

The Linked Employer Employee Database: A Research Perspective

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Presentation

- A. Description of LEED
- B. Research themes focused on:
 - 1. Worker outcomes
 - 2. Firm outcomes
 - 3. Worker / Firm link outcomes
- C. Future research prospects

A. Description of LEED

- IRD Employer Monthly Schedule (EMS)
 - Since April 1999
 - Lists all paid employees, their earnings and tax
 - Unique Worker and Employer IRD identifiers
 - Identifies WA Bft, ACC, PPL, SA, NZS payments
- SNZ Longitudinal Business Frame (LBF)
 - Identifies geographic units (PBN) as “firm”
- MSD Benefit data
- EOTE feasibility study of MoE/ITO data link
- *Note:* LBD development in parallel to LEED

Pros & Cons of LEED

- Strengths:
 - ~ population of PAYE *empl* and *earnings*
 - tracks workers longitudinally
 - tracks *firms* longitudinally
 - tracks worker/firm *matches*
- Weaknesses:
 - few worker/firm characteristics
 - few policy instruments
 - No hours
 - Uncertain “sampling” properties

B. Research Themes

- StatsNZ LEED Research webpage:
<http://www.stats.govt.nz/leed/reports/default.htm>
- (1) Worker focused outcomes
- (2) Firm focused outcomes
- (3) Worker / Firm link focused outcomes
- Data development project research
 - Not discussed here

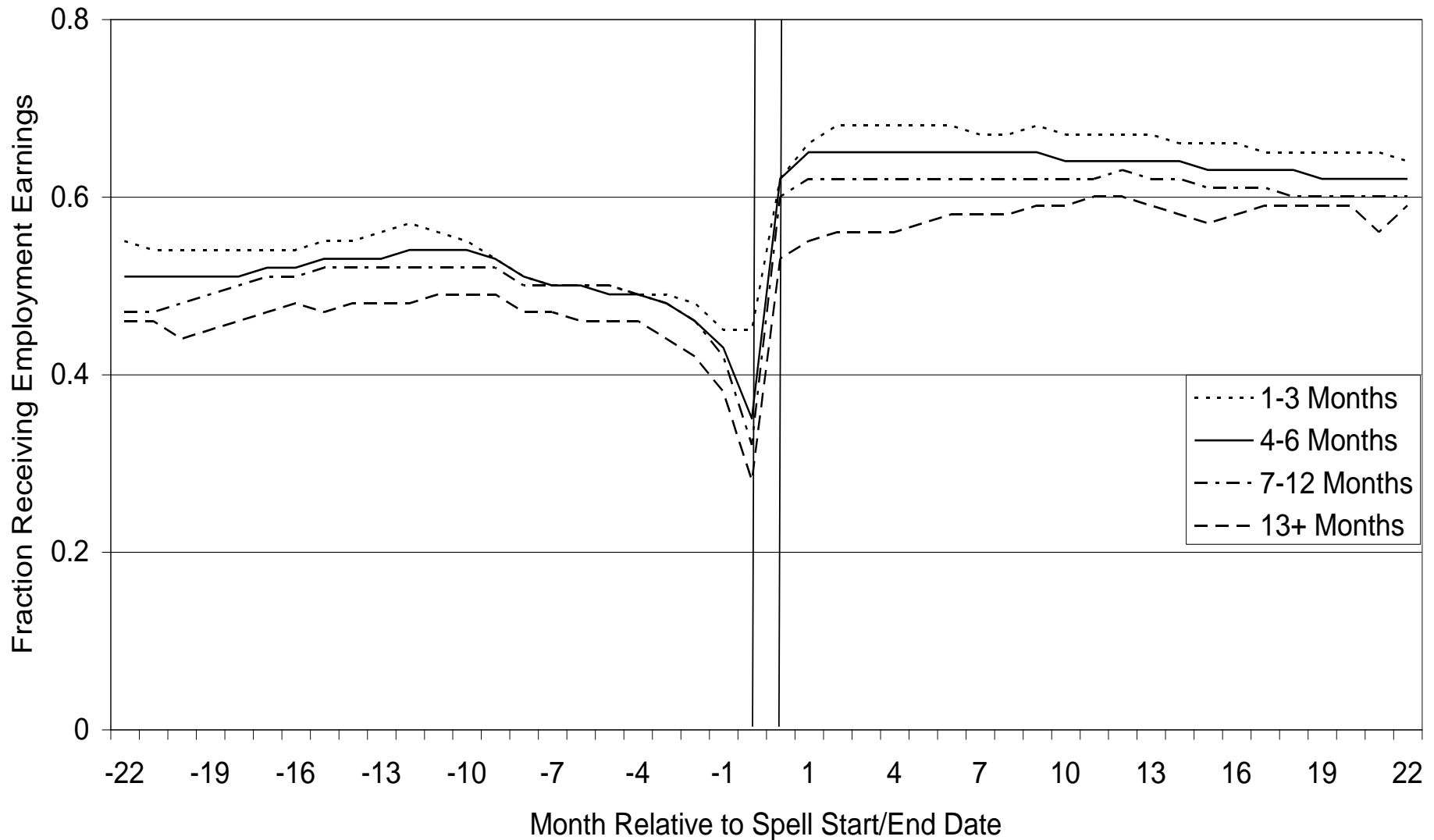
(1) Worker focused outcomes

- Impact of injury (ACC) on emp & earns
 - Crichton, Stillman & Hyslop (2004, 2005)
- Benefit to work transition analyses
 - Hyslop, Stillman & Crichton (2004); Dixon & Crichton (2006); Stillman & Hyslop (2006); Moore (2006)
 - See some *highlights*
- Paid Parental Leave analysis
 - Crichton (2008)
- Older workers / transitions to retirement
 - Dixon & Hyslop (2008); Dixon (2008, 2009)
 - See some *highlights*

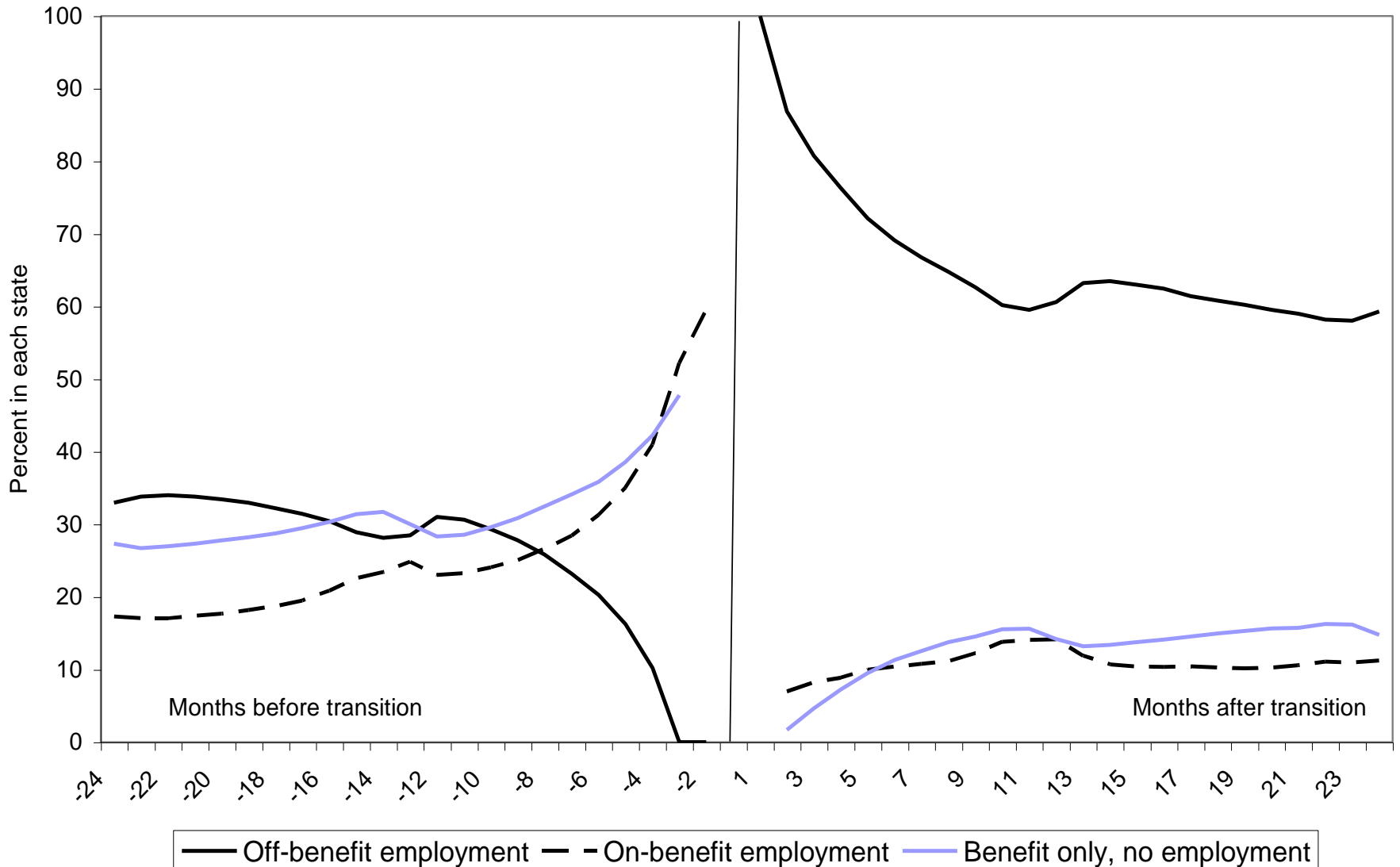
... Worker focused outcomes

- Firm closure effects on Emp & Earns
 - Dixon & Stillman (2008)
- Measuring job tenure
 - Papadopoulos (2008); Timmins (2008)
- Job mobility and earnings dynamics
 - Maloney* (2006); Hyslop & Mare (2009)
- Impact of IT / Educ on emp & earns
 - Crichton (in progress); Smith (in progress)
- *Some highlights ...*

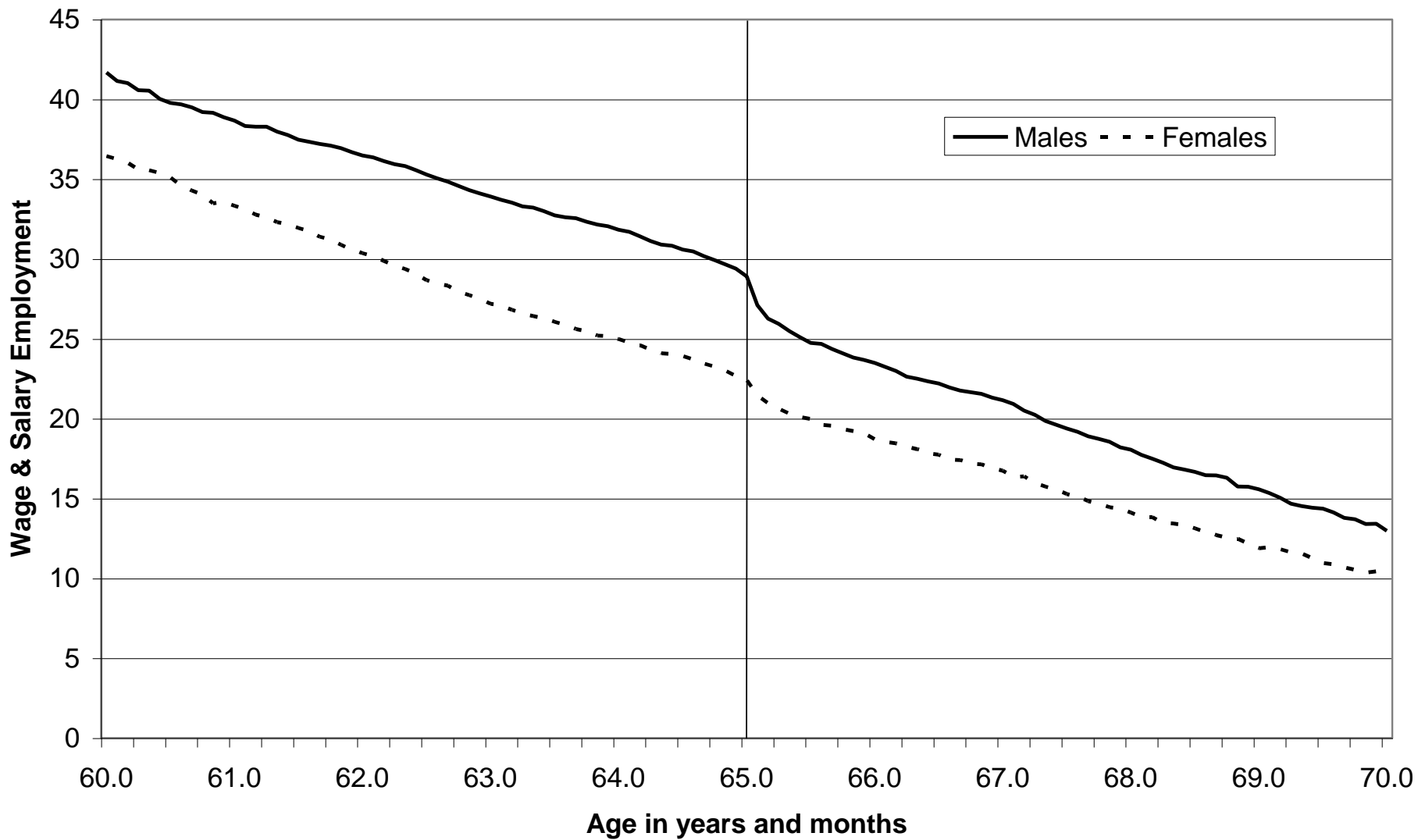
Employment rates pre/post Bft (HS&C, 2004)



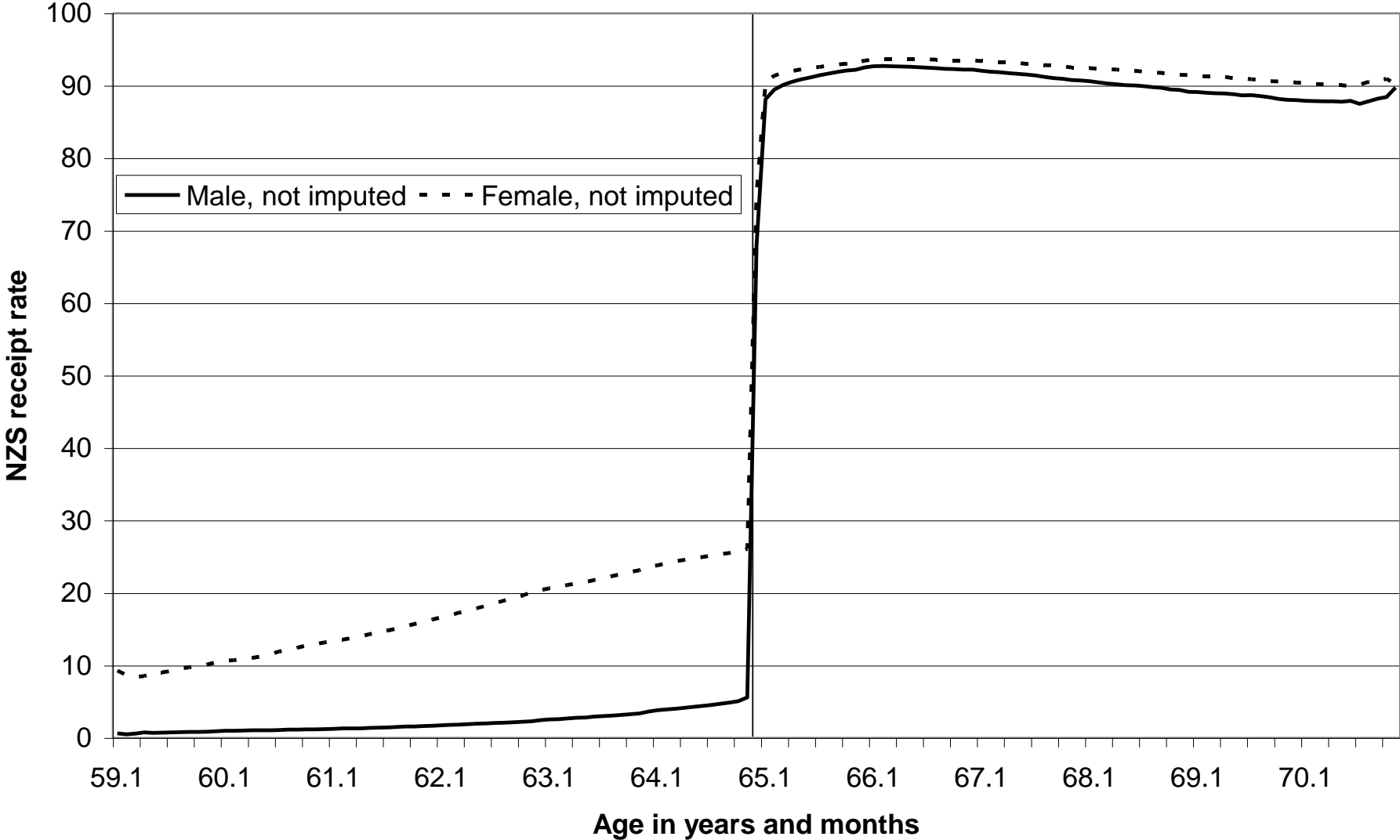
Employment & bft receipt rates (D&C, 2006)



Transitions to *retirement* (D&H, 2008)



Transitions to *retirement* (D&H, 2008)



(2) Firm focused outcomes

- Measuring labour productivity
 - Dixon (2007)
- Minimum wage effects on employment
 - Hyslop, Mare, Stillman & Timmins (2008)
- *Some highlights ...*

Min wages & firm employment (HMS&T, 2008)

- Since 2000: teen min wages have doubled, raising avg wages ~5-10% relative to adults
- Firm analysis of teen empl ... distribution & wage-bill impacts
- No robust effect on teen employment by Hi-teen firms

	Share of Teen-emp	Avg Firm Emp-share	MW impact on Wage-bill
All Inds	100%	7.5%	0.5%
4 main Inds	60%	15.5%	1.5%
Hi-teen firms	20-25%	40+%	4-5%

(3) Worker / Firm matches

- Measuring worker / firm effects in earnings
 - Mare & Hyslop (2006)
- Employment intensity, matching, & earnings
 - Hyslop & Mare (2007)
- Composition change over business cycle
 - Mare & Hyslop (2008)
- Seasonal employment analysis
 - Timmins (in progress)
- Job mobility and earnings dynamics
 - Maloney* (2006); Hyslop & Mare (2009)
- Worker/firm match & firm productivity
 - Mare & Hyslop (in progress)

Selected highlights

- Consider earnings regression model:

$$Y_{ijt} = X_{it}'\beta + \theta_i + \Psi_j + \varepsilon_{ijt}$$

Y_{ijt} = log(earnings rate) worker-i, firm-j, year-t

$X_{it}'\beta$ = observed (demographic) component

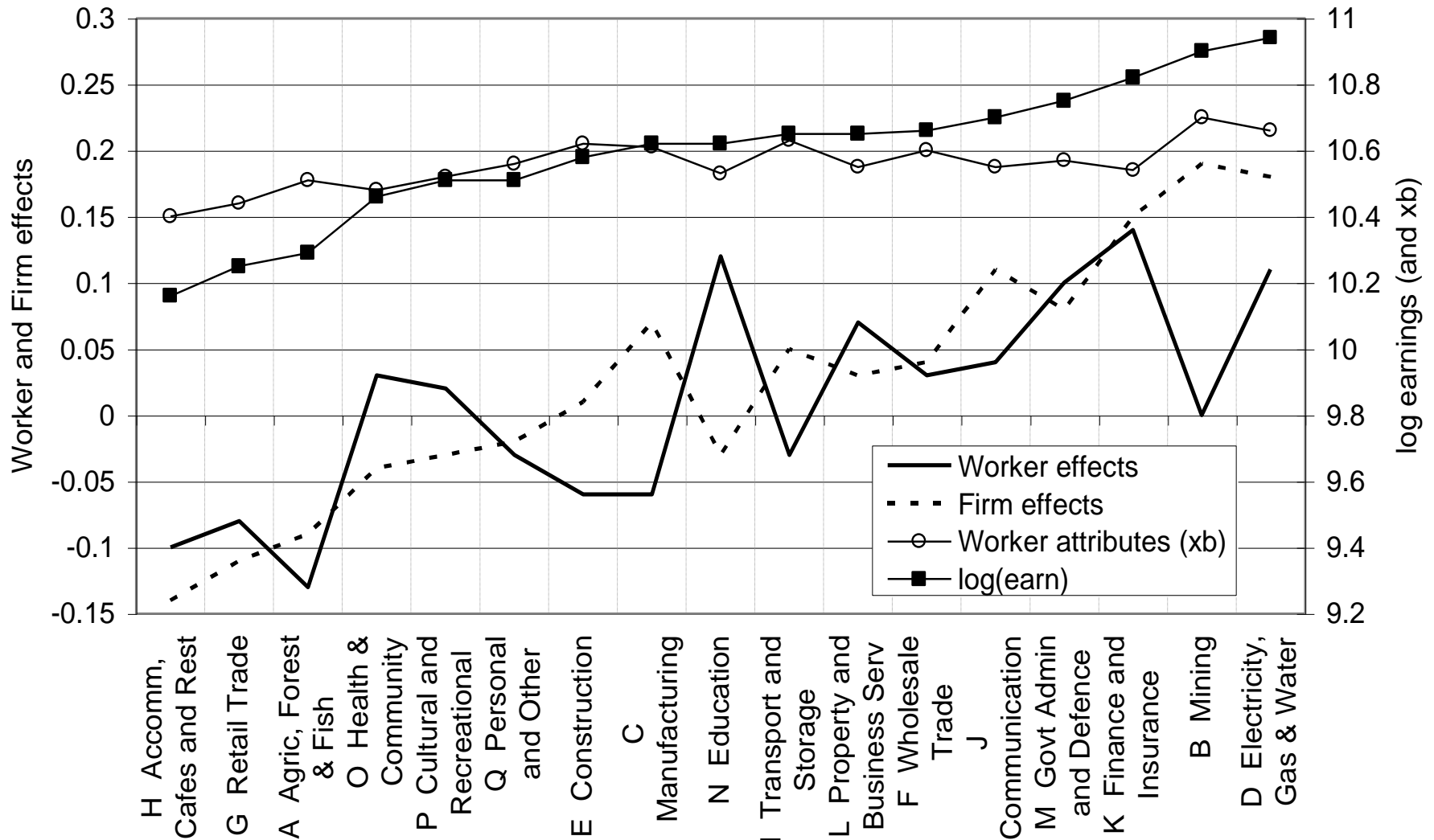
θ_i = (unobserved) worker fixed effect

Ψ_j = (unobserved) firm fixed effect

ε_{ijt} = idiosyncratic component

- Mare & Hyslop (2006):
 - significant worker and firm components of earnings
 - worker and firm “effects” positively correlated

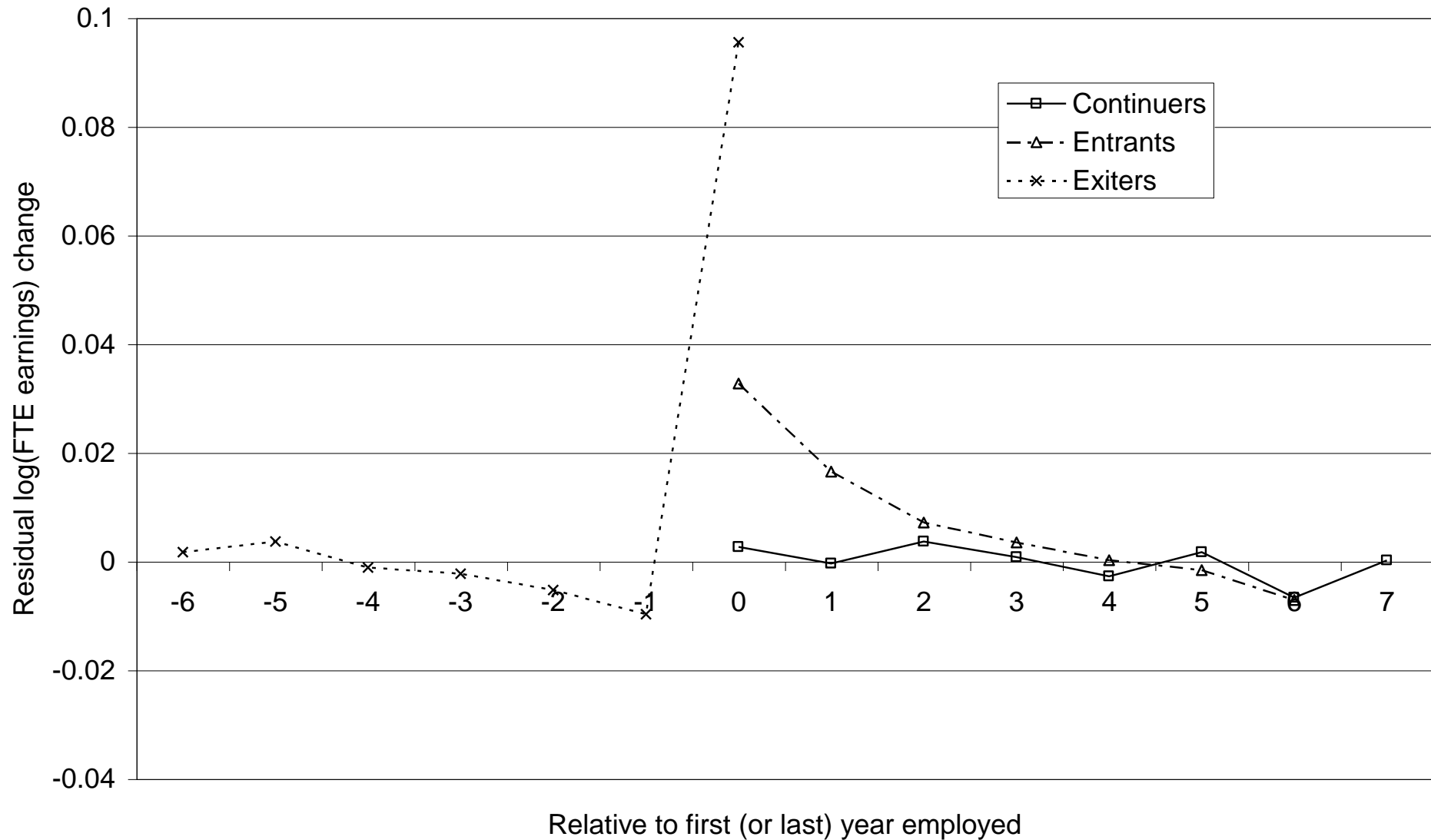
Figure 2 (M&H, 2006): Industry earnings differentials



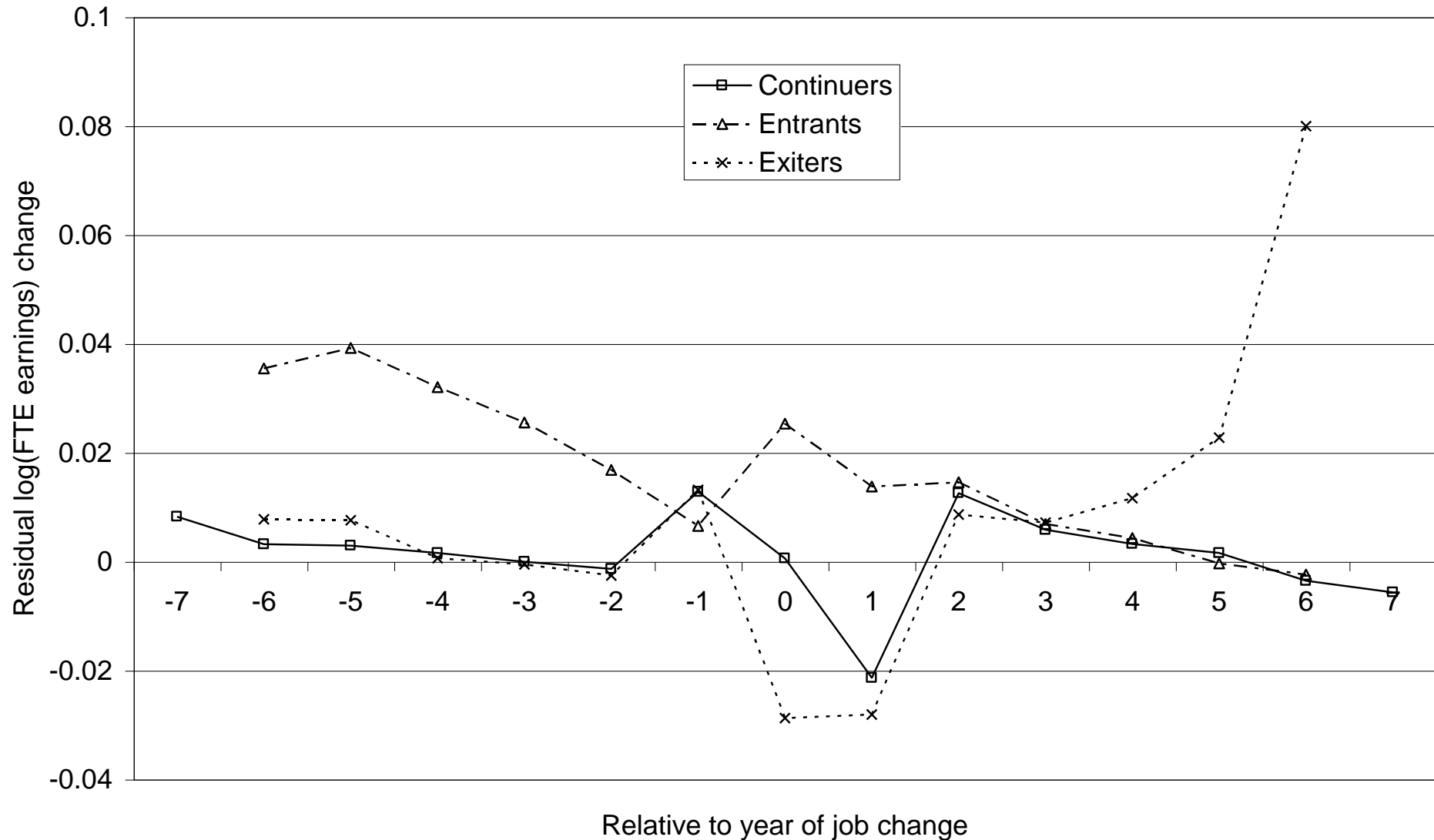
Projects on worker-firm links

- Mare & Hyslop (2008):
 - 1999–2007 bus. cycle: Emp up 20+%; #firms up 10+%
 - Significant dilution of worker ‘skill’ & firm ‘quality’
 - Measured annual average earnings growth ~1.3%
 - Composition-adjusted growth ~2.0%: i.e. substantially greater!
- Hyslop & Mare (2007):
 - Characterises workers annual employment by FT/PT & FY/PY
 - Describes job matching along these dimensions
 - Raw PT wage penalty due to worker and/or firm chars not PT *per se*
- Hyslop & Mare (2009):
 - Job movers have slightly higher raw wage growth than stayers
 - On avg workers seem to move to better firms (0.3%), but lose accumulated firm-specific tenure (-1.6%)
 - Higher *ability* workers gain (lose) most moving to better (worse) firms

(H&M, 2009): Job-stayers' Residual earnings change



(H&M, 2009): Job-movers' Residual earnings change



C. Future research prospects

- Criteria to consider:
 - LEED's strengths: i.e. worker-firm links, dynamics
 - Well identified population groups (e.g. Retired people: 90+% receive NZS by 65)
- *Plug* for a survey-data link:
 - Consider a single sample (e.g. HLFS) link to LEED (c.f. US 1-off CPS / SSA merge)
 - Gains? pt-in-time random sample of population, socio-demographic & HH structure info, independent pt-in-time (svy) LM measures
 - Risks? Privacy/confidentiality assessments, consent from svy respondents may be low, minimal risk to svy response

Fertile research areas?

- Workers' earnings & LM dynamics
- Tax & bft smoothing of income shocks
- Inequality measurement (only individuals!)
- Benefit dynamics, using MSD bft info
- Education (& Ind Train) impacts on worker empl, earns, and firm outcomes
- Analysis of worker selection into education & IT, and firm-interactions
- Business cycle effects on LM decisions
- Evaluation of policy on LM outcomes (e.g. Benefit policies / prgs; Education prgs; etc)¹