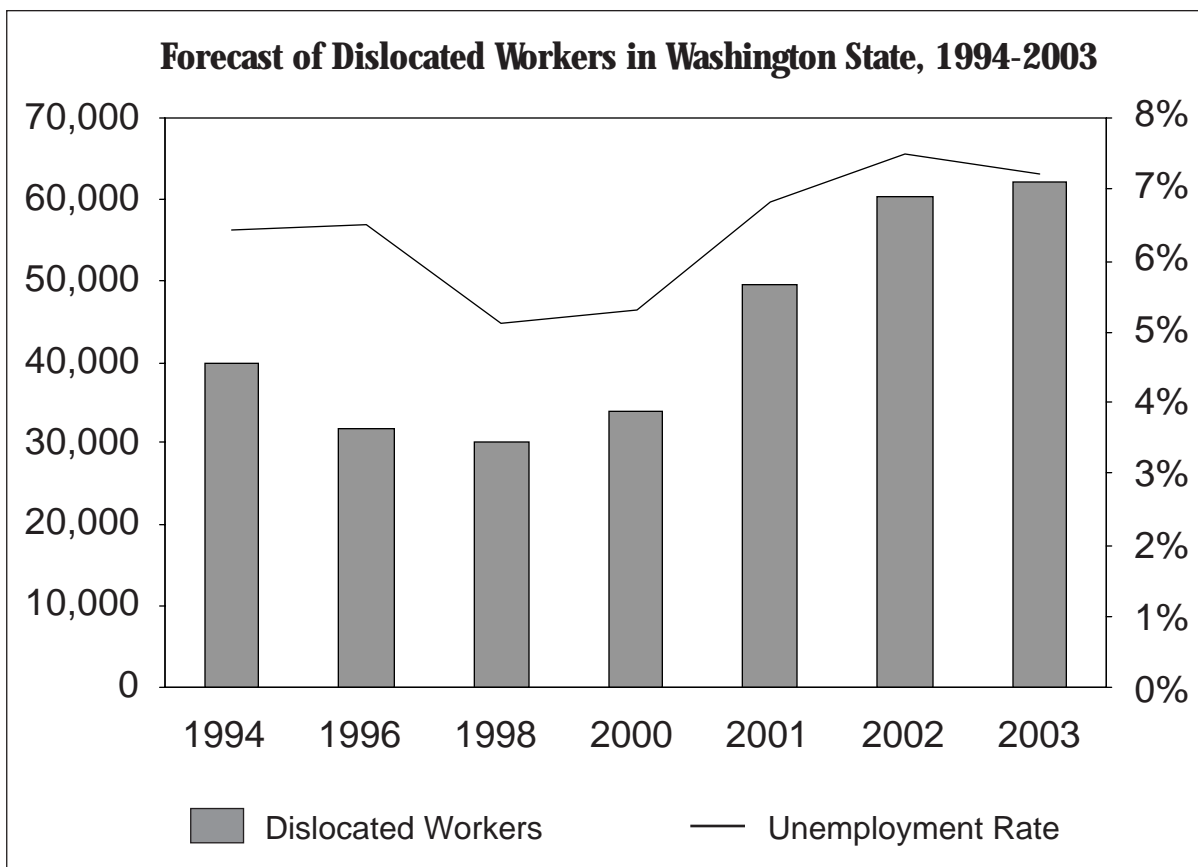

Studies in Industry and Employment

Estimating Dislocated Workers in Washington



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Economic and Policy Analysis Unit
Gary Kamimura, *Economic Analyst*

Labor Market and Economic Analysis Branch
Gary Bodeutsch, *Director*

Washington State Employment Security
Carver Gayton, *Commissioner*

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Executive Summary

Dislocated Worker Definitions:

- There are disparate and conflicting definitions of worker dislocation; some minor, others pronounced. These wide-ranging conceptual differences as well as scant agreement as to how to meld them into an acceptable operational definition have heretofore hampered the development of a single estimate of dislocated workers in Washington.
- Most difficult are definitions which, though conceptually viable, cannot be measured with present data collection resources and therefore are not operational (e.g., those who are self-employed, re-employed at lower wages and skills, not employable absent education and training, re-employed only after relocating, etc.).
- The ESD operationally recognizes, per certified state law, that dislocation involves individuals who have been terminated or received notice of termination, are eligible for or have exhausted Unemployment Insurance (UI) benefits, and are unlikely to return to work in their previous industry or occupation.
- The dislocated worker issue is being driven primarily by funding, but is clouded by uncertainty over how many workers are *currently* dislocated and in need of assistance and how many workers *may be* dislocated when Washington's economy experiences a cyclical downturn or structural shocks.
- The most statistically rigorous and quantifiable approaches to estimating the number of dislocated workers are based on the Current Population Survey, Unemployment Insurance beneficiaries, Worker Profiling/Re-employment Systems, and covered employment data.

Current Population Survey Method:

- The 1996 Current Population Survey (CPS) estimated the number of displaced workers in Washington at 108,000. A count of only those who were unemployed or not in the labor force showed 32,000 (30 percent) of those workers to be dislocated.
- An Employment Security generated forecast using the CPS and DRI's long range cyclical forecast coupled with historic state unemployment rates shows the number of dislocated workers in Washington climbing into the 60,000 to 62,000 range as the state's economy slows over the next five years.
- Application or extrapolation of a national pattern of under-employed workers to Washington's displaced worker estimate translates into another 27,000 workers, which would effectively raise the 1996 estimate of dislocated workers from 32,000 to 59,000.

Local Declining Industry/Occupation Method:

- Of the 245,300 UI beneficiaries in Washington in 1995, 77,700 (or nearly one-third) were found to have been separated or dislocated from either a local declining industry or a local declining occupation or both. Of those dislocated workers, nearly 7,200 were in a serious situation of having had both their industry and occupation in decline.
- Further examination of the 77,700 UI beneficiaries shows that closer to 55,700 are at greater risk of dislocation due to having been separated from industries in strong decline or occupations in strong decline or both.
- UI beneficiary data show that there was little demographic difference between dislocated workers and other unemployed workers in Washington, suggesting that at the state level dislocated workers were very much like other unemployed workers, except for the fact that they may face more difficulties finding re-employment in their past industry or occupation.
- A demographic profile drawn from the UI beneficiary data reveals that roughly two-thirds of dislocated workers in Washington were male, that their average age was close to 38 years, and that their average educational attainment was about 12 years.

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- UI beneficiary data show that in geographic terms, the state's metropolitan counties accounted for the largest absolute number of dislocated workers. Counties with the greatest shares of dislocated workers tended, for the most part, to be tied to transportation equipment (both aircraft and shipbuilding), forest products, and the Hanford Nuclear Reservation.

Worker Profiling Method:

- Over the ten quarters from third quarter 1995 through fourth quarter 1997, the Worker Profiling/Re-employment System (WP/RS) identified 50,176 individuals whose profile scores indicated that they were likely to exhaust their UI benefits and may become dislocated workers.
- The Worker Profiling/Re-employment System shows that 60 percent of the dislocated workers were separated from services-producing sectors compared to 30 percent from goods-producing sectors. Half were separated from white-collar occupations while about a third were separated from blue-collar occupations. Regionally, dislocated workers were predominantly from Puget Sound and western Washington and metropolitan areas, though their respective counterparts in eastern Washington and nonmetropolitan areas picked up larger shares recently.

Industry Restructuring Method:

- An analysis of covered employment and wage data shows that the net number of Washington jobs lost to restructuring over the 1988-96 period was just over 82,600. This figure represents jobs that were lost due to restructuring and may or may not represent the absolute number of individuals dislocated (i.e., a person could have been dislocated more than once from the same industry or from a different one).
- When the 82,600 net jobs lost were identified by major industry divisions, manufacturing (mostly aircraft and parts), accounted for more than two-thirds of that number while the state's services-producing sectors (primarily trade, FIRE, and services) accounted for most of the third that remained.
- The industries most affected by restructuring from 1988-96 were aircraft and parts followed by research and testing due to Hanford; variety and hardware stores due to "big box" competition; ship building due to global competition; logging and sawmills due to supply constraints; and commercial banks and savings institutions due to mergers caused by national competition.

Method Comparisons:

- Though methodologically dissimilar, the CPS, declining industries and occupations, worker profiling, and industry restructuring approaches generated estimates of dislocated workers in Washington from 30,000 to 60,000 in 1995.
- The lower range is anchored by the CPS (32,000-40,000) while the middle and upper ranges are anchored by the UI-based worker profiling (50,176) and declining industries and occupations methods (55,700).
- A yet-to-be determined method for estimating current and future worker dislocation in Washington might incorporate select components of the CPS, declining industries and occupations, worker profiling, and industry restructuring approaches.
- Each approach possesses strengths and weaknesses. The CPS brings to the table a national presence and time series that covers all workers, but which is tied in Washington to a small sample. The UI-based approaches provide important local perspectives as well as demographic and geographic characteristics of dislocated workers, but do not capture non-covered workers. The industry restructuring approach provides a detailed, industry-specific perspective, but lacks occupational characteristics and also does not capture non-covered workers. None of the approaches count, for example, the under-employed or those re-employed only after relocating.

The Challenges and Complexities of Worker Dislocation

Who or what constitutes a *dislocated* worker? There are perhaps as many responses to this question as there are dislocated workers. The definitional aspect of dislocation alone makes this an exceptionally complex and challenging issue. That notwithstanding, the issue of dislocated workers has emerged once again on Washington's political landscape to a degree not witnessed since the restructuring of the state's resource-based industries in the 1980s or since the corporate restructuring of the early 1990s. The irony is that it has surfaced in the midst of a largely booming state economy within which adverse impacts from dislocation would be thought to be minimal at best. Some of the irony dissipates, however, as regional disparities continue to be a factor (i.e., the *Two Washingtons* phenomenon).

So what is once again driving this issue? State funding, to a large degree. Funding has emerged as the principal driver as the State Legislature debates what resources, if any, to direct toward existing and proposed dislocated worker programs. To date, a significant number of dollars has gone into dislocated worker programs implemented at both the state and local levels by entities ranging from the Employment Security Department to the Department of Community Trade and Economic Development to the Department of Natural Resources to the Workforce Training and Education Coordinating Board to the State Board for Community and Technical Colleges to the Private Industry Councils and Economic Development Councils, among others. This money has been used to provide everything from job training and retraining to education and skill development to job search and placement assistance to small business start-up loans and short-term emergency loans to labor market and other information. Ultimately, the players can be broadly identified as those who promote investment in human capital and those who promote investment in economic development.

Attempts to establish an appropriate level of funding have been clouded by uncertainty over the number of dislocated workers in Washington. This has effectively

played out as a dual uncertainty. There is, on one hand, uncertainty about how many workers are *currently* dislocated even though they may have been dislocated in a previous period. Some, though not all, of these individuals are referred to as *long-term* dislocated workers. On the other hand, there is uncertainty over just how many workers may be dislocated in the future when Washington's currently healthy economy experiences a sharp cyclical downturn or additional structural shocks. Both questions need to be addressed as the legislature considers the nature and amount of funding to dedicate to dislocated workers over the next several state biennia.

This study attempts to answer both questions to the degree possible through a review of four distinct methodologies previously published on the subject of dislocated workers and industry restructuring. While the information may not answer all the questions, it should provide a relatively solid foundation or guide of currently available data on this subject for lawmakers and policymakers as they address the complex and challenging issue of dislocated workers in Washington.

Who or What is a Dislocated Worker?

The Employment Security Department operationally recognizes dislocated workers in Washington as they are defined in the following codified state laws:

- Unemployment Compensation (RCW 50.04.075)
- Employment and Training Trust Fund (RCW 50.16.096)

The common threads in these two laws are that the individual must have been terminated or received notice of termination, be eligible for or has exhausted Unemployment Insurance (UI) benefits, and be unlikely to return to work in his/her industry or occupation due to diminished demand for his/her skills.

Two additional definitions worth mentioning are the federal Job Training Partnership Act (JTPA) and Trade Adjustment Assistance (TAA). Both are of significance to the Employment Security Department because it is the state cooperative agency with oversight responsibilities for these federal programs in Washington. The federal Job Training Partnership Act, namely Title III of the program, targets dislocated workers. The JTPA definition

is, in many respects, identical to the Employment Security definition of dislocated workers, particularly in its criterion of UI eligibility or exhaustion as well as some self-employed individuals. A couple of points of departure, however, are reflected in JTPA's inclusion of individuals who were part of a permanent plant closure, whether or not they have employment opportunities with other firms within the same industry or occupation. The federal Trade Adjustment Assistance (TAA) targets workers who lose their jobs or experienced wage reductions due to foreign import competition so long as they have worked for at least 26 weeks the prior year in trade affected employment. A more recent expansion of the TAA program was the NAFTA Trade Adjustment Assistance program which was specific to jobs impacted by trade with Canada and Mexico.

The definition of worker dislocation in the report on Natural Resource Harvest Variation in Rural Communities applies to unemployed individuals who worked in declining industries that are located in counties with unemployment rates significantly higher than the state average. The latter qualification closely resembles the Employment Security Department's definition of *economically distressed* counties, which requires a three-year average annual unemployment rate that is 20 percent or higher than the state average.

There are many other definitions of worker dislocation which, though conceptually viable, present considerable identification and quantification issues at an operational level. These definitions encompass but are not limited to those who are not covered by UI (most self-employed), those who were re-employed at less pay and using lower skill sets (under-employed), those who need additional training and/or education to be re-employed (tuition waivers), and those who must or have relocated to become re-employed in their industry or occupation.

What remain are disparate and conflicting definitions of worker dislocation; some minor, others pronounced. These wide-ranging conceptual differences as well as scant agreement as to how to meld them into an acceptable operational definition have heretofore hampered the development of a single estimate of dislocated workers in Washington.

Absent the development of new data and methodological approaches, one is left to consider four currently operational approaches to estimating worker dislocation.

Four Approaches to Estimating Worker Dislocation

The following describes four approaches to estimating the number of dislocated workers in Washington. They are among the most statistically rigorous and quantifiable approaches available to date. In other words, they are operational approaches to estimating worker dislocation. These four approaches can be identified by their program source as follows:

- Current Population Survey
- Local Declining Industries and Occupations
- Worker Profiling/Reemployment System
- Industry Restructuring

Current Population Survey

Displaced Workers. The *Current Population Survey (CPS)* is a monthly national survey of 50,000 households conducted by the Bureau of the Census, U.S. Department of Commerce that provides comprehensive data on, among other things, the nation's labor force. Since 1984, the CPS has been supplemented biennially (i.e., every two years) with displaced worker data collected for the Employment and Training Administration within the U.S. Department of Labor.

Here in Washington, the CPS survey sample is comprised of 773 households. During the course of conducting the supplemental survey in February 1998, the Labor Department determined that 700 of those households were eligible to be surveyed (i.e., there was a physical household present) and ultimately conducted 644 household interviews. Washington's relatively modest sample size raises the issue of statistical reliability. However, the Labor Department stands behind the sample as adequate and statistically accurate.

Displaced workers are defined as those 20 years of age and older who lost their jobs over the prior three calendar years because (1) their plant or company

closed or moved, (2) there was insufficient work for them to do, or (3) their position or shift was abolished. Those individuals must have worked for their employer for at least three years (also known as long-tenured) to be considered displaced, thus explaining the definitional “floor” of twenty as opposed to, say, eighteen with respect to age. The actual question asked is as follows:

“During the last 3 calendar years, that is (for example), January 1993 through December 1995, did you lose a job or leave one because: your plant or company closed or moved, your position or shift was abolished, insufficient work, or another similar reason?”

Individuals who answer “yes” are counted as displaced. Those individuals are also asked whether they were employed, unemployed, or not in the labor force (many of whom are regarded as discouraged workers) in the week prior to the survey. With respect to displacement, it makes no difference whether or not the person is employed because displaced workers can be and often are re-employed by the time they participate in the survey.

The 1996 CPS estimate placed the number of displaced workers in Washington at 108,000. Translated, this means that from January 1993 to December 1995, 108,000 workers in Washington lost jobs they had held for at least three years. Though not insignificant, it was considerably lower than the 127,000 workers displaced between January 1991 and December 1993

identified in the 1994 survey and the 187,000 workers displaced between January 1987 and December 1989 identified in the 1990 survey. As the state and national economies have continued to improve since 1996, it is anticipated that the 1998 estimate will be lower still. It should be noted that the decline could also be driven in part by the change in the CPS reference period from 5 to 3 years.

The time series depiction of worker displacement in Washington from 1988-96 clearly reveals adverse cyclical and structural impacts (see Figure 1). The former is punctuated by the 1994 estimate, which covers the period from January 1991 to December 1993 and included a national economic recession. The latter is highlighted by the 1990 estimate, which encompasses the period from January 1987 to December 1989 and included restructuring in the state’s transportation equipment (both aircraft and ship building), forest products, and commercial banking industries.

This discussion of displaced workers is necessary to lay the groundwork for the subsequent discussion of *dislocated* workers. The two terms are often used interchangeably. However, for the purposes of this analysis, they are viewed as separate and distinct. The CPS survey is specific to displaced workers, not dislocated workers. The following assessment of dislocated workers has been produced by Employment Security Department economists, who used the CPS estimates of displaced workers in Washington (as well as forecast

Figure 1
Displaced Workers
Washington State, Selected Years
Source: Bureau of Labor Statistics

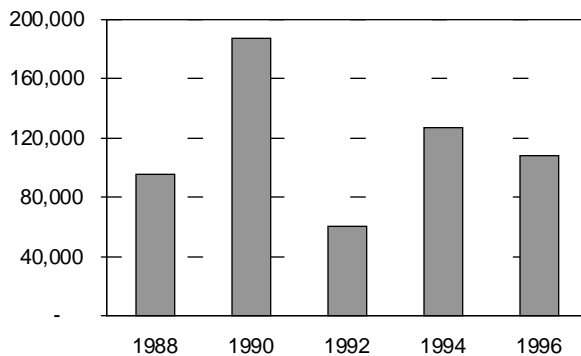
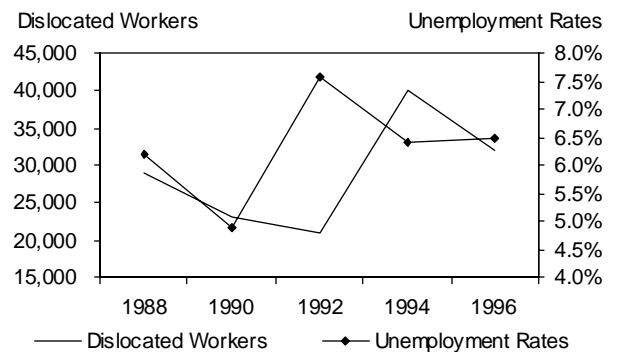


Figure 2
Dislocated Workers and Unemployment Rates
Washington State, Selected Years
Source: Employment Security & Bureau of Labor Statistics



data) as a base upon which to build their estimate of dislocated workers in the state.

Dislocated Workers. As noted, the CPS estimate of displaced workers counted those who were employed, unemployed, and not in the labor force at the time they were surveyed. Though perhaps acceptable with respect to estimating displaced workers, this grouping was regarded as overly inclusive by ESD economists for counting dislocated workers. Consequently, they chose to distill this information to reach what they regarded as a more appropriate reflection of dislocated workers by counting only those who were unemployed and not in the labor force. Those who identified themselves as displaced but employed were excluded because they currently had jobs and were therefore not regarded as dislocated in the way the layperson thinks of dislocation.

The reworked CPS showed that there were 32,000 dislocated workers in Washington in 1996 (*see Figure 2 on the previous page*). Though down significantly from 40,000 in 1994, a period during which a number of industries in Washington were restructuring, it was nevertheless higher than it had been in the late 1980s and early 1990s. This suggests that while the worst of the recent round of worker dislocations in Washington has passed, it certainly is not a non-issue.

Another indication that worker dislocation has eased in recent years is revealed in the falling share of dislocated workers as a proportion of total displaced workers. Since the 1992 survey, that share has fallen from 35 percent to 30 percent. Over the 1988-96 observation period, the share was at its lowest in 1990 when only 12 percent or 23,000 of the 187,000 displaced workers were unemployed or not in the labor force. This was indicative of a state economy which was shedding jobs through restructuring during the late 1980s, but which was still heady enough to provide re-employment opportunities for most of the displaced individuals.

The present period (which will be captured in the CPS-derived February 1998 estimate of dislocated workers over the period from January 1995 through December 1997) is expected to represent a cyclical low both in terms of Washington's count of dislocated

workers and its unemployment rate. The linking of these two economic measures is intentional. There is a strong correlation between the CPS-derived estimate of worker dislocation and the state's annual average unemployment rate (*see Figure 2*). In fact, if one adjusts for the fact that the CPS is conducted every two years, their respective trend lines are virtually identical. The relationship between worker displacement and the unemployment rate is evident as well, but with the former lagging the latter.

Local Declining Industries and Occupations

The Research and Evaluation unit within the Labor Market and Economic Analysis Branch of Employment Security used a combination of Unemployment Insurance (UI) beneficiary data, Occupational Employment Statistics (OES) data, and Covered Employment and Wage (ES-202) data as central elements in estimating the number of dislocated workers in Washington. Published in a report entitled *Local Declining Industries and Occupations*, these data enabled the unit to identify industries and occupations that had experienced declining demand for labor at the *county* level and subsequently identify unemployed individuals who had been separated from those particular industries and occupations.

The emphasis on declining industries and occupations assumes that dislocated workers are, in large measure, unlikely to return to their previous industry or occupation or that they have limited employment opportunities in the same or similar work in the area in which they were employed. The emphasis in this approach is on *locally-observed* industry and occupational decline; the same industries and occupations may not similarly be in decline statewide or in other areas. This raises the issue of a dislocated worker's option to relocate to an area of the state where his or her industry or occupation is not in decline.

The methodology for this approach, in abbreviated form, included the following elements:

- Short-term employment trends for every industry and occupation in every county.

- A decline of at least 20 positions to denote a local declining industry or occupation (with percentage changes also taken into consideration in counties with small employment levels).
- Industry and occupation trends linked to UI claimants in Calendar Year 1995.
- Numerical estimates and characteristics of dislocated workers for three levels of classification for diminishing demand.
- Follow-up which links a sample of calendar year 1995 UI claimants to Worker Profiling data and employment outcome results obtained from the UI Wage Tax file.

Study Results. The data on declining industries and occupations was generated and stratified at three increasingly more disaggregated levels to provide revealing observations about worker dislocation in Washington in 1995.

The first cut at the data simply distinguished the 245,300 UI beneficiaries in 1995 as either separated from an industry and/or occupation that was declining or not declining. This initial cut at the data identified 77,700 (or nearly one-third) as having been separated from either a declining industry or occupation with the balance having been separated from an industry or occupation, neither of which were in decline at the state level. These 77,700 were broadly categorized as dislocated workers. This also left 167,600 unemployed individuals who were separated from industries and occupations, neither of which was in decline. This is consistent with the observation that not all unemployed persons are dislocated, and that the majority of unemployment (in this case, more than two-thirds) is due to reasons not related to dislocation such as predictable labor market churning.

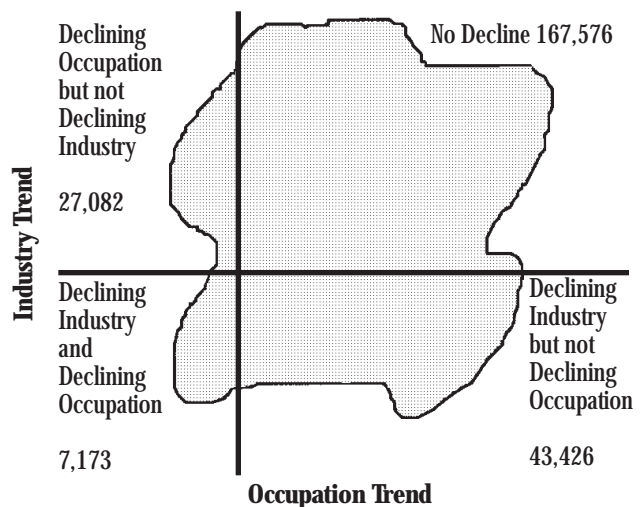
The second level data run keyed in on the 77,700 UI beneficiaries separated or dislocated from either a local declining industry or a local declining occupation or both (see Figure 3). This run distinguished dislocated workers by their more specific industry and occupational situations and revealed the following:

Industry decline, occupational growth	43,400
Industry growth, occupational decline	27,100
Industry and occupational decline	7,200

The 43,400 might actually have had fair to good employment opportunities because while employment in their industry was declining, employment in their occupation was rising. In other words, they could conceivably be re-employed in the same occupation but a different industry. On somewhat the same note, 27,100 individuals might have employment opportunities because employment in their industry was increasing despite the fact that employment in their occupation was declining. This is perhaps a more difficult situation, though not an untenable one if the individual's skill set is appropriate to another occupation in that industry or if the individual receives additional training or retraining. That nevertheless left nearly 7,200 in the much more serious situation of having both their industry and occupation in decline. Still present were the 167,600 unemployed individuals separated from industries and occupations that were not in decline.

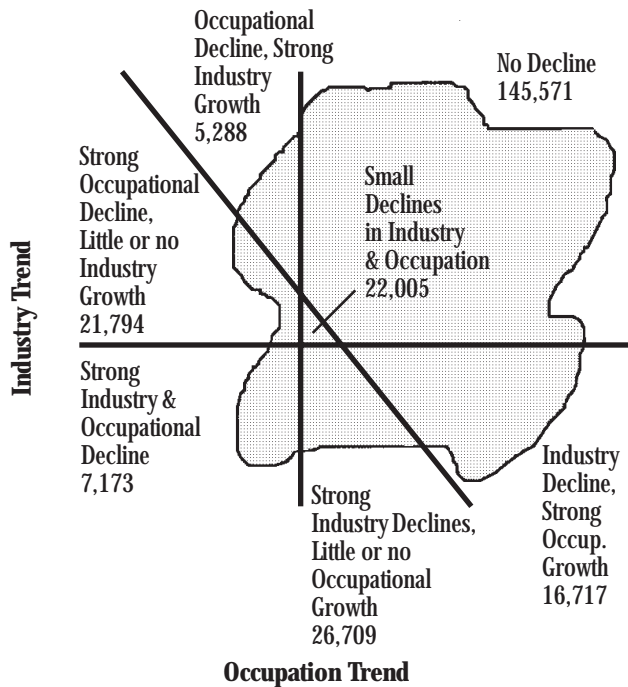
The third level data generation introduced an even finer approach to measuring the degree of change in both industrial and occupational employment trends (see Figure 4 on the next page). Of the 245,300 UI beneficiaries in Calendar Year 1995, this run revealed the following (see shaded box on page 6).

Figure 3
Classification of UI Beneficiaries
Calendar Year 1995
Source: Employment Security Department



This figure is a schematic which only approximates the actual data. The density of recipients within the shaded area varies dramatically, with the highest density near the center.

Figure 4
Classification of UI Beneficiaries
Calendar Year 1995
 Source: *Employment Security Department*



This figure is a schematic which only approximates the actual data. The density of recipients within the shaded area varies dramatically, with the highest density near the center.

Strong declines in industry/occupation	7,200
Strong industry decline, little or no occupational growth	26,700
Strong occupational decline, little or no industry growth	21,800
Small declines in industry and occupation	22,000
Industry decline, strong occupational growth	16,700
Occupational decline, strong industry growth	5,300
No decline in industry or occupation	145,600

The increasingly finer levels of data disaggregation are important because they break down the industry and occupational situations of the 77,700 UI beneficiaries

broadly classified as dislocated. Findings at the third level of detail strongly suggest that not all of the 77,700 workers labeled as dislocated are equally vulnerable to prolonged dislocation. To be sure, the 7,200 identified as having been separated from industries and occupations that were both in strong decline are dislocated and are likely to suffer prolonged unemployment. Beyond that, the 21,800 and 26,700 with strong occupational and industry decline, respectively, and little or no growth on the flip side, may also suffer significant periods of unemployment. When summed, this more narrowly defined group of dislocated workers numbers 55,700.

Demographic Characteristics. Demographic and UI benefit characteristics of dislocated workers were compared to those of other unemployed workers in the UI system during CY 1995 (*see Figure 5*). Though all of the findings were statistically significant or valid, there was very little difference between dislocated workers and other unemployed workers. This suggests that, at least at the statewide level, dislocated workers were very much like other unemployed workers, save the fact that they may face more difficulties in finding re-employment in their past industry or occupation. This is viewed as both a positive and a negative. On the upside, there does not appear to be evidence of bias in comparing the profile of dislocated workers against other unemployed workers. On the downside, because there is little or no

Figure 5
Demographic Characteristics of Dislocated Workers vs. Other Unemployed Workers, Washington, CY 1995
 Source: *Employment Security Department, LMEA*

	Dislocated Workers	Oth. Unemp Workers
Gender (% Female)	35.7%	35.3%
Education (Years)	11.92	11.96
Age (Years)	37.92	37.72
WBA (\$)	\$224.94	\$218.66
Total UI (\$)	\$3,560.74	\$3,412.99
Duration (Weeks)	15.87	15.65
Exhaustion (Rate)	34.0%	32.8%

distinction between dislocated workers and other unemployed workers, the former would appear to be difficult to target. Still, it is important to recognize that there are statistical differences between dislocated workers and all other unemployed workers and that these differences become more pronounced as they are worked down to the local level. The key point to be made is that worker dislocation is ultimately a local event.

That having been noted, the profile data show that roughly two-thirds of dislocated workers in Washington were male, that their average age was close to 38 years, and that their average educational attainment was about 12 years (high school). This was virtually identical to the profile for other unemployed workers. As for UI benefits, dislocated workers averaged \$225 in weekly benefits and \$3,561 in total UI payments over an average duration of close to 16 weeks with an average exhaustion rate of about 34 percent. This was only slightly higher than the averages for other unemployed workers drawing UI benefits.

Though there is scant difference between dislocated workers and other unemployed workers, subtle differences in demographic characteristics do, in fact, emerge when dislocated workers are examined at a greater level of detail which breaks out those in declining industries, declining occupations, or both (see Figure 6).

One pattern emerges with respect to gender and education in the form of significant differences between those in the Declining Industries (DI) category and Declining Occupations (DO) category with the

Figure 6
Demographic Characteristics of Dislocated Workers by Type
Washington, Calendar Year 1995
Source: *Employment Security Department, LMEA*

	DI	DO	DI & DO
Gender (% Female)	31.2%	41.7%	39.7%
Education (Years)	11.56	12.39	12.32
Age (Years)	38.42	37.06	38.09
WBA (\$)	\$233.13	\$208.75	\$236.44
Total UI (\$)	\$3,711.67	\$3,224.76	\$3,915.50
Duration (Weeks)	16.00	15.54	16.36
Exhaustion (Rate)	34.6%	32.5%	35.8%

latter statistically aligned more closely with the Declining Industry and Declining Occupation (DI/DO) category. The DO are also more likely to be female and have more education.

Another pattern emerges with respect to the UI characteristics where the Declining Industry and Declining Occupation (DI/DO) group, not surprisingly, is more likely to have higher Weekly Benefit Amounts and Total UI benefits, as well as longer duration of unemployment and likelihood of exhausting their UI benefits.

Geographic Characteristics. From a regional perspective, the geographic distribution of the 77,700 individuals identified as dislocated was heavily skewed toward Puget Sound metropolitan areas in western Washington (see Figure 7). Better than four out of five resided in metropolitan areas compared to nonmetropolitan areas. Three out of five were in the Puget Sound region compared to the balance of the state. Three out of four lived in western Washington compared to eastern Washington.

The county level geographic distribution of the 77,700 individuals identified as dislocated was analyzed in two ways—in absolute terms and as a share of UI beneficiaries. In absolute terms, the state’s metropolitan areas accounted for the largest number of dislocated workers (see Figure 8 on the next page). This was no surprise given that those areas also have

Figure 7
Geographic Distribution of Dislocated Workers
Washington, 1995
Source: *Employment Security Department, LMEA*

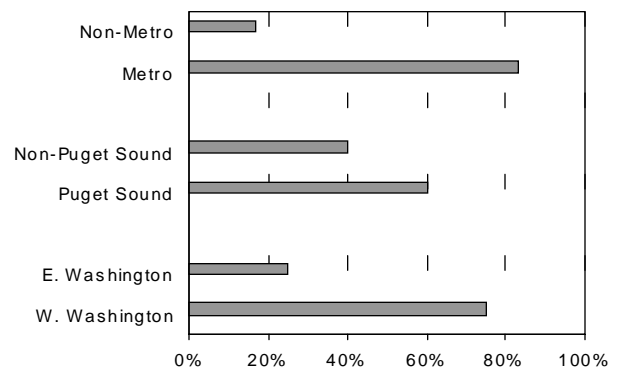


Figure 8

Dislocated Workers in Declining Industries (DI), Declining Occupations (DO), or Both and Share of Total UI Beneficiaries
 Washington, Calendar Year 1995

Source: Employment Security Department, LMEA

LOCATION	DI ONLY		DO ONLY		DI and DO		TOTAL	
	COUNT	%	COUNT	%	COUNT	%	COUNT	%
State	43,426	17.7	27,082	11.0	7,173	2.9	77,681	31.7
Adams	146	7.3	73	3.7	5	0.3	224	11.3
Asotin	80	7.7	104	10.0	8	0.8	192	18.6
Benton	1,582	22.2	1,060	14.9	191	2.7	2,833	39.7
Chelan	492	8.6	464	8.1	57	1.0	1,013	17.7
Clallam	1,334	40.1	155	4.7	125	3.8	1,614	48.5
Clark	760	9.7	596	7.6	73	0.9	1,429	18.2
Columbia	151	14.6	84	8.1	14	1.4	249	24.1
Cowlitz	341	7.1	167	3.5	15	0.3	523	10.9
Douglas	190	7.1	203	7.6	19	0.7	412	15.4
Ferry	34	4.1	71	8.6	3	0.4	108	13.0
Franklin	674	20.5	413	12.6	96	2.9	1,183	36.0
Garfield	18	6.9	14	5.4			32	12.3
Grant	394	8.7	211	4.6	18	0.4	623	13.7
Grays Harbor	1,081	24.1	236	5.3	157	3.5	1,474	32.9
Island	200	9.0	158	7.1	10	0.5	368	16.6
Jefferson	114	8.6	78	5.9	16	1.2	208	15.7
King	11,489	19.5	8,114	13.8	2,467	4.2	22,070	37.5
Kitsap	600	7.9	2,186	28.7	287	3.8	3,073	40.3
Kittitas	573	22.3	172	6.7	56	2.2	801	31.1
Klickitat	243	17.9	198	14.6	120	8.8	561	41.3
Lewis	624	16.1	140	3.6	32	0.8	796	20.5
Lincoln	50	12.7	47	11.9	7	1.8	104	26.4
Mason	279	13.5	149	7.2	24	1.2	452	21.9
Okanogan	143	4.0	326	9.1	12	0.3	481	13.4
Pacific	202	13.0	76	4.9	2	0.1	280	18.0
Pend Oreille	186	9.4	170	8.6	17	0.9	373	18.8
Pierce	4,603	19.2	3,944	16.4	876	3.6	9,423	39.2
San Juan	161	10.7	30	2.0	5	0.3	196	13.0
Skagit	845	14.3	251	4.2	98	1.7	1,194	20.1
Skamania	158	12.0	110	8.3	16	1.2	284	21.5
Snohomish	5,775	27.1	2,540	11.9	1,207	5.7	9,522	44.6
Spokane	1,008	7.3	2,112	15.4	192	1.4	3,312	24.1
Stevens	86	4.1	173	8.3	10	0.5	269	12.9
Thurston	1,199	15.3	580	7.4	158	2.0	1,937	24.7
Wahkiakum	15	3.2	31	6.6	1	0.2	47	10.0
Walla Walla	588	26.4	129	5.8	18	0.8	735	32.9
Whatcom	1,808	23.9	765	10.1	543	7.2	3,116	41.3
Whitman	46	8.3	50	9.0	7	1.3	103	18.6
Yakima	5,154	28.7	702	3.9	211	1.2	6,067	33.8

the largest labor markets. Topping the list was King County with 22,000 dislocated workers, followed by Snohomish and Pierce in the 9,500 range, Yakima in the 6,000 range, and Spokane, Whatcom, Kitsap, and Benton in the 3,000 range.

As noted, the 77,700 dislocated workers (as defined by this methodology) comprised 32 percent of Washington's total UI beneficiaries in CY 1995. Using the state average as a benchmark, 12 or nearly one-third of Washington's counties had dislocated worker shares that were higher than the state average. These counties tended, for the most part, to be tied to transportation equipment (both aircraft and shipbuilding), forest products, and the Hanford Nuclear Reservation. More specifically, the highest shares (40 percent or more) were in Clallam, Snohomish, Whatcom, Klickitat, Kitsap, and Benton counties (*see Figure 8*). One notable observation was that agriculture-based counties tended to have among the lowest shares of dislocated workers despite having historically high unemployment rates. This is quite characteristic of seasonal agricultural economies, which tend to generate high unemployment as seasonal activity comes and goes, but of which little is permanent. This further underscores a previous point that not all unemployed workers are dislocated workers.

As noted earlier, there are different degrees of magnitude within the declining industries, occupations, or both. At the state level, of the 31.7 percent of UI beneficiaries separated from declining industries or occupations, 17.7 percent were tied to a declining industry, 11 percent to a declining occupation, and 2.9 percent to a declining industry and occupation. A number of Washington counties had shares significantly higher than the state averages in each of these categories, which suggests that they were more apt to find themselves with dislocated workers (*see Figure 8*). The counties from which there were the greatest shares of UI beneficiaries from declining industries were those dominated by forest products, aircraft and parts, food processing, and nuclear waste cleanup (Hanford). The list of counties with the largest share of UI beneficiaries from declining occupations was similar, with the addition of Kitsap (shipbuilding trades) and Spokane (mining trades). The counties with the highest share of UI beneficiaries from industries and

occupations both in decline were Klickitat, Whatcom, Snohomish, King, Kitsap, Clallam, and Pierce. Once again, the transportation equipment (both planes and ships) and lumber and wood products sectors and their respective occupational lineups were largely responsible.

It should be pointed out that an examination of the more narrowly defined group of 55,700 dislocated workers revealed a regional distribution similar to that of the 77,700 dislocated workers discussed in this section. That is, the 55,700 were found to be present in Puget Sound metropolitan areas in western Washington to a similar degree as the 77,700. The key exception, and this may be critical, is that the distribution shifted to nonmetropolitan, non-Puget Sound, and eastern Washington regions by one to three percentage points. This suggests that those faced with a somewhat more deteriorated industry and/or occupational situation were also somewhat more apt to be from rural areas.

Building a Trend Line. Recognizing that this information is a couple of years old, the Research and Evaluation unit is in the process of preparing an update to this study using data for Calendar Year 1996. The study results should be available in the near future. While the absolute number of UI beneficiaries separated from declining industries, occupations, or both may change, the real interest will be in seeing whether the dislocated worker profile (both demographic and geographic) remains relatively constant or changes over time.

Worker Profiling/Re-employment System

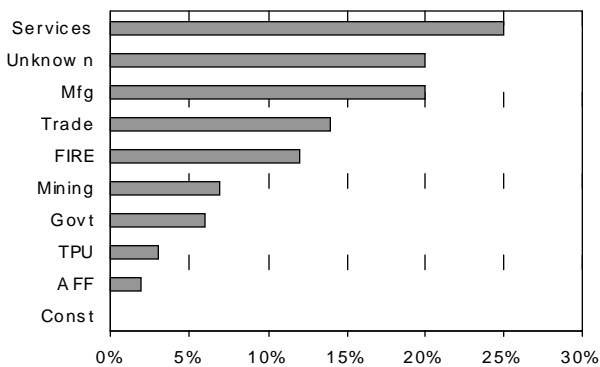
As a result of the Unemployment Compensation Amendments of 1993 (P.L. 103-152)—which amended the Social Security Act—states are *required*, as a condition of receiving administrative grants, to design and implement a system that profiles and tracks through re-employment services all new claimants for regular unemployment compensation. One purpose of worker profiling is to identify, at the time of first payment in a new benefit year, those individuals who are likely to both exhaust their benefits and be in need of re-employment services. A second purpose is to identify those displaced permanently from their previous jobs who are likely to

experience difficulties finding re-employment and who could benefit from job assistance to make a successful transition to new employment. States are also required to disqualify from receiving benefits those individuals identified by the profiling system but who have failed to participate in re-employment programs.

Washington State established its Worker Profiling and Re-employment Services System (WP/RS) on July 1, 1995. The Unemployment Insurance program has a very active role in the WP/RS system identifying, selecting and referring claimants likely to exhaust benefits. The quantitative foundation of the WP/RS is based on a combination of individual characteristics and labor market information that are entered into a weighted logistic regression. From that logistic regression is computed the probability of benefit exhaustion and profile scores for those new claimants. The WP/RS methodology uses a number of variables or indicators to generate an estimate of dislocated workers. Those variables or indicators include the following:

- Work history/tenure (hours from base year of employment)
- Years of education
- Estimated duration of unemployment (22 week minimum)
- Annual average unemployment rate in county of residence
- Industry and occupational employment trends

Figure 9
Dislocated Workers by Industry
as Identified by the Worker Profiling System
Source: Employment Security Department, LMEA



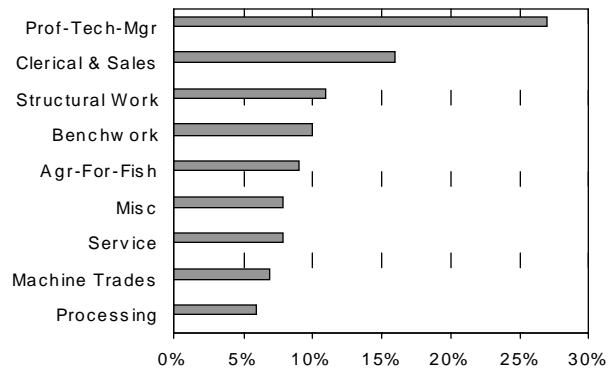
- Individual's Dictionary of Occupational Titles (DOT) code
- Regional/geographic identifier

Dislocated Workers. Over the ten quarters from third quarter 1995 through fourth quarter 1997, WP/RS identified 50,176 individuals whose profile scores indicated that they were likely to exhaust their UI benefits and become dislocated workers. Though data were not available for the first and second quarters of 1995, it is believed that the number of dislocated workers identified by WP/RS has eased in each subsequent calendar year. For example, the number of dislocated workers identified in 1997 was 13,848 compared to 23,168 in 1996.

From an industry perspective, approximately 30 percent of the 50,176 dislocated workers were separated from goods-producing sectors, mostly manufacturing, while 60 percent were separated from services-producing sectors, mostly services (10 percent had no known industry designation) (see Figure 9). This industry distribution remained relatively constant over the 1995-97 period.

From an occupational standpoint, just over half of the 50,176 dislocated workers were separated from white-collar occupations while just over a third were separated from blue-collar occupations (the balance were from agriculture, forestry, and fishing and miscellaneous occupations not otherwise classified) (see Figure 10). Unlike the industry composition, which was

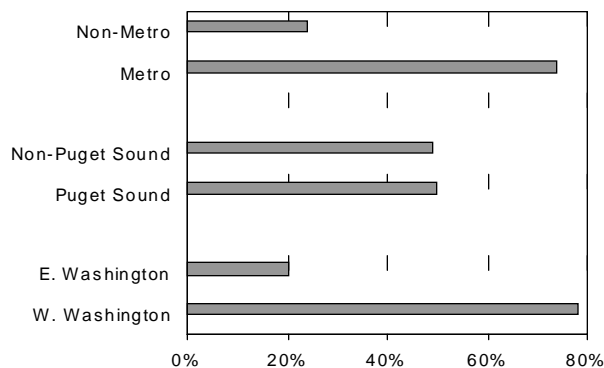
Figure 10
Dislocated Workers by Occupation
as Identified by the Worker Profiling System
Source: Employment Security Department, LMEA



generally consistent over time, the occupational distribution has shifted considerably. White-collar occupations produced a greater share of dislocated workers in 1995 than in 1996 and 1997. Conversely, blue-collar occupations generated a much larger share of dislocated workers in 1997 than in 1996 and 1995.

Geographically, two counties—King and Pierce—accounted for fully a third of the 50,176 workers dislocated from 1995-97. Viewed regionally (see Figure 11), 50 percent of Washington’s dislocated workers were separated from jobs in the Puget Sound region compared to 50 percent in the balance of the state. Approximately 75 percent of those dislocated workers were separated from jobs in metropolitan areas compared to 25 percent in nonmetropolitan areas. On a similar note, nearly 80 percent were separated from jobs in western Washington compared to 20 percent in eastern Washington. This pattern, however, was not fixed. Puget Sound, western Washington and the metropolitan areas saw their shares of dislocated workers subside progressively from 1995 to 1997 while their counterparts subsequently experienced the opposite trend. In other words, the non-Puget Sound, nonmetropolitan, and eastern Washington regions accounted for rising shares of dislocated workers in the most recent period under WP/RS. This was due to the accelerating job growth in the Puget Sound region and Clark County and weaker job growth in eastern Washington metropolitan areas.

Figure 11
Dislocated Workers by Geographic Region
as Identified by the Worker Profiling System
Source: Employment Security Department, LMEA



It should be noted that the WP/RS methodological approach is not static. There is a continuing effort to introduce and test new variables with the aim of developing an even more accurate identifier of those likely to exhaust UI benefits and experience difficulty finding re-employment—and, by extension, become dislocated workers.

Cyclical, Structural Maturity and Dislocated Workers

Cyclical and structural maturity are concepts important to a discussion of dislocated workers because they tend to foster higher than average unemployment in the industries within which they are present. When these economic phenomena are present, a significant share of workers is viewed as being at risk of longer episodes of unemployment. This has historically been the case in Washington where cyclical and restructuring have contributed to jobless rates that are higher and more volatile than nationally. It is also important to recognize that an industry can be both cyclical and structurally mature, a combination that tends to generate higher than average dislocation.

Cyclical reflects shifts in the national economic business cycle. Business cycles tend to generate disproportionately high employment or unemployment depending on where an economy is in the cycle; namely, whether it is expanding or contracting. Turning points in the business cycle are brought about by factors that influence supply and demand. For example, recessionary pressures are often brought to bear by softening demand that squeezes revenue and forces cost-cutting which, in turn, increases the likelihood of payroll reductions. The dislocation caused by cyclical tends to be relatively *short-term* as dislocated workers can generally expect to be re-employed in their industries once the economy moves into recovery and expansion.

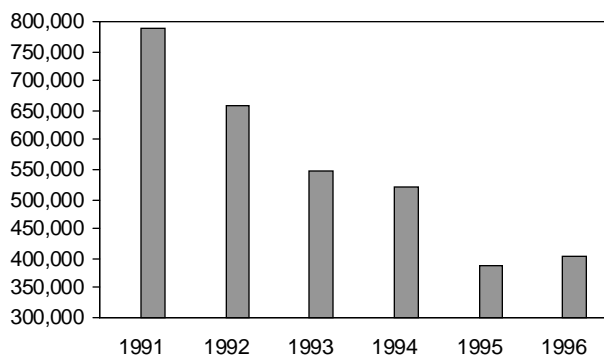
Structural maturity, more commonly referred to as *restructuring*, reflects long-term upward shifts in productivity. Shifts of this nature typically result in unemployment as affected firms introduce new equipment, processes, and technology to heighten their competitive positions and overall productivity, and

replace jobs as those gains are realized. Restructuring pressures are also brought to bear by shifts in consumer buying patterns. The dislocation caused by restructuring tends to be *long-term* and often permanent. This is not to suggest a restructured industry cannot rebuild its work force and that dislocated workers cannot find re-employment in that industry. However, the new jobs created presumably require new or different skills and dislocated workers will need those skills if they hope to be re-employed in the industry.

The covered employment trend for structurally mature industries in Washington is one of relatively steady decline over the 1991-96 period, though the pattern appears to have troughed or bottomed out in 1995 (see *Figure 12*). This is consistent with what one expects with regard to restructured industries; the employment level after restructuring should be lower even in the midst of the state's overall economic recovery and expansion. The apparent trough in 1995 is consistent with the observation that most of the major restructuring activity during the state's current and ongoing business cycle has already been carried out.

It should be underscored that *Figure 12* represents an aggregate statewide trend that does not translate uniformly at the regional or county level. In other words, regions or counties are not affected equally by restructuring. The degree of impact varies depending on a geographic area's industry composition and the resulting share of employment identified as structurally mature.

Figure 12
Structurally Mature Industry Covered Employment
Washington State, 1991-1996
Source: *Employment Security Department*



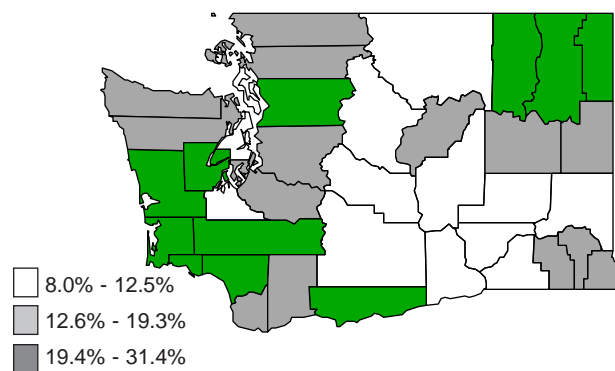
The aircraft and parts sector is a good example. If that sector experiences restructuring, counties within which it has a significant employment presence will be more adversely impacted than those within which it has little or no presence. In fact, there are significant differences among Washington counties when it comes to their respective shares of employment in industries classified as structurally mature (see *Figure 13*). This is consistent with the findings of the previously discussed dislocated workers report that used UI beneficiaries as its base. That report provided considerable detail on worker dislocation by geographic area.

For the purposes of this report, however, it is the concept of structural maturity that is most important because it is upon this concept that the foundation for yet another measure of long-term worker dislocation is established.

Workers Dislocated by Industry Restructuring

In a continuing effort to shed light on the issue of dislocated workers, the Economic and Policy Analysis unit within the Labor Market and Economic Analysis Branch of Employment Security generated an estimate of net jobs lost due to industry restructuring in Washington from 1988-96. This period covers the latest and yet ongoing national economic business cycle, including a national economic recession in 1990-91.

Figure 13
Structural Jobs as a Percentage of Covered Employment
Washington State, 1996
Source: *Employment Security Department*



This is a departure from all three of the prior methodologies discussed in that it uses industry data rather than individual data (you will recall that the CPS used data from a phone-based household survey while the other studies used Unemployment Insurance claimant data). It is also a departure from previous methodologies because it is one of the first to recognize that worker dislocation is *inherently* linked to economic restructuring. This means that dislocative impacts could befall individuals regardless of education, skills, or experience.

Why use restructured industries to get at the issue of dislocated workers? Because restructuring reflects long-term upward shifts in productivity during which affected industries introduce new equipment, processes, and technology to heighten their competitive positions and overall productivity and, in the process, shed jobs and cause dislocation as those gains are realized. The same kind of dislocation can also be brought to bear by shifts in consumer demand or changes in the supply of available inputs. It is also felt that these types of jobs are among those least likely to return, thus providing what many feel is a textbook definition of worker dislocation.

Methodology. To do this, the Economic and Policy Analysis unit devised a three-step methodology that utilized as its foundation the department's annual average covered employment and wage (ES-202) data for all three-digit Standard Industrial Classification (SIC) coded industries in Washington.

Step 1 identified the annual high (peak) and low (trough) employment for each three-digit SIC coded industry over the 1988-96 period, and further identified those whose net employment declined from the high to the low over the period rather than vice-versa.

Step 2 identified among the aforementioned industries those that more specifically experienced a net employment decline of 10 percent or more over the 1988-96 period. A threshold or trigger of 10 percent or greater was selected because it is consistent with the State Legislature's definition of a Type 2 structurally mature industry.

Step 3 brought to bear the insights and observations of Economic and Policy Analysis economists who studied

the employment trends in each of the identified industries and issued their professional judgements as to whether the industry in question was affected by restructuring or by some other economic factor such as a recession. Those identified as the former were included; those identified with the latter were not. Again, the intent here was to distinguish between impacts from restructuring versus those from, say, the business cycle.

The following summarizes the outcomes from the Economic and Policy Analysis unit's investigation of workers dislocated by industry restructuring in Washington:

Number of Workers. By this method, the net number of Washington jobs lost to restructuring over the 1988-96 period was estimated at just over 82,600. These may or may not represent the absolute number of individuals dislocated (i.e., a person could have been dislocated more than once from the same industry or from a different one). This number also does not assume that the workers in those jobs were dislocated to the extent that they are not currently working, though that may be the case.

Industry Distribution. There were few surprises when the 82,600 net jobs lost were identified by major industry divisions (see *Figure 14*). Manufacturing, due largely to aircraft and parts, accounted for more than two-thirds of jobs lost to restructuring. The state's services-producing sectors (primarily trade; services; and finance, insurance, and real estate) accounted for most of the remaining third of jobs lost to restructuring. This makeup, particularly with manufacturing heading the list,

Figure 14
Net Employment Loss in Restructured Industries
by Industry Sectors, Washington State, 1988-1996
Source: *Employment Security Department*

Industry Grouping	Loss	% Share
Total	82,636	100%
Agriculture & Mining	2,725	3%
Manufacturing	55,631	67%
Transportation & Public Utilities	765	1%
Trade	11,845	14%
Finance, Insurance & Real Estate	6,428	8%
Services	5,242	6%

Figure 15

Net Employment Loss in Restructured Industries
2,000 or More, Washington State, 1988-1996
Source: Employment Security Department

SIC	Industry Title	Net Loss
372	Aircraft & Parts	36,195
873	Research & Testing Services	4,821
533	Variety Stores	4,297
373	Ship & Boat Building & Repairing	3,533
241	Logging	3,249
242	Sawmills & Planing Mills	3,120
602	Commercial Banks	2,328
091	Commercial Fishing	2,257
525	Hardware Stores	2,175
381	Search & Navigation Equipment	2,159
603	Savings Institutions	2,113

pretty much fits our intuitive perception of restructuring and its industrial impacts.

Industry Ranking. A ranking of three-digit SIC coded industries most affected by restructuring at some time over the 1988-96 period also revealed few surprises (see Figure 15). Those who follow the headlines are probably familiar with the past and present travails in these industries. Aircraft and parts topped, by far, the list with 36,200 jobs. Search and navigation equipment could be added to that as this group of aircraft parts subcontractors lost more than 2,100 jobs. Research and testing followed with 4,800 jobs, thanks to cutbacks at the Hanford site. Variety and hardware stores, buffeted by competition from “big box” stores, lost close to 6,500 jobs. Hit by global competition, ship and boat building and repairing suffered restructuring losses of more than 3,500. Logging and sawmills combined for 6,400 jobs in the wake of supply constraints. Mergers caused by national competition caused a combined loss of 4,400 jobs among commercial banks and savings institutions.

Note: Readers should bear in mind that these data are separate and distinct from those discussed in the previous section on covered employment in structurally mature industries. The subject matter is the same; however, the data in this section addresses the net number of covered jobs lost during periods of restructuring whereas the data in the previous section addresses the number of workers employed in industries affected by restructuring.

Dislocated Worker Forecast

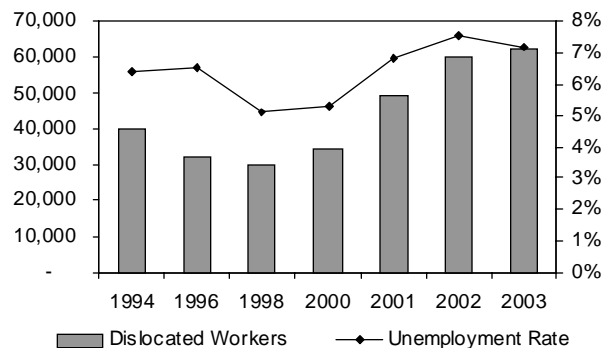
Forecasting the future number of dislocated workers in Washington is as challenging as assessing their current number, if not more so. Nevertheless, economists from the Employment Security Department wanted to illustrate at least one possible application of an aforementioned approach—in this case the CPS—toward that end. They proceeded by taking historical CPS estimates and extrapolating off that base using forecasted state unemployment rate data, the latter having been identified as a *coincident* indicator with respect to dislocated workers. They ran their projections of the number of dislocated workers in Washington through the next two state bienniums (2000-01 and 2002-03). Again, this is just one example of a possible application of an existing methodology for forecasting purposes.

The resulting forecast shows a heightening in the number of dislocated workers in Washington into the 60,000 to 62,000 range as the state’s economy slows over the next five years (see Figure 16). This forecast, which represents the Employment Security Department’s best estimate of worker dislocation in the near term, was driven by the following assumptions:

- Strong economic growth in Washington in 1997-1998 giving way to easing in 1999-2000 and eventually a national economic recession in 2001-

Figure 16

Forecast of Dislocated Workers in Washington
Washington State, 1994-2003
Source: Employment Security Department, LMEA



- 2002, as consistent with the latest cyclical forecast produced by Data Resources Incorporated (DRI).
- Less severe impacts anticipated in Washington during the national economic recession in 2001-2002 than was the case in either the 1970-71 or 1981-82 recessions due to restructuring effected in recent years.
 - Washington's unemployment rate rising from an annual average of approximately 5.0 percent in 1997 to possibly 8.5 percent in 2002 based on historical relationships between the state and nation.
 - The forecasted number of dislocated workers in Washington holding in the 30,000 to 40,000 range from 1998-2000, then gradually climbing into the 60,000 to 62,000 range by 2002-2003 as the state's economy weakens.

Convergence and Coalescence

The measurement tools used to estimate the number of dislocated workers in Washington rely, for the most part, on different methodologies and base data to arrive at their respective estimates. Nevertheless, while they arrived at different absolute figures, it is clear that the estimates derived by all four methods fall within a comparable range (*see Figure 17*). Taking 1995 as the benchmark, the differences between the CPS and UI-based estimates appear to be largely insignificant, particularly as a share of the total civilian labor force.

As a result, the Employment Security Department is confident that the number of dislocated workers in Washington in 1995 was between 32,000 to 60,000 with the lower range anchored by the CPS (32,000-40,000),

Figure 17
Comparison of Dislocated Worker Estimates
Washington State, 1995 Benchmark
Source: *Employment Security Department & BLS*

	Range
Current Population Survey	32,000 to 40,000
Local Declining Industries & Occupations	55,700 or fewer
Worker Profiling	50,176 or fewer
Industry Restructuring	50,000 to 60,000

and the middle and upper ranges anchored by the UI-based worker profiling and declining industry/occupation methods. Furthermore, applying the lower CPS estimate as a base from which to project future worker dislocation generated an estimate of 60,000 to 62,000 by 2002-03 as the state's economy weakens. If the assumption is that Washington's economy will not see the same degree of worker dislocation during the coming national economic recession as it had in the past, the 60,000 range is well within what might reasonably be expected.

Again, the current lower range of 32,000 to 40,000 is based on the estimated count of unemployed workers and workers not in the labor force as derived from the Current Population Surveys conducted in 1996 and 1994, respectively (once the data from the recently conducted February survey become available in August, they will provide a 1998 estimate). The current upper range of 60,000 is based on the more narrowly defined count of only those UI beneficiaries separated from industries in strong decline or occupations in strong decline or both.

The Worker Profiling/Re-employment System estimate of 50,176 from third quarter 1995 to fourth quarter 1997 is, like the declining industry/occupation estimate, buttressed by the fact that it, too, uses UI beneficiaries, specifically those who received both a first payment and a high profile score. For that reason, it is no surprise that the WP/RS estimate is comparable to that of the UI beneficiary estimate driven by industry and occupational trends. It is also probable that the WP/RS estimate of dislocated workers is presently lower than the 50,176 upper range since a number of those individuals probably have been re-employed in a different industry or occupation (quite possibly under-employed at a lower wage or salary).

At face value, the covered employment estimate of 82,600 net jobs lost to industry restructuring appears wildly out of sync with the CPS- and UI-derived estimates. The key to understanding the lack of comparability is in understanding the distinction between net number of *jobs* and net number of *workers*. The 82,600 estimate reflects the net number of jobs. As noted, that may or may not represent the absolute number of dislocated individuals (e.g., a person could have been

dislocated more than once from the same industry or from a different one). More important, this number does not assume that workers were dislocated to the extent that they are not re-employed unlike the CPS). An examination of the sectors that contributed to the 82,600 estimate shows that aircraft and parts alone constituted 36,000 while another 27,000 were in non-manufacturing sectors. Given the healthy state of the economy, especially in aerospace, it is reasonable to assume that most of the workers in that industry alone have been re-employed and that the net number of jobs currently still lost to restructuring has descended into the 50,000 to 60,000 range.

When it comes down to it, each method possesses both strengths and weaknesses. As noted, the CPS brings to the table an established national presence and time series that covers all workers, but which is offset with respect to Washington State estimates by a relatively small sample. The UI-based approaches provide an important local perspective as well as demographic and geographic characteristics of dislocated workers, but do not capture non-covered workers. The industry restructuring approach provides a detailed, industry-specific perspective, but lacks occupational characteristics and also does not capture non-covered workers. None of the approaches counts, for example, the under-employed or those re-employed only after relocating.

That having been said, a Bureau of Labor Statistics study on worker displacement reported that approximately one-quarter of the nation's workers are under-employed and, possibly by extension, dislocated. If one assumes that the same holds true for Washington, one-fourth of Washington's displaced worker estimates for 1996 and 1994 represents 27,000 to 32,000 individuals. If added to the state's dislocated worker estimate of 32,000 to 40,000, they would boost the range of worker dislocation to 59,000 to 72,000.

An argument might be made that a method for projecting worker dislocation could incorporate certain aspects and components of all four approaches. Why? Because each brings to such a task at least one piece of information the others cannot. The CPS, the only approach that provides a time series or historic trend element, can lay the foundation for estimating the

number of dislocated workers in the near term. The UI-based declining industries and occupations and worker profiling data can provide a demographic and geographic profile of those future dislocated workers, particularly if the study update currently in progress indicates that the profile is holding relatively constant. The industry restructuring data coupled with the insight of Employment Security economists can identify the industries currently being impacted.

For the present, the issue of dislocated workers in Washington will continue to be encompassed by some degree of disagreement and controversy, particularly when the discussion involves what, if anything, should be done (i.e., how much should be spent on direct and indirect assistance and what form should that assistance take). This report, however, has hopefully informed the reader about the quantitative, operational approaches currently available to estimate the number of current and future dislocated workers in Washington and, in doing so, initiated a first step toward agreement on a single methodological approach.

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