

Downsizing in The Public Sector: Tables and Figures

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Table 1
Scope of Retrenchment, 1990s
 Total Number of Retrenchees

<i>Region</i>	<i>Employment Reduction</i>	<i>By Instrument</i>			<i>Separations</i>	<i>Rehires</i>	<i>New Hires</i>
		<i>Involuntary Hard</i>	<i>Involuntary Soft</i>	<i>Voluntary</i>			
All Cases	4,710,566	1,178,394	752,809	577,188	503,3875	282,307	41,002
Africa	892,062	104,035	140,896	97,878	909,705	15,900	1,743
Asia	233,311	0	11,000	172,711	255,311	3,000	19,000
Europe	2,853,559	883,259	132,000	105,000	2,853,559	0	0
Latin America	731,634	191,100	468,913	201,599	1,015,300	263,407	20,259

Source: Haltiwanger and Singh (1999). “Involuntary hard” refers to layoffs, “involuntary soft” refers to employment reduction due to enforcement of rules and, “voluntary” refers to voluntary separations.

Table 2
Scope of Retrenchment, 1990s
 Average Number of Retrenchees

<i>Region</i>	<i>Employment Reduction</i>	<i>By Instrument</i>			<i>Separations</i>	<i>Rehires</i>	<i>New Hires</i>
		<i>Involuntary Hard</i>	<i>Involuntary Soft</i>	<i>Voluntary</i>			
All Cases	117,764	39,280	27,882	18,037	125,847	7,058	1,025
Africa	59,471	10,404	14,090	7,529	60,647	1,060	116
Asia	29,164	0	2,200	28,785	31,914	375	2,375
Europe	407,651	176,652	33,000	26,250	407,651	0	0
Latin America	73,263	19,110	58,614	22,400	101,530	26,341	2,026

Source: Haltiwanger and Singh (1999); “Involuntary hard” refers to layoffs, “involuntary soft” refers to employment reduction due to enforcement of rules and, “voluntary” refers to voluntary separations.

Table 3
Scope of Retrenchment, 1990s
Total Financial Costs
 (millions of dollars)

<i>Region</i>	<i>Financial Costs</i>				<i>Cost Per Worker</i>	<i>Financial Benefits</i>	
	<i>Total</i>	<i>Severance Payments</i>	<i>Enhanced Pension</i>	<i>Safety Net</i>		<i>Total</i>	<i>Annual Wage Bill Savings</i>
All Cases	12,074	2,708	6,098	3,268	n.a.	4,206	2,834
Africa	500	255	20	225	n.a.	673	96
Asia	1,400	1,281	71	48	n.a.	179	-153
Europe	8,583	0	5,588	2,995	n.a.	1,846	1,446
Latin America	1,591	1,172	419	0	n.a.	1,508	1,445

Source: Haltiwanger and Singh (1999). "Involuntary hard" refers to layoffs, "involuntary soft" refers to employment reduction due to enforcement of rules and, "voluntary" refers to voluntary separations.

Table 4
Scope of Retrenchment, 1990s
Average Financial Costs
 (millions of dollars)

<i>Region</i>	<i>Financial Costs</i>				<i>Cost Per Worker</i>	<i>Financial Benefits</i>	
	<i>Total</i>	<i>Severance Payments</i>	<i>Enhanced Pension</i>	<i>Safety Net</i>		<i>Total</i>	<i>Annual Wage Bill Savings</i>
All Cases	402	87	244	192	4,142	168	123
Africa	38	20	2	32	3,630	61	11
Asia	200	183	14	24	3,651	26	-22
Europe	2,146	0	1,397	998	3,817	923	723
Latin America	265	167	70	0	5,695	302	289

Source: Haltiwanger and Singh (1999). "Involuntary hard" refers to layoffs, "involuntary soft" refers to employment reduction due to enforcement of rules and, "voluntary" refers to voluntary separations.

Table 5
Key Characteristics in Selected Retrenchment Programs, 1990s

<i>Country:</i>	<i>Argentina</i>	<i>Argentina</i>	<i>Ghana</i>	<i>Hungary</i>	<i>India</i>	<i>Peru</i>	<i>Peru</i>	<i>Uganda</i>	<i>Uganda</i>
<i>Characteristic:</i>	<i>Federal</i>	<i>Railroads</i>				<i>Civil Service</i>	<i>Tax</i>	<i>Civil Service</i>	<i>Military</i>
Targeting									
Sill-Biased	No	No	Yes	Yes	No	No	Yes	Yes	Yes
Age-Biased	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes	No
Neutral	-	-	-	-	-	Yes	-	-	-
Reduction									
Involuntary-Hard	No	No	No	Yes	No	Yes	No	Yes	Yes
Involuntary-Soft	Yes	Yes	Yes	-	No	Yes	Yes	Yes	Yes
Voluntary	No	Yes	Yes	-	Yes	Yes	Yes	Yes	Yes
Rehires	No	No	No	No	No	Yes	No	No	No
New Hires	Yes	No	No	No	No	No	Yes	No	No
Financial									
Break-Even	0.41	1.56	1.82	Loss	Loss	2.6	Loss	Loss	2.7
Payback	-	-	1.66	-	-	-	0.0023	-	1.2
Productivity									
Organization	Yes	Yes	No	-	-	-	Yes	-	No
Worker	-	-	Yes	-	-	-	-	-	Yes
Safety Net	No	No	Yes	Yes	Yes	No	No	Yes	Yes

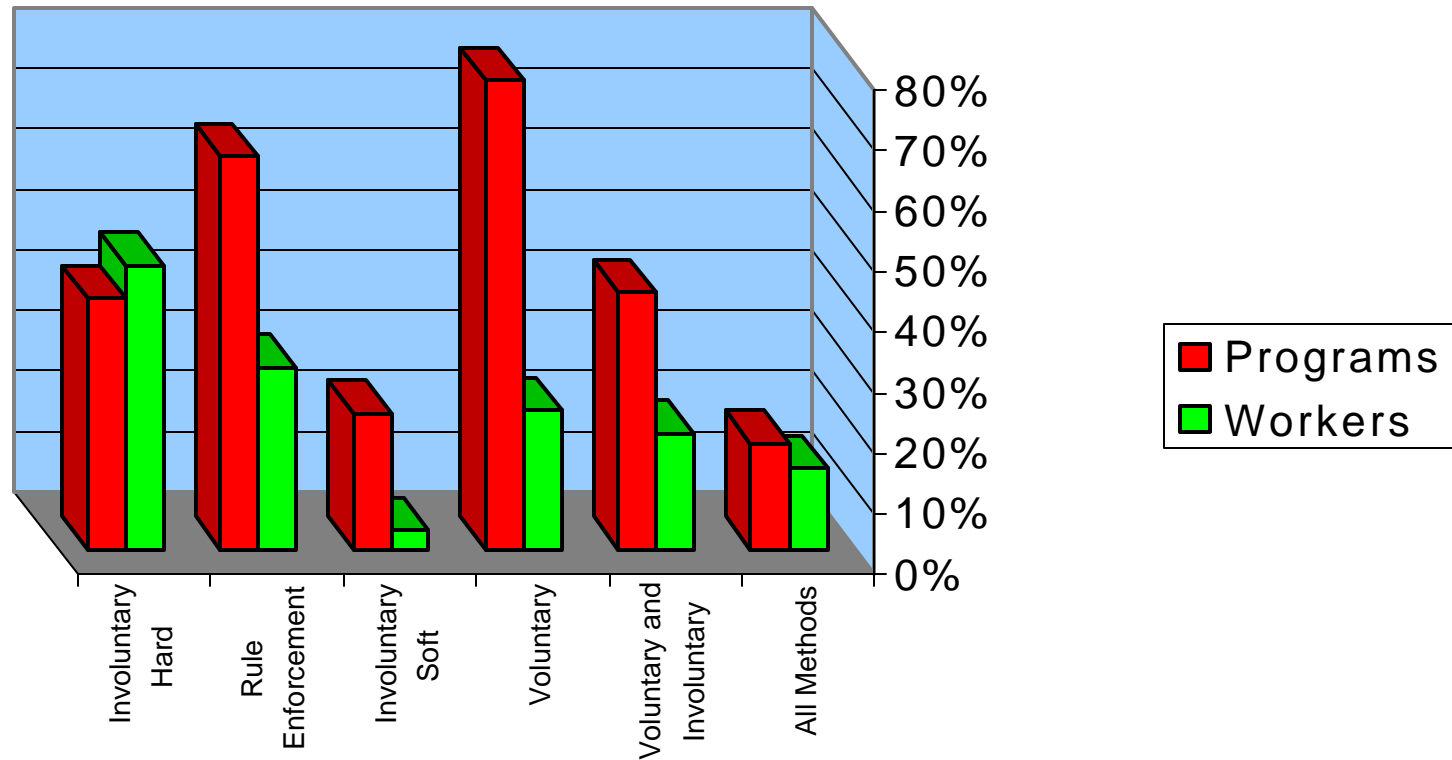
Source: Haltiwanger and Singh (1999)

Table 6
Determinants of Losses from Separation

	<i>Welfare loss</i>				<i>Earnings loss</i>			
	<i>Argentina</i>	<i>Ecuador</i>	<i>Egypt</i>	<i>Turkey</i>	<i>Ecuador</i>	<i>Ghana</i>	<i>Slovenia</i>	<i>Turkey</i>
<i>Workers Characteristics</i>	<i>White Collar Employees</i>	<i>Central bank employees</i>	<i>Public sector workers</i>	<i>Cement and oil workers</i>	<i>Central Bank Employees</i>	<i>Civil Servants</i>	<i>Formal Labor Force</i>	<i>Cement and oil workers</i>
Public sector wage	+	0	<i>n.a.</i>	0	0	0	<i>n.a.</i>	+
Seniority	<i>n.a.</i>	+	?	0	+	0	+	0
Education	0	-	+	-	-	0	0	-
Work Experience	?	+	-	+	0	0	+	-
Female	<i>n.a.</i>	0	+	0	+	+	-	0
Married	-	0	<i>n.a.</i>	0	+	0	<i>n.a.</i>	0
Dependants	?	+	<i>n.a.</i>	+	0	0	<i>n.a.</i>	0
Source	Robbins (1996)	Rama and Maclsaac (1999)	Assaad (1999)	Tansel (1997)	Rama and Maclsaac (1999)	Alderman <i>et al.</i> (1996)	Orazem <i>et al.</i> (1995)	Tansel (1997)

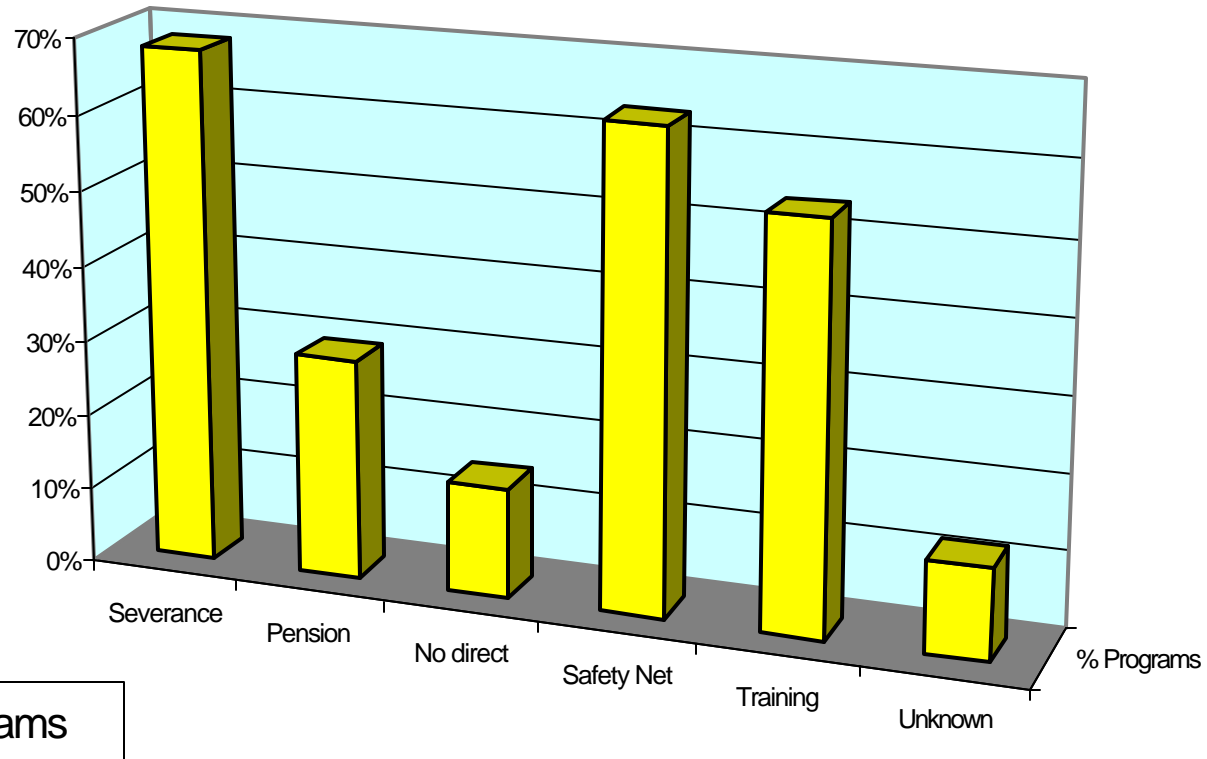
Source: Rama (1999)

Figure 1: Employment Reduction Methods



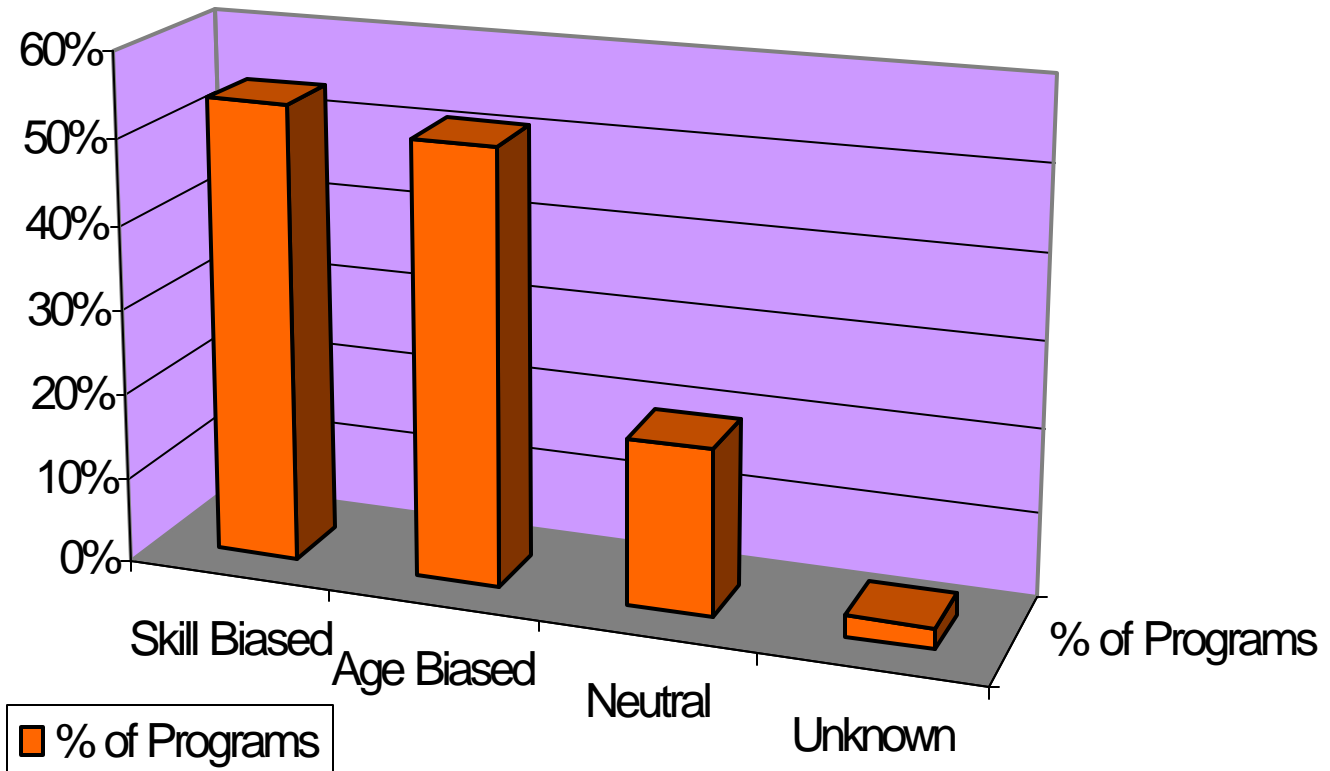
Source: Haltiwanger and Singh (1999). “Involuntary hard” refers to layoffs, “involuntary soft” refers to employment reduction due to enforcement of rules and, “voluntary” refers to voluntary separations. One operation may include more than one method, thus the adding up of methods may not be necessarily 100 percent.

Figure 2: Retrenchment Assistance



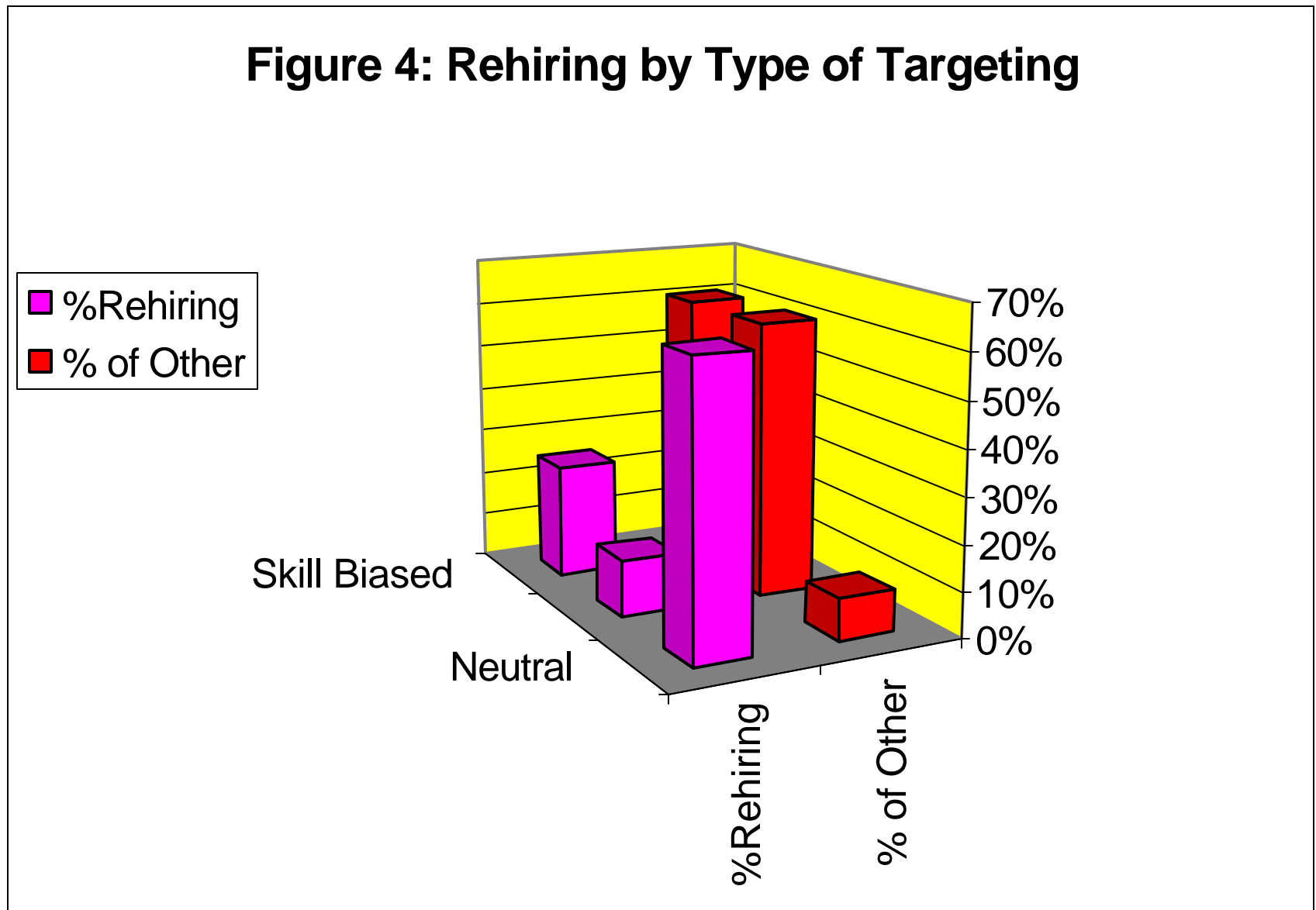
Source: Haltiwanger and Singh (1999). One operation may include more than one method. The adding up of methods may not be necessarily 100 percent.

Figure 3: Targeting



Source: Haltiwanger and Singh (1999). One operation may include more than one method. The adding up of methods may not necessarily add up to 100 percent.

Figure 4: Rehiring by Type of Targeting



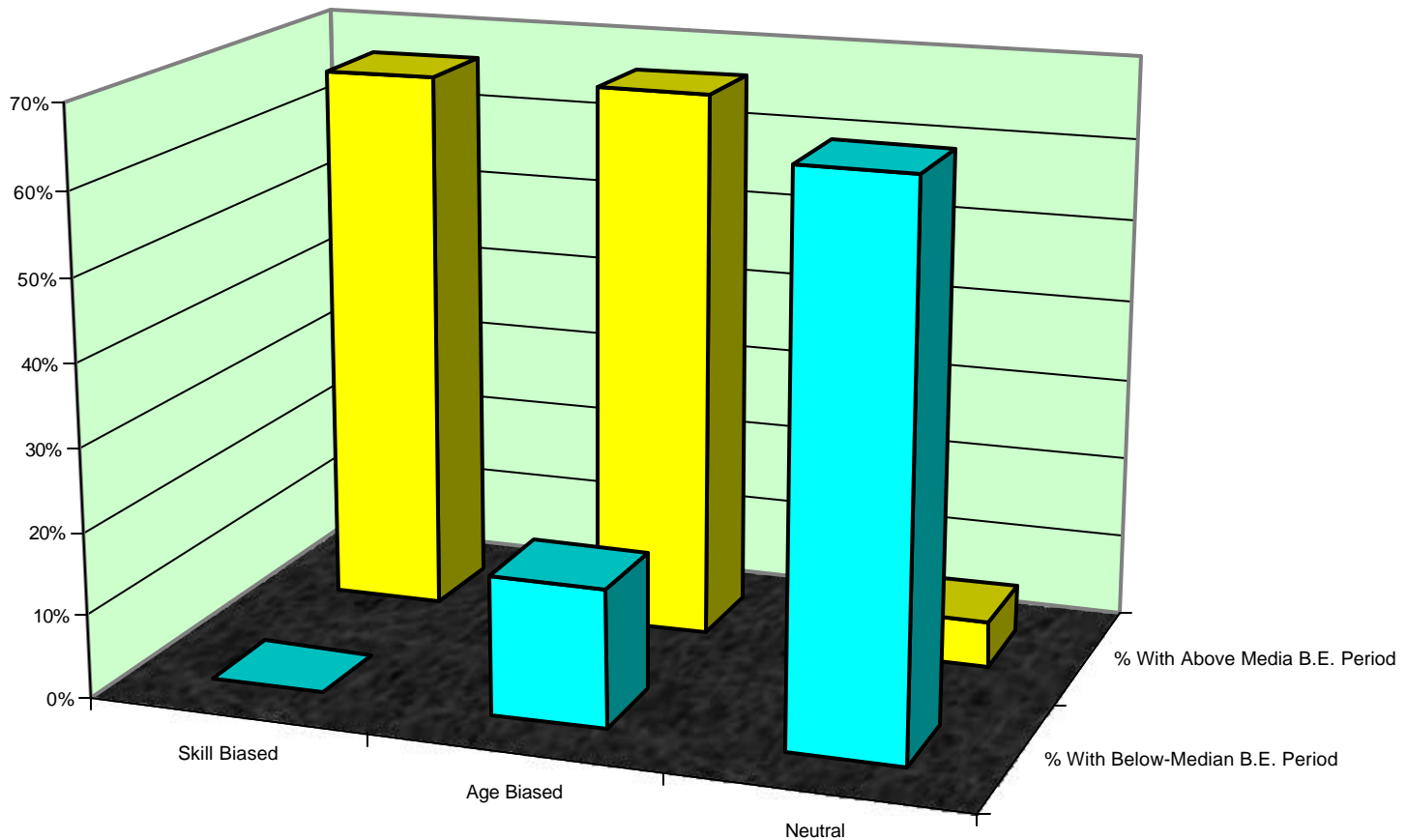
Source: Haltiwanger and Singh (1999). "Involuntary hard" refers to layoffs; "involuntary soft" refers to employment reduction due to rule enforcement and "voluntary" refers to voluntary separations. One operation may include more than one method. The adding up of methods may not be necessarily 100 percent.

Figure 5: New Hires and Characteristics by Targeting



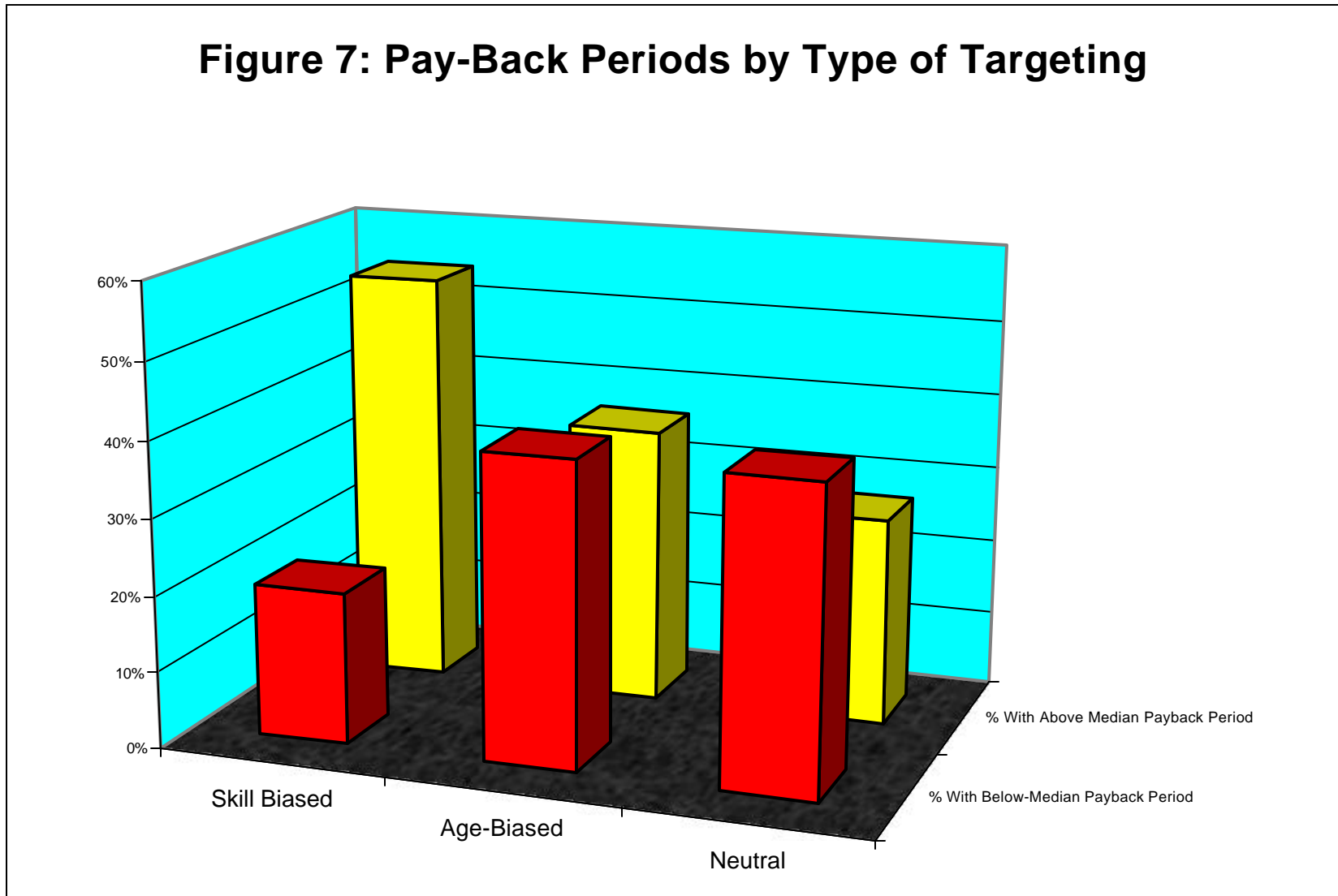
Source: Haltiwanger and Singh (1999). One operation may include more than one method. The adding up methods may not be necessarily 100 percent.

Figure 6: Financial Break Even by Targeting



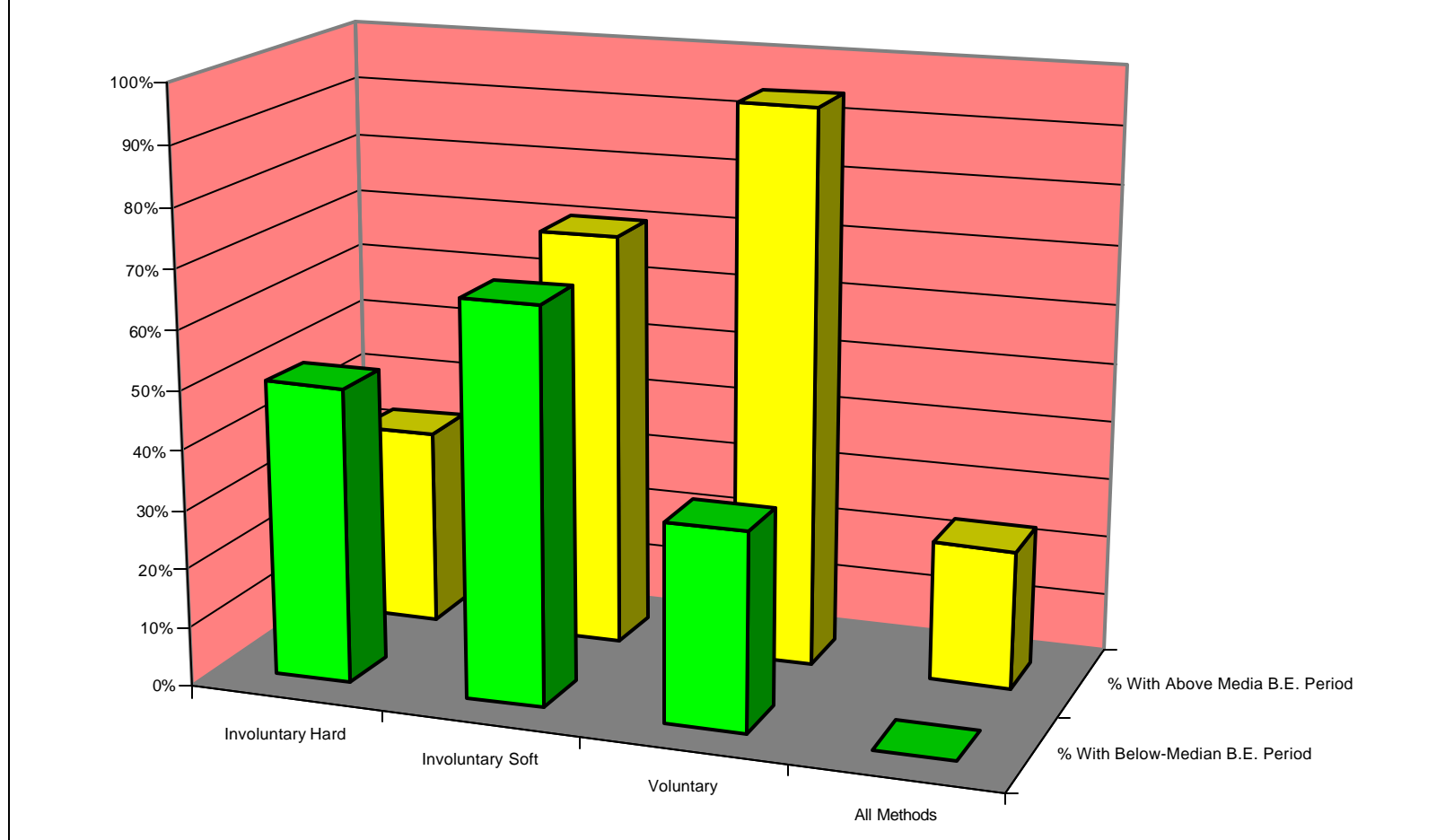
Source: Haltiwanger and Singh (1999) One operation may include more than one method thus, the adding up of methods may not necessarily yield 100 percent.

Figure 7: Pay-Back Periods by Type of Targeting



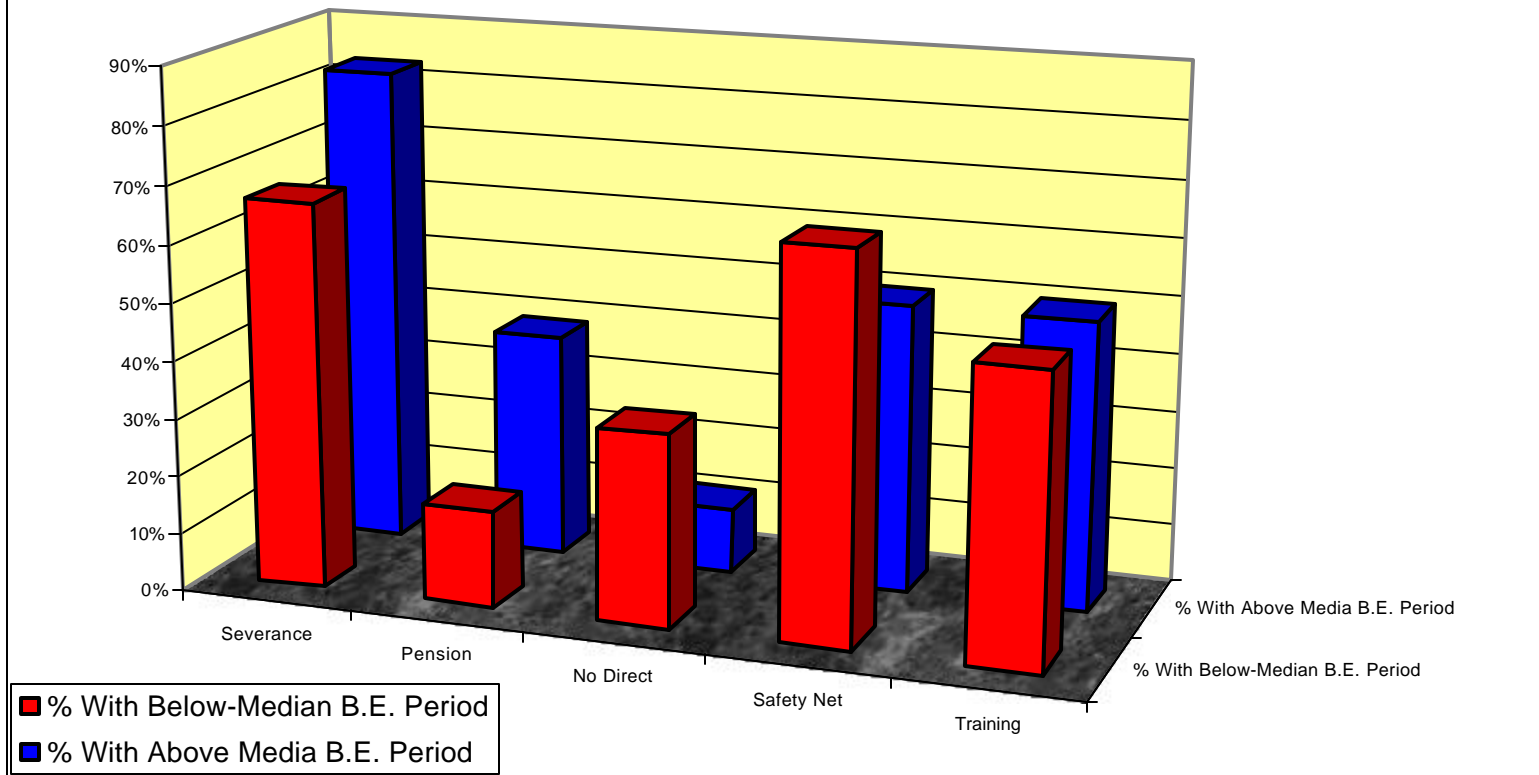
Source: Haltiwanger and Singh (1999) One operation may include more than one method thus, the adding up of methods may not necessarily yield 100 percent.

Figure 8: Financial Break-Even by Type of Retrenchment



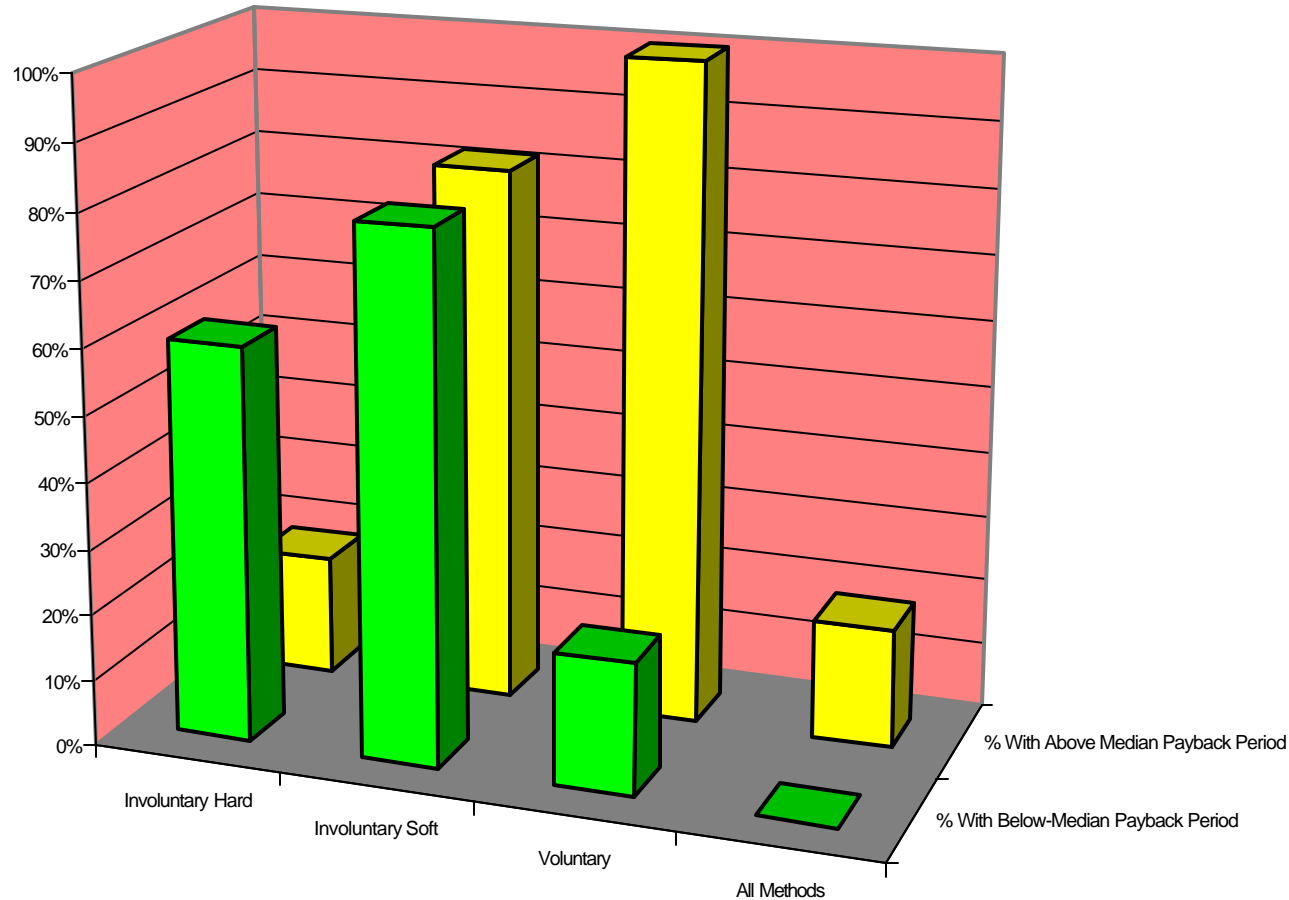
Source: Haltiwanger and Singh (1999). “Involuntary hard” refers to layoffs, “involuntary soft” refers to employment reduction due to enforcement of rules and “voluntary” refers to voluntary separations. One operation may include more than one method. The adding up of methods may not necessarily add up to 100 percent.

Figure 9: Financial Break Even by Type of Assistance



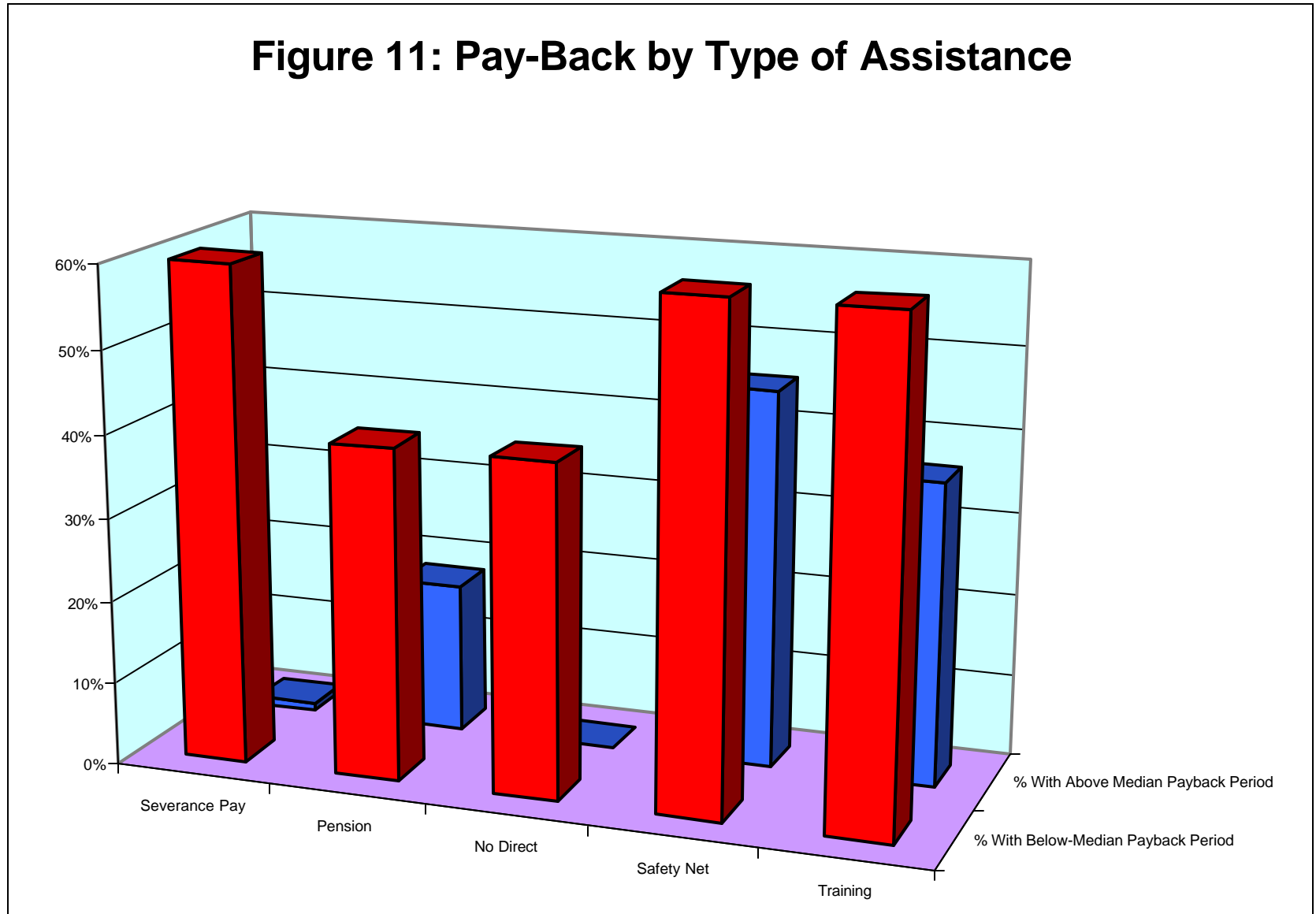
Source: Haltiwanger and Singh (1999) One operation may include more than one method. The adding up of methods may not necessarily add up to 100 percent.

Figure 10: Pay-Back by Type of Employment Reduction



Source: Haltiwanger and Singh (1999). “Involuntary hard” refers to layoffs, “involuntary soft” refers to employment reduction due to enforcement of rules, and “voluntary” refers to voluntary separations. One operation may include more than one method. The adding up of methods may not necessarily add up to 100 percent.

Figure 11: Pay-Back by Type of Assistance



Source: Haltiwanger and Singh (1999). One operation may include more than one method, thus the adding up of methods may not be necessarily 100 percent.

Appendix Active Labor Market Policies
(Source: Dar and Tzannatos, 1999)

(i) Job Search Assistance

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
Assisting individuals laid off as a result of industrial restructuring in Canada 1989-1991 (Fay, 1996)	After years of decline, a sharp rise in unemployment during this period from 8% to 11%. By 1990-91, Canada was spending about 0.2% of GDP of employment services and their administration.	The Industrial Adjustment Service. Job counseling provided to those laid off en masse. Other services e.g. retraining were also provided.	Quasi-experimental	Those who availed of the service spent more time searching for jobs (12 weeks) and lost income (\$7200).	Program hindered clients in their job search with no positive benefits.
Assisting youth in increasing their employability in Canada 1989-1992 (Fey, 1996).	After years of decline, a sharp rise in unemployment during this period from 8% to 11%. Youth unemployment rose from 12% to 16% during this period.	Job search assistance among a variety of services provided to help disadvantaged students in their school to work transition.	Quasi-experimental	No impact on raising probability of employment or earnings or participants as compared to control group.	Program did have a positive impact in raising education level of participants (0.3 years).
Assisting long-term Dutch unemployed through job counseling services in the mid to late 1980s (OECD, 1993)	Unemployment rates falling steadily from 8% to 5% during this period.	Persons who had been interviewed for three years or more were given job reorientation interviews/counseling.	Quasi-experimental	Small improvement in probability of employment (2-3%).	No information available on earnings gain.
Scheme to help youth find employment in Holland in the early 1990s (Fey, 1996)	Unemployment had fallen from 9% in the mid 1980s to 6% by 1991 but rose again to 9% by 1994. Youth unemployment remained fairly steady at around 11% during this period.	Provision of counseling and job search assistance for school leavers upto 20 years old.	Quasi-experimental	No impact on the probability of finding a job or increasing earnings for the treatment group as compared to the control group.	Program did not have any impact on likelihood of participants entering education or training either.

Job Search Assistance

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
Scheme to help youth find employment in Holland in the early 1990s (Fey, 1996)	Unemployment had fallen from 9% in the mid 1980s to 6% by 1991 but rose again to 9% by 1994. Youth unemployment remained fairly steady at around 11% during this period.	Provision of counseling and job search assistance for school leavers upto 20 years old followed by subsidized temporary work.	Quasi-experimental	Counseling offered to youth had little impact on job chances. Temporary job placement (subsidized by government) appeared to lead to regular employment gains of 20%.	No information on earnings gain for participants.
Assisting the very long term unemployed gain employment in New Zealand in 1994 (NZ DOL, 1995)	Over 30% of the unemployed (10% of labor force) are long-term unemployed. Unemployment rates were fairly steady. Expenditures on these programs were about 0.12% of GDP.	For individuals employed for at least two years. Consisted of four elements: a job screening interview, a one week workshop, a follow up interview and case management.	Quasi-experimental	A moderate increase in full-time work (5%).	Evaluation done five months after individuals joined program. No information on wage gain of participants relative to control.
Assisting AFDC (Assistance to Families with Dependent Children) participants gain employable skills in the U.S. in the 1980s (Heckman, 1994)	Unemployment rates remained between 6-7% in the U.S.. 0.08% of GDP spent on these programs.	Participants - mainly women with young children - provided training in various skills. They also attend job search clubs for two weeks and then search for jobs.	Experimental	Participants earn 4% more than the control group.	Cost of training and job-search assistance combined is \$16,250 per recipient (most of the cost is for training), making the program highly cost-ineffective.
Get people off unemployment benefits and into employment in Charleston, New Jersey, Washington, Nevada and Wisconsin in the 1970s and the 1980s (Meyer, 1995)	Unemployment rates remained between 6-7% in the U.S.. 0.08% of GDP spent on these programs.	Varying length job search seminars. The seminars and personal visits with job search counselors exceed that of the control group.	Experimental	Significant decline in number of weeks of unemployment bonus claimed (between one and four weeks). Slight increase in re-employment earnings.	Experiments lasted from 6-12 months after which evaluation was conducted. Cost-benefit analysis tend to show that the UI system benefited from these interventions.

Job Search Assistance

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
Job search assistance provided to the unemployed in Hungary in the mid 1990s (O'Leary, 1998(a))	Sharp rise in unemployment: from below one percent at the turn of the decade to 12 percent by 1994. After falling continuously for five years, real GDP started growing slowly. Hungary spent 0.15% of GDP on these programs.	Unemployed provided a full range of placement services including job referrals, counseling, skills assessment, job search training, resume preparation and job clubs.	Quasi-experimental	Participants seven percent more likely to be employed. However, no impact on earnings. Women benefit more than men.	Evaluation done in 10 counties. No significant difference in duration or amount of unemployment benefits received.
Job search assistance provided to the unemployed in Poland in the mid 1990s (O'Leary, 1998(a))	GDP started growing slowly from 1994 but unemployment rate rose from 0% in 1989 to 16% by 1994, though it has declined since. Poland spent 0.01% of GDP on these programs.	Unemployed provided a full range of placement services including job referrals, counseling, skills assessment, job search training, resume preparation and job clubs.	Quasi-experimental	Participants are 15% more likely to be employed than control group. They earn about \$5 month more (significant). Women benefit more than men.	Evaluation done in 8 counties. Treatment group was unemployed for almost 0.5 months more and drew \$24 more in unemployment compensation than control group.

Retraining in Cases of Plant Closures & Mass Layoffs

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
<p>Ford Plant Closure in San Jose, U.S. (1982). 2400 workers lost their jobs (OECD, 1993a)</p>	<p>A 25 percent decline in auto production between 1978 and 1980. Unemployment rates in the U.S. rose from 7.5 percent in 1981 to 9.5 percent in 1982 and 1983 and manufacturing employment declined by 5 percent during 1981-83.</p>	<p>Basic skills training as well as targeted vocational training in marketable skills.</p>	<p>Non-scientific</p>	<p>High success rate in placement.</p>	<p>Causes for perceived success were - adequate resource base (\$6000 grant/worker); high degree of coordination and assistance provided by Ford and government.</p>
<p>Shipyard closure in Storstrom county, Denmark (1986). 2000 people lost their jobs (OECD, 1993a).</p>	<p>High unemployment rates in regions, especially among women. National unemployment rates for men in 1986 and 1987 were 6.1 and 6.4 percent respectively while the corresponding numbers for women were 10.0 and 9.6 percent. Employment in manufacturing remained stagnant since the mid 1980s.</p>	<p>Program in training women entrepreneurs (1986-89) to help them start their own business. A total of 200 hours of introductory and specific business oriented training were provided.</p>	<p>Non-scientific</p>	<p>51 businesses were set up by 1989. Less than a third of participants opened up a full-time business and few hired any employees, thus generating low additional employment.</p>	<p>This program did not seem to have met with much success and was apparently quite costly (precise cost estimates unavailable).</p>
<p>Steel and Coal plant closure in Creusot-Loire, France (1984). 1230 people became unemployed almost immediately (OECD, 1993a).</p>	<p>Contracting steel sector. In mining industry, employment has fallen steadily throughout the 1980s - by close to 40 percent between 1980 and 1990. Unemployment rates rose from 8.1 percent in 1982 to 10.2 percent by 1985. Manufacturing employment fell by about 6 percent between 1983 and 1985.</p>	<p>Workers received 70 percent of their former salaries for 10 months during which they participated in retraining and job-search activities after which they were promised re-employment in different firms in the region. Training was provided in engineering courses, plastic molding, refrigeration etc.. Financial incentives were provided to firms to hire these workers.</p>	<p>Non-scientific</p>	<p>High success rate in placement.</p>	<p>No evidence of long term employment impact of program participation.</p>

Retraining in Cases of Plant Closures & Mass Layoffs

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
<p>Closure of Pulp plant in Kramfors in Northern Sweden in 1977 (OECD, 1991).</p>	<p>Unemployment rates in Sweden rose from 1.6 percent in 1976 to 2.2 percent by 1978. Employment in manufacturing declined by 8 percent between 1977 and 1979.</p>	<p>Participants provided with classroom training.</p>	<p>Quasi-experimental</p>	<p>Upon completion, participants received lower weekly wages than those not receiving training. Drop in earnings are especially significant in the first year with no appreciable long-term gains.</p>	<p>No information provided on re-employment rates or costs. Benefits from retraining program were insignificant.</p>
<p>Over 3000 workers laid off due to auto and auto parts plant closures in Michigan (1980-83). The general profile of those laid off was experienced blue collar male workers who earned high wages (Leigh, 1994).</p>	<p>A 25 percent decline in auto production between 1978 and 1980. High unemployment rates in 1981/82 nationally (9.5 percent) which had fallen to 7.5 percent by 1984. Manufacturing employment rose by 5 percent between 1983 and 1984.</p>	<p>Workers were provided a mixture of job search assistance (JSA) and classroom training. These services were provided promptly after plant closures. Retraining was provided in occupations in which there was perceived to be growing demand. Training curricula provided instructions in blue collar trades.</p>	<p>Quasi-experimental</p>	<p>Classroom training (CT) did not significantly improve program participants post-program re-employment rate. Trainees did no better than those receiving JSA.</p>	<p>Earnings estimates varied (ranging from negative to significantly positive). Training did not seem to have been very effective, especially in light of fact that training cost twice as much as JSA.</p>
<p>Mass Layoffs due to auto and steel plant closures in Buffalo (1982-83). The general profile of those laid off was experienced blue collar male workers who earned high wages (Corson, Long and Maynard, 1985).</p>	<p>High unemployment rates in 1981/82 nationally (9.5 percent) which had fallen to 7.5 percent by 1984. Manufacturing employment rose by 5 percent between 1983 and 1984.</p>	<p>Displaced workers were provided with a mixture of JSA and either classroom or on the job training (OJT). Program services were provided after a fairly lengthy period of post-layoff unemployment.</p>	<p>Quasi-experimental</p>	<p>JSA only services were found to have a fairly large impact on earnings measured over the first six post-program months. However there was no evidence of any incremental effect above that of JSA for either classroom training or OJT.</p>	<p>Classroom training and OJT were ineffective. Cost of CT and OJT programs were around four times as much as JSA, implying that JSA was potentially the only cost effective program. No evidence was provided about employability of program participants.</p>

Retraining in Cases of Plant Closures & Mass Layoffs

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
Plant closures at 13 steel factories and mines in Canada in the early 1980s (Leigh, 1992).	Unemployment rates rose between 1980 and 1983. Employment in non-agricultural activities fell slightly over the time period.	JSA and training was provided to these workers.	Quasi-Experimental	Likelihood of worker having a job was seven percent higher than comparably displaced workers not in the program. This impact was attributed to training which was used by 28 percent of workers. However at two mining sites, the program had no impact.	Training seems to have had a greater impact than JSA. However, no information on costs. Job counseling had little impact in Canada as targeted job counseling is provided by Canada's Public Employment Service as a standard service to all unemployed.
445 workers were laid off due to automobile plant closure in Australia in 1984 (Leigh, 1992).	Unemployment rates rose steadily in Australia reaching a high of 9 percent in 1984 before falling to 8 percent for the next few years. Between 1980 and 1984 employment in manufacturing shrunk by 4 percent.	Labor Adjustment Training Arrangement. Provision of classroom training (average length 19 weeks) to meet retraining needs of workers. Main distinction between courses was whether they provided driver training or not.	Quasi-experimental	Over a nine month period, driver training increased the probability of re-employment. However, other training courses resulted in a decline in re-employment probabilities.	No indication of cost-effectiveness of different type of training courses. Self-selection problem arose as individuals who chose not to participate were included in the control group. Impact of longer training courses was negative.
Around 2000 workers laid off at the Uddevalla shipyard in Sweden in 1985 (Alfthan and Janson, 1994).	Local economy was given a boost by decision of Volvo to establish a car manufacturing plant at Uddevalla. Unemployment rates were declining in this period while manufacturing employment was fairly steady.	Significant number of workers joined retraining programs several months prior to being laid-off. Courses of varying duration were offered in welding, engineering and control engineering. Programs were provided by state owned training board, municipal education institutions and other adult education institutions.	Non -scientific	By November 1987, over 90 percent of the workers who had completed training had found jobs or become self-employed - most of them in occupations they had trained for.	Two major factors accounted for the success of the training program - economy and labor market conditions were buoyant in the region throughout the phase out period; shipyard management, employment offices and training agencies worked in close cooperation.

Retraining in Cases of Plant Closures & Mass Layoffs

Labor Market Problem	Relevant Indicators	Intervention Design	Type of Evaluation	Result	Comments
<p>The Volvo plant at Goteborg, Sweden planned to lay off 1000 workers in 1992 associated with the phasing out of an older car model with a new model (Alfthan and Janzon, 1994).</p>	<p>Volvo planned to recruit 800 workers to prepare for the production of the new line of cars. Unemployment rates were rising sharply – from 3.2 percent in 1991 to 5.9 percent in 1992. Manufacturing employment dropped by 9 percent in 1992. Total employment also fell by four percent.</p>	<p>Retraining program was proposed which would help the existing workforce to manage the change without job loss. The company accepted the proposal under the stipulation that the cost be shared by the government. The program is a broad competency raising program which includes specific training to prepare the participants for the production of the new automobiles.</p>	<p>Non-scientific</p>	<p>Not available as program too recent to be evaluated.</p>	<p>Program costs are expected to be about \$25 million (\$25000 per person) close to half of which will be paid by the government. In judging the cost-effectiveness of this program, it should be compared with the expected unemployment benefits of \$6.5 million the government would have to pay.</p>
<p>Sweden: 1980s and 1990s: general evaluation of public retraining programs for those laid off <i>en masse</i> (OECD, 1991)</p>	<p>Unemployment rose steadily over the period of study.</p>	<p>Various types</p>	<p>Various types</p>	<p>Retraining programs have become more ineffective over time - especially since the economy has begun deteriorating. Participants have greater difficulty in finding jobs than the openly unemployed.</p>	<p>Cost-effectiveness of training programs has declined both because effectiveness has fallen and costs have increased.</p>