

# Financial Performance Benchmarks

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# Outline

- Financial Ratios
- Financial Stress
- Five Year Benchmarks
  - Farm Size
  - Farm Type
- Profit Margin Persistence
- Competitive Advantage

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# Financial Ratios

- Sample
  - Farms with continuous data from 2004 to 2008.
  - 1,062 farms
  - Selected farm characteristics:
    - Value of Farm Production           \$355,001
    - Net Farm Income                   \$85,239
    - Total Farm Assets                 \$1,074,187
    - Total Acres                           1,892

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# Financial Ratios

- Operating Profit Margin Ratio
  - $(\text{Net Farm Income} + \text{Interest} - \text{Unpaid Labor}) / (\text{Value of Farm Production})$
  - Average:
    - $(85,239 + 19,074 - 47,370) / (355,001) = 0.1604$
  - Benchmark:
    - **0.2804**

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## Financial Ratios

- Asset Turnover Ratio
  - (Value of Farm Production) / (Average Total Assets)
  - Measures the effectiveness of the firm in utilizing assets
  - Example:
    - $(355,011) / (1,074,187) = 0.3305$
  - Benchmark:
    - **0.3409**

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## Financial Ratios

- Total Expense Ratio
  - (Total Farm Expense) / (Value of Farm Production)
  - Example:
    - $(269,762) / (355,011) = 0.7599$
  - Benchmark:
    - **0.6592**

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## Financial Ratios

- Adjusted Total Expense Ratio
  - (Total Farm Expense + Unpaid Labor) / (Value of Farm Production)
  - Example:
    - $(269,762+47,370) / (355,011) = 0.8933$
  - Benchmark:
    - **0.7651**

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## Financial Ratios

- Economic Total Expense Ratio
  - (Total Farm Expense + Unpaid Labor + Opportunity Charge on Owner Equity) / (Value of Farm Production)
  - Example:
    - $(269,762+47,370+60,873) / (355,011) = 1.0648$
  - Benchmark:
    - **0.9372**

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## Financial Ratios

Measure	Average	Benchmark
TER	0.7599	<b>0.6592</b>
ATER	0.8933	<b>0.7651</b>
ETER	1.0649	<b>0.9372</b>

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## Financial Stress

- Components of financial stress:
  - negative earnings
    - rate of return on farm equity
    - net farm income from operations minus opportunity cost for unpaid labor
  - debt to asset ratio above 0.70

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## Financial Stress

- Percentage of Farms
  - Negative Return on Equity = 34.93%
  - High Debt = 10.17%
  - Financially Stressed = 5.56%

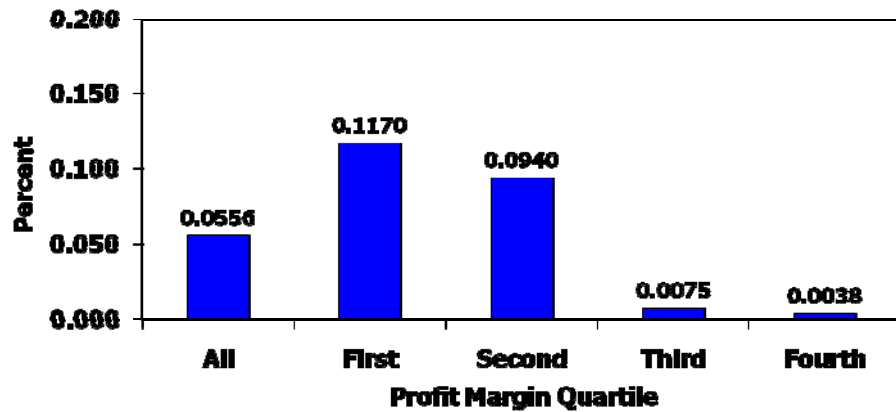
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## Financial Stress

Measure	Average	Benchmark
Negative ROE	34.93%	<b>0.38%</b>
High Debt	10.17%	<b>3.77%</b>
Financial Stress	5.56%	<b>0.38%</b>

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## Financial Stress



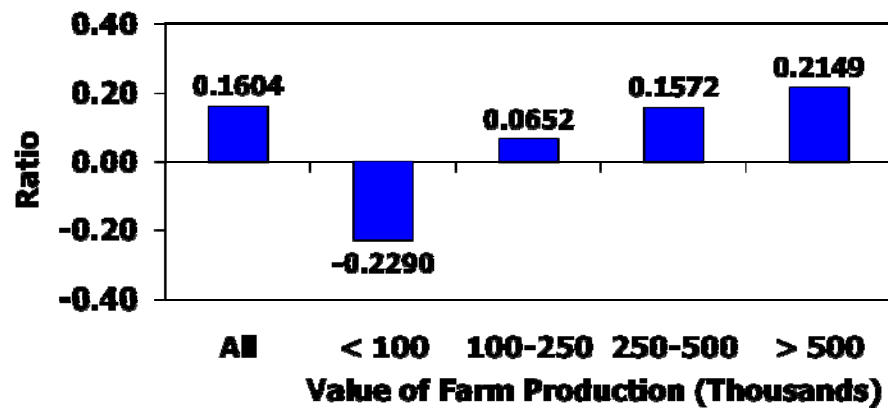
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## Financial Performance Farm Size

Category	Percentage of Farms
VFP less than \$100,000	13.47%
VFP between \$100,000 and \$250,000	34.18%
VFP between \$250,000 and \$500,000	32.11%
VFP greater than \$500,000	20.24%

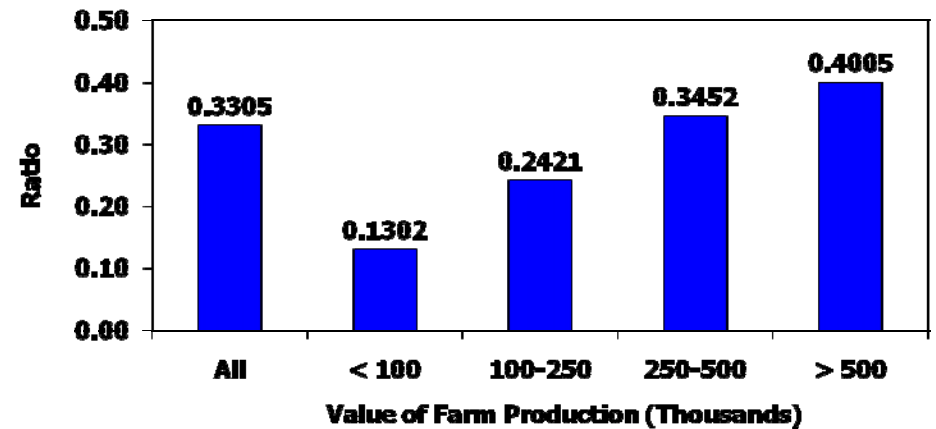
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## Profit Margin Ratio



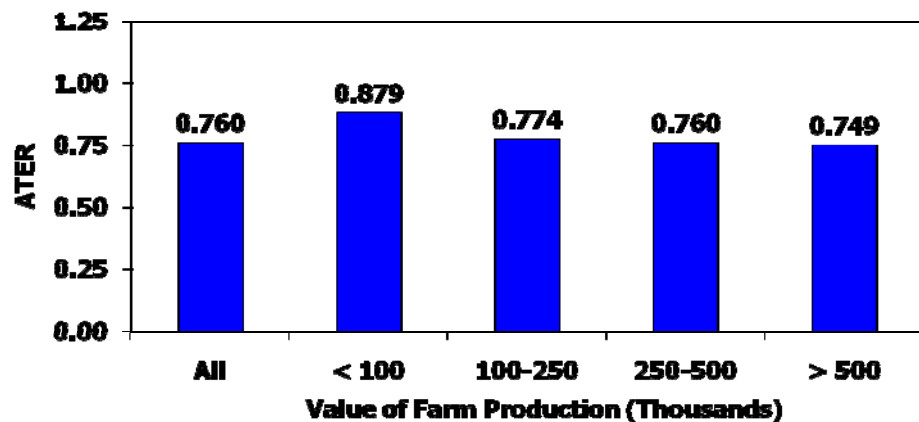
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## Asset Turnover Ratio



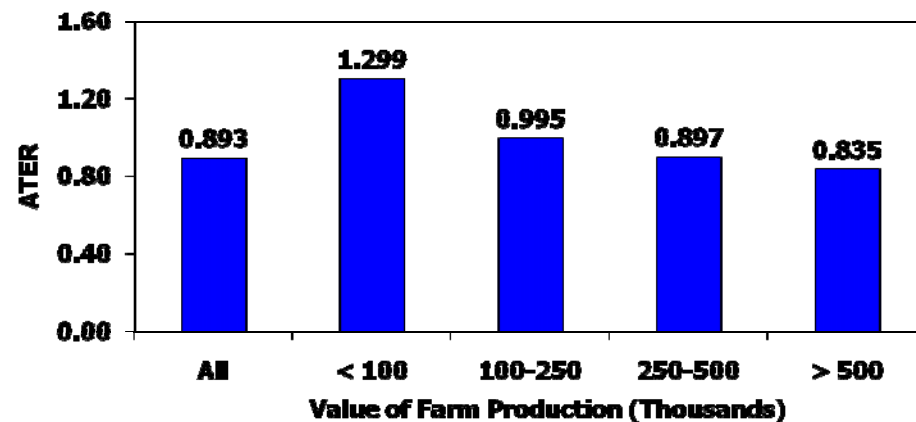
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## Total Expense Ratio



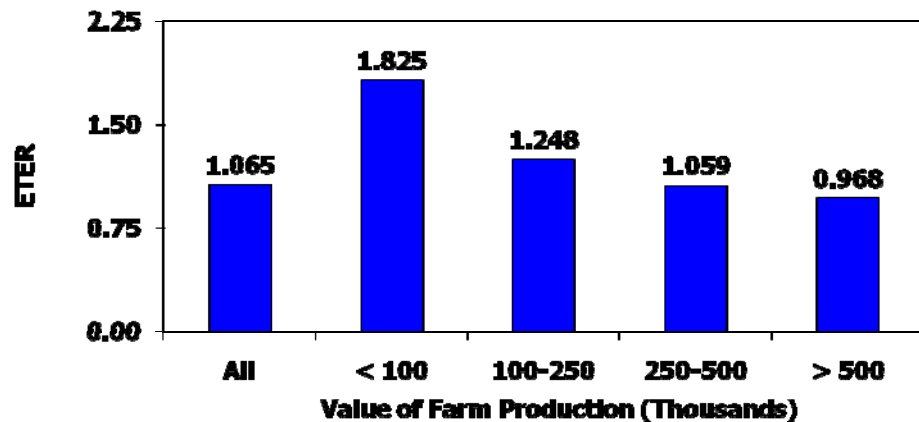
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## Adjusted Total Expense Ratio



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## Economic Total Expense Ratio



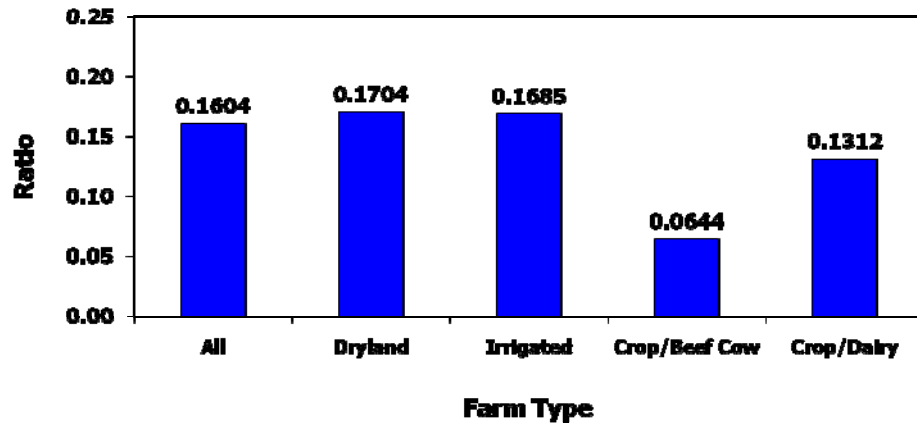
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## Financial Performance Farm Type

- Number of farms:
  - Dryland Crop 657
  - Irrigated Crop 18
  - Crop/Beef Cow 57
  - Crop/Dairy 29

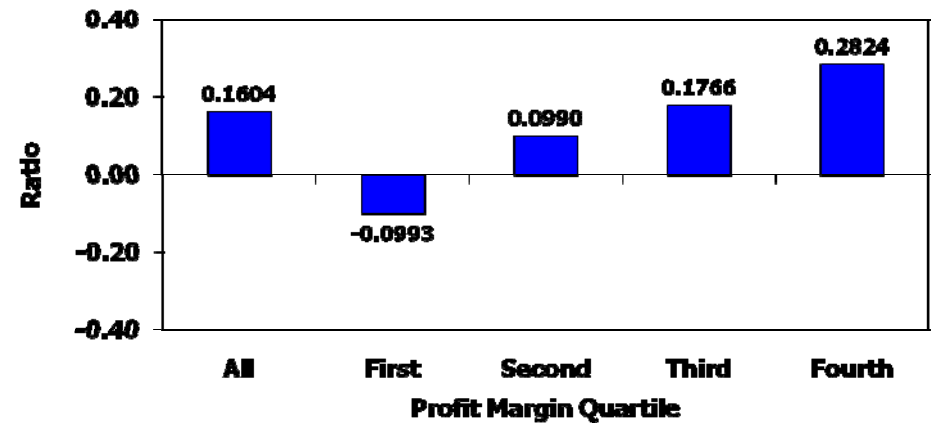
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## Profit Margin Ratio



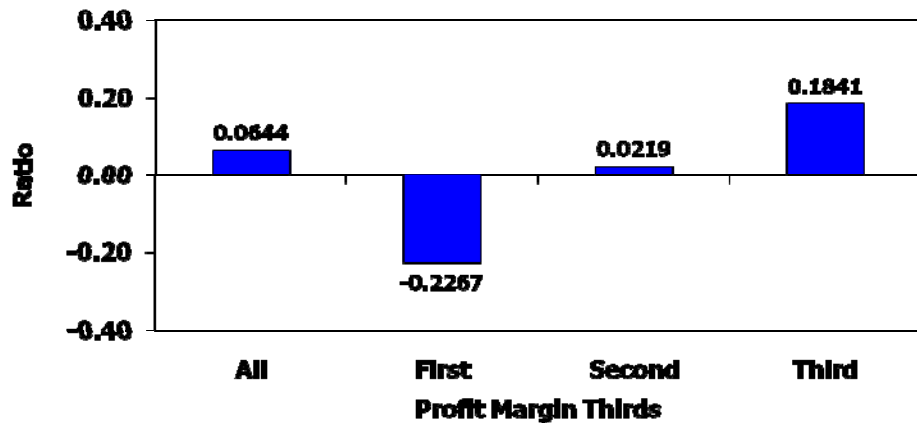
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## Profit Margin Ratio Dryland Crop Farms



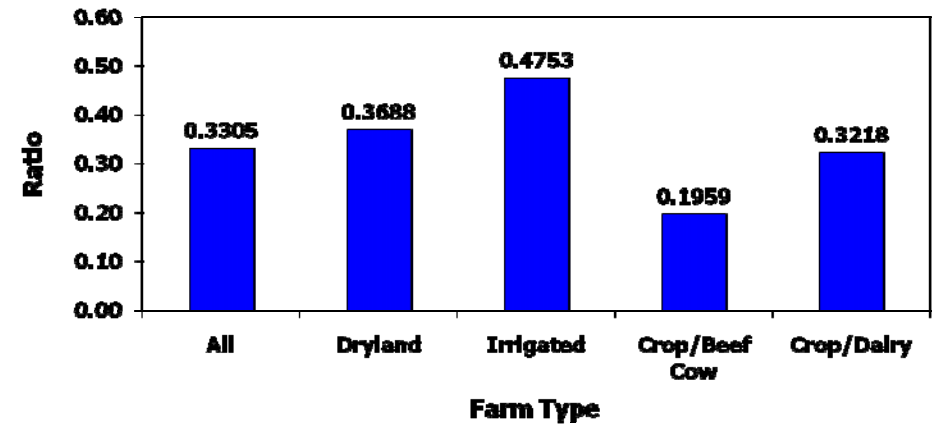
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## Profit Margin Ratio Crop/Beef Cow Farms



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## Asset Turnover Ratio



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## Profit Margin Persistence

- It is a widely established fact that profitability, efficiency, and per-unit costs vary significantly among farms and ranches.
- Are these differences in performance due to random events such as weather or are these differences due to controllable factors such as managerial ability?

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## Profit Margin Persistence

- The profit margin ratio was used to measure financial performance for each farm and year for KFMA farms with continuous data from 2004 to 2008.
- The number of years each farm was in the top or bottom quartile was computed.

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## Profit Margin Persistence

- Five-Year Averages:
  - Value of Farm Production = \$355,001
  - Net Farm Income = \$85,239
  - Unpaid Labor = \$47,370
  - Operating Profit Margin = 0.1604
  - Asset Turnover Ratio = 0.3305
  - Total Expense Ratio = 0.760
  - Adjusted Total Expense Ratio = 0.893
  - Economic Total Expense Ratio = 1.065

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## Profit Margin Persistence

Category	Top Profit Margin	Bottom Profit Margin
Zero Years	39.64%	45.57%
One Year	24.48%	21.37%
Two Years	17.61%	13.37%
Three Years	10.45%	8.00%
Four Years	5.37%	5.74%
Five Years	2.45%	5.93%

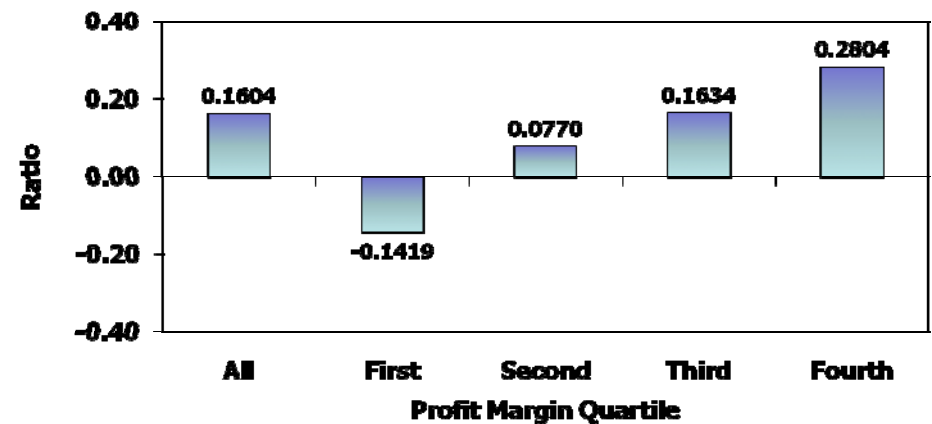
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## Profit Margin Persistence

- Obviously, it was relatively difficult to consistently be in the top profit margin quartile. However, there were farms that had an above average profit margin using five-year average data.
  - Farms in the top quartile, using five-year averages, had a profit margin of 0.2804 (compared to the average profit margin of 0.1604). The farms in the bottom quartile had an average profit margin ratio of -0.1419.
  - The farms in the bottom profit margin quartile also had a relatively low asset turnover ratio and relatively high expense ratios. Only one of the farms in the bottom quartile was able to cover opportunity costs on family and operator labor.

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## Profit Margin Ratio



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## Profit Margin Persistence

- Results indicate that weather and other external factors made it difficult for a farm to consistently be in the top quartile over time. However, approximately 46 percent of the farms were able to stay out of the bottom profit margin quartiles during the five-year period.
- Results suggest that using one year of data to benchmark is problematic. However, given the large difference in financial performance among farms using five-year average data, it is essential that farms benchmark using average data for a longer time period.
- The results also suggest that it is possible for farms to have a competitive advantage.

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## Competitive Advantage

- Position and Dynamics
  - Position
    - Overall cost leadership
    - Differentiation
  - Dynamics
    - Refers to how a firm accumulates resources and capabilities, as well as to how it adjusts over time to changing circumstances.

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# Competitive Advantage

		Relative Price Per-Unit		
		Lower	Average	Higher
Relative Cost Per-Unit	Lower	1 Indeterminate Position	2 <b>Competitive Advantage</b>	3 <b>Competitive Advantage</b>
	Average	4 <b>Competitive Disadvantage</b>	5 Parity Position	6 <b>Competitive Advantage</b>
	Higher	7 <b>Competitive Disadvantage</b>	8 <b>Competitive Disadvantage</b>	9 Indeterminate Position

Hunt, 2000

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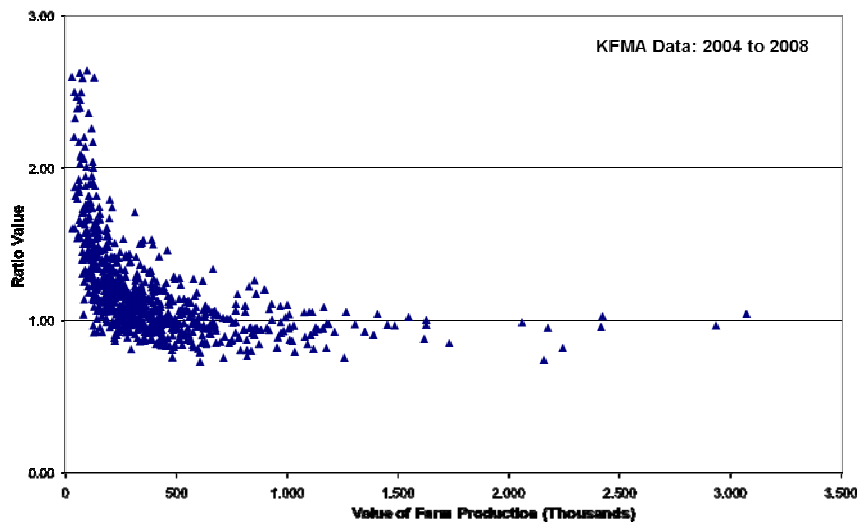
# Competitive Advantage 1988-2007 KFMA Data

Variable	Above Average (30% of farms)	Average (42% of farms)	Below Average (28% of farms)
Value of Farm Production	<b>332,709</b>	211,173	<b>109,601</b>
Operating Profit Margin Ratio	<b>0.212</b>	0.136	<b>-0.024</b>
Asset Turnover Ratio	<b>0.338</b>	0.263	<b>0.169</b>
Cost Efficiency	<b>0.696</b>	0.589	<b>0.453</b>

Source: Yeager and Langemeier (2009)

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## Economic Total Expense Ratio



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## Resource Based Framework

- The **resource based theory of firm** focuses on the resources that contribute to a firm's **competitive advantage**.
- This framework involves asking four questions related to:
  - Value
  - Rareness
  - Imitation
  - Organization

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## Resource Based Framework

- **The Question of Value**
  - Does the firm’s resources and capabilities enable the firm to respond to environmental threats and opportunities?
- **The Question of Rareness**
  - How many competing firms already possess particular valuable resources and capabilities?

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## Resource Based Framework

- **The Question of Imitation**
  - Do firms without a resource or capability face a cost disadvantage in obtaining it compared to firms that already possess it?
- **The Question of Organization**
  - Is the firm organized to exploit the full competitive potential of its resource and capabilities?

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## Resource Based Framework

- Identifying and utilizing unique resources that are difficult for other firms to obtain is a key component in sustaining a firm’s competitive advantage.
- Firms without any unique resources will find it increasingly difficult to compete.

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## Resource Based Framework Is a Resource or Capability ...

Valuable?	Rare?	Costly to Imitate?	Exploited by Organization?	Competitive Implications	Economic Performance
No	No	No	No	Disadvantage	Below Normal
Yes	No	No	No	Parity	Normal
Yes	Yes	No	No	Temporary Advantage	Above Normal
Yes	Yes	Yes	Yes	Sustained Advantage	Above Normal

Adapted using information in Chapter 3 of Barney and Clark (2007).

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## More Information?

- [www.agmanager.info](http://www.agmanager.info)
  - Contributors – Langemeier