

The World's Largest Open Access Agricultural & Applied Economics Digital Library

# This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

### Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<a href="http://ageconsearch.umn.edu">http://ageconsearch.umn.edu</a>
<a href="mailto:aesearch@umn.edu">aesearch@umn.edu</a>

Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.

No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.

#### Trusted Brokers in Rural Land Markets: Parish Case Studies in Scotland

Yumi Isaka Kato\*, Carmen Hubbard and Guy Garrod

Newcastle University

## Discussion Paper prepared for presentation at the 94<sup>th</sup> Annual Conference of the Agricultural Economics Society

#### 29 - 30 March 2021

Copyright 2021 by Yumi Isaka Kato, Carmen Hubbard and Guy Garrod. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

\* A PhD student at the School of Natural and Environmental Science, Centre for Rural Economy, Newcastle University. Email: Y.Kato2@newcastle.ac.uk

#### Abstract

This paper explores how social networks and government institutions work in rural land markets, with a special focus on the role of brokers. For this purpose, insights from New Economic Sociology (NES) and New Institutional Economics (NIE) are combined to build a theoretical framework, and a Social Network Analysis is applied to individual case studies. Specifically, two parishes in Scotland, where dynamic land pattern changes can be observed, were investigated. After the land market network for each parish was identified, the connections between actors were traced followed by in-depth interviews. The paper particularly examines the role of brokers in relation to the information flow and discusses their impacts on transaction costs in rural land markets. Preliminary results highlight the dominant channels in the market, i.e. informal networks with private agents involved, which support the NES position, as well as the work of a government matching scheme which reflects the NIE position. In both cases, the findings show that brokers can contribute to reducing the search and negotiation costs of land transactions through building trustworthy relationships with stakeholders.

**Keywords** Land market, Transaction costs, Broker, Trust

**JEL code** Q15 Agriculture: Land Ownership and Tenure

#### 1. Introduction: Research aims and Research questions

Land in rural areas is a key economic resource providing a variety of goods and multiple functions, such as food production, environmental protection and recreation, but it is also an essential component of rural society, associated with various values around history, community, culture and place (Munton, 2009, Winter and Lobley, 2009). Thus, insights from a range of disciplines and perspectives need to be brought in to answer the simple but fundamental question: "How is land in rural areas owned and used?"

While there are different models of land use and ownership for sustainable rural development (Ostrom, 2015), one of the key aspects in designing and implementing rural land policy is to deliver improved economic efficiency in producing agricultural products while at the same time to achieve a level of social fairness in accessibility to the land. However, achieving an optimal land use without losing the balance between these two dimensions is challenging. Such difficulties may be rooted in too naïve a view of land markets where land is transacted simply as a result of economic incentives, while the real mechanism underlying land transactions could be much more complex.

Driven by the complexity of land markets, this research focuses on transactions in rural land markets, aiming to examine the mechanism of land transactions focusing both on their social and economic characteristics, and to inform the design of future land policies. It explores the different roles of social networks and government institutions using insights from two different theories, the New Economic Sociology (NES) which emphasises the role of social networks in our economic life, and the New Institutional Economics (NIE) which has a greater emphasis on the role of formal institutions. Specifically, the paper aims to answer the following research questions:

- 1. Who are the key actors in social networks in rural land markets, and how do they interact?
- 2. Do brokers facilitate rural land transactions? If yes, how are they brokering land information, between whom, and what is the role of trust in these transactions?
- 3. What is the brokers' contribution in terms of transaction costs?

To answers these questions, the paper looks into the example of rural Scotland that has a history of land transactions, associated with dynamic changes brought about by an ongoing Land Reform and the adoption of various policy measures (Warren and McKee, 2011, Wightman, 2015). Hence, two constructs, the role of the informal social networks and formal institutions in rural land markets are investigated in two contrasting local communities (parishes) in Scotland.

This paper is structured as follows. First, the policy context of Scottish land reform and economic trends in agricultural land markets are reviewed in Section 2. Second, the underlying theoretical framework built from NES and NIE are explained in Section 3. Here, attention is paid to brokers and their role within the land market, particularly from the point of view of social capital (i.e. trust among social networks). Section 4 describes the methods employed for data collection and data analysis. This is followed by some preliminary results in Section 5 and conclusion in Section 6.

#### 2. Context: Rural land markets in Scotland

Scotland is a country where the government has clear objectives designed to change the pattern of land use and ownership. For over two decades, Land Reforms in Scotland have mainly aimed to achieve a fairer distribution of land, and their impacts on land management have been discussed by several scholars (Thomson *et al.*, 2016). Thus, investigating rural land market in

Scotland will enable to get a better understanding of the processes through which land use/ownership can be changed to achieve greater public benefit.

The main policy objective of the Scottish Land Reforms is to change the existing pattern of land ownership which for years has been concentrated on a few private owners<sup>1</sup>. As Reid (2015) summarised, the series of legislation, including the Land Reform (Scotland) Acts of 2003 and 2016, has led to a more diversified land ownership, especially through strengthening community rights (Bryden and Geisler, 2007, McMorran, 2018, McKee, 2015). As a result, the area owned by community has increased more than three times over the last two decades (Scottish Government, 2020a).

Besides these changes in landownership, another important stream of the reforms is reflected in changes in the tenure system, which allows farmers to access the land without large capital investments (Edwards and Kenyon, 2014). While the Agricultural Holdings (Scotland) Act 1991 has retained the security of tenure with life-time tenancy, the recent Land Reform of 2016 has brought pre-emptive right to buy for tenants<sup>2</sup>, as well as some flexibility to the land markets by setting new types of tenant agreements with fixed-term (Table 1).

Table 1. Key Changes in Tenure System, Scotland

Legislation	New tenancy types	Pre-emptive right to buy
Agricultural Holdings (Scotland) Act 2003	It introduces Limited Duration Tenancies (LDTs: not less than 10 years with no upper limit) and Short Limited Duration Tenancies (SLDTs: not more than 5 years)	It gives tenant farmers the pre- emptive right to buy
Land Reform (Scotland) Act 2016	It introduces Modern Limited Duration Tenancies (MLDTs: a minimum term of 10 years but can be extended at any time during that period) replaced for LDTs, as well as Repairing Tenancies (minimum term of 35 years)	It removes the registration procedure for the right to buy

**Source:** Author's own construction based on Edwards and Kenyon (2014) and the Scottish Government (2019).

Interestingly, when examining trends in the tenanted agricultural land (Figure 1), there is a clear decline in rented land area, from 32% in 1999 to 22% in 2019. The current rented area accounts for around 1.3 million ha. Besides the increase number of landowners<sup>3</sup>, three key drivers have contributed to this downward trend (LRRG, 2014): i) farm amalgamation that has occurred to achieve 'economies of scale'; ii) landowners' preference for holding land, hence benefiting from direct payments and other farm grants as compared to rent; and iii) strong security of tenure since the 1991 Act caused reluctance of landowners to lease land. It also should be noted that the increase in seasonal lets<sup>4</sup> or contract farming are excluded from the

<sup>&</sup>lt;sup>1</sup>83% of its Scotland's rural land is privately owned, of which 50% belonged to 432 owners in 2012 (Hunter *et al.*, 2014).

<sup>&</sup>lt;sup>2</sup>The Agricultural Holdings (Scotland) Act 2003 provides for tenant farmers to register an interest in the land in order to be allowed the first refusal before it is put onto the market.

<sup>&</sup>lt;sup>3</sup>It followed the economic recession of the 1920s and an increase in taxation, which resulted in the break-up of the large estates. The proportion of agricultural holdings with rented land decreasing from 93% in 1913 to 73% in 1949, followed by a further fall to 45% in 1980 (LRRG, 2014).

<sup>&</sup>lt;sup>4</sup>This is rented land for less than 365 days in a year, and it has increased from 520,000 ha in 2005 to 770,000 ha in 2014 (Scottish Government, 2020). Most of it is rough grazing, driven by the CAP Single Farm Payment entitlements (Thomson, 2016).

figures for rented land (Thomson, 2016). Recently, joint-venture farming<sup>5</sup> has grown as a more flexible option for new entrants as opposed to tenancies (McKee *et al.*, 2018, Williams and Slee, 2008), following some government support.

Alongside these dynamic policy directions and market trends, there is also a wide range of land control measures. However, relative to other countries, Scotland has had low level of market interventions. For example, there are currently no restrictions on landowners' eligibility (with regards to nationality or limits of the area owned by individual owners) (Thomson *et al.*, 2014, Glass *et al.*, 2018). Additionally, instead of any concrete mechanisms of rent controls, a rent review process is recommended, and disputes over rent are resolved by the Scottish Land Court. To further the discussion on effective measures, the Scottish Land Commission established in 2016 to support the implemenation of the Land Reform (McIntosh, 2019, Edwards *et al.*, 2015), is now debating new options for changes within the wider package of land reform, including a review of farmland taxation (e.g., the Agricultural Property Relief for Inheritance Tax) (Alma Economics, 2020, Hughes *et al.*, 2018).

Lastly, but importantly, the future domestic agricultural policy should be considered as a key influencing factor. The Scottish Government will retain the CAP regime until 2024, putting an emphasis on food production (Scottish Government, 2018).

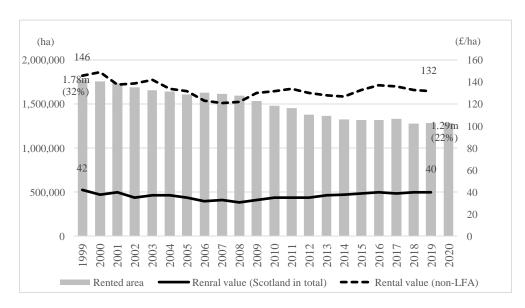


Figure 1. Rented agricultural land and Rental value (in real terms), 1999 -2020, Scotland

Source: Author's own construction based on the Abstract of Scottish Agricultural Statistics (1999-2019) and June Agricultural Census 2020 for rented area; the Tenanted Agricultural Land in Scotland (1999-2016) and December Agricultural Survey (2017-2019) for rental value. See also Edwards and Kenyon (2014) and Thomson (2016).

<sup>&</sup>lt;sup>5</sup>A "form of cooperation, formed in a legal manner, between two or more parties to form a business relationship, other than as landlord and tenant (FAS, 2017)" including contract farming, partnerships, and share farming (McKee *et al.*, 2018, p.19).

#### 3. Theoretical Framework: NES and NIE and the role of Transaction Costs

Historically, land markets are characterised by market failures (Bator, 1958) which 'often mirror readily understood notions of appropriate neighbourly behaviour and the interdependencies of modern life' without transaction costs (TCs) taken into account (Wu and Duke, 2014). TCs have been applied to the theory of agricultural tenure markets, and defined as: i) costs of establishing contracts and negotiations, such as searching for suitable properties, verifying the characteristics and negotiating with owners/buyers; and ii) costs of implementing the final contract, such as conveyancing fees (Currie, 1981, Ciaian *et al.*, 2012).

Within the literature, there are several quantitative analyses which incorporate TCs in agricultural land markets (Ciaian and Swinnen, 2006, Deininger and Jin, 2005, Skoufias, 1995, Takahashi *et al.*, 2018, Léger-Bosch, 2019). These analyses reveal that the presence of TCs can lead to a smaller number of market participants or to a smaller amount of land being transacted. Specifically, one of the issues in the land market operation is the asymmetric information among the participants, which can result in increasing TCs and thus functions as market barriers.

Existing research on land markets with TCs help us to understand more realistic mechanisms of land transactions, and it is worth noting that the influence of social capital, such as trust among social networks, has been considered as a significant factor in recent scholar debates regarding TCs. For example, research on the US farmland markets shows that social relationships between parties are essential factors in the land transactions (Kostov, 2010, Robison *et al.*, 2002, Tsoodle *et al.*, 2006).

This is important since land markets in rural areas, where family and rural community networks have a strong influence (Halfacree, 1994), cannot be understood without observing the social relationships between landowners and farmers. However, these studies which employed econometric models using social indicators, cannot fully explain how characteristics such as trust and social networks influence TCs in rural land markets, particularly regarding the 'information flows' and 'market barriers' which are the focus of TC analysis. To address this research gap, we argue that it is important to introduce a sociological lens to examine the real mechanism of land transactions embedded in social networks.

The New Economic Sociology (NES) (Smelser and Swedberg, 2005, Granovetter and Swedberg, 2011, Guillén et al., 2003) provides a valuable analytical framework for this research. NES emphasises the positive role of trust among social networks in mitigating social costs in the real economy (Granovetter, 2017). Nonetheless, this framework should be compared carefully with the social constructs described by the New Institutional Economics (NIE) (Ménard and Shirley, 2008), within which TC theory is subsumed, as 'informal' (norms, belief, habits and behaviour) and 'formal' institutions (constitutions, laws, contracts and regulations). According to Nee and Swedberg (2008), both NES and NIE reject the neoclassical assumptions of perfect information and instrumental rationality around TCs. However, one area where these two frameworks collide is the scope of Trust (Table 2). NES argues that trust works in larger social structures with the help of brokerage bridging information flows among social actors (Burt, 2005, Burt, 2002), described by Granovetter (2017) as 'a little trust goes a long way'. By contrast, NIE places less emphasis on trust in economic transactions (Williamson, 2013), asserting that these informal institutions are generally personal and small-scale, and are replaced by government institutions, as the development, complexity and differentiation of societies increases (Ellickson, 1991, Cook et al., 2005).

5

<sup>&</sup>lt;sup>6</sup>Robison and Oliver (2016) applied behavioural economics in farmland exchanges, highlighting farmland transactions anomalies from the perspective of personal relationships.

Table 2. NES and NIE positions around the scope of Trust

New Economic Sociology	New Institutional Economics	
Social norms and trust among social	<u>Trust</u> works in personal transactions but <u>not</u>	
networks play a critical role, connecting	in most economic transactions, thus it has	
individual actions and social institutions.	minor economic significance (Williamson,	
Structural embeddedness, i.e. the structure of	2013).	
the network that individuals are embedded in is examined carefully.	Informal institutions are generally personal and of small-scale, thus are often replaced by	
Focus on the role of <b>brokerage</b> , which bridges the distance between small-scale exchanges and larger economic structures.	<b>government institutions</b> as the growth, complexity and differentiation of societies increase.	

Source: Authors' own construction based on Granovetter (2017).

When it comes to the application of these theories in rural studies, Atterton (2007) and Meador (2019) have applied NES to rural businesses and examined the role of different types of ties/networks in rural development. Additionally, the practice of social networks has broadly been analysed in the context of resource management (Prell *et al.*, 2009). Particularly, attention paid to the functions of trust between actors has also increased (Rust *et al.*, 2020), including the notion of interrelations between institutional trust and interpersonal (de Vries *et al.*, 2019). However, a few studies have explored rural land markets from this (NES) perspective.

Therefore, this paper aims to test empirically these two theories by examining both the role of social networks and government institutions in rural land markets, with a special focus on brokers. Network brokers, as agents who build bridges between people, are intrinsic to trustworthiness and reputation (Burt, 2008) and have information advantages in breadth, timing and arbitrage in the markets (Burt and Soda, 2021). While research on brokers has rapidly increased across disciplines (Kwon *et al.*, 2020), a few studies were found in land market analysis despite that the presence of estate agents acting as intermediaries has long been debated by scholars (Nix *et al.*, 2003). The need for government support to bridge (farm) sellers and buyers is also increasing (McKee *et al.*, 2018). Therefore, examining the functions of brokers in rural land markets would lead to reduce the above-mentioned research gaps, specifically the understanding on how trust, correlated with information flows and market barriers, could affect transaction costs.

Against this theoretical framework, this paper will approach the posed RQs in the following order. First, the key actors in social networks and the relationships between them are identified. Second, the role of brokers within these social networks in bridging information is discussed. Finally, brokers' contribution to transaction costs in the rural land markets are explained. Through answering RQs, the rural land markets are explored as the place where we can observe the complex interplay of land policy and the economic and social characteristics of land transactions.

#### 4. Methodology: Parish case study with Social Network Analysis

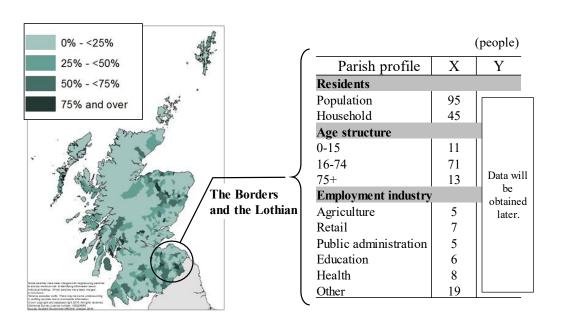
A case study approach is adopted as an effective methodology to explore and understand complex issues in the real world (Yin, 2014). Case studies are particularly useful when theoretical frameworks support the explanation of specific problems and identify the causal complexity. Hence they help to evaluate and refine the associated theories (George and Bennett, 2005, Vennesson, 2008, Gerring, 2011). Such approach strives for theoretical generalisation

with purposeful sampling, rather than the statistical generalisation from a large-number of cross-case studies (Yin, 2014, Silverman, 2017, Creswell and Poth, 2017).

Additionally, Sutherland (2020) highlights the utility of a parish study that continues the tradition of community-based approaches for a qualitative rural research. For this research, two parishes (Scottish township) from South East of Scotland (the Borders and the Lothian)<sup>7</sup> are selected. This region has a high ratio of rented land (Figure 2), hence actors (e.g., farmers, landowners, and brokers) are commonly engaged in land transactions.

Specifically, the research conducts a comparative analysis to explore NES and NIE theories in practice. Comparison between one parish (Parish X), which is characterised by communities with tight social networks, and the other (Parish Y), where government scheme has a strong influence, may reflect differences between the NES and NIE positions in rural land markets. In other words, this research assumes that land market in Parish X is closer to the NES position where informal social networks work without being replaced by government institutions, whereas Parish Y may be a better fit to the NIE theory, where government institutions play a greater role than social networks.

Figure 2. Percentage of tenanted agricultural land by parish and selected parish profiles



#### Source:

https://www.webarchive.org.uk/wayback/archive/20180514170654/http://www.gov.scot/Topics/Statis tics/Browse/Agriculture-Fisheries/agtenancy [Accessed 05/03/2021]. Parish profiles are author's own construction based on Scotland's census 2011, which is the latest figures published.

*Note:* Although Scotland's census no longer shows the data by parish, the Output Area (the smallest geography produced by grouping postcodes together) which covers almost of the same geographic area was chosen to obtain the area profile.

<sup>&</sup>lt;sup>7</sup>South East is an important area especially for crop production (around 30% of the total holdings of crop and fallow in Scotland), while other farm types are well represented. The size of holdings also varies, but is relatively large as the Scottish Borders and the Lothian accounts for about 15% of the total holdings sized over 100 ha in Scotland. The selected parish reflects these regional characteristics.

This assumption is supported by some existing reports. For example, regarding social networks, according to a 2018 nation-wide landownership survey conducted by the Scottish Tenant Farming Commission (McIntosh, 2018), over 80% of a total of 1,035 participants (121 landlords and 914 tenant farmers) answered that the landlord-tenant relationships are good and regular face to face contacts help to build strong relationships. Nevertheless, 60% of landlords and 25% of tenants do employ an agent to assist with their business transactions<sup>8</sup>. At the same time, the common behaviour where 'when a tenant retires or terminates a lease, the landlord motivation is to lease to an existing tenant rather than an unknown entity' (Thomson *et al.*, 2014) also strengthen the importance of social relationships between contracting parties.

As for the government scheme, the Scottish Land Matching Service (SLMS) was established in 2019 as 'a structural option to increase land availability' (McKee *et al.*, 2018). SLMS aims to address the issue of an ageing farming population and to improve access for new entrants at the same time, through matching farmers who rent surplus land or transfer their businesses with new entrants starting a farming business or existing farmers expanding their businesses (Lacey, 2019). By the end of October 2020, the number of people registering their interests reached 150 and four joint-ventures are in progress (SLMS, 2020), one of which is in Parish Y.

Regarding data collection and analysis, a Social Network Analysis (Scott and Carrington, 2011, Borgatti *et al.*, 2009) was conducted with qualitative interviews. These are well-suited for exploration of networks and their practices (Hollstein, 2011). The following steps were employed (Table 3). First, the social networks in which a farmer is embedded, were mapped through the identification of the relevant landowners and agents. Second, the connections between individual actors were traced using multiple choice questionnaires to identify: a) the types of relationships between them; b) how contact between actors takes place; and c) the main reasons for transactions. This was followed by semi-structured interviews about how brokers obtain information and build trust and the advantages of direct/intermediated land transactions for farmers. Given the Covid-19 restrictions, the interviews were conducted by phone and Zoom, and supplemented by information provided by interviewees via emails. Thematic and content analysis was employed for data analysis (Robson and McCartan, 2016).

Table 3. Data collection and analysis

Steps order	Methods	Interview items	Analysis
Step1: Mapping a social network of the land market in the parish	Structured interviews	<ul> <li>Who are the landowners/tenants you transact the land with? Are there any intermediary agents?</li> <li>Where do the landowners/tenants/agents live? (Same parish/Same county/Outside parish)</li> <li>Areas and numbers of land parcels transacted.</li> <li>Type of the agreement and duration.</li> </ul>	Figure 3 to answer RQ 1, 2
Step2: Tracing the connections between actors	using multiple choice questionnaire	<ul> <li>What is your relationship with the landowner/tenant/agent? (Relative/Neighbour/Friend or acquaintance/Business associate/ Land advertised)</li> <li>How did you make contact with the landowner/tenant/agent? (In person/Local events/Government support/Other)</li> <li>Why did you transact the land with the landowner/tenant/agent? (Price or rent/Obligation/Trust/Reputation/Government support or Official recommendation/Other)</li> </ul>	Figure 4 to answer RQ 1, 2

<sup>&</sup>lt;sup>8</sup>Agents are defined as land agents, or other professionals who act as an intermediary between two parties (e.g. solicitors, valuers and agricultural advisors). Business transactions include rent reviews, valuations, legal issues relating to the lease.

-

**Table 3 (Continued)** 

Steps order	Methods	Interview items	Analysis
Step3: In-depth interviews with actors	Semi- structured interviews sharing question list (1-2 hours)	For brokers:  • What is the key information, and how do you obtain it? And what are the key things to build trust with clients?  • What are the advantages you offer compared to the direct land transactions?  For farmers:  • What are the advantages of direct land transaction (not using agents) and of intermediated land transactions (using agents)?  • Do trust and/or government support make land transactions easier or more difficult for you?	<b>Table 6, 7, 8</b> to answer RQ 2, 3

Source: Author's own construction.

#### 5. Results: Two different types of broker

RQ1. Key actors in social networks and their interactions

The profile of farms in each parish is provided in Table 4. In Parish X, there are three farms<sup>9</sup> of which the data from farm A, the largest arable farm in the parish is a work in progress. Farm B has 80 ha of land for crops and grass, whereas Farm C has 26 ha of land for grazing for over 100 breeding livestock. Both are family farms and a substantive part of their income comes from off-farm jobs.

Table 4. Profile of farms

	Parish X		Parish Y			
	Farm A	Farm B	Farm C	Farm H	Farm I	?
Interviewee						
Gender and age	Male, 50-59	Female, 50-59	Male, 40-49			
Current business	S					
Farm type	Crops: Barley + ?	Crops: Barley and grass	Livestock: Breeding ewes and cows			
Size category	100+ha	10-100ha	100+			
Employment		Family + One contractor	Family only			
Other income source		Off farm jobs + Other * (>50%)	Off-farm jobs (>50%)	Data co	ollection is in	progress.
Land area	Data					
(A) Rent from someone else	collection is in	100 ha (13 parcels)	13 ha (5 parcels)			
(B) Own for their own farm	progress.	None	13 ha (3 parcels)			
(C) Rent out to someone else		20 ha (4 parcels)	None			
Farmed area (A)+(B)-(C)		80 ha	26 ha			

Source: Author's own construction based on interviews.

*Notes:* (\*) Other includes for example pensions, social security benefits, investment income.

 $^9$ Other than these three farms, there are four or five workers coming to Parish X for contract farming who are excluded from this case study.

Figure 3 illustrates the land transactions around each parish. In Parish X, there are seven actors involved in the network, including four farmers, two owners and one broker. It should be noted that transactions are seen not only between farmers and landowners but also amongst farmers. Specifically, Farmer A farms his owned land while letting his land to Farmers B and C. Farmer B rents 13 parcels sized 100 ha directly from her business associate Farmer A through a 1991 Tenancy Agreement, within which four parcels sized 20 ha are let to her relative Farmer G through seasonal lets. Farmer C farms his own land while he rents five parcels from three different individuals, including his neighbour Farmer A through an intermediary, Broker D. Although the contract with Farmer A is a seasonal let, their relationship has remained stable for 20 years. He also rents land from his business associate and a friend who both live outside the parish, through seasonal lets and headage basis.

Example X Area (parcels Starting year Parish Y Parish X Node attribute Farmer 20 ha (4) Data will be obtained later. Owner В 2018 Broker 100 ha (13) D 2018 Interviewed 0.9 ha (1) 4 ha (1) Type of tenancy 2000 1991 Act LDT/SLDT 10.4 ha (3) Seasonal lets Other

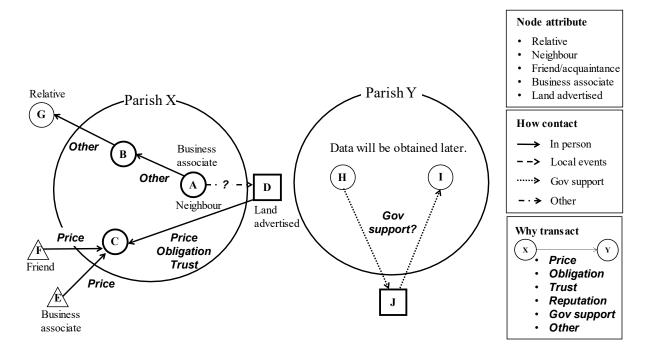
Figure 3. Land transactions around the two parishes (Step1)

Source: Author's own construction based on interviews.

**Notes:** In this figure, a land market is defined in terms of people who transact the land inside and outside the parish.

Figure 4 shows that most of transactions are made through personal contacts between relatives, neighbours and friends, which mean that land transactions are embedded in the informal networks. At the same time, not only 'Price' but also 'Obligation' and 'Trust' are chosen as the reason for the transactions between Farmer C and Broker D. Concerning 'Other' for the transactions between Farmer B and Farmer A/G, she does not find any reasons other than 'succession' in 2018. Further data collection is needed to obtain the whole picture of Parish X. As for Parish Y, data collection is in progress.

Figure 4. Social relationships around the land transactions (Step2)



Source: Author's own construction based on interviews.

#### RQ2. Brokers bridging information and the role of 'Trust'

Within the explored networks, two different types of brokers are identified: a private agent (Broker D) and a public institution (Broker J) whose profiles are shown in Table 5. Although this paper focuses on the small local communities, both brokers cover the entire Scotland or wider area and their representability of function is high. Generally, Broker D bridges sellers and purchasers in both ways by finding a purchaser who meets the conditions and price suggested by the seller in private market and by advertising the land widely in the public market, whereas Broker J contacts people who have registered their interests through the dedicated website. In brokering between people, as shown in Table 6, they often obtain information mainly about clients' interests and their objectives by visiting farms as well as from sharing information with colleagues or other agents/estates.

Regarding building trust, Broker D values 'Reputation' and 'Personal contact and details' in rural land markets that he describes as 'tightly knit' communities. In contrast, Broker J emphasised 'Fairness' to both parties and maintaining 'Confidentiality' in order to work as an independent 'honest broker'. In either case, building trustworthy relationships with the service users is essential for both the private agent and the public institution acting as brokers.

**Table 5. Profile of brokers** 

	Broker D (Private agent)	Broker J (Public institution)
Service offered	Rural agency covers buying and selling of rural property, farms, estates and forestry. Other rural sectors also cover management, valuation and farming of land.	Free service for users, matching people who are seeking and offering opportunities through arranging agreements that fit both parties.
Area covered	Four offices in Scotland out of 40 across the UK. 130 offices in other sectors across the UK and internationally.	All regions across Scotland
Functions	Some 25% of marketed farmland in Scotland	150 people are registered

Source: Authors' own construction based on interviews.

Table 6. Interview results from brokers: Information and Trust (Step 3)

Table 6. Interview results from brokers. Information and Trust (Step 3)			
Interview items	Broker D (Private agent)	Broker J (Public institution)	
What is the key information in land transactions, and how do you obtain it?	<ul> <li>Key information - Clients' interests:</li> <li>Who is interested?</li> <li>Why is this particular farm of interest to them?</li> <li>Where they are coming from?</li> <li>Can they move in a certain time?</li> <li>Can they afford it?</li> <li>How to obtain it:</li> <li>Go and meet people on their farm</li> <li>Ring colleagues across the UK/around the world</li> </ul>	<ul> <li>Key information - Clients' objectives:</li> <li>Objectives of both parties, to find a solution in the role of intermediary</li> <li>How to obtain it:</li> <li>Go and visit people and have a face-to-face discussion</li> <li>Have meetings with land agents and estates</li> </ul>	
What are the key things that build trust with clients?	Reputation:  'Third party reference is the best reference in the world. [] For the market in Britain, it is a very tightly knit community. You either trust each other or you don't. [] I'm only really as good as the last deal I've done. As long as I'm still getting good deals, my reputation goes on. If I did bad deals or did underhand deals and that does go on, then nobody would trust you.'  Personal contact and details:  'The company is only as good as the people work for it. [] If you're a farmer, a bit worried about employing an agent from a big name company, as long as you met the individual, and you sat around the kitchen table, and talk about what he wants to do,	Fairness:  'Trust is a really big thing in this. [] I'm independent in this, I have no particular one side or the other. I'm there to try and facilitate. So, I have no financial interest in it. I want to hear from both sides. And if I can help, advise how they may both meet their objectives and come together, that's fine for me. [] There's no fixed way but whatever they do it must be fair to both parties.'  Confidentiality:  'Because I make it a very strong play, anything that is said to me in any conversation with a client is confidential. [] Because if I was to spoil their confidence, then my credibility as an	
	what his dreams are and what his beliefs are, that's fine. [] Everything in service and selling is psychology. Psychology, trust, and detail. Never, ever forget the detail.	intermediary is not there. That's it. To me, that's important.'	

Source: Authors' own construction based on interviews.

*Note:* Label names (e.g., Search costs, etc) and underlines are made by the author.

#### RQ3. Brokers' contribution to Transaction Costs

When examining the advantages offered by brokers (Table 7), interesting contrasts emerge. Broker D emphasises that they can reduce especially 'Search costs', both in terms of finding the best trader among those interested in the transaction, and the best land and property on the market. These activities enable traders to make the decision among more participants in the markets, and with more available information on the farm. In contrast, Broker J stresses that the public institution mitigates 'Negotiation costs' in the transactions, by giving expert advice to find the best solutions, and clarifying the problems to reach the contract agreement between the parties. Their involvements can encourage the reserved actors to enter the markets and to communicate with participants. Therefore, these results suggest that the intermediary of both a private agent and a public institution play a significantly important role in tackling the issues of information asymmetry and market barriers in different ways.

Table 7. Interview results from brokers: Advantages in transactions (Step 3)

Interview items	Broker D (Private agent)	Broker J (Public institution)
What are the advantages you offer compared to direct land transactions?	Search costs (people):  'When you sold a farm or an estate or a property, [] you have to look their eyes and say, at that moment in time for two or three months been on the market, I have tried to find any buyer anywhere in the world who might be interested in your farm or estate [] and therefore you can retire or stop farming, knowing that you've got the best price that the market could give you at that time.'  Search costs (land and property):  'There is nothing to stop private individuals talking and doing a deal. [] The reason we've grown is because I think our preparation. There are so many things to think about when you're selling a farm. [] So when I go to the market, [] I tried to make sure there's nothing he can't see or he didn't know because I have told him absolutely everything about the farm. That's why we are the team. And that's why the landowners don't do it between themselves.'	Negotiation costs (expert advice):  'I know there are agreements happening locally between people who talk to each other and that's great. [] but for those who maybe a little bit more reserved about what we want to do, maybe a bit shy about it. I hope that we could offer. Some of it may just be, they want to know what would be the best option for them and they go away and that's fine. I just want to be able to give advice.'  Negotiation costs (contract agreement): 'I get to the stage relegate the two parties and I get them down to the table and talk to them, I can be very blunt not in an aggressive way but I can ask the difficult questions that probably both of them want to ask, but if they were doing on a one to one basis, could cause tensions. [] And I always say that whatever comes of this, part of the agreement must include an exit strategy for both parties [] nobody knows what's around the corner. Everybody must know the way out of this.'

Source: Authors' own construction based on interviews.

*Note:* Label names (e.g., Search costs, etc) and underlines are made by the author.

Farmers' opinions are also significant, and they cannot be ignored (Table 8). While there is an advantage in direct transaction which could allow farmers and landowners to solve the possible problems together even after the land transaction happened (e.g., fixing fences on the land), an important point for intermediated transactions is 'appropriate price setting'. Trust between parties (farmers and agents) also benefits farmers from obtaining further information when more farmland is available, which is considered as diminishing search costs for future transactions. In contrast, government support seems to be more fit to business transfer with a sort of trial period in which both parties can build a 'mutual respect'. Thus, offering the time to communicate to each other could significantly contribute to mitigating negotiation costs.

**Table 8. Interview results from farmers: Advantages in transactions (Step 3)** 

Interview topic	Advantages of		
What are the advantages of direct and intermediated land transactions?	Direct transaction - Problem-solving:  'If you get on well with them and you build a relationship you can speak to each other about situation so sometimes if the fences need to be sorted out you can ask them.'	Intermediated transaction - Verifying costs: 'Advantages are that you have somebody there to deal with the price setting. You have help for what the price should be.'	
Do trust and/or government support make land transactions easier or more difficult for you?	Trust in agents - Search costs:  'You trust the agent and the agent trusts you, and work well together, you're probably more likely to get the land another time. If you're looking for to expand your land, and the agent will think and coming up and let you know. That's the advantage of having trust between the two.'	Government support - Negotiation costs:  'Farmers that are closer to retiring, they don't want to sell the farm possibly but to achieve an income and maybe helps them to find somebody they can trust and they can try a bit. Transfer it piece by piece. [] There's a bit of time to figure out how the whole thing works. You can build up a mutual respect. [] and also means it might allow that [] incoming farmers to work on a personal loan and then they potentially buy it in the future.'	

Source: Authors' own construction based on interviews.

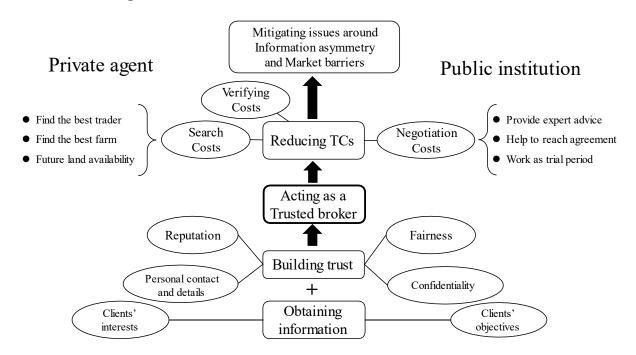
Note: Label names (e.g., Search costs, etc) and underlines are made by the author.

#### 6. Conclusion

This research aims to understand the complex mechanism of land transactions in rural Scotland. For the purpose, this paper identified social actors in rural land markets and explored their interactions using Social Network Analysis supplemented by semi-structured interviews. Results of case studies in two different parishes find contrasting channels of agricultural land markets. One is based around informal social networks in both direct and intermediated transactions among actors. The other one is developed with support from a government scheme matching farmers and landowners. These links to the two theories (NES and NIE) that from the theoretical framework for this analysis, hence the case where private agents intermediate transactions underlies the NES position, whereas the case in which a government institution matches actors reflects the NIE position. However, in either case, building trust is crucial in their acting as brokers, offering service with attained information and getting deals done.

As Figure 5 summarised, results show that trusted brokers can offer advantages in reducing TCs, especially search costs by identifying the best trader and the best farm through comprehensive preparation (private agent), or negotiation costs by giving independent advice and helping to reach an agreement (public institution). Consequently, they contribute in different ways to mitigating the issues around information asymmetry and market barriers which have been highlighted by previous studies.

Figure 5. Functions of trusted brokers in rural land markets



Source: Authors' own construction based on interview results.

It can be concluded that trust plays a key role in brokering actors in the farmland markets, even in the case where government institutions work beyond the informal social networks. However, further research is still needed to understand how land markets work, particularly the exploration of cases where both social networks and government institutions work together rather than one being more dominant than the other. The interplay among actors should also be carefully observed and compared. The preliminary findings for this research should help to draw some best practices, lessons, and policy recommendations to counter market failures in rural land markets.

#### References

- ALMA ECONOMICS 2020. Land and property taxation in Scotland: Initial scoping of options for reform. Scottish Land Commission.
- ATTERTON, J. 2007. The 'Strength of Weak Ties': Social Networking by Business Owners in the Highlands and Islands of Scotland. *Sociologia Ruralis*, 47, 228-245.
- BATOR, F. M. 1958. The Anatomy of Market Failure. *The Quarterly Journal of Economics*, 72, 351-379.
- BORGATTI, S. P., MEHRA, A., BRASS, D. J. & LABIANCA, G. 2009. Network Analysis in the Social Sciences. *Science*, 323, 892-895.
- BRYDEN, J. & GEISLER, C. 2007. Community-based land reform: Lessons from Scotland. *Land Use Policy*, 24, 24-34.
- BURT, R. S. 2002. The Social Capital of Structural Holes. *In:* GUILLÉN, M. F., COLLINS, R., ENGLAND, P. & MEYER, M. (eds.) *The New Economic Sociology: Developments in an Emerging Field.* Russell Sage Foundation.
- BURT, R. S. 2005. *Brokerage and closure : an introduction to social capital*, Oxford; New York: Oxford University Press.

- BURT, R. S. 2008. Information and structural holes: comment on Reagans and Zuckerman. *Industrial and Corporate Change*, 17, 953-969.
- BURT, R. S. & SODA, G. 2021. Network Capabilities: Brokerage as a Bridge Between Network Theory and the Resource-Based View of the Firm. *Journal of Management*.
- CIAIAN, P., KANCS, D. A., SWINNEN, J., VAN HERCK, K. & VRANKEN, L. 2012. Institutional Factors Affecting Agricultural Land Markets. *Comparative Analysis of Factor Markets for Agriculture across the Member States*. Factor Markets.
- CIAIAN, P. & SWINNEN, J. F. M. 2006. Land Market Imperfections and Agricultural Policy Impacts in the New EU Member States: A Partial Equilibrium Analysis. *American Journal of Agricultural Economics*, 88, 799-815.
- COOK, K. S., HARDIN, R. & LEVI, M. 2005. *Cooperation without trust?*, New York: Russell Sage Foundation.
- CRESWELL, J. W. & POTH, C. N. 2017. *Qualitative inquiry and research design : choosing among five approaches*, Los Angeles: SAGE Publications.
- CURRIE, J. M. 1981. *The economic theory of agricultural land tenure*, Cambridge; New York: Cambridge University Press.
- DE VRIES, J. R., VAN DER ZEE, E., BEUNEN, R., KAT, R. & FEINDT, P. H. 2019. Trusting the People and the System. The Interrelation Between Interpersonal and Institutional Trust in Collective Action for Agri-Environmental Management. *Sustainability*, 11, 7022.
- DEININGER, K. & JIN, S. 2005. The potential of land rental markets in the process of economic development: Evidence from China. *Journal of Development Economics*, 78, 241-270.
- EDWARDS, T. & KENYON, W. 2014. Tenant farming. Scottish Parliament Information Centre (SPICe).
- EDWARDS, T., KENYON, W., POLLOCK, S. & REID, A. 2015. Land Reform (Scotland) Bill. Scottish Parliament Information Centre (SPICe).
- ELLICKSON, R. C. 1991. *Order Without Law: How Neighbors Settle Disputes*, Cambridge, Mass: Harvard University Press.
- FARM ADVISORY SERVICE 2017. New Entrants to Farming: Guidane Notes Joint Venture Farming. Farm Advisory Service.
- GEORGE, A. L. & BENNETT, A. 2005. *Case studies and theory development in the social sciences*, Cambridge, Mass: MIT Press.
- GERRING, J. 2011. The Case Study: What it is and What it Does. *In:* GOODIN, R. E. (ed.) *The Oxford Handbook of Political Science*. Oxford University Press.
- GLASS, J., BRYCE, R., COMBE, M., HUTCHISON, N., PRICE, M., SCHULZ, L. & VALERO, D. 2018. Research on interventions to manage land markets and limit the concentration of land ownership elsewhere in the world: Commissioned Report No 001. Scottish Land Commission.
- GRANOVETTER, M. S. 2017. *Society and economy : framework and principles*, Cambridge, Mass: The Belknap Press of Harvard University Press.
- GRANOVETTER, M. S. & SWEDBERG, R. 2011. *The sociology of economic life*, New York: Routledge.
- GUILLÉN, M. F., COLLINS, R., ENGLAND, P. & MEYER, M. 2003. *The new economic sociology: developments in an emerging field*, New York: Russell Sage.
- HALFACREE, K. H. 1994. The importance of 'the rural' in the constitution of counterurbanization: Evidence from England in the 1980s. *Sociologia Ruralis*, 34, 164-189.
- HOLLSTEIN, B. 2011. Qalitative Approaches. *In:* SCOTT, J. & CARRINGTON, P. J. (eds.) *The SAGE Handbook of Social Network Analysis*. London: SAGE Publications.
- HUGHES, C., MCCLUSEY, W., SAYCE, S., SHEPHERD, E. & PETE, W. 2018. Investigation of Potential Land Value Tax Policy Options for Scotland: Final Report. Scottish Land Commission.
- HUNTER, J., PEACOCK, P., WIGHTMAN, A. & FOXLEY, M. 2014. 432:50 Towards a comprehensive land reform agenda for Scotland: A briefing paper for the House of Commons Scottish Affairs Committee. House of Commons.
- KOSTOV, P. 2010. Do Buyers' Characteristics and Personal Relationships Affect Agricultural Land Prices? *Land Economics*, 86, 48-65.

- KWON, S.-W., RONDI, E., LEVIN, D. Z., DE MASSIS, A. & BRASS, D. J. 2020. Network Brokerage: An Integrative Review and Future Research Agenda. *Journal of Management*, 46, 1092-1120.
- LACEY, A. 2019. *Cabinet Secretary launches new land matching service* [Online]. Scotland's Rural College. Available: https://www.sruc.ac.uk/news/article/2503/cabinet\_secretary\_launches\_new\_land\_matching\_s ervice [Accessed 11/02/2021].
- LÉGER-BOSCH, C. 2019. Farmland tenure and transaction costs: Public and collectively owned land vs conventional coordination mechanisms in France. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 67, 283-301.
- LRRG 2014. The Land of Scotland and the Common Good: Report of the Land Reform Review Group. Scottish Government.
- MCKEE, A., SUTHERLAND, L.-A., HOPKINS, J., FLANIGAN, S. & RICKETT, A. 2018. Increasing the Availability of Farmland for New Entrants to Agriculture in Scotland: Final report to the Scottish Land Commission. Scottish Land Commission.
- MCKEE, A. J. 2015. Legitimising the Laird? Communicative Action and the role of private landowner and community engagement in rural sustainability. *Journal of Rural Studies*, 41, 23-36.
- MCLNTOSH, B. 2018. A Review of the Conduct of Agents of Agricultural Landlords and Tenants. Scottish Land Commission.
- MCLNTOSH, B. 2019. Codes of Practice: Agreeing and Managing Agricultural Leases. Scottish Land Commission.
- MCMORRAN, R., LAWRENCE, A., GLASS, J., HOLLINGDALE, J., MCKEE, A., CAMPBELL, D. AND COMBE, M. 2018. Review of the effectiveness of current community ownership mechanisms and of options for supporting the expansion of community ownership in Scotland: Commissioned Report. Scottish Land Commission.
- MEADOR, J. E. 2019. Reaching rural: Identifying implicit social networks in community development programmes. *Journal of Rural Studies*, 68, 285-295.
- MÉNARD, C. & SHIRLEY, M. M. 2008. Introduction. *In:* MÉNARD, C. & SHIRLEY, M. M. (eds.) *Handbook of New Institutional Economics*. Berlin, Heidelberg: Springer.
- MUNTON, R. 2009. Rural land ownership in the United Kingdom: Changing patterns and future possibilities for land use. *Land Use Policy*, 26, S54-S61.
- NEE, V. & SWEDBERG, R. 2008. Economic Sociology and New Institutional Economics. *In:* MÉNARD, C. & SHIRLEY, M. M. (eds.) *Handbook of New Institutional Economics*. Berlin; Heidelberg: Springer.
- NIX, J., HILL, P., WILLIAMS, N. & BOUGH, J. 2003. *Land and estate management*, Chichester: Packard Publishing.
- OSTROM, E. 2015. Governing the commons: the evolution of institutions for collective action. Cambridge: Cambridge University Press.
- PRELL, C., HUBACEK, K. & REED, M. 2009. Stakeholder Analysis and Social Network Analysis in Natural Resource Management. *Society & Natural Resources*, 22, 501-518.
- REID, A. 2015. Land Reform in Scotland. The Scottish Parliament Information Centre (SPICe).
- ROBISON, L. J., MYERS, R. J. & SILES, M. E. 2002. Social Capital and the Terms of Trade for Farmland. *Review of Agricultural Economics*, 24, 44-58.
- ROBISON, L. J. & OLIVER, J. R. 2016. Explaining Farmland Exchange Anomalies by Including Relational Goods. *Annual meeting of Agricultural & Applied Economics Association*. Boston.
- ROBSON, C. & MCCARTAN, K. 2016. Real World Research: A Research for Users of Social Research Methods in Applied Settings, Hoboken: John Wiley & Sons Ltd.
- RUST, N., PTAK, E., GRAVERSGAARD, M., IVERSEN, S., REED, M., DE VRIES, J., INGRAM, J., MILLS, J., NEUMANN, R., KJELDSEN, C., MURO, M. & DALGAARD, T. 2020. Social capital factors affecting uptake of sustainable soil management practices: a literature review. *Emerald Open Research*, 2.
- SCOTT, J. & CARRINGTON, P. J. 2011. *The SAGE Handbook of Social Network Analysis*, London: SAGE Publications.

- SCOTTISH GOVERNMENT 2018. Stability and Simplicity: proposals for rural funding transition period. Scottish Government.
- SCOTTISH GOVERNMENT 2019. *Agricultural holdings and tenant farming guide: Tenancy types* [Online]. Available: https://www.gov.scot/publications/agricultural-holdings-and-tenant-farming-guide/pages/tenancy-types/ [Accessed 29/01/2021].
- SCOTTISH GOVERNMENT 2020a. Community Ownership in Scotland 2019. Scottish Government. SCOTTISH GOVERNMENT 2020b. *Economic Report on Scottish Agriculture 2020 edition* [Online]. Scottish Government. Available: https://www.gov.scot/publications/economic-report-on-scottish-agriculture-tables-2020-edition/[Accessed 25/1/2021].
- SILVERMAN, D. 2017. Doing Qualitative Research, Los Angeles: SAGE Publications.
- SKOUFIAS, E. 1995. Household Resources, Transaction Costs, and Adjustment through Land Tenancy. *Land Economics*, 71, 42-56.
- SLMS. 2020. *October Update from SLMS*. [Online]. Available: https://slms.scot/making-change-is-never-easy-were-here-to-help-2/ [Accessed 11/02/2021].
- SMELSER, N. J. & SWEDBERG, R. 2005. *The Handbook of Economic Sociology*, Princeton: Princeton University Press.
- SUTHERLAND, L.-A. 2020. Finding 'Hobby' Farmers: A 'Parish Study' Methodology for Qualitative Research. *Sociologia Ruralis*, 60, 129-150.
- TAKAHASHI, D., CHANG, T. & SHOBAYASHI, M. 2018. The role of formal and informal institutions in farmland consolidation: The case of Shiga Prefecture, Japan. *International Journal of the Commons*, 12(2), 80-107.
- THOMSON, S. 2016. Scottish agriculture. *In:* SKERRATT, S., ATTERTON, J., MCCRACKEN, D., MCMORRAN, R. & THOMSON, S. (eds.) *Rural Scotland in Focus 2016.* Edinburgh: Scotland's Rural College.
- THOMSON, S., MOXEY, A. & BUTLER, A. 2014. Scottish Agricultural Tenure Evidence Review. Scottish Government Social Research 2014. Scottish Government.
- THOMSON, S., MOXEY, A., WIGHTMAN, A., MCKEE, A., MILLER, D., BRODIE, E., GLASS, J., HOPKINS, J., MATHEWS, K., THOMSON, K., MC MORRAN, R. & BRYCE, R. 2016. The impact of diversity of ownnership scale on social, economic and environmental outcomes: Exploration and case studies: Final Report to the Scottish Government. Scottish Government.
- TSOODLE, L. J., GOLDEN, B. B. & FEATHERSTONE, A. M. 2006. Factors Influencing Kansas Agricultural Farm Land Values. *Land Economics*, 82, 124–139.
- VENNESSON, P. 2008. Case studies and process tracing: theories and practices. *In:* DELLA PORTA, D. & KEATING, M. (eds.) *Approaches and Methodologies in the Social Sciences* Cambridge: Cambridge University Press.
- WARREN, C. R. & MCKEE, A. 2011. The Scottish Revolution? Evaluating the Impacts of Post-Devolution Land Reform. *Scottish Geographical Journal*, 127, 17-39.
- WIGHTMAN, A. 2015. *The Poor Had No Lawyers: Who Owns Scotland (And How They Got It)*, Edinburgh: Birlinn Ltd.
- WILLIAMS, F. & SLEE, R. 2008. Barriers to New Entrants to Scottish Farming A New Perspective on an Old Problem. *the 6th Rural Entrepreneurship Conference*. Crichton University Campus, Dumfries.
- WILLIAMSON, O. E. 2013. The transaction cost economics project: the theory and practice of the governance of contractual relations, Cheltenham, UK; Northampton, MA, USA: Edward Elgar.
- WINTER, M. & LOBLEY, M. 2009. What is land for? : the food, fuel and climate change debate, London; Sterling, VA: Earthscan.
- WU, J. & DUKE, J. M. 2014. Introduction. *In:* WU, J. & DUKE, J. M. (eds.) *The Oxford handbook of land economics*. Oxford; New York: Oxford University Press.
- YIN, R. K. 2014. Case study research: design and methods, Los Angeles: SAGE Publications.