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## The Perception of Market Power in Land Transactions

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## Moral Evaluation of Land Market Transactions

### **Abstract**

Against the backdrop of rising land prices and pending land-market regulations, we examine how market power is perceived in agricultural land transactions. The market power of buyers of agricultural land is a widely debated issue in the land-market literature. However, the drivers of the market-power perception towards land-buying farmers have yet to be studied, because they also influence the regulatory debates. Therefore, the main objective of this study was to investigate what drives the perception of market power. For this purpose, we ran an online experiment with a US sample in which we manipulated farm size in a between-subjects design. Literature suggests that win–win denial plays a role in evaluating transaction partners. Therefore, we investigated the role of win–win denial in perceiving land-buying farmers. Results show that power perception is strongly driven by farm size. Furthermore, market power is seen to rest with conventional (not organic) farmers and corporate (not family) farmers. Of our participants, 55.86% engaged in win–win denial by deeming the land-buying farmer (large or small) as worse off after the transaction in comparison to the land-selling local government. The majority of participants saw small and large farmers as profit-seekers. The study provides valuable insights for a better understanding of market power perception and, thus, of the land market discourse in the United States.

Keywords: land transactions, agricultural land markets, market power, zero-sum thinking, win–win denial

## 1. Introduction

Over the last three decades, US agriculture has experienced a process of structural transformation. As part of this transformation, production is concentrated in areas providing higher profitability. Furthermore, all sizes of farms are getting larger, and small ones are shutting down (Spangler et al. 2020). Within this context, US land markets are following the global trend of sharp price increases. Starting from an average of 2,300 dollars per acre in 2011, prices skyrocketed to 3,300 dollars per acre in 2021 (USDA 2022). The higher demand for land (driven by multiple purposes, e.g., urban sprawl, environmental services, and biogas production) and increased value of total agricultural exports (Kenner et al. 2022) have fueled the current increase in land prices. Another factor contributing to rising land prices is the current situation of high credit availability, which combines easy access to credit with low returns on investments. Hence, large financial investors find a slow and steady profitability in farmland, which is a safe option in the absence of better alternatives.

Chastened by the dramatic effects of the 2009 economic crisis caused by the collapse of real estate prices, US society has developed apprehension regarding high real estate prices. In the current situation, such fears might not be unfounded, as credit availability has been correlated to land price increases and a subsequent collapse in prices (Rajan and Ramcharan 2015). Adding to these concerns, evidence from Kuethe and colleagues (2019) and Roesch and colleagues (2018) shows how the current high prices of farmland are not sustained by returns on agricultural production. Instead, farmland prices are based on expectations of future value, all *mise en place* for a debacle in land value. There is a general fear of markets realizing that land does not provide the expected returns, prompting a sudden loss in land value.

At the same time, concerns are increasing regarding certain actors accumulating excessive market power in the US farmland market. Samuelson and Nordhaus (2010) define market power as “the degree of control that a single firm or a small number of firms have over the price and production decisions in an industry,” although other definitions refer to it as the capability to make profits above marginal costs. Studies via hedonic price models on the concentration of US land markets have identified ownership concentration as a driver of farmland rental prices (Kuethe et al. 2018). Nevertheless, such findings have been disputed, as researchers have built models from survey data instead of transaction data, which might amplify the effect of market concentration in land prices (Bigelow et al. 2020). Regardless of discrepancies in the appropriateness of the data, even if market concentration was evident, the nature of deriving a devious use of power resulting in price gouging is elusive and needs to be evaluated case-by-case (Balmann et al. 2021).

Social concerns about market power concentration are also linked to the perception that foreign and non-agricultural investors are driving the increase in farmland prices (Fairbairn 2013). Regarding non-agricultural investors, some claim not only that they raise farmland prices but that they benefit unfairly from farm-support subsidies. While theoretically, the transfer from subsidies received by agricultural tenants could be transferred to landowners (Goodwin et al. 2005), empirical research indicates that in most cases, the amount of money transferred from renters to landowners is rather low and only occurs under special circumstances (Graubner 2018). The number of acres owned by foreign investors doubled between 2007 and 2017 (Bocci et al. 2017). Nevertheless, there is no conclusive evidence of foreign investors having a direct impact on farmland prices (Croonenbroeck et al. 2021; Devaney and Scofield 2017). The concerns about foreign investors are not new, and their land acquisitions have been regulated through the Agricultural Foreign Investment Disclosure Act since 1978. Some states have limited the number of acres a foreign entity can acquire, while other states have completely banned foreign ownership of land (Bocci et al. 2017).

People’s perceptions of market power imbalances, which are presumed to cause rising farmland prices, have reignited old debates on how to regulate land markets. Negative experiences of past debacles in real estate prices add fuel to the fire. Some call for stricter regulations on land markets as an answer to

foreign investors, while others call for controlling elements to avoid sudden losses in land value (Fairbairn 2013). The concern about market power driving prices up together with the fear of a burst in the bubble of land prices are ideal ingredients for disaffection toward farmland markets, which might lead to accentuated win–win denial of farmland markets. One objective of the current academic debate is to design a regulatory framework that best achieves diverse societal and environmental welfare goals (Turner et al. 2020). To contribute to that debate, we take a step back and investigate how people perceive land market transactions. Better understanding people’s concepts of market power is also important in light of successful land market regulation, which relies on a supportive population.

Psychological researchers have investigated what drives the evaluation of market transactions. In a series of online studies, Johnson and colleagues (2021) investigated how sellers and buyers are rated after a simple transaction (purchase of a t-shirt or a haircut). They found that buyers and sellers are *not* rated as better off after the transaction, even though there is nothing that indicates that the transaction is not voluntary in nature. Hence, this evaluation can be interpreted as win–win denial, as the authors themselves call it. The study also reveals that win–win denial occurs across various contexts and does not happen randomly. Data show that after the transactions the share of buyers rated as worse off is significantly higher than the share of the sellers rated as worse off. The authors explain this asymmetric evaluation as driven by naïve mercantilism, which describes a fixation on money, leading to the perception that the transaction party ending up with money is better off and the transaction party giving up money is worse off. However, preliminary results from Jauernig and colleagues (2022) show that naïve mercantilism might not be the reason for this asymmetric evaluation of transaction partners but rather the perception of a power asymmetry. In our power hypothesis, we predict that if the “weaker” transaction partner profits from an increased price, the market exchange is regarded as fairer than if the “stronger” partner profits from it—regardless of who the seller and buyer are. Our data corroborate this hypothesis. Both explanations (naïve mercantilism and the power hypothesis) describe asymmetries between transaction partners. In this study, we investigated these asymmetries in the perceived market power of land-market agents.

In a context of ambivalently justified demands for stricter or less strict regulations, we aimed to explore people’s attitudes toward land transactions by investigating what drives the market-power perception of land-buying farmers. Our main hypothesis was that:

**Land-buying owners of large farms are assumed to have more market power than land-buying owners of small farms.**

To further understand what drives market-power perceptions, we investigated how people rate the form of ownership, farm management technique, and type of agricultural product. We expected people to perceive corporate farms (as opposed to family farms) and conventional farms (as opposed to organic farms) as more powerful. Next, we investigated the role win–win denial plays in evaluating the market power of owners of small and large farms, as well as the perceived profit orientation of both groups of farm owners (small-scale and large-scale). Finally, we backed up our power-perception measure by asking participants directly to what extent they viewed large and small farmers as selling their land voluntarily.

To explore the main hypothesis, we experimentally manipulated the farm size (owner of a small/large farm business) to vary the perceived power position of the land-buying farm owner. This allowed us to better understand what drives market-power perceptions of land-buying farmers.

## 2. Study Design

To address our research questions, we conducted an online vignette experiment in which participants were asked to evaluate a land transaction scenario. The vignette read:

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*Mr. Smith, an owner of a small [large] agricultural business, buys a piece of land from the public body. Due to the increased demand for land, Mr. Smith pays a price that is 30% higher than the price he would have paid two years ago.*

Our between-subjects treatment variation consisted of manipulation of the size of the farm owned by the farmer who buys the piece of land. Participants were randomly allocated to one of the two treatments. Farm size was expected to be the main driver of power perception. To control for this assumption, we tested to what extent and in what direction other factors (form of ownership, farm management technique, and type of agricultural product) influence people's power perception of farmers. To test the perception of the different market power factors, we formulated survey questions: Subjects were asked to rate the importance of factors as market-power drivers on 7-point Likert scales (very important to not important at all). Subsequently, participants had to indicate the direction in which market power increased in their view (e.g., for the factor of ownership, the "family farm" can be seen as more powerful than the "corporate farm").

Furthermore, we assessed how much market power participants thought the respective land-buying farmer (small or large) had and to what degree they estimated that this farmer was predominately motivated by profit. Participants indicated their estimations on 7-point Likert scales. We also elicited participants' win-win denial by asking them who they saw as better off after the transaction—the buying farmer (but not the regional government) or the public body (but not the buying farmer), or whether both were better off (no win-win denial).

Our sample consisted of about 200 US adult citizens recruited via a prime panel from Cloud Research<sup>1</sup>, due to the diverse demographics of the panel (Chandler et al. 2019). After eliciting our main variables, participants provided personal information and answered an attention-check question.

### 3. Results

We collected 208 unique and complete questionnaires; 63 participants did not pass the attention control question, leaving an effective sample size of  $N = 145$  (37% male, 63% female). The effective sample was composed of 74 replies in the Small-Farm Treatment and of 71 in the Large-Farm Treatment. The median age of the subjects was 41 years, compared to the national median of 38.3. The average income of the subjects ranged between \$25,000 and \$50,000, slightly below the US average (Federal Reserve System 2020). A t-test was used to determine the presence of significant asymmetry in responses between the two treatments.

Starting with the power perception for the given land transaction scenario, our results reveal an asymmetry between treatments (Figure 1). Subjects evaluating the transaction in the Small-Farm Treatment perceived the land-buying farmer as significantly less powerful ( $M = 3.54$ ,  $SD = 1.67$ ) than subjects evaluating the transaction in the Large-Farm Treatment ( $M = 4.67$ ,  $SD = 1.49$ ),  $t(74;71) = 4.33$ ,  $p < 0.01$ . The asymmetry confirms our main hypothesis that owners of large farms are perceived as more powerful than owners of small farms buying land.

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<sup>1</sup> cloudresearch.com

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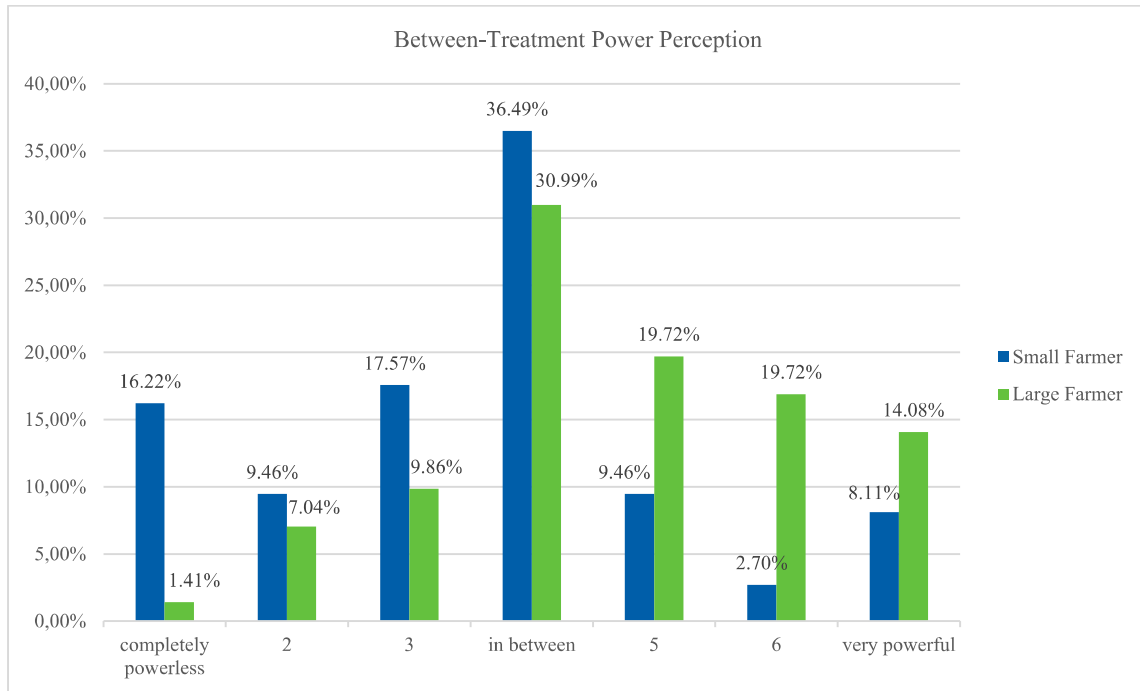


Figure 1: Between-treatment comparison of the power perception of the land-buying farmer for the given scenario.

Table 1 displays perceived drivers of market power and the perceived direction of market power: Farm size of the land-buying farmer is considered a fundamental driver of market power, whereby the “large farms” are clearly seen as more powerful than “small farms.” This result corroborates our hypothesis that the size of the land-buying farmer plays a fundamental role in driving power perception.

Based on the subjects’ perceptions, the type of agricultural product produced by the land-buying farmer played a similar role in driving market power. The form of ownership and farm management technique of the land-buying farmer were both perceived as significant factors in driving market power, as well. In that regard, corporate farms were perceived as more powerful than family farms, and conventional farms were perceived as more powerful than organic ones, although to a lesser degree.

Perceived Drivers of Market Power			
	% of people thinking the driver is important	Average direction of market power / 100	Legend for the direction of market power
Farm size (small farm, large farm)	72.41%	73.66	0 - Small, 100 - Large
Form of ownership (family farms, corporate farms)	65.52%	69.66	0 - Family, 100 - Corp.
Farm management technique (organic or conventional)	62.06%	57.14	0 - Organic, 100 - Conv <sup>2</sup> .
Type of agricultural product (cattle, corn, soybean, milk, etc.)	72.41%	N/A	N/A

Table 1: Perceived drivers of market power. The table shows the frequency subjects ( $N = 145$ ) consider each of the drivers important. Additionally, the direction of the importance is shown through an average of the answers of the subject, where 0 is the total power for one of the factors and 100 means the total power for the opposite.

<sup>2</sup> Conv: Abbreviation of conventional

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We also assessed how participants rated the land-sale transaction in terms of the betterment of the transaction partners. A bit more than half of our participants (55.86%) did not believe that both parties improved their situation after the transaction, therefore engaging in win–win denial. Subjects in the Small-Farm Treatment were more prone to believe that “the transaction improves the situation of the regional government but worsens the situation of Mr. Smith” (47.30% believed so in the Small-Farm Treatment versus 35.21% in the Large-Farm Treatment). Antithetically, subjects in the Large-Farm Treatment were more inclined to believe that “the transaction improves Mr. Smith’s situation but worsens the situation of the regional government” (18.31% in the Large-Farm Treatment versus 10.81% in the Small-Farm Treatment). The descriptive difference, however, is not statistically significant ( $t(74;71) = 1.08, p = 0.14$ ).

For the given scenario of a land transaction, both groups of participants largely agreed on the land-buying farmer being predominately driven by profits (59.46% in the Small-Farm Treatment and 66.20% in the Large-Farm Treatment). Accordingly, we did not find a statistically significant difference in subjects’ perception of large and small farmers’ profit orientation ( $t(74;71) = 0.61, p = 0.27$ ).

Finally, serving as a robustness check for our main finding of market-power perception being driven by the buyer’s size, we asked subjects directly about their opinion on farmers selling their land; 52.41% believed that “when small family farmers sell their land, they often do so against their will,” yet only 25.52% of the subjects thought that “when large corporate farmers sell their land, they often do so against their will.” The asymmetry is statistically significant ( $t(145) = 5.32, p < 0.001$ ).

### 4. Discussion and Conclusion

Results from our online experiment show that people perceive land-buying owners of large farms as equipped with more market power than land-buying farmers who own small farms. Furthermore, our data indicate that farm size is a prominent driver in the attribution of market power, next to the form of ownership, farm management technique, and type of agricultural product. These findings are in line with agricultural narratives that see smaller, organic, and/or family-run farms as being at a disadvantage and therefore as worthy of regulatory protection (Altieiri 2009; Galluzzo 2016). Our results indicate that these smaller, organic, and family-run farms are explicitly seen as equipped with less market power than their larger, conventional corporate counterparts.

People rated owners of small and large farms as equally profit-oriented. This is interesting, as it shows that the difference in perceived market power is apparently not caused by different profit motives, suggesting that market power is rather seen as an external motive-independent feature that happens to be equally distributed between large and small farms.

Our data also indicate a roughly equal amount of win–win denial no matter whether the buying farmer owns a large or a small farm. Furthermore, the majority of our participants think that in such a transaction, the land-buying farmer loses and the land-selling regional government wins. Yet, when looking at different farm sizes, participants do not think that the owner of a small farm is even worse off after a land transaction than the owner of the large farm.

This result suggests that participants are generally suspicious about the win–win potential for land-buying farmers in public land sales. This could be interpreted as a attitude. Whether this attitude is in fact stable and may also transfer to other markets is a research question to be investigated. Future research is also needed to further explore what drives the power perception of land-market sales. To



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better understand how farm size drives the power perception of market transactions, researchers should investigate how different seller types (not a regional government) might influence the power perceptions within a land transaction. Additionally, studying the perceptions of market power and fairness toward potential land-buyers who are outcompeted by other land-buyers could contribute to a better understanding of the social perception of land markets.

Our study is subject to various limitations. We used a convenience sample that is not representative of the US population. To corroborate our findings, a study could be conducted with a larger sample, enabling us to control for participants' agricultural backgrounds.

Our findings contribute to gaining a better understanding of how people perceive market power in land-market transactions. Next to the economic research on the drivers of land prices, the effects of market-power concentration, and the efficacy of various types of land-market regulation, our investigation of the perception of market power adds an important component that allows for a better understanding of land-market discourses that form the basis of land-market regulations.

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