# An Empirical Analysis of the Farm Problem: Comparability in Rates of Return

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September 25, 2000

Keywords: farm business, farm problem, farm safety net, nonfarm business, profitability, rate of return

Select Paper for *Challenging the Agricultural Economics Paradigm* A symposium honoring the career of Luther G. Tweeten, Anderson Professor of Agricultural Marketing, Trade and Policy, September 10-11, 2000, Columbus, Ohio.

# 1 Introduction

The *farm problem* refers to economic difficulties of the farm sector. While perhaps intentionally vague so as to fit a wide variety of ills (Gardner, 1992), the list of difficulties always includes low returns, either to the farm household in the form of low incomes or to the farm business in the form of low return on assets. Most researchers extend the farm problem's symptoms to include variability in the stream of returns over time. In developed economies, the farm problem has been traditionally addressed with price and supply controls, but in the U.S. these were substantially altered with the Federal Agricultural Improvement and Reform (FAIR) Act of 1996, which suspended supply control mechanisms for many commodities, including feed grains, wheat, cotton, and rice. Passage of the FAIR Act followed more than a decade of relative income parity between farm and nonfarm households, and occurred in a sophisticated financial environment that allows farmers to manage production and price variability. Observers, including agricultural economists, felt safe to consider the farm problem a historic phenomenon, if they thought of it at all, and many envisioned an eventual end to direct farm budget subsidies (Bonnen and Schweikhardt, 1998).

However, emergency legislation created to compensate farm businesses for low output prices totaled more than $20 billion from 1998 to 2000. In light of the the level of supplemental assistance to farmers awarded to farmers since 1997, the FAIR Act is seen by many to provide insufficient support for adverse market outcomes, and the search for post-FAIR legislation with safety net characteristics now appears high on the agenda of policymakers (Harwood and Jagger, 1999). However, it is too early to say whether a safety net for agriculture would compensate all farmers for low prices, or only those farmers with low incomes regardless of market prices. It does seem desirable to judge the health of the farm sector

relative to the nonfarm economy, rather than in the ad-hoc manner used over the past few years. The purpose of this paper is to facilitate such a comparison.

The most popular way to examine the symptoms of the farm problem has been to compare the income of households that meet the U.S. Bureau of the Census definition of a farm (more than $1,000 in agricultural sales over a year) with income for all U.S. households. One way to carry out this out is to compare average farm household income, from the annual Agricultural Resource Management Survey (ARMS), to the average household income from the Bureau of the Census' Current Population Survey (CPS). This type of comparison can be found in Table 31 *Average Income to Farm Operator Households* of the Economic Research Service's *Agricultural Outlook*, published ten times a year. For a more direct assessment of the problem of low returns, household incomes, expenditures, and net worth can be compared to a minimum threshold or poverty line. Measures of the incidence, intensity, and and inequality of poverty have direct applications in assessing the low incomes. See Hopkins and Morehart (2000) for an example of this approach.

One might expect to get different results when using a business as the unit of analysis than when using the household, and comparability in income and wealth could co-exist with low rates of return to investments in agriculture (Gardner, 1992). Many farm households, for instance, compensate for low farm earnings through off-farm employment, which accrues to the household rather than the farm business. While the methods employed to compare returns at the household level are fairly well established, comparisons of returns at the business level are incomplete. Within the agricultural sector, business returns have been compared over time (Melichar, 1979), between different farm types (ERS, 1997) and regions (Angirasa et al., 1993). Outside of agriculture, farm returns have been compared to stock market returns (Hepp, 1996; Irwin et al., 1988) but not to other businesses themselves.

It is likely to be more helpful, however, to compare farm returns with returns attained on similar, family-owned and -operated nonfarm businesses, because households that operate a nonfarm proprietorship, such as a restaurant, dry cleaners, or store are potentially exposed to the same macroeconomic shocks, types of risk, and asset immobility that affect farm businesses. All family-owned businesses, regardless of whether they are a farm or nonfarm proprietorship, can add to as well as drain a significant proportion of family income and wealth. By putting forth the entrepreneurial class as the proper reference group for farm businesses, our analysis significantly adds to the empirical assessment of the magnitude of the farm problem.

In the section that follows we present ethical and economic rationale for finding comparability in rates of return, and explain the ratio-based approach used to proxy business returns. Then, we discuss the USDA and Federal Reserve microdata used to model the farm and nonfarm sector. Finally, we present our results and summarize the major findings and policy implications.

## 2 Firm Financial Performance

The desire for comparable returns for farm and nonfarm businesses is often motivated by an ethical concern for both distributive justice, i.e., that groups receive fair treatment in the distribution of material resources, and commutative justice, i.e., that groups receive fair exchange for their goods and services (Bonnen and Schweikhardt, 1998). In addition to ethical concerns, persistent gaps in relative returns are an indication of potential market inefficiency, as economic arbitrage theory predicts that capital will seek its highest return. Transactions need not be direct between farm and nonfarm proprietorships in the sense that

low returns on a cotton farm should motivate a change in business model to become a grocery store. Asset markets, however, will reward those who take advantage of opportunities to arbitrage between differences in asset returns, by entering into high-return sectors and exiting from low-return sectors. However, the theory applies to economic, rather than accounting, rates of return, so that arbitrage may not bring equality in accounting returns if the investments have different levels of capital gain or if risk and taxation liability are different. Further, the theory ignores structural issues, so that while constant returns to scale and free entry are not necessary conditions, they are sufficient for equality across sectors (Bliss, 1987).

Corporate earnings across sectors can be compared using stock price and dividend values to measure firm profitability, under the assumption that stock prices reflect all information related to the profitability of a corporation. Sole proprietorships, however, have no outside shareholders by definition, so rates of return must be inferred through accounting methods used to measure profitability.

*Dupont analysis* yields the return on asset *(ROA)* measure of firm profitability, reflecting the profitability per dollar of assets. The accrual measure of profitability combines information from both the income statement and balance sheet of a businesses. The popularity of ROA is in part due to its ability to compare firms of different sizes, compare returns for firms from different sectors of the economy, and compare business performance with financial instrument performance. Dupont analysis allows for the relationship between sales, costs, and assets to be examined, and these relationships will not be as readily apparent when looking at the components of ROA individually.

Decomposition of ROA into analytic components can also yield insight into the deter-

minants of financial performance (Featherston et al., 1988). We decompose ROA into two other common ratio measures, operating profit margin ($OPM$) and asset turnover ($AT$), to illustrate differences in profitability between firms of different sizes and between firms in the farm and nonfarm sector. Operating profit margin is a common measure of profitability, although constructed entirely from income statement information. Operating profits reflect the ability to generate revenues and control costs in such a way as to generate a profit. Asset turnover is a ratio constructed from both income statement and balance sheet information, reflecting the degree to which assets generate revenues. Table 1 provides a useful definition and interpretation of the three measures as used in the present study.

**Table 1. Key Financial Measures**

| **Measure** | **Definition** | **Interpretation** |
|---|---|---|
| Return on Assets (ROA) | (Net cash income generated by all assets - labor costs - management costs + taxes + interest payments) / total assets. | Average interest earned on all investment. |
| Operating Profit Margin (OPM) | (Net cash income generated by all assets - labor costs - management costs + taxes + interest payments) / gross revenues. | The proportion of earnings or revenue available to compensate debt and equity capital. |
| Asset Turnover (AT) | Gross revenues / total assets | The volume of business flowing through the asset base. |

# 3 Data

Early studies of farm returns on assets, reviewed in Tweeten (1989) presented interpretation problems because their rates of return were imputed from sector data, rather than disaggregated firm data. Returns gathered from systematic surveys allow returns to be treated as a distribution, i.e. explicitly showing low-return firms, high-return firms, and all firms in between. This treatment of returns can be contrasted with studies that put forth a *representative firm* that is representative of only a single point within the entire distribution, in

most cases the average firm. Because surveys can be constructed so as to be representative of an entire population of firms, researchers need not resort to anecdotal evidence to make a point about sector heterogeneity. Heterogeneity of sector performance is important, particularly at the lower end of the distribution of firms, where low productivity is one indicator of possible early exit. While ROA from surveys can be compared to financial instruments, surveys often contain other financial and management characteristics that can be used to shed light on why certain types of firms experience high or low returns.

Farm business data used in the analysis comes from the 1997 Agricultural Resource Management Survey (ARMS), an annual survey administered and maintained by the National Agricultural Statistics Service and the Economic Research Service, both USDA agencies. The ARMS survey contains over 10,000 observations, stratified into 13 sales classes for each of the 48 contiguous states. The ARMS survey is also multi-phase, requiring the use of a complex weighting strategy in order to aggregate at the state, regional, or national level. Responses in ARMS are expanded according to the probability of being selected, so that each response represents the surveyed firm and other farm households that are like it. The data set used in this study was restricted to those farm businesses that had over $50,000 in sales over the course of a year, and contained 5,480 observations. This restriction, which only embraces a third of the total number of farms on a national scale, does nevertheless include over 90% of the value of production of the entire agricultural sector. Due to the many important differences between small farms and large farms, we treat agricultural businesses with sales less than $250,000 as a separate group from those with sales greater than $250,000. The breakpoint corresponds to the recommendation of the National Commission on Small Farms (1998).

Information on non-farm businesses was obtained from the Federal Reserve Board's Sur-

**Table 2. Median values for farm and nonfarm business data, 1998**

| Variable | Farm | Nonfarm |
|---|---|---|
| Cash Receipts | 114,082 | 120,000 |
| Variable Costs | 67,336 | 58,950 |
| Unpaid Labor | 20,228 | 39,125 |
| Management | 5,262 | 6,000 |
| Assets | 460,177 | 80,000 |
| *Farm data from 1997 ARMS; Nonfarm data from 1998 SCF* | | |

vey of Consumer Finance (SCF) for 1998 (covering the 1997 calendar year). This nationwide triennial survey collects detailed information on all household assets (including residences, other real estate, businesses, all types of financial assets, pensions, and other assets) and liabilities (including mortgages, installment loans, credit card debt, pension loans, and other debts) along with information to analyze wealth (income, demographics, marital history, employment history, attitudes). The SCF uses a dual frame sample consisting of 3,000 households from a standard representative sample and 1,500 households drawn from a special high wealth oversample. To correspond to the the farm businesses modeled, the data set in this analysis was restricted to households with sole proprietorship businesses with more than $50,000 in annual sales, and contained 245 observations.

Median values taken by components of the ROA measure are listed in Table 2. Charges for the opportunity cost of proprietor labor were calculated using proprietor labor hour inputs and a wage rate from an independent source. For farm businesses, unpaid labor was charged $10 per hour, the rural manufacturing wage. For nonfarm businesses, a wage rate was used equal to the median hourly wage for the type of job performed by the proprietor. Median hourly wages for each job type were estimated from the unused SCF observations (the wage-earning households). A charge for management equal to five percent of gross sales of the firm was also calculated and subtracted from the net cash income of the firm.

# 4 Results

Results are presented in two sections. First, we look exclusively at commercial farms and compare the returns of smaller-sized farms to larger farms. Then, we compare the two classes of farm business to all nonfarm businesses with sales greater than $50,000. Return measures are presented as distributions of *ROA* as well as its *OPM* and *AT* components.

## 4.1 Returns of smaller farms and of larger farms

Figure 1 shows, for smaller and larger farm businesses, return on assets using the cumulative distribution function *(cdf)*. In the figure, each *cdf* shows returns at every quantile of the distribution. Overlaid *cdfs* are read horizontally at the quantiles. As an example of how to compare two curves, the dotted lines compare the median ROA for each group. Note that while negative returns exist on both small and large farms, the incidence of negative returns is much less for larger farms. At every point, the distribution of returns for large farm businesses first order stochastically dominates (exceeds at every point in the distribution) the return to assets of small farm businesses. Returns at the median are higher (more than five times higher) for larger farm businesses than small businesses. The third curve shown in the figure is for all farm businesses with sales greater than $50,000 per year. Note that because among farms with more than $50,000 in sales, most farm businesses have sales less than $250,000 per year, the distribution for all sizes of commercial farms closely resembles the distribution for small farms. At the bottom of Figure 1 the probability density function *(pdf)* is shown; it represents the slope of the *cdf* at every point in the distribution. While the *pdf* may be a more familiar device to some readers it cannot be used to rank distributions or economic outcomes, therefore we will present our results primarily through the *cdf* device.

Decomposition of ROA into AT and OPM brings additional insight into the differences by size of farm business. Figure 2 shows that the relative economic advantage possessed by larger farms extends to the operating profits and asset turnover distributions as well. The top panel in Figure 2 shows that larger sized farm businesses are more cost efficient in production. The bottom panel of Figure 2 shows that the distribution of asset turnover for larger farms stochastically dominates the distribution of asset turnover for smaller farms, indicating that large farms do not just have more assets, but use their assets more efficiently in producing sales. The financial performance gap (the distance between the *cdf* of large and small farm businesses) decreases in OPM but increases in AT, implying that cost control can be achieved by well-managed small farms, but that well-managed small farms did not achieve a sales volume relative to asset value equal to well-managed large firms. The steady and positive relationship between farm size and business income has been a persistent feature of the structure of agriculture and is not likely to be surprising to most observers (ERS, 1997).

### 4.2 Farm and nonfarm returns

Figure 3 provides a comparison of the *cdf* as well as the *pdf* of return on assets for farm and nonfarm businesses using ARMS and SCF data for 1997. Note from the *pdf* that the dispersion of returns is much greater for nonfarm businesses, possibly due to the greater inherent heterogeneity of the rest of the economy relative to the farm sector. Table 3 shows the rate of return for three quartiles of interest. Median returns for nonfarm businesses are near 3 percent, for small farms near zero, and for large farms nearly seven percent.

Because the distributions cross, the ordering of farm and nonfarm businesses are reversed

**Table 3. Return on Asset Quantiles for Farm and Nonfarm Businesses, 1998**

| Population | 25th Percentile | 50th Percentile | 75th Percentile |
|---|---|---|---|
| All Farms | -0.072 | -0.002 | 0.065 |
| Small Farms | -0.076 | -0.005 | 0.057 |
| Large Farms | -0.003 | 0.069 | 0.187 |
| All Nonfarm Businesses | -0.213 | 0.029 | 0.374 |

away from the median, so nonfarm financial performance trails small farms at the 25th percentile and exceeds large farms at the 75th percentile. Large farm financial performance ceases to exceed nonfarm businesses at about the 60th percentile, where return on assets exceed 10 percent, while small farm rate of return does not exceed nonfarm returns past the 40th percentile, where returns are negative 2 percent.

Decomposition of these results sheds light on the analytical question of why return measures differ between sectors. OPM distributions (top panel of Figure 4) show that farm and nonfarm proprietorships were much more alike in their ability to generate a profit during 1997. Large farms in particular were able to control costs relative to sales volume compared to nonfarm businesses, exceeding margins for nonfarm businesses over all but the top 20 percent of the distribution. Perhaps this should not be a surprising result, since the aspects of business management that lead to profitability are the same no matter what type of business, and have the same potential to be successfully executed. The median operating profit margins of all farm businesses and nonfarm businesses are quite close, although nonfarm businesses dominate farm businesses as a group.

A comparison of farm and nonfarm business asset turnover ratios shows dramatic differences in how efficiently assets are used to generate revenue (bottom panel of Figure 4). Farm businesses have much lower asset turnover rates than non-farm businesses. The inability to influence the lengthy biological processes in agricultural production and the long idle time for many agricultural assets, including land and machinery assets, could contribute to lower

asset turnover relative to nonfarm businesses. Perhaps more importantly, the degree of asset ownership can greatly influence the asset turnover ratio. Farm or non-farm businesses that lease the majority of their assets can achieve substantially higher turnover rates than those that own the majority of assets.

Even though nonfarm businesses dominate all farm businesses in OPM and AT, they do not dominate all farm business in the composite measure, ROA. This is because high asset turnover can be associated with a business with either a positive or a negative operating profit margin, and high sales volume can amplify marginal profits in either direction. It appears that AT, in particular the absolute level of assets employed in the business, that drives the wedge between farm and nonfarm financial performance, measured as ROA.

Economic theory predicts convergence in long-term returns, rather than short-term returns. Ideally, we would compare long-term returns for each firm in the survey to examine profits at more than just a single point in time, and smooth over business cycles that affect the distribution as a whole as well as firm-level dynamics of investment practices. Unfortunately, neither the SCF nor the ARMS data are structured as panel surveys, and the best that we can do is compare repeated cross-sections for additional survey years.

Figure 5 shows ROA for both farm and nonfarm businesses for the three years (1991, 1994, and 1997) when comparable data existed for both farm and nonfarm businesses. The top panel shows the *cdf* and the bottom panel shows the *pdf* of ROA. Note that the general shape and location of the farm ROA distributions changes little over the periods examined. No first-order ranking among years is possible, as each year's distribution crosses another at some point. This is the case even for 1998 (included even though there is no corresponding nonfarm business measure), when low prices could have conceivably altered the distribution

drastically.

More telling, however, are the yearly differences in nonfarm returns. While the nonfarm distributions shift widely over the years, a clear ordering exists among the years, when 1997 was the best outcome, followed by 1991 and then 1994. Evidence suggests that the income of sole proprietors was strong in 1997 relative to the previous year, as aggregate proprietor incomes grew 4.7% at the same time that the number of those claiming self-employment as the primary occupation decreased by 1.9% (Headd, 2000).

The measured difference between farm and nonfarm returns could in theory represent an equilibrium if ROA as measured leaves out important sources of returns for agricultural firms, such as capital gains in the agricultural sector. Agricultural sector assets are dominated by agricultural real estate, which makes up over 75% of the overall farm asset portfolio on average. Agricultural real estate has appreciated at an average compound rate of 4% per year since 1987 (ERS, 2000), so farm businesses may tolerate a low current return on assets in exchange for a relatively higher capital gains in the asset value. Under this strategy, the asset is held both for its annual dividend as a production input, in the form of net cash returns, as well as its investment value, in the form of a capital gain. We simulate the effect of an increase in the value of agricultural real estate by adding 5% of the value of real estate to the firm's current pretax cash income. The top panel of Figure 6 demonstrates that a capital gain adjustment would be sufficient to close the gap at the median between all farm and nonfarm returns in 1997. The effect of the capital gain is to shift the crossing point of the nonfarm business distribution further to the right, so that at the same time that the gap between farm and nonfarm businesses decreases at the upper end of the distribution, it is getting greater at the lower end. Capital gains increase the proportion of farms that exceed nonfarm returns as well as increases the range over which farms dominate nonfarm

businesses.

Another factor that may be responsible for differences in farm and nonfarm returns is the effect of government payments on farm returns. Direct government payments are designed to compensate for low returns (although payments are not means-tested), so that we might expect some of the gap between farm and nonfarm returns at the lower end of the distribution to disappear if not for the direct government support that exists for farms but not for other businesses. The bottom panel of Figure 6 demonstrates the effect on ROA of an elimination of direct government payments, which consisted almost entirely of so-called AMTA payments, in 1997. The overall shift in the *cdf* appears to be slight, smaller in magnitude than the effect of capital gains, and the effects are relatively evenly distributed throughout the distribution. While the FAIR act has been criticized for failing to provide an adequate safety net for farm households, it seems that the percentage of extremely adverse outcomes realized by farms is lower for households operating nonfarm businesses. Of course, direct payments not only enter into current returns, but are capitalized into asset values. However, no attempt to adjust asset values accordingly was done for this data, and the shift must be interpreted as the short-term effect of an unanticipated loss of income.

Figure 7 compares the level of assets used in farm and nonfarm businesses, showing dramatically higher levels of assets used in farm businesses. Smaller farms, who also employ a vastly larger set of assets than nonfarm businesses, are disadvantaged relative to nonfarm businesses regarding their ability both to control costs as well as their ability to efficiently produce sales from a given asset level. Larger farms, on the other hand, are highly competitive at controlling costs, but perhaps because of high asset levels they lag high-performing nonfarm businesses.

One of the primary implications of a low return to investments is a low rate of wealth creation for farm households. In particular, this will be true if a household depends solely on agricultural sources of income and equity investments, and fails to diversify outside of their own businesses. The ARMS and SCF data can be analyzed to detect differences in net worth between households operating farm and nonfarm sole proprietorships. To carry out this comparison, we combined the business and non-business assets and debt for each household. The bottom panel of Figure 7 shows that the net worth of households with a farm business is quite similar to the net worth of households with a nonfarm business. The median wealth of households with nonfarm businesses is slightly less than the median wealth of all households with a farm business, and much smaller than the median wealth of large farm businesses. It is also relevant to compare wealth levels of proprietorships to wealth levels of wage-earning households, also shown in the bottom panel of Figure 7. As seen, the level of wealth found in the wage-earning population is dominated by all classes of household proprietorships.

## 5 Conclusions

Our analysis set out to compare business returns in agriculture to returns outside of agriculture. We used a unique data set that allowed us to look at a wide range of sole proprietorship businesses to assess comparability in returns. This approach allowed for a deeper investigation of ways in which farm businesses are different from nonfarm businesses. We found three major differences.

First, nonfarm businesses achieved a median rate of return that was slightly greater than all farm businesses and slightly less than farm businesses with sales greater than $250,000.

When a capital gain was considered on farmland, the gap between farm and nonfarm business rates of return disappeared, and the gap between large farm and non-farm businesses grew. The effect of direct government payments, on the other hand, was slight and did not change the ordering of median returns. The entire distribution of nonfarm returns were more dispersed relative to farm returns, indicating that even though the complexity and heterogeneity of farming is appropriately stressed in forming farm policy, performance of the sector as a whole is stabilizing relative to the rest of the economy. At the lower end of the distribution, for firms with negative return on assets, nonfarm businesses performed worse than farm businesses.

Second, return measures can be decomposed into a profitability measure (operating profit margin) as well as an efficiency measure (asset turnover). Large farms fare well relative to nonfarm businesses regarding their profitability, with similar to greater OPM for farm businesses over much of the distribution, although high-return large farms under-performed high-return nonfarm businesses. Smaller farms, on the other hand, have lower profit margins than nonfarm businesses at every point in the distribution. The most compelling difference between farm and nonfarm businesses is found in the ability of nonfarm businesses to generate much higher sales from assets relative to farm businesses.

Third, the net worth positions held by households with nonfarm businesses largely coincides with the net worth positions of households with farm businesses. In the case of large farm businesses, total household wealth is greater than wealth of households with nonfarm businesses. This suggests that despite highly variable rates of asset depletion and creation in the nonfarm proprietorship sector, similar patterns of household wealth have attained. The level of wealth creation for nonfarm businesses is likely in part achieved through diversification of the investment portfolio of households. While farm businesses may also

diversity, their strikingly similar distribution of assets and wealth indicate that they likely do much less diversification than nonfarm entrepreneurs.

Two main policy implications appear to come out of the study. First, because most of the value added in agriculture occurs on farms that achieve profit levels similar to profits achieved on nonfarm businesses, the agricultural sector does not seem to be suffering from the *farm problem* as defined by low returns. Low returns, where they exist, are slightly augmented by capital gains and government payments, but these do not appear to be operating that significantly change the distribution of returns, implying that their incidence does little to target low-return businesses. Safety nets, where necessary, should be put in place where returns are judged to be excessively low at the household level. Diversification of farm investments outside of the sector would likely boost net returns for the overall household portfolio, particularly for small farms, who appear to have significant levels of poorly-performing assets.

Second, the *farm problem* is frequently interpreted as one of excessive volatility in returns. Our analysis indicates, however, that variability in the distribution of returns is much greater for the nonfarm business sector than the farm business sector. More direct testing is required here, however. Returns for a given firm may be much more variable than quantile returns if a firm changes its order within the distribution each year due to idiosyncratic shocks. One can imagine that the large variation in performance at different quantiles shown here is a lower bound on the firm-level variation in business returns. Both farm and nonfarm businesses are likely to change their ordering within the distribution from year to year. Unfortunately, collecting data required to follow returns over time for a farm or nonfarm business is not a component of the Survey of Consumer Finances or ARMS.

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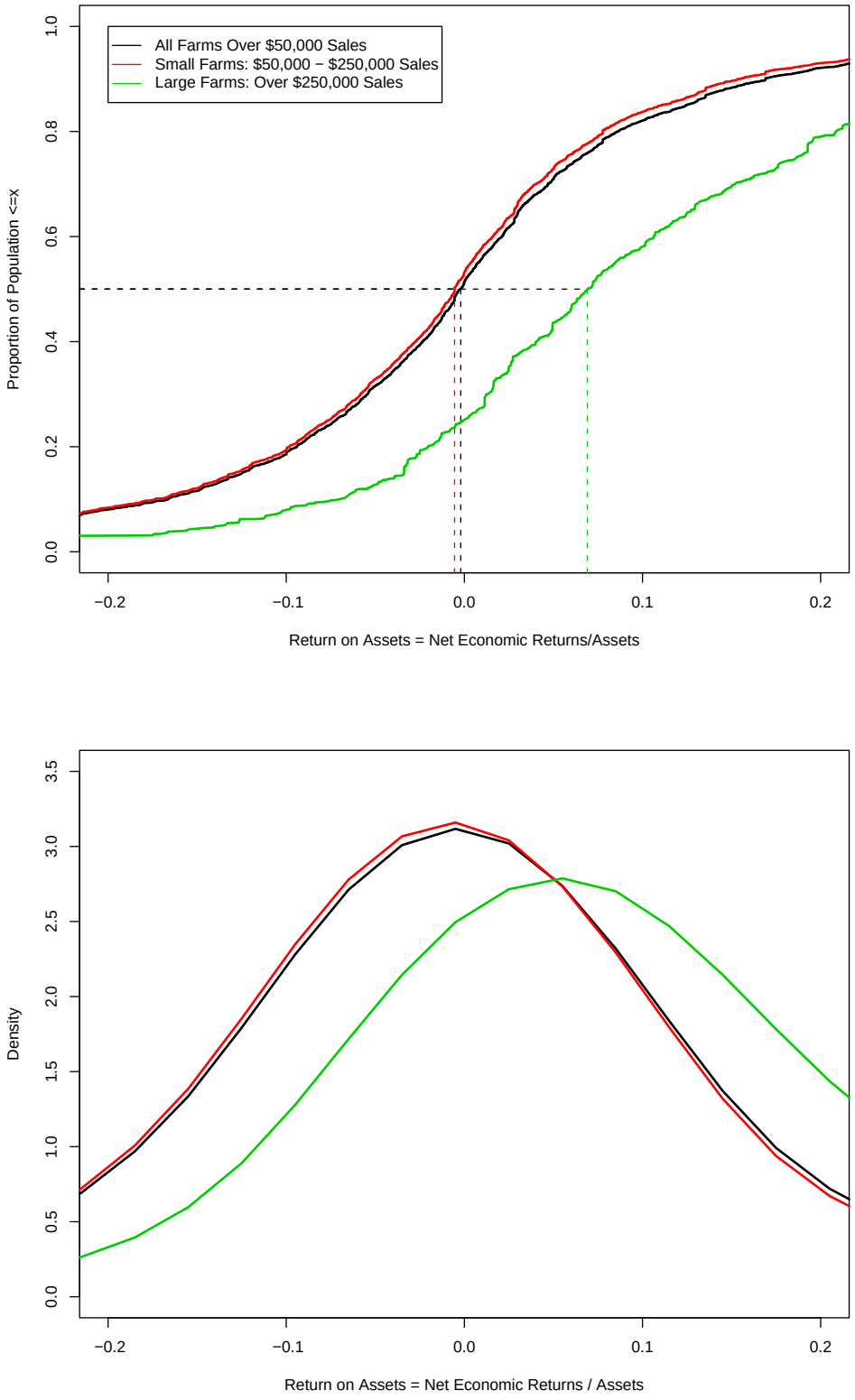


Figure 1: Cumulative Distribution (top) and Probability Density (bottom) of Returns on Assets to Farm Businesses

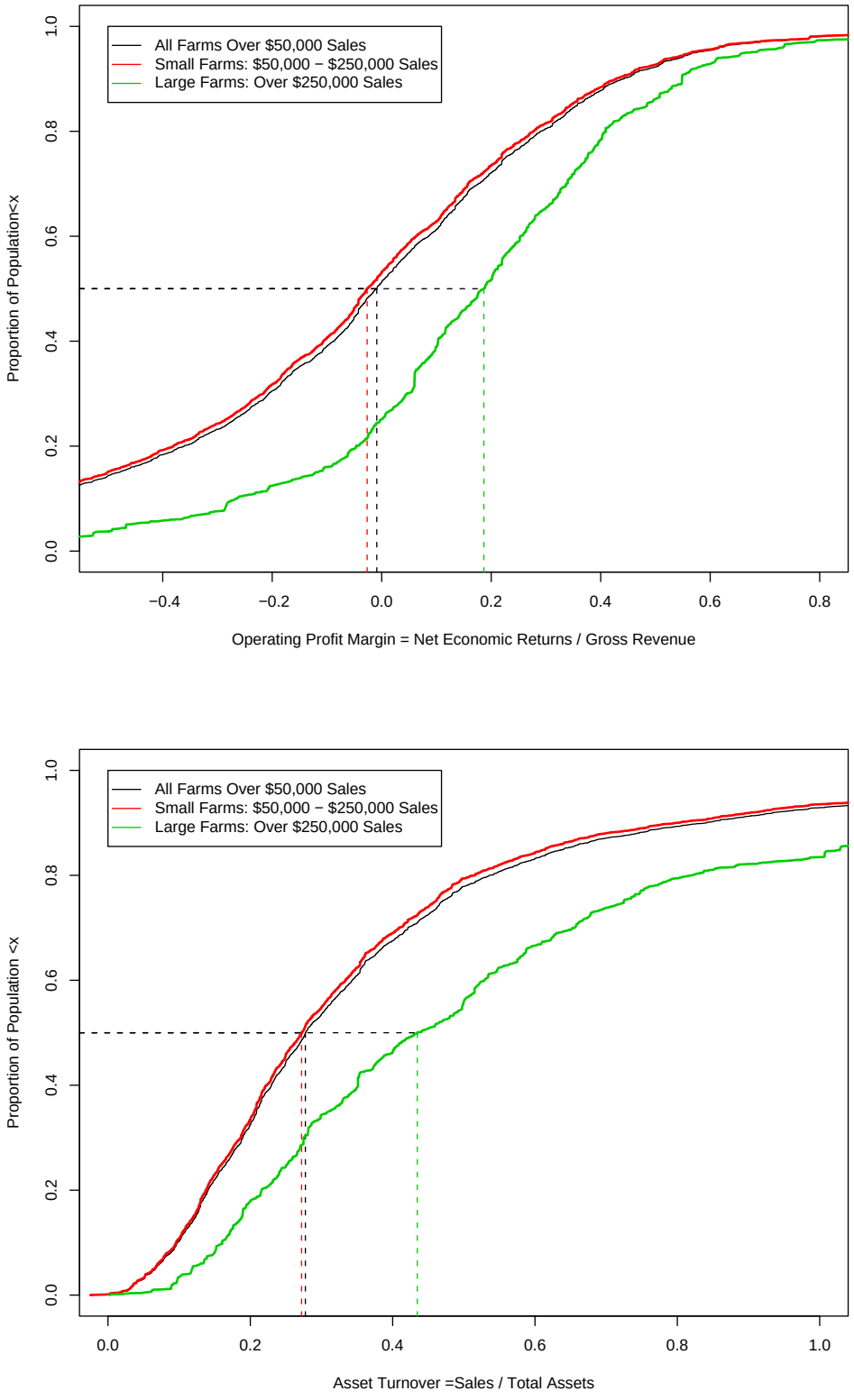


Figure 2: Cumulative Distribution of Operating Profit Margin (top) and Asset Turnover (bottom) for Farm Businesses, by Sales Class, 1997.

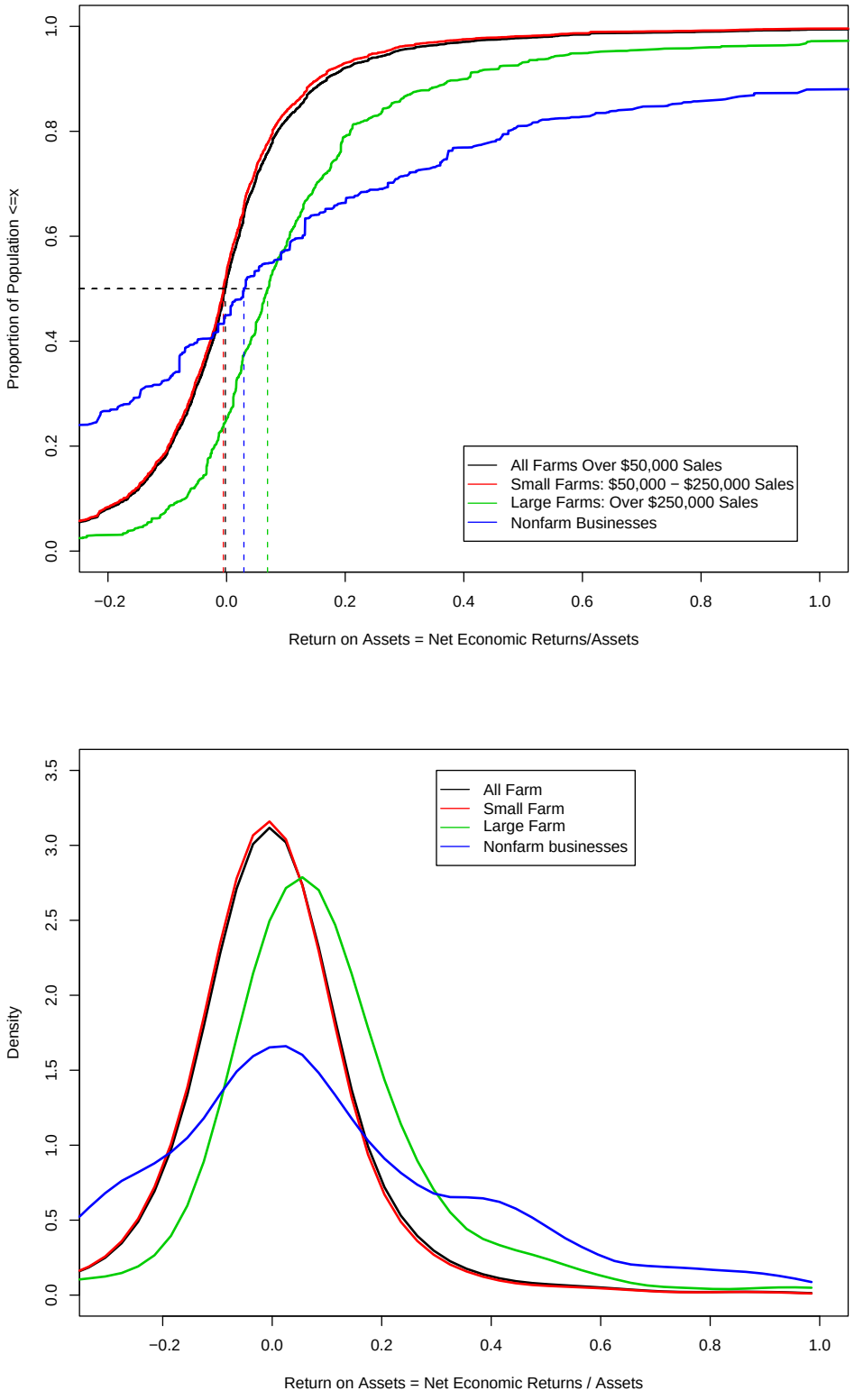


Figure 3: Cumulative Distribution (top) and Probability Density (bottom) of Returns on Assets for Farm and Nonfarm Businesses, 1997.

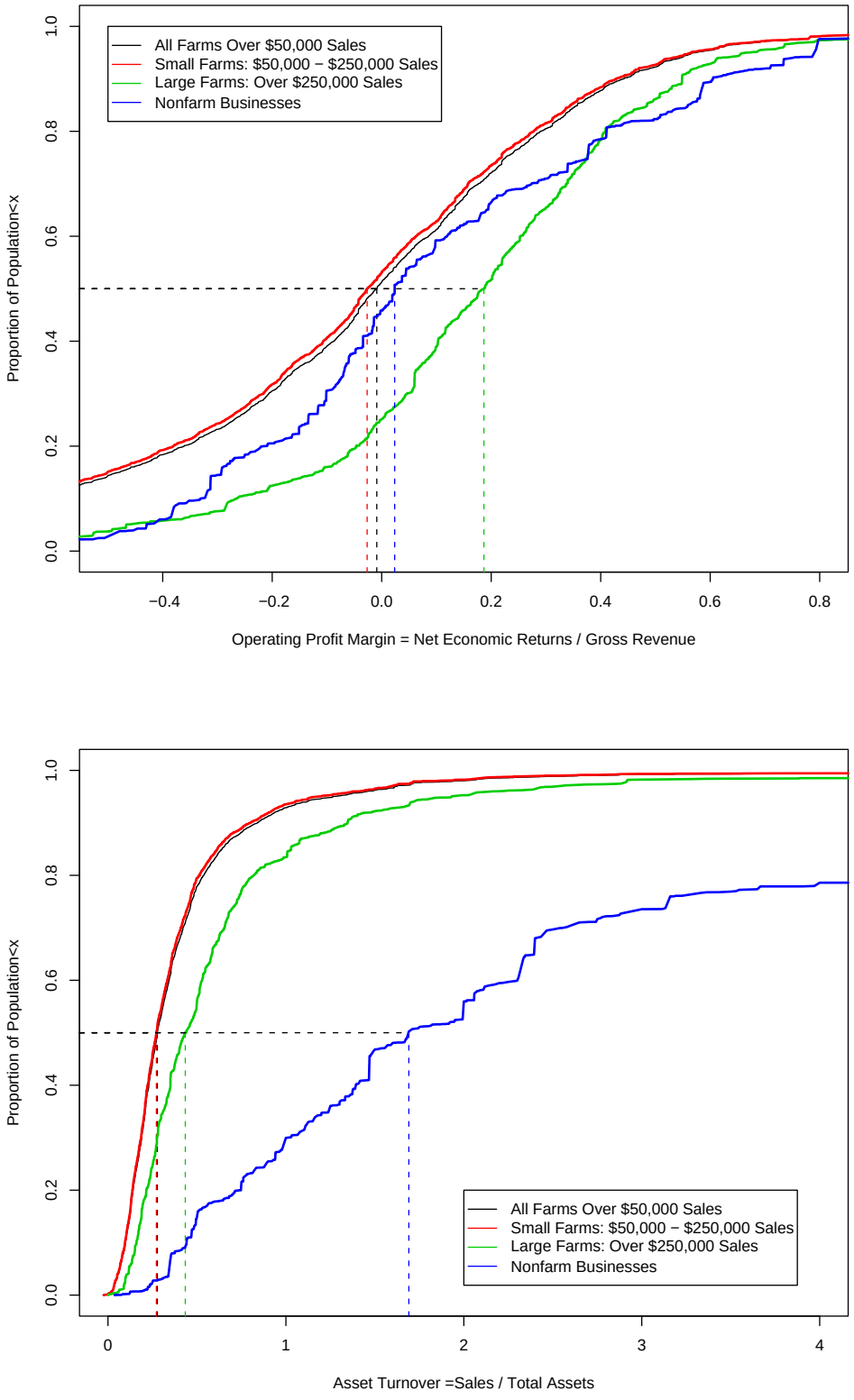


Figure 4: Cumulative Distribution of Operating Profit Margin (top) and Asset Turnover (bottom) for Farm and Nonfarm Businesses, by Sales Class, 1997.

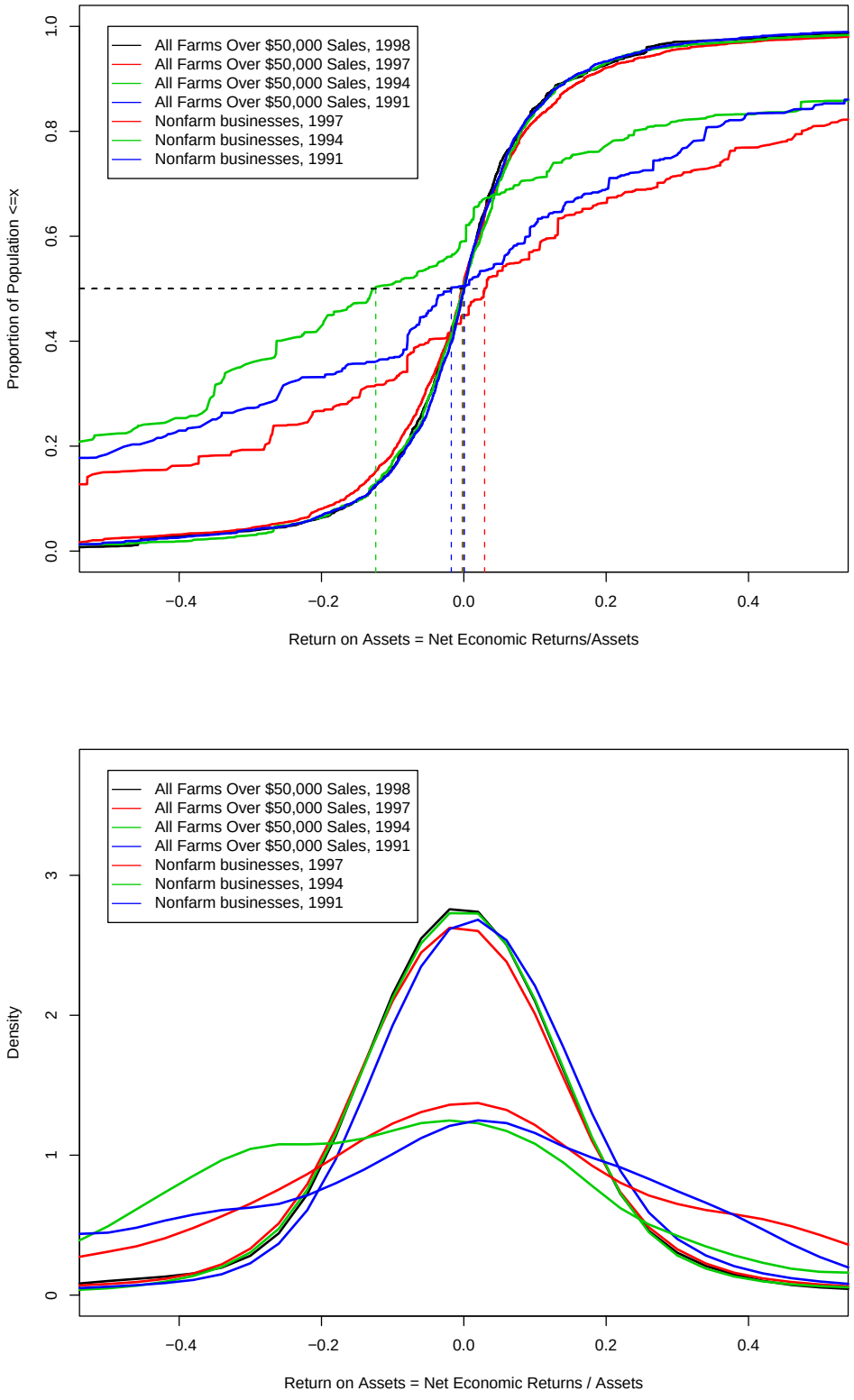


Figure 5: Cumulative Distribution (top) and Probability Density (bottom) of Returns on Assets to Farm and Nonfarm Businesses, 1991 to 1998.

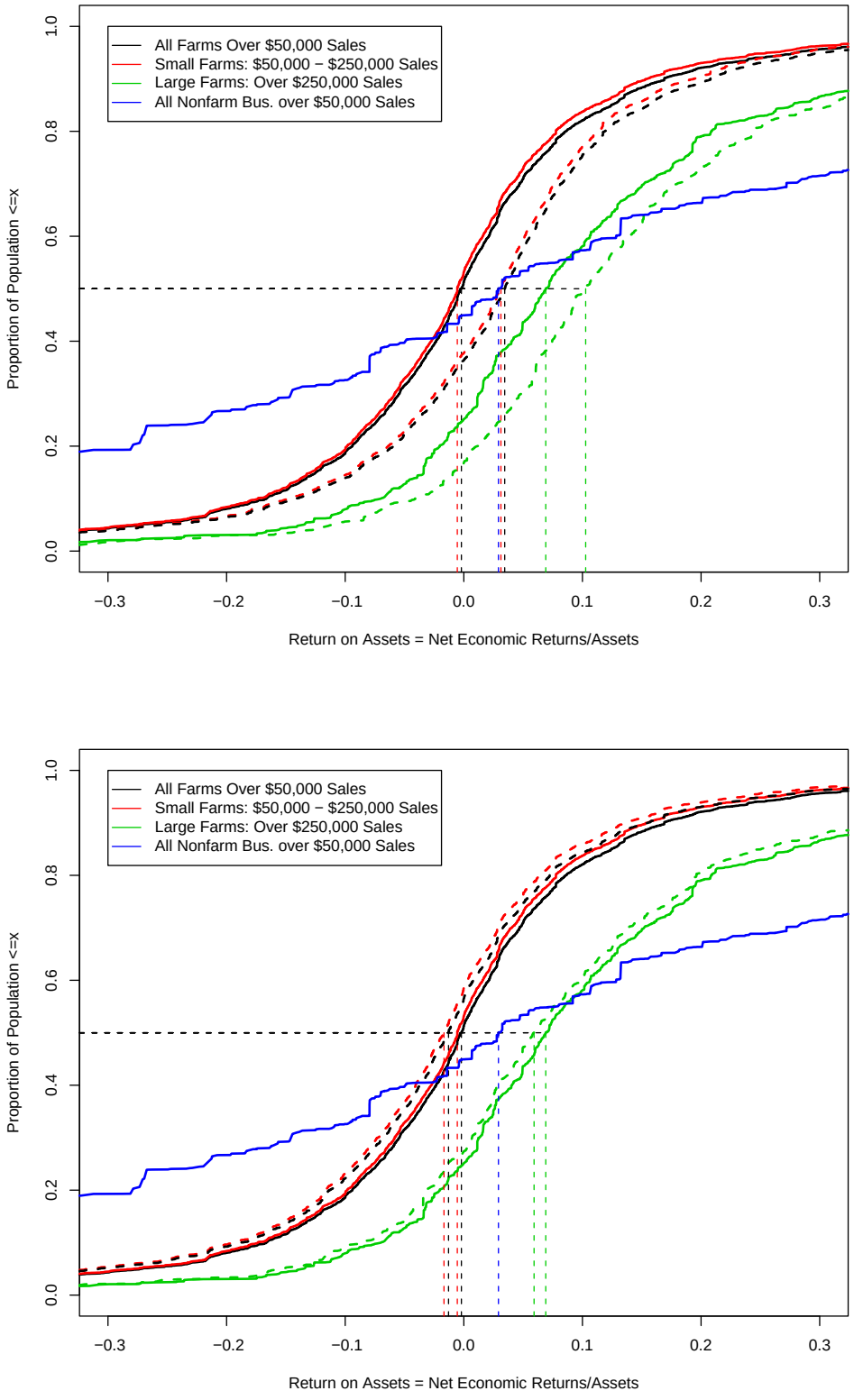


Figure 6: Cumulative distribution of returns on assets simulations with a 5% capital gain on farm real estate (top) and without direct government payments, 1997

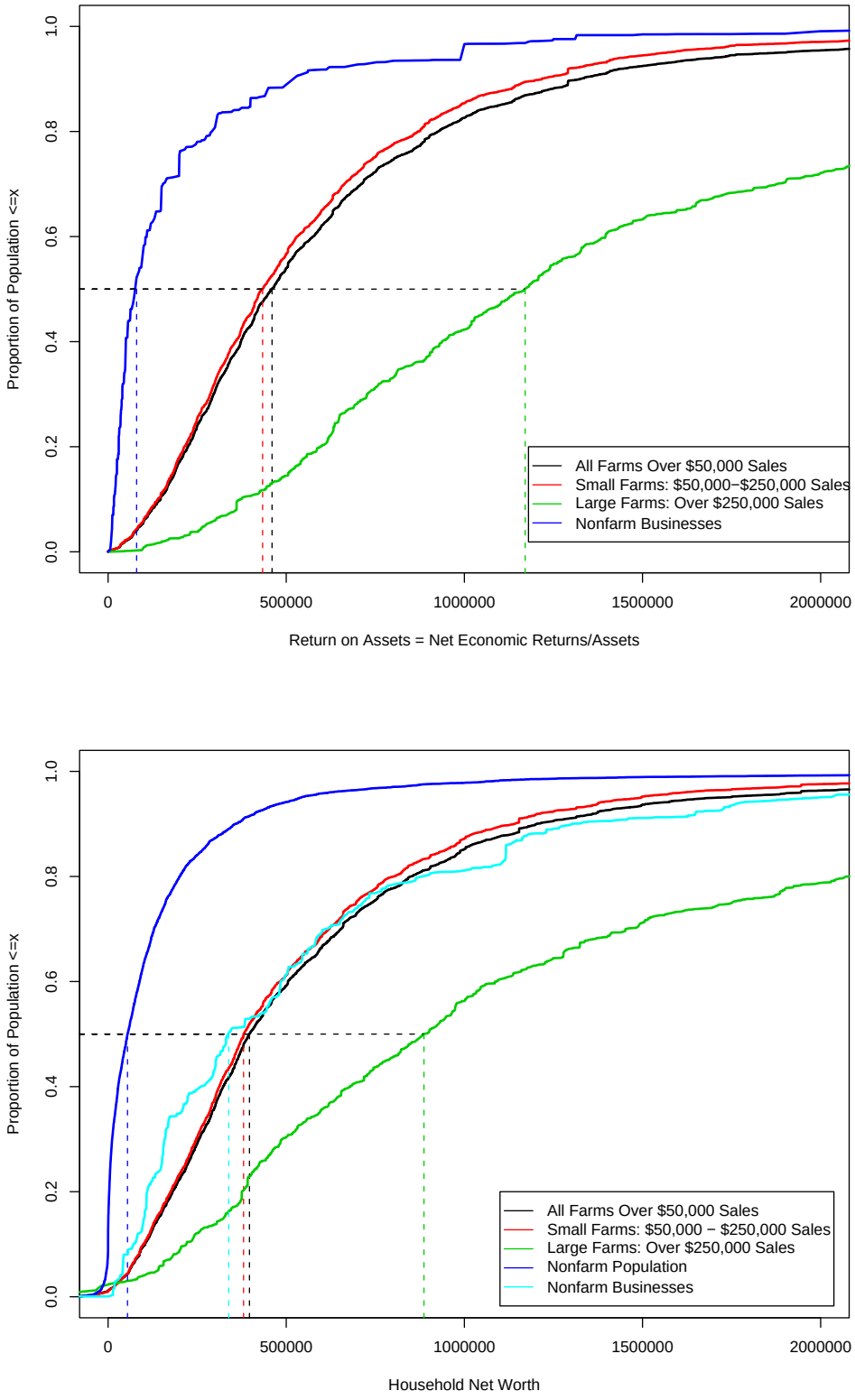


Figure 7: Cumulative Distribution of Total Assets for farm and nonfarm businesses (top) and household net worth for farm households, nonfarm households, and all households, 1997