

Appendix D: Estimation Methodology for Job Loss and Wage Loss

The estimates for employment and wage loss are derived from data provided by Safe Horizon (see Table D.1). Based on Safe Horizon files, two types of employment loss were identified: immediate-term and short-term.

Immediate-term impacted workers refers to employees who experienced temporary dislocations during the first two weeks after September 11th.

Short-term impacted workers refers to workers who were laid-off during the first three months after September 11th.

Three types of wage losses were identified:

- (1) Lost wages of impacted workers during the first two weeks after September 11th;
- (2) Lost wages by laid-off workers; and
- (3) Reduced wages by current workers who experience reduced working hours.⁸²

However, the employment and wage data from Safe Horizon captured only part of the picture of impacted businesses and workers in Chinatown. Safe Horizon provided temporary cash assistance to workers in the disaster zone (south of Canal Street). Based on field research with businesses, labor groups, and trade association representatives, businesses located on the north side of Canal Street were as economically devastated as those located on the south side of Canal Street. As a result of the restricted vehicular traffic in Lower Manhattan, major bridges and tunnel shut-downs, and the increased scrutiny of trucks traveling into and out of Manhattan, consumers and tourists shied away from Chinatown entirely.

Furthermore, according to Census 2000 data, nearly 80% of the 23,000 residents who reside between Canal and Delancey streets (north of Canal Street in the Chinatown area) are of Asian descent. According to the Apparel Industry Task Force at the New York State Department of Labor, over 80% of Chinatown's garment factories are located north of Canal Street. According to a joint garment factory survey by the Federation and UNITE, the average size and workforce of garment factories north of Canal Street are larger than those south of Canal Street. While most other relief agencies use Canal Street as the relief boundary, the Empire State Economic Development Corporation extended the boundary beyond Canal Street in their business assistance programs and officially recognized Houston Street as the northern boundary for providing relief to struggling businesses. Therefore, in estimating job loss and wage loss for the entire Chinatown community, the extent of economic injury for Chinatown's businesses located north of Canal Street must also be taken into consideration.

The extent of employment and wage loss for north of Canal Street was estimated by multiplying the figure for employment and wage loss south of Canal Street, by the ratio of businesses for north of Canal Street relative to businesses south of Canal Street.

⁸² The Federation's recently completed industry-specific surveys with garment factories and restaurants owners indicate that over 70% of garment workers and 35% of restaurant workers were still working at reduced hours, five months after September 11th.

In order to capture the economic impact on employment and wage losses in Chinatown, the following procedures were implemented (see Table D.2):

1. Obtained a breakdown of businesses by type (e.g., garment factories, restaurants, and others) between south of Canal Street and north of Canal Street.
- **Employment Loss**
 2. Multiplied the ratio of businesses north of Canal Street relative to businesses south of Canal Street by the number of immediate-term dislocated workers and laid-off workers south of Canal Street to obtain estimates for the total number of immediate-term dislocated workers and laid-off workers in Chinatown.
 - **Wage Loss**
 3. Immediate-term Dislocated Workers:
Multiplied the ratio of businesses north of Canal Street relative to businesses located south of Canal Street by the amount of lost earnings for impacted workers in the area south of Canal Street to obtain estimates of reduced earnings for the area north of Canal Street. Then, the reduced wage figures for north and south of Canal were combined to estimate the total lost wages for immediate-term impacted workers in Chinatown.
 4. Laid-off Workers:
Multiplied the average weekly wage (before September 11th) by the six-month period to obtain wages lost due to job losses.
 5. Current Workers:
According to industry-specific employer surveys conducted by the Federation with UNITE and the Chinese American Restaurant Association, over 70% of garment workers and 35% of restaurant workers were working at reduced hours, five months after September 11th. Multiplying these percentages by the number of immediate-term impacted workers, an estimate of the current affect workers was determined. Then, this figure was multiplied by 50% of their pre-September weekly average earnings to obtain an estimate of reduced wages for currently affected workers.
 6. Total Wage Loss:
For the total estimation of wage loss, the estimates of lost wages for immediate-term impacted workers, lost wages of laid off workers, and reduced wages of currently affected workers were combined.
 - **Direct Effect Multipliers on Job Loss and Wage Loss**
 7. To estimate the multiplier effect⁸³ of these lost wages among garment workers and restaurant workers in Chinatown, the estimates of direct wage losses incurred by garment workers and restaurant workers were multiplied by a factor of 1.4 (garment workers) and 1.6 (restaurant workers).⁸⁴

⁸³ It should be noted that the multiplier effect of job loss and wage loss is not geographically bounded. Given that more than half of all Chinatown workers do not live in Chinatown, a substantive share of the spillover effect took place in other areas.

⁸⁴ Regional Input-Output Modeling System (RIMS II), Regional Economic Analysis, Bureau of Economic Analysis.

As the above methodological framework shows, conservative assumptions were made when estimating employment loss and wage loss. Assuming that the average number of workers per factory north and south of Canal Street is the same, in other words a 1 to 1 ratio; but given that 80% of the factories are located north of Canal Street, this ratio becomes 4 to 1. This was the ratio used in the study. Alternatively, a more liberal approach in estimating employment loss and wage loss is to consider the ratio of average number of workers per factory for north and south of Canal, which is 1.2 to 1, based on our survey of garment factory owners. This would yield a ratio for garment factories (north of Canal Street and south of Canal Street) of 4.8 to 1.

Furthermore, the above estimation is conservative given the following factors:

1. Due to lack of available data, the estimation of total wage loss for all of Chinatown's workers (\$114 million) is calculated with the multiplier effect factored in for garment and restaurant workers only.
2. Due to the nature of the informal (cash-based) economy of Chinatown, not every affected worker who worked on the south side of Canal Street was able to access short-term cash assistance from Safe Horizon. According to Safe Horizon's guidelines, appropriate documentation, such as earnings records, had to be submitted before an individual could be approved for cash assistance. As reported in one Chinese language newspaper⁸⁵, more than 3,000 affected workers applied for Safe Horizon's temporary cash assistance program in a community center located at 62 Mott Street, however, only 1,900 were given relief monies.
3. In the garment industry, there are still some sweatshops that are not registered with NYSDOL. The size of these unofficial businesses is a matter of debate. Thus, these businesses are not captured in government, relief, or community source data files.
4. Also, a substantial number of workers perform garment work in their homes. Due to a lack of documentary support, this particular group of affected workers would not qualify for any assistance and, therefore, are not included in the data used for this study.

⁸⁵ "Safe Horizon Assistance Update," World Journal (November 13, 2001).

TABLE D.1:
Job Loss and Wage Loss in Chinatown in the Aftermath of September 11th
Safe Horizon Data - ONLY South of Canal Street

Number of Immediate-Term Impacted - All	5,119	Number of Laid-Offs - All	1,527
Garment Workers	2,641	Garment Workers	846
Restaurant Workers	1,092	Restaurant Workers	344
Others	1,386	Others	337
First Two Week Weekly Wage Loss - All	944,473	Average Weekly Earnings - All	318
Garment Workers	250,651	Garment Workers	207
Restaurant Workers	214,855	Restaurant Workers	319
Others	478,967		
Reduced Earnings of Current Workers		Underemployed Workers	2,712
Weekly Wage Loss - All	304,968	Garment Workers (70%)	2,278
Garment Workers	235,752	Restaurant Workers (35%)	434
Restaurant Workers	69,216		
Wage Loss for Laid-Off Workers	11,654,064		
Garment Workers	4,202,928		
Restaurant Workers	2,633,664		
Others	4,817,472		
Total Wage Loss	12,903,505		
Garment Workers	4,689,331		
Restaurant Workers	2,917,735		
Others	5,296,439		

TABLE D.2:
Estimation of Job Loss and Wage Loss in Chinatown
in the Aftermath of September 11th

Number of Immediate-Term Impacted - All	17,163	Number of Laid-Offs - All	5,323
Garment Workers	13,205	Garment Workers	4,230
Restaurant Workers	1,824	Restaurant Workers	574
Others	2,134	Others	519
First Two Week Weekly Wage Loss - All	5,657,741	Average Weekly Earnings - All	318
Garment Workers	3,088,288	Garment Workers	207
Restaurant Workers	814,795	Restaurant Workers	319
Others	1,754,658		
Reduced Earnings of Current Workers		Underemployed Workers	12,114
Weekly Wage Loss - All	31,064,378	Garment Workers (70%)	11,389
Garment Workers	28,290,189	Restaurant Workers (35%)	725
Restaurant Workers	2,774,189		
Wage Loss for Laid-Off Workers	45,928,990		
Garment Workers	24,031,210		
Restaurant Workers	4,336,337		
Others	17,561,443		
Total Wage Loss	82,651,110		
Garment Workers	55,409,687		
Restaurant Workers	7,925,321		
Others	19,316,102		
Direct-effect Multipliers	Wage Loss	Multiplier*	
Garment Workers	55,409,687	1.4678	81,330,338
Restaurant Workers	7,925,321	1.6654	13,198,830
Others	19,316,102	-	19,316,102
Total Wage Loss with Multipliers***			113,845,270
Direct Effect Multipliers Temporary Job Dislocat**	Multiplier*		
Garment Workers	13,205	1.4678	19,382
Restaurant Workers	1,824	1.6654	3,037
Others	2,134	-	2,134
Total Temporary Job Dislocations with Multipliers			24,553
Direct-Effect Multipliers	Job Loss	Multiplier*	
Garment Workers	4,230	1.4678	6,209
Restaurant Workers	574	1.6654	957
Others	519	-	519
Total Job Loss with Multipliers			7,685

* Source: Regional Input-Output Modeling System (RIMS II), Regional Economic Analysis, Bureau of Economic Analysis.

** Temporary Job Dislocations.

*** Figure represents total wage loss for all of Chinatown workers with multipliers factored in for garment and restaurant workers only.