

LMI Training Institute
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Chapter 6

Successor/Predecessor Analysis

6.1 Successor/Predecessor Firm Analysis

The purpose of this project is to use worker flows to improve information on changes in economic entities - successor/predecessor UI accounts (SEIN) and reporting units (SEINUNITS) - over time. This is useful in its own right to our partner states, and to the Census Bureau. It has the additional benefit of eliminating false worker and job flows from the employment dynamics estimates. Successor/Predecessor analysis provides better measures of business births and deaths, as well as consolidations and breakouts (spin-offs).

6.1.1 Working with Successor/Predecessor Files

The LEHD staff has worked with a number of states to use UI wage record data to shed light on the births/deaths/mergers and acquisitions of businesses (entity demography editing). We have sent each state a report which identifies:

1. Total linkages identified by ES202 and UI data, and their concurrence
2. Typical ES202 discrepancies that may be a source of the relatively low concurrence
3. The most commonly occurring industry links in the UI data
4. The most commonly occurring industry links in the ES202 data
5. An analysis of industries 7361 and 7363

We identify four sets of linkages

1. Predecessor firm dies & more than 80% of predecessor's employment moves to successor
2. Predecessor firm dies & less than 80% of predecessor's employment moves to successor
3. Predecessor firm lives & more than 80% of predecessor's employment moves to successor
4. Predecessor firm lives & less than 80% of predecessor's employment moves to successor

When using the ES202 file, the definition of firm "death" is that there is a successor/predecessor flag in the data. A death in the UI data is when a firm's employment drops below 10% of previous quarter employment for two consecutive quarters.

What is provided to the state partners

The elements of this project that are returned to the states are currently determined in consultation with partner states. An example of what states receive is an ASCII file, where the first row of the file contains the variable names. The variables, in the order in which they appear from left to right, are as follows:

- SEIN = Predecessor's State Employer Identification Number
- SEIN_SUCC = Successor's State Employer Identification Number
- MATCH_PERIOD = (letting YEAR and QUARTER comprise period t) the number of employees from NUM_LEFT who are observed at the successor for the first time in period t+1 divided by NUM_LEFT
- NUM_LEFT = number of employees observed transitioning from predecessor to successor

- LINK_UI
 - = 1 if condition 1 and condition 2 are both true
 - = 2 if condition 1 is true but condition 2 is false
 - = 3 if condition 1 is false but condition 2 is true
 - = 4 if condition 1 and condition 2 are false
- PRED_SIZE_CLASS_UI = size class of predecessor (see class definitions below)
- SUCC_SIZE_CLASS_UI = size class of successor (see class definitions below)
- SUCC_LINK_UI
 - = 1 if condition 3 and condition 4 are both true
 - = 2 if condition 3 is true but condition 4 is false
 - = 3 if condition 3 is false but condition 4 is true
 - = 4 if condition 3 and condition 4 are false
- PRED_SIC4 = 4 digit SIC of predecessor
- SUCC_SIC4 = 4 digit SIC of successor
- YEAR = Year of transition
- QUARTER = Quarter of transition

Definition of size classes:

- SIZE_CLASS
 - = 1 if $1 \leq \text{employment} < 5$
 - = 2 if $5 \leq \text{employment} < 20$
 - = 3 if $20 \leq \text{employment} < 50$
 - = 4 if $50 \leq \text{employment} < 100$
 - = 5 if $100 \leq \text{employment} < 250$
 - = 6 if $250 \leq \text{employment} < 500$
 - = 7 if $500 \leq \text{employment}$

6.1.2 Examples of use

These data can be used to:

- Provide additional information about the births and deaths of firms
- Provide summary statistics (as below) about the size class of firms generating the greatest number of transitions

Actual examples from one of our partner states are provided below.

Size Class of Firms with	Link Code				Grand
Successor/Predecessor Links					Total
succ_size_class_ui	1	2	3	4	
1<=employment<5	1	1		8	10
5<=employment<20	257	158	9	270	694
20<=employment<50	190	125	4	469	788
50<=employment<100	105	95	2	859	1061
100<=employment<250	104	94	6	2007	2211
250<=employment<500	51	68	3	1860	1982
500<=employment	143	272	4	8621	9040
blank	7	12	1	58	78
Grand Total	858	825	29	14152	15864

- Identifying the industries of predecessor firms, by type of link
- Industry of Predecessor firms, by type of link and number of firms
- Identifying the industry to industry transition of large clumps of workers from one firm to another (link code 4, only those with more than 200 businesses included by type of link, and for 2001).

Predecessor	Successor Industry							
Industry	1542	1611	1771	5311	5812	7361	7363	7389
1542	37	49	98				2	
1611	68	170	120				5	
1771	87	67	206				1	
5311				126	47	6	89	21
5812				36	36	8	148	46
7361				7	1	62	423	2
7363	4	2	3	94	161	430	2755	94
7389				7	14	3	43	56