

## Firm Job Gain

**Datafile label:** FrmJbGn

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Point-in-time

**Definition:** Firm (j) had more employees at the end (EmpEnd) of the reference (t) quarter than at the beginning (Emp) of the reference (t) quarter.

**Explanation:**

- The total number of jobs gained, summed across firms in which end-of-quarter employment was greater than employment [beginning-of-quarter] in the reference quarter. Only firms that opened or increased in employment are included in this definition. Firm Job Gain can assume only a positive value or zero. Either Firm Job Gain is positive, or Firm Job Loss is positive for a particular employer, but not both. Firm Job Gain and Firm Job Loss will both be zero if beginning and ending employment are equal in the reference (t) quarter for a specific employer.
- Count of jobs gained at firms that either opened or increased in employment.
- Represents a gain in employment across firms during the reference quarter.
- Firm Job Gain (FrmJbGn) defines a category of firms.

**Measure:**

$$JC_{(jt)} = \overline{Emp}_{(jt)} \times \max(0, G_{(jt)})$$

$$\left( \begin{array}{l} \overline{Emp}_{(jt)} = \frac{(B_{(jt)} + E_{(jt)})}{2}; G_{(jt)} = \frac{(E_{(jt)} - B_{(jt)})}{\overline{Emp}_{(jt)}} \\ B_{(jt)} = \sum_i b_{(ijt)} \quad ; E_{(jt)} = \sum_i e_{(ijt)} \end{array} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first or final quarters of available data from a given state.

### Firm Job Gain (FrmJbGn) Example:

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Job Gain (FrmJbGn), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Almez		\$ 4,200	\$ 3,000	\$ -	1	
Suresh	\$ -	\$ -	\$ 3,750	\$ 8,800		1
Tom	\$ 3,775	\$ 3,750	\$ 3,875	\$ 3,850	1	1
Iona	\$ -	\$ -	\$ 4,875	\$ 4,250		1
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					3	4

At Happy Teeth, Almez, Tom, and Dr. Ali were employed at the beginning of the reference (1996:Q3) quarter. Suresh, Tom, Iona and Dr. Ali were employed at the end of that quarter. The firm had an Emp of 3 and an EmpEnd of 4, so it gained 1 job.

History of UI Wage Reports for QUICK LUNCH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Ly	\$ -	\$ -	\$ 4,350	\$ 4,975		1
Ms. White	\$ -	\$ -	\$ 9,050	\$ 9,500		1
Totals for employees who fit the definition of Emp and EmpEnd:					0	2

At Quick Lunch, no one was employed at the beginning of the reference (1996:Q3) quarter because the firm opened in that quarter. Ly and Ms. White were employed at the end of that quarter. The firm had an Emp of 0 and an EmpEnd of 2, so it gained 2 jobs.

History of UI Wage Reports for DAILY TRIBUNE					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Chaitley	\$ -	\$ 3,000	\$ 5,500	\$ -	1	
Khone	\$ -	\$ -	\$ 5,325	\$ 8,800		1
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$17,750	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					2	2

At Daily Tribune, Chaitley and Mr. Ramirez were employed at the beginning of the reference (1996:Q3) quarter. Khone and Mr. Ramirez were employed at the end of that quarter. The firm had an Emp of 2 and an EmpEnd of 2, so it gained 0 jobs.

Both Happy Teeth and Quick Lunch had more jobs at the end (EmpEnd) of the reference (1996:Q3) quarter than at the beginning (Emp). Therefore their job gains are summed.\* Daily Tribune had the same number of jobs in the reference (1996:Q3) quarter, despite the fact that Khone was hired, so it is not summed. Firm Job Gain (FrmJbGn) for the State of New Columbia in the reference (1996:Q3) quarter is 3 jobs.

Totals for the State of New Columbia	Emp	EmpEnd	FrmJbGn
	1996:Q3	1996:Q3	1996:Q3
Happy Teeth	3	4	1
Quick Lunch	0	2	2
Totals:	3	6	3

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## Firm Job Loss

**Datafile label:** FrmJbLs

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Point-in-time

**Definition:** Firm (j) had fewer employees at the end (EmpEnd) of the reference (t) quarter than at the beginning (Emp) of the reference (t) quarter.

- Explanation:**
- The total number of jobs lost, summed across firms in which end-of-quarter employment was less than employment [beginning-of-quarter] in the reference quarter.  
Only firms that closed or declined in employment are included in this definition. Firm Job Loss can assume only a positive value or zero. Either Firm Job Gain is positive, or Firm Job Loss is positive for a particular employer, but not both. Firm Job Gain and Firm Job Loss will both be zero if the beginning and ending employment are equal in the reference (t) quarter for a specific employer.
  - Count of jobs lost at firms that either closed or declined in employment.
  - Represents a loss in employment across firms during the reference quarter.
  - Firm Job Loss (FrmJbLs) defines a category of firms.

**Measure:**

$$JD_{(jt)} = \overline{Emp}_{(jt)} \times \text{abs}(\min(0, G_{(jt)}))$$
$$\left( \overline{Emp}_{(jt)} = \frac{(B_{(jt)} + E_{(jt)})}{2}; G_{(jt)} = \frac{(E_{(jt)} - B_{(jt)})}{\overline{Emp}_{(jt)}} \right)$$
$$\left( B_{(jt)} = \sum_i b_{(ijt)} \quad ; E_{(jt)} = \sum_i e_{(ijt)} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first or final quarters of available data from a given state.

**Firm Job Loss (FrmJbLs) Example:**

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Job Loss (FrmJbLs), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Almez	\$ 4,300	\$ 4,200	\$ 3,000	\$ -	1	
Suresh		\$ -	\$ 3,750	\$ 8,800		1
Tom	\$ 3,775	\$ 3,750	\$ 3,875	\$ -	1	
Iona	\$ -	\$ 4,250	\$ 4,875	\$ -	1	
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					4	2

At Happy Teeth, Almez, Tom, Iona, and Dr. Ali were employed at the beginning of the reference (1996:Q3) quarter. Suresh and Dr. Ali were employed at the end of that quarter. The firm had an Emp of 4 and an EmpEnd of 2, so it lost 2 jobs.

History of UI Wage Reports for QUICK LUNCH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Ly	\$ 4,800	\$ 4,975	\$ 4,350	\$ -	1	
Ms. White	\$10,250	\$ 9,500	\$ 9,050	\$ -	1	
Totals for employees who fit the definition of Emp and EmpEnd:					2	0

At Quick Lunch, Ly and Mrs. White were employed at the beginning of the reference (1996:Q3) quarter. No one was employed at the end of that quarter, because it closed in that quarter. The firm had an Emp of 2 and an EmpEnd of 0, so it lost 2 jobs.

History of UI Wage Reports for DAILY TRIBUNE					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Chaitley	\$ -	\$ 3,000	\$ 5,500	\$ -	1	
Khone	\$ -	\$ -	\$ 5,325	\$ 8,800		1
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$17,750	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					2	2

At Daily Tribune, Chaitley and Mr. Ramirez were employed at the beginning of the reference (1996:Q3) quarter. Khone and Mr. Ramirez were employed at the end of that quarter. The firm had an Emp of 2 and EmpEnd of 2, so it lost 0 jobs.

Both Happy Teeth and Quick Lunch had fewer jobs at the end (EmpEnd) of the reference (1996:Q3) quarter than at the beginning (Emp). Therefore their job losses are summed.\* Daily Tribune had the same number of jobs in the reference (1996:Q3) quarter, despite the fact that Chaitley lost her job, so it is not summed. Firm Job Loss (FrmJbLs) for the State of New Columbia in the reference (1996:Q3) quarter is 4 jobs.

Totals for the State of New Columbia	Emp	EmpEnd	FrmJbLs
	1996:Q3	1996:Q3	1996:Q3
Happy Teeth		2	2
Quick Lunch	2	0	2
Totals:	6	2	4

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## Firm Job Change

**Datafile label:** FrmJbC

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Point-in-time

**Definition:** Firm (j) had a net change in employment between the end (EmpEnd) of the reference (t) quarter and the beginning (Emp) of the reference (t) quarter.

- Explanation:**
- The net change between end-of-quarter employment and employment [beginning-of-quarter] in the reference quarter, summed across firms.  
Firm Job Change can be positive, negative, or zero. It is positive if there is a net gain of jobs, negative if there is a net loss of jobs, and zero if there is no net change in employment.
  - Net count of jobs gained or lost at firms.
  - Represents a net change in employment across firms during the reference quarter.
  - Firm Job Change (FrmJbC) defines a category of firms.

**Measure:**

$$JF_{(jt)} = E_{(jt)} - B_{(jt)}$$
$$\left( \begin{array}{l} B_{(jt)} = \sum_i b_{(ijt)} \\ E_{(jt)} = \sum_i e_{(ijt)} \end{array} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first or final quarters of available data from a given state.

**Firm Job Change (FrmJbC) Example:**

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Job Change (FrmJbC), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Almez	\$ 4,300	\$ 4,200	\$ 3,000	\$ -	1	
Suresh	\$ -	\$ -	\$ 3,750	\$ 8,800		1
Tom		\$ 3,750	\$ 3,875	\$ 3,850	1	1
Iona	\$ -	\$ 4,250	\$ -	\$ -		
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					3	3

At Happy Teeth, Almez, Tom, and Dr. Ali were employed at the beginning of the reference (1996:Q3) quarter. Suresh, Tom and Dr. Ali were employed at the end of that quarter. The firm had an Emp of 3 and an EmpEnd of 3, so it gained 0 jobs.

History of UI Wage Reports for QUICK LUNCH					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Ly	\$ -	\$ -	\$ 4,350	\$ 4,350		1
Ms. White	\$ -	\$ 9,500	\$ 9,050	\$ 9,050	1	1
Totals for employees who fit the definition of Emp and EmpEnd:					1	2

At Quick Lunch, Mrs. White was employed at the beginning of the reference (1996:Q3) quarter. Ly and Ms. White were employed at the end of that quarter. The firm had an Emp of 1 and an EmpEnd of 2, so it gained 1 job.

History of UI Wage Reports for DAILY TRIBUNE					Emp	EmpEnd
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q3	1996:Q3
Chaitley	\$ 5,025	\$ 5,750	\$ 5,500	\$ -	1	
Khone	\$ -	\$ 5,210	\$ 5,325	\$ -	1	
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$ -	1	
Totals for employees who fit the definition of Emp and EmpEnd:					3	0

At Daily Tribune, Chaitley, Khone, and Mr. Ramirez were employed at the beginning of the reference (1996:Q3) quarter. No one was employed at the end of that quarter because the firm closed in that quarter. The firm had an Emp of 3 an EmpEnd of 0, so it lost 3 jobs.

Happy Teeth had the same number of jobs at the beginning and the end of the reference (1996:Q3) quarter, so its FrmJbC is zero.\* Quick Lunch had more jobs, so its FrmJbC is positive. Daily Tribune had fewer jobs because it closed, so its FrmJbC is negative. All three FrmJbC amounts are summed to find the statewide FrmJbC. Firm Job Change (FrmJbC) for the State of New Columbia in the reference (1996:Q3) quarter is -2 jobs.

Totals for the State of New Columbia	Emp	EmpEnd	FrmJbC
	1996:Q3	1996:Q3	1996:Q3
Happy Teeth	3	3	0
Quick Lunch	1	2	1
Daily Tribune		0	-3
Totals:	7	5	-2

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## Firm Gain Stable Jobs

**Datafile label:** FrmJbGnS

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Full quarter

**Definition:** Firm (j) had more stable jobs (EmpS) in the reference (t) quarter than in the previous (t-1) quarter.

- Explanation:**
- The total increase in full-quarter jobs, summed across firms in which full-quarter employment in the reference quarter was greater than in the previous quarter.  
Only firms that had an increase in full-quarter jobs are included in this definition. Firm Gain Stable Jobs can assume only a positive value or zero. Either Firm Gain Stable Jobs is positive, or Firm Loss Stable Jobs is positive for a particular employer, but not both. Firm Gain Stable Jobs and Firm Loss Stable Jobs will both be zero if the number of full-quarter jobs in the reference quarter is equal to the number of full-quarter jobs in the previous quarter.
  - Count of full-quarter jobs gained at firms that had an increase in full-quarter jobs.
  - Represents a gain in full-quarter jobs across firms during the reference quarter.
  - Firm Gain Stable Jobs (FrmJbGnS) defines a category of firms.

**Measure:**

$$FJC_{(jt)} = \bar{F}_{(jt)} \times \max(0, FG_{(jt)})$$
$$\left( \begin{array}{l} \bar{F}_{(jt)} = \frac{(F_{(jt-1)} + F_{(jt)})}{2} \\ FG_{(jt)} = \left( \frac{F_{(jt)} - F_{(jt-1)}}{\bar{F}_{(jt)}} \right) \\ F_{(jt)} = \sum_i f_{(ijt)} \end{array} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first two quarters or the final quarter of available data from a given state.

**Firm Gain Stable Jobs (FrmJbGnS) Example:**

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Gain Stable Jobs (FrmJbGnS), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Almez	\$ 4,300	\$ -	\$ -	\$ -		
Suresh	\$ -	\$ -	\$ 3,750	\$ 8,800		
Tom	\$ 3,775	\$ 3,750	\$ 3,875	\$ 3,850	1	1
Iona	\$ -	\$ 4,050	\$ 4,075	\$ 1,825		1
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of EmpS:					2	3

At Happy Teeth, Tom and Dr. Ali had stable jobs in the previous (1996:Q2) quarter. Tom, Iona, and Dr. Ali had stable jobs in the reference (1996:Q3) quarter. The firm had 2 stable jobs in the previous (1996:Q2) quarter and 3 stable jobs in the reference (1996:Q3) quarter, so it gained 1 stable job.

History of UI Wage Reports for QUICK LUNCH					EmpS	EmpS
	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Ly	\$ -	\$ -	\$ 4,350	\$ -		
Ms. White	\$ -	\$ 9,500	\$ 9,050	\$ 9,500		1
Totals for employees who fit the definition of EmpS:						1

At Quick Lunch, the firm opened in the previous (1996:Q2) quarter, so it had 0 stable jobs that quarter. Ms. White had a stable job in the reference (1996:Q3) quarter. The firm had 0 stable jobs in the previous (1996:Q2) Quarter and 1 stable job in the reference (1996:Q3) quarter, so it gained 1 stable job.

History of UI Wage Reports for DAILY TRIBUNE					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Chaitley	\$ 5,025	\$ 5,750	\$ 5,500	\$ -	1	
Khone	\$ -	\$ 5,210	\$ 5,325	\$ 5,210		1
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$18,000	1	1
Totals for employees who fit the definition of EmpS:					2	2

At Daily Tribune, Chaitley and Mr. Ramirez had stable jobs in the previous (1996:Q2) quarter. Khone and Mr. Ramirez had stable jobs in the reference (1996:Q3) quarter. The firm had 2 stable jobs in the previous (1996:Q2) quarter and 2 in the reference (1996:Q3) quarter, so its gained 0 stable jobs.

Both Happy Teeth and Quick Lunch had more stable jobs in the reference (1996:Q3) quarter than in the previous (1996:Q2) quarter, so their stable job gains are summed.\* Daily Tribune's count of stable jobs did not change, so it is not summed. Firm Gain Stable Jobs (FrmJbGnS) for the State of New Columbia in the reference (1996:Q3) quarter is 2 jobs.

Totals for the State of New Columbia	EmpS	EmpS	FrmJbGnS
	1996:Q2	1996:Q3	1996:Q3
Happy Teeth	2	3	1
Quick Lunch	0	1	1
Totals:	2	4	2

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## Firm Loss Stable Jobs

**Datafile label:** FrmJbLsS

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Full quarter

**Definition:** Firm (j) had fewer stable jobs (EmpS) in the reference (t) quarter than in the previous (t-1) quarter.

- Explanation:**
- The total decrease in full-quarter jobs, summed across firms in which full-quarter employment in the reference quarter was less than in the previous quarter.
    - Only firms that had a decrease in full-quarter jobs are included in this definition. Firm Loss Stable Jobs can assume only a positive value or zero. Either Firm Gain Stable Jobs is positive, or Firm Loss Stable Jobs is positive for a particular employer, but not both. Firm Gain Stable Jobs and Firm Loss Stable Jobs will both be zero if the number of full-quarter jobs in the reference quarter is equal to the number of full-quarter jobs in the previous quarter.
  - Count of full-quarter jobs lost at firms that had a decrease in full-quarter jobs.
  - Represents a loss in full-quarter jobs across firms during the reference quarter.
  - Firm Loss Stable Jobs (FrmJbLsS) defines a category of firms.

**Measure:**

$$FJD_{(jt)} = \bar{F}_{(jt)} \times \text{abs}(\min(0, FG_{(jt)}))$$

$$\left( \begin{array}{l} \bar{F}_{(jt)} = \frac{(F_{(jt-1)} + F_{(jt)})}{2} \\ FG_{(jt)} = \left( \frac{F_{(jt)} - F_{(jt-1)}}{\bar{F}_{(jt)}} \right) \\ F_{(jt)} = \sum_i f_{(ijt)} \end{array} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first two quarters or the final quarter of available data from a given state.

**Firm Loss Stable Jobs (FrmJbLsS) Example:**

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Loss Stable Jobs (FrmJbLsS), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Almez	\$ 4,300	\$ 4,200	\$ 3,000	\$ -	1	
Suresh	\$ -	\$ -	\$ 3,750	\$ 8,800		
Tom	\$ 3,775	\$ 3,750	\$ 3,875	\$ 3,850	1	1
Iona	\$ -	\$ 4,250	\$ -	\$ -		
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of EmpS:					3	2

At Happy Teeth, Almez, Tom, and Dr. Ali had stable jobs in the previous (1996:Q2) quarter. Tom and Dr. Ali had stable jobs in the reference (1996:Q3) quarter. The firm had 3 stable jobs in the previous (1996:Q2) quarter, and 2 stable jobs in the reference (1996:Q3) quarter, so it lost 1 stable job.

History of UI Wage Reports for QUICK LUNCH					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Ly	\$ -	\$ 3,100	\$ 5,025	\$ 4,975		1
Ms. White	\$ 8,550	\$ 8,325	\$ 9,050	\$ 9,500	1	1
Totals for employees who fit the definition of EmpS:					1	2

At Quick Lunch, Ms. White had a stable job in the previous (1996:Q2) quarter. Ms. White and Ly had stable jobs in the reference (1996:Q3). The firm had 1 stable job in the previous (1996:Q2) quarter, and 2 stable jobs in the reference (1996:Q3) quarter, so it gained 1 stable job.

History of UI Wage Reports for DAILY TRIBUNE					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Chaitley	\$ 5,025	\$ 5,750	\$ 5,500	\$ -	1	
Khone	\$ -	\$ 5,210	\$ 5,325	\$ -		
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$ -	1	
Totals for employees who fit the definition of EmpS:					2	0

At Daily Tribune, Chaitley and Mr. Ramirez had stable jobs in the previous (1996:Q2) quarter. No one had a stable job in the reference (1996:Q3) quarter, because the firm closed in that quarter. The firm had 2 stable jobs in the previous (1996:Q2) quarter and 0 stable jobs in the reference (1996:Q3) quarter, so it lost 2 stable jobs.

Both Happy Teeth and Daily Tribune had fewer stable jobs in the reference (1996:Q3) quarter than in the previous (1996:Q2) quarter, so their stable job losses are summed.\* Quick Lunch had more stable jobs, so it is not summed. Firm Loss Stable Jobs (FrmJbLsS) for the State of New Columbia in the reference (1996:Q3) quarter is 3 jobs.

Totals for the State of New Columbia	EmpS	EmpS	FrmJbLsS
	1996:Q2	1996:Q3	1996:Q3
Happy Teeth	3	2	1
Daily Tribune	2	0	2
Totals:	5	2	3

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## Firm Change Stable Jobs

**Datafile label:** FrmJbCS

**QWI indicator:** Firm employment change

**Level of measurement:** Job (PIK-SEIN pair)

**Level of estimation:** All jobs in a firm (SEIN)

**Employment status:** Full quarter

**Definition:** Firm (j) had a net change in stable jobs (EmpS) between the reference (t) quarter and previous (t-1) quarter.

**Explanation:**

- The net change in full-quarter jobs in the reference quarter, compared to the previous quarter, summed across firms. Firm Change Stable Jobs can be positive, negative, or zero. It is positive if there is a net increase in jobs with full-quarter status, negative if there is a net decrease in jobs with full-quarter status, and zero if there is no net change in jobs with full-quarter status.
- Change in net count of full-quarter jobs at firms.
- Represents a net change in full-quarter jobs across firms during the reference quarter.
- Firm Change Stable Jobs (FrmJbCS) defines a category of firms.

**Measure:**

$$FJF_{(jt)} = F_{(jt)} - F_{(jt-1)}$$

$$\left( F_{(jt)} = \sum_i f_{(ijt)} \right)$$

(See above Definition and Explanation sections for a narrative description.)

**QWI availability:** Not defined for the first two quarters or the final quarter of available data from a given state.

**Firm Change Stable Jobs (FrmJbCS) Example:**

The State of New Columbia contains three firms, Happy Teeth, Quick Lunch, and Daily Tribune. For the purpose of estimating Firm Change Stable Jobs (FrmJbCS), the reference quarter is 1996:Q3.

History of UI Wage Reports for HAPPY TEETH					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Almez	\$ 4,300	\$ 4,200	\$ 3,000	\$ -	1	
Suresh	\$ -	\$ -	\$ 3,750	\$ 8,800		
Tom	\$ 3,775	\$ 3,750	\$ 3,875	\$ 3,850	1	1
Iona		\$ 4,250	\$ -	\$ -		
Dr. Ali	\$13,000	\$13,250	\$13,750	\$13,625	1	1
Totals for employees who fit the definition of EmpS:					3	2

At Happy Teeth, Almez, Tom, and Dr. Ali had stable jobs in the previous (1996:Q2) quarter. Tom and Dr. Ali had stable jobs in the reference (1996:Q3) quarter. The firm had 3 stable jobs in the previous (1996:Q2) quarter and 2 stable jobs in the reference (1996:Q3) quarter, so it lost 1 stable job.

History of UI Wage Reports for QUICK LUNCH					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Ly	\$ -	\$ 3,100	\$ 5,025	\$ 4,975		1
Ms. White	\$ 8,550	\$ 8,325	\$ 9,050	\$ 9,500	1	1
Totals for employees who fit the definition of EmpS:					1	2

At Quick Lunch, Ms. White had a stable job in the previous (1996:Q2) quarter. Ms. White and Ly had stable jobs in the reference (1996:Q3) quarter. The firm had 1 stable job in the previous quarter and 2 stable jobs in the reference (1996:Q3) quarter, so it gained 1 stable job.

History of UI Wage Reports for DAILY TRIBUNE					EmpS	EmpS
Employees	1996:Q1	1996:Q2	1996:Q3	1996:Q4	1996:Q2	1996:Q3
Chaitley	\$ 5,025	\$ 5,750	\$ 5,500	\$ -	1	
Khone	\$ -	\$ 5,210	\$ 5,325	\$ -		
Mr. Ramirez	\$17,500	\$17,775	\$17,875	\$ -	1	
Totals for employees who fit the definition of EmpS:					2	0

At Daily Tribune, Chaitley and Mr. Ramirez had stable jobs in the previous (1996:Q2) quarter. No one had a stable job in the reference (1996:Q3) quarter because the firm closed in that quarter. The firm had 2 stable jobs in the previous (1996:Q2) quarter and 0 stable jobs in the reference (1996:Q3) quarter, so it lost 2 stable jobs.

Both Happy Teeth and Daily Tribune had fewer stable jobs in the reference (1996:Q3) quarter than in the previous (1996:Q2) quarter, so their FrmJbCS is negative.\* Quick Lunch had more stable jobs, so its FrmJbCS is positive. Firm Change Stable Jobs (FrmJbCS) for the State of New Columbia in the reference (1996:Q3) quarter is -2 jobs.

Totals for the State of New Columbia	EmpS	EmpS	FrmJbCS
	1996:Q2	1996:Q3	1996:Q3
Happy Teeth	3	2	-1
Quick Lunch	1	2	1
Daily Tribune	2	0	-2
Totals:	6	4	-2

\* The method of summation used in this example is a simplification of the equation for this QWI and is intended for demonstration purposes. For the actual calculation, refer to the specification in the previous Measure section.

## QWI Definitions at a Glance

### Point-In-Time Measures

<u>Lead/Lag Notation</u>	<u>Date</u>	<u>FrmJbGn</u>		<u>FrmJbLs</u>		<u>FrmJbC</u>	
		EmpEnd > Emp		EmpEnd < Emp		EmpEnd - Emp	
t-6	1995:Q1						
t-5	1995:Q2						
t-4	1995:Q3						
t-3	1995:Q4						
t-2	1996:Q1						
t-1	1996:Q2		1		1		1
<b>t (reference)</b>	<b>1996:Q3</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>1</b>
t+1	1996:Q4	1		1		1	
t+2	1997:Q1						
t+3	1997:Q2						
t+4	1997:Q3						
t+5	1997:Q4						

t(reference)= the year/quarter for which the QWI is estimated

1= PIK-SEIN pairing observed in the reference quarter is present in the designated quarter.

0= PIK-SEIN pairing observed in the reference quarter is not present in the designated quarter.

### QWI

FrmJbGn	Firm Job Gain	Firm (j) had more employees at the end (EmpEnd) of the reference (t) quarter than at the beginning (Emp) of the reference (t) quarter.
FrmJbLs	Firm Job Loss	Firm (j) had fewer employees at the end (EmpEnd) of the reference (t) quarter than at the beginning (Emp) of the reference (t) quarter.
FrmJbC	Firm Job Change	Firm (j) had a net change in employment between the end (EmpEnd) of the reference (t) quarter and the beginning (Emp) of the reference (t) quarter.

## Full-Quarter Measures

Lead/Lag Notation	Date	FrmJbGnS		FrmJbLsS		FrmJbCS	
		EmpS(t) > EmpS(t-1)		EmpS(t) < EmpS(t-1)		EmpS(t) - EmpS(t-1)	
t-6	1995:Q1						
t-5	1995:Q2						
t-4	1995:Q3						
t-3	1995:Q4						
t-2	1996:Q1		1		1		1
t-1	1996:Q2	1	<b>1</b>	1	<b>1</b>	1	<b>1</b>
<b>t (reference)</b>	<b>1996:Q3</b>	<b>1</b>	1	<b>1</b>	1	<b>1</b>	1
t+1	1996:Q4	1		1		1	
t+2	1997:Q1						
t+3	1997:Q2						
t+4	1997:Q3						
t+5	1997:Q4						

t(reference)= the year/quarter for which the QWI is estimated

1= PIK-SEIN pairing observed in the reference quarter is present in the designated quarter.

0= PIK-SEIN pairing observed in the reference quarter is not present in the designated quarter.

## QWI

FrmJbGnS	Firm Gain Stable Jobs	Firm (j) had more stable jobs (EmpS) in the reference (t) quarter than in the previous (t-1) quarter.
FrmJbLsS	Firm Loss Stable Jobs	Firm (j) had fewer stable jobs (EmpS) in the reference (t) quarter than in the previous (t-1) quarter.
FrmJbCS	Firm Change Stable Jobs	Firm (j) had a net change in stable jobs (EmpS) between the reference (t) quarter and previous (t-1) quarter.

## QWI Availability at a Glance

### Point-In-Time Measures

<u>State Input Data</u>	<u>Date</u>	<u>FrmJbGn</u>		<u>FrmJbLs</u>		<u>FrmJbC</u>	
		EmpEnd > Emp		EmpEnd < Emp		EmpEnd - Emp	
first quarter	1990:Q1	X	X	X	X	X	X
	1990:Q2						
	1990:Q3						
	1990:Q4						
	1991:Q1						
	1991:Q2						
	:::						
	:::						
	:::						
	:::						
	2002:Q3						
	2002:Q4						
	2003:Q1						
	2003:Q2						
	2003:Q3						
last quarter	2003:Q4	X		X		X	

State Input Data- State ES202 and UI Wage Records

X- QWI estimate is not calculated

### Full-Quarter Measures

<u>State Input Data</u>	<u>Date</u>	<u>FrmJbGnS</u>		<u>FrmJbLsS</u>		<u>FrmJbCS</u>	
		EmpS(t) > EmpS(t-1)		EmpS(t) < EmpS(t-1)		EmpS(t) - EmpS(t-1)	
first quarter	1990:Q1	X	X	X	X	X	X
	1990:Q2		X		X		X
	1990:Q3						
	1990:Q4						
	1991:Q1						
	1991:Q2						
	:::						
	:::						
	:::						
	:::						
	2002:Q3						
	2002:Q4						
	2003:Q1						
	2003:Q2						
	2003:Q3						
last quarter	2003:Q4	X		X		X	

State Input Data- State ES202 and UI Wage Records

X- QWI estimate is not calculated