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Will future land based food and fibre production be in family or corporate hands? An analysis of farm land ownership and governance considering farmer characteristics as choice drivers. The New Zealand case



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#### ABSTRACT

Family farming in various guises has been the dominant ownership and governance system in primary production over recorded history. This outcome has been controlled by farmers and their families, possibly due to tradition, opportunities, personal characteristics, skill sets and the nature of primary production. Of these, it is hypothesised that the farmers' personal characteristics play a major part in the choice, and continuance, of current ownership and governance systems. Equally as important, they, and therefore the land ownership system, play a part in the efficiency of production systems and improvement of the biological and production environment.

The benefits and difficulties of commonly used ownership systems in Western society are reviewed. Using a sample of New Zealand (NZ) farms, a comparison of the managers' features for owner/operator, partnership and corporate based systems is presented. There were significant differences in many variables including the farmers' age, education, number of children, asset levels, years on the current farm, and similar, but more importantly, the farmers in the ownership system groups had differing personal characteristics. Significantly, despite the corporate based farms employing more professional assistance, the profit levels were similar across ownership systems leaving the farmers' characteristics the main factors correlating with system choice. However, governance systems per se are only marginally correlated with production systems and efficiency.

As successive generations of farmers are unlikely to have different characteristics, and corporate based systems continue to exhibit similar profit levels, relatively simple family based systems will continue to dominate farm land ownership and control. The trends suggest family farms will increase in size and involve family conglomerates facilitating the management of larger, and in many cases multiple, farms. While currently there are few differences in biological efficiency between ownership systems, given the efficiency benefits of size and scale, this could well change with the increase of family conglomerates. Relative to increasing corporatisation, the continuance of family based ownership and governance will also be of benefit to the environment. When developing land policies, these highlighted relationships should be taken into account. This study is a first to consider personal characteristics relative to ownership.

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## 1. Introduction

Currently family farms dominate ownership systems despite exhortations that more corporate based systems should be introduced (Moreno-Perez and Lobley, 2014). For years researchers have studied the possible reasons for the continuing dominance of family farms coming up with a range of possibilities, but no one has considered the influence of the farmer's personal attributes and objectives including the farmer's risk attitude. Similarly, the impacts of ownership and governance systems on productive efficiency need considering (Koirala et al., 2016). The research reported fills this gap through comparing these factors for family relative to company ownership farms. This is preceded by a brief review of alternative ownership and governance systems to put a boundary on alternative systems.

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Personal attributes are primarily defined through the farmer's personality (Matthews and Deary, 1998), in this case as expressed in farm decision making (management style), the farmer's intelligence (Wilt et al., 2006; Sternberg, 2004), the farm owners' objectives and the related risk attitude. Age and experience are also factors. Overall, psychologists (e.g. DeYoung, 2011) believe a person is largely defined by their personality and intelligence both of which are influenced by their genetic makeup and the environment experienced including parental influences. Objectives are similarly influenced (Willock et al., 1999).

It is also suggested that biological system management needs an intimate relationship between the manager, employees, who are perhaps family members, and the system for systems to be effectively managed. The strength of this organic relationship depends on the personal and psychological characteristics of the managing farmer, including their objectives, particularly if they are on duty 24 h a day. Biological systems continue every minute of the year so non owning managers in corporate systems, and non family employees, may miss critical events. This is less likely on family farms.

In setting up governance and management systems, discussion over what is governance relative to management often comes to the fore (Corbetta and Montemerlo, 1999; Carney, 2005). In reality this division is irrelevant relative to having an efficient system that covers all the decision needs of the farm and its owners. This may well vary from case to case as each situation is unique (Nuthall, 2012). Systems can range from a simple sole owner/operator system through to a company (corporate) structure controlled by a board of directors with an employed manager both charged with carrying out the share (bond) holders' requirements.

Whatever the arrangements, decisions and action must occur in all the areas relevant to production and marketing. The areas include everything from technical decisions, decision analysis methods and rules, right through to ownership systems, contracts, tax decisions, labour management (labour legislation and best practice), and, certainly not least, health, safety and environmental regulation compliance.

In a sole owner/operator situation, the manager must have an ability to cover all these areas, though in some cases expertise will be purchased (for example, a tax accountant is commonly hired). In contrast, a public company with a board of directors employing a manager has a wide range of people to cover the requirements for knowledge and ideas. Which is best for both the owners and the national interests? It is likely to depend on the owners involved, their objectives and personalities, the family structure and the type of farming. For existing farms a key question covers whether the current ownership and management systems meet the current owner's needs? Is change necessary?

The literature provides (see Section 3 below) many opinions on a best system, but there are few well documented conclusive qualitative and quantitative studies. Most reports use logic and opinion, albeit experienced, rather than facts. Indeed, there have been pleas, for example, for research about boards of directors to quantify and understand their workings (who holds the power and what is their degree of influence? (Old, 2009)) and the extent of value creation (Huse et al., 2011). This research provides quantitative clarification on many of the issues. Furthermore, there are no studies relating a farmer's personal characteristics to ownership and governance. This research is the first to move in this direction.

This article proceeds by reviewing farm ownership around the world, briefly listing the structures that might be used for ownership and management, and reporting on the literature covering the features of alternative ownership systems. This leads to a grounded systems diagram reflecting the important variables relevant in the decision on ownership and governance. The procedures used in obtaining and analysing data on NZ farms relating ownership sys-

tems to financial success and other factors are described, and the managers' personal attributes and a range of other variables including productive efficiency are related to ownership. Finally, given the evidence presented, a conclusion over the decision factors for both family and corporate governance choices is provided and discussed.

The data used to test the hypotheses was obtained through a mail survey of a stratified random sample of NZ farmers. This was analysed using a range of methods depending on the question. Simple comparisons and listings were used to describe the features of the farms under different ownership forms using standard statistical tests for validity checking, and the importance of the variables contributing to the ownership decision were calculated using logistic regressions.

## 2. The choices. Farm ownership and governance systems worldwide

#### 2.1. Introduction

In assessing the future of farm ownership systems it is important to consider past and current systems as they form a base for considering options and what the future might hold. The first section considers statistics expressing the importance of past and current systems, and the second considers the structure of commonly available systems. These impact on farmers' choice of system.

## 2.2. Past and current systems

In ancient Egypt, Mesopotamia, Palestine, North America, and also in most Asian countries, primary production was largely organised through family groups (Allen and Lueck, 1998). This also occurred in Africa where communal land was allocated to families. Family farming also dominated in Europe, and in the new world as the farming settlers came mainly from Europe. This is clear in Australia (Voyce, 2007), but also in many other countries (e.g. N.Z., United States, Canada, Africa, South and Central America, India). In these countries the indigenous people (Maoris, Aboriginals, First Nations etc.) often had different systems which continue in part in some cases, even if modified. In addition, land settlement schemes in many countries, especially post wars, involved settling family businesses.

Seemingly more beneficial systems have not been developed leaving family farming to continue being dominant. In New Zealand, according to Nuthall and Old (2014), family farms are common with 29% sole traders and 56% family partnerships. Companies (corporations) made up 9% with the remainder a range of alternatives like share farming. Much the same occurs in most countries. Johnson et al. (2009) reviewed the situation in the Netherlands, Italy, Canada and the US and found, for example, in Canada 83.8% of farms were sole ownership or family partnerships (21.1% without a written agreement, 5.6% with), 14.1% were family companies (corporations), 1.9% were non family companies leaving 0.3% in other ownership situations. For Europe it is reported 97% are family farms (European Commission, 2013). However, Johnson et al. (2009) did find a range of family structures in the US giving rise to varying decision making responsibilities. They report, for example, 3.3 million people were engaged in day to day decision making on the 2.2 million farms. As part of their management team, 5% used formal advisors, and 16% hired professional management services. They also report it is not uncommon for farmers to develop advisory groups, often informally, to assist decision making. Family income in many cases also comes from off farm sources. In the US 10% of farmers had non-farm occupations. Some farm families also hold 'off farm' assets. For example, in Canada off farm assets are 12% of the total.

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