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Defining and measuring the gig economy using survey data

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Defining and measuring the gig economy using survey data

By Vincent Hardy

Highlights

- Gig work, digital platform employment, and dependent self-employment are essential concepts to understand the evolving nature of the gig economy. While there is notable overlap between these three forms of work, each can also occur on their own.
- (1) Gig work is a form of employment characterized by short-term jobs or tasks which does not guarantee steady work and where the worker must take specific actions to stay employed. (2) Digital platform employment refers to paid work carried out on, or through Internet platforms or apps which exercise control over the work process. (3) Dependent self-employment refers to self-employed workers who are operationally or economically dependent on another person or business such as a main client, a supplier, or an app.
- From October to December 2022, an average of 871,000 Canadians aged 15 to 69 had a main job featuring characteristics that were consistent with the concept of gig work, including 624,000 who were self-employed and 247,000 who were employees. An additional 1.5 million people had completed gig work at some point during the previous 12 months.
- Using a narrow definition of digital platform employment – working through Internet platforms or apps which pay workers directly – 468,000 Canadians had completed digital platform employment in the 12 months ending in December 2023.
- From July to September 2022, an average of 588,000 people were self-employed without employees in their main job and relied on a single business relationship where the other party exercised a large extent of control over a key dimension of their work, such as their schedule, the organization of their work, their prices, or the supply of tools or materials.

Introduction

In recent years, the concepts of “gig work” and the “gig economy” have been used to describe paid activities that involve very short-term tasks or jobs with no guarantee of future work. According to the Organisation for Economic Cooperation and Development (OECD), the gig economy and the sharing economy are related phenomena associated with the development of digital platforms which “facilitate transactions that occur outside of traditional business structures by individual [...] sellers of goods and services to consumers” (OECD, 2019, p. 15).

However, the term “gig” first appeared in the world of live jazz performance and is still used to refer to an arrangement where musicians are paid for a single performance, with no guarantee of future employment.¹ While gig work is not a new phenomenon (Stanford, 2017), digital platforms have become relatively common in some sectors of economic activity, such as food delivery, personal transport and tutoring and have made it easier for Canadians to engage in gig work.

Part of the statistical measurement of gig work and digital platform employment involves counting how many people engage in these forms of employment. Yet to fully understand the changes occurring within the labour market, it is also important to examine the type of arrangements or contracts through which workers are employed. Indeed, since many gig and digital platform workers are paid as self-employed workers rather than employees, they are often not covered by social insurance programs such as sick leave, Employment Insurance (EI) and workers’ compensation through that activity.

In Canada, provincial and federal labour and tax laws can include provisions and benefits for workers who start their own businesses. However, gig and digital platform workers may lack access to the full benefits associated with being self-employed, such as the freedom to hire employees, choose their work hours, or set their own prices.

1. Concise New Partridge Dictionary of Slang and Unconventional English, 2015, p. 344. See also Labour Market Information Council (2021).

This is because platform operators and other businesses who hire gig workers may establish terms of service and other rules which limit the freedom of workers to complete their work as they see fit. As such, some gig workers may be in situations of dependent self-employment: lacking the full advantages of being self-employed while also being more vulnerable to economic downturns or unexpected life events compared with employees.

This report aims to improve the statistical measurement of the gig economy by defining the three core concepts of gig work, digital platform employment and dependent self-employment. Further, the article provides estimates of the three phenomena based on data collected through supplements to the Labour Force Survey (LFS) in 2022 and 2023. All estimates provided in the article are associated with a margin of error.

Gig work: paid jobs or tasks with little permanence and stability

The term gig work has been used in different ways by researchers, policymakers and in day-to-day life (Labour Market Information Council (LMIC), 2021), leading to various interpretations of its meaning. To help guide data collection in this context, national statistical agencies associated with the Conference of European Statisticians – the statistical body of the United Nations Economic Commission for Europe (UNECE) – reached consensus on a general definition in 2022. The definition is broad enough to cover a range of situations which may appear in slightly different forms in different countries. Further, it includes work performed either with, or without, the assistance of a digital platform. For example, a freelance translator who is paid through a digital platform that matches them with clients is considered a gig worker, just as much as a freelance translator who finds clients by word-of-mouth.

According to the definition, found in the UNECE *Handbook on Forms of Employment*, gig workers:

1. “Are people who accept short-term tasks, projects, or jobs
2. Are paid per unit of work delivered²
3. Have no assurance of steady employment and must make specific efforts on their own to obtain each task, project, or job” (UNECE, 2022, p. 62-63)

In the Canadian context, elements 1) and 3) are retained to operationalize the definition. As such, gig work is defined as paid work done on the basis of short-term tasks, projects, or jobs, which does not guarantee ongoing work, and where there is a need for the worker to play an active role in obtaining their next task, job or client. A broad interpretation of point 2) is taken to simply exclude employees who are guaranteed a regular wage or salary.³

Defining digital platform employment

While digitalization and digital platforms play a growing role in the economy and the labour market, not all digital platforms are associated with *digital platform employment*. In a broad sense, digital platforms describe a range of electronic tools and applications which connect the producers of goods or services with potential buyers or users (OECD-EU-ILO, 2023, p. 40). According to a classification developed by the International Labour Organization (ILO), there are four main types of digital platforms (see ILO, 2021, p. 40):

1. those which **provide services to individual users** (e.g., social media, crowdfunding platforms, videoconferencing tools)
2. those which **facilitate exchanges** (e.g., retail platforms, business-to-business exchanges)
3. those which **mediate work** (e.g., food delivery apps, microtask platforms)
4. **hybrid platforms** which combine elements of the first three

All four types of digital platforms are potentially relevant to the labour market and employment. For example, businesses who own and operate a digital platform may hire employees such as programmers or accountants to manage the business. Many companies and organisations also use videoconferencing software and social media as part of their activities. However, the term digital platform employment refers more specifically to a situation

2. Refers to being paid based on the completion of a particular task or upon delivery of a product rather than being paid a wage or salary for time worked.

3. The Handbook provides flexibility for countries to include employees paid per hour who have very short contracts under the definition of gig work.

where the digital platform mediates the exchange of work or labour between a service provider or a seller, and a client. According to the consensus definition developed by the Organization for Economic Cooperation and Development (OECD), the European Union (EU) and the ILO, digital platform employment refers to:

1. “The activities associated with producing goods or services completed through or on a digital platform, when:
2. The digital platform or app controls and/or organizes essential aspects of the work, such as controlling access to clients or facilitating the payment” (see OECD-EU-ILO, 2023, p. 45).

Based on this definition, the managers and employees of companies who operate digital platforms are excluded since their work is not conducted through the platform. In addition, many platforms providing services to individual users, such as videoconference software or payment platforms, are also excluded as they do not control how the user does their work or interacts with clients. For example, a tutor who uses videoconference software to teach students, but advertises their services through their own website, bills the clients directly, and handles the payment themselves would not be counted as performing digital platform employment. In contrast, websites or apps which facilitate the match between workers and clients and handle the payment process are covered under the OECD-EU-ILO definition. Other types of platforms such as video-hosting websites or online marketplaces for selling goods may be in scope if the platform enforces performance standards, sets prices, or controls other essential aspects of the work done through the platform.

Defining dependent self-employment

In Canada and across most of the world, both the tax system and official statistics classify self-employed workers into two broad groups: those who operate an incorporated business and pay themselves a salary or dividends, and those who operate an unincorporated business. Self-employed workers are also typically divided into those who are employers and those who are self-employed without employees.

While these two characteristics describe essential differences among self-employed workers, notable variations in self-employment also exist in terms of the degree of control the self-employed person has over business decisions or their methods of work. For example, a self-employed worker may work as a consultant for another company and may be required to fulfill certain conditions as part of that contract, such as being available during specified hours, or following certain protocols when interacting with clients.

When a self-employed worker depends on another business or person for a large part of their commercial activity and when that second business or person controls key elements of their work, the self-employed worker may be in a situation of dependent self-employment. Workers in dependent self-employment have a different relationship to their own business compared with other self-employed workers due to a more limited capacity to invest, make decisions, or control when and how they work. In this sense, self-employed workers who are dependent on a single client, a supplier, or a digital platform share several characteristics with employees. At the same time, workers in dependent self-employment often lack some or all of the protections granted to employees under employment standards legislation, as well as regulations pertaining to the workers’ compensation system, paid sick leave and minimum wages.⁴ While some self-employed workers are covered by EI benefits⁵ or make voluntary contributions to the EI program, in most cases companies who hire contractors are not required to make EI contributions on their behalf.

The growth of digital platform employment has brought renewed focus on dependence among self-employed workers. The level of control exercised by platforms is of specific interest, as workers are often dependent on the platform to obtain clients. However, important variations across platforms exist, ranging from minimal control by the platform to situations where the platform sets prices, requires specific behaviours and standards, and pursues disciplinary action (see Eurofound, 2016). Dependent self-employment can also emerge in other types of economic relationships, such as self-employed workers who are contracted to work for a single company or who rely on a single supplier to operate their business.

4. In many Canadian jurisdictions, case law or the labour code extend some protections to self-employed workers who are judged to be dependent contractors or work in specific occupations. This usually provides some, but not all of the protections and rights granted to employees. For example, in Ontario, the Digital Platform Workers’ Rights Act creates a special status for digital platform workers and provides specific rights and protections. However, the act does not recognize that digital platform workers are entitled to the same protection as employees under the Employment Standards Act. The statistical measurement of dependent self-employment focuses on the circumstances of self-employed workers, irrespective of any legal recognition of this status.

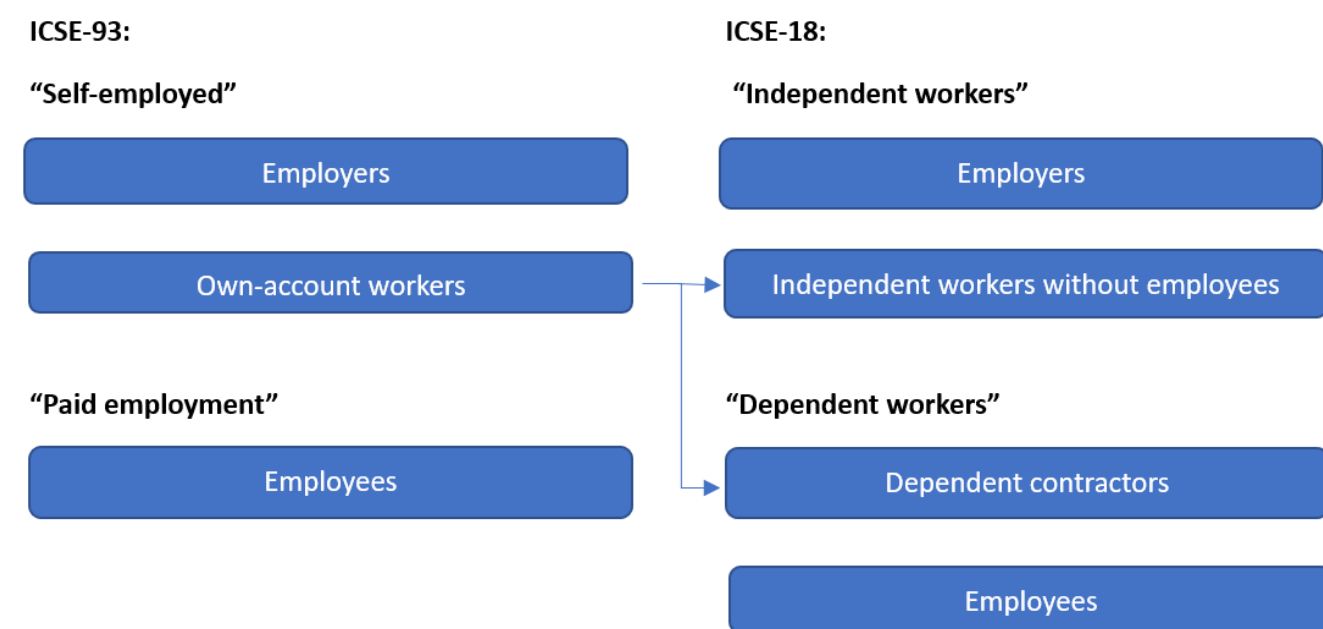
5. Owners of establishments operating in specific industries such as barbering and hairdressing must make contributions to EI on behalf of workers, even when those workers are not employees.

To fully capture dependence among self-employed workers and to better understand the relationship between dependence and the emergence of digital platforms, the ILO has updated its statistical standard on the measurement of self-employment and paid employment by introducing the new category of “dependent contractors”. This has resulted in a reorganization of the International Classification of Status in Employment (ICSE) – the statistical standard which serves as the basis for the statistical measurement of work relationships.

Some workers who are classified as self-employed workers without employees (own-account workers) under the old standard would fall under the dependent contractor category based on the new standard. According to the ILO (2020), the main elements to consider when classifying self-employed workers as either dependent contractors or own-account workers concern whether the worker has a critical business relationship with a single client, supplier, platform or other entity, and if this relationship involves “economic dependence” (where the other party controls prices, access to tools or materials, etc.) or “organizational dependence” (where the other party determines work hours, work methods etc.).

In the present article, the concept of dependent self-employment is used as a broader concept to understand the ways in which self-employed workers may be dependent on other businesses or persons. In collaboration with international and Canadian partners, further work will be pursued to move from measuring dependent self-employment to measuring the more specific category of dependent contractors.

Figure 1
Changes in the measurement of work relationships from ICSE-93 to ICSE-18



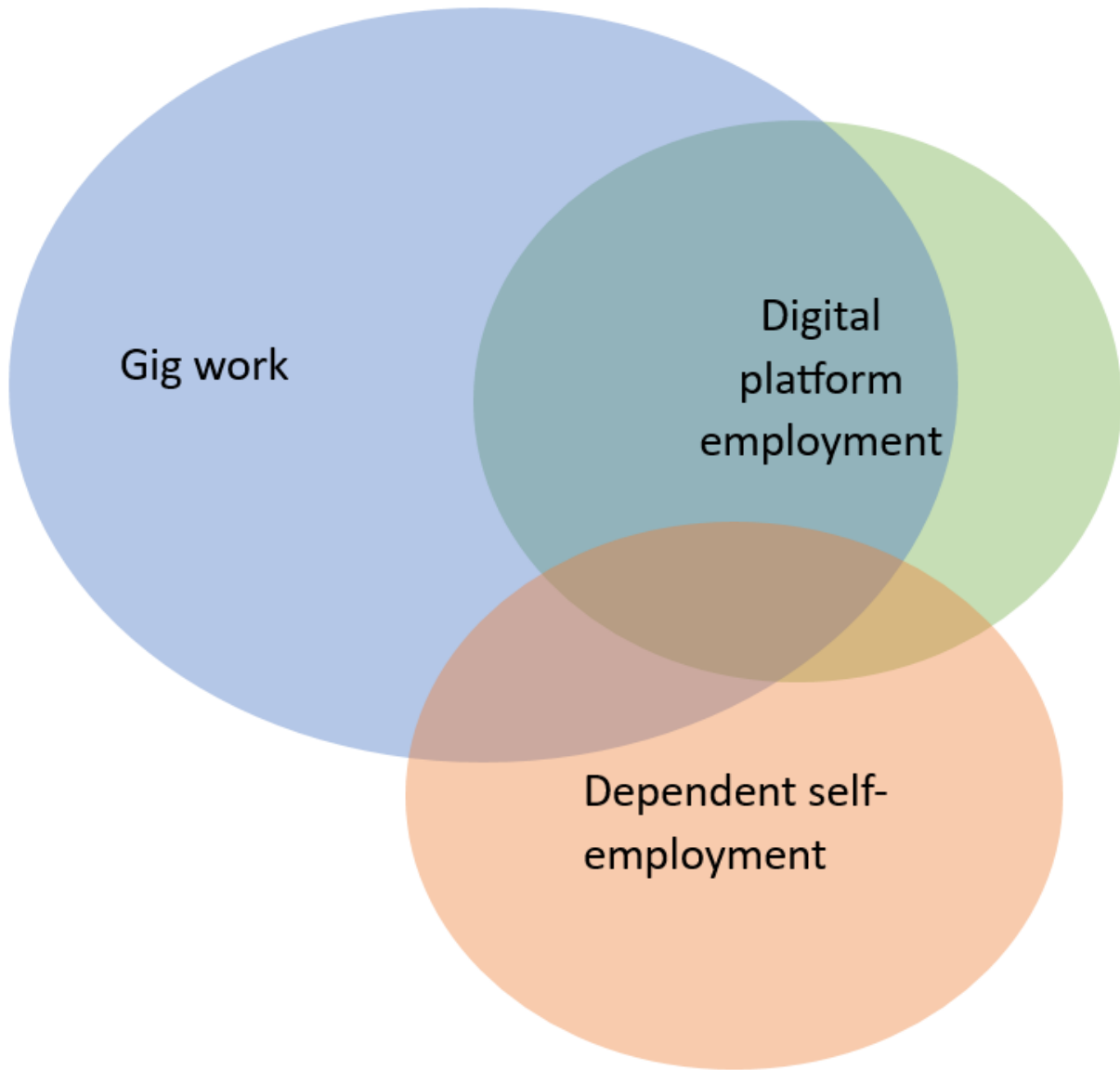
Source: International Labour Organization (ILO), 2018.

Aligning the measurement of gig work, digital platforms and dependent self-employment

While there is overlap between the three phenomena of gig work, digital platform employment and dependent self-employment, each can also occur on their own. Gig work is a broader concept that covers work based on short-term tasks or jobs that may or may not be conducted on or through a digital platform. Dependence among self-employed workers may also emerge as part of business relationships that do not involve platforms (e.g., dependence on a main client). Further, dependent self-employment may involve short-term, unsteady work, but could also occur in the context of a long-term business relationship. Finally, while work carried out through digital platforms often features short-term tasks or jobs with no guarantee of steady work, some workers may be able to secure relatively long contracts through platforms.

The development of data on the gig economy therefore requires a data collection strategy that can be used to produce distinct estimates for gig work, digital platform employment and dependent self-employment. The remainder of the paper describes a method to produce estimates for each component using data from supplements to the LFS.

Figure 2
The conceptual relationship between gig work, digital platforms, and dependent self-employment



Source: Centre for Labour Market Information, Statistics Canada.

Measuring gig work, digital platform employment and dependent self-employment

Measuring gig work

In the fall of 2022, a supplement on gig work was collected as part of the Labour Market and Socio-economic Indicators program (LMSI) – Statistics Canada’s program of supplements to the LFS. The data collection and survey design strategy started from the premise that gig workers could be either employees or self-employed workers. While the nature of gig work may differ if it is experienced as an employee (for example, due to minimum wage legislation and other labour regulations), the core features of gig work — the short-term nature of the task or contract for which the worker is remunerated, the lack of permanence, and the need to take specific action to obtain the next job, task or shift — are all circumstances that can be potentially experienced by employees.

In the following sections, estimates of gig work are provided for three groups: people who are self-employed gig workers in their main job, people who are gig employees in their main job, and people who engage in gig work as a secondary activity – regardless of their status as an employee or a self-employed worker.

Unless otherwise stated, the analysis refers to the population aged 15 to 69 living in the provinces and reflects the average for the months of October, November and December 2022.

Gig self-employment as a main job

Due to variations in the way that Canadians may understand the concept of “gig work”, the fall 2022 LFS supplement did not directly ask self-employed workers if they engaged in gig work as a main job or business. Instead, several survey questions were asked which could help identify workers in situations that were consistent with the UNECE’s definition.

The first component of the UNECE’s definition refers to work consisting of short-term tasks, projects or jobs. In the 2022 fall LFS supplement this was identified based on a range of variables measuring the level of engagement or investment that self-employed workers had in relation to their own business:

- Not having employees
- Not owning or leasing premises dedicated to the business
- Not having business partners
- Having an unincorporated business
- Lacking contracts of 3 months or longer with formal organizations such as businesses, government agencies, and non-profits
- Usually working less than 15 hours per week

The other component of gig work described by the UNECE’s definition is the lack of assurance of steady employment and the need to consistently look for new clients. This situation could reflect a voluntary decision to operate a business on an intermittent basis, or a scenario where a self-employed worker struggles to find clients and expand their business. As such, the indicators considered for this dimension were selected to capture both situations:

- Having a business that operates less frequently
- Not easy to find clients in normal times⁶
- Having few recurring clients or not being able to operate the business based on existing clients alone
- Having had days with no clients or work despite wanting to work⁷

In order to identify self-employed workers who were in situations corresponding to the concept of gig work, a statistical technique called Latent Class Analysis (LCA) was applied to the data. LCA is a useful analytical approach to identify groups of individuals who share similar characteristics. LCA can estimate the number of

6. A reference to “normal times” was included in the survey question to direct the respondent away from their recent experiences during the COVID-19 pandemic and to encourage them to focus on their average situation rather than unusual highs or lows in demand.

7. Refers to the previous 12 months.

groups which best describe the data, estimate the size of each group, and help identify its most important features.⁸ One characteristic of LCA is that it expresses the classification of cases in terms of probabilities and does not force each case to fall in a specific class.

Overall, the results of the LCA reveal that self-employed workers are best classified into five groups, and that two of the groups identified have characteristics consistent with the UNECE's definition of gig work.⁹ Based on their characteristics, the two groups can be best described as "lower-engagement gig workers" and "vulnerable sole proprietors". Both groups were largely composed of self-employed workers with no employees and no business partners who had a low probability of owning or leasing premises dedicated to their commercial activity. A unique feature of lower-engagement gig workers was a higher probability of working less than 15 hours per week (55.0%) or from 15 to less than 30 hours per week (44.8%). Compared with the average for all self-employed workers (3.0%), lower-engagement gig workers were also more likely to indicate that they operated their business intermittently (13.2%).

In contrast, "vulnerable sole proprietors" were much more likely to work more than 30 hours per week (76.5% probability), but had several features which indicated that they were experiencing challenges maintaining a stable flow of clients, tasks, or jobs. Workers in this group were almost guaranteed (99.8%) to have had days with no work or clients over the previous 12 months, were more likely than not to lack a stable client base (64.8% probability) and had an above-average probability of not finding it easy to obtain clients in normal times (24.4% probability compared with 13.1% for all self-employed).

Salient indicators that defined both groups in LCA can in turn be used to develop a measure of gig work that reflects the UNECE's definition. Using specific statistical criteria rather than levels of probability also makes it easier to track the number of self-employed gig workers over time. As noted above, both groups of gig workers had several characteristics in common (no business partners, employees, or dedicated premises), and these features were retained as measurement criteria. However, the two groups had a distinct level of engagement with their business in terms of the hours they usually dedicated to it, and additional criteria had to be introduced to identify both types of gig work.

For lower engagement gig workers, the characteristics selected to define the group were either: usually working very short hours per week (less than 15 hours per week) or having an intermittent business.

For vulnerable sole proprietors, a broader criteria was adopted to include more self-employed workers whose employment characteristics were consistent with the concept of gig work. As such, the approach taken was to include self-employed workers who lacked a stable client base.

Based on these criteria, from October to December 2022 an average of 91,000 self-employed workers were lower-engagement gig workers in their main job, 449,000 were vulnerable sole proprietors and 84,000 were in both categories. Together, these 624,000 workers accounted for 26.5% of those who were self-employed in their main job.

Measured in this way, gig work includes self-employed workers who experienced days of no work despite wanting to work (54.6%) or who do not find it is easy to obtain clients (17.7%), as well as gig workers who did not face either of these challenges (40.5%).

Criteria to measure two types of self-employed gig work as a main job

1. "Lower engagement gig workers" do not have employees, partners, or a dedicated building or space and either:
 - ▶ Usually work very short hours (less than 15 hours per week) or
 - ▶ Have a business which operates intermittently.

8. Latent Class Analysis was performed using the LCA Stata plug-in (LCA Stata plug-in, 2015). Following Weller, Bowen, and Faubert's (2020) guidelines on best practices for LCA, both fit statistics and the interpretability of the solution were used to select the best model. Particular attention was paid to the Bayesian information criteria (BIC) which previous studies have found to be the most reliable indicator of statistical fit. Both the BIC and the Consistent Akaike information criterion (CAIC) pointed to the five-class model as the best fit for the data. Model results are reported in the appendix and specifications are available upon request.

9. See appendix for the item-response probabilities for each variable and the characteristics of the other groups identified by the LCA.

2. “Vulnerable sole proprietors” do not have employees, partners, or a dedicated building or space and:
 - ▶ Lack a stable client base on which they could rely for the next five years

Previously, researchers at Statistics Canada have relied on tax data to develop estimates of the gig economy. Notably, Jeon et al. (2019) proposed an operational definition of gig work grounded in categories found within the Canadian tax system. Jeon et al. (2019) define gig workers as unincorporated self-employed workers who declare fishing, farming, professional, business or commission income, and do not have business partners or a business number.

While there are good reasons to assume that self-employed workers with these characteristics are in less stable or predictable self-employment,¹⁰ survey data can provide more information on the specific circumstances of workers. Indeed, the results of the latent class analysis show that gig workers can be self-employed workers who spend only a small number of hours working at their business, or self-employed persons who do not have a stable client base. However, both tax and survey data point to the lack of business partners and the absence of employees as central components of gig work.

Employees who are gig workers in their main job

The concepts of temporary and permanent employment provide a clearer starting point to identify gig workers among employees. Permanent employees are, by definition, not gig workers as they have an arrangement with an employer that guarantees steady work (ILO, 2018). However, not all temporary employees are gig workers. Indeed, some temporary employees have relatively long contracts and have little need to take action to stay employed in the short term. The ILO, for example, establishes a distinction between short-term and casual employees – those who have contracts shorter than 3 months or a temporary job with no guaranteed work hours – and fixed-term employees – those who have contracts longer than 3 months.

The October, November and December LFS supplements also collected more detailed information on the circumstances of temporary employees. This served to establish if the temporary employee had an arrangement where they had to take action or make specific efforts to obtain a shift, contract or job. Three situations matched this dimension of gig work: 1) working based on successive contracts with different employers, 2) being a day labourer, or 3) having a casual job with an employer that allowed the worker to choose when they worked.¹¹ Arrangements where employees did not need to take action or make a specific effort to obtain a shift or task were not considered to be in scope for the definition of gig work – even if that arrangement did not guarantee stable employment.

Criteria to measure gig employees

To be counted as gig employees, workers must be temporary employees and meet both of the following criteria:

1. **Component of the UNECE definition:** People who accept short-term tasks, projects or jobs.

Measurement criteria:

 - ▶ Employees with a temporary contract shorter than three months OR
 - ▶ Employees who have a temporary job with no guaranteed hours.
2. **Component of the UNECE definition:** Have no assurance of steady employment and must make specific efforts on their own to obtain each task, project, or job.

Measurement criteria:

 - ▶ Temporary employees who work based on successive contracts with different employers;
 - ▶ Day labourers;
 - ▶ Employees with a casual job who can choose when they work.

10. Notably, Jeon et al, 2019 argue that obtaining a business number from the Canada Revenue Agency is an indicator that the self-employed worker expects continuity in their business activity.

11. The other possible circumstances respondents could choose from were: works based on a series of successive contracts with the same employer; only works when called-in or assigned a shift by the employer; has received a permanent job offer; will return to school or do something else at the end of the contract; uncertain about future contract situation; none of these.

Combining the ILO's definition of short-term and casual contracts with situations where an employee had to take a specific action or make an effort to obtain each task or shift showed that in October, November, and December of 2022, an average of 247,000 employees (1.5%) had characteristics that were close to the UNECE's definition of gig work.

In this sense, gig work does not capture all employees who experience short-term or less stable employment. Indeed, on average, in October, November, and December 2022, a further 532,000 temporary employees were in short-term or casual employment, 652,000 had a temporary contract lasting more than 3 months, and 1.9 million employees had a permanent job, but were not guaranteed a minimum number of work hours every pay period.

Gig work as a secondary activity

In addition to workers who engage in gig work as a main job, some Canadians may complete short-term jobs or tasks as a secondary activity. This type of gig work can supplement income and form part of the supply of labour within a country (Kostyshyna and Luu, 2019). However, it does not necessarily consist of a "job" or "employment" according to the ILO's definition of these concepts. Every month, the LFS follows ILO guidelines by measuring employment with reference to a specific "reference week". Respondents are asked if they worked at a job or business for at least 1h, or were absent, but maintained attachment to a job or business during that week. Because gig work may be done very sporadically, all instances of gig work may not be captured by this measurement strategy.

The fall LFS supplement asked respondents to indicate if they had completed freelancing, paid gigs or short-term jobs or tasks during the previous 12 months. The only restriction was to exclude income that was not associated with the provision of a service or the sale of a product (e.g., trading stocks online). According to these results, 1.5 million Canadians aged 15 to 69 had completed a short-term gig, job, or contract in the last 12 months in addition to their current main job. Combined with workers who were gig workers in their main job, this suggests that 2.4 million people or 8.9% of the population 15 to 69 had engaged in a form of gig work in the 12 months preceding their LFS interview in October, November or December 2022.

Measuring digital platform employment

In order to measure digital platform employment according to the OECD-EU-ILO definition presented earlier in the article, a series of questions were added to the December 2022 and December 2023 monthly LFS supplements. These questions aimed to capture (1) the types of activities completed through digital platforms and (2) the nature of the digital platforms or apps used by workers.

To measure the types of activities completed through platforms (1), the questionnaire asked respondents to indicate whether they had carried out different types of work through a digital platform or app over the previous 12 months in order to earn income. The work activities listed in the questionnaire include the sale of goods to earn income,¹² renting out accommodation, and a range of services, such as personal transport, delivery services and teaching or tutoring (see Table 1). This approach enables the production of estimates for specific types of activities done through platforms, and helps distinguish between activities which mostly generate income based on the ownership of goods or property, such as selling goods or leasing accommodation, and those for which income is derived from the provision of services with a relatively high labour input (e.g. delivery, data entry, cleaning) (OECD-EU-ILO, 2023, p.51).

To measure the nature of the digital platforms or apps used by workers (2), a series of follow-up questions were included in the supplement. First, for all types of activities completed through digital platforms, respondents were asked if they had been paid directly by clients, by the platforms or in some other way. Second, for a smaller number of activities, the December 2023 LFS supplement included additional follow-up questions to identify the functionalities of the platforms used by workers (e.g., whether the platform used a rating system or enforced performance standards).¹³ Future iterations of the supplement will extend and streamline this latter approach to cover all types of activities completed through platforms.

12. This excludes selling second-hand goods that are no longer needed.

13. For personal transport, delivery services, and selling goods, the name of the platforms used by workers was also collected as part of an additional verification step.

While there are debates regarding the types of platforms that are covered by the concept of digital platform employment, a possible distinction can be made between platforms which pay workers from those which are not involved in the payment process (e.g., platforms which help match workers and clients, but let the two parties arrange the payment by themselves). This is because the involvement of the platform or app in the payment is a relatively clear indicator that the platform has leverage over workers and can influence the nature of the activities carried out through or on the platform. However, some websites or apps which do not pay workers directly still intervene in the work process by managing a user rating system, enforcing performance standards or setting prices. Such platforms may also fall under the OECD-EU-ILO definition of digital platform employment.

As such, it is possible to distinguish between three different types of digital platform employment based on the nature of the control exercised by the platform or app. Each of those types reflect an increasingly broader definition of digital platform employment: (1) digital platforms which pay workers directly, (2) digital platforms which exercise some form of control over the work process and (3) digital platforms which do not exercise control beyond offering a tool for clients and workers to connect (e.g. online message boards, social media). While only the first two types of digital platforms match the OECD-EU-ILO definition of digital platform employment, measuring the last type of platform employment may be of interest for other purposes, such as tracking workers' use of online platforms that help them connect with clients.

When only considering workers who were paid by platforms or apps, results from the 2023 LFS supplement indicate that 468,000 people aged 15 to 69 (1.7% of the population) had engaged in digital platform employment in the 12 months ending in December 2023 by providing a service, selling or advertising goods for sale, or renting out accommodation. For 79,000 of them (0.4% of the employed population), this was their main job or business during the December 2023 LFS reference week. The most common types of activities done through such apps or platforms were delivery services (245,000), personal transport (116,000), and the sale of goods (65,000).

While an overall estimate is not yet available for the second type of digital platform employment, the results offer evidence that a larger number of workers use platforms which exercise a coordination or control function, without necessarily paying workers directly. For example, among people who had provided tutoring, teaching, or training through an app or platform in 2023, 5,500¹⁴ people indicated they had been paid by the platform, and an additional 10,800 workers reported using a platform that had a coordination or control function. Similarly, among people who created content such as blogs, videos, or podcasts through a digital platform, 15,600 were paid by the platform, and a further 14,700 had used a digital platform which exercised at least one form of control over the work process.

Finally, based on the broadest definition of digital platform employment – including the platforms which pay workers, those which have a control or coordination function, and those which simply connect workers with clients – 927,000 Canadians (3.3% of the population) had completed digital platform employment during the 12 months ending in December 2023, and 135,000 of them (0.7% of the employed population) reported this was their main job or business. Most of the difference between the broader and the more restricted estimate is attributable to the sale of goods for income, with 242,000 people indicating that they had been paid directly by clients for the goods they had sold.

For each type of platform, the distinction can be made between workers who sell goods or rent out property compared with those providing a service with a larger labour input. Among the 468,000 people who had done platform work in 2023 and were paid by the app or digital platform, 368,000 indicated that they had provided a service and 103,000 indicated they had sold goods or leased accommodation.¹⁵ Using the broad definition of digital platform employment, 570,000 had provided a service and 381,000 had sold goods or rented out accommodation.

14. Estimates in this paragraph are associated with a relatively large margin of error.

15. Some respondents completed both types, and for a small number of respondents who selected 'other', it was not possible to determine if they had provided services or goods.

Table 1
Types of digital platform employment and functionalities of platforms, 12 months ending in December 2023

	Used a platform which pays the worker	Used a platform and was paid directly by clients or the platform	Used a platform with at least one coordination or control function
	count		
Total, worked for income through a digital platform or app	467,500	927,100	N/A
Personal transport ¹	115,800	135,200	135,200
Delivery ¹	245,200	277,600	277,600
Selling goods to earn income ²	65,100	306,800	129,000
Cleaning, or handiwork such as assembling furniture or yard work	F	28,300 ^E	...
Pet or house sitting	F	16,500 ^E	...
Child or elderly care	F	10,700 ^E	...
Medical, mental health or other health care services	F	19,500 ^E	12,800 ^E
Tutoring, teaching or training	5,500 ^E	32,700 ^E	16,300 ^E
Programming, coding, data analysis, video editing, web or graphic design	F	43,000 ^E	...
Text editing, proofreading, translation, data or text entry, transcription	F	13,600 ^E	...
Tagging or rating pictures or videos	F	6,300 ^E	...
Creating content such as videos, blogs or podcasts	15,600 ^E	42,000	30,200 ^E
Professional services, such as law, accounting, marketing	12,800 ^E	66,800	46,400 ^E
Renting out a room, a house, or any accommodation	37,800 ^E	82,900	...
Other	13,400 ^E	32,800 ^E	...

... not applicable

^E use with caution

F too unreliable to be published

1. Additional processing was applied to remove the use of platforms which do not have a coordination or control function and do not match a service provider and a client.

2. Additional processing was applied to remove selling through personal or company websites and other out of scope responses. Excludes selling second-hand goods that are no longer needed.

Notes: Population aged 15 to 69. Excludes population living in the territories, on Indigenous reserves and in institutional settings, as well as full-time members of the armed forces.

Sources: Statistics Canada, Labour Force Survey (3701), and Labour Market Indicators (5375), December 2023, custom tabulation.

Measuring dependent self-employment

The final core component of the gig economy – dependent self-employment – was measured as part of the LFS supplement collected from July to September 2022. Estimates represent the average of those three months for the population aged 15 to 69.

A key element to note is that self-employed workers with employees are not covered by the concept of dependent self-employment. The ILO excludes this group from the category of dependent contractors (ILO, 2018) and the ability to hire employees is a strong indicator that a self-employed person maintains a relatively high degree of operational control over their business activities. The survey, therefore, focused on self-employed workers without employees – also known as own-account workers – and measured dependent self-employment in two stages. First, the questionnaire established whether or not self-employed workers without employees depended on another business or person, such as a main client, a supplier, a website or app, or a broker for at least 50% of their commercial activity. Then, among those who did, a series of questions were asked about the nature of this relationship. This was done to determine if the business or person on which the self-employed worker relied exercised control over key aspects of their work, such as their prices, their working time, or the supply of tools or materials.

Nearly 6 in 10 own-account workers rely heavily on a single business relationship

According to data from the LFS supplement, on average there were 1.8 million workers who were self-employed without employees in their main job from July to September 2022. Among them, over half (57.7%) or 1.0 million were dependent on a single business relationship for at least 50% of their commercial activity. The most common types of relationships on which own-account workers were dependent included having a single main client (42.2%) and being subcontracted tasks or projects by another person or business (23.2%).

Table 2**Own-account workers with a business relationship which accounts for at least 50% of their commercial activity, July to September 2022**

	Count	Percentage
Total	1,011,500	100.0
A single client	427,100	42.2
Another company or person subcontracting tasks, projects or clients	234,800	23.2
An agency, broker or other type of intermediary	145,400	14.4
A website or app that matches the business with clients or potential clients	142,900	14.1
A single supplier	61,400 ^E	6.1

^E use with caution

Notes: Self-employed workers without employees aged 15 to 69. Excludes population living in the territories, on Indigenous reserves and in institutional settings, as well as full-time members of the armed forces.

Sources: Statistics Canada, Labour Force Survey (3701), and Labour Market and Socio-economic Indicators (5377), July to September 2022, custom tabulation.

Distinct patterns of dependence

Not all own-account workers who rely on a single business relationship are in a situation of dependent self-employment. According to the ILO (2020), there are two main ways in which dependence can emerge among self-employed workers. The first is operational dependence, which refers to a situation where the client, the website or platform, or the other entity on which the self-employed worker relies, controls how the self-employed person organizes their work. This can occur in different ways, such as the enforcement of a particular schedule or work hours as well as rules or guidelines on how work activities should be performed. The second type is economic dependence, which refers to situations where the dominant party in a business relationship directly controls prices, the provision of tools or materials essential for the business, or access to the market.

To better understand the dimensions of dependent self-employment in the Canadian context, a statistical technique called exploratory factor analysis (EFA) was applied to the data.¹⁶ EFA is a technique that can identify salient statistical relationships in a set of variables. The analysis focused on situations where another business or person exercised a large extent of control over a particular facet of the self-employed person's work activity. Overall, the analysis showed that there are common patterns or dimensions in the way that own-account workers may lack control over key aspects or their work as part of critical business relationships:

- The first pattern showed that when another business or person exercises a large extent of control over the work hours of an own-account worker, this often occurs alongside control over the organization of their work tasks. To a lesser extent, control over the price of the product or service was also associated with this dimension.
- The second pattern relates to economic dependence and highlights how dependence on another business or person for the provision of tools or software often coexists with dependence on that entity to obtain work materials.
- There was also some evidence – albeit weaker – of a third pattern, showing that a lack of control over prices and the inability to hire outside help tended to occur together.

These three patterns suggest that some own-account workers are affected by one, or a combination of: 1) a lack of control over the organization of their work or schedule 2) dependence on another business or person to obtain the tools or materials required for their work or 3) a lack of control over the ability to make key economic decisions such as hiring outside help or setting prices.

From July to September 2022, an average of 331,000 self-employed workers without employees were in a situation where a business or person on which they were dependent for their commercial activity directly controlled their schedule or their methods of work. In addition, for 313,000 own-account workers, a supplier, a main client, a

16. The factor analysis was performed in SAS 9.4 based on a matrix of tetrachoric correlations using proc factor with maximum likelihood (ML) estimation and promax rotation. Six variables, referring to control over the work schedule, the ability to determine how work tasks are organized or conducted, the ability to set the price of the product or service, the provision of tools or software, the provision of materials, control over how the self-employed worker contacts clients, and the ability to hire paid help were included in the analysis. A variable on the consequences of losing the dominant business relationships was also considered in preliminary models but was found to be unrelated to the other dimensions. A series of criteria can be considered when attempting to identify the number of factors or "patterns" which best describe the data. While ML estimation pointed to the existence of 2 patterns (factors) based on the Kaiser criterion, an alternative specification using unweighted least squares estimation supported the presence of a third pattern based on observations of the scree plot and the proportion of common variance accounted by the retained factors (100% common variance). In addition, there was support for a 1-factor solution based on Parallel Analysis (PA), suggesting that there was also a tendency for some workers in dependent self-employment to experience multiple patterns of dependence at once.

website or app, or another entity exercised a large extent of control over the provision of tools or materials required to do their job, and 397,000 of them had limited control over prices or were not allowed to hire outside help as part of their business arrangement. For some, there was overlap between the different types of dependence with 143,000 own-account workers indicating that they experienced all three forms. Overall, 588,000 self-employed workers, accounting for 33.5% of own-account workers, experienced at least one of the three forms of dependence.

The prevalence of a particular type of control varied somewhat according to the nature of the business relationship on which own-account workers relied. While 30 to 40% of own-account workers who were reliant on a main client (39.7%), a website or app (31.3%) or another company or person subcontracting tasks or jobs (35.6%) indicated that the other entity directly controlled the organization of their work or schedule, this proportion was only 13.8% for those dependent on an agency, broker or other type of intermediary. As expected, those dependent on a single supplier were most likely to indicate that this supplier exercised a large extent of control over the provision of tools or material essential to run the business (50.0%), compared with 30.0% among own-account workers dependent on a single client and 33.4% for those reliant on a website or app. Finally, own-account workers reliant on a website or app were more likely to indicate that they were subjected to a large extent of control over prices or lacked the ability to hire employees (45.8%), compared with those reliant on other types of business relationships (38.1%).

Conclusion

The gig economy has generated both risks and opportunities for workers in Canada. On one hand, new technologies have made it easier for Canadians to engage in short paid tasks, projects or jobs that can supplement income and are sometimes pursued as a main activity. On the other hand, business relationships that emerge in the context of the gig economy may generate situations of “dependent self-employment”: a type of work relationship where workers are self-employed but lack control over important aspects of their work, such as setting prices or organizing their schedule.

These new developments have created a need to improve understanding and measurement of three interrelated phenomena. The first – gig work – is a form of employment characterized by short-term jobs or tasks which does not guarantee steady work and where the worker must take specific actions to stay employed. The second is digital platform employment, which refers to employment carried out on or through Internet platforms or apps which exercise some control over the work process, and the third is the measurement of dependent self-employment more generally. While there is notable overlap between these three forms of work, each can also occur on their own.

In 2022 and 2023, Statistics Canada collected LFS supplements to collect information on gig work, digital platform employment, and dependent self-employment. In this report, methods to measure all three forms of work were proposed. Looking ahead, Statistics Canada will continue to build on and refine its data collection and analytical strategies.

Data collection through surveys will continue to play an important role. Surveys help produce timely data that can be used to track the scale of the gig economy over time and align measurement strategies with the latest international statistical standards. Information from surveys will be complemented with the ongoing use of tax data, which can provide a comprehensive picture of the ways in which Canadians earn income and contribute to the economy.

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Appendix

Table A.1
Latent Class Analysis - Model fit statistics

	1 class	2 classes	3 classes	4 classes	5 classes	6 classes
	estimator					
AIC	4786.84	2824.88	2612.47	2518.86	2402.31	2349.83
BIC	4877.26	3011.75	2895.79	2898.64	2878.54	2922.5
CAIC	4892.26	3042.75	2942.79	2961.64	2957.54	3017.5
Adjusted BIC	4829.6	2913.25	2746.46	2698.46	2627.52	2620.65
Entropy R-sqd	1.00	0.72	0.6	0.59	0.81	0.82

Notes: Self-employed workers aged 15 to 69. Excludes population living in the territories, on Indigenous reserves and in institutional settings, as well as full-time members of the armed forces.

Sources: Statistics Canada, Labour Force Survey (3701), and Labour Market and Socio-economic Indicators (5377), October to December 2022, authors' calculations.

Table A.2
Item-response probabilities by class - 5 class model

	Class 1 ¹	Class 2 ²	Class 3	Class 4	Class 5
	percentage				
Employees					
Does not have employees	100.0	91.2	92.0	100.0	0.1
Has employees	0.0	8.8	8.0	0.0	99.9
Dedicated business premises					
Has dedicated business premises	11.2	20.8	18.5	45.4	70.7
Does not have dedicated business premises	88.8	79.2	81.5	54.6	29.3
Business partners					
Has partners	1.8	8.9	0.0	99.9	54.6
Does not have business partners	98.2	91.1	100.0	0.1	45.4
Contracts longer than 3 months					
Has contracts longer than 3 months	21.5	8.7	18.8	15.8	23.6
Does not have contracts longer than 3 months	78.5	91.3	81.2	84.2	76.4
Clients					
Business has not had any clients yet	6.2	7.9	4.6	4.1	1.2
Business mostly based on getting new clients	6.7	18.2	11.3	5.5	8.4
Has recurring clients, but cannot sustain business on their own	27.8	38.7	19.6	13.4	18.4
Could operate business based on existing or returning clients	59.4	35.2	64.6	76.9	72.0
Incorporation status					
Incorporated	8.4	38.9	33.0	62.8	87.1
Unincorporated	91.6	61.1	67.0	37.2	12.9
Ease of getting clients					
Disagree that it is easy to get clients	17.2	24.4	7.2	10.8	11.6
Agree or neutral that it is easy to get clients	82.8	75.6	92.8	89.2	88.4
Work hours per week					
Usually works less than 15 hours per week	55.0	4.0	1.1	10.2	1.4
Works from 15 to less than 30h per week	44.8	19.4	12.5	16.5	4.0
Works more than 30h per week	0.2	76.5	86.4	73.3	94.6
Period of operation					
Operates all year round	71.2	75.3	90.9	89.1	94.3
Operates during most of the year	12.4	14.7	5.7	4.3	4.2
During a specific season	3.2	5.7	2.3	5.3	1.2
Intermittently	13.2	4.3	1.2	1.2	0.3
Days with no work or no clients					
Had days with no work or no clients	56.1	99.8	16.2	19.2	18.0
Did not have days with no work or no clients	43.9	0.2	83.8	80.8	82.0

1. "Lower engagement gig workers".

2. "Vulnerable sole proprietors".

Notes: Self-employed workers aged 15 to 69. Excludes population living in the territories, on Indigenous reserves and in institutional settings, as well as full-time members of the armed forces.

Sources: Statistics Canada, Labour Force Survey (3701), and Labour Market and Socio-economic Indicators (5377), October to December 2022, authors' calculations.