Gross Job Flows 1972-1998 Update

This memo describes the update to the Gross Job Flows series for 1994-98. For total manufacturing, 2-digit and 4-digit, the update provides additional years and quarters of job flows for 1994-98. For some selected classification series (e.g., size, age, state) some modifications to the class variables have been made and some new classifications have been made possible by data infrastructure improvements at CES. For the new classifications, we provide a consistent series from 1972-98.

Job creation and destruction decomposed into the contribution of continuers, startups and shutdowns are released ONLY for 2-digit industry and total manufacturing. For all other classifications, job creation and destruction are measured and released for all plants only.

1. Definitions of Job Flow Variables

All definitions for job flows are described in detail in Job Creation and Destruction by Steven J. Davis, John Haltiwanger and Scott Schuh.

- pos = Job Creation
- neg = Job Destruction
- posb = Job Creation from startups
- posc = Job Creation from continuers
- negd = Job Destruction from shutdowns
- negc = Job Destruction from continuers
- empsh = Employment share (using average of employment in t-1 and t)

2. Class Variables

The data are released using the following fifteen class variables:

2.1 SIC Industry (4-digit level)
For 1972-86, the series released are on a 1972-SIC basis. From 1987-98 the series are released on a 1987-SIC basis. For researchers who wish to use a consistent series, we have used a public domain cross-walk to generate 1972-98 data on a 1987-SIC series.

For use of 4-digit series, note that:
The total number of industry is 447 by 72 basis SIC between 1972 and 1986.
The total number of industry is 458 by 87 basis SIC between 1987 and 1997.
The total number of industry is 457 by 87 basis SIC in 1998 because the logging industry is excluded from manufacturing.

2.2 SIC Industry (2-digit level)
Job flow rates are aggregated from 4 digit SIC industry on an employment-weighted basis. For POSB, POSC, NEGD and NEGC, the industries 20 and 21 are combined together.

2.3 Total Manufacturing
Job flow rates are aggregated from 4-digit SIC industry.
2.4 **Region**
Region refers to the nine census regions.

2.5 **State**
There are 51 states.
The state code is the postal code two-letter abbreviation.

2.6 **Current Size**
For annual, nine classes (csize) by the average of employments at time t and t-1 (cursize).

\[
\begin{align*}
&\text{if } 0 < \text{cursize} < 20 \text{ then } \text{csize}=1; \\
&\text{if } 20 \leq \text{cursize} < 50 \text{ then } \text{csize}=2; \\
&\text{if } 50 \leq \text{cursize} < 100 \text{ then } \text{csize}=3; \\
&\text{if } 100 \leq \text{cursize} < 250 \text{ then } \text{csize}=4; \\
&\text{if } 250 \leq \text{cursize} < 500 \text{ then } \text{csize}=5; \\
&\text{if } 500 \leq \text{cursize} < 1000 \text{ then } \text{csize}=6; \\
&\text{if } 1000 \leq \text{cursize} < 2500 \text{ then } \text{csize}=7; \\
&\text{if } 2500 \leq \text{cursize} < 5000 \text{ then } \text{csize}=8; \\
&\text{if } 5000 \leq \text{cursize} \text{ then } \text{csize}=9;
\end{align*}
\]

For quarterly, eight classes.

\[
\begin{align*}
&\text{if } 0 < \text{cursize} < 20 \text{ then } \text{csize}=1; \\
&\text{if } 20 \leq \text{cursize} < 50 \text{ then } \text{csize}=2; \\
&\text{if } 50 \leq \text{cursize} < 100 \text{ then } \text{csize}=3; \\
&\text{if } 100 \leq \text{cursize} < 250 \text{ then } \text{csize}=4; \\
&\text{if } 250 \leq \text{cursize} < 500 \text{ then } \text{csize}=5; \\
&\text{if } 500 \leq \text{cursize} < 1000 \text{ then } \text{csize}=6; \\
&\text{if } 1000 \leq \text{cursize} < 2500 \text{ then } \text{csize}=7; \\
&\text{if } 2500 \leq \text{cursize} \text{ then } \text{csize}=8;
\end{align*}
\]

2.7 **Initial Size**
For annual, nine classes (sizei) by the employment at time t-1 (inisize). For births, use employment at time t.

\[
\begin{align*}
&\text{if } 0 < \text{inisize} < 20 \text{ then } \text{sizei}=1; \\
&\text{if } 20 \leq \text{inisize} < 50 \text{ then } \text{sizei}=2; \\
&\text{if } 50 \leq \text{inisize} < 100 \text{ then } \text{sizei}=3; \\
&\text{if } 100 \leq \text{inisize} < 250 \text{ then } \text{sizei}=4; \\
&\text{if } 250 \leq \text{inisize} < 500 \text{ then } \text{sizei}=5; \\
&\text{if } 500 \leq \text{inisize} < 1000 \text{ then } \text{sizei}=6; \\
&\text{if } 1000 \leq \text{inisize} < 2500 \text{ then } \text{sizei}=7; \\
&\text{if } 2500 \leq \text{inisize} < 5000 \text{ then } \text{sizei}=8; \\
&\text{if } 5000 \leq \text{inisize} \text{ then } \text{sizei}=9;
\end{align*}
\]

For quarterly, eight classes.

\[
\begin{align*}
&\text{if } 0 < \text{inisize} < 20 \text{ then } \text{sizei}=1; \\
&\text{if } 20 \leq \text{inisize} < 50 \text{ then } \text{sizei}=2;
\end{align*}
\]
if 50 <= inisize <100 then sizei=3;
if 100 <= inisize <250 then sizei=4;
if 250 <= inisize <500 then sizei=5;
if 500 <= inisize <1000 then sizei=6;
if 1000<= inisize <2500 then sizei=7;
if 2500<= inisize then sizei=8;

2.8 Current Firm Size
Nine classes (fcsize) by the average of firm employments at time t and t-1 (fcursize).
if 0   < fcursize <20   then fcsize=1;
if 20  <= fcursize <50   then fcsize=2;
if 50  <= fcursize <100  then fcsize=3;
if 100 <= fcursize <250  then fcsize=4;
if 250 <= fcursize <500  then fcsize=5;
if 500 <= fcursize <1000 then fcsize=6;
if 1000<= fcursize <2500 then fcsize=7;
if 2500<= fcursize <5000 then fcsize=8;
if 5000<= fcursize       then fcsize=9;

2.9 Initial Firm Size
Nine classes (fsizei) by the firm employment at time t-1 (finisize). For births, use employment at time t.
if 0   < finisize <20   then fsizei=1;
if 20  <= finisize <50   then fsizei=2;
if 50  <= finisize <100  then fsizei=3;
if 100 <= finisize <250  then fsizei=4;
if 250 <= finisize <500  then fsizei=5;
if 500 <= finisize <1000 then fsizei=6;
if 1000<= finisize <2500 then fsizei=7;
if 2500<= finisize <5000 then fsizei=8;
if 5000<= finisize       then fsizei=9;

2.10 Broad Age
Three classes by broad establishment age.
if 0   < age <5    then ageb=1;
if 5  <= age <10   then ageb=2;
if 10  <= age      then ageb=3;

2.11 Detailed Age
Eight classes by detailed establishment age.
if 0   < age <2   then aged=1;
if 2  <= age <3   then aged=2;
if 3  <= age <4   then aged=3;
if 4  <= age <5   then aged=4;
if 5  <= age <6   then aged=5;
If $6 \leq age < 10$ then aged=6;
If $10 \leq age < 16$ then aged=7;
If $16 \leq age$ then aged=8;

2.12 Broad Firm Age
Three classes by broad firm age.
If $0 < fage < 5$ then fageb=1;
If $5 \leq fage < 10$ then fageb=2;
If $10 \leq fage$ then fageb=3;

2.13 Detailed Firm Age
Eight classes by detailed firm age.
If $0 < fage < 2$ then faged=1;
If $2 \leq fage < 3$ then faged=2;
If $3 \leq fage < 4$ then faged=3;
If $4 \leq fage < 5$ then faged=4;
If $5 \leq fage < 6$ then faged=5;
If $6 \leq fage < 10$ then faged=6;
If $10 \leq fage < 16$ then faged=7;
If $16 \leq fage$ then faged=8;

2.14 Establishment Type
Establishment is part of a single unit firm (0) versus a multi unit firm (1).

2.15 Earnings per Worker
Five classes by quintiles of earnings per worker (WAGE).
Lowest class has value of 1.


**List of External Data Sets (ASCII)**

### Annual Data Sets

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<thead>
<tr>
<th>File</th>
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<th>Variables</th>
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<td>class year pos neg empsh</td>
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<td>ra2</td>
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