Memo on draft

of Nov 02, 2023

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01 30, 2024 15:03

Michael firm samples (CIT-IRP5)

Base

All ag farms & dropping years other than 2010-16 & dropping farms which enter after 2013.

Unbalanced

All base farms observed in 2010-11 or 2011-12, dropping farm-year observations with missing value in key sales and cost variables (value_added, g_cos, g_sales, irp5_kerr_weight_b, x_labcost).

Balanced

Unbalanced panel & missing values in other variables (ltrain, lnon_wage_labcosts, lawage, llabcost_pe, loprofit, lmaterials, l_labcost, loprofits_pe, lrevenue, lrev_pe) were replaced with value = 0.

Survivor

Unbalanced panel & dropping farms with a missing observation for some year.

Survivor $\subset$ Unbalanced, Balanced = Unbalanced (NA $\rightarrow$ 0)

Marlies employee samples (IRP5, low wage workers)

Base=Non-survivor

All employees in ag farms observed in 2010 and/or 2011 & Not years other than 2010-2016 & Not farms entered after 2012 & workers earning $<$ R5400 per month for all periods.

Survivor

Non-survivor & observed in all years of after the entry.

Survivor $\subset$ Non-survivor

CIT-S/NS

S/NS sample & employer appears in CIT data

NonCIT-S/NS

S/NS sample & employer does not appear in CIT data

Survivor $=$ CIT-Survivor + NonCIT-Survivor

From Michael, Jan 19, 2024

Unbalanced

Survivor

Capital intensity went up in 3-4 years.

- Substituted labor → capital for both unbalanced and survivor farms.

Employment (# of employees)

- Unbalanced: Reduced in 3-4 years.
- Survivor: Shot up at the impact, settled down in 3-4 years.

Labour costs per worker

- Unbalanced: Increased in 3-4 years.
- Survivor: Reduced at the impact. Initially substituted high paid workers → low paid workers?

Unbalanced

Survivor

Average wage

- Unbalanced: Unchanged.
- Survivor: Reduced and stayed down for 4 years (statistically indistinguishable from zero).

Non-wage labour costs

- Unchanged for both at the impact.
- It may go up after 5 years?

Operating profits

- Unbalanced: Increased at the impact.
- Survivor: Unchanged.

Unbalanced farms

- Substituted labour → captal.

Survivor farms

- Substituted labour → captal.
- Substituted high paid workers → low paid workers.

From Marlies, Jan 24, 2024

Unbalanced (CIT)

Survivor (CIT)

# of employees not on payroll (Exit)

- Unbalanced: Unchanged.
- Survivor: Increased at the impact.

# of employees newly hired (Entry)

- Unbalanced: Unchanged.
- Survivor: Decreased in 1-4 years.

Employment (# of employees)

- Unbalanced: Decreased (large SEs).
- Survivor: Unchanged.

Survivor farms reduced new hire, increased termination, but not enough to change employment level.

Unbalanced (non-CIT)

Survivor (non-CIT)

# of employees not on payroll (Exit)

- Unbalanced: Increased at the impact.
- Survivor: Increased at the impact.

# of employees newly hired (Entry)

- Unbalanced: Decreased at the impact.
- Survivor: Decreased in 1-4 years.

Employment (# of employees)

- Unbalanced: Decreased at the impact (statistically zero).
- Survivor: Decreased in 1-3 years.

Impacts are more pronounced with non-CIT samples. Implausibly large in some outcomes (small sample bias?)

Makes an economic sense that capital intensity increased.

Employment is unchanged after 3 years, but it is relative to the control trend. Need to plot the control employment as a reference.

Economic rationale:

- If wage costs increased, how does a producer maintain employment, while increasing capital intensity?

Why did survivor farms initially substitute high wage workers with low wage workers?

Technological feasibility:

- If low wage workers = seasonal workers, how can their tasks be substituted?

Economic rationale:

- If low wage workers are more affected by minimum wage increase, why does a producer want to use more of a factor whose price became more expensive?

From Marlies, Jan 29, 2024

Non-survivor (CIT), seasonal

Survivor (CIT), seasonal

# of seasonal employees not on payroll (Exit)

- Non-survivor:
- Survivor: Unchanged.

# of seasonal employees newly hired (Entry)

- Non-survivor: Decreased in 0-2 years.
- Survivor: Unchanged.

Employment (# of seasonal employees)

- Non-survivor: Increased at the impact (large SE).
- Survivor: Unchanged, but a dip at $t = -1$.

CIT seasonal

- Non-survivor: Reduced new hires.
- Survivor: Unchanged.

Non-survivor (CIT), non-seasonal

Survivor (CIT), non-seasonal

# of non-seasonal employees not on payroll (Exit)

- Non-survivor: Unchanged.
- Survivor: Increased at the impact but settled down.

# of seasonal employees newly hired (Entry)

- Non-survivor: Decreased after 1 year, negative point estimates.
- Survivor: Unchanged but negative point estimates.

Employment (# of non-seasonal employees)

- Non-survivor: Unchanged.
- Survivor: Decreased.

CIT non-seasonal

- Non-survivor: Reduced new hires.
- Survivor: Reduced new hires and employment.

Non-survivor (Non-CIT), seasonal

Survivor (Non-CIT), seasonal

# of seasonal employees not on payroll (Exit)

- Non-survivor:
- Survivor: Unchanged.

# of seasonal employees newly hired (Entry)

- Non-survivor:
- Survivor: Unchanged.

Employment (# of seasonal employees)

- Non-survivor:
- Survivor: Unchanged, but a dip at $t = -1$.

Non-CIT seasonal

- Non-survivor:
- Survivor: Unchanged.

Non-survivor (Non-CIT), non-seasonal

Survivor (Non-CIT), non-seasonal

# of non-seasonal employees not on payroll (Exit)

- Non-survivor: Unchanged.
- Survivor: Increased at the impact but settled down.

# of seasonal employees newly hired (Entry)

- Non-survivor: Negative point estimates.
- Survivor: Decreased.

Employment (# of non-seasonal employees)

- Non-survivor: Decreased at 0.
- Survivor: Decreased for 0-2 years.

Non-CIT non-seasonal

- Non-survivor: Reduced new hires and employment at the impact.
- Survivor: Increased exits, reduced new hires, reduced employemt.

How should we summarise?

Large farms held seasonal employment, reduced non-seasonal new hires and employment (except non-survivors held non-seasonal employment unchanged).

- Corporate (CIT) farms reduced non-seasonal new hires and employment, but held seasonal employment at level (except non-survivors reduced new hires).
- Marginal (Non-CIT) farms reduced non-seasonal employment.

Large and small farms: Seasonal workers are hard to reduce. Non-seasonal workers were reduced in some cases. Substituted high skilled with low sklled workers?

Headline: Capital intensity↑

Possible headline: Stable seasonal employment but reduced non-seasonal employment?

Possible mechanism: High skilled workers are substituted by machines?

Other things to consider

Regardless of using which/both of unbalanced vs. survivor (complete) panel, need to consider how attrition affect results.

Are the treated more likely to attrit than the control?

If so, impacts may be more adverse than estimated.

To know about it, regress

$$attrit = a \times characteristics + b \times characteristics * treated + e.$$

and test $b = 0$.