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by Tahsin Mehdi and Marc Frenette

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The impact of layoffs on labour market outcomes of workers in industries dependent on United States demand for Canadian exports

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Abstract

Recent trade tensions between Canada and the United States have raised questions around the impact of potential job losses related to tariffs. While the Canada–U.S. trade tensions are unique to the present day, layoffs in any industry are not. Investigating how workers in industries dependent on U.S. demand for Canadian exports (IDUSCEXs) have historically fared following job loss could shed light on the adaptability of workers in these industries. The majority of employees aged 25 to 54 who were laid off from IDUSCEXs over the 2013-to-2016 period were re-employed in other industries in the years following job loss. However, they fared worse economically in at least the first three years compared with their counterparts from industries not dependent on U.S. demand for Canadian exports, excluding public administration, educational services, and health care and social assistance (INDUSCEXOs), in relative and absolute terms. The results also indicate that although jobs in IDUSCEXs were more likely to be unionized or have employer-sponsored pension plans compared with jobs in INDUSCEXOs, men displaced from IDUSCEXs were less likely to secure jobs with these features in the years following layoffs compared with men from INDUSCEXOs.

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Introduction

Recently imposed tariffs on Canadian exports by the United States could reduce U.S. demand for Canadian products and, consequently, potentially lead to job losses in industries dependent on U.S. demand for Canadian exports (IDUSCEXs).¹

While the Canada–U.S. trade tensions are unique to the present day, layoffs in any industry are not. Investigating how workers in IDUSCEXs have historically fared following job loss could shed light on the adaptability of workers in these industries. Many of the potentially affected jobs are of high quality, based on several measures (Frenette et al. 2025). Jobs in IDUSCEXs are generally well-paying and are more likely to be either full-time, permanent or both (i.e., full-time permanent) and to be high-tenured (10 years or more with the same employer) compared with those in industries not dependent on U.S. demand for Canadian exports. In addition, jobs in IDUSCEXs are more likely to be unionized or have an employer-sponsored pension plan associated with them, compared with those in industries not dependent on U.S. demand for Canadian exports, excluding educational services, health care and social assistance, and public administration (INDUSCEXOs). Thus, potential layoffs in IDUSCEXs would often involve high-quality jobs that may be challenging to replace.

Workers in affected industries may go through an adjustment period following job loss, as is often the case (Bonikowska and Morissette 2013; Morissette and Chen 2020). Men are considerably more likely than women to be employed in IDUSCEXs, as are older workers compared with younger workers, and lower-educated workers compared with higher-educated workers (Frenette and Mehdi 2025). The labour market outcomes of affected workers may depend in part on these characteristics. Only time will tell how well they adapt to job losses if their industry is affected.

Although it is too early to know how workers in IDUSCEXs might adapt to potential job losses, the purpose of this article is to examine historical patterns of their post-displacement labour market outcomes, which could yield valuable insights.

Data and methods

This article is based on administrative data from Statistics Canada’s Longitudinal Worker File (LWF), which is a matched employer–employee database consisting of all workers in Canada who received a T4 Statement of Remuneration Paid. The LWF integrates information from four separate data sources: the T4 and T1 files from the Canada Revenue Agency, the Record of Employment (ROE) files from Employment and Social Development Canada, and the Longitudinal Employment Analysis Program file from Statistics Canada. The current LWF contains data from 1989 to 2022.

The LWF has several features that make it well suited for analyzing job displacement. It distinguishes between various types of employee separations, allowing distinctions to be made between layoffs, dismissals, quits and other separations. This is done through the ROE, which specifies the reason for

1. According to a recent analysis, 8.8% of Canadian workers (corresponding to roughly 1.8 million jobs) were employed in IDUSCEXs in 2024, either directly or indirectly. These are industries where 35% of jobs or more depended on U.S. demand for Canadian exports (Statistics Canada 2024). The degree of dependence of these industries on U.S. demand has largely remained unchanged over at least the past 10 years.

work interruption or separation.² As a result, the LWF can directly identify all laid-off workers and allows the exclusion of workers separating for other reasons. The LWF also facilitates the distinction between temporary and permanent layoffs. A temporary layoff is defined as a situation where the employee returns to the same employer during the year of the layoff or in the following year. When such a return does not occur, the layoff is considered permanent. This article focuses on the latter (i.e., permanent layoffs).

This article compares real earnings, as well as some other labour market outcomes, of displaced workers (the treatment group) with those of their non-displaced counterparts (the control group) who satisfy a similar set of restrictions in the years before layoff.³

The focus is on paid workers who (1) were laid off at some point from 2013 to 2016 (inclusive);⁴ (2) were aged 25 to 54 when they were laid off; (3) were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; (4) were employed in enterprises with at least 20 employees when they were laid off; (5) had at least two years of tenure with the same employer when they were laid off; and (6) had annual earnings greater than \$1,000 and less than \$1,000,000 when they were laid off. Earnings are expressed in constant 2024 dollars throughout this article. For the purpose of defining a layoff, only the main job of each worker was considered (i.e., the job in which they earned the most during a given year). Outcomes were tracked longitudinally for 10 years—6 years following layoffs and 3 years prior to layoffs—allowing the outcomes of the most recent cohort of laid-off workers in the sample (those laid off in 2016) to be observed through 2022 (the most recent year of data available in the current LWF).

This article uses a similar event study analysis framework as the Organisation for Economic Co-operation and Development (OECD 2024a, OECD 2024b) and Illing et al. (2024), among others, but with a slight modification. The estimation strategy began with a two-step matching procedure to satisfy the “parallel trends” assumption, which entails making the sample of displaced and non-displaced workers comparable prior to the event (i.e., layoff year). First, the sample was split by IDUSCEX and INDUSCEXO, and exact matching was used within these subsamples to match displaced workers with non-displaced workers of the same sex, from the same year (i.e., 2013, 2014, 2015 and 2016), and from the same two-digit industry as classified by the North American Industry Classification System. Second, within each of those matched samples, propensity scores were estimated using a probit model of job displacement on the natural logarithm of annual earnings in the three years prior to job loss, enterprise size, age of the worker and their employment tenure. Based on the propensity scores, nearest neighbour one-to-one matching without replacement was applied to match each displaced worker with a unique

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2. The *Employment Insurance Act* and the related Employment Insurance Regulations require every employer to issue an ROE when an employee working in insurable employment has an interruption in earnings. The information contained on the ROE is used to determine whether a person qualifies for employment insurance (EI) benefits, as well as the benefit rate and the duration of their claim in such cases. The ROE must be issued even when the employee does not intend to file a claim for EI benefits. More importantly, the ROE indicates the reason for the work interruption or separation. The ROE can thus be used to potentially identify workers who are laid off, workers who quit and workers who separate from their employers for other reasons (Bonikowska and Morissette 2013).
 3. Clearly identifying a causal link between layoffs and subsequent labour market outcomes ideally requires that job displacement be uncorrelated with workers' (unobserved) abilities. For this reason, the economics literature usually focuses on workers who are displaced as a result of **mass** layoffs, which are commonly defined as a reduction in employment by at least 30% within a firm (OECD 2024b). This goes some way towards ensuring that job losses are somewhat exogenous and not necessarily inherent to individual employee performance. However, mass layoffs may not be completely exogenous because some firms use them as a way to restructure the skill composition of their workforce by selectively eliminating certain jobs (Bockerman et al. 2024; Chhiner 2023; Margolis and Montana 2024). For this reason, this study considers **all** permanent layoffs regardless of the magnitude of layoffs within an enterprise.
 4. During this period, Canada's economic climate was shaped by some notable events, such as the sharp decline in global oil prices beginning in 2014, which adversely affected Canada's resource sector, and the escalation of the Canada–U.S. softwood lumber dispute around 2016, increasing uncertainty for Canadian industries dependent on U.S. demand.

non-displaced worker.⁵ Next, rather than estimating a two-way fixed effects regression model usually used in event study analyses (e.g., OECD 2024a; OECD 2024b; Illing et al. 2024), this article used the interaction-weighted estimator of Sun and Abraham (2021), which amounts to estimating the following regression model on the matched sample of displaced and non-displaced workers from the first step:⁶

$$y_{itc} = \alpha_i + \lambda_t + \sum_{k=-3}^6 \gamma_k I(t = c + k) + \sum_{j=2013}^{2016} \sum_{k=-3}^6 \delta_{jk} D_i I(t = c + k) I(c = j) + X'_{it} \beta + u_{itc}$$

where y_{itc} is some outcome of interest for worker i belonging to cohort $c \in \{2013, 2014, 2015, 2016\}$ of displaced workers and their matched non-displaced counterparts in year t ; α_i is a worker fixed effect;⁷ λ_t is a year fixed effect; γ_k is the fixed effect relative to the displacement year such that $k = 1$ is the first full year following displacement; δ_{jk} measures the change in outcomes of displaced workers ($D_i = 1$) from cohort $j \in c$ relative to the displacement year and relative to the outcome trajectories of their matched counterparts who were never displaced over the 10-year study period ($D_i = 0$); X_{it} contains age, age squared and age cubed of worker i in year t ; u_{itc} is the latent error; and $I(\cdot)$ is an indicator function, which equals 1 if the argument inside it is true and 0 otherwise.⁸ The model was estimated separately for men and women within IDUSCEXs and INDUSCEXOs, and the standard errors were clustered at the individual level. The key measures of interest were calculated as the weighted average of the estimated cohort-specific effects,

$$\delta_k = \sum_{j=2013}^{2016} w_{jk} \delta_{jk}$$

for $k = -3$ to 6, where $w_{jk} \in [0, 1]$ is the share of displaced workers from cohort j in the estimation sample such that $w_{2013,k} + w_{2014,k} + w_{2015,k} + w_{2016,k} = 1$.

Five outcomes for y_{itc} were considered: (1) relative earnings, which in this article refers to the ratio of earnings in year t to earnings two years before displacement; (2) earnings levels;⁹ (3) firm wage premia

5. Non-displaced workers are those who were never laid off from any job over the 10-year study period; could be colleagues of displaced workers; and could separate from their employer in subsequent years—i.e., in the six years following the year of layoff of a given treatment cohort—for any reasons other than layoff. This prevents “forbidden comparisons” of treated units that were treated in earlier periods, and avoids overestimating displacement effects when restricting the control group to workers who remain with the same employer (OECD 2024a). For men, the matching procedure resulted in a combined sample size across cohorts of about 385,000 workers from IDUSCEXs and 2.6 million from INDUSCEXOs. The sample of women consisted of around 188,000 workers from IDUSCEXs and 1.4 million from INDUSCEXOs. Exactly half of each sample consisted of workers who were laid off over the 2013-to-2016 period, while workers in the other half of each sample were never laid off over the entire study period.

6. Sun and Abraham (2021) show that staggered treatment timing (i.e., workers being laid off in different years) can lead to biased estimates from the standard two-way fixed effects model. In this study, the two-way fixed effects model produced results that were similar to the Sun and Abraham (2021) estimator.

7. Although information on workers’ education is not available from tax data, the worker fixed effect goes some way towards mitigating this concern since it captures unobserved time-invariant characteristics specific to each worker (e.g., innate ability).

8. As an example, consider the cohort of displaced workers ($D_i = 1$) from 2016 (i.e., $c = 2016$). Then $t = 2017$ would be their first full post-displacement year. Thus, $I(t = c + k) = 1$ when $k = 1$ (i.e., $c + k = 2016 + 1 = 2017$), and $I(c = j) = 1$ when $j = 2016$.

9. Since outcome (1) is a ratio, it has the distinct advantage of allowing δ_k to be interpreted in percentage terms (e.g., earnings of laid-off workers change by $[\delta_k \times 100]\%$, on average, k years since job loss relative to their pre-displacement earnings). However, expressing the impact of job loss in earnings levels is also important.

as measured by firm fixed effects from the model of Abowd et al. (1999);¹⁰ (4) the likelihood of being employed in a job associated with an employer-sponsored pension plan; and (5) the likelihood of being employed in a unionized job. When the outcome is (4) or (5), the regression becomes a linear probability model, in which case ($\delta_k \times 100$) can be interpreted as an **approximate** percentage point difference between displaced and non-displaced workers.

The majority of workers laid off over the 2013-to-2016 period from industries dependent on U.S. demand for Canadian exports transitioned to other industries in the year following job loss

On average, over 75% of men and 70% of women found paid employment in the year following layoffs, regardless of whether they were displaced from IDUSCEXs or INDUSCEXOs.¹¹ Among this group of re-employed workers, 64% of men and women who were laid off from IDUSCEXs over the 2013-to-2016 period had secured a job in INDUSCEXOs. Another 5% of these men and 12% of these women were re-employed in public administration, educational services, or health care and social assistance (which are also industries not dependent on U.S. demand for Canadian exports). The remaining 31% of men and 24% of women were re-employed in IDUSCEXs.

Conversely, 9% of re-employed men and 6% of re-employed women who were laid off from INDUSCEXOs over the 2013-to-2016 period had transitioned to IDUSCEXs in the year after job loss.

Longer-term transition rates were similar over the six-year post-displacement period. How workers adjust during this period—including their ability to move to other industries—may affect their future earnings potential, as well as other outcomes, such as the quality of the firm they are re-employed in and whether their job is unionized or is associated with an employer-sponsored pension plan.

Layoffs were associated with greater earnings losses for workers in industries dependent on U.S. demand for Canadian exports compared with their counterparts in other industries

Overall, men and women who experienced a permanent layoff from IDUSCEXs earned 42% and 50% less one year following the layoff compared to two years prior to the layoff. These losses were considerably larger than those registered among workers who were laid off from INDUSCEXOs (32% and 37% for men and women, respectively). However, these results do not take into account the losses experienced by otherwise similar workers who were not laid off (i.e. the comparison group).

To do so, the analysis (in this section and beyond) turns to the multivariate approach described in the Data and methods section, which expresses earnings losses (and other outcomes) of individuals who were laid off relative to their counterparts who were not. Based on this approach, the earnings of men

10. This entails regressing the natural logarithm of earnings on age; age squared; age cubed; and firm, worker and year fixed effects. The estimated firm fixed effects are then retrieved and the average is calculated for each firm. These estimated firm fixed effects measure firm wage premia or firm quality after accounting for workforce composition effects within firms.

11. About 10% of laid-off men and women became self-employed in the year following job loss, regardless of whether they were previously employed in IDUSCEXs or INDUSCEXOs.

laid off from IDUSCEXs were 71% lower in the year following job loss relative to their pre-displacement earnings observed two years before job loss. This compares with a decrease of 64% for their counterparts from INDUSCEXOs (Chart 1).¹² The relative earnings of women laid off from IDUSCEXs were 82% lower in the year following job loss compared with 70% for their counterparts from INDUSCEXOs (Chart 2).¹³ It is not until the second year after job loss that displaced workers started recouping some of their earnings losses. But regardless of sex, those who were laid off from IDUSCEXs fared worse economically in a statistically significant way for up to three years after job loss compared with their counterparts from INDUSCEXOs. Three years after being laid off, the earnings of workers displaced from IDUSCEXs were still 39% lower for men and 46% lower for women than their respective pre-displacement earnings, compared with 35% lower for their counterparts from INDUSCEXOs.¹⁴

In absolute terms, men laid off from IDUSCEXs earned about \$55,000 (constant 2024 dollars) less than their non-displaced counterparts in the year after job loss, while men laid off from INDUSCEXOs earned about \$43,000 less. Women laid off from IDUSCEXs earned roughly \$46,000 less than their non-displaced counterparts, while women laid off from INDUSCEXOs earned approximately \$32,000 less. Six years after being laid off, men from IDUSCEXs earned \$25,000 less than their non-displaced counterparts, while men from INDUSCEXOs earned \$21,000 less. Similarly, women laid off from IDUSCEXs earned \$19,000 less, while women laid off from INDUSCEXOs earned \$14,000 less. These absolute differences in earnings between displaced and non-displaced workers remained statistically significant throughout the six-year period following layoffs.

The fact that absolute earnings losses were higher for workers in IDUSCEXs is not surprising given that earnings tend to be higher, on average, in those industries than in INDUSCEXOs (Frenette et al. 2025). In 2022, the average annual earnings of men in IDUSCEXs amounted to about \$92,000, while it stood at about \$85,000 in INDUSCEXOs. Women in IDUSCEXs (\$70,000) also outearned their counterparts in INDUSCEXOs (\$58,000). Earnings have historically been higher in IDUSCEXs than in INDUSCEXOs dating back to at least the 1990s.

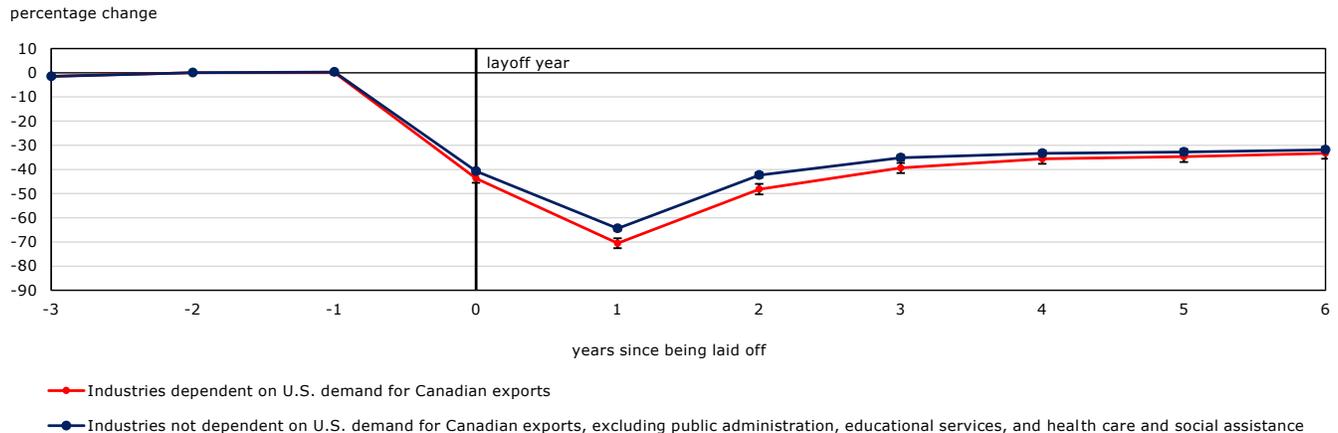
The earnings advantage held by men from IDUSCEXs prior to job loss was eliminated six years after displacement, reflecting a steeper decline relative to their INDUSCEXO counterparts. Although those laid off from IDUSCEXs had higher pre-displacement earnings than their counterparts from INDUSCEXOs, both groups averaged about \$63,000 in annual earnings six years after layoffs, considering the group of men who lost their job over the 2013-to-2016 period. For women, however, the post-displacement earnings gap between IDUSCEXs and INDUSCEXOs persisted, albeit narrower than before displacement. Women who were initially laid off from IDUSCEXs still averaged higher earnings (\$48,000) six years later than their counterparts from INDUSCEXOs (\$43,000).

12. All of the charts presented throughout this article simply plot the δ_k estimates for $k = -3$ to 6 (horizontal axis) as described in the data and methods section.

13. On average, men represented about 74% of the IDUSCEX workforce and 58% of the INDUSCEXO workforce over the past three decades.

14. The permanent layoff rate—the number of workers permanently laid off as a share of all workers—ranged from roughly 1% to 4.5% in IDUSCEXs and INDUSCEXOs over the past three decades. Moreover, the trends were similar for men and women. Layoff rates in IDUSCEXs peaked during the 2009 global financial crisis at 3.4% for men and 4.3% for women. During that year, these rates stood at 2.8% for men and 2.0% for women in INDUSCEXOs. Layoff rates in INDUSCEXOs peaked in 2020 at around 3.5% for both men and women. In that year, the rates were 2.1% for men and 2.7% for women in IDUSCEXs.

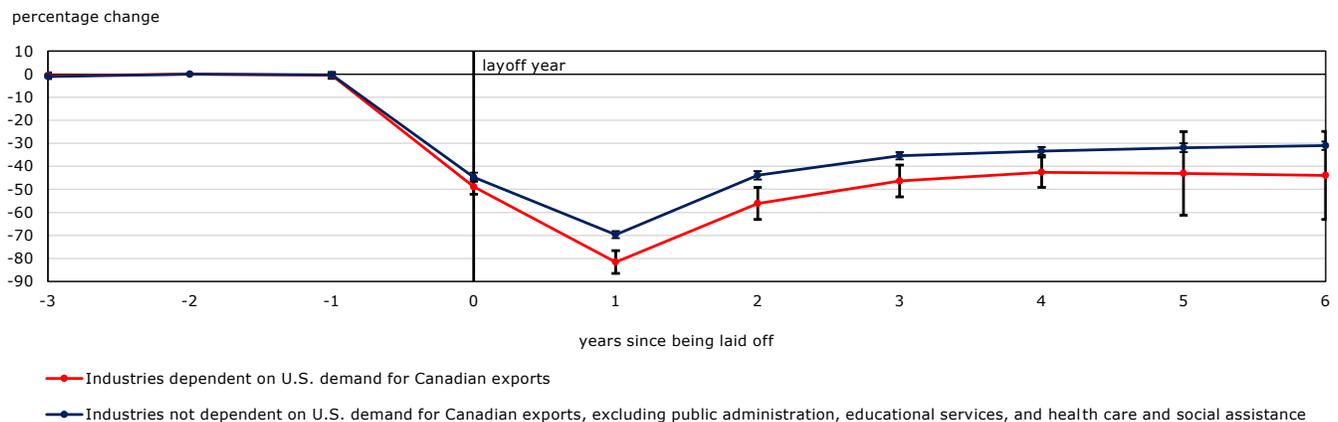
Chart 1
Percentage change in real earnings of men who were permanently laid off over the 2013-to-2016 period relative to their earnings two years before being laid off



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. The percentage changes in real relative earnings of laid-off employees presented in this chart were estimated relative to the real relative earnings of their non-displaced counterparts. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Chart 2
Percentage change in real earnings of women who were permanently laid off over the 2013-to-2016 period relative to their earnings two years before being laid off



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. The percentage changes in real relative earnings of laid-off employees presented in this chart were estimated relative to the real relative earnings of their non-displaced counterparts. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Workers laid off from industries dependent on U.S. demand for Canadian exports were more likely to be re-employed in firms where average pay was lower compared with the firms of their non-displaced counterparts

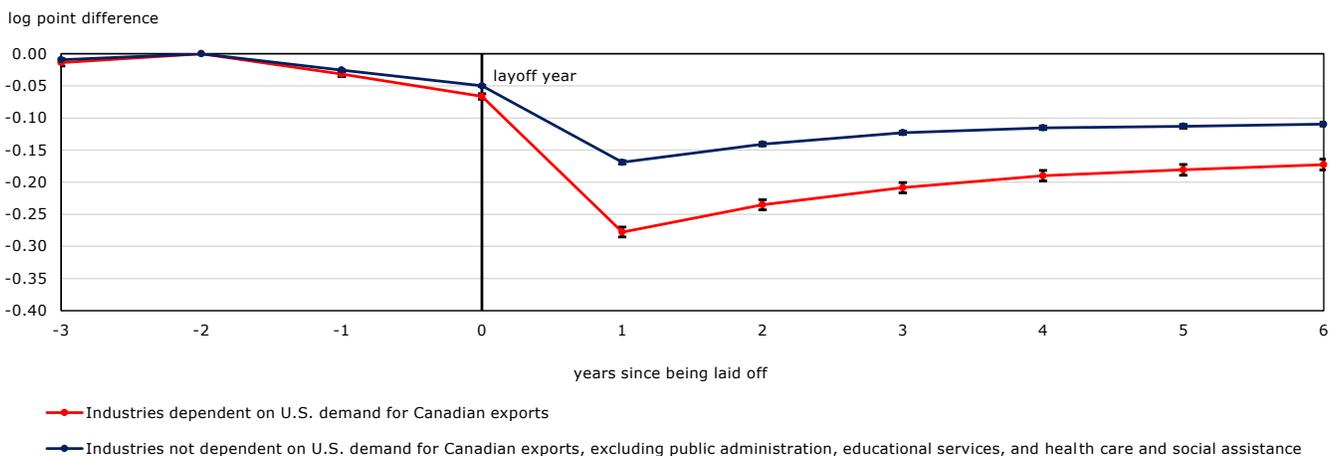
One of the sources of earnings losses after job loss is the transition from high-paying to low-paying firms, irrespective of workforce composition (Lachowska et al. 2020; Raposo et al. 2021; Bertheau et al. 2023). Higher earnings among workers in INDUSCEXs reflect, in part, relatively higher firm wage premia in these industries—i.e., employers paying higher baseline wages. However, workers tend to be re-employed by lower-paying firms during the transition period after layoffs. The same pattern holds for workers laid off from INDUSCEXOs, but the gap in firm wage premia between displaced and non-displaced workers was higher in INDUSCEXs.

Considering men who were laid off over the 2013-to-2016 period and re-employed in the following year, the average earnings across the firms that hired them were about 0.28 log points—or about $100 \times (1 - \exp[-0.28]) = 24\%$ —lower than those of the firms where their non-displaced counterparts were employed (Chart 3). This gap in firm wage premia was about 16% in INDUSCEXOs. Six years after layoffs, firm wage premia were still 16% lower in INDUSCEXs compared with 10% lower in INDUSCEXOs.

Among displaced women who were re-employed in the year after layoffs, the average earnings across the firms that hired them were about 0.37 log points—or about 31%—lower than those of firms where their non-displaced counterparts worked (Chart 4). This gap in firm wage premia was roughly 12% in INDUSCEXOs. Six years after layoffs, firm wage premia were still 19% lower in INDUSCEXs compared with 7% lower in INDUSCEXOs.

The gap in firm wage premia between workers laid off from INDUSCEXs and INDUSCEXOs remained statistically significant throughout the six-year post-displacement period.

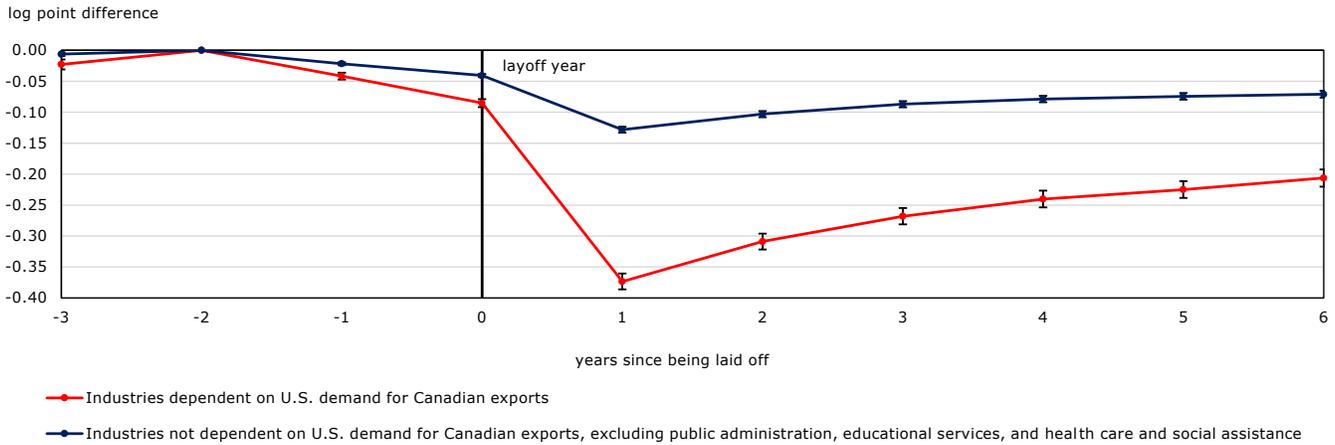
Chart 3
Difference in firm wage premia between firms that employed men who were permanently laid off over the 2013-to-2016 period and firms that employed their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Chart 4
Difference in firm wage premia between firms that employed women who were permanently laid off over the 2013-to-2016 period and firms that employed their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

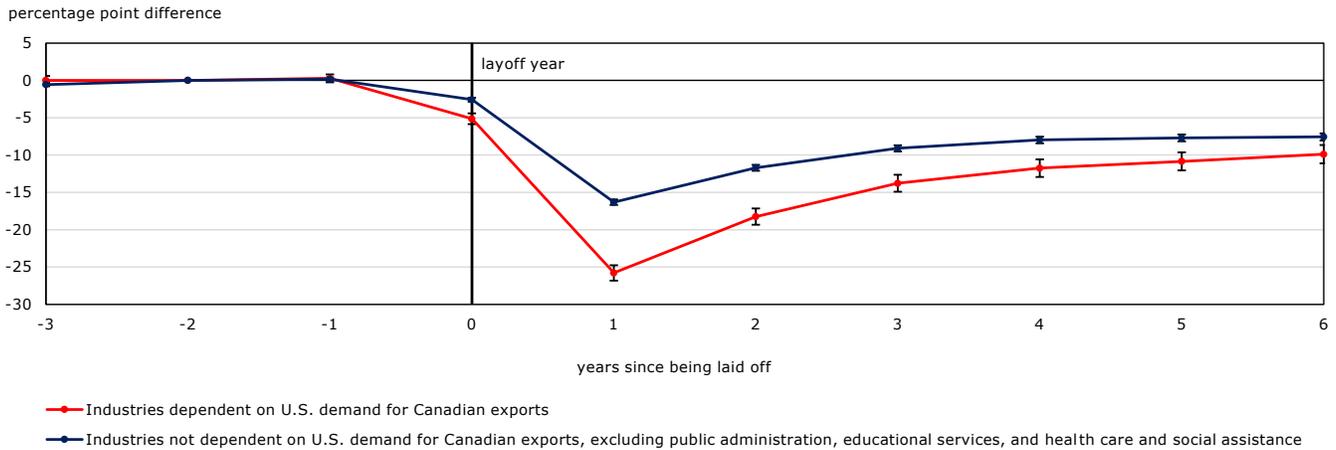
Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Workers laid off from industries dependent on U.S. demand for Canadian exports were less likely to be re-employed in jobs with an employer-sponsored pension plan in the years following layoffs compared with their non-displaced counterparts

Men who were laid off from IDUSCEXs over the 2013-to-2016 period were 26 percentage points less likely than their non-displaced counterparts to have a job with an employer-sponsored pension plan in the year after layoffs (Chart 5). Men who were laid off from INDUSCEXOs were 16 percentage points less likely than their non-displaced counterparts to have a job with an employer-sponsored pension plan in the year following job loss. Similar trends were observed for women (Chart 6). Although this gap in the likelihood of having an employer-sponsored pension plan narrowed between displaced and non-displaced workers over time, the percentage point difference remained greater in a statistically significant sense for workers laid off from IDUSCEXs than their counterparts from INDUSCEXOs throughout the six-year post-displacement period.

The loss of an employer-sponsored pension plan could have important implications in terms of retirement planning—particularly for workers laid off from IDUSCEXs, since they tend to be older compared with workers from other industries.

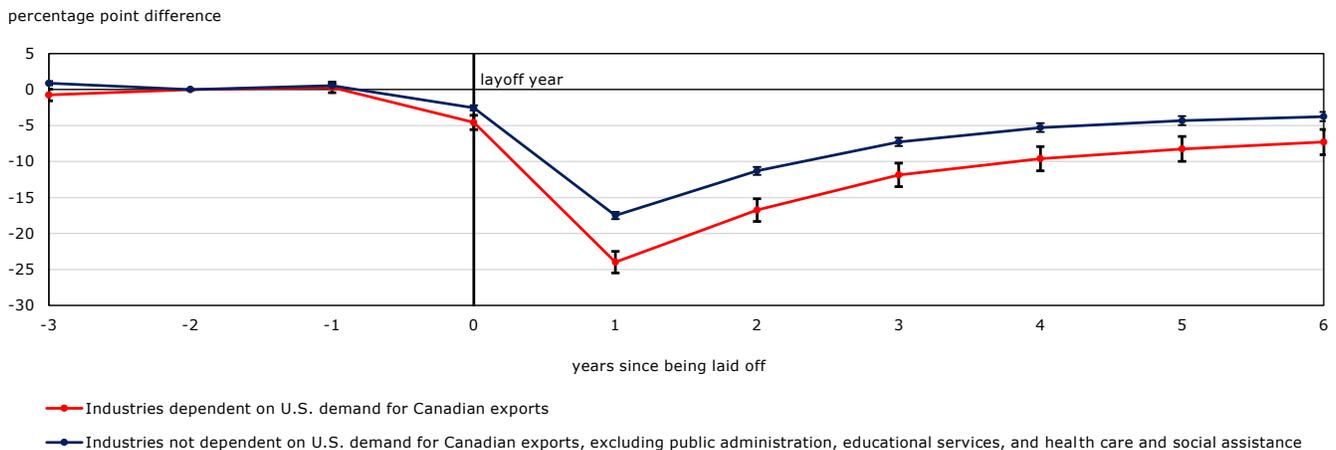
Chart 5
Percentage point difference in the probability of having a job with an employer-sponsored pension plan between men who were permanently laid off over the 2013-to-2016 period and their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Chart 6
Percentage point difference in the probability of having a job with an employer-sponsored pension plan between women who were permanently laid off over the 2013-to-2016 period and their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

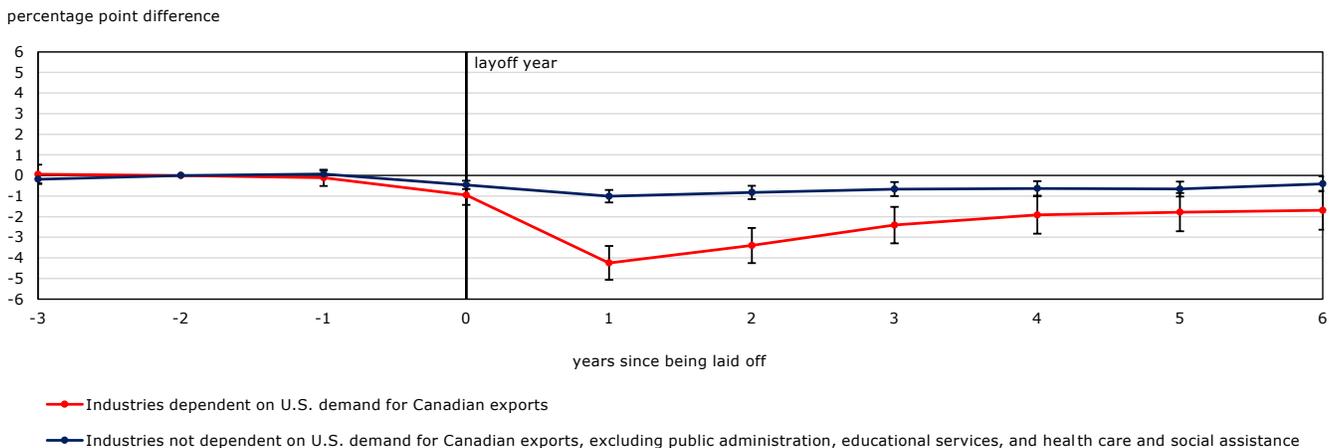
Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Men laid off from industries dependent on U.S. demand for Canadian exports were less likely to be in unionized jobs in the years following layoffs compared with their non-displaced counterparts

Among men who were laid off over the 2013-to-2016 period, those from IDUSCEXs were about 4 percentage points less likely than their non-displaced counterparts to be in a unionized job in the year following layoffs. Men who were laid off from INDUSCEXOs were 1 percentage point less likely than their non-displaced counterparts to be in a unionized job throughout the six-year post-displacement period (Chart 7). This gap in the likelihood of securing a unionized job between displaced and non-displaced workers from IDUSCEXs narrowed over time, but the difference remained statistically significant for three years following layoffs.

Conversely, displaced women—regardless of whether they were laid off from IDUSCEXs or INDUSCEXOs—were more likely to have a unionized job in the years following layoffs. Women who were laid off from IDUSCEXs were 1 to 3 percentage points more likely than their non-displaced counterparts to be in a unionized job over the six-year post-displacement period. Women displaced from INDUSCEXOs were about 4.5 percentage points more likely than their non-displaced counterparts to be in a unionized job over the same period (Chart 8). This is partly explained by the higher transition rates of displaced women to public administration, educational services, and health care and social assistance, where unionized jobs are more prevalent compared with other industries. But as mentioned in the previous section, displaced women (and men) were less likely than their non-displaced counterparts to be employed in jobs with employer-sponsored pension plans. While employer-sponsored pension plans are also a common feature across the public administration, educational services, and health care and social assistance industries, some industries in the commercial sector, such as manufacturing, and finance and insurance, have relatively high shares of jobs associated with employer-sponsored pension plans where non-displaced workers might be employed. Moreover, displaced workers could be working part time during the transition period after layoffs, and part-time jobs are less likely to be associated with employer-sponsored pension plans.

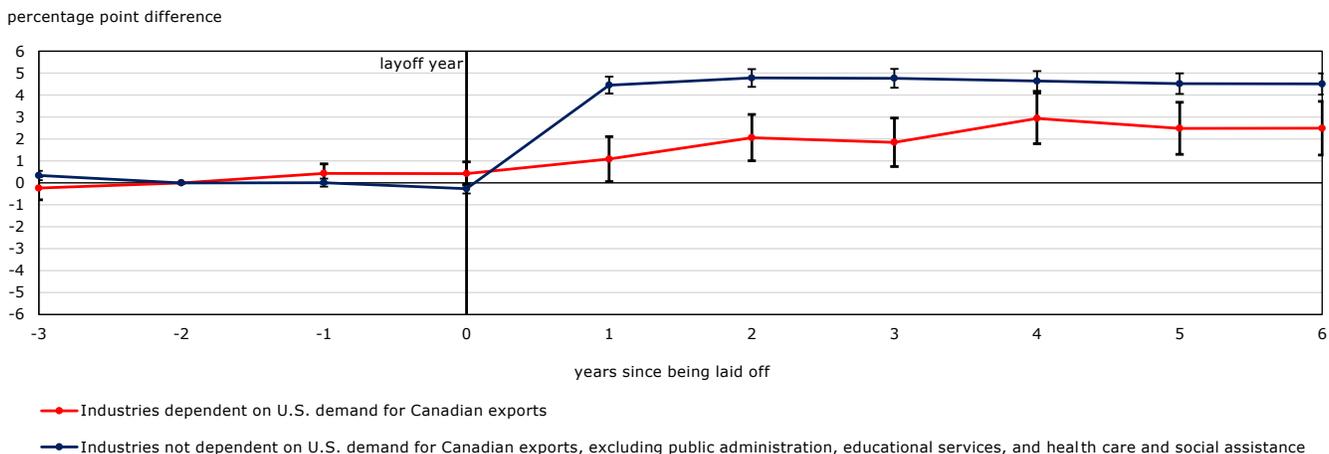
Chart 7
Percentage point difference in the probability of having a unionized job between men who were permanently laid off over the 2013-to-2016 period and their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Chart 8
Percentage point difference in the probability of having a unionized job between women who were permanently laid off over the 2013-to-2016 period and their non-displaced counterparts



Notes: An event study regression was estimated with a panel sample of displaced and non-displaced workers with similar characteristics heading into the layoff year. The sample consists of paid workers who were aged 25 to 54 when they were laid off; were employed in enterprises excluding those in public administration, educational services, and health care and social assistance when they were laid off; were employed in enterprises with at least 20 employees when they were laid off; had at least two years of tenure with the same employer; and had annual earnings greater than \$1,000 (constant 2024 dollars) and less than \$1,000,000 when they were laid off. For the purpose of defining a layoff, only the main job of each worker was considered. Industries dependent on U.S. demand for Canadian exports are those in which at least 35% of jobs depend on U.S. demand for Canadian exports (Statistics Canada 2024). The vertical lines overlaid on the lines indicate the 95% confidence interval.

Source: Statistics Canada, Longitudinal Worker File, 2010 to 2022.

Conclusion

Recent trade tensions between Canada and the United States have raised concerns about the possibility of layoffs, particularly in IDUSCEXs. While it is too early to know the extent of job losses in these sectors, it is possible to ascertain key indicators that may inform future strategies for dealing with potential large-

scale job displacements. A first article looked at job quality indicators in IDUSCEXs. A follow-up article looked at the socioeconomic characteristics of employees in these sectors, which could relate to their potential adaptability in the event of job loss. The present article examined how workers from IDUSCEXs historically fared economically after layoffs.

The results indicate that the majority of men and women aged 25 to 54 who were laid off from IDUSCEXs over the 2013-to-2016 period found paid employment in other industries in the year following job loss. However, they fared worse economically in at least the first three years following job loss compared with their counterparts who were laid off from INDUSCEXOs. On average, workers in IDUSCEXs have historically outearned their counterparts from INDUSCEXOs. As such, the pre-displacement earnings of workers in IDUSCEXs were higher than those of their counterparts in INDUSCEXOs. However, six years after job loss, men laid off from IDUSCEXs and INDUSCEXOs averaged similar earnings, while displaced women from IDUSCEXs averaged somewhat higher earnings than their counterparts from INDUSCEXOs. But the earnings of displaced workers were still lower relative to their pre-displacement levels for the first three years following layoffs, and absolute earnings losses were greater in IDUSCEXs for at least six years following layoffs. One reason for this is that workers laid off from IDUSCEXs were more likely to be re-employed in lower-paying firms after job loss. The results also indicate that although jobs in IDUSCEXs were more likely to be unionized or have employer-sponsored pension plans associated with them compared with jobs in INDUSCEXOs, men displaced from IDUSCEXs were less likely to secure jobs with these features in the years following layoffs compared with men displaced from INDUSCEXOs. The same holds for women, but they were more likely to secure unionized jobs in the post-displacement period, regardless of whether they were laid off from IDUSCEXs or INDUSCEXOs.¹⁵

Greater earnings losses, combined with the possibility of losing job quality features such as employer-sponsored pension plans, could have important implications for displaced workers, especially those from IDUSCEXs, who tend to be older and less educated compared with those from other industries. Only time will tell how well these workers adapt to job losses if their industries are affected.

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15. The analysis was repeated for workers who were laid off over the 1998-to-2001 period for a historical perspective. The analysis revealed similar findings, indicating that the adverse effects of layoffs in IDUSCEXs have occurred across different cohorts in the past. However, while these historical parallels suggest a degree of robustness in the results, caution is warranted in drawing conclusions about future events, since evolving economic conditions and policy contexts may lead to different outcomes in future waves of layoffs.

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