

Working at home

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Technological advances have made it possible for workers in many industries to work at home. This form of work arrangement, however, is not new. Prior to the Industrial Revolution, many trades were carried out at home. A door was commonly all that stood between the family quarters and the store or workshop. Even after urban workers had been assembled in factories, piece work done at home (particularly by women in the garment industry) enabled businesses to vary production volume and reduce costs, and provided work for unskilled workers (Boris, 1996). Today, with the development of tools such as the personal computer and the Internet, many workers – even those whose jobs require frequent exchange of information with peers – have the opportunity to work at home.

In November 1995, 16% of all workers regularly performed at least part of their usual work hours at home. One-half of these workers were paid by an employer; the other half were self-employed. More than one million employees worked at least part of the time at home. Slightly more than half of all self-employed workers (53% or 1.1 million) operated a business from their home.¹ This article examines employees who regularly perform paid work at home as part of their main job (see *Data sources and definitions*). It discusses trends in this practice, notes occupations and industries in which it occurs most frequently, and considers the quality of such jobs and the characteristics of the employees.

Working at home is on the rise

Between 1991 and 1995, the proportion of employees working at home increased from 6% to 9%. While the rise may be attributable in part to a

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Data sources and definitions

The **Survey of Work Arrangements (SWA)** has been conducted twice as a supplement to the Labour Force Survey: in November 1991, sponsored by Statistics Canada, and again in November 1995, sponsored by Human Resources Development Canada. The 1995 SWA adopted a new definition of working at home, which included regularly paid overtime (previously excluded). Consequently, the results from the two surveys are not directly comparable. Some information can be compared, however.

In 1991, the following question was asked:

“Some people work all or some of their regularly scheduled hours at home. Excluding overtime, does ... usually work any of his/her scheduled hours at home?”

In 1995, this revised version was used:

“Some people do all or some of their paid work at home. Does ... usually do any of his/her paid work at home?”

Data were collected on a worker's **main job**, that is, the one to which most hours were devoted during the week in

question, when a worker held more than one job.

In this article, work at home refers to any paid work carried out at home. This definition includes so-called **teleworkers**, that is, workers who use telecommunications tools or networks (such as computers and the Internet) to carry out their duties.²

The **census** collected information on place of work in 1971, 1981, 1991 and 1996. For the purpose of the census, a worker is considered to work at home if he or she does so at least three days a week. Respondents may not claim to work both on an employer's premises and at home. Recent data are not directly comparable with those from preceding years, because only the 1996 Census asked for the street address of the workplace.

The **General Social Survey** collects data on social trends. The 1992 survey was concerned with time use. In addition to collecting information on work arrangements, it included 10 questions designed to measure perceptions of time pressures and, by extension, stress levels of people who work at home.

change of wording in the Survey of Work Arrangements,³ it is borne out by a strong increase in the United States. The proportion of American employees working at home increased from 9% in May 1991 to 17% in May 1997.⁴ If the American trend is any indication of the pattern in Canada, the number of people working at home will probably continue to increase.

Census figures show an increase of working at home among employees since 1971. For example, the proportion of those who worked at home at least three days a week grew from 2.8% in 1971 to 3.0% in 1981 and 4.0% in 1991.⁵

The Canadian increase between 1991 and 1995 was widespread. According to the SWA, all goods industries (primary, manufacturing and construction) and most service industries were affected.⁶ Working at home was more common in the service sector (10%) than in goods industries (6%) (Table 1). In addition to the role played by services, factors affecting the growth of this practice include the development of communications technologies, the decreasing cost of personal computers and other office equipment, and the federal government's adoption of a work-at-home policy based on a 1992 pilot

Table 1
Employees working at home, by industry

	Employees					
	Total		Work at home			
			Number	Distribution	Proportion	
	'000	%	'000	%	%	
All industries	11,055	100	1,003	100	9	
Goods sector *	2,958	27	174	17	6	
Primary	341	3	36	4	10	
Agriculture	111	1	22	2	19	
Manufacturing	2,011	18	102	10	5	
Durable	1,015	9	48	5	5	
Non-durable	996	9	53	5	5	
Construction	461	4	28	3	6	
Service sector	8,097	73	829	83	10	
Transportation, storage and communication	728	7	57	6	8	
Transportation and storage	425	4	26	3	6	
Communication	303	3	31	3	10	
Trade	1,859	17	110	11	6	
Wholesale	520	5	63	6	12	
Retail	1,338	12	47	5	4	
Finance, insurance and real estate	641	6	68	7	11	
Finance and insurance	480	4	37	4	8	
Real estate operators and insurance agencies	161	1	30	3	19	
Business services	620	6	73	7	12	
Government services	762	7	53	5	7	
Educational services	939	8	322	32	34	
Health and social services	1,229	11	73	7	6	
Accommodation, food and beverage services	1,319	11	73	7	6	

Source: Survey of Work Arrangements, 1995

* Includes utilities.

project. In addition, a number of large companies (for example, IBM and Bell Canada) are conducting their own experimental programs on working at home. Reflecting the trend among employees, more and more self-employed workers are also conducting business from home (Pérusse, forthcoming).

Advantages and disadvantages

Perhaps every worker dreams from time to time of being able to spend at least one day a week working at home, banishing all thoughts of traffic and bad weather. Most workers who put in hours at home in November 1995 did so, however, for work-related reasons (cited by 8 out of 10 such workers). Some 44% said they had no choice; 14% did so to achieve better working conditions; and 8% used home as the usual workplace. Only 20% worked at home for personal reasons.

This arrangement does not suit all employees and employers (see *Advantages and disadvantages of working at home*).⁷ Research has shown that the more disciplined, solitary, autonomous and qualified employees are, the more satisfied they are with working at home (St-Onge and Lagassé, 1995a). Although the practice is commonly believed to reduce the stress of balancing work

Advantages and disadvantages of working at home

Advantages

Employers

- Increase in employee productivity
- Reduction in expenses for work space
- Easier recruitment and retention of staff

Employees

- Increased scheduling flexibility
- Easier to reconcile work and family responsibilities
- Reduced expenses for transportation, clothing and food
- Less time spent travelling

Disadvantages

- Problems related to co-ordination and communication with employees
- Lack of control over work⁸
- Problems with information security
- Smaller social circle
- Fewer career possibilities
- Possible increase in workload⁹

and family life, the General Social Survey on time use suggests that these workers are neither more nor less stressed than workers in general, regardless of their occupation or number of children (Fast and Frederick, 1996). Another conventional belief is that working at home reduces highway congestion and transport-related pollution. This has not been proven; in fact, according to an American study, such workers compensate by making other kinds of trips (Pratte, 1996).

In addition to being able to reduce office space and parking costs by having employees work at home, many employers are spared additional costs for supplies at home. According to the SWA, 50% of such workers said their employer provided no supplies for working at home; another 12% reported that no supplies were required (Table 2). Despite this, computers or other equipment are indispensable in many occupations. Indeed, 38% said that some equipment was provided or costs were reimbursed. For instance, one home-based worker in 5 was provided with a computer in November 1995; one in 7 with a modem; and one in 10 with a fax. A large proportion of white-collar workers¹⁰ (especially teachers) said they were provided with nothing by their employer.

It depends on what you do

Workers who worked some of their hours at home tended to be employed in industries suited to this form of work, particularly education (32%) (Table 1).

In addition, working at home tended to be favoured by those who worked in isolation, or who used communications technologies. For example, teachers were more likely to spend some of their working hours at home. In fact, 43% of teachers did so part of the time (Table 3). Because of their large numbers, teachers made up 28% of all employees who regularly did paid work at home. In contrast, tasks

Table 2
Equipment supplied by employer for work at home

	Nothing supplied	No equipment required	Equipment supplied or costs reimbursed		
			Total	Computer	Modem, fax or other
			%		
All occupations *	50	12	38	22	25
Directors, managers and administrators	38	12	50	34	37
Professionals	65	12	23	14	15
Teaching	72	13	15	7	7
Clerical	30	18	52	34	40
Sales	42	--	49	23	27
Service	55	--	--	--	--

Source: Survey of Work Arrangements, 1995

* Includes workers in primary occupations; processing, machining and fabrication; construction trades; transport equipment operating; material handling; and other skilled workers.

requiring direct contact with customers or colleagues, as well as services provided in a specific place, tended to be poorly suited to this arrangement.

Other occupations in which a large proportion of employees worked at home in November 1995 included directors, managers and administrators (17%) and farmers, horticulturists and animal breeders (16%). It was less common for workers in product fabricating, assembly and repair (2%) to work at home, because most of their tasks were performed in shops and factories. Similarly, few specialized service workers (3%) worked at home. For example, most salaried barbers and hairdressers worked in salons, while those who worked at home were generally self-employed. Medical and health workers were also unlikely to work at home, because they provided services in a specific location. Only 4% of this occupational group (including nurses, dieticians and laboratory dental technicians) worked at home.¹¹

The odd hour here and there

Even though working at home is increasingly common, employees who spend most of their working time there remain the exception. Among the one million workers who worked at home in November 1995, 421,000 did so less than five hours a week. Considering full- and part-time workers together, however, 206,000 spent at least half of their usual working hours at home, including 143,000 who worked only at home. Employees who performed at least 30 minutes of work at home each week worked an average 12 hours at home; those who spent at least half of their working time at home devoted 29 hours; and those who worked full time at home put in 31 hours.

Although 43% of teachers regularly did paid work at home, for many this involved only a few hours' work. The 206,000 teachers who did more than half an hour of paid work per week at home averaged 10 hours,

Table 3
Employees working at home, by occupation

	Employees						
	Work at home						Average weekly time**
	Total		Number	Distribution	Proportion	Minimum 30 minutes	
	'000	%	'000	%	%	'000	hours
All occupations	11,055	100	1,003 *	100	9	796	12
Directors, managers and administrators	1,605	15	271	27	17	212	12
Professionals	2,246	20	424	42	19	318	10
Natural sciences, engineering and mathematics	466	4	43	4	9	34	8
Social sciences	245	2	30	3	12	22	10
Religion	26	--	16	2	60	--	--
Teaching	664	6	286	28	43	206	10
Medicine and health	654	6	26	3	4	--	--
Artistic, literary and recreational	190	2	24	2	12	--	--
Clerical	1,843	17	105	10	6	99	13
Sales	945	9	97	10	10	75	11
Service	1,402	13	39	4	3	37	29
Primary	197	2	18	2	9	16	19
Farming, horticulture and animal breeding	106	1	17	2	16	15	19
Processing, machining and fabricating	1 504	14	26	3	2	--	--
Product fabricating, assembling and repair	956	9	23	2	2	--	--
Construction trades; transport equipment operating; material handling; and other skilled workers	1,311	12	24	2	2	18	6

Source: Survey of Work Arrangements, 1995

* Includes 57,000 workers who did not report number of hours worked at home, as well as 150,000 who said they regularly put in less than 30 minutes work at home each week.

** These are hours worked by employees who did at least 30 minutes work at home each week.

although 15% performed at least half of their work at home (about 26 hours per week). While office workers and specialized service workers were less likely than professionals or administrators to work at home, they tended to work more hours on average. In addition, service employees who worked at home at least half the time did so 56 hours per week on average, far more than workers in all other occupations. Farmers, horticulturists and animal breeders were almost as likely to work at home as managers, but their situation was quite different: most home workers on farms (82% of those who worked at least 30 minutes

per week at home) worked *only* at home (only 21 hours per week on average). Managers, on the other hand, were less likely to work only at home, but put in more hours when they did so (35 hours).

Job quality

On average, employees who worked at home in November 1995 were better paid (\$20.15 per hour) than their peers who worked on the employer's premises (\$ 14.65 per hour) (Table 4). In addition, they were more likely to be covered by employment benefits. For example, 59% had an employer-

sponsored retirement plan, compared with 50% of other workers. These benefits were not necessarily related to the place of work, but rather to the age, occupation and industry of the employees. Such workers were more likely to be between 25 and 54, professional (primarily teachers) and working in service industries.¹²

The relationship between working at home and income and employment benefits can be measured, in part, by standardizing the data¹³ by selected characteristics (age, sex, industry and occupation). The results of this technique indicate that regardless of age,

Table 4
Hourly earnings and employment benefits

	Standardized average					
	Non-standardized data		Sex, age, occupation *		Sex, age, industry *	
	At home	Employer's premises	At home	Employer's premises	At home	Employer's premises
	\$/hour					
Hourly earnings	20.15	14.65	17.07	15.07	18.90	14.90
	%					
Pension plan	59	50	45	51	50	51
Supplementary health plan	66	58	53	59	60	59
Dental plan	62	54	52	55	58	54
Paid sick leave	70	56	56	57	64	56
Paid vacation leave	69	73	66	73	71	73

Source: Survey of Work Arrangements, 1995

* Three age groups, six occupation groups, eight industry groups.

sex and occupation, employees who work at home earn more per hour (\$17.07) than other workers in similar categories (\$15.07), even though the difference is considerably less than when non-standardized data are used.¹⁴

However, standardizing the data changes the picture regarding employment benefits. A lower proportion of people who work at home tend to enjoy these benefits. For example, only 45% benefit from an employer-sponsored pension plan, compared with 51% of others.

Standardized data for age, sex and industry continue to show a difference between those who work at home and those who do not, though the gap is less pronounced than it is when non-standardized data are used. Therefore, age, sex, occupation and industry characteristics of those who work at home only partly explain their superior wages and benefits.

Employee characteristics

Employees living with an employed spouse were more likely to work at home in November 1995 (12%) than sole breadwinners (8%), persons living alone (7%), or lone parents (10%) (Table 5).

Because working at home offers parents better opportunities to balance work and family, it is most often observed when there are children under 16 present. Furthermore, the practice is most prevalent among

workers (both men and women) of child-rearing age. For example, only 3% of young people (aged 15 to 24) regularly spent part of their working hours at home in November 1995, compared with 10% of workers aged

Table 5
Employees working at home, by sex and family type

	Both sexes	Men	Women
	%		
All paid workers	9	8	10
Youngest child under 6	11	10	12
Youngest child between 6 and 15	11	11	11
No children under 16	8	7	9
In a couple	11	10	12
Youngest child under 6	11	10	13
Youngest child between 6 and 15	12	12	12
No children under 16	10	9	11
Sole breadwinners	8	9	6
Youngest child under 6	10	10	--
Youngest child between 6 and 15	11	11	--
No children under 16	6	7	--
Dual-earner couples	12	11	13
Youngest child under 6	12	10	13
Youngest child between 6 and 15	12	12	13
No children under 16	11	10	12
Lone parents	10	--	9
Unattached individuals	7	6	9

Source: Survey of Work Arrangements, 1995

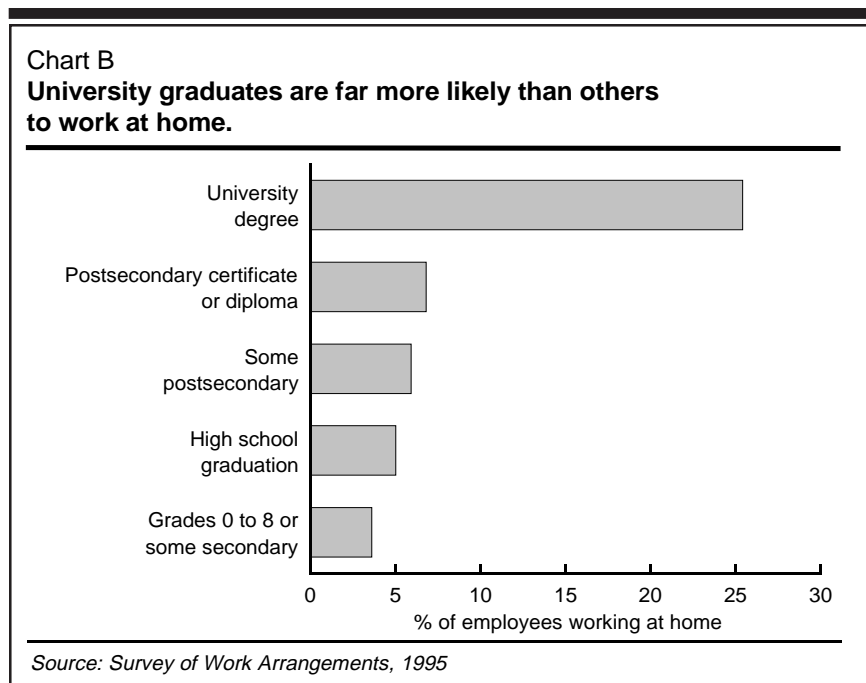
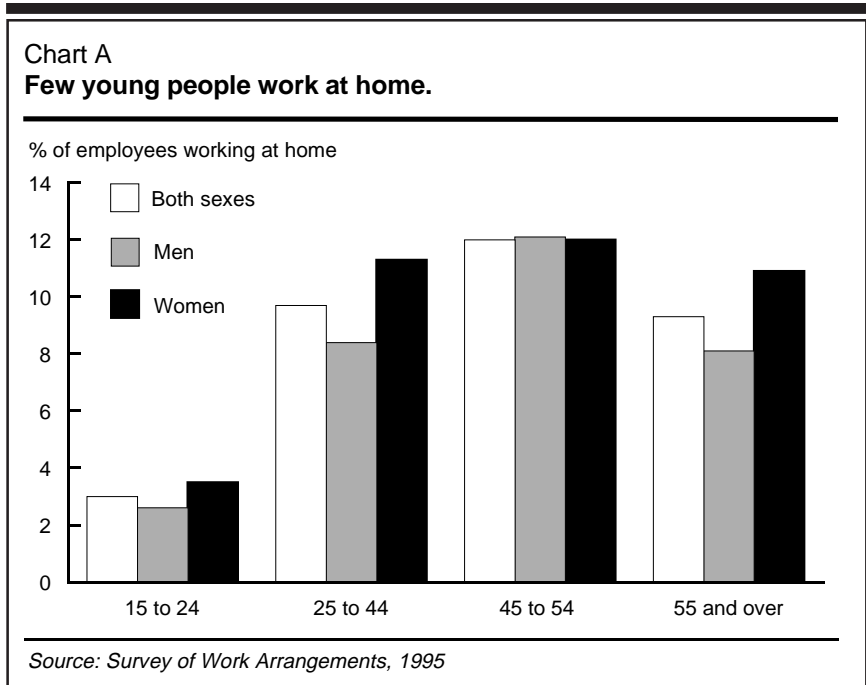
25 to 44, and 12% aged 45 to 54. For workers aged 55 and over, working at home decreased to an average 9%. Women were more likely to work at home than men (10% versus 8%), especially if they were raising families (Chart A).

Education, which is strongly correlated with occupation, shows a distinct pattern for employees working at home. While 4% of those with a primary or partial secondary education had this arrangement in November 1995, and 7% of those with a high school diploma or non-university postsecondary certificate did so, 25% of workers with a university degree worked at home (Chart B).

Working at home was also more prevalent among workers who held more than one job. For example, 11% of those with multiple jobs worked at home in their main job, compared with 9% of workers with only one job. The proportion of employees who worked at home in their second paid job is unknown but conceivably just as great, since jobs providing supplementary income often involve tasks that can be carried out at home.

No more traffic jams!

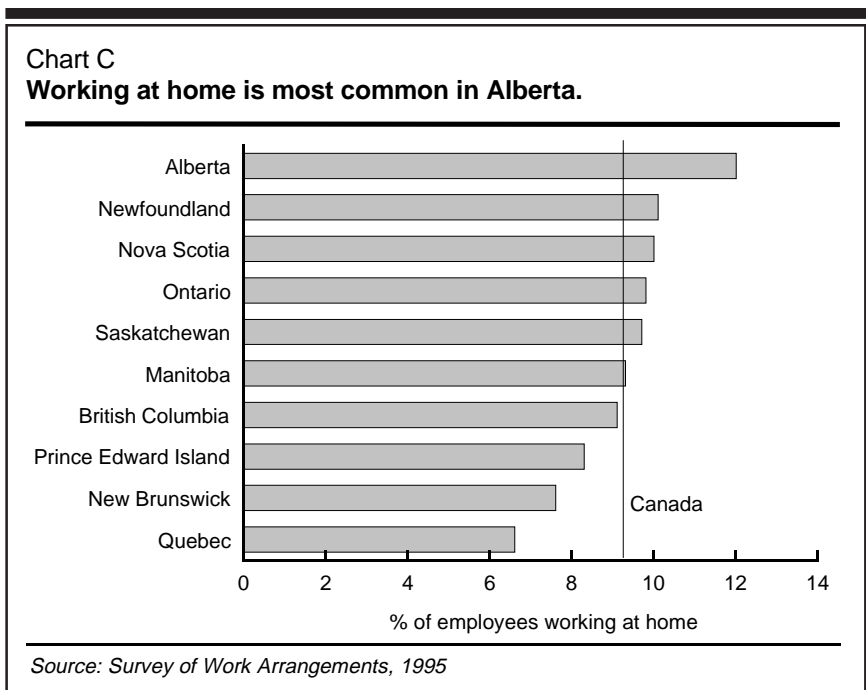
The Industrial Revolution moved workers from the home to the factory. Ironically, technological advances have made it possible for workers to live in rural areas while maintaining frequent contact with the office in town: in November 1995, only 9% of urban workers spent part of their working time at home, compared with 10% of rural workers. At the same time, workers away from large centres have been able to avoid long commutes to work. Data for highly remote regions, while less reliable because of small sample sizes, appear to indicate that working at home was even more prevalent in those areas. The practice was also more common in certain provinces: in Alberta, for example, 12% of employees worked at home, whereas in Quebec only 7% of workers did so (Chart C).



Conclusion

Working at home has become increasingly common. While many people do so only a few hours a week, the number who carry out at least half of

their working hours at home is increasing. Workers more likely to work at home include those aged 45 to 54, women, teachers, managers, farmers and service industry workers.



Because most employees work at home for work-related rather than personal reasons, this trend is probably of equal benefit to employers. □

■ **Notes**

1 Independent business people have their own motivations and working conditions; their situation will be the subject of a separate study (Pérusse, forthcoming).

2 St-Onge and Lagassé (1995b) present several definitions of working at home.

3 Usual paid overtime was included in 1995 (see *Data sources and definitions*). However, the number of usual paid overtime hours is small compared with total hours. An employee who works 40 hours per week at an employer's premises and who declares 10 overtime hours at home would work at home 20% of the time. Therefore, the new, more inclusive, definition increases the number of workers who report only a small proportion of hours worked at home. The change in the question had little effect on the number of employees who carried out at least half of their work hours at home. In 1995,

206,000 employees worked at home most of the time. This represented an increase of 59,000 workers since 1991.

4 The U.S. Bureau of Labor Statistics conducted three surveys, in May 1985, May 1991 and May 1997. The 1991 and 1997 definitions of working at home are generally comparable, and similar to that of the 1995 SWA (Deming, 1994 and U.S. Bureau of Labor Statistics, 1998).

5 Data from the 1996 Census are not directly comparable with those from previous years.

6 Only the finance, insurance and real estate industry, which experienced profound structural changes in this period, showed a slight decrease.

7 St-Onge and Lagassé (1995b) review the main North American studies on this topic, while Codère (1995) explains the advantages and disadvantages in detail.

8 In a private survey conducted among large and medium-sized Canadian companies (KPMG, 1997), three-quarters of employers disliked the lack of personal contact with employees, and close to half mentioned the lack of direct control. In fact, remote supervision of employees

involves a complete redefinition of this concept, since the number of hours spent performing a task is often a criterion for evaluating quality of work.

9 Unions have sometimes argued that workload might increase for those who work at home – who often put in long hours to achieve fixed performance objectives – and for other workers who are expected to put in the same effort.

10 White-collar workers include managers, professionals, and clerical, sales and service workers.

11 Most physicians are self-employed.

12 On the other hand (but to a lesser extent), they were also more likely to be women, non-unionized and employed by small businesses, factors that account for a lower rate of benefit coverage.

13 Data standardization is a statistical technique that makes it possible to assess observed differences in a particular characteristic between one group and another, assuming that these two groups are identical in some respect. In the case of paid work at home, it is of interest to know whether merely working at home is associated with pay that differs from that obtained from working at an employer's premises. To eliminate the effect of age, sex and occupation on workers' wages, respondents are categorized as home worker/non-home-worker in such a way that each combination of variables is represented in the same proportion as it is in the overall group of workers.

14 Standardization of results cannot control for all differences between two populations for two reasons. First, there is variation within groups for which controls have been implemented (for example, university professors compared with elementary school teachers); second, only some factors have been controlled for (age, but not experience, for example). In this article, pay and employment benefits have been studied in two ways: by controlling for 36 age/sex/occupation groups (3 age groups, 6 occupation groups), and by controlling for 48 age/sex/industry groups (3 age groups, 8 industry groups). The number of SWA respondents is not sufficient to support controlling results for a larger number of groups. Therefore, it is possible that the remaining wage advantage for these workers is related to factors other than merely working at home.

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