

# How to Publish Bayesian Studies in Management Journals

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# Framing a Bayesian Study

- The audience is skeptical: editors, reviewers, colleagues
- Avoid attacking frequentist methods directly and calling into question everything that has gone before – this can be a challenge!
- Hypothesis development is still critical, and yet it is different – there is no absolute cutoff
- Carefully align the theory with the method – perhaps the most compelling aspect of a Bayesian approach

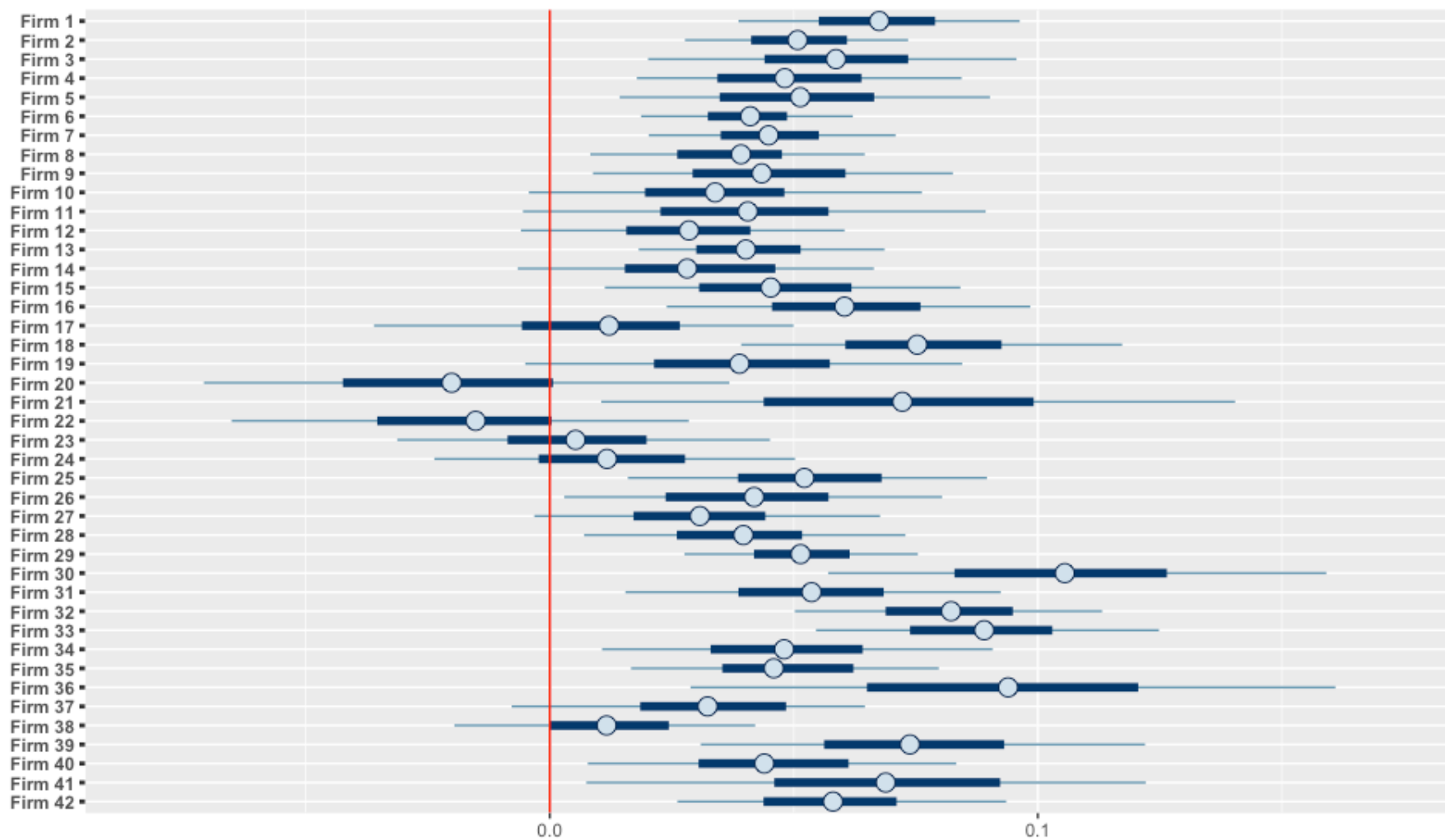
## Some Further Challenges

- Historically, management research has offered results that are broadly applicable to a population
  - In a Bayesian study, the results are probabilities for the data in the study (units of analysis)
- The argument must be made as to how generalizable the results are to other individuals, firms, industries, etc.
- The issues of priors must be addressed. Many believe that the priors chosen automatically determine the outcomes in Bayesian studies. You need to show that your priors didn't absolutely determine the results of the study.

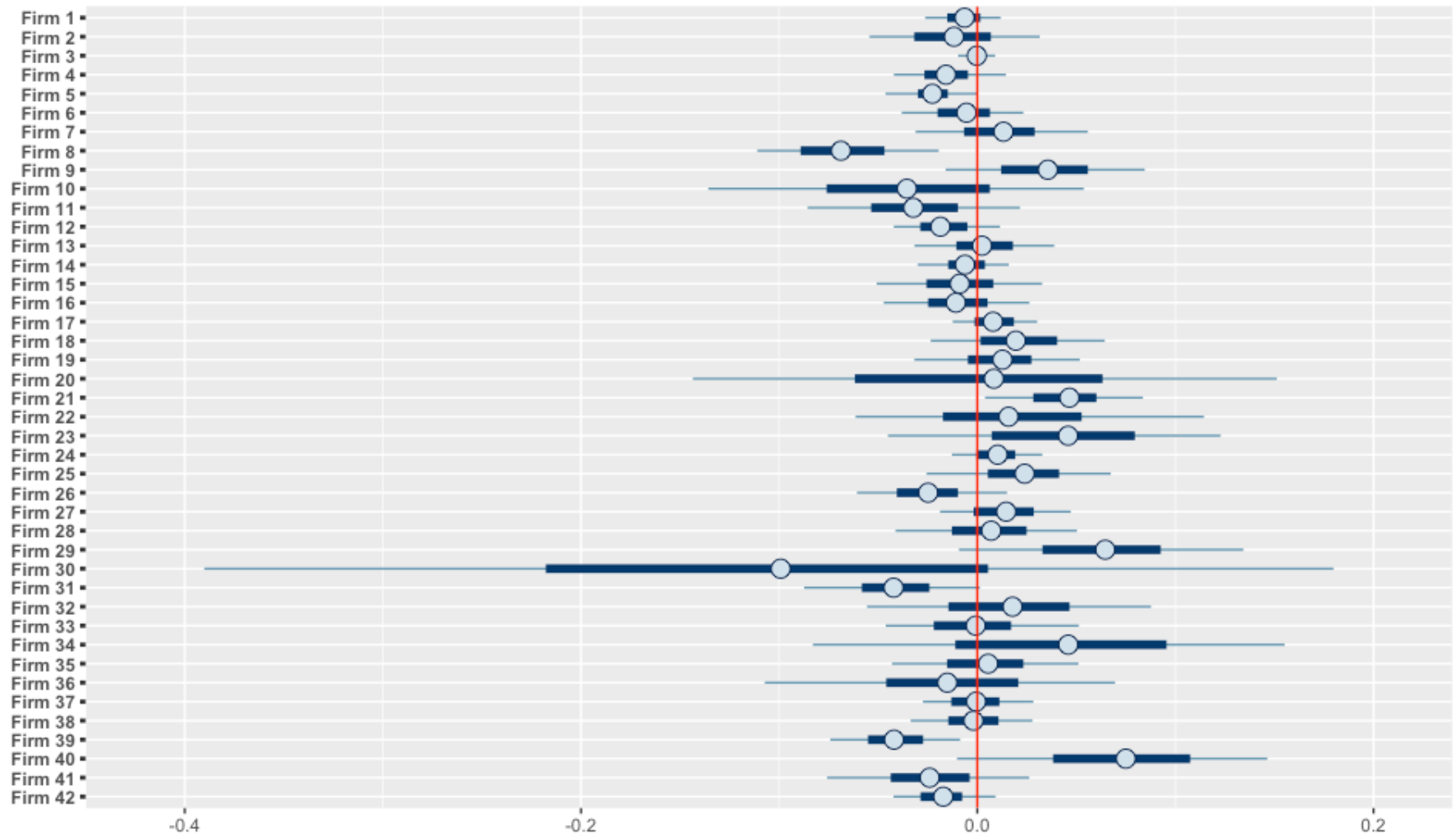
## So How Do You Report Results in a Paper?

- Reviewers are asking for comparisons of Frequentist and Bayesian approaches
- Show interval estimates, posterior distributions, and a table with numbers & parameters
- For hypotheses, show the relevant posterior distributions and explain what they mean (e.g., the most likely outcome is this and here is how the probability of outcomes is distributed)
- Offer your argument as to how and to what extent the results support or contradict the hypothesis

# Interval Estimates of Individual Firms – Intercept



# Interval Estimates of Individual Firms – BuyUnits

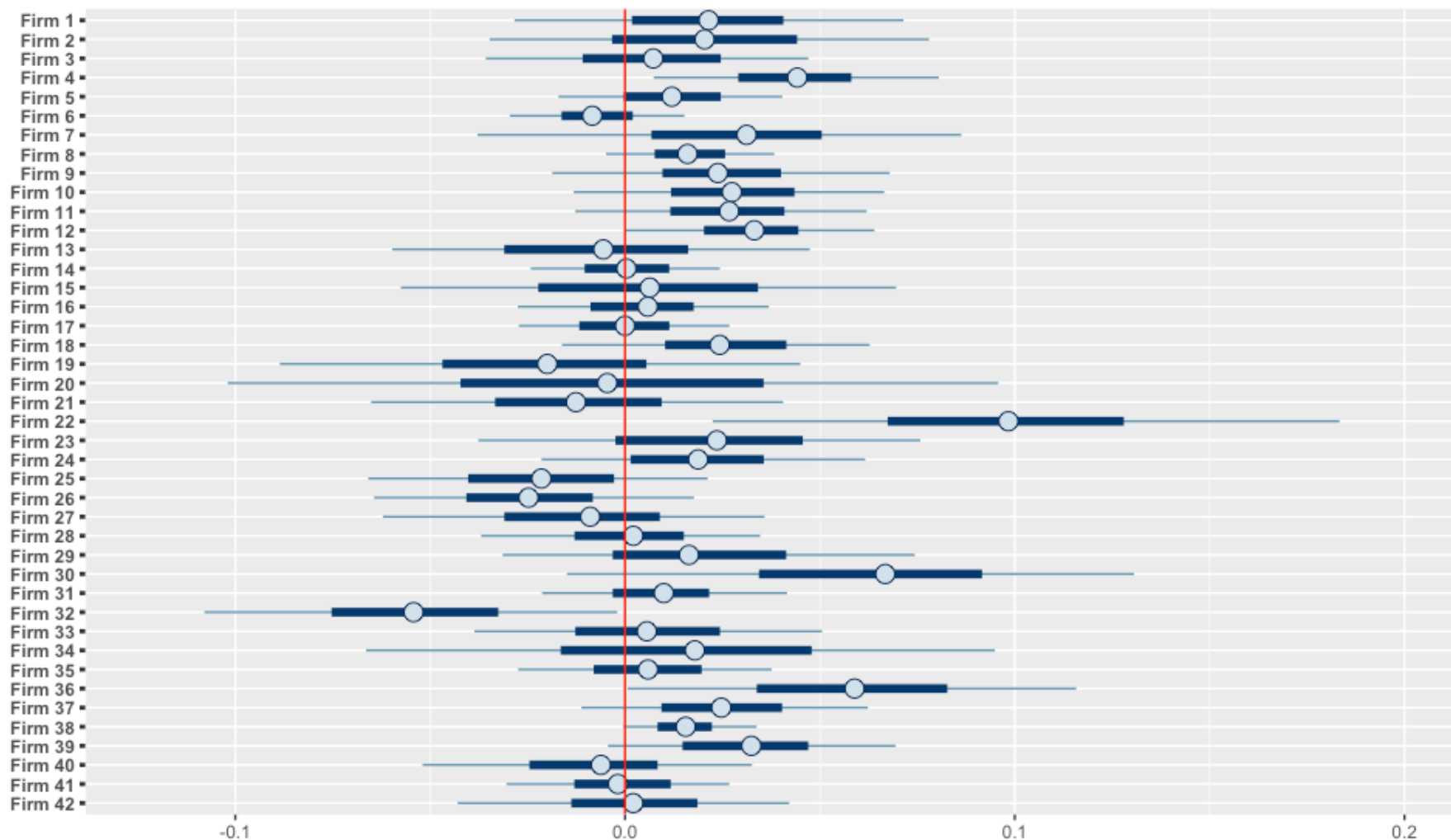


# Interval Estimates of Individual Firms – SellUnits



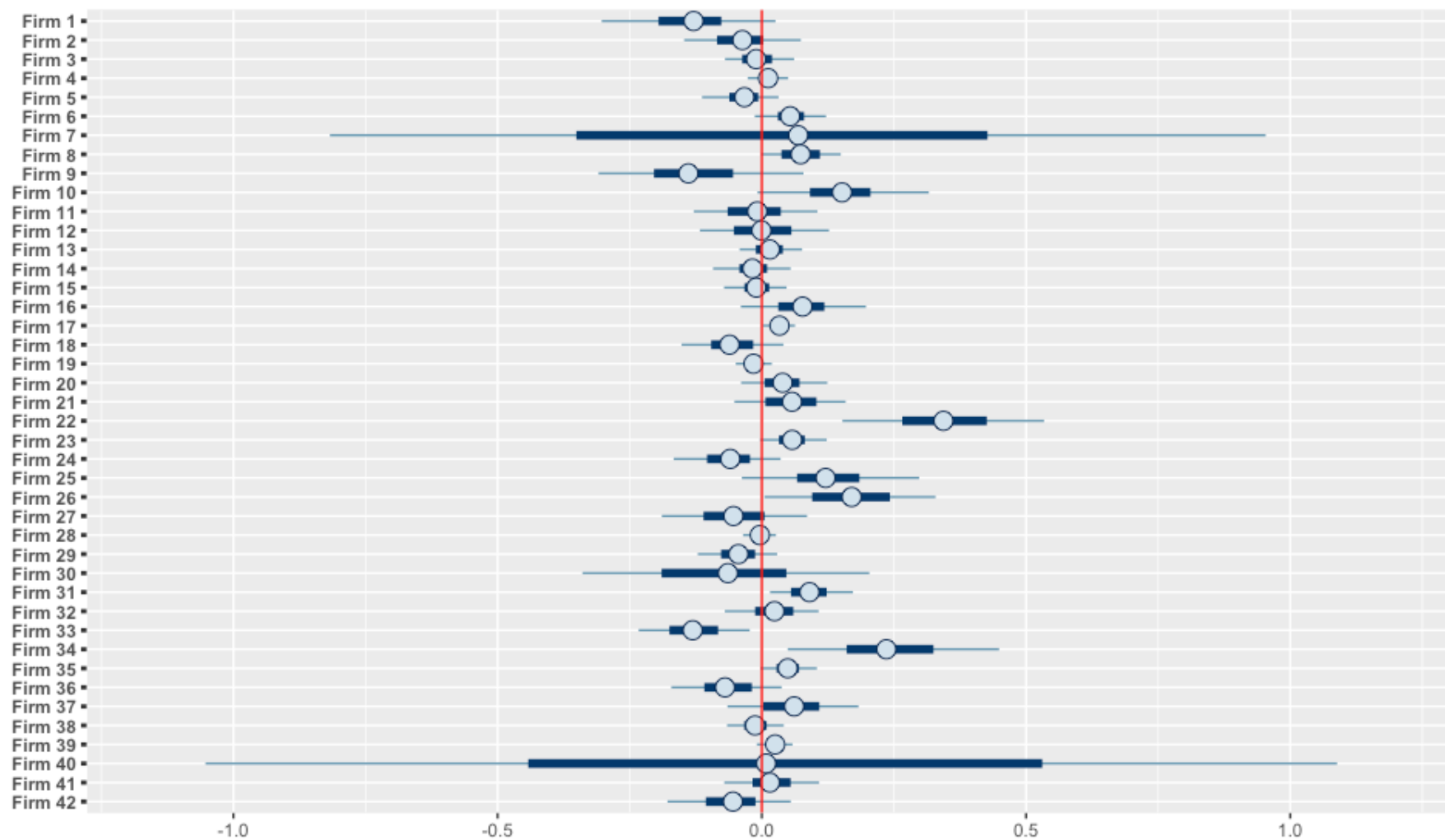
0.25 = 25%

# Interval Estimates of Individual Firms – FRestruct

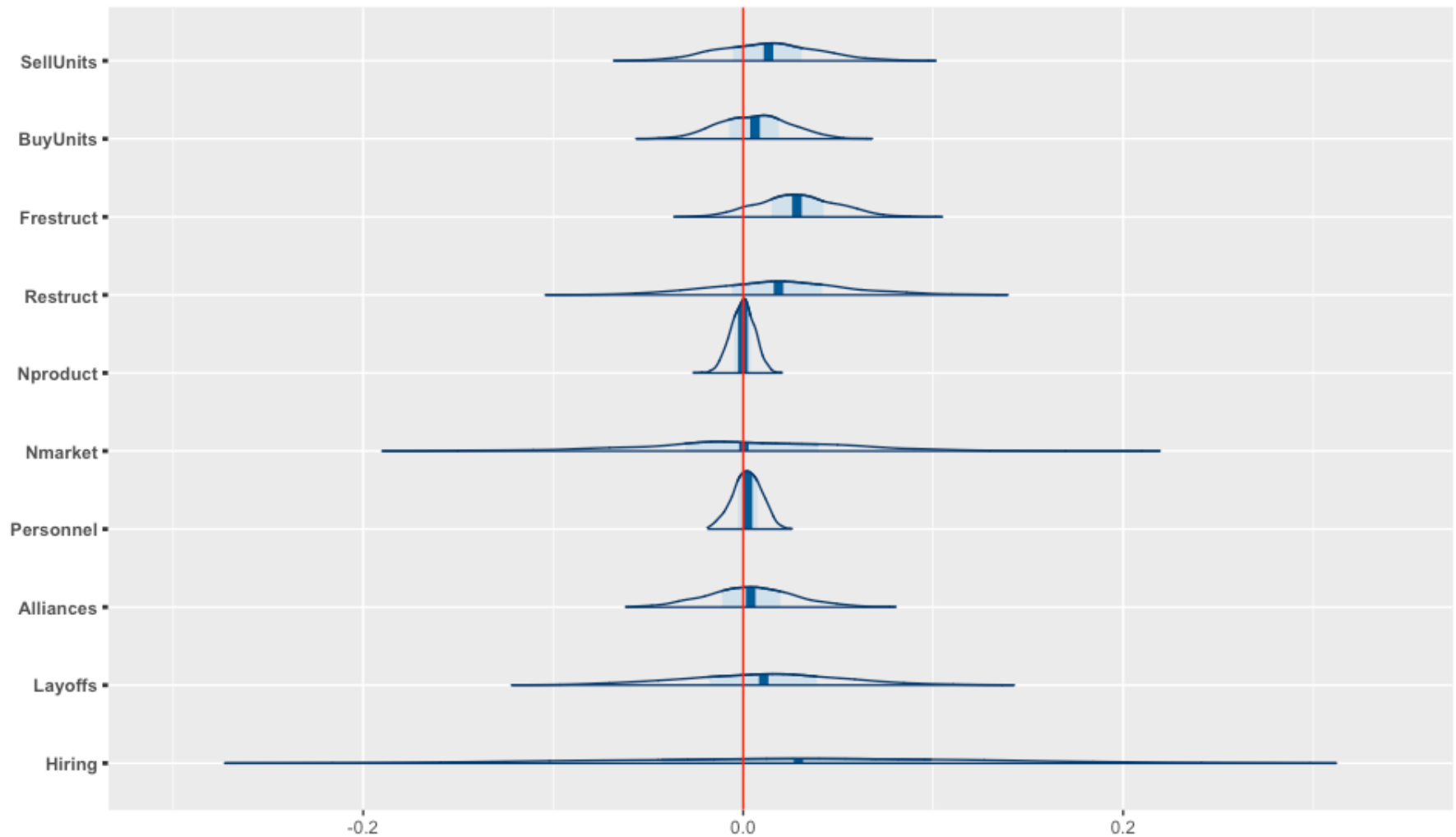




# Interval Estimates of Individual Firms – Restruct

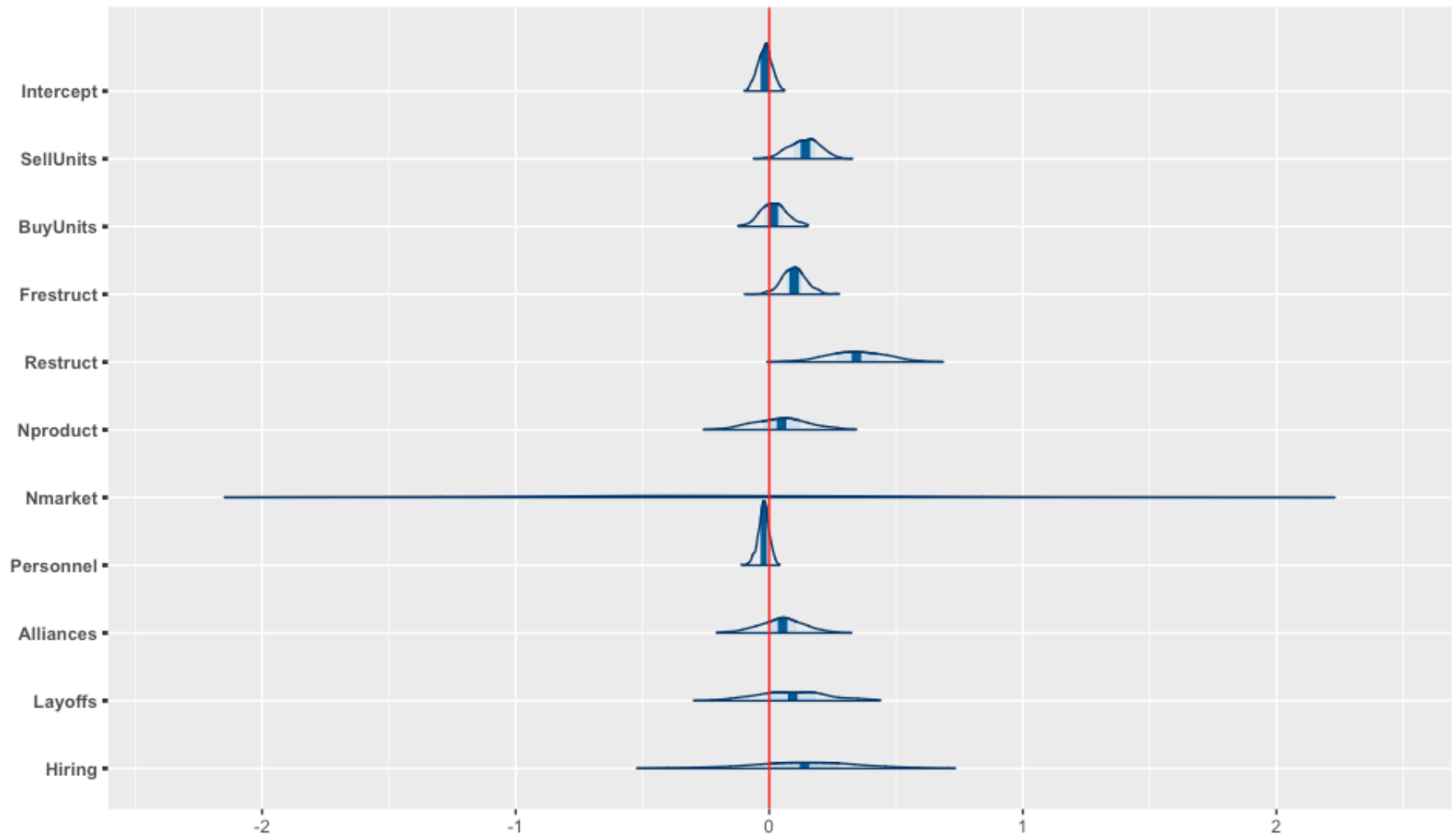


# Bayesian Regression - Posterior Distribution – All Firms

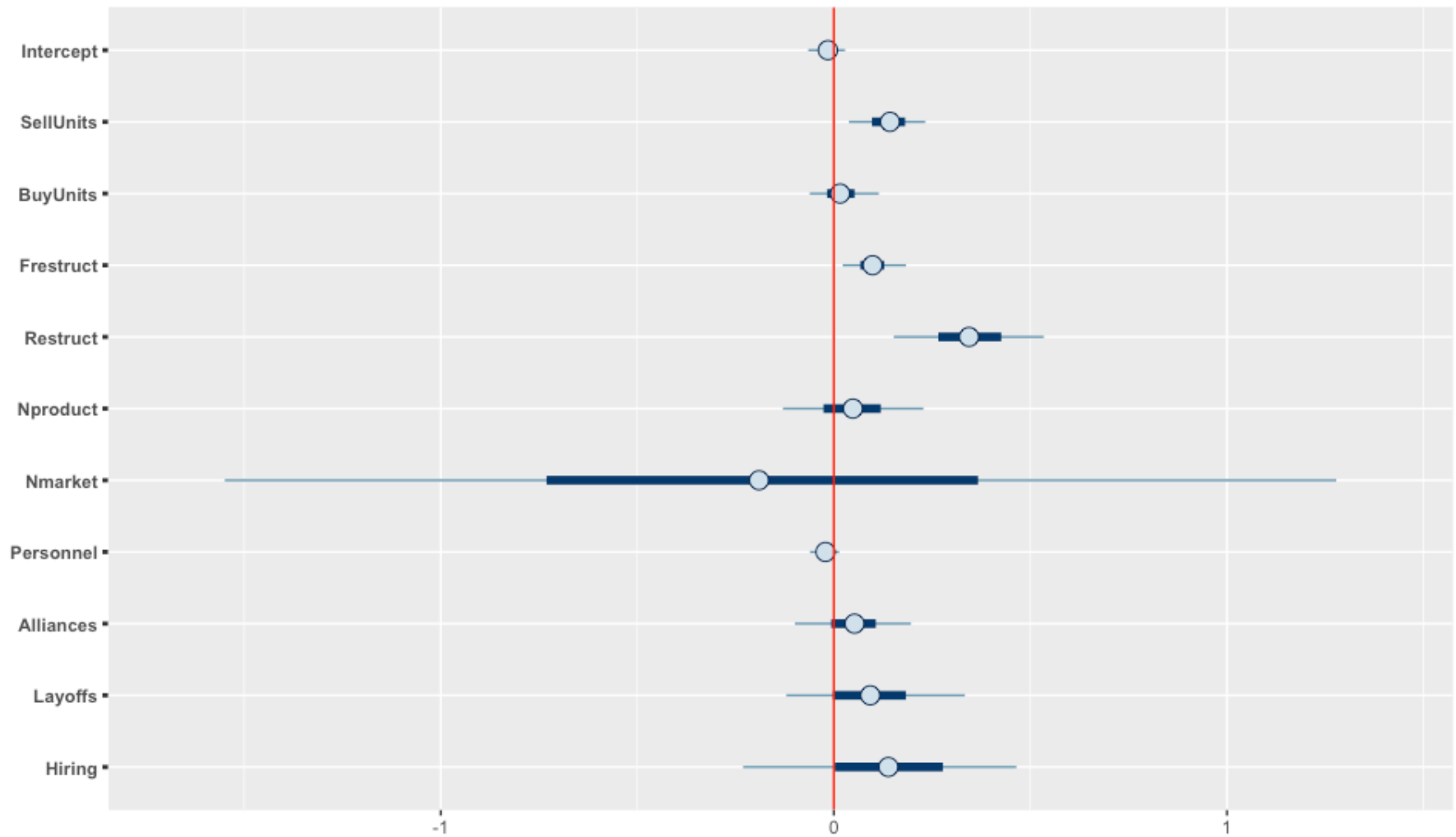


0.2 = 20%

# Posterior Distributions – Firm 22



# Interval Estimates – Firm 22



# Bayesian Regression

## Point & Interval Estimates – All Firms

Performance Effect = Market Returns

Parameter	estimate	lower	upper	positive
Frestruct	0.0322	-0.0173	0.0724	0.92
Restruct	0.0215	-0.0517	0.0831	0.70

# Conclusion

A Bayesian approach makes a lot of sense when working with theories like the RBV that are trying to explain why some firms outperform other firms

Researchers can identify firms that are statistically different from other firms and then work to identify what it is that allows those firms to outperform others

Researchers also can, and do, use Bayesian approaches to study effects across entire samples (drug trials, voting, marketing, etc.)

Online retailers also use Bayesian statistics to decide which products and incentives to offer based on purchases