



# Initial COCOMO II.2003 Data Analysis

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# Outline

- ➔ • Context
- Initial Results
- Later Results
- Proposed Next Steps
- Backup Charts

# Context

- Have obtained 115 new data points
  - Brings total to 276 projects
  - Some from significantly different contexts
- Initial 37 projects quite compatible
  - Similar coefficients, prediction accuracy
- Next 78 projects quite different
  - Lower coefficients, prediction accuracies
- Exploring causes of differences
  - May need something like PRICE S Platform drivers

# Initial Results: 37 new projects

- Prediction Accuracies and Calibration Values
- Calibration Values from New Subsets



# CII+37 Accuracies and Calibration Values

$$PM = A * (SIZE)^{(B+\Sigma)} * \Pi(EM)$$

	<b>CII</b>	<b>CII+37</b>	<b>Subset 1</b>	<b>Subset 2</b>	<b>Subset 3</b>	<b>Subset 4</b>
<b>Pred(.20)</b>	63%	55%	61%	61%	54%	60%
<b>Pred(.25)</b>	68%	65%	70%	69%	62%	69%
<b>Pred(.30)</b>	75%	70%	77%	74%	70%	73%
<b>A</b>	2.94	3.13	2.84	2.79	3.06	2.96
<b>B</b>	0.91	0.94	0.94	0.95	0.94	0.92

\*Subset: only adding the new data points from one organization to CII.

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# CII+115 Accuracies and Calibration Values

	CII	CII+37	CII+115	Subset 5	Subset 6	Subset 7
<b>Pred(.20)</b>	63%	55%	35%	55%	51%	36%
<b>Pred(.25)</b>	68%	65%	40%	64%	59%	46%
<b>Pred(.30)</b>	75%	70%	49%	69%	65%	50%
<b>A</b>	2.94	3.13	2.64	3.23	3.42	2.5
<b>B</b>	0.91	0.94	0.85	0.94	0.92	0.84
<b>Negative linear coefficients</b>	RUSE	RUSE, FLEX	RUSE, TEAM, AEXP, SITE, TOOL	RUSE, TEAM	RUSE, TEAM	TEAM, FLEX, AEXP, SITE
<b>Negative bayesian coefficients</b>	None	None	PREC, TEAM	None	TEAM	TEAM

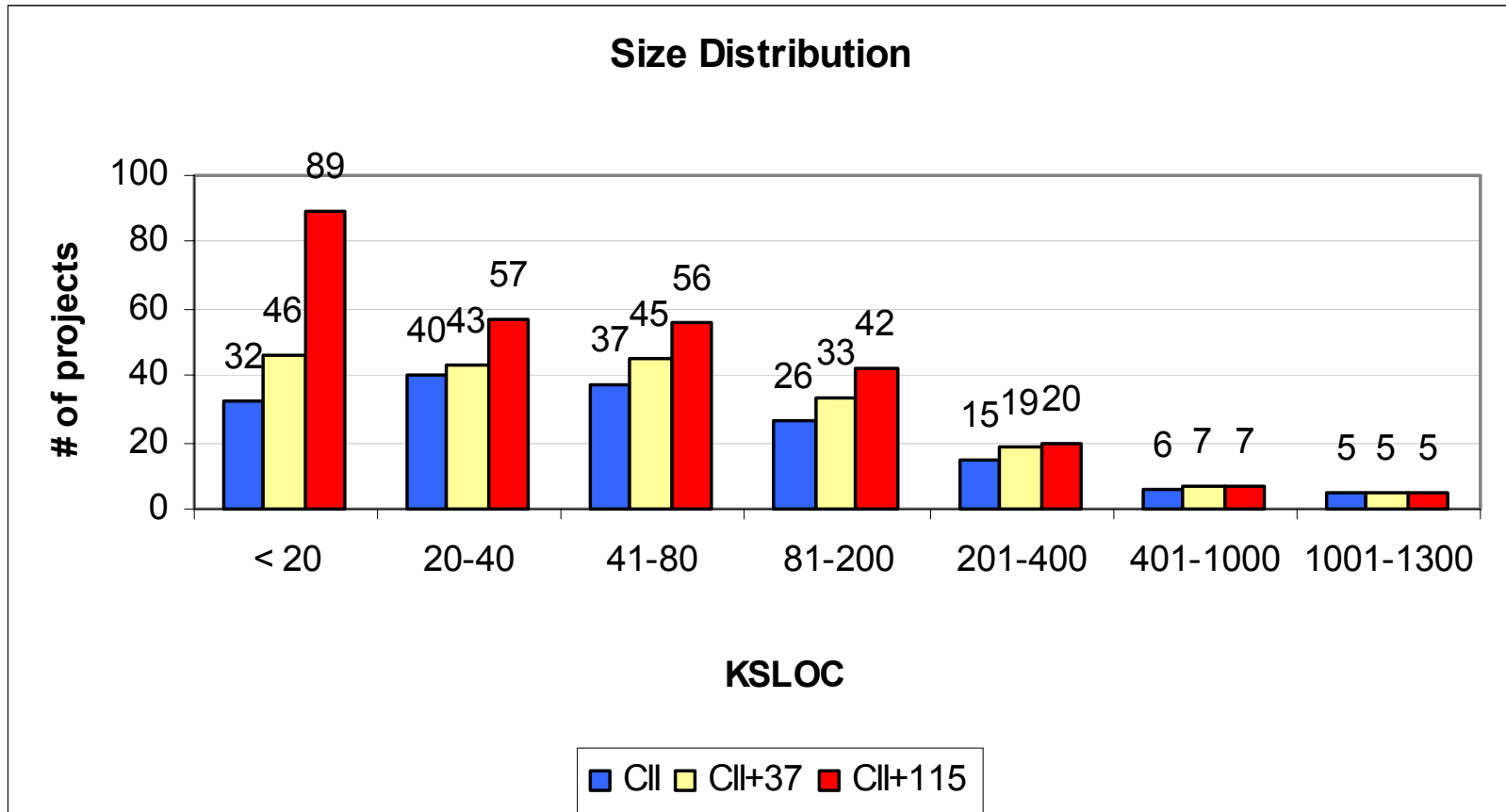
# Initial Diagnosis; Proposed Next Steps

- Subsets 5, 6, and particularly 7 have different characteristics
  - Not fully explained by COCOMO II parameters
- Exploring nature of differences
  - Business sectors
  - Small projects
- May need something like PRICE S Platform drivers

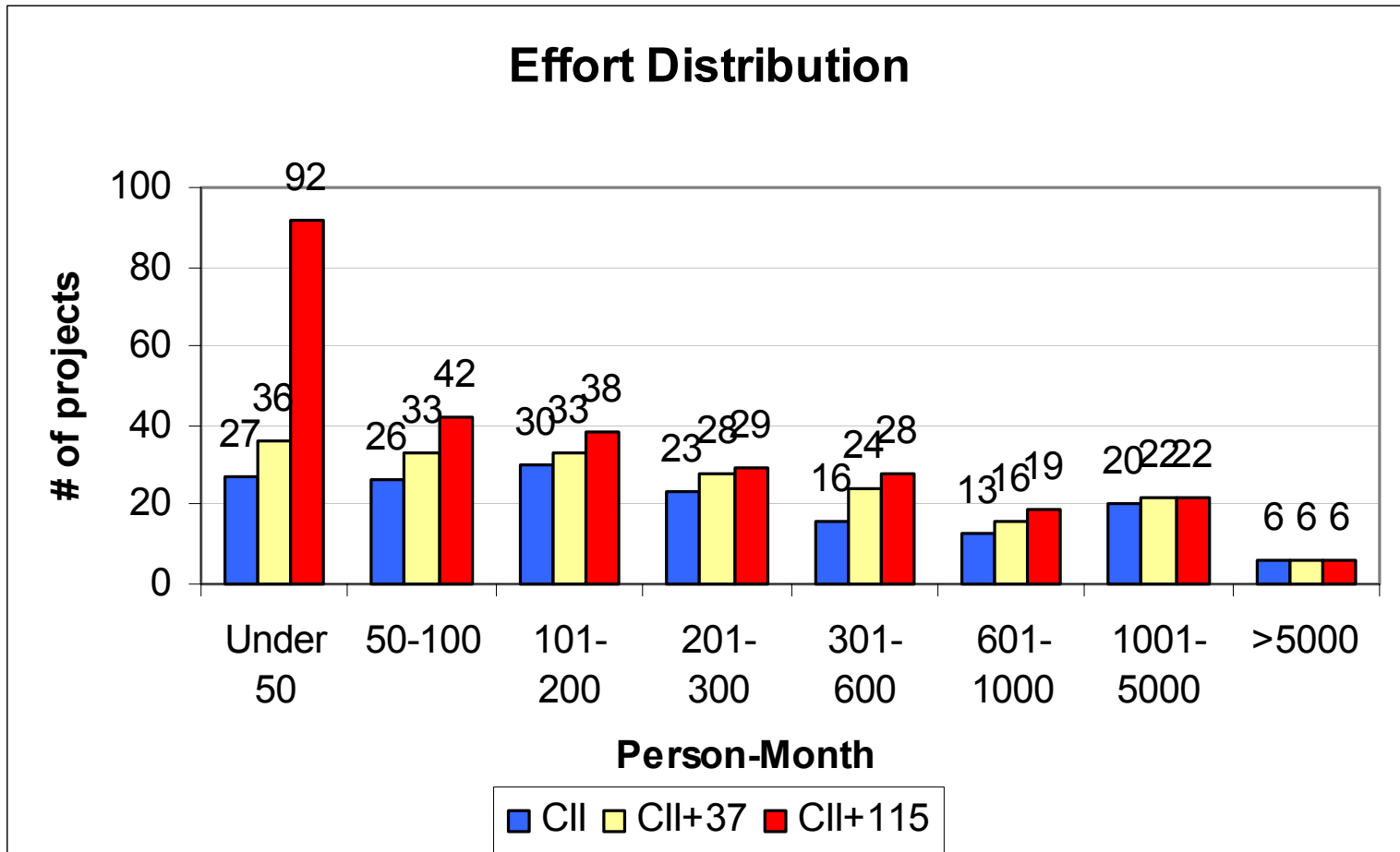
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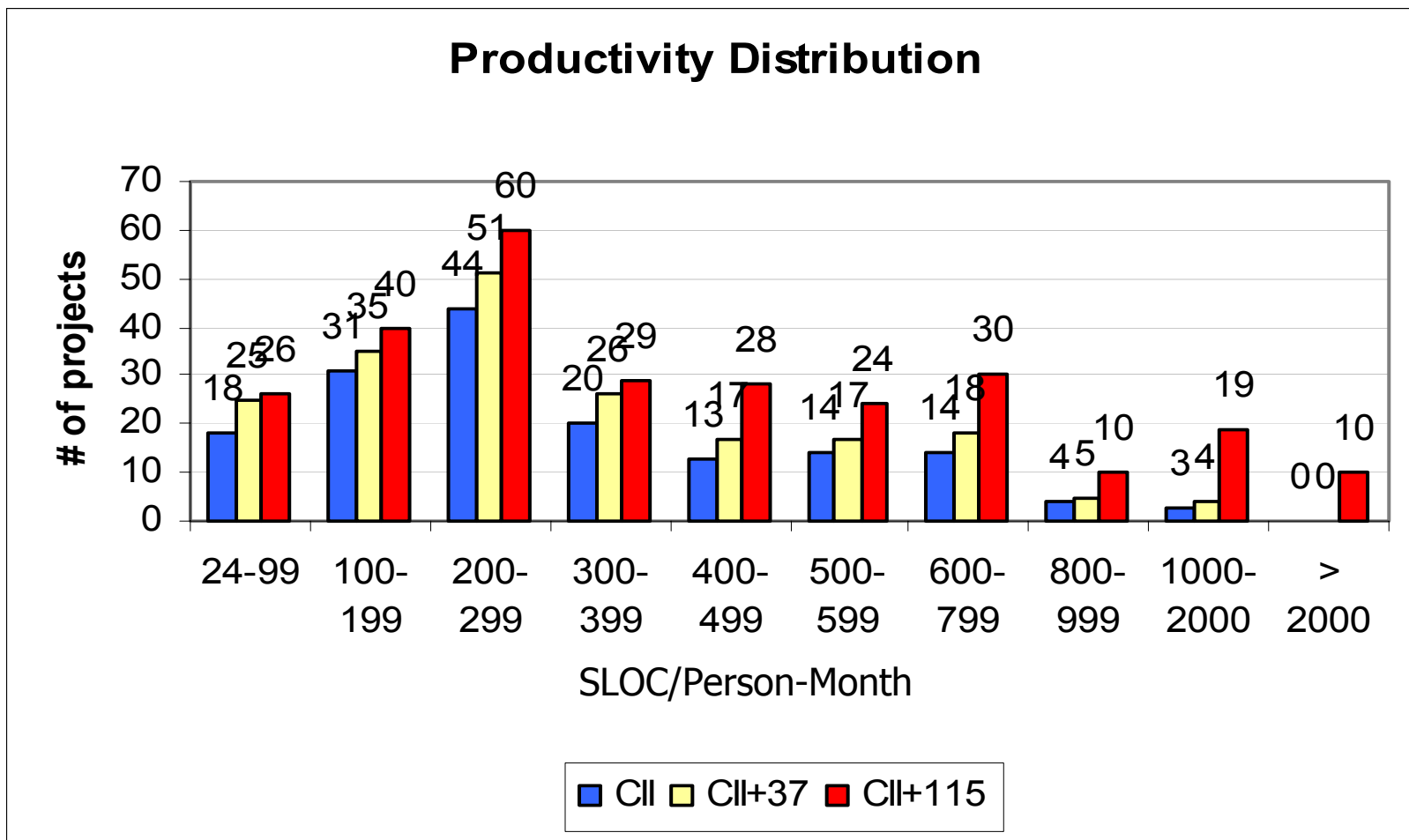
# CII.2003 Size Distribution



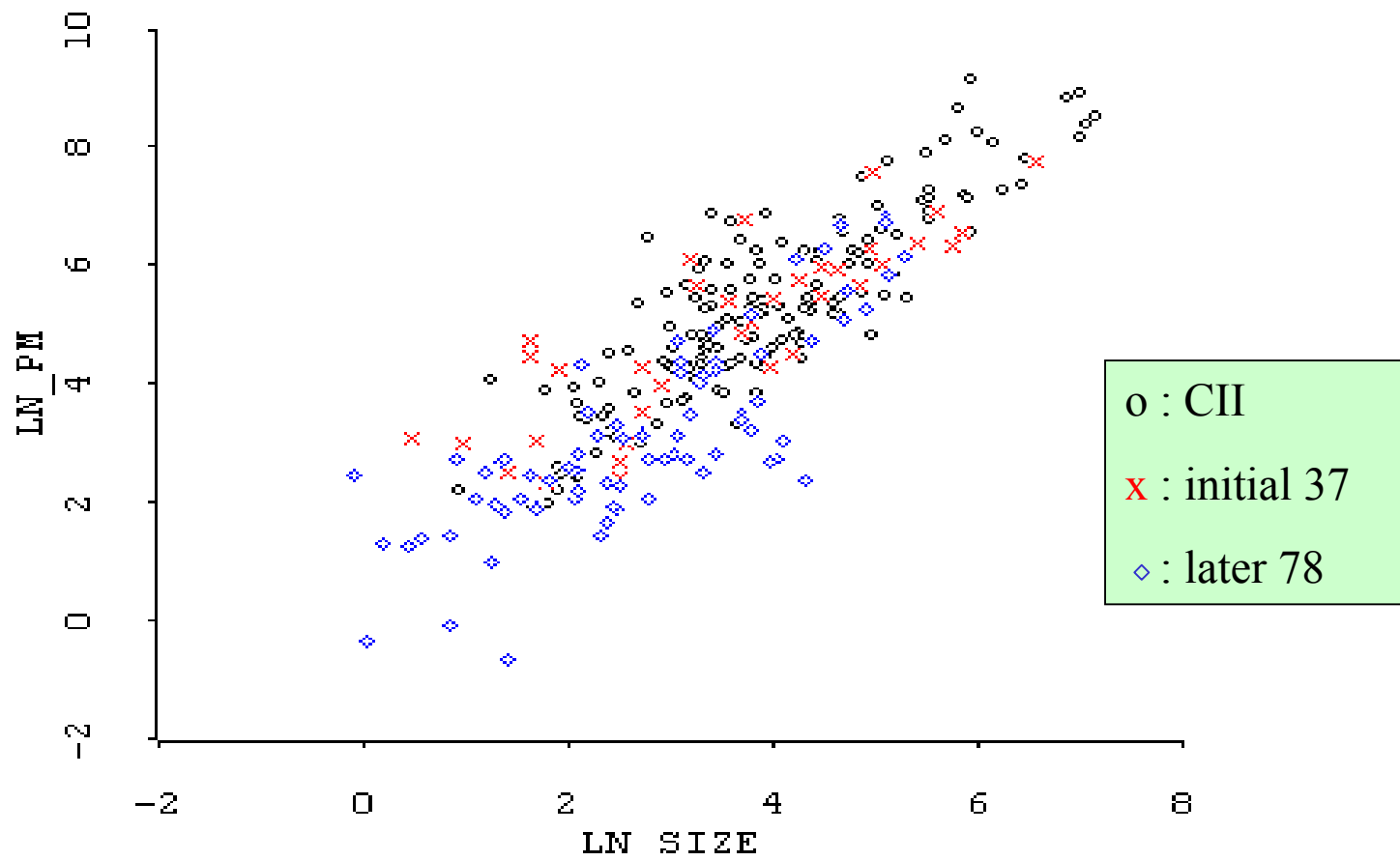
# CII.2003 Effort Distribution



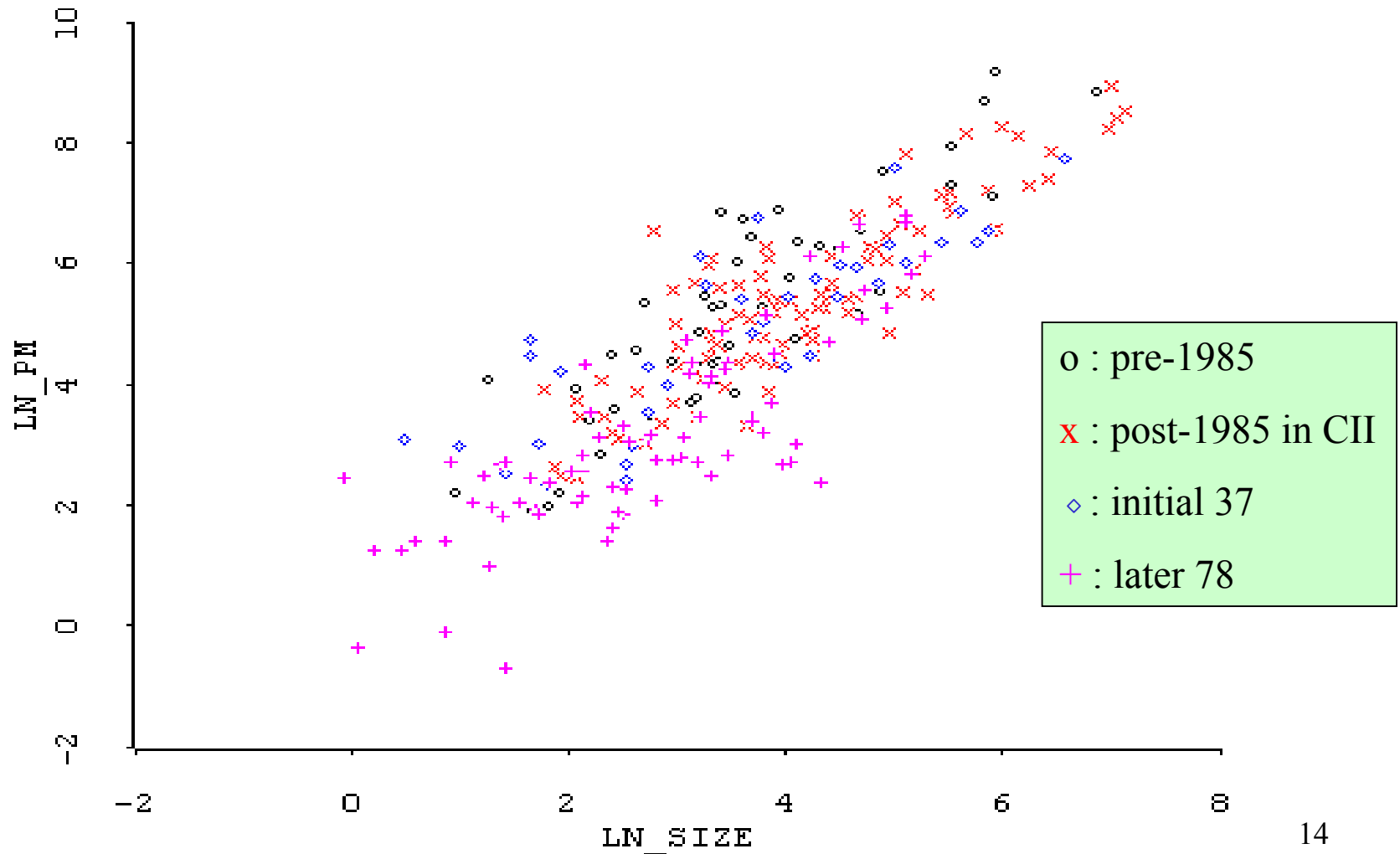
# CII.2003 Productivity Distribution



# Size Predictive Power Differences



# Data Age Plot



# Correlation Matrixes

CII:

	PCAP	STOR
ACAP	0.67	
TIME		0.71

CII+37:

	PCAP	STOR
ACAP	0.67	
TIME		0.65

CII+115:

	PCAP	STOR	PLEX
ACAP	0.65		
TIME		0.66	
LTEX			0.62