Analyzing Direct Payments to U.S. Farm Households: Addressing the Distribution Gap

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Decoupling Project

- Domestic and Trade Policy
- Production Distortions from Coupled Programs
  - ⋆ Floyd and Gardner models
  - ⋆ Returns distributed among factors of production
- Production Distortions from Decoupled Programs
  - ⋆ No distortions due to price effects
  - ⋆ Lump-sum payments may have non-price effects

Production Flexibility Contract Implementation

- PFC payments must go directly to producers
- However, landowners are the ultimate beneficiaries

  Capitalization Sales price includes stream of future PFC payments
  Pass-through Rental price includes current PFC payments

- PFC payments and non-price effects

  wealth effect preferences change
  insurance effect outcome truncation

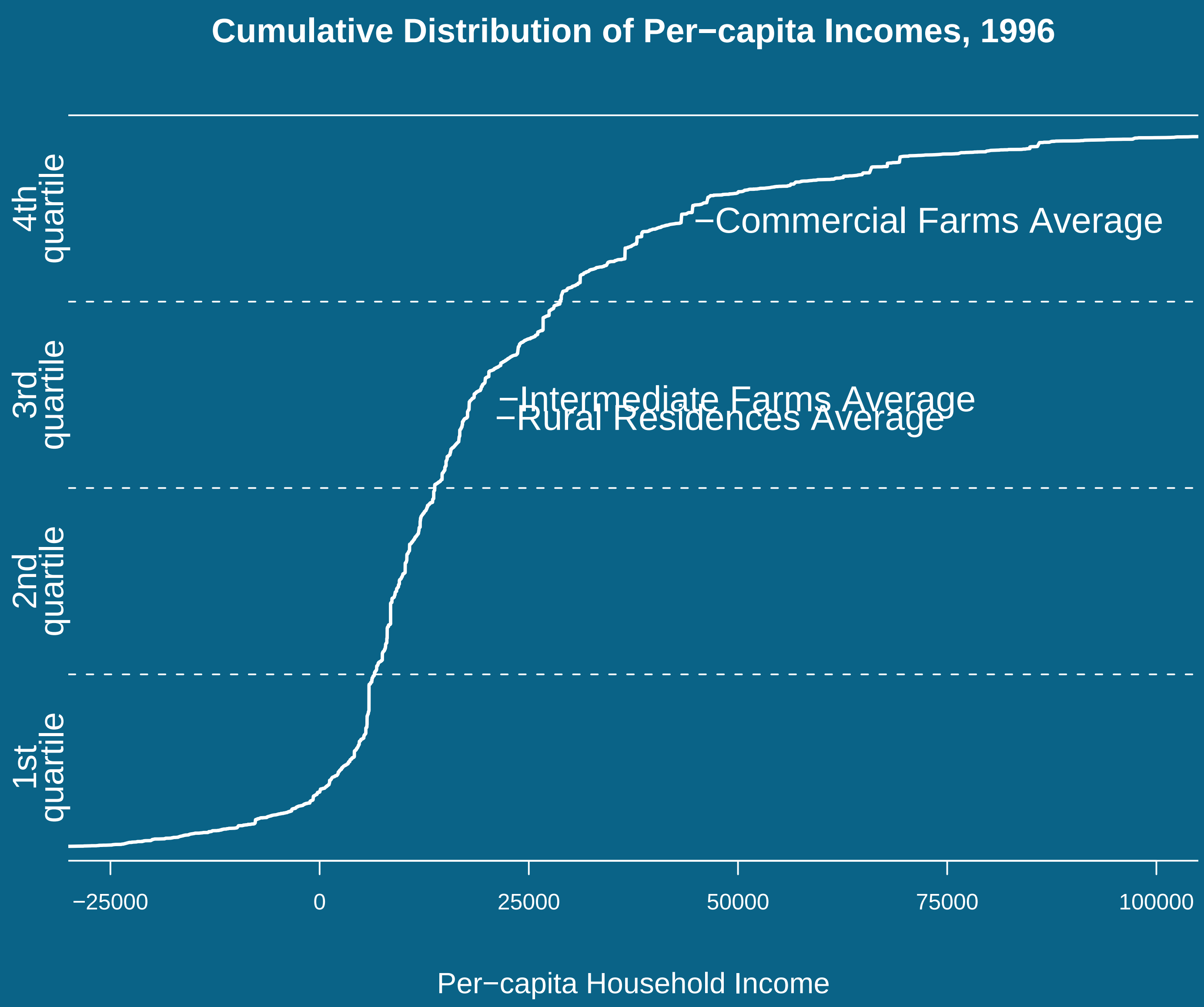
The 'Distribution Gap' in Policy Evaluation

- Distributional Analysis may be more relevant for policy purposes than the *Veil of Ignorance*
  - ⋆ Original position matters
- Distributions are endogenous to how recipients make decisions
  - ⋆ "Farming the Program"
- Multiple representative agents can be useful compromise between distributional and aggregate approaches

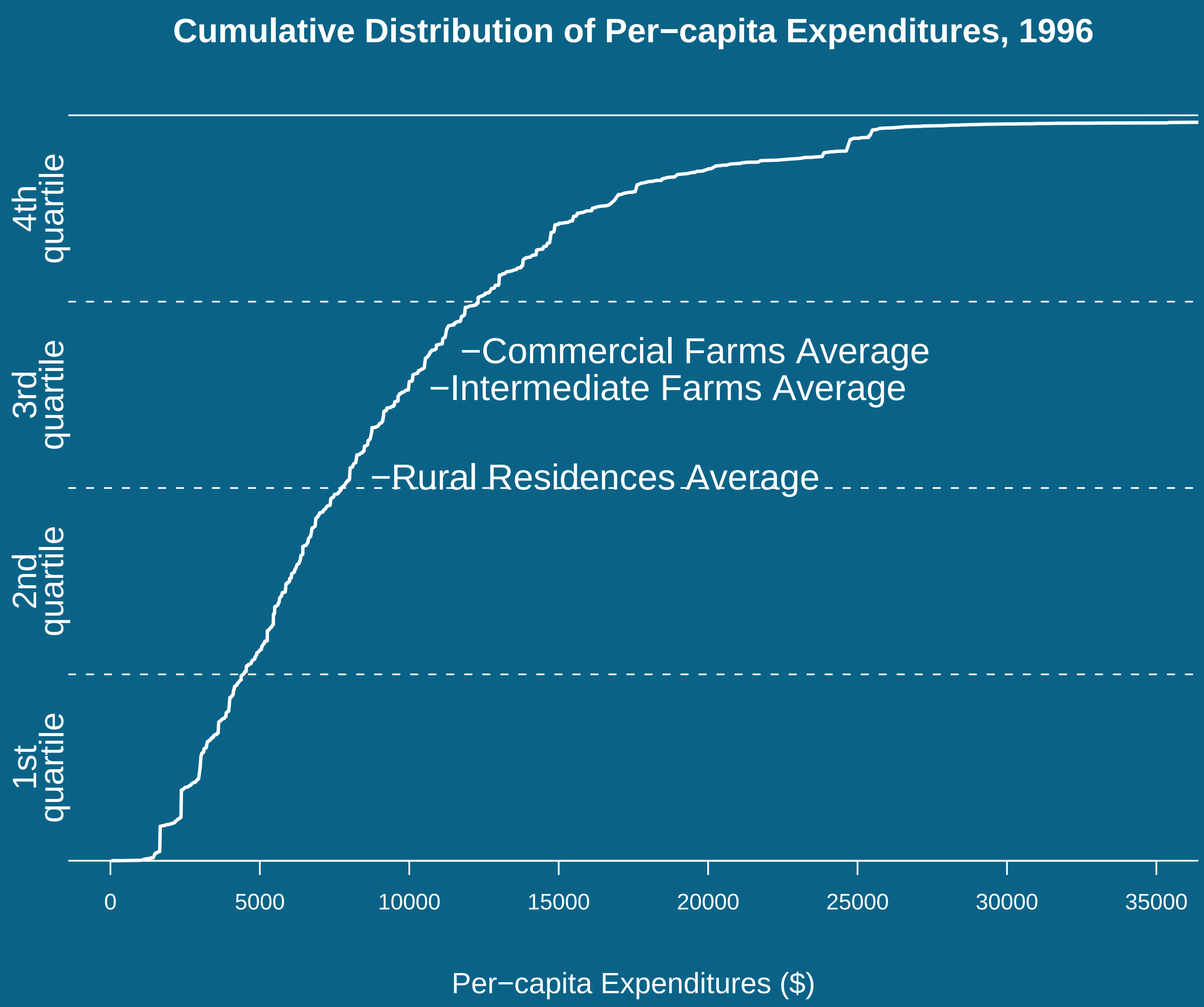
Payments and Average Levels of Well-being

	Farm Type		
	Commercial	Intermediate	Rural Residences
Panel A. Farm Household Measures of (per-capita) Well-being			
Direct Payments per capita	9,335	2,299	676
Total Household Income	41,140	17,755	17,405
Wealth	373,998	225,236	171,878
Household Expenditures	10,707	9,646	7,687
Panel B. Farm Business Measures of Financial Well-being			
Direct Payments	22,159	5,497	1,565
Return on Assets Ratio	7	1	(10)
Total Production to Economic Costs Ratio	117	99	84
Total Production less Economic Costs ($/acre)	101	(78)	(155)

Farm Household Heterogeneity



Farm Household Heterogeneity



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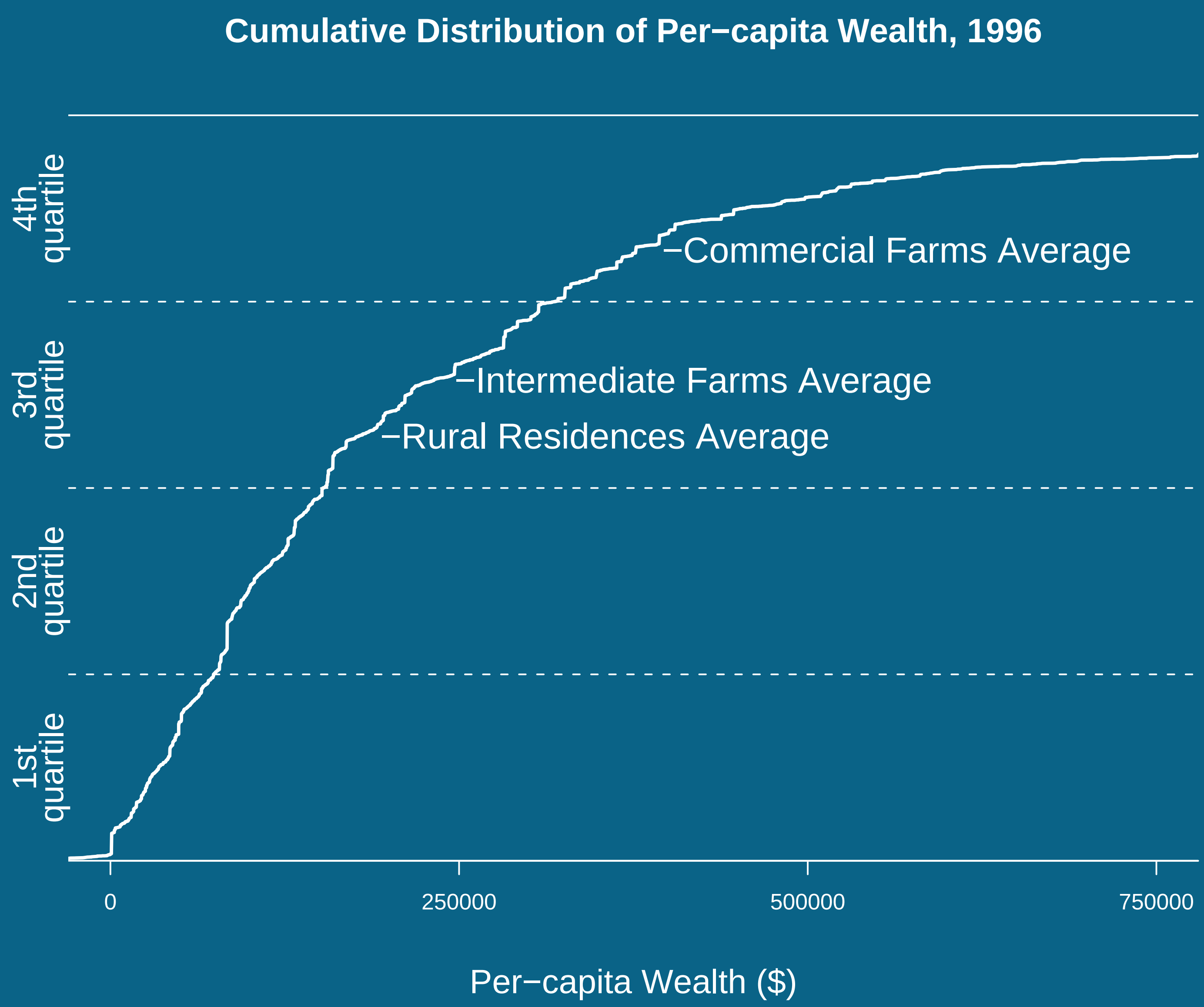
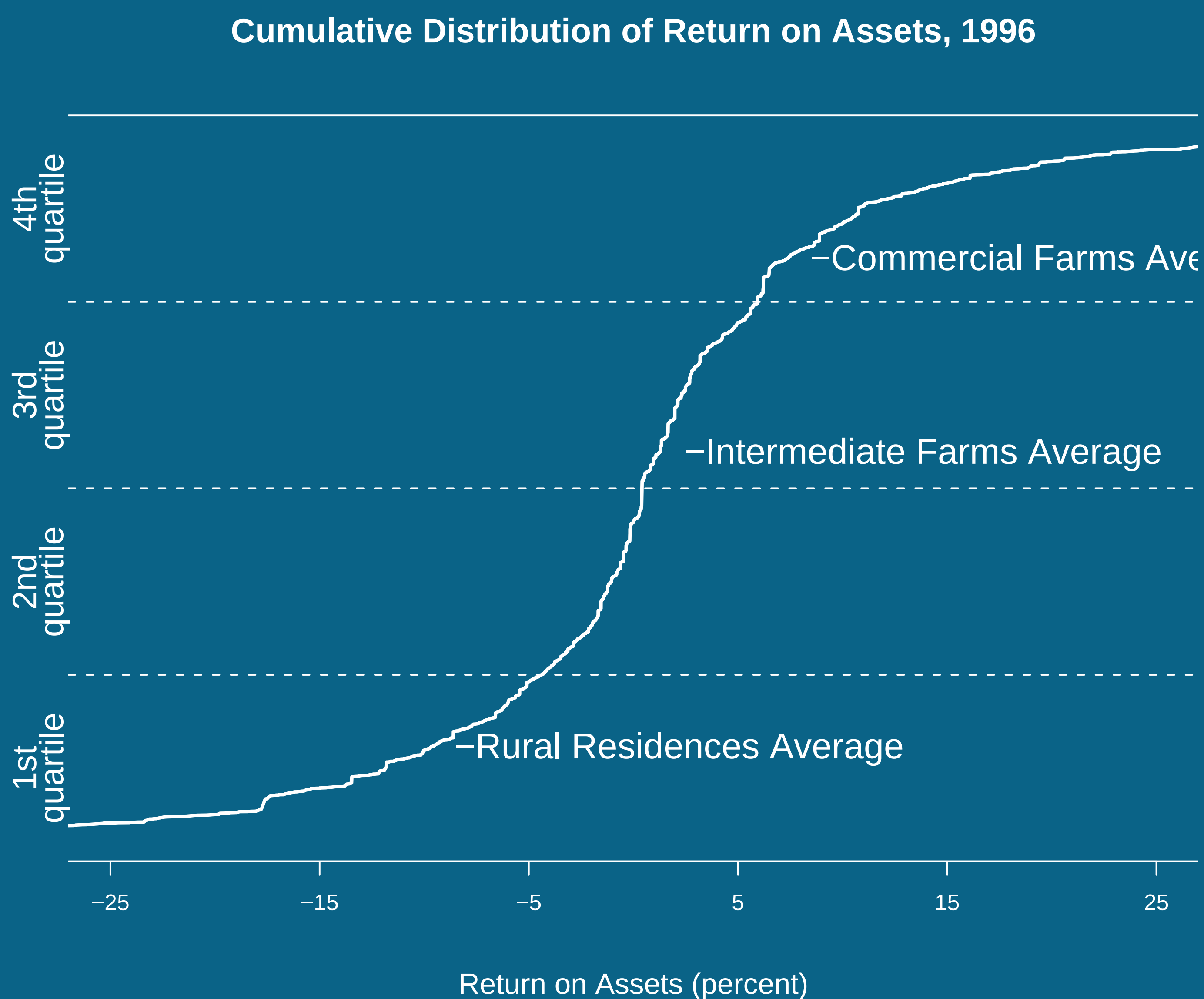


Farm Business Heterogeneity



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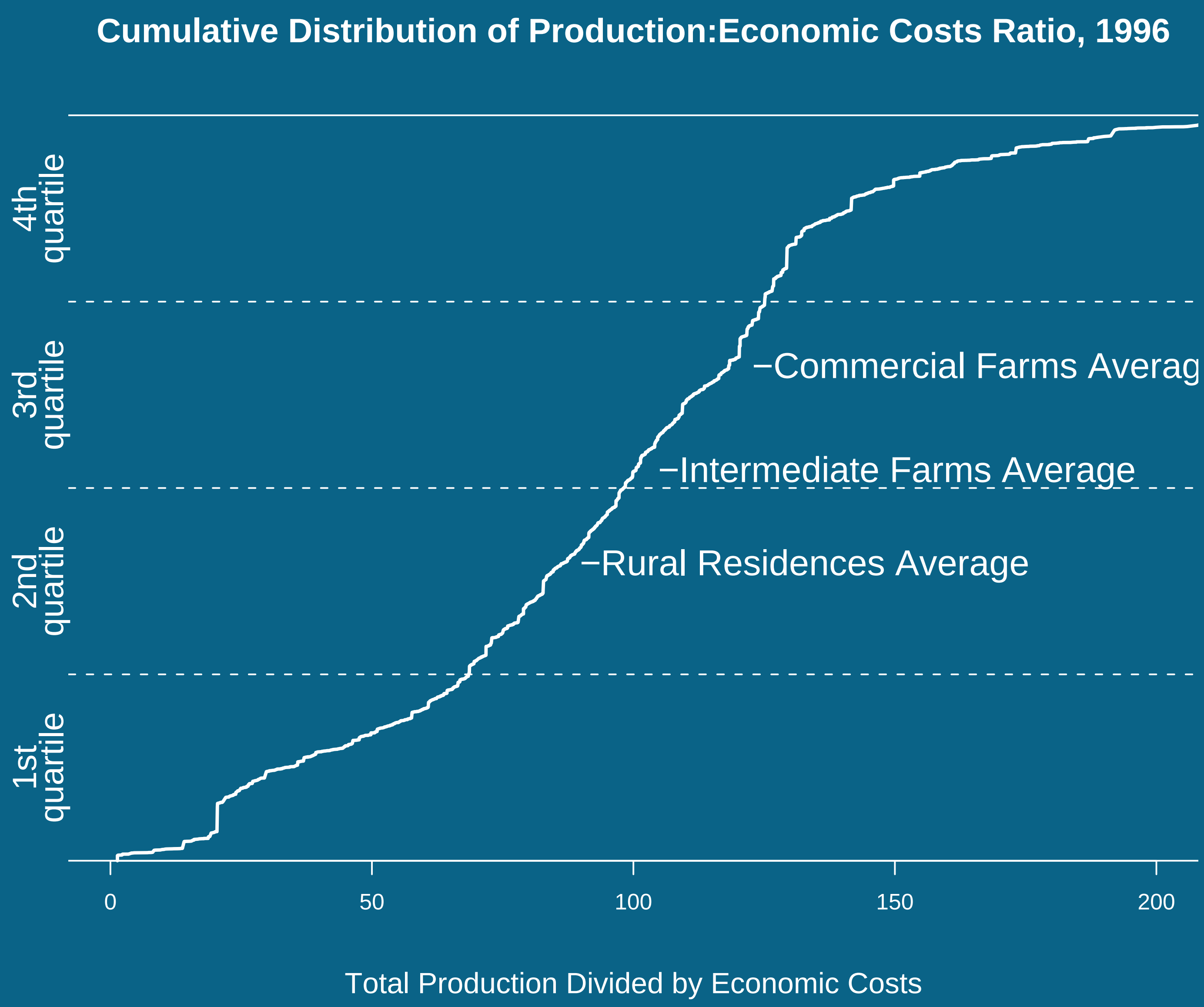
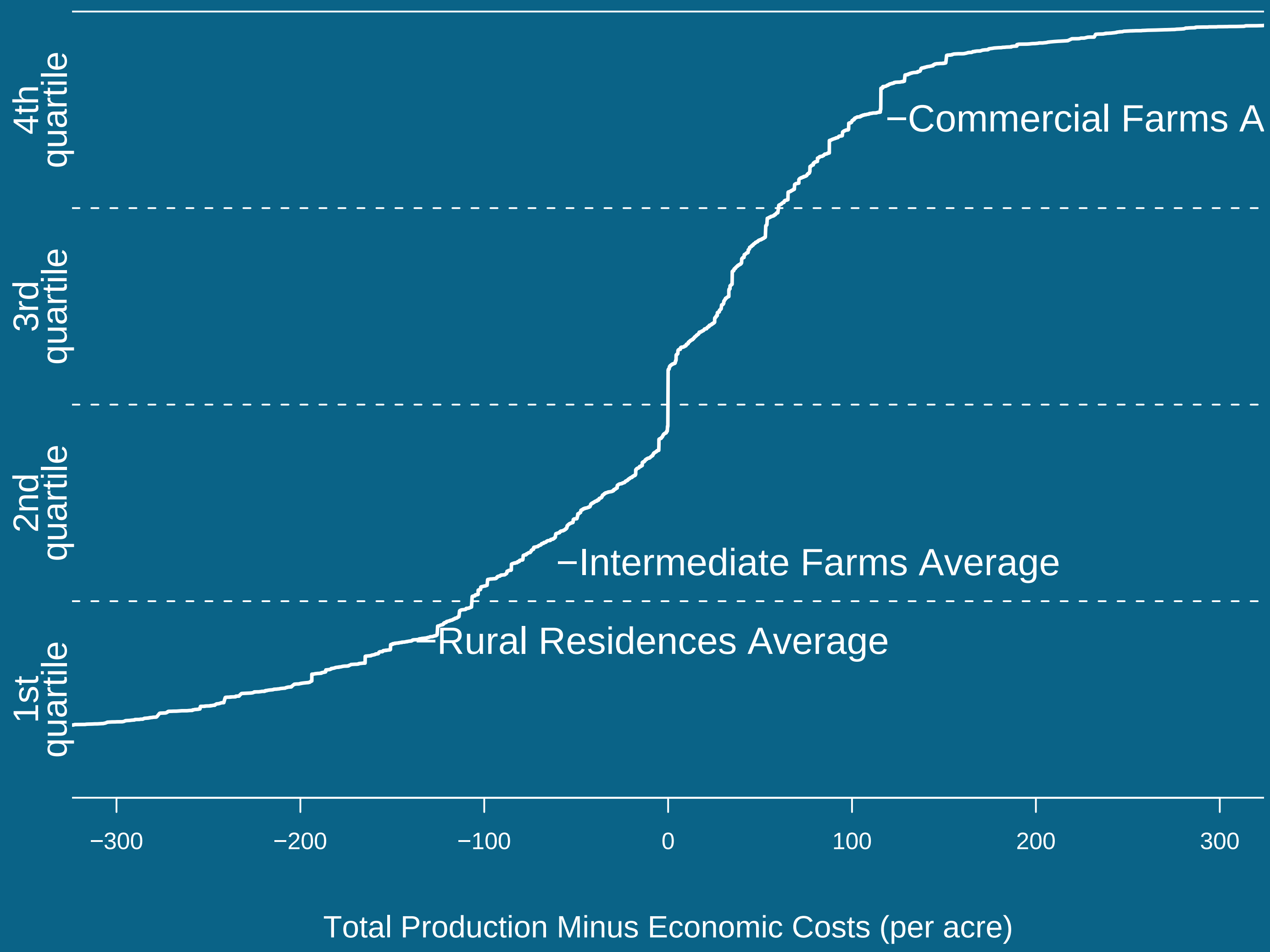


Farm Business Heterogeneity

Cumulative Distribution Returns to Land per Acre, 1996



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Panel C. Transfers to Operators vs. Landlords			
Direct Transfers to Operators	32,221	5,490	2,392
Direct Transfers to Landlords	3,158	1,068	230
Pass-through	15,950	2,651	804

Payment Effect Decomposition

- Observation-level impacts

Gross Effect $GE_i = Y_i^1 - Y_i^0$, where 1 signifies with-payment and 0 signifies the without-payment level of well-being Y for observation i

Pass Through Effect $PT_i = \alpha_i \cdot GE_i$, where α_i is the share of base acres that are not owned for observation i

Net Effect $NE_i = GE_i - PT_i$, the difference between the gross and pass-through effects for observation i

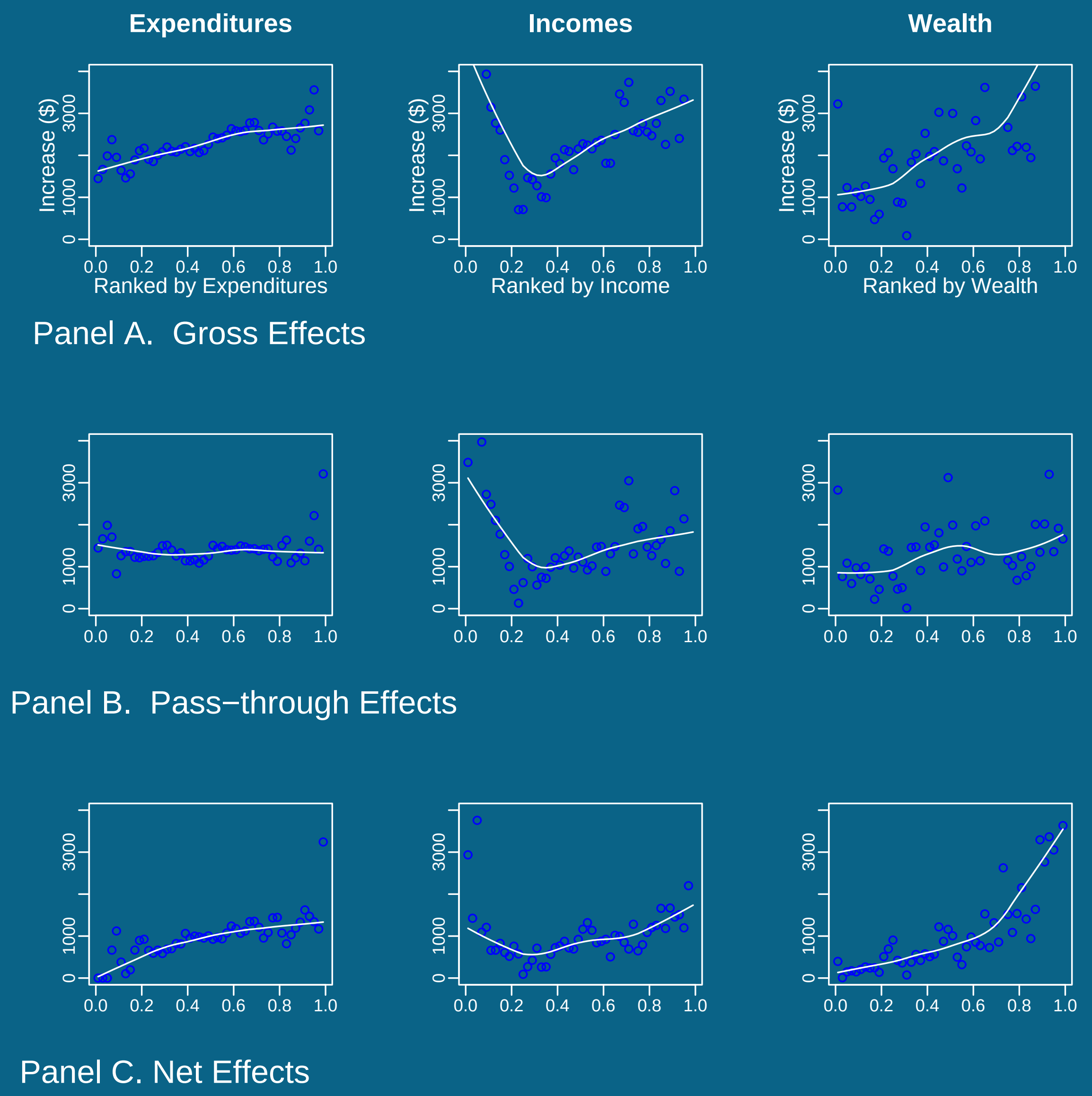
- Distribution-level impacts

Gross Effect $GE_q = F_{Y_q^1} - F_{Y_q^0}$

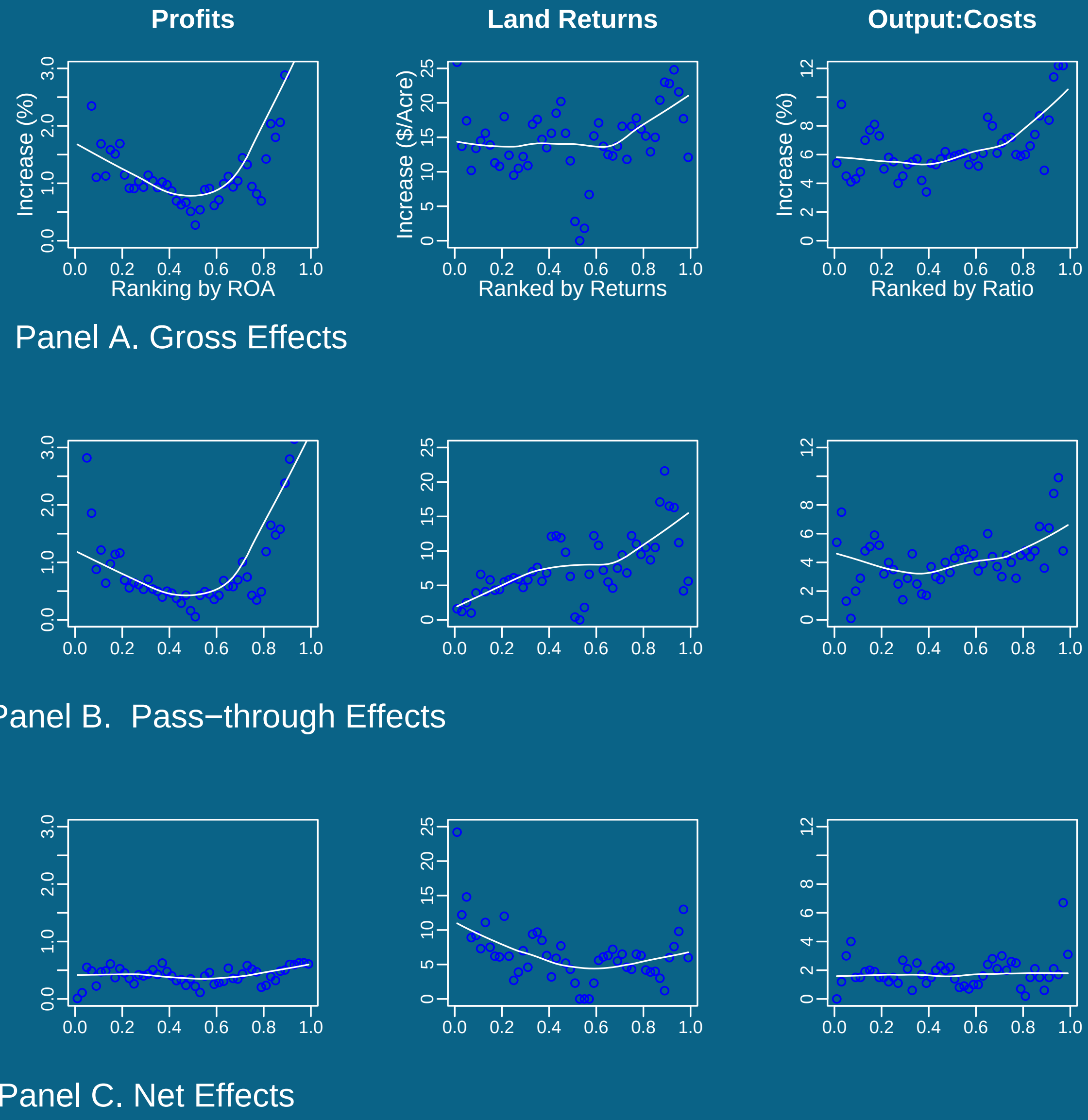
Pass Through Effect $PT_q = F_{Y_q^1} - F_{Y_q^{1,\alpha}}$

Net Effect $NE_q = GE_q - PT_q$

Household Effects



Business Effects



Summary

- Household-level net effects of payments are more uniform than gross effects suggest
  - ⋆ payments are still correlated to well-being in the case of expenditures and wealth
  - ⋆ Shallower “U” with income
- Business-level net effects are not correlated with firm performance
  - ⋆ Net Payments are flat across profits and break-even distributions
  - ⋆ Net payments negatively correlated to residual land returns

Implications for Decoupling

- Reliance on rented base acres results in most (63%) benefits passing through to landlords outside production sector
- Commercial farms, with high use of rented acreage, pass through most (72%) benefits. These farms received 59% of payments
- Net payments after pass through are more proportional for most measures of well-being, exceptions include:
  - ⋆ Positive correlation of expenditures and net payments suggestive of effect on consumption
  - ⋆ Positive correlation with wealth leaves little scope for large wealth effect on risky behavior