apply; even classifying studies according to whether they are really experimental or quasi-experimental is challenging — without going back into the primary data, it is not really possible to make a robust assessment.

[4] The review team were provided with draft guidelines by DfID, which are similar but not entirely equal to the recent guidelines published on DfID's webpage. The guidelines served as a filter for including only evidence that was of reasonably good quality and comparing contrasting evidence on different points.

Issues of aggregation

Not all the principles of quality laid out in the guidelines establish an equal threshold for assessment (e.g., the criterion of acknowledging the existing body of research is much less rigorous and easier to meet than, for example, that of demonstrating measurement validity). This makes it difficult to aggregate all the principles into a single arrow or indicator of strength and quality of evidence.

The challenges of property rights as a research focus

In the case of property rights, the different dimensions and interpretations of property rights in the literature and the greater complexity relative to specific interventions, such as cash transfers, have made it difficult to tease out causality from statistical econometric analysis. Forms of property rights influence but do not necessarily determine real or perceived security of property, the effects of which may affect investment and innovation through perhaps four main paths, but which may equally engender all manner of other linkages within systems, some of which we may not appreciate, and which depend heavily on context (and it can be hard to define what elements of context matter most). Cross-country regression cannot deal fully with this, even if it can produce some indicative results. Qualitative analysis can provide additional insight into understanding the contexts that create the variegated patterns.

As such, it can be difficult to come to a firm conclusion about the overall strength of the evidence although we do make some comments on this during our analysis of the evidence. In the Briefing Papers, we have strived to make this as transparent as possible, highlighting and discussing the nature of the evidence, and trying to provide an informed sense of the broader pattern.

3 Property rights and economic growth — theoretical and conceptual issues

3.1 Defining secure property rights

"Property"
This review focuses on immobile, fixed assets, namely housing[5] and land. It does not include discussions of intellectual property nor more sociological associations with belonging or a sense of connection to a place. It also does not include discussions around other, moveable types of assets, such as warehouse receipts, as this implies a much broader discussion of a different nature drawing on a different set of literature.

"Rights"
Our analysis takes a working definition of a property right as the control over assets and the "return to the assets that are produced and improved" (Rodrik 2000a) or "residual rights[6] of control (over assets)" (Grossman and Hart 1986; Segal and Whinstone 2010) rather than "ownership of assets". This control can take various forms and is backed up by laws, regulations and policies or social norms — institutions — that define, negotiate, monitor and enforce property rights.

Rather than a single "right", discussions of property rights often refer to "bundles" of inter-related rights (Everest-Phillips 2008; Besley and Ghatak 2009) which involve the right to use, sell, transfer/bequeath, allow use by others and restrict use by others. These rights can often overlap and be contested, as the right of one person to do something with an asset can have implications for someone else's rights, actual or potential. In addition, rights are vested at different levels – individual, household, community – with different content of rights at these different levels (e.g. some individuals may be able to use a resource, or harvest natural resources, but not to transact or alienate a resource). Who holds the rights and how this is determined is a focus for the review, e.g. 'owners' versus 'tenants' and intra-household issues, eg. the rights of women to 'family' land.

"Security"
Broadly speaking, a property right is secure when the right holder perceives it to be stable and predictable over a reasonable period of time and protected from expropriation or arbitrary change, with claims that are backed up by some type of authority. Security typically implies the ability to appropriate benefits arising from a particular property right.

A dominant narrative from developed economies is that property rights need to be private and individual, expressed in a formal and legal form, backed up by the State (de Soto 2000). However, emphasis by international development institutions, informed by experiences of programmes and partnerships in developing countries, is increasingly on secure, equitable access to property under different legal systems and diverse national and local situations, looking at the legality and legitimacy of different institutional arrangements. It is more explicitly recognised that formal property rights underpinned by titling may be neither necessary nor sufficient to ensure security of rights, depending on how such rights are recognised and enforced in a particular context (Deininger 2003; EU 2004; DfID 2004). Formal property rights will not be effective if they do not confer control rights; sufficiently strong control rights may serve the purpose even in the absence of formal property rights (Rodrik 2000a).

[5] In much of the literature, housing refers to "house + land".
[6] Where the owner is entitled to the use and fruits of the asset except insofar as (s)he has contractually agreed to limits on those rights (say, by transferring them to others).

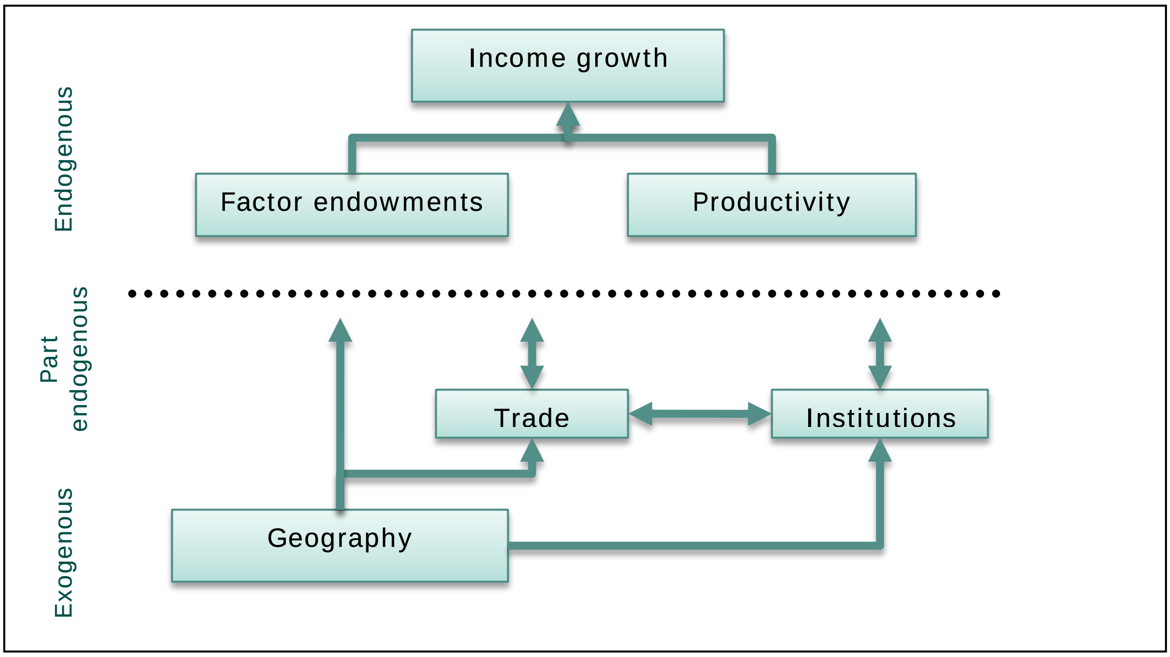
Others see a "continuum" of tenure security, underpinned by a social tenure domain model – described as a "system where different sources of land access and use patterns co-exist, allows a diversity of tenure situations ranging from the most informal types of possession and use, to full ownership" (Global Land Tool Network 2012) where people should be able to move from one form of rights to another over a period of time.

However, even where economies are more developed, the view that that evolution from informal collective to formal individual rights is necessary or desirable is contested and it is argued that communal property rights can, under some circumstances, be superior (Platteau 1996, 2000).

3.2 Growth and its determinants

Economic growth, measured through the increase in the real gross domestic product (GDP) per capita over time, has traditionally been attributed to accumulation of factors of production (labour and capital), and increased total factor productivity (Lucas 1988; Williams et al 2009). These, in turn, are influenced by underlying factors, such as the degree of integration with the global economy, macroeconomic stability, public sector governance/public financial discipline, institutional framework, degree of government intervention and many others (Rodrik 2000a, 2003, 2004a; World Bank 2005). Figure 1 presents a simplified diagram of growth economics:

Summary of growth economics



Source: Rodrik 2003

Since the 1990s, authors such as Rodrik (2000b, 2003, 2004b, 2007) have found that institutions are powerful determinants of growth, and that property rights represent one category of economic institutions.[7] More recently, greater importance has been attributed to the role of property rights as a mainstay among institutions of promoting growth (Besley and Ghatak 2009) and the role of the state in formalising and protecting such rights (Acemoglu and Johnson 2000, 2004).

[7] Others are those that modify transactions costs, including reducing risk, and those that allow collective action.

This was proposed counter to other analysis that identified factors, such as geography (McArthur and Sachs 2001), religion or colonial and legal origin of different systems (La Porta et al 1999) as the being the key determinants of growth.

3.3 Why private property rights matter for growth – a theory of change

The economic case for secure property rights is that growth depends on investment; however, investors do not invest if there is a risk of government or private expropriation (Everest-Phillips 2008; Besley and Ghatak 2009; Acemoglu et al. 2004). In this context, property rights are equated with private property rights whereby property owners can legally exclude others from using a good or asset. This discussion focuses on investment by firms, in contrast to the discussion of land property rights and investment by households, which is discussed in the separate Briefing Paper on rural household welfare.
Besley and Ghatak (2009; 2011) identify four main channels through which secure property rights influence economic activity and resource allocation:

- Security channel whereby investment is expected to lead to a flow of income, which needs to be protected against expropriation through secure, well-defined property rights. Such protection provides incentive to invest; by implication, insecure property rights could mean that firms or individuals may fail to realise the fruits of their investment and efforts.
- Efficiency channel, enhancing the mobility of assets through transactions such that assets are transferred to those who can use them most productively.
- Reduced protection costs – secure property rights mean that individuals can devote fewer resources to protecting their property (an unproductive use of resources) and these resources can go to productive uses.
- Transactions facilitation – formally defined property rights allow for the use of property in supporting other transactions by using it as collateral to raise resources on the financial market. This may increase productivity along the lines delineated by de Soto (de Soto 2000).

Figure 2 presents the theory of change diagrammatically, tracing the main channels of influence identified between formal property rights and economic growth while highlighting some of the assumptions that underpin this theory.

The first row corresponds to potentially important contextual factors which may drive a particular issue, in this case, the need for more secure property rights, and the need for a particular intervention to remedy that. For instance, low per capita income levels in developing countries implies the need for investment to generate higher income but this is constrained by the lack of secure property rights that undermine the security of the investment. The second row refers to a range of interventions or changes through which rights over land are strengthened.[8] Changes in attitudes which are important in altering behaviour are shown in the third row following the Besley and Ghatak framework outlined above.

These changes in behaviour theoretically lead to changes in actions: firms undertake more investment (partly made possible by using available credit), and land markets are more active. These changes in turn lead to better intermediate outcomes, namely higher levels of investment, more efficient factor use and increased factor productivity, which results in income growth and, in the presence of reasonably equitably distributed growth, a lower proportion of the population under the poverty line.

[8] In the case of the growth literature, the form of securing property rights is not explicitly mentioned but the key focus is risk of expropriation, with private, formal property rights implicitly providing greater security.

3.4 ... and why they might not

However, not everyone supports the view that institutions, and secure property rights specifically, are the main ingredient for growth (Glaeser et al 2004; Fogel 2004; McArthur and Sachs 2001; Schmid 2006), and some question that private, individual property rights are the most appropriate form for spurring growth.

Even where the role of private property rights in promoting growth is broadly supported, questions are raised about other factors that influence growth and that may be equally or more important than property rights themselves, such as the existing distribution of wealth or the degree of competition in financial markets (Besley and Ghatak, 2011).

Schmid (2006) suggests that a certain degree of insecurity of rights (in the form of uncompensated change in economic opportunities) is actually essential for economic growth and development. Drawing on the experience of US frontier history in milldams, canals and railroads, he argues that entrepreneurs can tolerate some change in rights that is not completely compensated, which provides for innovation, whereas excessively secure property rights could undermine innovation if entrepreneurs must fully compensate those affected.

Two key arguments advanced against securing rights through private titling are that this process can generate conflict and can increase the level of inequality in society, both of which can retard growth, particularly pro-poor growth (Easterly 2001; Acemoglu et al 2005). The rise of the *rentier* society[9] in Latin America is a case in point (Engelmann and Sokoloff 2000; Hoff 2003).

Others point to the great expense associated with constructing a formal property rights system and suggest that resources could be best placed improving more simplified forms of rights (e.g., starter rights)[10] or focusing on other issues that could be more important for growth (Everest-Phillips, 2008).

3.5 Economic growth research questions

Drawing on this debate, as well as specific requests from DfID on the question of distribution and growth, this paper reviews the evidence for four research questions:

1. Does the provision of private, formal property rights result in increased investment and productivity? Do alternative forms provide sufficient security to drive investment?

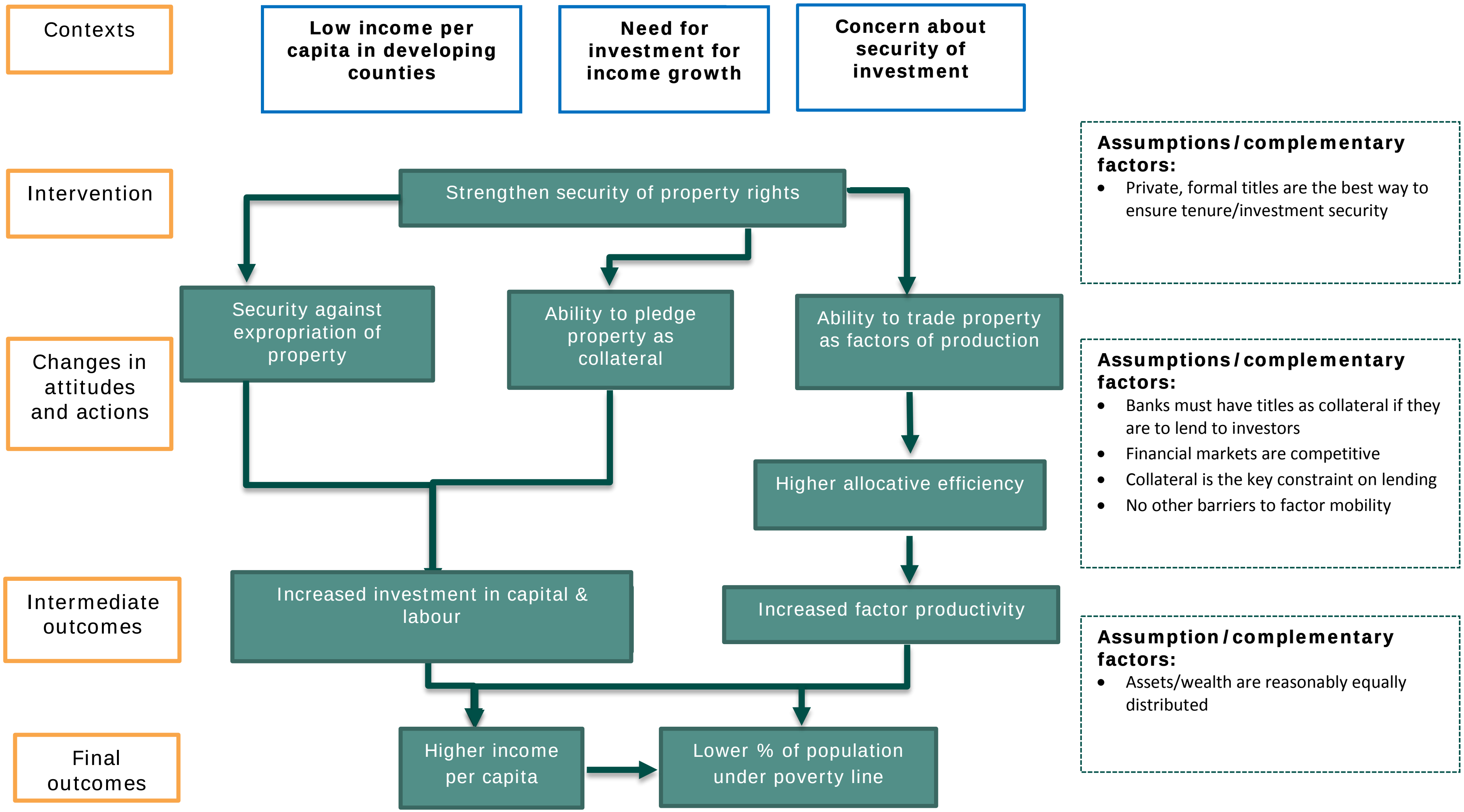
2. Do formal rights allow property to be used as collateral against credit, thereby increasing investment and generating growth at a regional or national level?

3. Can private property rights enable resources to be put to more productive uses, generating growth at a regional or national level?

4. Might allocating formal property rights change the distribution of property, thereby affecting either growth or the distribution of its benefits?

[9] A society where a large proportion of income is derived from rents, in this case, from property, without generating much contribution to society, e.g., in the form of growth and innovation.
[10] Interview with Clarissa Augustinus, UN-HABITAT, October 2012.

Figure 1: Diagram of Theory of Change - Property Rights and Economic Growth



1 Evidence on each research question

Thinkers in the last two decades have focused on the role of institutions in long-term economic growth, and among them, property rights (for example, Acemoglu et al 2001, 2002, 2004, 2005; Mauro 1995; Knack and Keefer 1995; Barro 1996; Aron 2000; Easterly and Levine 2003; Dawson 2003; Rodrik 2004).

A particular focus on the role of property rights emerged with papers from Acemoglu et al (ibid) singling out the security of property rights as a predominant determinant of income level differences. This has given rise to a discussion about the validity of the results, calls for greater disaggregation of analysis and some, albeit limited, indications of contradictory evidence.

The section looks more closely at the nature of the evidence, identifying the types of studies (datasets, population and level of analysis), measures of economic growth and property rights security, and the type of analysis performed on the data. It then summarises the evidence in favour of the influence of property rights on growth, weighing this up against contradictory evidence and concerns about how the evidence has been constructed and interpreted.

1.1 General characteristics of the evidence

Types of studies

The majority of the studies analysing the link between property rights (or institutions more broadly) are non-experimental, macro-level, cross-country analyses, using a country as the main unit of analysis. There are a handful of micro-level studies relating property rights to growth of firms (Green and Moser 2012; Johnson et al 2002; Ojah et al 2010) via their impact on firm-level investment.

The target population in the studies is (implicitly) firms, normally in urban areas, although the main unit of analysis is the country. There are very few studies that focus explicitly on firms as the level of analysis.[11]

Measures of economic growth and security of property rights

The majority of studies measure economic growth through income per capita levels, usually (log) GDP per capita. However, some authors use other measures, such as output per worker (e.g., Hall and Jones 1999).

Most analysis on the impact of property rights assumes **private, formal property rights** and focuses on the protection and enforcement of those rights. The most common measure used as proxy for secure property rights is the risk of expropriation, measured by the International Country Risk Guide (ICRG), often combined with the degree of contract enforceability. The ICRG data set is produced by the PRS Group,[12] with broad coverage both across countries (140) and over time (1982 to present day). An increase in the index indicates greater security of property rights.

While some studies refer to the risk of expropriation and the degree of contract enforceability as key measures of property rights security, others (Keefer and Knack 2002) use an ICRG property rights index based on a wider set of (five) indicators that "specifically evaluate the credibility and predictability of property and contractual rights in a large number of countries",

[11] While households could be classified as firms, firm-level studies refer to firms as industrial units. Studies focusing on households are discussed in the Briefing Papers on rural and urban households.

[12] The PRS Group is a company that provides businesses with information on political and economic risk through its Political Risk Services (PRS) and the *International Country Risk Guide (ICRG). The ICRG* monitors 140 developed, emerging and frontier markets, rating a range of risks to international businesses and financial institutions.

namely: Expropriation Risk, Risk of Repudiation of Contracts by Government, Rule of Law, Quality of the Bureaucracy, and Corruption in Government. This ICRG property rights index is highly correlated with an alternative one constructed from data provided by a second investor risk service, Business Environment Risk Intelligence (BERI), based on measures of contract enforceability, risk of nationalisation, and bureaucratic delays.

Ojah et al (2010) use different elements of the legal environment as a proxy for secure property rights – judicial enforcement of property rights and level of corruption.

Type of analysis

The macro level studies focus on regression analysis. Studies usually begin with simple ordinary least squares regression, moving to two-stage least squares (2SLS) and introducing instrumental variables to try to remove noise and endogeneity from the analysis.

Focus of the literature

The evidence presented for the discussion of the general link between property rights and growth implicitly assumes that investment is the main transmission channel between the two variables so this is examined under Research Question 1. However, there are also studies that discuss the specific link between property rights and investment, which are also highlighted. This area is the overwhelming focus of the studies gathered under the literature review; much less literature is devoted to discussing the other research questions.

1.2 Evidence for research question 1: investment and productivity

1. Does the evidence confirm that the provision of private, formal property rights results in increased investment and productivity? Does the evidence indicate which alternative forms provide sufficient security to drive investment?

Evidence supporting link

There is a **medium/large** body of evidence (>10 studies) supporting a positive link between secure property rights[13] and long-term economic growth. This comes from a group of authors that are influential and cited often in the literature (Acemoglu et al 2001, 2002, 2005; Knack and Keefer 1995; Hall and Jones 1999; Kerekes and Williamson 2008) who feel that the evidence amply demonstrates that institutions, including secure property rights, are associated with better long-run economic performance or, conversely, that poor quality institutions, and insecurity of property and contract rights reduces growth.

Regressions run on the relationship between proxies for property rights and economic growth are statistically significant for repeated analyses and the authors believe that this plausibly demonstrates a causal relationship between secure property rights and long-run growth: “There is convincing empirical support for the hypothesis that differences in economic institutions, rather than geography or culture, cause differences in incomes per-capita” (Acemoglu et al 2005; p. 402).

Focusing on growth over the period 1974-1989, and using the ICRG composite index and adding it to a Barro-type growth regression, Knack and Keefer (1995) found that a standard-deviation increase in the index (about 12 points on a 50-point scale) increases growth by 1.2 percentage points on average, using simple OLS regression.

This analysis is taken up by Acemoglu et al (2001, 2002, 2005) who use a base sample of 64 countries colonised between the 15th and 19th centuries, running simple and more complex least squares regressions of GDP per capita in 1995 on the average protection against expropriation risk (of private property) through institutions (measured via ICRG – average over 1985-1995). On the basis of a 2SLS regression, the authors found a highly significant impact of (property rights) institutions on the level of income per capita. This analysis was

[13] Normally equated in the literature with formal, private property rights.

repeated with the “natural experiment” of the separation of North and South Korea, countries with shared historical and cultural roots, and similar geography but which established very different types of property rights regimes after their separation. The authors noted that by 2000, the level of income per capita in South Korea was US$16,100 while in North Korea it was only US$1,000, about the same as a typical sub-Saharan African country (Acemoglu et al 2005, p. 406).

Acemoglu et al (2001, 2002, 2005) are careful to analyse whether their results could arise from capturing the effect of omitted variables or reverse causation, a problem identified with the OLS method used by Barro (1996) and Knack and Keefer (1995), which potentially undermines the validity of the positive relationship that these authors found between institutions and economic growth. To ensure that their analysis did not capture the effect of omitted variables, the authors used settler mortality as an instrumental variable, i.e. a variable that has no direct effect on current economic performance but one that had a significant influence on the establishment of private property rights in ex-colonies. They found that high potential settler mortality was significantly negatively correlated with the level of settlement. When Europeans settled, they subsequently set up institutions to protect property rights and limit government power. They hypothesise that once such institutions are set up, they are likely to persist (due mainly to the high cost of setting them up) and determine the presence and quality of current institutions. When Europeans did not settle, they put in place systems of arbitrary rule and expropriation of local resources. In Acemoglu et al (2002), the authors further argue that the density of non-European population in prospective colonies shaped European settlement patterns. In areas that were densely settled (or urbanised) by the local population, the Europeans did not settle themselves but established exploitative institutions, compared to low-density areas. As such, they argue that local population density and settler mortality in 1500 can be used as instruments for modern political institutions constraining the executive.

The authors also tested the robustness of their results against different factors but found no significant effect of: colonial and legal origin (hypothesis of La Porta et al 1999); religion; geography/latitude; or the sample of countries within their base sample.

This is confirmed by Kerekes and Williamson (2008) who identify a strong, positive relationship between secure property rights (measured using ICRG’s risk of expropriation and the Heritage Index of Private Property) and investment (capital formation) again controlling for variables such as geography, religion and legal and colonial origin.

At a micro level, Johnson et al. (2002) use a survey conducted among entrepreneurs of former communist countries in order to study the effect of perceived weaker property rights on reinvestment of profits. They find that firms are more likely to reinvest their profit if they perceive their property rights as more secure, with secure property rights being more important for investments than availability of credit.

Green and Moser (2012) also support the link between secure property rights and investment at firm level. Their results indicate that they hold for large firms (i.e. secure property rights, in the form of formalised land title, are important for the emergence of large firms although not for small and medium firms) at least in the case of Madagascar.

Ojah et al (2010) look at the roles and interactions of property rights and internal/external finance channels on investment across 860 firms in Kenya, Tanzania and Uganda, using the World Bank's Investment climate Assessment (ICA) data where the proxy for secure property rights is an effective legal environment, measured mainly by judicial enforcement of property rights. They found that firms with secure property rights are more likely to invest in fixed capital in Kenya and Uganda. Tanzania, which has the lowest security of property rights, also has the lowest share of firms undertaking investment, which is consistent with the relatively high prevalence of corruption and the smaller share of firms that have confidence in the judicial process.

Qualifications and queries

While there appears to be strong evidence supporting the argument that secure property rights are a predominant factor in determining growth, other studies are more sceptical: some argue that this is conceptually incorrect and not borne out by important case studies; others query whether property rights are the most important determinant of growth among other institutions; and finally, others raise doubts about the robustness of the modelling results.

Do institutions, and property rights specifically, determine growth?

Are other factors more important?

Some authors question the primacy of institutions in determining economic growth. While Acemoglu et al's analysis contradicted theory and evidence originally advanced by authors such as McArthur and Sachs (2001) about the importance of factors, such as geography and health, other studies have taken a different position. Glaeser et al (2004) emphasise the role of human skills, drawing on the divergent experiences of North and South Korean after separation and a sample of 89 poor countries from 1960 as well as reassessing Acemoglu et al's results using the dataset of 64 ex-colonies. They find that during 1960-2000, countries with high human capital in 1960 grew faster, on average, than ones with low human capital.

Analysis by Keefer (2007) of the role of different factors in China's accelerated growth from the 1980s highlighted the role of government in creating a safe investment climate with support by government to enhance investor returns, and credible moves to reduce the risk of expropriation, despite the lack of formal property rights (supported by Rodrik 2003).

Other authors take issue with the idea that a single factor can be said to determine growth above all others. This is expressed in Schmid (2006) who states that neither institutions, technical factors of production, income, social structure nor human agency have primacy as all are "embedded together in evolution and emergence". Haggard and Tiede (2011) state that it is hard to separate property rights from the "cluster of institutions" that affect investment and economic growth. They replicate Acemoglu et al's (2005) analysis and conclude that they have not yet resolved the issue of unbundling institutions "because of the even wider array of "rule of law" measures that may also be producing the divergence in long-run growth" in that analysis (p. 679). Rodrik (2004) criticises the over-emphasis on property rights, saying that it results in "property rights reductionism".

Does correlation equate to causality?

Another criticism of the analysis that property rights are the main determinant of growth compared to other institutions or factors is that the studies asserting this establish only a correlation or association rather than causality and it is hard to separate property rights from other factors that affect investment and economic growth (Haggard and Tiede 2011; Pande and Udry 2005). While many authors have attempted to address this using appropriate instrumental variables or new econometric technology, they have not always been successful (Bazzi and Clements 2009).

Is causality one way only?

Linked to this is the concern that the analysis does not succeed in proving that the causality runs in one direction only — from secure property rights to growth — as growth can also lead to improvements in the security of property rights (La Porta et al 1999; Chong and Calderón 2000; Glaeser et al 2004). Chong and Calderón (2000) obtained strong evidence for two-way causality: growth increases the ICRG (and BERI) measures but institutional quality, as measured by ICRG (and BERI) values, increases growth rates. Because the ratings are subjective assessments by experts, it is possible that the ratings are influenced by knowledge of recent economic performance (World Bank undated). This is supported by more recent evidence from Mijiyawa (2009) who undertook cross-sectional analysis over the period 1970-2005, with a sample of 142 countries (116 developing and 26 developed countries) and found that the quality of private property rights institutions is positively affected by increases in GDP per capita. This two-way causality also seems to exist at a more micro level (Green and Moser 2012).

In addition, the relationship between property rights and growth may be non-linear (Bose et al 2012): stronger enforcement of property rights raises growth up to a certain point before growth begins to decline.

Are results driven by the datasets used?
The discussion about causality and its direction leads to another query raised in the literature about the robustness of the results showing a positive link between secure property rights and economic growth — that these results are sensitive to the dataset and level of aggregation. Haggard and Tiede (2011) state that they hold for developed and developing countries combined but are weak for just developing countries (p. 677). Radeny and Bulte (2011) state that the predominance of institutions in determining growth falls away when a smaller, more homogenous sample of countries (in Africa) are analysed, with other factors, such as geography and history prevailing.

Other authors (Green and Moser 2012; Pande and Udry 2005) support the link at macro level but would like to see more micro/in-country analysis to see whether the results hold consistently at a more disaggregated level.

Concerns about the forms and measures of property rights
While the measures of property rights security assume, implicitly, that property rights are private and formal, the cross-country studies do not discuss the form that property rights would need to take to be secure (with the exception of Ojah et al 2010, who talk about the impact of using more informal channels to settle disputes in Tanzania). China appears to be the exception once again: Keefer (2006) explicitly refers to growth in the absence of formal individual property rights in China, attributing investment to other factors, while Khan (2002) stipulates that the absence of property rights spurred greater efficiency on the part of companies as property rights were contingent on performance.

Moreover, concerns are raised about the measures commonly used for property rights. For some authors, indices of institutions used in the cross-country literature are not adequate proxies for institutions as they measure outcomes rather than reflecting permanent rules of the game, are not transparent, represent a subjective assessment of risk and can be volatile over time (Glaeser et al 2004; Pande and Udry 2005; Chang 2005). As the property rights systems is a “complex of a vast set of institutions….survey results can be strongly influenced by the general state of business rather than the inherent quality of property rights system itself (Rodrik, 2004 in Chang 2005).Other measures focus strongly on *de jure* procedures that may or may not govern actual behaviour (Pande and Udry 2005). The use of different proxies in different studies, particularly for property rights, can make it harder to compare results across studies.

In addition, there is no discussion of gender impacts at macro level. This presupposes that the same rules governing economic opportunity apply to everyone; in reality, the underlying capacity to own and control property varies by gender and marital status (Hallward-Driemeier and Gajigo 2011).

Conclusions

There appears to be a **medium/large** (> 10 studies) body of evidence showing that secure property rights are an important determinant of long-term economic growth.

These studies adhere to the central quality criteria of being open and transparent, appropriate and rigorous, internally valid and cogent, and would be rated as **high** according to these criteria. However, it is hard to take a firm position on the quality of the evidence: part of the literature (15 studies) is devoted to highlighting concerns about the level of the analysis undertaken and possible bias in the methods applied, the measures used as proxies for variables, and the existence and direction of causality; this undermines the strength of the evidence in favour of the positive link between secure property rights and growth, although it was not possible to do a direct comparison of the quality of the different studies without delving deeply into their methodology and, possibly, primary data used. In addition, other types of studies that might identify more contradictory evidence about the impact of property rights on growth might have been excluded by virtue of not meeting the central quality assessment criteria (see Introduction for more discussion of this).

1.3 Evidence for research question 2: collateral-based finance

2. Does the evidence indicate that formal rights allow property to be used as collateral against credit, thereby increasing investment and generating growth at a regional or national level?

There is little direct discussion in the literature of the link between property rights and collateral-based finance at (larger) firm level (see Briefing Paper on Rural Households for discussion of much larger body of evidence at farm/household level). The main paper that focuses explicitly on the "collateral effect" at cross-country (firm) level is Kerekes and Williamson (2008). This looks at whether empirical evidence supports de Soto's argument that secure and well-defined property rights transform assets from "dead capital" into resources that can be used to generate additional capital and obtain credit, thereby stimulating production (de Soto 2000). Conversely, lack of well-defined and secure property rights can increase the cost of borrowing or can prevent any loan from being obtained.

To test this hypothesis, the authors look at a sample of 114 countries throughout the world and 61 ex-colonies, regressing domestic credit to the private sector (measured as the financial resources available to private sector in 1998, as a percentage of GDP)[14] on different measures of property rights.[15] Using different measures of property rights (the ICRG and the Heritage Foundation's index of private property) they confirm that secure property rights lead to increases in credit through the collateral effect, which in turn promotes growth (higher income per capita): "a one unit change in the property rights index is estimated to produce a sizeable increase in domestic credit of between four and seven percentage points" (p.313). In line with Acemoglu et al's analysis, these results hold when controlled for other factors, such as geography, religion, etc.

Outside of this paper, most discussion and evidence in the literature on firms and national growth focus on other, related issues such as the impact of broad investor protection rights on the ability to raise capital (see Kumar et al 2001; and Beck et al 2002 in Beck and Levine 2003), the role of legal institutions in explaining international differences in financial development (La Porta et al, 1997, 1999, 2000), the critical effect of judicial efficiency on lowering the cost of financial intermediation for households and firms (Laeven and Giovanni 2003)[16] or the importance of stronger property rights for the poverty-reducing effect of financial deepening (Singh, R. J. and Huang, Y. 2011).[17]

Conclusions

There appears to be a **very small** (one main study) body of evidence using cross-country analysis showing that secure property rights are important for collateral-based finance at macro level. This study adheres to **high quality** research criteria. A much larger and more mixed body of evidence is available at household level and we refer the reader to the Briefing Papers on rural and household welfare for further details.

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[14] The authors view this as an appropriate measure to capture the collateral effect as it represents the ability to secure a loan.

[15] The authors justify using domestic credit to the private sector as an appropriate measure to capture the collateral affect as they state that it represents the ability to secure a loan.

[16] The paper measures bank interest rate spreads for 106 countries at an aggregate level, and for 32 countries at the level of individual banks. The authors conclude that, after controlling for a number of other country characteristics, judicial efficiency, in addition to inflation, is the main driver of interest rate spreads across countries.

[17] Looking at a sample of 37 countries in sub-Saharan Africa from 1992 through 2006, Singh and Huang's results suggest that financial deepening could narrow income inequality and reduce poverty, and that stronger property rights reinforce these effects. Interest rate and lending liberalisation alone could, however, be detrimental to the poor if not accompanied by institutional reforms, in particular stronger property rights and wider access to creditor information.

1.4 Evidence for research question 3: allocative efficiency

3. What is the evidence to support the hypothesis that private property rights can enable resources to be put to more productive uses, generating growth at a regional or national level?

Besley and Ghatak (2010) refer to the role of more secure property rights in facilitating market transactions or trade in assets via the deepening of rental or sales markets in land, thus increasing the mobility of assets such that all land is fully utilised and is highly productive.

However, the literature search did not reveal any references on this topic at a firm, national or cross-country level. Most of the literature and evidence focuses on the impact of land rental and sales markets on **household productivity**, which is discussed in detail in the Briefing Paper on rural household welfare.

1.5 Evidence for research question 4: distribution of property and growth

4. Does the evidence indicate that securing title over property changes the distribution of who controls property, affecting how growth is distributed across different groups?

DfID asked ODI to look into the question of how securing title over property might change the distribution of property and, in doing so, influence the distribution of growth. This is indirectly part of the theory of change outlined earlier in that it affects the link between growth and the percentage of the population below the poverty line. However, it is not directly broached in the Besley and Ghatak pathways used to frame the analysis and presentation of evidence in this paper.

The interplay between protection of property rights and the distribution of economic resources may be important (Asoni 2008). This is recognised in Acemoglu et al (2005) who state that "societies where only a very small fraction of the population has well-enforced property rights do not have good economic institutions" although they do not go into much detail in explaining why equal access to economic resources is better than unequal access.

However, the steps from interventions to secure property rights to a change in the distribution of property and, consequently, the distribution of growth are not explored explicitly in the literature. Previous literature has explored the **relationship between inequality and growth** (see Fort 2007 for range of references with particular concentration on Latin America; Galor et al. 2004) but the link between inequality and property rights has been much less explored.

At a cross-country level, where the literature does analyse this link, the literature appears to focus on **how the distribution of assets affects the security of property rights**, thereby affecting growth, rather than the inverse relationship between securing property rights and changing the distribution of assets. Moreover, this relationship is explored without focusing on particular interventions, such as titling.

Keefer and Knack (2002) argue that a higher degree of social polarisation (measured by the inequality of land holdings) increases the likelihood of extreme policy deviations, making property rights less secure and thus negatively affecting growth. Running regressions across a large sample of countries, with the average ICRG from 1986-1995 as the dependent variable against inequality measures in 1985, each five-point rise in the Gini coefficient is associated with a decline in the ICRG index of nearly one point. Each standard deviation increase in income inequality (i.e., of 9.4) reduces the property rights index by about one-sixth of a standard deviation (i.e., by 1.6).

Other authors (Sokoloff and Engerman, 2000; Hoff 2003) highlight the influence that a highly unequal distribution of assets can have on general institutional development using the relative development of the Caribbean and Latin America, and North America: until 1800, the former were more prosperous than the US and Canada but during the 19th century, this position was reversed and a wide gap opened up. The greater inequality in wealth and distribution of assets contributed to the evolution of institutions that protected the privileges of the elites and restricted opportunities for the broad mass of the population to participate in commercial activities, thereby setting the levels of inequality for centuries afterwards.

However, Asoni (2008) highlights the possible endogeneity arising in such questions. The distribution of property rights influences growth but growth and wealth creation may influence the distribution of resources. Galor et al. (2004) discuss this: as the economy grows, land becomes less important, education and human and physical capital become more important, while the price of labour goes up. This has immediate distributional effects: land ownership is less important but “personal talent, social capital and organizational abilities” prevail.

Conclusions

The literature reviewed supports the idea that unequal asset/property distribution will have a negative impact on the security of property rights and the quality of institutions in general, and this will have a negative knock-off effect on growth. However, at cross-country level, there does not appear to be any substantial discussion or presentation of evidence on the impact that titling has on the distribution of who controls property and, through this, on the distribution of growth. Evidence is **weak/non-existent**.

2 Evidence gaps and implications for further research

The discussion of available evidence for different research question reveals some gaps that would benefit from further research, including:

- Collection and analysis of more and better quality micro level data on the impact of secure property rights on firms' investment decisions within countries to complement and test the results from cross-country analysis.

- Collection and analysis of data on the impact of secure property rights on collateral-based finance at a macro/large firm level.

- Collection and analysis of data on the impact of secure property rights on allocative efficiency at a macro/large firm level.

- Collection and analysis of data on the impact of more formal property rights on the distribution of property and benefits from growth at a national/cross-country level.

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Annex 1: Experts interviewed for this briefing paper

The following experts were interviewed for this briefing paper. They were asked to provide their views on the evidence and recommend relevant literature.

Expert Name	Affiliation	Area of expertise
Dr Bina Argawal	Director & Professor of Economics Institute of Economic Growth University of Delhi	Gender and women's rights and Land Rights in South Asia; agricultural economics
Paul Mathieu	Senior Officer, Natural Resources Management and Environment Department, Climate, Energy and Tenure Division, FAO	Legal aspects of tenure of land and water; Voluntary Guidelines on tenure security and the work conducted by FAO
Prof Ben Cousins	Chair in Poverty, Land and Agrarian Studies, PLAAS	Political economy of agrarian change, especially small-scale agricultural producers (politics, economics); formalisation of customary land rights
Prof Wendy Wolford	Associate Professor, Development Sociology, Cornell University	Land property rights; landless movements
Prof Timothy Besley	School Professor of Economics and Political Science, LSE	Property rights – conceptual framework and micro evidence
Steven Lawry	DAI/ University of Wisconsin Land Tenure Centre	Property rights of land; communal property rights; land tenure reform processes; pastoralism