

Local Choice, Portfolio Choice
By
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- ▶ However, latent assumption: HH locate randomly This paper

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- ▶ Tension: Is it really the economic prospective expectation (thus optimism) or distance that explains allocation bias?

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- ▶ Stage 1: Reduced-form model of distance between residence and stock headquarter, $dist_{i,c,h,j}$
[main “independent” variable]
- ▶ Stage 2: Reduced-form model of portfolio weight bias
[main dependent variable]

Empirical construct - Stage 1

- ▶ $dist_{i,c,h,j} = a + \mathbf{b}Z_{i,t} + \mathbf{c}D_{i,t} + \mathbf{d}S_{j,t} + \text{Interactions} + e_{i,c,h,j}$
- ⇒ $Z_{i,t}$: Local climate, age of the household, city recreation
[Intuition: older households prefer to live in areas with mild year-round climates or recreations → areas with high prospective]
 - ⇒ $D_{i,t}$: HH demographics
 - ⇒ $S_{j,t}$: Stock financial characteristics (size, BM, turnover, mom, volatility, profitability, investment code, industry code)

Empirical construct - Stage 2

$$\blacktriangleright EW_{i,c,h,j} \equiv \frac{w_{i,c,h,j} - w_j^{VW}}{w_j^{VW}} = f(\text{dist}_{i,c,h,j}, \text{controls})$$

$\Rightarrow w_{i,c,h,j}$: observed stock weight for HH i who live in zipcode c investing in stock j headquartered in zipcode h

$\Rightarrow w_j^{VW}$: value weight of the corresponding stock as used in Russell 1000 index

$\Rightarrow f(\cdot)$: linear regression

Main result - Stage 1

	(1)	(2)	(3)	(4)
Panel A: First-Stage				
LogClimate × LogAge		-0.628 [-3.65]		-0.516 [-3.99]
LogRecreation × LogAge			-0.865 [-4.03]	-0.75 [-3.82]
Stock Financial Char's		YES	YES	YES
Household Basic Demo's		YES	YES	YES
Household Prof. Demo's		YES	YES	YES
HH ZIP-Code Race Pct.		YES	YES	YES
LogClimate		YES	YES	YES
LogRecreation		YES	YES	YES
Other MSA Demo's		YES	YES	YES
Other MSA Demo's × HH Basic Demo's		YES	YES	YES
Other Instruments		NO	NO	YES
<i>F</i> -statistic		13.45	16.42	21.37
Average Number of Households	4,339	4,339	4,339	4,339
Average Number of Stocks	988	988	988	988

Main result - Stage 2

Panel B: Second-Stage

	OLS	2SLS	2SLS	2SLS
Distance	-0.101 [-5.73]	-0.082 [-1.92]	-0.077 [-1.84]	-0.074 [-1.90]
Stock Financial Char's	YES	YES	YES	YES
Household Basic Demo's	YES	YES	YES	YES
Household Prof. Demo's	YES	YES	YES	YES
HH ZIP-Code Race Pct.	YES	YES	YES	YES
LogClimate	YES	YES	YES	YES
LogRecreation	YES	YES	YES	YES
Other MSA Demo's	YES	YES	YES	YES
Other MSA Demo's × HH Basic Demo's	YES	YES	YES	YES
Hansen <i>J</i> -test (<i>p</i> -value)				0.71
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2. Non-linear dependent variable
3. Implication from time series dimension
4. Diminishing effect?

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- ▶ Benchmark choice in the paper, i.e., CAPM:

w_j^{VW} , extracted from the value-weighted portfolio on that stock given the Russel 1000 Universe.

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- ▶ Do all stocks in Russel 1000 appear in your HH holdings?
- ▶ **Suggestion:** Better to re-calculate the benchmark using the stock universe actually reflected in sample.

2. Non-linear dependent variable

- ▶ Page 10: on average, a household in our sample has a portfolio weight of 10.31 bps on a Russell 1000 stock and holds 2.32 stocks. The standard deviation of the number of stocks is 2.27...

Panel D: Household Stock Holdings

	Mean	S.D.	Median	Min	Max
Portval (\$)	30,776.79	126,247.43	11,255.43	1,000	16,227,021
Numstk	2.32	2.27	1.7	1	36
portwt	10.31 bps	0.03	0	0	1
EW	1.07	161.52	-1	-1	1,648,400

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- ▶ Lots of weights are zero
- ▶ Lost of portfolios will have a negative bound → How to interpret this in a regression framework?

2. Non-linear dependent variable

1. Study home upward bias & foreign negative bias differently.

The rational home bias story with growth spurts (this paper) does not necessarily imply a **linear** effect on the negative weights (e.g., expecting all other cities/HQs to go downhill).

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2. Observe there is a wide distribution in the total portfolio size to begin with: cohort effect? (again) wealth effect?

That is, could the rational home bias story diminish relative to financial capital share?

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- ▶ **Problem:** mean of t-stats doesn't correspond to mean of coefficient estimate; therefore, significant t statistics \neq the mean of t coefficient estimates are significant due to the SD correction. [harder to interpret]

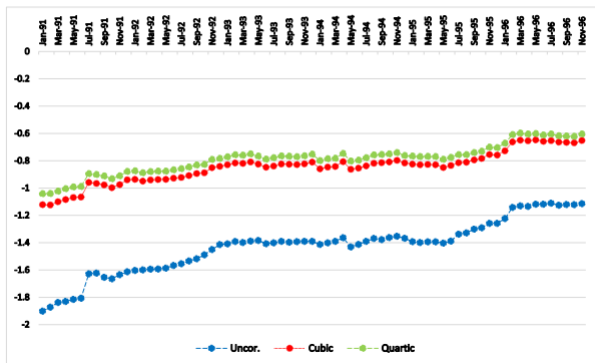
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 - ▶ Option 1: adding in time series dimension and control for some fixed effects and/or triple clustered SE; panel version.
 - ▶ Option 2: standard error of the mean coefficient [not the mean of t] should be reported.
 - ▶ Option 3: take a full-sample average of each variables (to regress and to be regressed on); pooled version.

4. Diminishing effect?

- ▶ Figure 1 (a) shows that there is an upward trend in the effect of distance loadings. However, it seems that there is a clear **upward trend**. [Simple projection shows that by 2018, the effect would fully diminish.] Thoughts?

(a) Distance Coef. in the Non-Linear Portfolio Choice Model

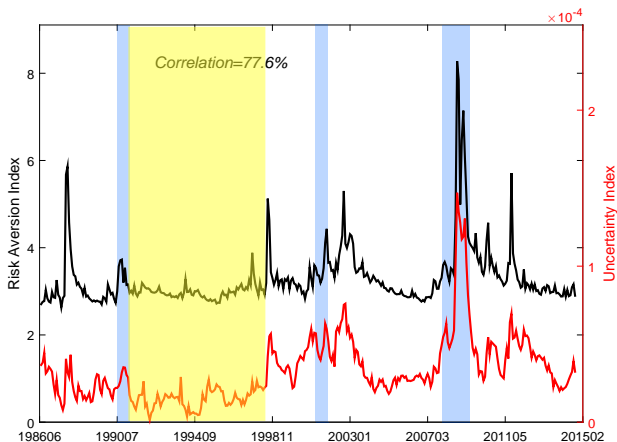


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- ▶ Introduce trends [back to Point 3]



Conclusion

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- ▶ To make it more convincing:
 1. Portfolio benchmark
 - a similar stock universe?

 2. Non-linear dependent variable
 - recognize possibly asymmetric effect

 3. Implication from time series dimension
 - cannot really ignore!

 4. Diminishing effect?
 - Trend / specific about this long-period of expansion?

Thank You!
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