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Workplace and Employee Survey Compendium

2001

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Statistics Canada
Labour Statistics Division

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Published by authority of the Minister responsible for Statistics Canada

October 2004

Catalogue no. 71-585-XIE

ISBN: 0-662-38433-4

Frequency: Occasional

Ottawa

La version française de cette publication est disponible sur demande (n° 71-585-XIF au catalogue).

Note of appreciation

Canada owes the success of its statistical system to a long-standing partnership between Statistics Canada, the citizens of Canada, its businesses, governments and other institutions. Accurate and timely statistical information could not be produced without their continued cooperation and goodwill.

Acknowledgements and credits

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Thanks also to Marie Drolet, Paul McPhie and Deborah Sunter for their reviews and helpful comments.

Table of Contents

Introduction

This compendium provides data from the Workplace and Employee Survey (WES) conducted in 2001 by Statistics Canada with the support of Human Resources Development Canada. An earlier version of this publication was prepared based on 1999 data. As with its prior version, this compendium edition provides tables based on selected sections of the WES questionnaires. These are intended to stimulate cross-sectional, longitudinal and linked analyses by practitioners and researchers alike. Although the survey is primarily designed to stimulate research involving multivariate and linked analyses of the matched employer-employee data, the approach herein adopted is descriptive in nature.

This publication pursues a threefold objective: first, to provide a snapshot of Canadian workplaces and their employees in 2001; second, to show some of the changes occurring in these workplaces and their employees; and third, to emphasize the linked nature of the WES data.

As for presentation and design considerations, the proposed closely follows the tabulation scheme used in the previous edition of the WES compendium. It is divided into six sections based on some sampled modules of the WES survey questionnaires.

The 2001 data are used in all cross-sectional tables and the 1999 data are used as baseline data in longitudinal tables. A few longitudinal tables are included in order to provide comparisons for the workplace portion of the survey between 1999 and 2001 and for the employee component comparisons between 1999 and 2000. The linked tables provide data supporting employee analyses that incorporate workplace characteristics.

Table cells with a coefficient of variation (CV) ranging from 25.0% to 33.0% are identified by an (E) and should be interpreted with caution. Table cells with a coefficient of variation (CV) greater than 33.0% are suppressed due to very high variability. These are identified in the tables by an (F).

The sample sizes and estimated populations by industry, workplace sizes and regions as well as their corresponding distributions are provided in Appendix A Table 1.

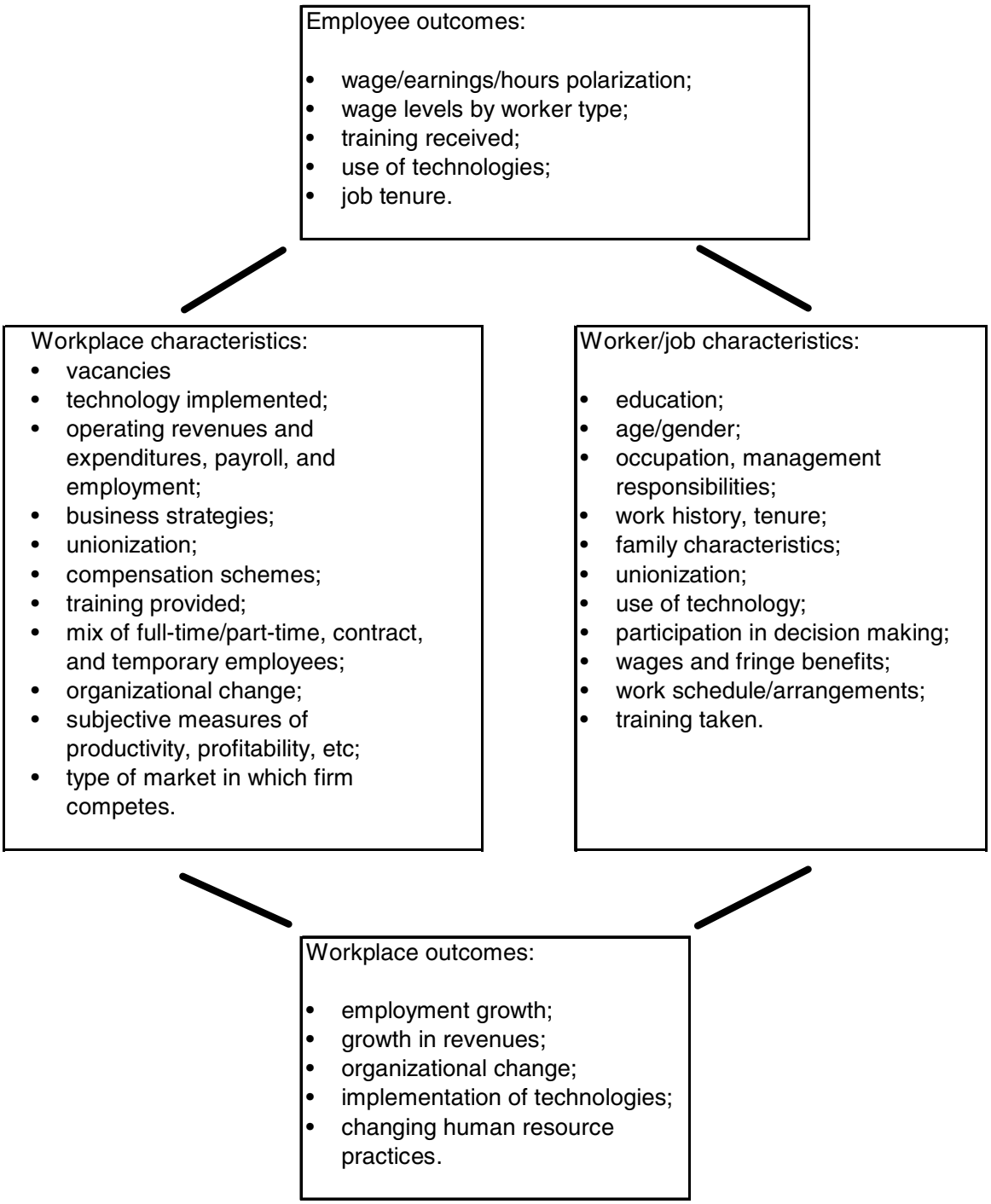
Why have a linked workplace and employee survey?

There is a wealth of information on workers' outcomes regarding wages and wage inequality, job stability and layoffs, training, job creation, and unemployment that can be gathered from a wide variety of surveys. In general, researchers have a good understanding of employee and employer outcomes. But a linkage of these two levels of analysis using micro data simply does not exist. The WES is the only source for this type of data in the country, allowing investigations linking changes that occur among employees to events taking place in firms and vice versa. Indeed, such a connection is necessary if one hopes to understand the association between labour market changes and pressures stemming from global competition, organizational and technological changes, and the drive to improve human capital.

Hence, the primary goal of WES is to establish a link between events occurring in workplaces and the outcomes for workers. The second goal of the survey is to develop a better understanding of what is occurring in companies in an era of substantial change. To provide this link, the WES is comprised of two components: (1) a workplace survey covering subjects such as the adoption of technologies, organizational change, training and other human resource practices, business strategies, and labour market dynamics, to name a few; and (2) a survey of employees within these same workplaces covering wages, hours of work, job type, human capital, use of technologies and training.

In what follows, the link between workplace characteristics and employee characteristics is shown through workplace and employee outcomes.

Figure 1: The Workplace and Employee Survey Conceptual Framework



Section 1: Work Organization and Organizational Change

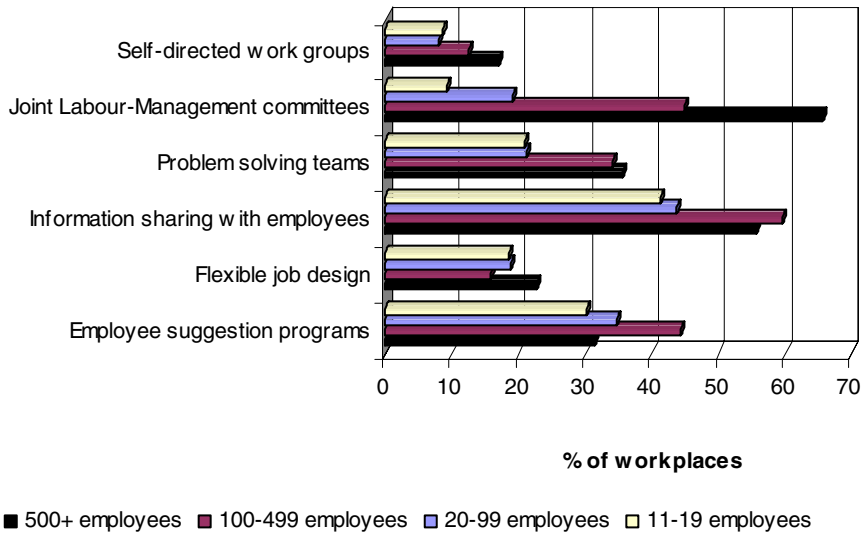
The Workplace and Employee Survey (WES) allows an investigation into the area of innovative or high performance work practices that are surmised to play a key role in the success of the new economy. The incidence, variety and extent of organizational change are also examined to identify what constitutes the core of organizational change implemented by workplaces.

Table 1: Incidence of work organization practices, 2001

Organizational practices	Overall incidence rate
Information sharing with employees	43.7
Employee suggestion programs	33.2
Problem solving teams	22.1
Flexible job design	18.5
Joint labour-management committees	16.1
Self-directed work groups	8.7

Employers with more than ten employees were asked in 2001 which work practices existed on a formal basis for non-managerial employees. Table 1 provides the incidence of selected work practices in Canadian workplaces. The table focuses on single work practice rather than on bundles of practices. Clearly, the most prevalent form of work organization in 2001 was information sharing. This form of work organization usually includes the sharing of information on firm's performance, technological or organizational changes. The least common practice was self-directed work groups, used by only one in twelve workplaces. It is worth noting that large workplaces (500 or more employees) were far more likely to use every formal work organization practice than the smaller ones (less than 20 employees). The one exception was employee suggestion programs, which were found in similar proportions in small and large workplaces.

Chart 1: Incidence of work practices, by size, 2001



The survey asked if any of the following organizational changes had been carried out in the workplace during the reference year:

- Downsizing (reducing the number of employees on payroll to reduce expenses);
- Re-engineering (focusing on the redesign of business processes to improve performance and cost);
- Increased integration among different functional areas;
- Increase in the degree of centralization with elimination of decentralized sub-offices;
- Decrease in the degree of centralization;
- Greater reliance on temporary workers;
- Greater reliance on part-time workers;
- Increase in overtime hours;
- Adoption of flexible working hours;
- Delayering (reducing the number of managerial levels);
- Greater reliance on functional flexibility (through job rotation and multi-skilling);
- Implementation of total quality management;
- Increased reliance on external suppliers of products or services, and
- Increased inter-firm collaboration in R&D, production, or marketing.

One third of the workplaces introduced some form of organizational change in 2001. As workplaces increased in size, so did the incidence of organizational changes.

Table 2: Incidence of organizational change, 2001

		Workplace size			
	Overall	1–19 employees	20–99 employees	100–499 employees	500+ employees
No change introduced	67.8	72.0	43.8	32.4	15.4
Greater integration among different functional areas	8.1	5.5	22.1	35.6	34.5
Increase in degree of centralization	5.5	4.0	13.3	23.6	19.0
Downsizing	6.6	5.8	9.2	24.0	27.0
Decrease in degree of centralization	2.5	1.7	7.6	10.5	10.8
Greater reliance on temporary workers	3.8	3.3	6.4	9.8	19.2
Greater reliance on part-time workers	6.8	6.4	8.6	9.7	15.7
Re-engineering	12.1	8.6	31.3	44.8	59.1
Increase in overtime hours	5.5	4.5	10.7	17.3	34.8
Adoption of flexible working hours	9.5	9.1	11.4	15.4	14.2
Reduction in the number of managerial levels	2.2	1.8	4.2	7.7	11.7
Greater reliance on job rotation, multi-skilling	10.2	7.9	23.3	30.6	17.5
Implementation of total quality management	7.6	6.4	13.6	24.3	16.3
Greater reliance on external suppliers of prod./serv.	6.6	5.9	11.1	12.5	16.4
Greater inter-firm collaboration in R/D, production	5.4	4.0	12.8	21.6	15.8

Table 2 shows that in 2001 re-engineering (redesigning of business processes to improve performance and cost) was the predominant form of organizational change, reported by one in eight workplaces; this was followed by greater reliance on functional flexibility (through job rotation and multi-skilling) with one in ten workplaces reporting this change. The importance of re-engineering was preponderant in workplaces of all size categories, except for the workplaces with less than 20 employees where the adoption of flexible working hours was the prevailing change implemented.

Three distinct patterns emerged by size. The core organizational changes among the workplaces with less than 20 employees were the adoption of flexible working hours, greater reliance on job rotation/multi-skilling, and greater reliance on part-time workers. By contrast, the larger workplaces, those with 500 employees or more, experienced increases in overtime hours, greater integration among different functional areas, and downsizing. The remaining workplaces showed greater reliance on job rotation/multi-skilling, greater integration among different functional areas and implementation of total quality management.

Chart 2: Incidence of organizational change, 2001

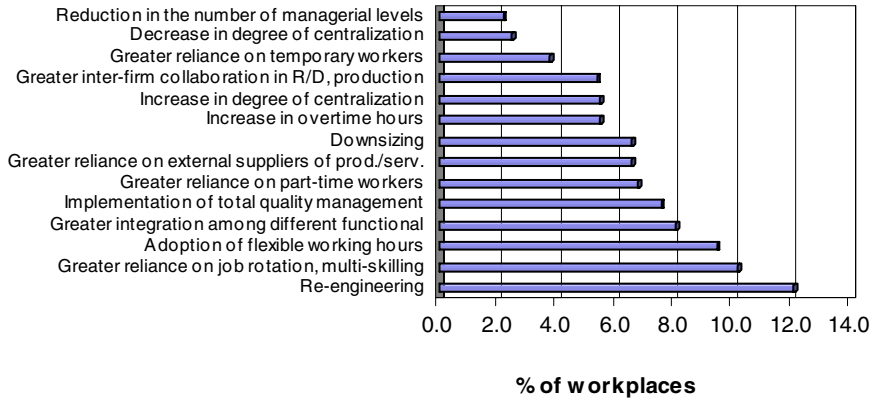
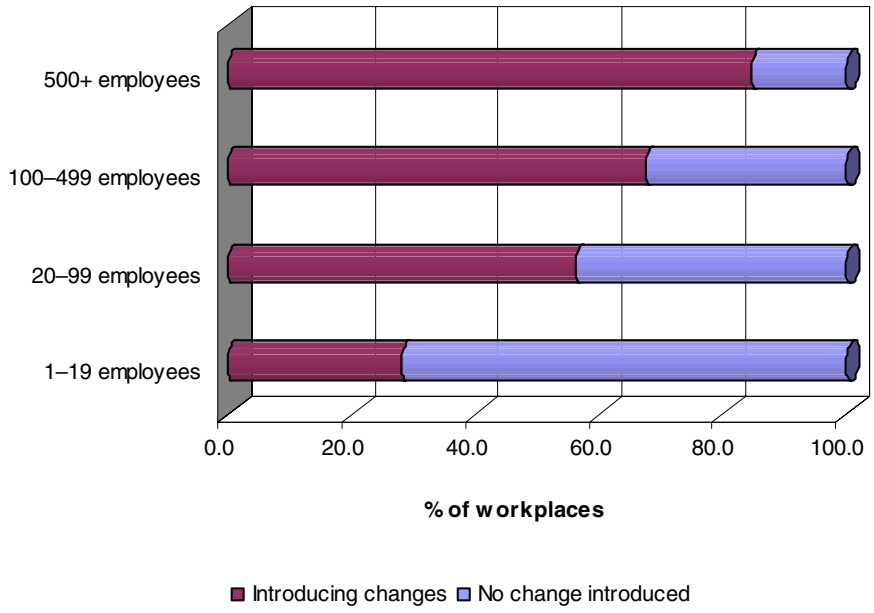


Chart 3: Organizational change by size



Section 2: Innovation and Technology

While Section 1 presents changes in the workplaces in 2001 from an organizational perspective, this section deals with changes that are technological in nature as well as innovation, and explores the area of computer-use in the workplaces. In the WES, innovation is defined as the introduction of new or substantially improved products, processes or services.

Table 3: Incidence of innovation, 2001

Workplace Characteristics	% of workplaces reporting the introduction of				% of employees in a workplace with an innovation
	Any innovation	Product innovation	Process innovation	Both product and process	
Overall	44.8	40.3	27.6	23.1	62.5
Industry Group					
Forestry, mining, oil and gas extraction	25.7	20.0	13.5[E]	F	57.0
Primary product manufacturing	62.5	59.8	38.6	36.0	77.1
Secondary product manufacturing	47.2	42.8	31.4	27.0	57.8
Labour intensive tertiary manufacturing	50.9	45.0	40.5	34.6	67.9
Capital intensive tertiary manufacturing	60.9	55.6	48.0	42.7	78.7
Construction	35.2	31.5	22.1	18.5	44.7
Transportation, warehousing and wholesale trade	40.1	36.6	25.2	21.7	55.3
Communication and other utilities	51.9	46.9	36.4	31.4	68.8
Retail trade and consumer services	50.2	45.8	25.5	21.2	66.1
Finance and insurance	67.2	62.4	47.6	42.9	78.6
Real estate, rental and leasing operators	34.5	27.1	23.3	16.0	46.0
Business services	41.6	35.1	29.1	22.6	58.9
Education and health services, non-profit groups	29.4	26.6	19.6	16.7	55.3
Information and cultural industries	55.8	51.8	38.0	34.0	71.0
Workplace size					
1–19 employees	41.8	37.3	24.6	20.1	48.4
20–99 employees	63.3	59.0	44.9	40.6	65.4
100–499 employees	65.3	60.7	53.2	48.6	66.4
500+ employees	74.5	67.3	60.8	53.6	73.4

Table 3 shows that innovation occurred frequently in Canadian workplaces. In fact, 44.8% of the workplaces reported at least one type of innovation. These workplaces employed 62.5% of the workforce. Workplaces introducing product innovations outnumbered those with process innovations. However, about one in four workplaces reported both a product and a process innovation.

The innovation rates for larger workplaces were clearly higher than those where fewer than 20 people were employed. As the workplaces increased in size, both product and process innovation rates increased.

Finance and insurance, primary product manufacturing, and capital intensive tertiary manufacturing were the most innovative industries with at least 60% of the workplaces reporting the introduction of some type of innovation. Forestry lagged behind all industries while still reporting that 1 in 4 of the workplaces introduced some type of innovation.

Chart 4: Innovation, by industry, 2001

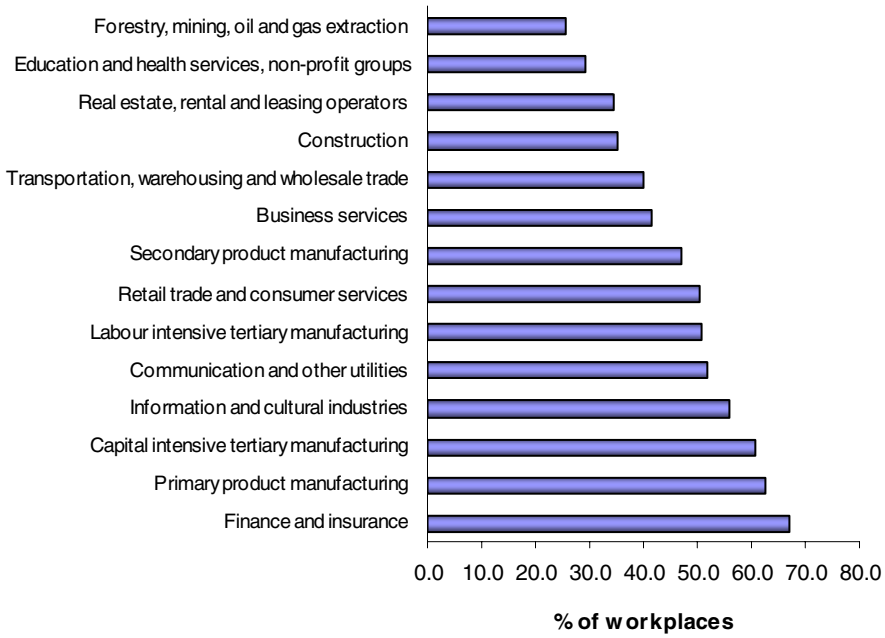


Table 4: Computer-based technology adoption, 2001

Workplace Characteristics	% of workplaces adopting a computer-based technology	
	Survey year*	
	1999	2001
Overall	25.7	16.5
Industry Group		
Forestry, mining, oil and gas extraction	27.3	16.9[E]
Primary product manufacturing	23.0	18.0
Secondary product manufacturing	30.8	14.0
Labour intensive tertiary manufacturing	25.2	29.7
Capital intensive tertiary manufacturing	39.5	24.6
Construction	17.5	11.2
Transportation, warehousing and wholesale trade	31.5	16.0
Communication and other utilities	25.0	17.0
Retail trade and consumer services	16.7	10.0
Finance and insurance	51.3	27.6
Real estate, rental and leasing operators	23.8	15.8
Business services	38.3	22.9
Education and health services, non-profit groups	23.1	19.1
Information and cultural industries	39.2	28.8

Table 4: Computer-based technology adoption, 2001, *Continued*

Workplace size		
1–19 employees	23.4	15.0
20–99 employees	39.5	23.8
100–499 employees	54.0	35.1
500+ employees	51.3	42.1

**Comparison is based on cross-sectional data.*

In 2001, 16.5% of workplaces reported having adopted new computer based technology, which represents a sharp drop compared to the adoption rate in 1999 (25.7%). This decline was observed among all industries except labour intensive tertiary manufacturing, which showed a net increase of 4.5 % between 1999 and 2001. The general pattern observed in both years is that as workplaces increased in size, the adoption rate of computer-based technology increased. However, the 2001 adoption rates were lower than the 1999 rates, regardless of workplace size.

The downward trend observed in computer-based technology adoption rate in 2001 may reflect technological implementation in preparation for year 2000 and also the cumulative effect of adoption of computer-based technology from previous years.

Chart 5: % Change in computer-based technology adoption, from 1999 to 2001

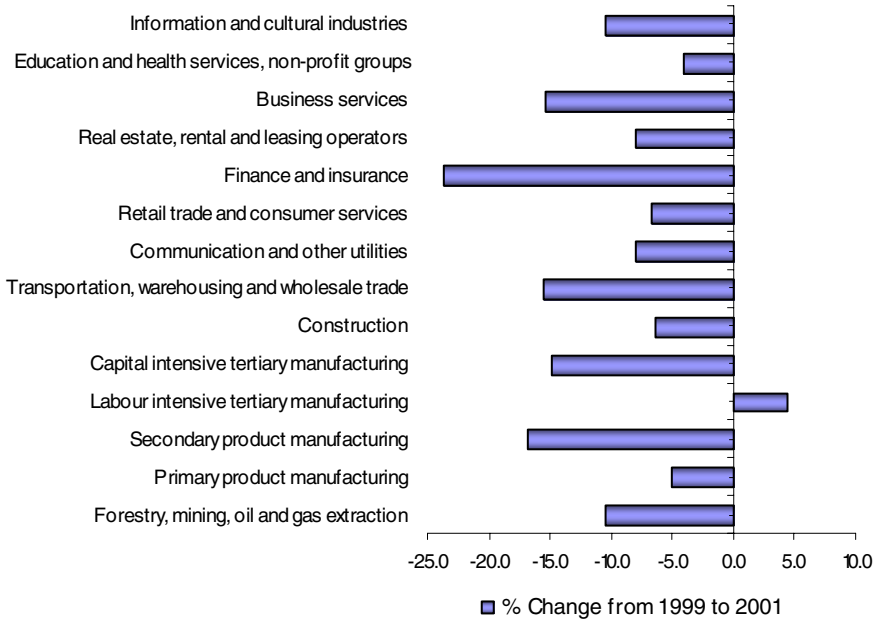


Table 5: Workplace innovation practices, between 1999 and 2001

Workplace Characteristics	Any innovation			
	No in 1999		Yes in 1999	
	No in 2001	Yes in 2001	No in 2001	Yes in 2001
Overall	35.8	13.4	22.2	28.6
Industry Group				
Forestry, mining, oil and gas extraction	48.7	14.4	24.4[E]	F
Primary product manufacturing	23.7	16.9	14.9	44.5
Secondary product manufacturing	29.6	16.1	23.8	30.5
Labour intensive tertiary manufacturing	24.9	17.1	28.4	29.7
Capital intensive tertiary manufacturing	18.5	8.5	22.2	50.8
Construction	41.3	10.1[E]	26.2	22.4
Transportation, warehousing and wholesale trade	36.6	11.1[E]	23.0	29.3
Communication and other utilities	33.9	20.1	20.5	25.4
Retail trade and consumer services	31.6	14.6	22.8	31.1
Finance and insurance	19.3	15.9[E]	15.5	49.4
Real estate, rental and leasing operators	49.1	18.0	18.6	14.3[E]
Business services	41.5	13.5	18.3	26.7
Education and health services, non-profit groups	46.8	11.4	24.8	17.0
Information and cultural industries	23.1	15.2	22.0	39.6
Workplace size				
1–19 employees	39.2	13.0	22.3	25.5
20–99 employees	16.4	15.8	21.8	45.9
100–499 employees	16.5	16.2	22.2	45.1
500+ employees	11.3	12.8	19.7	56.2

Table 5 provides data on workplace innovative status using a panel of 5291 continuing units[1] from 1999 to 2001. In 1999, 50.8% of continuing workplaces had introduced some type of innovation; in 2001, 42 % of them did so. Workplaces that innovated in 1999 but reported no innovation in 2001 outnumbered those that had innovated in 2001 but showed no innovation in 1999. That difference is the main driver of the net fall in the incidence of innovation in 2001.

Innovation occurred frequently among the continuing units with 64.2% reporting having innovated in at least one of the two years, and 28.6 % reporting an innovation in each of the 2 years. This last group of workplaces represents high innovation workplaces. In contrast, the no-innovation workplaces constituted 35.8% of the population.

[1] A continuing unit is a workplace that was surveyed in 1999 and was still active in 2001.

Table 5 also shows that the proportion of high innovation workplaces in 2001 was considerably higher among the large workplaces (56.2%). In contrast, the non-innovation workplaces were more likely to have less than 20 employees (39.2%). Capital intensive tertiary manufacturing had the highest proportion of high innovation workplaces (50.8%), followed by finance and insurance (49.4%), primary product manufacturing (44.5%), and information and cultural industries (39.6%). The remaining innovation rates for the industries were clustered in the range of 25 % to 31%. However, the likelihood of an innovation was higher in 1999 compared to the 2001 level. This is true for workplaces of all sizes and all industries, except for the communication and other utilities, finance and insurance, and real estate, rental and leasing operators where the innovation rates were equally likely in 1999 and 2001. The overwhelming observation was that large workplaces are more likely to innovate than the smaller ones.In the graph below, odds ratios are used because they provide a straightforward comparison between innovation incidences observed in 1999 and 2001. This comparison is provided separately for each WES industry.

An odds ratio of or close to 1.0 indicates that the estimated odds of innovation in a workplace was equally likely in each of the two years compared.

An odds ratio greater than 1.0 indicates that the estimated odds of innovation in a workplace were higher in 2001 than in 1999. For example, in the primary product manufacturing a workplace estimated odds of innovation was 13.4% higher in 2001 than in 1999. Similarly, an odds ratio inferior to 1.0 indicates that the estimated odds of innovation in a workplace were lower in 2001 than in 1999.

An odds ratio of 0.5 indicates that a workplace in this industry was half as likely to have innovated in 2001 than in 1999.

Chart 6: Innovation patterns, between 1999 and 2001

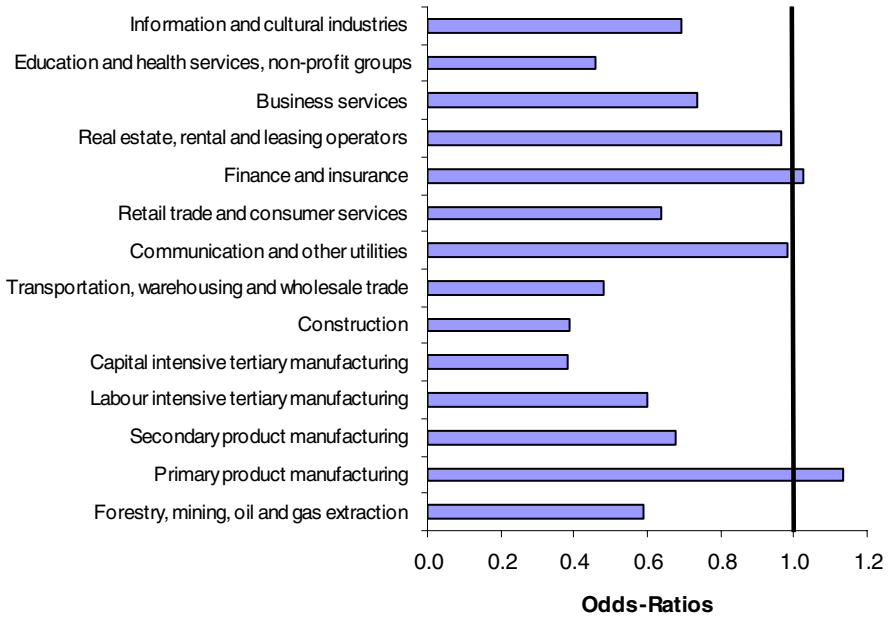


Table 6: Employees' use of technology, 2001

Employee and Workplace Characteristics	% of employees	
	Using a computer	Using a computer-assisted technology
Overall	60.1	13.3
Education attainment		
Less than high school	24.0	13.1
High school	44.3	12.8
Some post-secondary	64.2	14.7
University	87.0	10.2
Occupation groups		
Managers	82.7	10.9
Professionals	87.8	9.7
Technical/Trades	45.6	15.2
Marketing/Sales	42.7	22.0
Clerical/Administrative	86.8	10.3
Production workers	14.0	10.8
Industry		
Forestry, mining, oil and gas extraction	57.9	17.1
Labour intensive tertiary manufacturing	38.3	15.0
Primary product manufacturing	46.5	19.3
Secondary product manufacturing	61.4	21.3
Capital intensive tertiary manufacturing	57.7	19.2
Construction	36.7	8.5
Transportation, warehousing and wholesale trade	62.2	13.5
Communication and other utilities	60.2	16.7
Retail trade and consumer services	43.7	18.2
Finance and insurance	96.1	5.6
Real estate, rental and leasing operators	67.4	11.5
Business services	82.8	10.7
Education and health services, non-profit groups	68.5	7.1
Information and cultural industries	80.9	11.0

Employee computer use varied significantly by their industry of employment. For example, over 96% of employees in finance and insurance used a computer, compared to one third of construction workers.

The use of computers is widespread. Six out of ten employees regularly used a computer in 2001. Computer use increased with education level and was mostly concentrated in white-collar occupations (managers, professionals and clerical/administrative workers). Marketing and sales occupations had above average usage rates for computer-assisted technologies, but were below average in terms of computer use.

Chart 7: Employees' use of technology, 2001

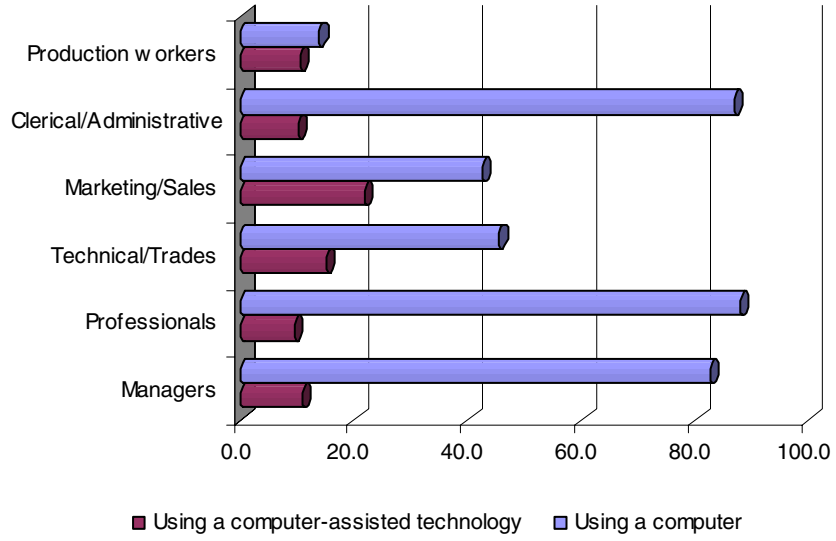


Table 7: Average hours spent using computers in 1999 and 2000

Employee and Workplace Characteristics	Employee working for					
	Same Employer in 1999 and 2000			Different Employer in 2000		
	Average time spent using computer in 1999	Average time spent using computer in 2000	% change	Average time spent using computer in 1999	Average time spent using computer in 2000	% change
Overall	17.6	18.5	4.9	14.3	17.2	20.8
Gender						
Men	16.1	17.2	6.5	11.7	14.6	24.4
Women	18.9	19.5	3.7	16.3	19.3	18.7
Age						
Less than 25	13.6	14.7	8.1	12.3	15.9	29.0
25–44	18.5	19.5	5.3	15.0	19.0	26.5
45 or more	16.8	17.4	3.5	14.2	13.6	-4.2
Educational attainment						
Less than high school	10.9	12.0	10.8	8.0	F	F
High school	17.7	17.9	0.9	11.1	13.8	24.8
Some university or post-secondary	17.9	19.1	6.3	14.5	17.1	18.0
University	18.4	19.0	3.5	17.4	20.8	19.5
Occupation groups						
Managers	18.8	19.9	6.0	17.1	14.4	-15.4
Professionals	18.1	18.9	4.3	16.4	19.4	18.4
Other non managers	17.0	17.8	4.7	12.8	17.6	37.5

Table 7: Average hours spent using computers in 1999 and 2000 *Continued*

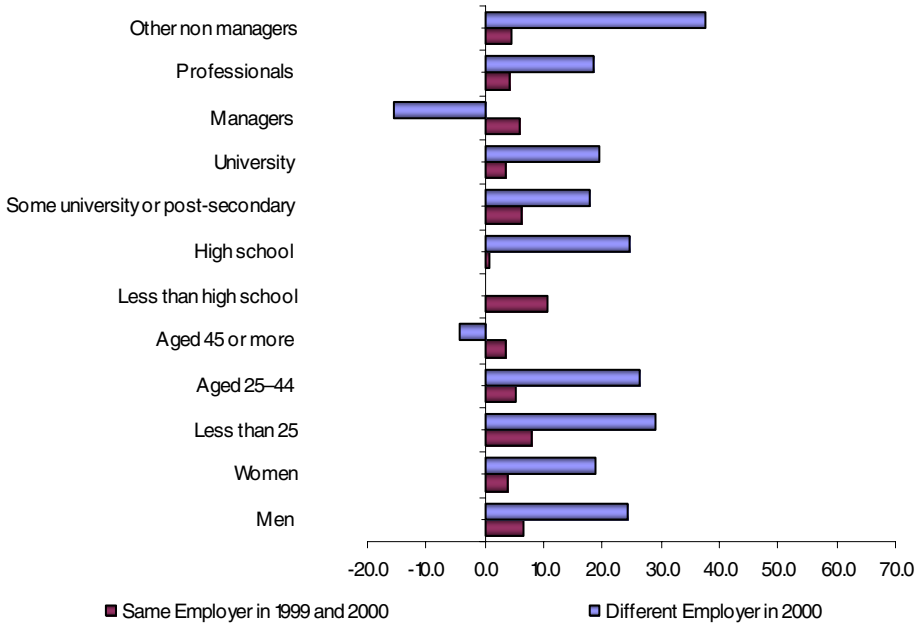
Industry						
Forestry, mining, oil and gas extraction	17.9	16.8	-5.7	F	20.4	F
Labour intensive tertiary manufacturing	16.0	16.4	2.4	10.6[E]	16.3[E]	54.1[E]
Primary product manufacturing	15.3	16.5	8.0	22.3	18.3	-18.2
Secondary product manufacturing	16.3	16.6	1.5	17.5	23.2	32.3
Capital intensive tertiary manufacturing	19.8	20.2	2.1	18.0	19.7	9.7
Construction	15.5	16.5	6.5	18.7	10.3[E]	-45.1[E]
Transportation, warehousing and wholesale trade	21.4	21.7	1.2	18.1	16.1	-11.0
Communication and other utilities	20.9	21.5	2.9	14.2[E]	17.4	22.7[E]
Retail trade and consumer services	12.1	14.2	17.8	8.1	11.8	45.7
Finance and insurance	25.7	26.4	2.7	24.6	23.4	-5.0
Real estate, rental and leasing operators	17.6	19.5	10.5	18.7	19.1	1.8
Business services	24.4	25.4	4.0	20.0	24.5	22.5
Education and health services, non-profit groups	13.3	13.6	2.1	8.8	15.9	80.2
Information and cultural industries	23.6	25.1	6.2	25.9	26.4	2.1
Workplace size						
1–19 employees	17.3	18.6	7.5	13.2	14.9	13.0
20–99 employees	17.8	19.1	7.1	12.6	15.8	24.8
100–499 employees	18.4	18.8	2.2	17.4	19.7	13.4
500+ employees	17.0	17.3	2.2	17.2	25.8	50.1

Table 7 presents the time spent by workers using[2] a computer at work. On the whole, workers who remained with the same employer (12841) increased by 4.9% the number of hours per week they used a computer at work from 1999 to 2000. The increase in time spent using computers was observed across genders, age groups, education levels, occupations and workplace sizes. However, when they changed employers (777), the increase in time spent using computers became more acute (20.8%). This pronounced increase was observed across all examined characteristics. However, two exceptions are worth noting: workers aged 45 or more and managers reduced the time they spent using computers when they changed jobs.

This increase in computer usage among workers having the same employer in both years was shared by all industries, except forestry, mining oil and gas extraction. In finance and insurance and business services, the increase among the workers who remained with their employers was below the average and reflects the historically high use of computers in these industries, having achieved respectively on average of 25.7 and 24.4 weekly hours per worker in 1999.

[2] The use of a computer in the job excludes sales terminal, scanners, machine monitors and includes microcomputers, mini-computers, personal computers, mainframe computers or laptops that can be programmed to perform a variety of operations.

Chart 8: % Change in average hours spent using computer



Section 3: Workplace Performance and Worker Satisfaction

This section focuses on workplace performance measures based on the employers' perception of their workplaces' attainment on labour productivity, sales growth, product quality, customer satisfaction and profitability. These indicators stand as proxies for their quantitative counterparts. Also in this section, worker satisfaction with job and pay are considered in order to provide some insight into the synergy between workplace performances measured through some qualitative indicators and worker well-being as proxied by job and pay satisfaction.

Table 8: Performance indicators, 2001

Workplace Characteristics	% of workplaces reporting increase in				
	Productivity	Sales	Product quality	Customer satisfaction	Profitability
Overall	37.0	46.9	33.3	36.3	34.8
Industry Group					
Forestry, mining, oil and gas extraction	44.7	37.3	21.2	22.6	41.8
Primary product manufacturing	50.7	46.3	44.0	42.7	34.7
Secondary product manufacturing	48.9	59.9	37.8	36.8	35.9
Labour intensive tertiary manufacturing	45.4	49.2	42.9	34.3	32.1
Capital intensive tertiary manufacturing	46.9	54.4	35.6	35.7	41.6
Construction	28.3	44.6	22.3	30.2	31.0
Transportation, warehousing and wholesale trade	39.9	47.3	30.1	36.4	28.5
Communication and other utilities	33.8	39.8	25.8	29.1	33.6
Retail trade and consumer services	34.6	56.3	37.6	38.5	35.5
Finance and insurance	54.6	66.5	34.7	54.7	63.5
Real estate, rental and leasing operators	26.1	35.5	26.9	21.3	28.3
Business services	35.8	40.2	34.6	34.9	38.6
Education and health services, non-profit groups	33.9	27.6	26.3	32.4	25.0
Information and cultural industries	45.3	38.4	46.0	47.8	33.8
Workplace size					
1-19 employees	35.0	45.5	32.3	35.0	33.4
20-99 employees	48.3	56.5	39.0	44.2	43.5
100-499 employees	51.7	49.0	43.4	43.1	43.8
500+ employees	59.9	56.1	54.1	55.5	35.4

Generally, workplaces showed a more positive assessment of their performance on all considered indicators with respect to the previous year, with sales growth being the highest (46.9%) and product quality (33.3%) the lowest. Finance and insurance outperformed all other industries in all considered indicators, except for information and cultural industries on product quality. As workplaces increased in size the proportion of workplaces reporting increase in productivity and product quality also improved.

Chart 9: Change in selected performance indicators, 2001

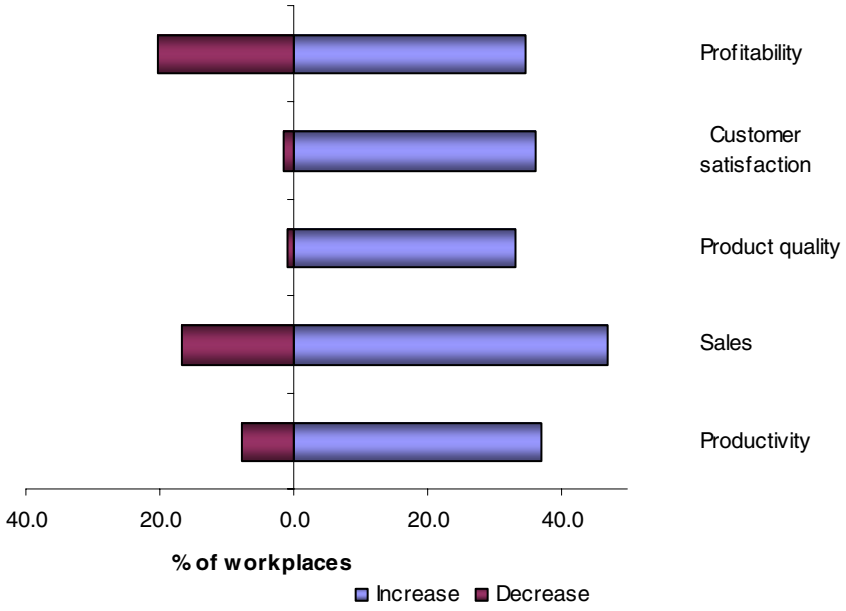


Table 9: Job and pay satisfaction, 2001

Employee Characteristics	% of employees who are satisfied with their job			% of employees who are satisfied with their pay		
	Not satisfied	Satisfied	Very satisfied	Not satisfied	Satisfied	Very satisfied
Overall	10.0	55.8	34.0	23.5	57.9	18.3
Gender						
Men	10.5	56.6	32.7	21.1	61.7	17.1
Women	9.4	55.0	35.3	25.9	54.3	19.6
Age						
Less than 25	14.1	58.1	27.7	27.0	56.6	16.3
25–44	9.8	57.0	33.0	23.7	58.8	17.5
45 or more	8.7	53.1	37.8	22.1	57.1	20.4
Education attainment						
Less than high school	10.3	59.3	30.1	23.5	60.9	15.3
High school	10.0	56.0	33.9	20.8	58.5	20.5
Some university or post-secondary	10.4	55.8	33.6	24.8	57.3	17.6
University	8.4	53.3	38.0	22.7	57.2	20.1
Occupation groups						
Managers	6.7	49.2	44.1	15.4	62.8	21.6
Professionals	9.2	52.5	38.0	25.9	57.2	16.7
Technical/Trades	10.6	56.7	32.5	23.4	58.2	18.3
Marketing/Sales	10.8	60.0	29.2	24.1	59.9	15.8
Clerical/Administrative	8.4	56.1	35.0	25.7	52.6	21.3
Production workers	14.9	62.9	22.1	26.5	58.3	15.2

Table 9: Job and pay satisfaction, 2001, *Continued*

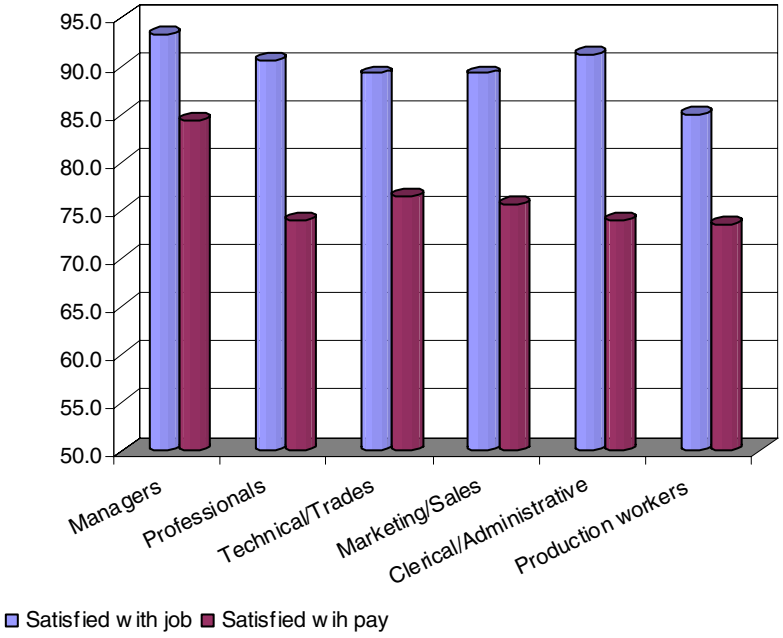
Hourly earnings						
Less than $12.00	13.5	62.3	23.9	31.2	56.5	12.0
$12–19.99	10.4	56.0	33.4	25.1	57.7	17.1
$20.00 or more	6.9	51.0	41.9	16.6	59.2	24.1

Note: The no-opinion column for each variable is not shown

Table 8 shows that employees are more likely to be very satisfied with their job than with their pay. Overall, WES indicated that about nine in ten employees were either satisfied or very satisfied with their jobs. However, the level of satisfaction fell to 76.2% when considering pay. Women and youth tended to be a little less satisfied with their level of pay.

Managers were twice as likely to be very satisfied with their jobs than production workers (44.1% vs. 22.1%). Employees who had higher levels of pay also had higher levels of satisfaction with their jobs. The proportion of employees very satisfied with their jobs ranged from 23.9% at the low end of the pay spectrum to 41.9% at the upper end.

Chart 10: Job and pay satisfaction, 2001



Section 4: Training

This section provides data on training received by employees and workplace training practices. Both classroom and on-the-job training are considered. Changes in the workplace training incidence between 1999 and 2001 are also examined. Further insights are provided into the distinguishing characteristics of workplaces that were actively engaged in training versus those that were not.

Table 10: Training received by employees, 2001

Employee and Workplace Characteristics	% of employees		
	Receiving no training	Receiving classroom training	Receiving on-the-job training
Overall	46.2	33.9	32.3
Gender			
Men	46.5	33.7	32.5
Women	45.9	34.0	32.0
Age			
Less than 25	44.8	24.7	40.2
25-44	44.4	35.4	33.3
45 or more	49.6	34.5	28.0
Less than high school	65.6	17.9	19.6
High school	54.5	25.5	27.0
Some university or post-secondary	43.6	35.4	35.2
University	33.3	47.9	37.4
Occupation groups			
Managers	41.9	35.8	35.1
Professionals	31.8	48.5	39.6
Technical/Trades	48.8	33.0	29.7
Marketing/Sales	55.3	20.1	30.6
Clerical/Administrative	48.0	32.3	33.0
Production workers	58.4	20.6	25.5
Industry			
Forestry, mining, oil and gas extraction	40.1	42.1	32.4
Labour intensive tertiary manufacturing	65.0	19.5	21.9
Primary product manufacturing	52.2	31.8	25.8
Secondary product manufacturing	47.8	31.5	33.3
Capital intensive tertiary manufacturing	45.0	34.1	35.1
Construction	56.7	26.5	25.5
Transportation, warehousing and wholesale trade	49.8	32.2	30.1
Communication and other utilities	26.4	61.5	34.1
Retail trade and consumer services	55.0	19.5	31.5
Finance and insurance	23.9	54.4	47.5
Real estate, rental and leasing operators	59.9	24.5	25.1
Business services	38.6	38.1	37.5
Education and health services, non-profit groups	37.2	47.4	32.1
Information and cultural industries	44.6	35.9	35.3

Table 10: Training received by employees, 2001, *Continued*

Workplace size			
1–19 employees	56.5	21.8	28.7
20–99 employees	47.7	30.7	33.0
100–499 employees	41.8	40.0	32.0
500+ employees	33.4	50.1	36.5

Source: Employee portion of the Workplace and Employee Survey

More than half of all employees received some form of training in 2001. Although the overall training rate was the same for youth (less than 25 years old) and adults (25 years old and over), youth tended to receive more on-the-job training, while adults received more classroom training. Chart 11 highlights the relationship between education and training: the more highly educated received more training, particularly classroom training. Similarly, managers and professionals received more classroom training than other occupational groups.

The survey also showed that industries with high classroom training rates tended to be those that were previously shown to have high concentrations of computer users, to have the highest innovation incidence and to have achieved higher performance levels. For example, finance and insurance was at the top of all these lists.

Chart 11: Training received by employees, 2001

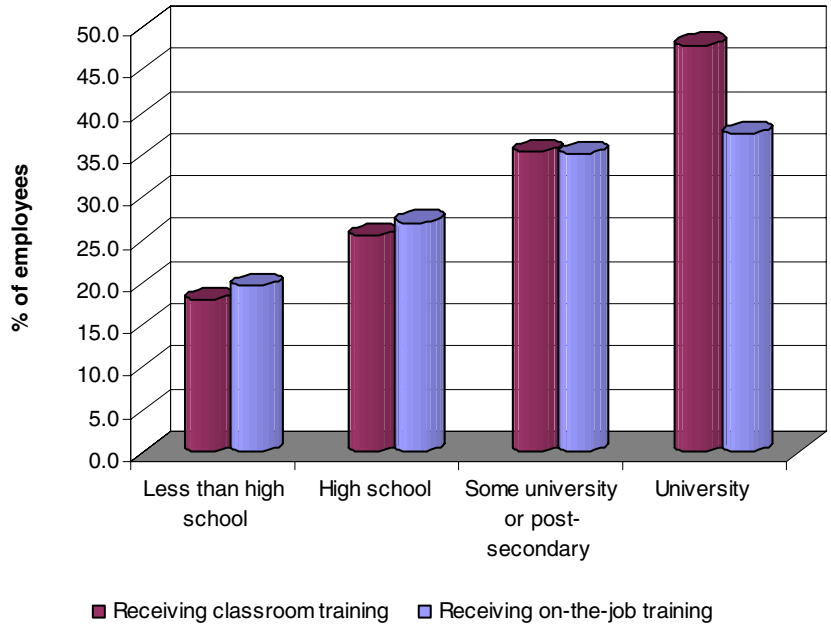


Table 11: Workplace training practices between 1999 and 2001

Workplace Characteristics	% of workplaces providing any type of training			
	No in 1999		Yes in 1999	
	No in 2001	Yes in 2001	No in 2001	Yes in 2001
Overall	24.3	16.5	11.7	47.4
Industry				
Forestry, mining, oil and gas extraction	13.2	29.0	13.6	44.3
Primary product manufacturing	22.3	15.5	15.3	47.0
Secondary product manufacturing	15.5	11.5	10.3	62.6
Labour intensive tertiary manufacturing	18.1	21.3	10.1	50.5
Capital intensive tertiary manufacturing	17.0	18.9	8.0	56.1
Construction	29.8	21.8	10.0	38.4
Transportation, warehousing and wholesale trade	23.7	17.1	13.8	45.4
Communication and other utilities	19.6	13.6	11.2	55.6
Retail trade and consumer services	30.8	14.3	11.7	43.2
Finance and insurance	7.3	8.2	9.2	75.4
Real estate, rental and leasing operators	33.2	17.4	9.4	40.0
Business services	22.2	21.1	17.4	39.3
Education and health services, non-profit groups	20.6	15.7	8.5	55.2
Information and cultural industries	16.0	19.6	11.0	53.4
Region				
Atlantic	28.3	26.5	11.2	34.0
Québec	33.2	12.5	10.3	44.0
Ontario	23.2	14.8	14.2	47.7
Alberta	19.9	19.8	11.5	48.8
British Columbia	17.3	18.9	7.5	56.3
Manitoba	28.1	12.4	7.0	52.6
Saskatchewan	12.9	17.9	16.2	53.1
Workplace size				
1–19 employees	28.1	18.6	12.4	41.0
20–99 employees	3.3	5.5	9.3	81.9
100–499 employees	F	1.1	0.8	97.7
500+ employees	F	1.8	F	97.9

Source: Employer portion of the Workplace and Employee Survey

Table 11 provides data on employer-supported training practices using a panel of 5291 continuing workplaces from 1999 to 2001. It provides insight into the ongoing pattern of employer-supported training over time and across industry, region and workplace sizes.

In 1999, 59.1% of the continuing workplaces provided some type of training while in 2001, 63.9 % of them did so. Panel members that had not provided training in 1999 but provided some form of training in 2001 outnumbered those that had provided training in 1999 but provided none in 2001.

Employer-supported training [3]occurred frequently: about 3 out of 4 workplaces (74.7%) reported at least one form of training in either 1999 or 2001. There are 47.4% who reported to have provided training to their employees in each of the two years examined. These firms represent high training-providing workplaces. In contrast, the no training-providing workplaces represented 24.3 % of the population.

Moreover, this table shows that almost all the workplaces (97%) which employed 100 or more employees provided their staff with training, a sharp contrast to the 41% observed among the smaller firms with 1 to 19 employees. This training effort permeates all industries, with finance and insurance at the high end of the high training-providing workplaces (75.4%) and construction (38.4%) at the low end.

Indeed, the incidence of training was higher in 2001 when compared to 1999, with the smaller workplaces driving the movement. Although smaller workplaces trained less than larger ones, their training incidences increased between 1999 and 2001.

In Chart 12 below, odds ratios are again used because they provide a straightforward comparison between the training incidences observed in 1999 and 2001. The comparison is provided separately for each WES industry.

An odds ratio of or close to 1.0 indicates that a workplace's estimated odds of training provision was equally likely in each of the two years compared. The training incidences in the two years were equal.

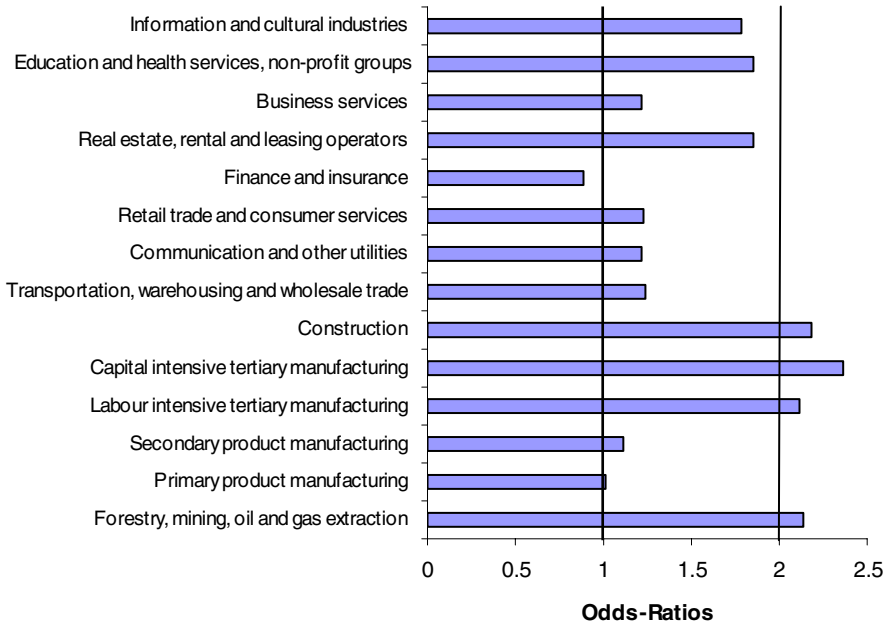
An odds ratio greater than 1.0 indicates that the odds of providing training were higher in 2001 than in 1999. Similarly, an odds ratio inferior to 1.0 indicates that the estimated odds of offering training were lower in 2001 than in 1999.

An odds ratio of 2.0 indicates that a workplace in that industry was twice as likely to have provided training in 2001 than in 1999.

An odds ratio of 0.5 indicates that a workplace in this industry was half as likely to have provided training in 2001 than in 1999.

[3] Employer-supported training includes all types of training intended to develop employees' skills and/or knowledge through a structured format or on-the-job training whether it takes place inside or outside the workplace.

Chart 12: Training patterns between 1999 and 2001



Section 5: Work Arrangements

This section conveys the flexibility of the labour market in terms of the variety and extent of standard and non-standard work arrangements such as reduced work weeks, compressed work weeks, flexible hours and weekend work. It also provides information on the extent of work at home in the workplaces surveyed with a view to shed some light on issues dealing with time pressures faced by employees.

Table 12: Work schedule, 2001

Selected Employee and Workplace Characteristics	Employment Status		% of employees who usually work			
	Part-time	Full-time	Reduced work week	Compressed work week	Flexible hours	Saturdays or Sundays
Overall	15.8	84.2	7.9	5.5	35.2	28.7
Gender						
Men	8.0	92.0	4.9	6.2	37.1	26.0
Women	23.3	76.7	10.8	4.8	33.2	31.4
Age groups						
Less than 25	40.7	59.3	20.4	5.8	38.8	58.1
25-44	12.5	87.5	6.2	5.4	34.7	24.8
Education attainment						
Less than high school	18.8	81.2	8.6	4.6	31.4	35.6
High school	15.2	84.8	6.2	6.3	28.4	34.1
Some post-secondary	16.8	83.2	9.2	6.0	33.9	30.0
University	11.7	88.3	5.2	3.9	47.7	15.4
Occupation groups						
Managers	F	96.0	2.0[E]	2.8[E]	46.1	21.7
Professionals	13.3	86.7	5.3	5.3	42.8	16.9
Technical/Trades	11.8	88.2	6.6	7.3	31.5	29.0
Marketing/Sales	47.5	52.5	21.3	2.3	39.7	73.2
Clerical/Administrative	15.9	84.1	9.4	4.4	29.4	15.5
Production workers	24.7	75.3	11.0	5.7	27.1	38.4
Industry						
Forestry, mining, oil and gas extraction	4.0[E]	96.0	F	16.3	27.0	30.0
Labour intensive tertiary manufacturing	3.5	96.5	4.9	7.7	27.2	14.7
Primary product manufacturing	F	97.7	3.7	8.7	25.5	23.1
Secondary product manufacturing	2.0[E]	98.0	3.9[E]	10.4	24.4	15.3
Capital intensive tertiary manufacturing	2.9[E]	97.1	4.5[E]	7.3	28.2	9.5
Construction	7.0	93.0	4.6	7.8	37.6	7.8
Transportation, warehousing and wholesale trade	9.0	91.0	4.3	4.9	33.2	16.5
Communication and other utilities	4.8	95.2	3.0[E]	9.2	31.3	12.3
Retail trade and consumer services	29.5	70.5	13.7	3.5	39.4	61.0
Finance and insurance	6.2	93.8	3.6	4.1	28.9	8.0[E]
Real estate, rental and leasing operators	19.7	80.3	8.1	3.1[E]	35.3	24.7
Business services	8.9	91.1	7.7	4.2	42.3	15.2
Education and health services, non-profit groups	22.1	77.9	8.4	5.4	36.1	25.6
Information and cultural industries	18.6	81.4	5.1	3.3	40.5	25.5

Source: Employee portion of the Workplace and Employee Survey

Table 12 provides data on work arrangements. In 2001, 84.2% of the workers were full-time workers. Part-time employment was concentrated among women, youth and salespeople.

Overall, 35.2% of workers had some flexibility in their hours of work and over one-quarter worked weekends. More men than women reported flexible working hours. While the university educated had the greatest incidence of flexible hours (47.7%), they seldom had regularly scheduled weekend work hours (15.4%). About 6 out of 10 workers in retail trade and consumer services industry usually worked weekends. This sharply contrasted with workers engaged in the construction industry who rarely worked during the weekends.

Reduced and compressed work weeks were not widespread work arrangements, each being reported by fewer than one in twenty workers. The groups with the highest incidence of reduced work weeks were youth (20.4%), marketing/salespersons (21.3%) and retail trade and consumer services workers (13.7%).

Chart 13: Work schedule by gender, 2001

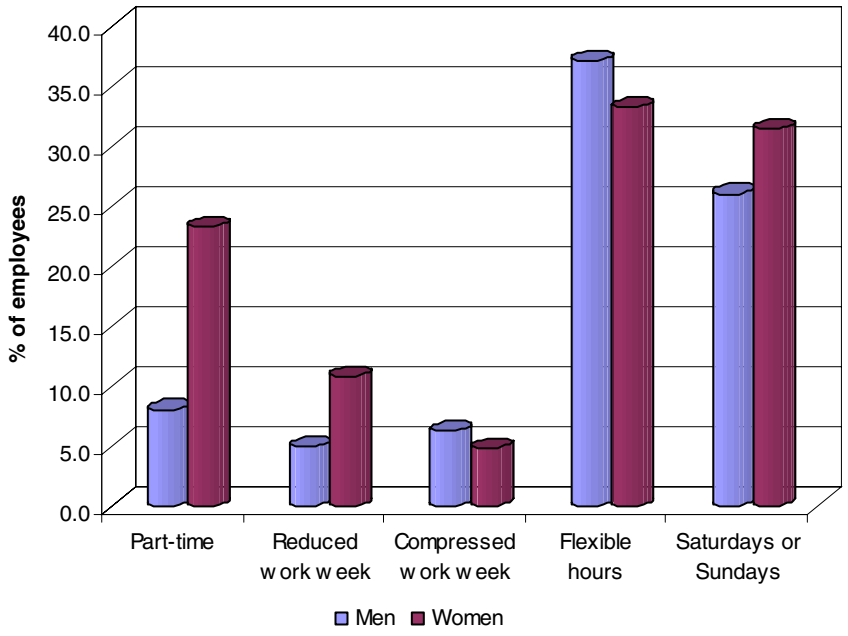


Table 13: Work at home, 2001

Selected Employee and Workplace Characteristics	% of employees doing some work at home			% of employees never working at home
	Paid and within normally scheduled work hours	Paid and in addition to normal hours	Unpaid and in addition to normal hours	
Overall	6.4	2.6	14.1	76.9
Gender				
Men	6.1	2.7	14.8	76.3
Women	6.6	2.6	13.5	77.4
Age				
Less than 25	2.2	F	3.6	93.4
25-44	7.2	3.1	14.7	75.0
45 or more	6.5	2.5	16.8	74.2
Occupation groups				
Managers	12.2	2.6[E]	37.6	47.5
Professionals	14.3	7.0[E]	25.5	53.1
Technical/Trades	4.4	1.7	9.6	84.2
Marketing/Sales	2.3	0.6	4.4	92.7
Clerical/Administrative	3.0	2.4	7.5	87.1
Production workers	0.5	0.1	1.0	98.3
Industry				
Forestry, mining, oil and gas extraction	6.3	2.6	13.1	77.9
Labour intensive tertiary manufacturing	2.6	1.5[E]	7.5	88.4
Primary product manufacturing	1.8[E]	F	8.2	88.9
Secondary product manufacturing	3.5	2.2[E]	8.7	85.5
Capital intensive tertiary manufacturing	2.4[E]	2.3	9.5	85.8
Construction	5.8	1.9[E]	10.7	81.5
Transportation, warehousing and wholesale trade	7.6	2.4	19.3	70.7
Communication and other utilities	3.4	1.5	13.1	82.0
Retail trade and consumer services	4.0[E]	0.8[E]	8.4	86.8
Finance and insurance	6.8	3.7[E]	23.7	65.9
Real estate, rental and leasing operators	7.6	1.9	18.8	71.7
Business services	11.7	3.4	12.8	72.1
Education and health services, non-profit groups	9.1[E]	4.9	21.4	64.7
Information and cultural industries	8.9	5.2	19.9	66.0

Table 13 provides information on work at home. About 23.1% of employees reported doing some work at home in 2001, mostly in the form of unpaid overtime. One in 15 employees worked regularly scheduled, paid hours in their own homes, while only one in 38 were paid for overtime worked at home. One out of seven workers brought unpaid work home with them. This unpaid overtime was concentrated among more highly educated workers and the managerial and professional occupations.

In terms of workplace characteristics, unpaid home work was most prevalent in several service sector industries: education and health services, and non-profit groups (21.4%); information and cultural industries (19.9%); and finance and insurance (23.7%).

The incidence of unpaid work performed in addition to normal hours was marginally higher for men (14.8%) than for women (13.5%). Workers aged 25-45 were more likely to work at home than youth. Over one in two managers reported doing some work at home, predominantly in the form of unpaid overtime.

Work at home varies by occupation and by industry. The highest incidence was found among employees in managerial positions. The greatest proportion of work at home was observed among workers in education and health services.

Chart 14: Work at home, 2001

Section 6: Wage and Non-wage Compensation Practices

This section focuses on the discretionary non-wage benefits provided by employers. Used in concert with the previous section on work arrangements, it provides some insight into the job quality. The variety and extent of these non-wage benefits are examined from both the employer and the employee perspectives.

Table 14: Non-wage benefits providers, 2001

Workplace Characteristics	% of workplaces offering		Proportion of employees in workplaces offering non-wage benefits
	Health related benefits*	Pension benefits*	
Overall	35.7	18.6	79.9
Industry Group			
Forestry, mining, oil and gas extraction	44.1	16.7	87.8
Primary product manufacturing	28.2	9.8	76.3
Secondary product manufacturing	50.1	27.3	90.7
Labour intensive tertiary manufacturing	52.6	23.3	86.9
Capital intensive tertiary manufacturing	52.7	18.4	90.4
Construction	31.6	9.7	70.3
Transportation, warehousing and wholesale trade	50.2	28.5	84.1
Communication and other utilities	67.0	45.9	92.5
Retail trade and consumer services	25.9	15.6	62.0
Finance and insurance	67.0	51.4	90.7
Real estate, rental and leasing operators	28.0	7.6	66.1
Business services	33.2	13.3	79.9
Education and health services, non-profit groups	34.4	17.3	90.3
Information and cultural industries	43.4	25.9	93.1
Workplace size			
1–19 employees	29.4	14.0	48.8
20–99 employees	72.1	41.9	82.7
100–499 employees	91.3	75.2	98.4
500+ employees	95.5	93.8	99.2

**Health-related benefits include life and/or disability insurance, supplemental medical and dental care*
**Pension benefits include pension plan and group RRSP*

Health-related benefits were the most prevalent non-wage benefits offered by employers. This was true for all industries and all workplace sizes. Again, as the size of workplaces increased, the incidence of both health-related and pension benefits also increased. The benefits were most likely to be found in finance and insurance and communication and other utilities**.**

Chart 15: Incidence of health-related and pension benefits, 2001

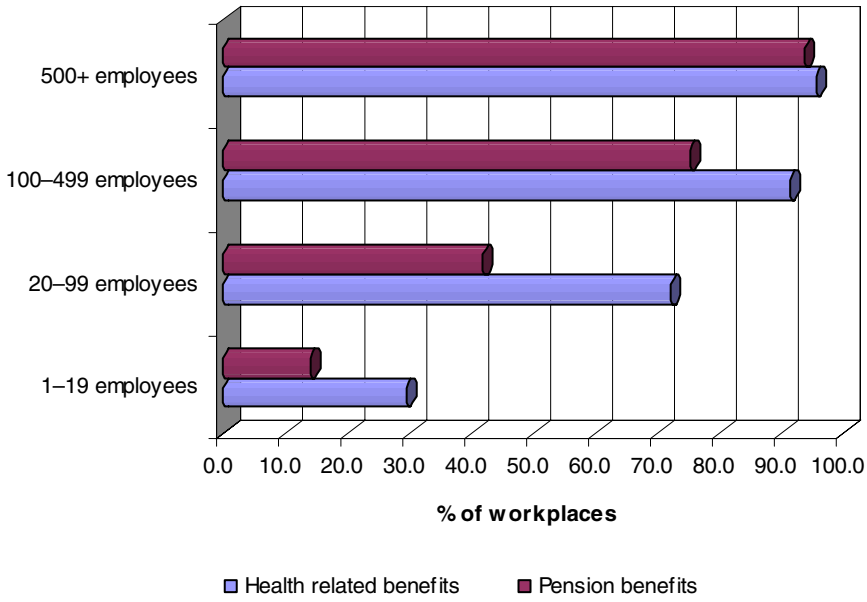


Table 15: Employees' non-wage benefits, 2001

Employee and Workplace Characteristics	% of employees who are included in :						
	Employer sponsored pension plan[1]	Group RRSP	Life/disability insurance plan	Supplemental medical insurance plan	Dental plan	Stock purchase plan	No non-wage benefits
Overall	31.7	17.9	57.2	51.8	55.3	6.8	28.8
Gender							
Men	32.4	19.8	62.0	57.1	60.7	7.7	25.9
Women	31.0	16.1	52.6	46.7	50.1	5.9	31.6
Age							
Less than 25	6.4	6.0	26.0	26.0	27.8	2.8[E]	52.7
25-44	30.1	18.4	59.3	54.0	58.8	7.3	25.7
45 or more	42.8	21.2	64.7	57.3	59.3	7.4	25.4
Education attainment							
Less than high school	18.3	11.2	40.3	35.0	36.9	2.4	45.0
High school	25.8	15.5	51.0	43.0	46.4	5.7	36.2
Some university or post-secondary	30.9	18.7	57.9	54.5	57.8	6.8	27.1
University	48.0	22.3	72.2	63.9	69.0	10.7	16.0
Occupation groups							
Managers	27.5	29.2	71.9	63.4	69.8	11.5	19.5
Professionals	52.4	18.7	74.5	65.9	71.7	9.2	13.3
Technical/Trades	27.9	17.7	55.1	50.4	53.9	6.1	31.5
Marketing/Sales	9.2	6.3	24.0	22.2	22.1	3.7[E]	56.0
Clerical/Administrative	35.9	20.5	59.3	53.4	55.8	6.4	23.7
Production workers	28.5	8.9	40.9	41.2	40.6	2.3	42.0

Table 15: Employees' non-wage benefits, 2001, *Continued*

Employment type							
Part-time	14.0	5.5	20.6	18.5	19.8	1.3	57.7
Full-time	35.0	20.2	64.1	58.1	62.0	7.8	23.4
Hourly wages							
Less than $12.00	6.6	5.7	24.5	24.4	24.3	1.9	57.9
12–19.99	30.2	18.2	61.0	53.4	56.5	5.5	24.7
$20.00 or more	51.0	26.5	77.4	70.3	76.7	11.5	11.5
Tenure							
Less than 1 year	22.4	13.3	53.7	49.6	53.7	7.8	29.3
1 to less than 5 years	24.9	16.4	51.1	47.9	52.0	7.2	33.7
5 to less than 10 years	34.9	21.2	58.8	53.1	56.2	6.0	27.6
10 to less than 20 years	47.2	20.7	69.5	59.4	61.4	5.3	20.2
20 or more years	55.7	23.6	76.2	64.3	66.7	7.5	15.7
Union status							
Unionized	63.0	17.9	74.3	66.2	69.1	4.0	11.1
Non-Unionized	19.5	17.9	50.6	46.3	50.0	7.9	35.7
Industry							
Forestry, mining, oil and gas extraction	50.8	34.5	72.4	69.4	75.0	21.2	17.9
Labour intensive tertiary manufacturing	24.0	14.1	50.3	44.5	45.9	7.6	39.3
Primary product manufacturing	47.4	22.4	73.4	66.6	70.0	6.4	15.3
Secondary product manufacturing	38.0	29.4	72.5	64.8	73.1	7.3	13.4
Capital intensive tertiary manufacturing	35.8	28.0	74.9	68.4	77.6	11.4	11.7
Construction	16.0	13.9	44.5	44.0	44.5	F	42.0
Transportation, warehousing and wholesale trade	28.1	26.4	66.6	61.3	63.8	7.5	21.6
Communication and other utilities	64.6	17.7	79.0	72.7	79.3	11.2	12.5
Retail trade and consumer services	8.4	9.3	33.2	31.2	33.6	4.3	49.7
Finance and insurance	51.3	30.4	77.6	69.6	76.7	29.6	8.9
Real estate, rental and leasing operators	17.4	11.3	44.1	38.6	39.8	2.9[E]	43.8
Business services	15.3	20.5	59.6	51.0	59.8	7.1	26.6
Education and health services, non-profit groups	59.7	15.8	66.9	58.7	59.1	F	19.7
Information and cultural industries	34.0	17.5	58.6	59.8	62.3	14.6	22.7
Workplace size							
1-19 employees	7.0	8.0	33.6	30.3	32.4	2.7	54.7
20-99 employees	20.6	19.4	55.4	52.2	54.9	6.7	27.7
100-499 employees	44.2	23.7	71.5	62.3	70.4	10.2	13.1
500+ employees	71.4	24.9	80.9	73.0	75.5	9.7	7.0

[1] *Before generating this table, the employer-sponsored pension plan data were modified. The first modification consisted in recoding workers as not having a registered pension plan if the employer reported not having any non-wage benefits for any employees at this location.*

Another modification was for Manitoba, where the legislation stipulates that full-time employees with at least 2 years of seniority must be eligible for an RPP, whenever an RPP is offered and, furthermore, participation in RPPs is compulsory. Thus, the fourth modification consisted in recoding a permanent full-time employee with at least 2 years of seniority as having an RPP if the firm reported having an RPP for all its permanent full-time employees. Similar modifications were applied when the firm offered an RPP to a) managers, b) non-managers non-unionized, c) non-managers unionized for workers in these occupations.

Table 15 shows that non-wage benefits are widespread. Only 3 in 10 workers do not have access to non-wage benefits. The most popular are health-related benefits, namely life and disability insurance plans, supplemental medical insurance plans and dental plans. Pension-related benefits were the second most prevalent.

Women, youth and those with less than high school education were less likely to have access to benefits. Looking at occupational groupings, marketing and sales employees were by far the least likely to receive non-wage benefits, while professional workers had the highest rate of coverage.

Working in a unionized job also increased the likelihood of receiving non-wage benefits. Being a full-time worker increases access to non-wage benefits. Again, as earnings increased, the likelihood of receiving non-wage benefits was higher.

The rate of access to non-wage benefits increased with the number of years in the current job. In the retail trade and consumer services industry where labour turnover is high, 1 out of 2 workers did not have access to non-wage benefits. In finance and insurance, where labour turnover is about half the rate found in the retail and consumer services industries this proportion represented only 1 in 11 workers.

As workplaces increased in size, the likelihood of receiving non-wage benefits also increased. While about 1 out of 2 workers did not have non-wage benefits in small-sized workplaces, over 9 out of 10 workers had access to these benefits in large-sized workplaces.

Chart 16: Selected non-wage benefits, 2001

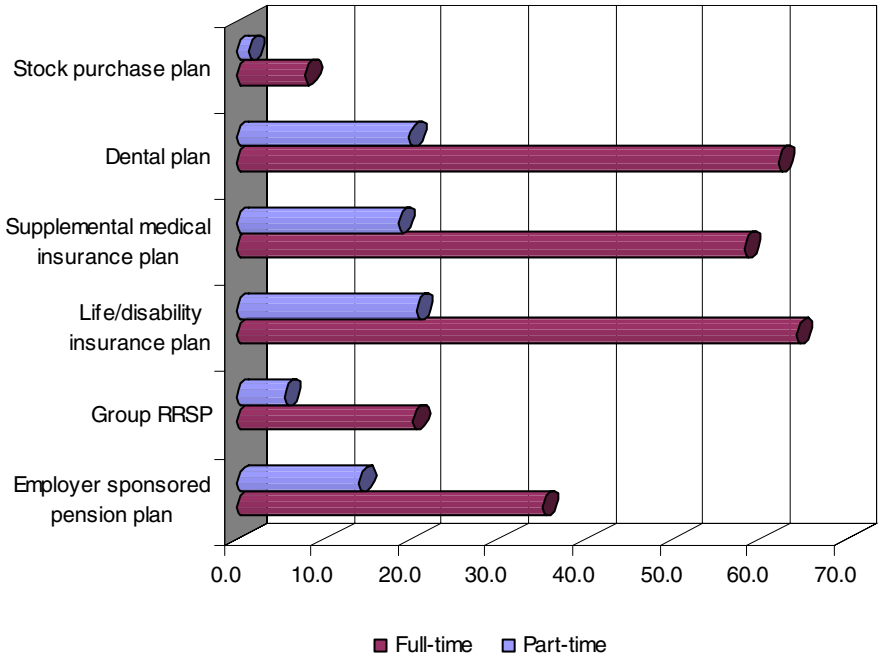


Table 16: Average hourly earnings and non-wage benefits, 2001

Employee and Workplace Characteristics	Non-wage benefits	
	No	Yes
	Hourly earnings	Hourly earnings
Overall	$13.67	$21.12
Gender		
Men	$14.63	$23.75
Women	$12.97	$18.36
Age		
Less than 25	$9.68	$12.00
25-44	$13.74	$21.24
45 or more	$16.38	$23.37
Education attainment		
Less than high school	$11.82	$14.59
High school	$13.14	$16.87
Some university or post-secondary	$13.52	$20.20
University	$19.55	$29.83
Occupation groups		
Managers	$18.23	$33.90
Professionals	$21.45	$27.12
Technical/Trades	$14.19	$19.18
Marketing/Sales	$9.60	$12.21
Clerical/Administrative	$12.59	$15.68
Production workers	$9.41	$14.51
Industry		
Forestry, mining, oil and gas extraction	$25.25	$27.03
Labour intensive tertiary manufacturing	$13.03	$17.38
Primary product manufacturing	$14.19	$21.63
Secondary product manufacturing	$16.52	$21.33
Capital intensive tertiary manufacturing	$15.18	$23.15
Construction	$17.83	$22.71
Transportation, warehousing and wholesale trade	$21.00	$22.01
Communication and other utilities	$13.94	$22.73
Retail trade and consumer services	$10.65	$13.57
Finance and insurance	$20.46	$30.19
Real estate, rental and leasing operators	$16.12	$19.34
Business services	$15.58	$23.49
Education and health services, non-profit groups	$15.21	$22.27
Information and cultural industries	$17.52	$23.90
Workplace size		
1-19 employees	$14.20	$18.19
20-99 employees	$12.20	$20.05
100-499 employees	$11.42	$20.06
500+ employees	$10.77	$25.34

Table 16: Average hourly earnings and non-wage benefits, 2001, *Continued*

Region		
Atlantic	$10.73	$17.06
Québec	$12.83	$19.82
Ontario	$13.79	$22.41
Alberta	$13.86	$20.71
British Columbia	$15.92	$22.24
Manitoba	$10.76	$18.19
Saskatchewan	$15.46	$17.31

Workers average hourly earnings were higher in workplaces that provided non-wage benefits. This was true regardless of gender, age group, educational attainment, occupation group, industry type, workplace size or region. Whether they worked in a non-wage benefits-providing workplace or not, male workers and those aged 45 or more and those with a university degree received higher monetary remuneration. The same holds for those employed in managerial and professional occupations. In organizational contexts where non-wage benefits were not provided, workers in forestry, mining, oil and gas extraction had the highest salary of all the 14 WES industries. However, in workplaces that did provide non-wage benefits, workers engaged in finance and insurance had the highest salary. It is worth noting that in workplaces where non-wage benefits were not provided, workers employed in small-sized firms had higher earnings than their counterparts working in larger workplaces.

Chart 17: Average hourly earnings and non-wage benefits, 2001

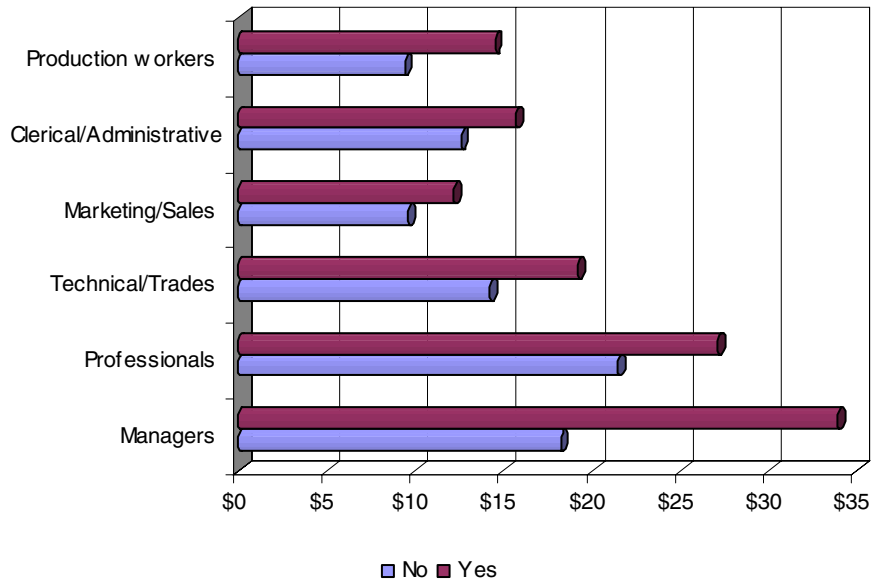


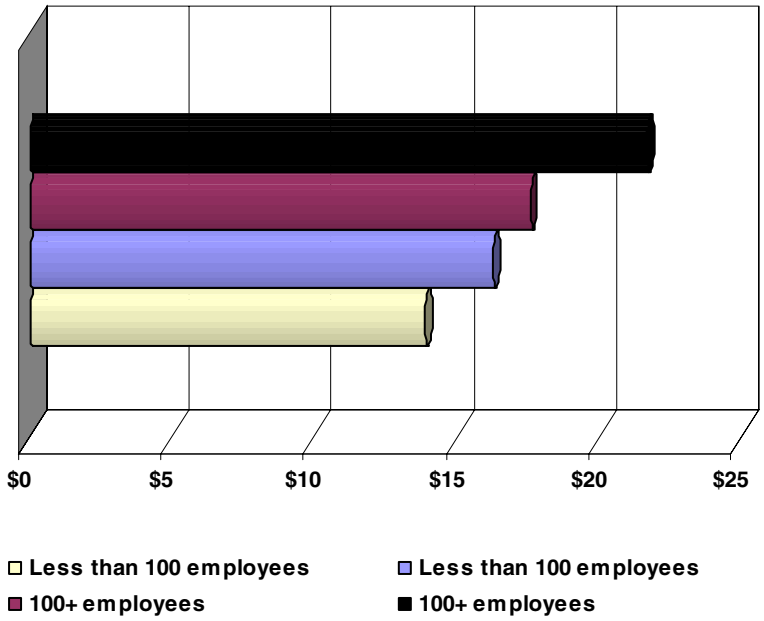
Table 17: Median hourly earnings by union coverage, 2001

	Union coverage			
	Without union coverage		With union coverage	
	Workplace size		Workplace size	
	Less than 100 employees	100+ employees	Less than 100 employees	100+ employees
	Hourly earnings	Hourly earnings	Hourly earnings	Hourly earnings
Overall	$13.89	$17.60	$16.30	$21.70
Industry				
Forestry, mining, oil and gas extraction	$19.00	$24.20	$19.95	$27.10
Labour intensive tertiary manufacturing	$12.00	$14.07	$14.39	$17.89
Primary product manufacturing	$14.73	$17.02	$15.10	$23.11
Secondary product manufacturing	$15.82	$21.63	$20.00	$20.90
Capital intensive tertiary manufacturing	$17.05	$19.53	$19.39	$24.93
Construction	$17.50	$21.10	$23.79	$20.19
Transportation, warehousing and wholesale trade	$16.30	$18.23	$20.00	$21.10
Communication and other utilities	$15.15	F	$21.47	$22.68
Retail trade and consumer services	$9.25	$11.15	$10.36	$12.32
Finance and insurance	$19.42	$22.09	$19.69	$25.57
Real estate, rental and leasing operators	$13.00	$23.53	$15.34	$16.57
Business services	$17.00	$21.58	$18.92	$18.55
Education and health services, non-profit groups	$15.60	$14.25	$16.30	$21.79
Information and cultural industries	$15.98	$24.38	$15.98	$26.85

Overall, as workplaces increased in size, median hourly earnings also increased. This was true in the presence or absence of union coverage. However, this increase in median earnings was more pronounced in organizations where there was union coverage (33.1% vs. 26.7%). Also, the union wage premium was higher in workplaces with 100 or more employees (23.3%) than in those with less than 100 employees (17.3%).

In almost all industries, workers employed in workplaces where there was union coverage fared better than their counterparts working in non-unionized workplaces. Workers in workplaces with 100 or more employees in the construction and business services industries and those employed in workplaces with less than 100 employees in education and health services were the only exceptions.

Chart 18: Median hourly earnings and union coverage, 2001



Closing Remarks

The relationships portrayed in Table 17 and throughout this compendium are undoubtedly affected by a wide array of moderating variables whose influences are not captured in the descriptive approach adopted in this compendium. The Workplace and Employee Survey (WES) provides a large gamut of workplaces and employee characteristics that can be used to shed further light on the many research hypotheses punctuating this compendium.

Appendix A: Concepts and Methods

OBJECTIVES

The Workplace and Employee Survey (WES) is designed to explore a broad range of issues relating to employers and their employees. The survey aims to shed light on the relationships among competitiveness, innovation, technology use and human resource management on the employer side and technology use, training, job stability and earnings on the employee side.

The survey is unique in that employers and employees are linked at the micro data level; employees are selected from within sampled workplaces. Thus, information from both the supply and demand sides of the labour market is available to enrich studies on either side of the market.

SAMPLE SIZES AND RESPONSE RATES

WES was conducted for the first time during the summer (employer survey portion) and fall (employee survey portion) of 1999. 6,351 workplaces and 24,597 employees responded to the survey, representing response rates of 94% and 83%, respectively. The sampled locations are followed over time, with the periodic addition of new locations to the sample to maintain a representative cross section. Employees are followed for two years: a fresh sample of employees being drawn on every second survey occasion (i.e. first, third, fifth). This longitudinal aspect allows researchers to study both employer and employee outcomes over time in the evolving workplace. For 2001, Appendix A Table 1 below provides sample sizes and estimated population and Appendix A Table 2 provides the achieved response rates.

Appendix A Table 1: Sample sizes and estimated populations, 2001

Workplace Characteristics	Workplaces			Employees		
	Number of respondents	Estimated population	%	Number of respondents	Estimated population	%
Overall	6,223	701,123	100.0	20,377	11,605,442	100.0
Industry						
Forestry, mining, oil and gas extraction	265	10,362	1.5	890	187,513	1.6
Labour intensive tertiary manufacturing	380	21,886	3.1	1,203	568,203	4.9
Primary product manufacturing	303	8,849	1.3	1,177	426,016	3.7
Secondary product manufacturing	290	13,324	1.9	972	410,676	3.5
Capital intensive tertiary manufacturing	364	17,989	2.6	1,403	665,747	5.7
Construction	569	50,977	7.3	1,692	481,569	4.1
Transportation, warehousing and wholesale trade	685	68,828	9.8	2,271	1,077,229	9.3
Communication and other utilities	408	9,593	1.4	1,063	232,219	2.0
Retail trade and consumer services	568	229,893	32.8	1,651	2,843,771	24.5
Finance and insurance	462	34,341	4.9	1,686	543,627	4.7
Real estate, rental and leasing operators	336	29,668	4.2	852	196,179	1.7
Business services	524	101,008	14.4	1,501	1,162,075	10.0
Education and health services, non-profit groups	707	88,930	12.7	2,808	2,457,291	21.2
Information and cultural industries	362	15,474	2.2	1,208	353,327	3.0
Workplace sizes						
1–19 employees	2,725	604,050	86.2	4,791	3,522,412	30.4
20–99 employees	1,726	82,686	11.8	6,795	3,458,593	29.8
100–499 employees	1,266	12,345	1.8	5,409	2,151,004	18.5
500+ employees	506	2,042	0.3	3,382	2,473,433	21.3
Region						
Atlantic	755	46,952	6.7	2,248	603,288	5.2
Quebec	1,407	144,216	20.6	4,320	2,658,028	22.9
Ontario	1,528	309,091	44.1	5,902	5,309,695	45.8
Manitoba	397	19,348	2.8	1,241	379,120	3.3
Saskatchewan	336	21,585	3.1	1,030	271,409	2.3
Alberta	874	68,101	9.7	2,516	1,060,126	9.1
British Columbia	926	91,829	13.1	3,120	1,323,776	11.4

Appendix A Table 2: Collection response rates, 2001

Workplace Characteristics	Workplace response rate (%)	Employee response rate (%)
Overall	85.8	86.9
Industry		
Forestry, mining, oil and gas extraction	86.4	88.1
Labour intensive tertiary manufacturing	80.0	84.8
Primary product manufacturing	87.8	88.2
Secondary product manufacturing	84.9	88.1
Capital intensive tertiary manufacturing	85.8	88.4
Construction	87.0	84.9
Transportation, warehousing and wholesale trade	82.9	87.7
Communication and other utilities	85.2	84.9
Retail trade and consumer services	84.3	85.8
Finance and insurance	83.2	92.1
Real estate, rental and leasing operators	88.0	86.4
Business services	86.9	85.7
Education and health services, non-profit groups	90.1	85.2
Information and cultural industries	90.4	88.2
Region		
Atlantic	91.8	86.4
Québec	91.7	86.7
Ontario	92.0	87.3
Manitoba	87.7	87.1
Saskatchewan	91.7	92.1
Alberta	88.3	83.9
British Columbia	88.1	87.8

Target population

The target population for the employer component is defined as all business locations operating in Canada that have paid employees, with the following exceptions:

a) Employers in Yukon and Northwest Territories

b) Employers operating in crop production and animal production; fishing, hunting and trapping; religious organizations; private households and public administration.

The target population for the employee component is all employees working in the selected workplaces who receive a Customs Canada and Revenue Agency T-4 Supplementary form.

Survey Population

The survey population is the collection of all units for which the survey can realistically provide information. The survey population may differ from the target population due to operational difficulties in identifying all the units that belong to the target population.

WES draws its sample from the Business Register (BR) maintained by the Business Register Division of Statistics Canada, and from lists of employees provided by the surveyed employers. The Business Register is a list of all businesses in Canada, and is updated each month using data from various surveys, profiling of businesses and administrative sources.

REFERENCE PERIOD

The reference period for WES is mainly the 12-month period ending in March of the survey year. Some questions in the workplace portion covered the last pay period of March of the survey year.

SAMPLE DESIGN

Two frames are used in the Workplace and Employee survey. The survey frame consists of a list of all relevant units and is used for sample design and selection; ultimately, it provides contact information for the selected units.

i) Workplace Survey

The survey frame for the Workplace component of WES was created from the information available on the Statistics Canada Business Register.

Prior to sample selection, the business locations on the frame were stratified into relatively homogeneous groups called *strata*, which were then used for sample allocation and selection. The WES frame was stratified by industry (14), region (6), and size (3), which was defined using estimated employment. The size stratum boundaries were typically different for each industry/region combination. The cut-off points defining a particular size stratum were computed using a model-based approach. The sample was selected using Neyman allocation. This process generated 252 strata with 9,043 sampled business locations in 2001.

All sampled units were assigned a sampling weight (a raising factor attached to each sampled unit to obtain estimates for the population from a sample). For example, if two units were selected at random and with equal probability out of a population of ten units, then each selected unit would represent five units in the population, and it would have a sampling weight of five.

The inaugural WES survey collected data from 6,351 out of the 9,144 sampled employers. The remaining employers were a combination of workplaces determined to be either out-of-business, seasonally inactive, holding companies, or out-of-scope. The majority of non-respondents were owner-operators with no paid help and in possession of a payroll deduction account.

ii) Employee Survey

The frame for the employee component of WES was based on lists of employees made available to interviewers by the selected workplaces. A maximum of 24 employees was sampled using a probability mechanism. In workplaces with three or four employees, all employees were selected.

Data Collection

Data collection, data capture, preliminary editing and follow-up of non-respondents were all done in Statistics Canada Regional Offices. Interviewers collected the workplace and employee survey data through computer assisted telephone interviews (CATI).

Statistical Edit and Imputation

In WES great care is given to the prevention of errors or incorrectly recorded values during the data collection process. This is accomplished via extended input editing in the computer questionnaire application. Following collection, the data are analyzed extensively and ratio editing is used to determine outlying observations based on robust outlier detection programs.

Respondents who opted not to participate in the survey – *total non-response* – were removed and the weights of the remaining units were adjusted upward to preserve the representativity of the sample. For respondents who did not provide all required fields – *item non-response* – a statistical technique called *imputation* was used to fill in the missing values for both employers and employees. Three imputations methods were used, namely weighted hot deck, trend and ratio.

Estimation

The reported (or imputed) values for each workplace and employee in the sample are multiplied by the weight for that workplace or employee; these weighted values are summed up to produce estimates. An initial weight equal to the inverse of the original probability of selection is assigned to each unit. The initial survey weights are calibrated to agree with known population totals. These adjusted weights are then used in forming estimates of means or totals of variables collected by the survey.

Variables for which population totals are known are called auxiliary variables. They are used to calibrate survey estimates to increase their precision. Each business location is calibrated to known population totals at the industry/region level. The auxiliary variable used for WES is total employment obtained from the Survey of Employment, Payrolls and Hours.

Estimates are computed for many domains of interest such as industry and region. The table below provides an overview of how the weights have been used in preparing the compendium tables.

Appendix A Table 3: Weight used in estimation and analysis

Type of tables	1999	2000	2001	Type of analysis
Cross-sectional Employer	Workplace final weight		Workplace final weight	Cross-sectional
Cross-sectional Employee	Employee final weight		Employee final weight	Cross-sectional
Longitudinal Employer	Workplace final weight			Longitudinal
Longitudinal Employee		Employee final weight		Longitudinal
Cross-sectional linked Employer-Employee	Linked employee weight			Employer Linked Analysis
Longitudinal linked Employer-Employee		Employee final weight		Employee Linked Analysis

DATA QUALITY

Any survey is subject to errors. While considerable effort is made to ensure a high standard throughout all survey operations, the resulting estimates are inevitably subject to a certain degree of error. Errors can arise due to the use of a sample instead of a complete census, from mistakes made by respondents or interviewers during the collection of data, from errors made in keying in the data, from imputation of a consistent but not necessarily correct value, or from other sources.

Sampling Errors

The true sampling error is unknown; however, it can be estimated from the sample itself by using a statistical measure called the *standard error*. When the standard error is expressed as a percentage of the estimate, it is known as the relative standard error or *coefficient of variation*.

Non-Sampling Errors

Some non-sampling errors will cancel out over many observations, but systematically occurring errors (i.e. those that do not tend to cancel) will contribute to a bias in the estimates. For example, if respondents consistently tend to underestimate their sales, then the resulting estimate of the total sales will be below the true population total. Such a bias is not reflected in the estimates of standard error. As the sample size increases, the sampling error decreases. However, this is not necessarily true for the non-sampling error.

Coverage Errors

Coverage errors arise when the survey frame does not adequately cover the target population. As a result, certain units belonging to the target population are either excluded (under-coverage), or counted more than once (over-coverage). In addition, out-of-scope units may be present on the survey frame (over-coverage).

Response Errors

Response errors occur when a respondent provides incorrect information due to misinterpretation of the survey questions or lack of correct information, gives wrong information by mistake, or is reluctant to disclose the correct information. Gross response errors are likely to be caught during editing, but others may simply go through undetected.

Non-response Errors

Non-response errors can occur when a respondent does not respond at all (total non-response) or responds only to some questions (partial non-response). These errors can have a serious impact on estimates if the non-respondents are systematically different from the respondents in survey characteristics and/or the non-response rate is high.

Processing Errors

Errors that occur during the processing of data represent another component of the non-sampling error. Processing errors can arise during data capture, coding, editing, imputation, outlier treatment and other types of data handling. A coding error occurs when a field is coded erroneously because of misinterpretation of coding procedures or bad judgement. A data capture error occurs when data are misinterpreted or keyed in incorrectly.

Joint Interpretation of Measures of Error

The measure of non-response error and the coefficient of variation must be considered jointly to assess the quality of the estimates. The lower the coefficient of variation and the higher the response fraction, the better will be the published estimate.

Confidentiality

The information presented in this publication has been reviewed to ensure that the confidentiality of individual responses is respected. Any estimate that could reveal the identity of a specific respondent is declared confidential, and consequently not published.

Response/Non-response

a) ***Response rate:*** includes all units, which responded by providing "usable information" during the collection phase.

b) ***Refusal rate:*** includes those units which were contacted but refused to participate in the survey.

Appendix B: Industry definitions

WES industry codes	Industry descriptions	North American Industry Classification System (NAICS)
01	Forestry, mining, oil and gas extraction	113, 1153, 211, 212, 213
02	Labour intensive tertiary manufacturing	311, 312, 313, 314, 315, 316, 337, 339
03	Primary product manufacturing	321, 322, 324, 327, 331
04	Secondary product manufacturing	325, 326, 332
05	Capital intensive tertiary manufacturing	323, 333, 334, 335, 336
06	Construction	231, 232
07	Transportation, warehousing and wholesale trade	411, 412, 413, 414, 415, 416, 417, 418, 419, 481, 482, 483, 484, 485, 486, 487, 488, 493
08	Communication and other utilities	221, 491, 492, 562
09	Retail trade and consumer services	441, 442, 443, 444, 445, 446, 447, 448, 451, 452, 453, 454, 713, 721, 722, 811, 812
10	Finance and insurance	521, 522, 523, 524, 526
11	Real estate, rental, leasing operations	531, 532
12	Business services	533, 541, 551, 561
13	Education and health services	611, 621, 622, 623, 624, 813 (except 8131)
14	Information and cultural industries	511, 512, 513, 514, 711, 712
Industrial activities excluded from WES		
Crop / animal production and support		111, 112, 1151, 1152
Fishing, hunting and trapping		114
Religious organizations		8131
Private households		814
Federal government public administration		911
Provincial and territorial public administration		912
Local, municipal and regional public administration		913
Aboriginal public administration		914
International and other extra-territorial public administration		919