Progress Report for ReHire Evaluation Design

Tania Barham Brian Cadena Patrick Turner

Department of Economics and Institute for Behavioral Science
CU-Boulder

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Data Sources

- Excel tracking files by vendor. **List of 815 SSNs by vendor extracted (all program applicants). Tracking data not yet imported/cleaned.**
- CDLE UI Earnings records for 815 applicants. **Complete panel of earnings/employment constructed; quarterly data with total earnings and an employment indicator for 2008-2014**
- CDHS Program participation records for 815 applicants (CBMS). **Complete monthly panel of participation indicators by program for 2007-2014.**

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Possible Program Outcomes

- Measuring effects of the program requires outcomes that are measurable for both treatment and control groups.
- Current internal tracking system does not collect data on everyone, and often only for "successes."
- Administrative data do not impose additional time burden on ReHire applicants or vendors.
  - CDLE: Earnings, employment, industry, job length/churn
  - CBMS: SNAP, BCA, others?
- Process outcomes can be measured using only the treated group but are not the *effect* of the program.
  - Number of clients served (by baseline characteristics)
  - Time in transitional job, share with direct hire into permanent job, etc.
- It is possible to track other *effects* of the program, but we would need to design and fund additional data collection.

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Our Progress

- Goal 1: Describe admin data available for possible program outcomes. Construct specific variables that could be affected by ReHire participation.
- Goal 2: Analyze pre-participation data to provide a profile of the typical ReHire participant and determine which variables are likely to be of most interest.
- Goal 3: Power analysis to determine whether a randomized evaluation is likely to reject the null of no effect under reasonably large true effect sizes.

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Program Participation

- The 815 ReHire applicants have substantial experience with CDHS programs (esp. SNAP, BCA).
- Number ever receiving benefits (by program) from 2007-2014:

Program	Subprogram	N
Adult Financial Assistance	AND SSI/CS	1
Adult Financial Assistance	Burial	1
Adult Financial Assistance	OAP A	1
Adult Financial Assistance	OAP B	12
Adult Financial Assistance	State AND	41
Colorado Works	**Basic Cash Assistance**	**165**
Colorado Works	State Diversion	38
County Diversion	County Diversion	9
Expedited Food Stamps	**Food Stamps**	**525**
Food Stamps	**Food Stamps**	**641**

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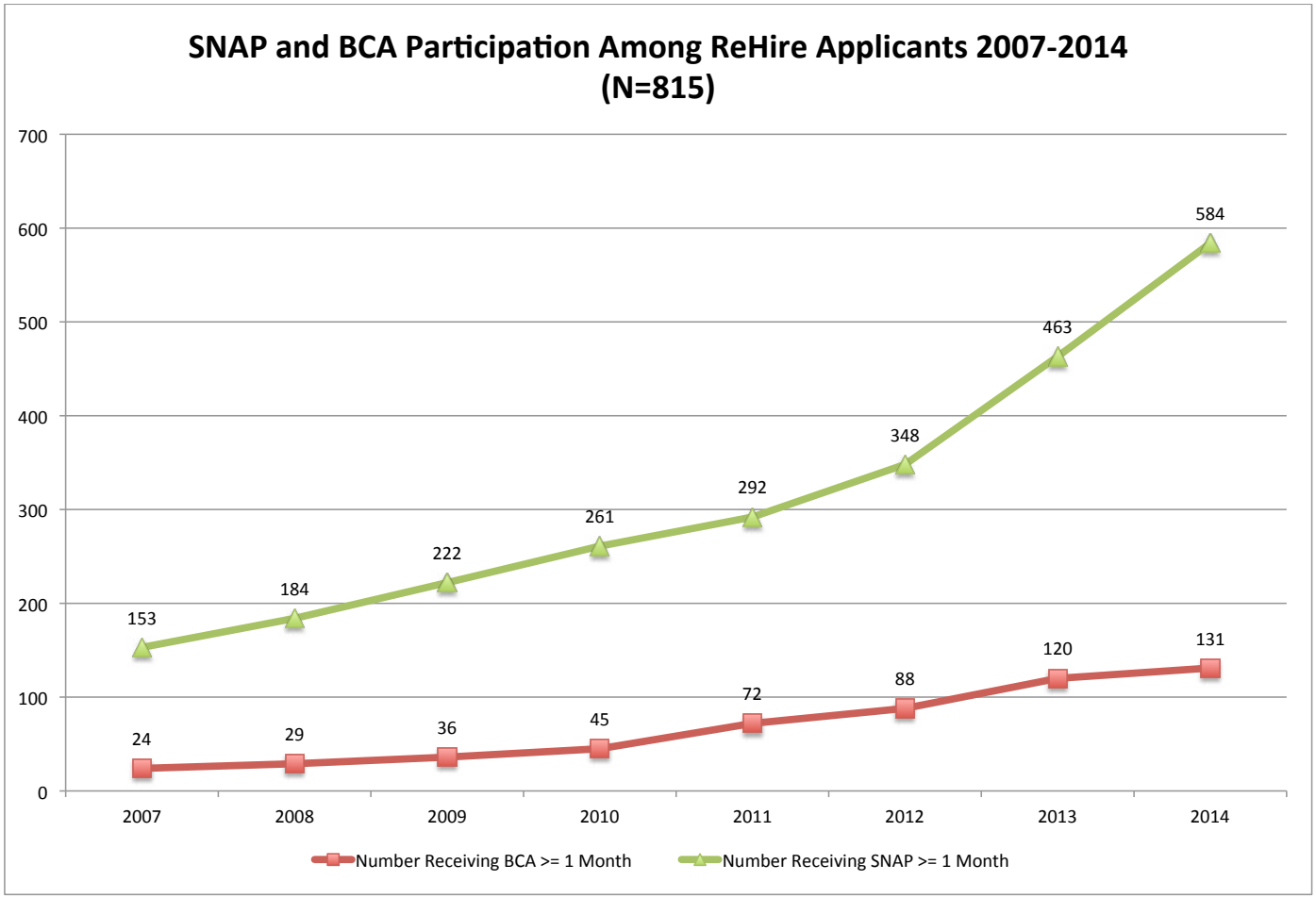
Participation Rises Before and During ReHire



Program Participation Outcomes Recommendation

1. Focus on participation in BCA and SNAP; other program participation too infrequent.
2. Good comparison group (from randomization) extremely important because participation rises during ReHire and may fall afterwards even in absence of program.

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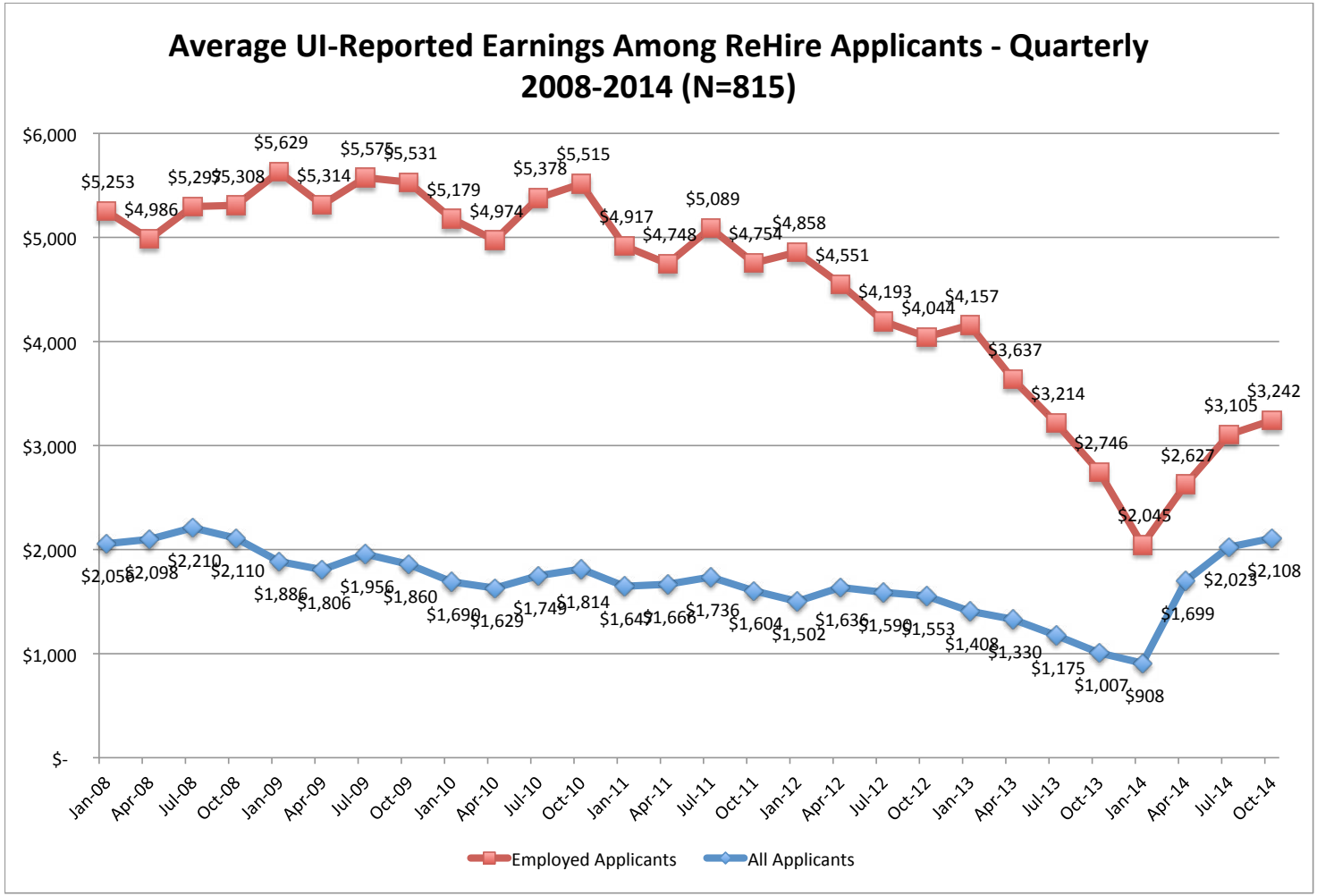
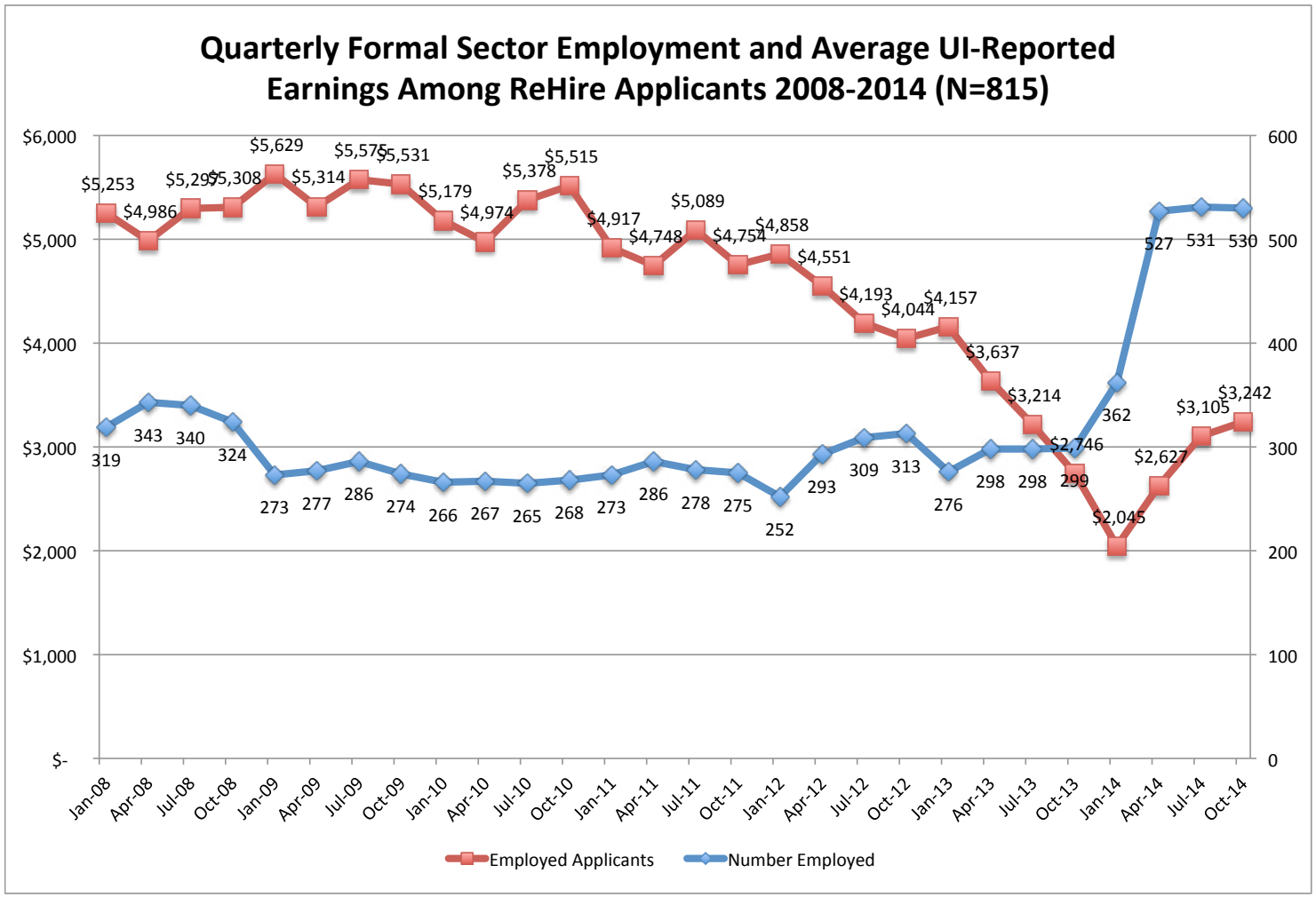
Formal Sector employment

- Most of the 815 ReHire applicants (638) had at least one quarter of formal sector employment between 2008 and 2013. Including 2014, 759 have valid CDLE earnings record.
- Employment rates and average earnings are both quite low prior to program start. Substantial scope for program to affect labor market attachment and total earnings.

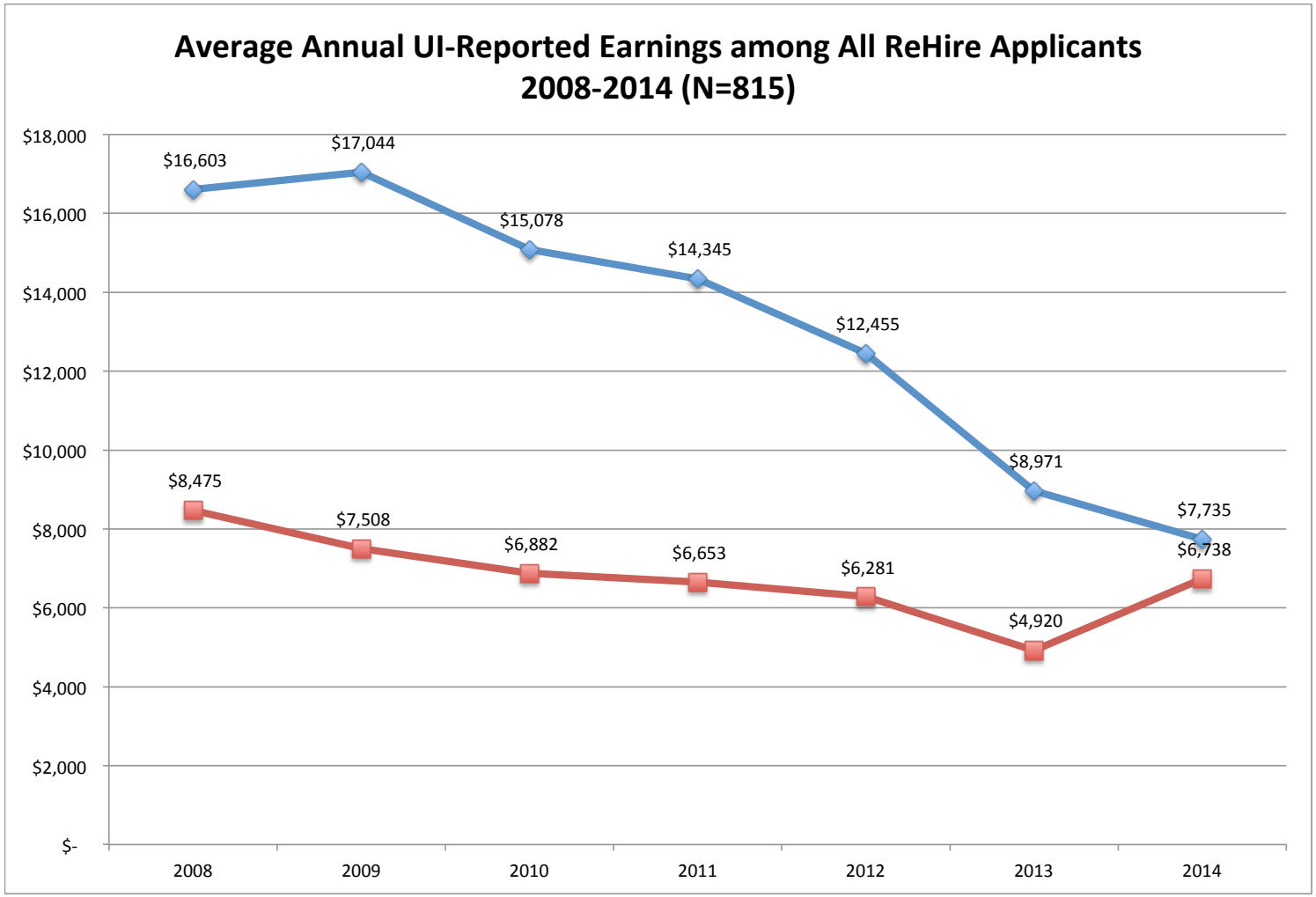
Average Earnings Dips Before ReHire, Rebounds During



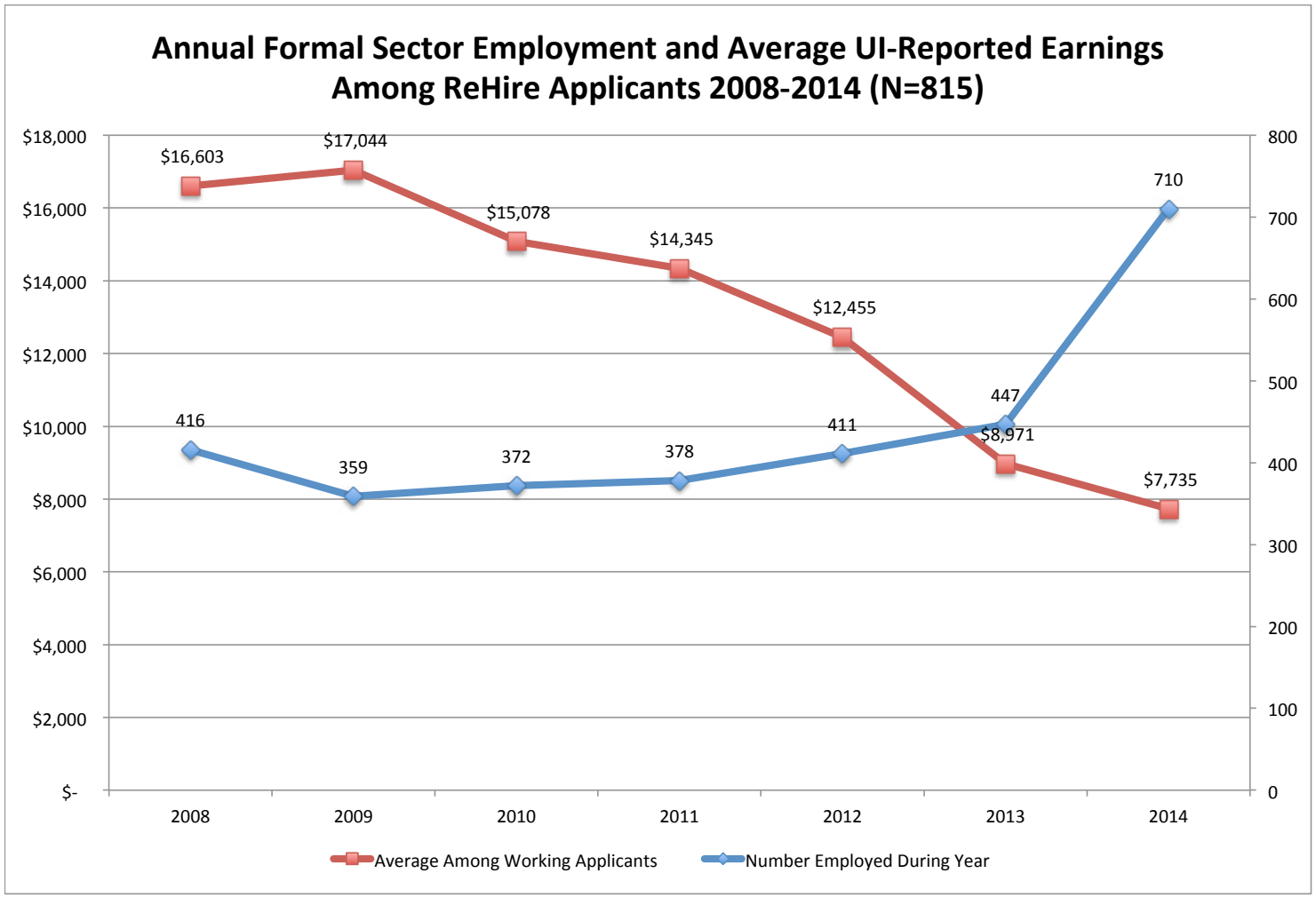
Earnings Decomposition



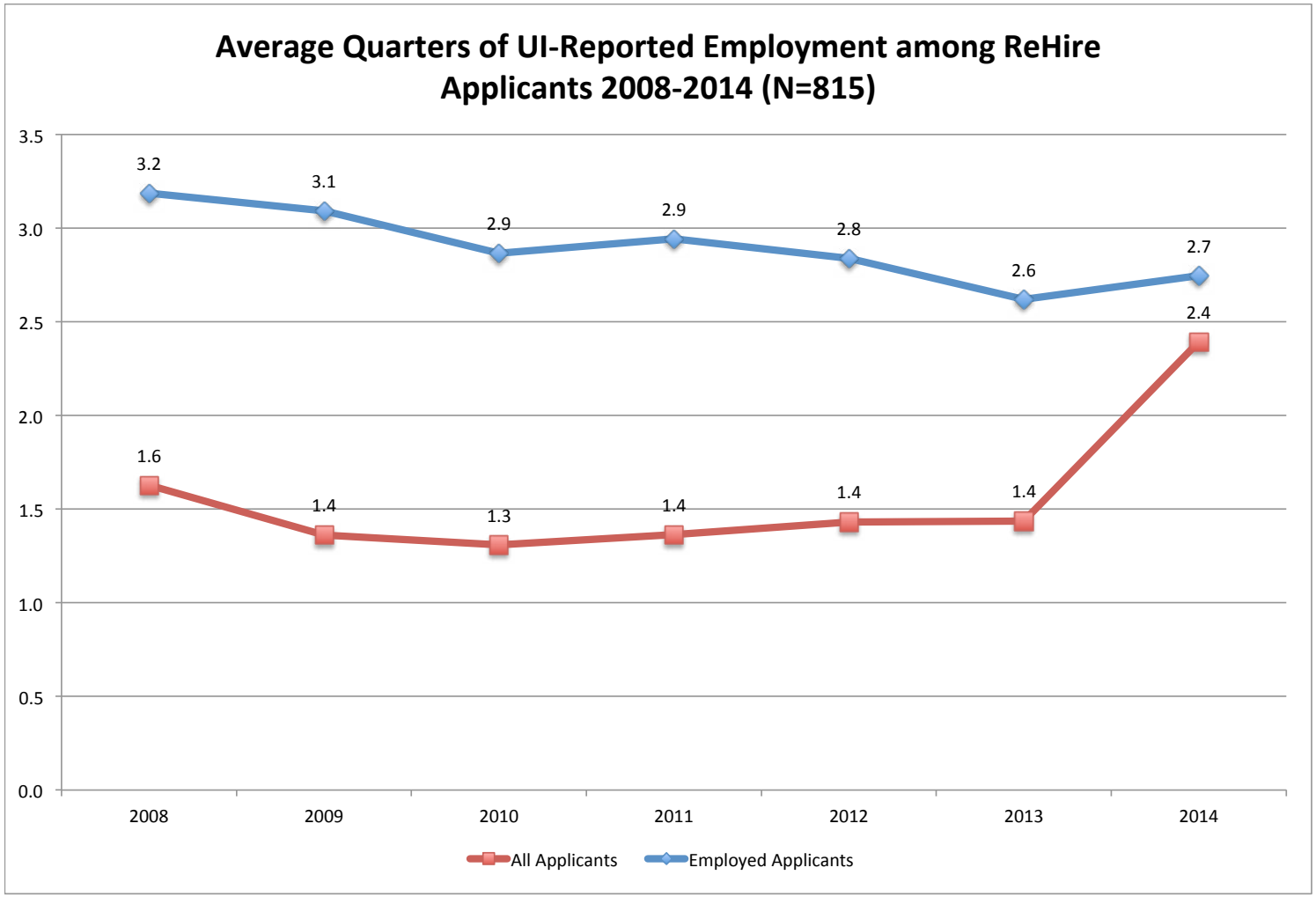
Annual Earnings Prior to ReHire



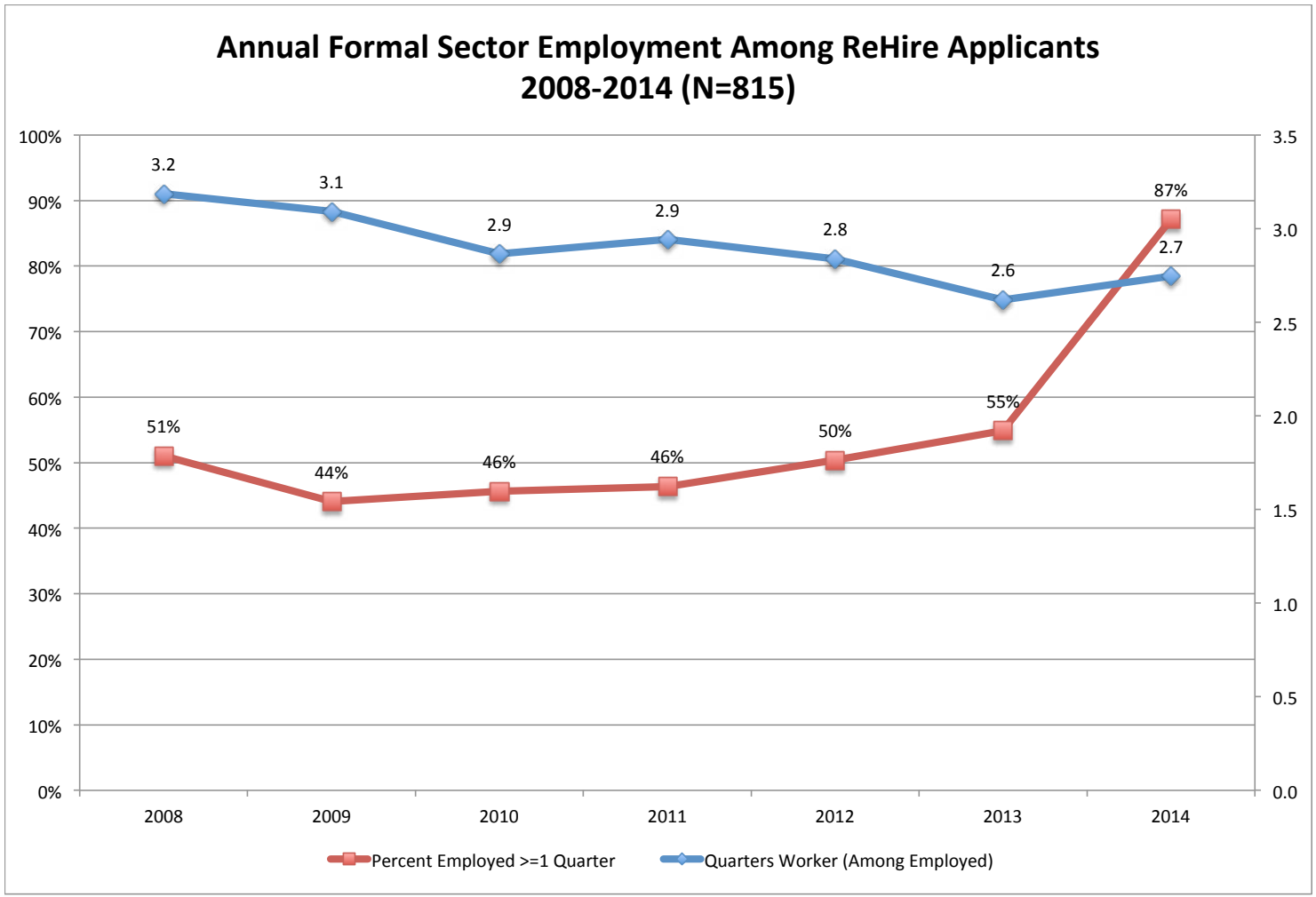
Annual Earnings Components Prior to ReHire



Quarters Worked Stable Prior to ReHire



Labor Market Attachment Rises during 2014



UI Records Outcomes Recommendation

1. Focus on employment margin first because quarterly employment low and full year employment rare.
2. Realize that earnings may be a useful summary measure, and it comes from two components.
3. Both quarterly and annual information potentially useful.
4. Likely need a full calendar year after program participation ends to evaluate labor market effects fully. Even if ReHire 2014 had been randomized, would not yet know program effects (beyond compliance with treatment).
5. Good comparison group (from randomization) extremely important because employment rises during ReHire, and may not be due to transitional job.

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Power Analysis for Employment and Earnings Outcomes

Power Analysis: Using 2013 Data

	Mean	SD	ICC	Range Effect Size (% increase)	Range N Needed Treatment Group
Annual Data					
Annual Earnings	4,412	7,364		30 - 35	651 - 478
Employment Rate	0.55	0.5		15 - 20	818 - 431
Number of Quarters	1.44	1.56		20 - 25	609 - 395
Quarterly Data					
Quarterly Earnings (no clustering)	1064	2187	0.58	20 - 25	2237 - 1421
Quarterly Earnings (clustering)	1064	2187	0.58	30 - 35	2705 - 1987
Employment Rate (no clustering)	0.359	0.48	0.55	15 - 20	2029 - 1052
Employment rate (clustering)	0.359	0.48	0.55	20 - 25	2788 - 1712

Notes: Assume significance on t-test is 0.5, power is 0.9 and trim earnings data at 1% level

Other Progress

- Literature Review
  - Extensive literature on "Active Labor Market Programs", including multiple randomized evaluations. Literally 100 other evaluations.
  - Key unanswered question: *What types of potential participants benefit the most from these programs?*
  - Our interest as academics is in answering this question, and knowing the answer would have clear policy implications.
- Prepare for baseline data collection
  - Gathering existing survey instruments, especially those targeting low-income population.
  - What does CDHS need for database vendor and when? Max duration for intake questionnaire?
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