Geographies of Contingency and Urban Form: Considering the Trajectories and Work Locations of Toronto's Temporary Staffers

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Abstract

This thesis explores the urban labour geographies of mobile workers precariously employed under flexible contracts and examines how these geographies are socially and organizationally negotiated. Such flexible labour practices are underexplored but challenge the assumptions that underlie economic geography scholarship, which largely presumes that most work is performed at a fixed location. Using a mixed-methods case study based on a quantitative analysis of Canadian census of population data and qualitative interviews with workers mediated by an employment agency– commonly known as temp workers– in Toronto, I find that census data does approximate where temp workers perform their labour due to two reasons. First, while participants have multiple consecutive jobs, these tend to be located in close proximity to each other within the same subcentre. Second, most participants seek out contractual stability and geographic immobility, which contradicts the commonly held assumption that low-wage workers travel along complex trajectories. I conclude that commonly used methodologies of measuring urban form are therefore still likely effective at mapping the overall economy, including flexible work, but that closer attention must be paid to seasonal fluctuations in labour demand, which are enabled by flexible contracts. Furthermore, I argue that greater emphasis must be placed within economic geography and planning scholarship on the trajectories of precariously employed people living and working in the periphery of polycentric cities, especially as it relates to equitable transportation planning.

Résumé

Cette thèse explore les géographies urbaines du travail des travailleurs mobiles employés de manière précaire dans le cadre de contrats flexibles, et examine comment ces géographies sont négociées sur les plans social et organisationnel. Ces pratiques de travail flexibles sont peu explorées mais remettent en question les hypothèses qui sous-tendent la recherche en géographie économique, qui présume souvent que la plupart des emplois d'effectuent à un endroit fixe. À l'aide d'une étude de cas à méthodes mixtes basée sur une analyse quantitative des données du recensement de la population canadienne et des entretiens qualitatifs avec des travailleurs médiatisés par une agence de placement - communément appelés travailleurs intérimaires - à Toronto, je constate que les données de recensement donnent une idée approximative du lieu où les travailleurs intérimaires exercent leur activité, et ce pour deux raisons. Premièrement, si les participants ont plusieurs emplois consécutifs, ceux-ci ont tendance à être situés à proximité les uns des autres dans le même sous-centre. Deuxièmement, la plupart des participants recherchent la stabilité contractuelle et l'immobilité géographique, ce qui contredit l'hypothèse communément admise selon laquelle les travailleurs à bas salaire suivent des trajectoires complexes. Je conclus que les méthodologies couramment utilisées pour mesurer la forme urbaine restent donc probablement efficaces pour cartographier l'économie métropolitaine dans son ensemble – t compris les emplois précaires -, mais qu'il faut accorder une plus grande attention aux fluctuations saisonnières de la demande de main-d'œuvre, qui sont rendues possibles par des contrats flexibles. En outre, je soutiens que les chercheurs en géographie économique et en planification doivent mettre davantage l'accent sur les trajectoires des travailleurs précaires qui vivent et travaillent à la périphérie des villes polycentriques, notamment en ce qui concerne la planification équitable des transports.

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Contribution to Original Scholarship and Contribution of Authors

This thesis is an original research contribution at the intersection of economic geography, planning and mobility studies scholarship. It contributes methodological innovation regarding the measurement of employment zones in metropolitan areas and proposes a conceptual and empirical reframing of the urban labour geographies of low-wage labour. The study design and original research were conceptualized by myself under the supervision of Richard Shearmur. I am the sole author of this thesis.

Chapter One: Introduction

A brief overview

Globalization, labour market liberalization and digitization have changed the urban geographies of work. Flexible labour practices such as gig labour, freelance labour or part-time employment mean that many people have multiple concurrent and consecutive employers. Furthermore, digitization has divorced some tasks from a specific location– such as an office– by enabling telecommuting through laptops and smartphones. Together, these processes have led to new norms of working, exemplified by hybrid work arrangements, the emergence of co-working spaces or the app-based platform economy in which low-wage workers move freely though urban areas in anticipation of their next food delivery or ride hailing gig. While mobile labour practices have been observed since at least the 1980s (Olson, 1983; Salomon, 1986), the COVID-19 pandemic accelerated these trends and, through the sudden transformation of the home into an office for many, brought into public consciousness which tasks can be performed from almost anywhere and which are still tied to specific locations.

While we are increasingly aware of the social changes workplace flexibility and mobility have brought, the effects of mobile work on the organization of urban space remain blurry and empirically understudied. In economic geography, the changing spatiality of work challenges the assumptions that traditionally underpin the theorization of urban form; for the longest time, consensus existed in economic geography scholarship that individuals with fixed job locations, as collected in census of population data, could on aggregate approximate the location of economic production and thus be used to map the urban economy. Under this framework, economic centres are defined as clusters of fixed workplaces where employees perform all, or at least most, of their labour. Yet, the proliferation of mobile communication technologies, the

ubiquity of internet access and the rise of short-term and part-time contracts raise questions whether the employer's address still can be equated with the location where work is performed (Rauhut, 2017). A debate has therefore emerged in the field– a debate this thesis engages with and contributes to– which conceptually and empirically questions whether employment clusters still sufficiently describe where economic value is truly created in metropolitan areas (Kellerman, 2016; Pajević, 2020; Stevens & Shearmur, 2020; Vasanen, 2013).

The lack of certainty surrounding the spatial effects of labour mobility on urban space permeates urban planning practice as well. Although the connections between urban planning and economic geography are not often made explicitly (Rydin, 2013), theorizations of economic urban form are still central to planners' understanding of urban space, especially in transportation planning where transportation networks are planned to connect residential and commercial areas (Brezzi & Veneri, 2015; Frey, 2003). Statistics Canada, in its discussion of the 2016 census, explicitly recognized the challenges transportation engineers and urban planners currently face in predicting commuting patterns with its census data, given that the work locations of a large population may vary (StatsCan, 2017). Furthermore, many cities are adopting planning strategies and investing in infrastructure projects aimed at attracting skilled mobile workers in a globalized economy, for example through rapid train connections between the centre and airport. These strategies are deemed risky for the health of urban regions as such projects often do not benefit the local population and the processes through which mobile workers negotiate their workplaces are not well understood (Amekudzi et al., 2012; Hutton, 2015).

A particular blind spot that remains– one that I begin to fill in this thesis– is the spatial effect of mobile labour on those who are precariously employed and whose work

contracts are based on part-time, gig, or platform labour (Kellerman, 2016; Malin & Chandler, 2017; Srnicek, 2017). Such labour forms a large percentage of the work that can no longer be located using census data and whose job locations are therefore underexplored. Furthermore, the geographies of such employment are assumed to be complicated: multiple concurrent contracts, frequently changing job sites, irregular shiftwork, mandatory training sessions and insufficient public transit access between employment centres are possible contributors to economic and spatial uncertainty (Lewchuk, 2017; Premji, 2017; Wilson et al., 2011). Concurrently, however, many such jobs are also tied to geographic locations. The COVID-19 pandemic in particular exposed a stark divide between those who could perform their work from the safety of their home and those, often precariously employed, who still had to commute to specific locations. Understanding where these locations are, how these locations are socially and organizationally negotiated between the worker and employers, and how the precariously employed manage multi-locational work remains crucial to the theorization of how mobile work is affecting the spatial organization of the North American urban economy and how planning practice should respond to spatial changes to work patterns.

Research goals and objectives

Within this thesis, I engage with and contribute to the current debates on the impact spatiotemporal changes to work patterns– exemplified by short-term contracts and multi-locational work– have had on the spatial organization of cities and North American urban form. Specifically, this doctoral research project adds to the current discussions in the field of urban economic geography through a mixed-methodology case study that empirically examines 1) how well census data can capture the labour geographies of precariously employed temp workers with complex trajectories and 2) how the urban labour geographies of low-wage work are socially and organizationally determined between employers and employees. For this purpose, I conduct a location-

based census data analysis using the methods commonly used since the 1990s to identify urban form in North America and compare these results to qualitative data collected during semi-structured interviews about participants' work-related geographies. The study takes place in Toronto, Canada and the research population are temp workers, a mediated labour arrangement that suggests a high degree of labour mobility, prevalence of multi-locational work, and precarious employment structures (Enright, 2013).

The findings contribute to the current discussions in three ways. First, I seek to examine the largely theoretical discourse on the ongoing validity of polycentric form empirically: to my knowledge, there has been no attempt at a comparative study that uses both location-based and qualitative methods to test which employment locations and trajectories are captured by census data and which are not. Second, I diversify the population whose labour mobility has been studied in the context of urban economic geography to include highly mobile individuals employed under precarious employment conditions. Third, I argue for the inclusion of *motility* and *immobility studies*– both of which are analytical frameworks that consider how movement is socially and organizationally negotiated– into the urban economic geography discourse concerning the changing spatiality of work.

Thesis structure and description of chapters

This thesis is organized in seven chapters, including this one. Chapter Two provides an overview of the literature relevant to this thesis. I begin by presenting the economic geography literature relating to the theorization and empirical measurement of North American urban form and outline how its conceptualization is tied to a location-based understanding of the workplace. Drawing on the fields of labour and mobility studies, I then summarize the debate surrounding the theoretical and methodological challenges non-standard labour arrangements and the widespread adoption of

information and communication technologies (ICTs), which enable hybrid and mobile work, pose to our understanding of urban form. A question central to this debate is why urban economic geography scholarship has seen so few changes to the spatial organization of employment in North American metropolitan regions since the 1980s and 1990s when the concept of polycentricity was introduced – despite the well-recorded impacts ICTs have had on the locations where office-based labour in particular is performed. I place particular focus on *immobility*, a subset of mobility scholarship that emphasizes the autonomy and influence groups such as migrants and the precariously employed have on shaping their geographies and movements. It is here that I introduce the key concept of *motility*, an analytical framework that considers organizational ability and social relationships to determine mobility potential which I use in the analysis and discussion of the interview data. The chapter concludes with the research questions.

Chapter Three is a detailed overview of the research design and methods used in this doctoral research project. As previously mentioned, this project aims to understand where temporary staffing labour is performed in the Toronto census metropolitan region (CMA), to what extent census data can capture these locations, as well as how work locations are socially and organizationally negotiated. I therefore provide justification why temp workers, whose labour is mediated to third party companies by agencies, are an appropriate demographic to test the limits of location-based methodologies of mapping employment clusters based on census data. Further, I describe the methods used in the mixed-methodology case study based on a spatial analysis of Statics Canada's 2016 Census of Population micro-data as well as 32 interviews with temporary staffers and key informants familiar with the Toronto region's temporary staffing industry. I conducted these interviews between June and September 2021. Throughout the chapter, I discuss the limitations of the research project and consider how interview

bias, the Toronto context and the data captured within the Statistics Canada census questionnaire narrow the claims that can be made from the findings.

Chapter Four is the first of three chapters presenting the empirical findings of this research project. This chapter is based solely on the quantitative analysis of 2016 Canadian census data and maps employment in the Toronto CMA for both the general working population and those working in the temporary staffing industry based on the location-based methodologies of measuring urban form. The analysis reveals that most employment in the Toronto CMA clusters in economic centres that are typical of the polycentric urban form generally associated with large North American metropolitan regions and that, according to the locations captured by census data, temporary staffing labour is also performed in the same employment centres. Additionally, a geographic divide emerges in which staffing agencies, workers and companies that use mediated labour appear to be organized in two distinct labour markets in which white collar staffing work is mostly located in the Toronto CMA's urban core while blue collar staffing work is organized and performed in peripheral subcentres.

Chapter Five addresses the spatial and temporal organization of Toronto's temporary staffing industry as it emerges from the interview data. Interviews with both workers and recruitment staff reveal that temporary staffing in the Toronto CMA tends to be *regionalized*, meaning that agencies draw on workers living in close proximity and mediate them to companies located in the nearest economic centre. Further, staffing placements in the Toronto CMA generally last multiple months as companies use mediated labour as part of their institutionalized hiring practice rather than a short-term solution of filling labour shortages. The findings begin to highlight the benefits and limitations of location-based methodologies of measuring urban form as the interviews confirm that census data do accurately map where temporary staffing labour in the

Toronto CMA is performed but provide few additional details about the daily mobility of workers or the length of their placements.

Chapter Six turns the attention towards the experience of temporary staffers in the Toronto CMA and examines the control they have over their labour mobility and workplaces. Drawing on analysis methods found in the field of mobility studies, the interviews demonstrate that temp workers do have meaningful control over their placement locations and length, despite the economic and social precarity associated with the contractual stipulations of mediated labour. Short commute times and stable schedules are the main considerations that temp workers use to decide which agency they will be associated with and which placements they accept. A 30-minute commute by public transit is almost universally mentioned as the ideal length, although participants are willing to travel for up to an hour. However, the interviews reveal that the access to workplaces within that time is uneven as those living and working on the periphery of the Toronto CMA report that transit cost, regularity of service and the low density of stops prevent the effective use of transit to reach Toronto's subcentres.

In Chapter Seven I discuss how the empirical findings contribute to the existing literature. Specifically, I address to what extent methodologies based on census data can approximate the labour geographies of temp workers in the Toronto CMA and whether this approximation sufficiently captures the Toronto region's economic urban form. I conclude that the qualitative interviews provide evidence that supports both a morphological approach to urban form based on census data as well as a functional approach in which network ties and uses are examined. Further, I argue for the broader incorporation of the *motility* framework into the field of urban economic geography to analyze and predict labour mobility. I also raise questions about the relationship between urban economic geography scholarship and planning practice and argue for

stronger integration between the two disciplines. This discussion arises from the finding that the Toronto region's polycentric urban form appears to be stable and that the majority of residents live near, and work in, peripheral economic subcentres, but that transit connectivity to these centres is lacking. Lastly, chapter eight briefly summarizes the main findings and takeaways presented in this thesis.

Chapter Two: Literature Review

In this chapter I provide an overview of the academic literature on the current spatiality of precarious labour in North American urban areas and its potential impacts on the conceptualization and empirical measurement of economic urban form. The purpose of this overview is to provide rationale for the scope of this doctoral research project, introduce key theories, and provide context for the methodology, results and discussion chapters yet to come. The chapter is organized in six sections. First, I review the literature on North American' urban form since the 1970s when polycentricity as a concept first emerged. Particular attention is paid to the employment density-based methods that have been used since the 1990s to define economic centres and theorize their topographical arrangement within urban space. The purpose of this section is to highlight how such methodologies have relied– and continue to rely– on the assumption that work is performed in a fixed location and that work arrangements that defy this assumption, for example vehicle-based jobs in the transportation and logistics sectors, have a marginal impact on the analyses.

I then continue with a review of two societal and technological developments that challenge the assumption that work can be approximated as being performed in a single location. First, I briefly outline the history of flexible, non-standard labour arrangements since their introduction to labour markets in the post-Fordist economy of the 1970s and 80s and provide an overview of the most common contractual arrangements facilitating flexibility. I further demonstrate how these arrangements can increase the risk of economic and geographic unpredictability and precarity among workers. I then discuss how the physical and virtual mobility granted by Information and Communication Technologies (ICTs) such as the personal laptop and smartphone has impacted the

conceptualization of urban form not only in North America but also in Europe and Asia, and introduce the theoretical and methodological debates that have thus ensued.

In the fourth section I provide an overview of the empirical studies on changing labour mobility among precarious workers since the proliferation of ICTs in the 2000s, in particular in urban areas. Special attention is paid to the literature using the *immobility* framework, a strain of research within the field of Mobility Studies that challenges the narrative of increased ICT-facilitated mobility and is often associated with the study of the precariously employed. I then briefly touch upon the impacts the COVID-19 pandemic has had on the organization and spatial location of workplaces before I summarize the key takeaways from this chapter to highlight the existing gaps in the literature and define the scope of this doctoral research project in relation to these gaps. Finally, I present the research questions.

Polycentric urban form in North American metropolitan regions

In this section I provide a brief overview of the literature on the current state of debate on the economic urban form of North American cities, which for large metropolitan areas is accepted to be polycentric (Arribas-Bel & Sanz-Gracia, 2014; Hajrasouliha & Hamidi, 2017). In particular, I will be drawing attention to the relationship between the empirical measurement of economic location and the reliance on census data that accurately approximates where work is performed in the conceptualization of polycentricity and urban form more generally.

The theorization and empirical measurement of economic urban form is closely linked to location theory, a school of thought based on the assumption that economic agents – whether it is companies, individuals or entire industries– follow economic principles in the selection of their operation sites. In particular balancing land rent,

transportation costs, and the proximity to a central market as well as resources such as labour and auxiliary services emerge as central considerations (Scott & Storper, 1986). At the urban scale, early theorizations of North American urban form such as the Chicago School's concentric model, in which urban land uses are organized in concentric circles around an urban core or central market, draw on theories of economic location such as the von Thünen model (Chisholm, 1961; Parks et al., 1925). In this model, the economic activity of both high-order services and manufacturing is centralized with land prices decreasing with increased distance to the core. The economic benefits of proximity to a central market and its consumers as well as the advantages of co-location – such as knowledge spillover– remained central concepts to the theorization of economic urban form which presupposes agglomeration. Such monocentric models of the city, premised upon a unique urban centre, has given way to polycentric models: the location of activities is still thought to follow distance- and cost-based criteria, but distances and costs are understood as being measured to multiple centres, each weighted differently by different actors (McMillen, 2001).

Within the North American discourse, the observation and theorization of polycentricity is closely linked to the macro-economic shift towards the post-Fordist economy occurring in the 1970s and 80s. Fueled by global competition, the importance and presence of vertically integrated, large-scale manufacturing that defined the Fordist production model declined in North America and was replaced by flexible production based on global supply chains (Jessop, 2002). While the shift towards post-Fordism had underlying social causes such as the restructuring of the employment relationship (which I will discuss in detail in the next section), much of the geographic economic reorganization can be attributed to technological innovations such as standardized global transportation logistics (i.e. trucks and cargo ships) and networked communication technologies (Castells, 1996; Scott & Storper, 1986).

Throughout the 1980s and 1990s – and even as early as the 1970s (Kemper & Schmenner, 1974; Mills, 1972; Odland, 1978) – it was observed among economic geographers that the singularity of the central business district (CBD) as the location for both office work and manufacturing was waning (Anas et al., 1998), which challenged the theorization of the monocentric city model based on a binary division between a central core and a peripheral, predominantly residential, hinterland (Pain, 2008; Scott & Storper, 1986). Specifically, it is agreed upon that the post-Fordist production model had two effects on the spatial organization of North American cities: first, North American cities increasingly became sites of command and control functions as well as knowledge production in a largely office-based economy (Boltanski & Chiapello, 2005; Scott & Storper, 1986; Yeates, 1998). Second, highway construction, low-cost trucking and suburban train yards diminished the remaining manufacturing industries' reliance on centrally located transportation hubs such as the harbour or rail yards (Anas et al., 1998); in the monocentric city model, manufacturing was located in close proximity to the central core, yet the construction of such new transportation infrastructure in urban areas enabled such industries to 'leapfrog out to the outermost suburbs' (Anas et al., 1998, pg 1430).

Innovations such as the fax machine and networked computing further diminished the need for close proximity in office work by allowing for the cheap and quick transportation of digital data over distance (Garreau, 1991). For office-based labour, a spatial division of functions began to develop in which strategic and representative work was located in the CBD while supportive back-office functions such as data management suburbanized (Shearmur & Alvergne, 2002; Urry, 1986). As such, the initial spatial division of uses in the post-Fordist economy in which the manufacturing and warehousing were suburbanized but office-based employment

remained in the core (Fujita & Ogawa, 1982) began to no longer hold true in North American cities (Garreau, 1991; Gordon & Richardson, 1996; Lang, 2003). The scatteration of office-based employment away from the core led to uncertainty surrounding the ongoing validity of agglomeration economies– and location theory as a whole (Massey, 1995)– in the post-industrial city (Fujita & Ogawa, 1982; Garreau, 1991; Giuliano & Small, 1991; Gordon & Richardson, 1996; Lang, 2003).

Early definitions of polycentricity were characterized by the inadequacy of monocentricity in face of the post-Fordist economic organization's spatial effects on North American metropolitan areas (Fujita & Ogawa, 1982; Kemper & Schmenner, 1974; Mills, 1972). Fujita and Ogawa (1982), for example, outline how new theorizations of urban form were largely motivated by evidence that the monocentric city model was unable to capture the changes occurring to the spatial organization of economic (and residential) activities in wake of post-industrial economic restructuring. Not only residential and commercial shopping spaces were suburbanizing but employment itself, which in turn led to previously unseen commute patterns (Anas et al., 1998; Fujita & Ogawa, 1982; Kim, 1983). Polycentricity thus initially is understood as a literal term that merely describes a multiplicity of economic subcentres and does not refer to a set morphological distribution of these centres in relation to each other (Giuliano & Small, 1991; McDonald, 1987; Small & Song, 1994).

The uncertainty surrounding the spatial distribution as well as the stability of new urban economic centres fuelled the development of empirical tests in the mid-1980s to identify and quantify subcentres. In particular McDonald (1987) proposed that publicly available data sets that provide geographic employment location information and record the administrative address of where workers are deemed to usually work during the day – for example the American 'Journey to Work' census data or local

origin-destination data– could be used to identify and map subcentres. Economic centres were subsequently defined through quantitative density measurements of employment activity, in which a certain employment density threshold had to be met in order to qualify as an agglomeration (Giuliano & Small, 1991). Centres are therefore defined as clusters of heightened employment density (Giuliano & Small, 1991; McMillen, 2001; McMillen & Smith, 2003; Shearmur et al., 2007). As a result, the definition of a subcentre and ultimately polycentricity itself cannot be divorced from the methods and methodologies initially used to map and measure the morphological distribution of economic agglomerations. Many of the early theorization of the non-monocentric city thus were largely descriptive and based on observational (Garreau, 1991) or quantitative empirical evidence of geographic changes to employment location (Fujita & Ogawa, 1982; McDonald, 1987).

Structuralist narratives, which argue that polycentric urban form follows consistent spatial patterns, do exist within North American research. In particular, Garreau's (1991) comparative study of subcentres across nine U.S. metropolitan areas, Hartshorn and Muller's (1989) theorization of the spatial distribution and connection between suburban downtowns and the CBD, as well as Krugman's (1991) core-periphery thesis, have led to definitions of polycentricity as a specific distribution of activities within a metropolitan area: in this understanding manufacturing is located in the periphery along highway and rail corridors as well as in close proximity to airports, back office functions cluster in suburban centres where commercial space is cheap, and agglomerations of high-order business services are found in the CBD .

The empirical measurement of North American form remains rooted in employment density-based methodologies that seek to define the sizes and topographical arrangement of multiple subcentres at the intra-urban scale (see Arribas-Bel & Sanz-

Gracia, 2014; Duquet & Brunelle, 2020; Kane et al., 2018; Yang et al., 2012). Although many of the early studies highlight their interest in commute flows (Giuliano & Small, 1991; Gordon, Richardson & Giuliano, 1989) and often used metropolitan origin-destination data to locate employment centres, job density-based methodologies proliferated due to their replicability. In North America, theoretical debates surrounding the empirical measurement of urban form since the early 2000s have centred around methodological innovations that mitigate the need to define density thresholds (Craig & Ng, 2001; McMillen, 2001, 2004; McMillen & Smith, 2003; Redfearn, 2007) and discuss whether models should assume the existence of the CBD (Arribas-Bel & Sanz-Gracia, 2014; Griffith & Wong, 2007; Hajrasouliha & Hamidi, 2017). While alternative methodologies based on network-flows (both physical and digital) as an approximation of density do exist and have proliferated elsewhere (Burger et al., 2014; Liu et al., 2018; Meijers et al., 2018), their adoption in the North American context has been limited (Meijers & Burger, 2010).

In recent years, however, the accuracy of location-based government data sources to approximate the place of employment has been fundamentally challenged in North American discourse along two lines of inquiry, which I will outline in detail in the next two sections. The emergence of non-standard labour practices, commonly summarized as the *gig economy* (Popan, 2021), as well as the ubiquity of information and communication technologies (ICTs) which allow for mobile work have led some scholars to question the assumption that the place of employment can be equated with the location of work or that this place of employment will be stable over time (Hesmondhalgh & Baker, 2010; McPhee, 2016; Peck & Theodore, 2001; Stevens & Shearmur, 2020). Thus, the question is being asked whether or not the location-based government data at the foundation of many empirical studies is sufficient in capturing

the workplaces of a metropolitan area's population in the 21st century (Pajević & Shearmur, 2017; Shearmur, 2018).

Theoretically and methodologically, the largely qualitative methodologies employed in mobility scholarship – which contend with questions such as how mobile workers chose their places of work (Hislop & Axtell, 2009; Kesselring, 2006) or what activities people engaged in during their commute (Lyons & Urry, 2005; Manderscheid, 2014) – is influencing some economic geographers in their current theoretical conceptualization of urban structure and how it is measured (Kellerman, 2016; Pajević & Shearmur, 2017; Phelps, 2017). Although the use of qualitative methodologies remains limited in the field, some researchers have used interviews to outline the impacts a geographically and temporally static conceptualization of labour have on urban economic geography (see Pajevic, 2020, Attoh, 2016 or my own work in Stevens & Shearmur, 2020 for example). Further, there are long-standing calls to incorporate qualitative research more readily to confirm whether or not the network flows calculated with quantitative regression models indeed reflect the lived experiences of urban residents (Pain, 2008). To my knowledge, however, these challenges to the accuracy of employment location-based data source have been largely theoretical thus far and further comparative, mixed-methodology study that outline the ability of approximating urban form based on these data sources are needed (Shearmur, Ananian, et al., 2021).

To conclude this section, the conceptualization of North American urban form as polycentric originates in the 1970s in light of the post-Fordist economy and was theorized throughout the 1980s and 90s. Further, polycentricity has emerged as a stable urban form in large North American urban areas and few changes to the geographic organization of economic activity in metropolitan areas have been observed since the 1990s (Arribas-Bel & Sanz-Gracia, 2014; Hajrasouliha & Hamidi, 2017). Polycentricity's

theorization and definition is closely tied to the quantitative methodologies used to measure it, which aim to identify spikes in employment density, thus signaling agglomeration patterns. As such, publicly available data sets that provide specific geographical information where employment is located (such as the census) remain central to the empirical measurement of North American urban form. However, the validity of these data sets to approximate where work is performed have been challenged in recent years. In the next two sections I will outline two central concerns: the emergence of non-standard labour practices as well as the ubiquity of information and communication technologies (ICTs) that allow much work to be performed at flexible locations.

Non-standard labour in the context of urban labour geographies

Non-standard labour, a term that describes a collection of flexible labour practices such as part-time labour or gig work (Kalleberg, 2000), has been critically examined by urban economic geographers in recent years as its wide-spread use in the labour market de-stabilizes the predictability of where economic activity is performed in urban areas (Pajević, 2020; Phelps, 2017; Shearmur, 2018). In this section I will outline the history of non-standard labour in North America, discuss how such flexible labour practices affect the individual's urban labour geographies, and present how its use in the labour market challenges current empirical methodologies of studying and quantifying urban form.

Like polycentricity, non-standard labour practices originate in the post-Fordist reorganization of the North American economy. Between the 1940s and 70s, the post-war Fordist era of industrial production in North America was centred on a co-dependent economic system of mass-production and mass-consumption based on Keynesian economic principles (Jessop, 2002). Under Keynesianism, full employment

was reached through government stimulation that increased production. Production and wages were dependent variables, thus meaning that increased production led to higher wages and subsequently increased economic consumption by workers (Rodgers, 1989).

A central component to this post-war economic organization was the *standard employment relationship* (SER), a term that describes the contractual norm of the North American Fordist economy (Fudge & Vosko, 2001). In it, contracts tended to be indeterminate, thus ensuring life-long employment with stable incomes even for less qualified workers. Employers also provided additional social and health securities under this agreement, for example in the form of pension contributions or health care benefits. Further, the collective bargaining power of workers in the form of unions was tolerated by both government institutions and corporate management (Fudge & Vosko, 2001; Kalleberg, 2000). Central to the normative model of full-time, male employment based on a breadwinner wage was the gendered division of labour in which unpaid, reproductive labour was feminized (Fudge & Vosko, 2001).

However, since the 1970s, the erosion of the *standard employment relationship* in the post-Fordist economy was institutionalized both through state governance and the adoption of lean management strategies aimed at reducing labour and production costs by corporate actors. At the governmental level, labour markets were de-regulated to combat the high unemployment and economic stagnation in the 1970s that resulted from intensified global competition and integration and was leading to social unrest (Enright, 2013; Harvey, 1989). Neo-liberal governments in the 1980s and 90s institutionalized non-standard labour practices through three strategies: first, they liberalized the labour market by weakening the state protection of labour rights and legalizing previously outlawed contractual arrangements such as the use of labour intermediaries like temporary staffing agencies (Coe et al., 2007). Second, punitive

welfare regimes adopted in the 1990s– for example the 1996 US welfare reform, *Agenda 2010* in Germany or the 1996 Ontario Supports to Employment Program – disincentivized and penalized unemployment, thus forcing workers into part-time employment with lower wages (Peck, 1996; Vosko, 2000). Third, governments themselves diverged from standard employment contracts by increasingly hiring part-time staff in public sector positions (Stecy-Hildebrandt et al., 2018, Ricca, 1989).

Concurrently, corporations began utilizing lean management tactics in which non-essential costs were drastically reduced or cut altogether. Boltanski and Chiapello in their seminal work *The New Spirit of Capitalism* (2005) trace an ideological shift in organization management textbooks beginning in this time: indeterminate full-time employees, which in the post-war period had been viewed as a companies' greatest asset, were increasingly viewed as liability risk factors as their wages formed a significant ongoing cost. By the 1980s, the vertically integrated firms of the Fordist production era had outsourced many of their production arms internationally, thus drastically reducing the number of workers they employed in North America. As a result, North American cities saw a higher concentration of knowledge-intensive and office-based employment opportunities dedicated to the management and control of globalized production chains (Massey, 1995). Further, *just in time* management practices – the strategy of swapping in-house production for globalized production chains in which many of the components are outsourced (Boltanski & Chiapello, 2005)– was extended towards 'just in time labour' (Odih, 2003), a term which describes the increasing prevalence of flexible labour arrangements such as *zero-hour* contracts where paid hours are not guaranteed as well as corporations' reliance on temporary labour. Under this managerial model, labour becomes a flexible variable in which the number of employees can be constantly adjusted in response to delays in the supply chain, seasonal lulls or moments of increased production (Boltanski & Chiapello, 2005).

Non-standard labour thus is largely defined in contrast to the *standard employment relationship* and can take many forms (Kalleberg, 2000; Lewchuk, 2017; Rodgers, 1989). In particular Kellenberg (2000) outlines five different forms non-standard labour can take that are united in being a departure from full-time labour with indefinite contracts: part-time, mediated, contract, short-term and contingent labour. Part-time work is defined by employment relationships that provide fewer hours than standard full-time employment contracts which is defined as less than 30 hours per week in Canada and US (Vosko et al., 2009). Although part-time labour in the 1970s was a welcomed alternative labour form at first that allowed women to enter the workforce and allowed for freedom and flexibility on part of workers (Boltanski & Chiapello, 2005), gains in the percentage of part-time labour within the total work force since the 1980s have largely been among participants preferring full-time labour (Hatton, 2015; Kalleberg, 2000).

Other non-standard labour forms are defined by their reliance on labour mediators that facilitate the employment arrangement between workers and employers. In particular temporary staffing which is defined by a contractual triangulation between temporary staffing agencies, workers and client firms (Gonos, 1997) has been of central importance to the institutionalization of non-standard labour practices in labour market regulation since the 1970s (Hatton, 2011; Peck & Theodore, 2006; Vosko, 2000). In this work arrangement, workers are tied to agencies in *zero-hour* contracts. Such temp workers are then mediated to workplaces in exchange for an hourly mediation fee paid by the client company to the agency (Figure 1). More recently, information and communication technologies (ICTs) have facilitated the emergence of digital labour intermediaries such as UBER or Deliveroo. Similar to staffing agencies, workers in the

platform economy do not have a direct employment relationship but are reliant on the platform to facilitate work and payment (Srnicek, 2017).

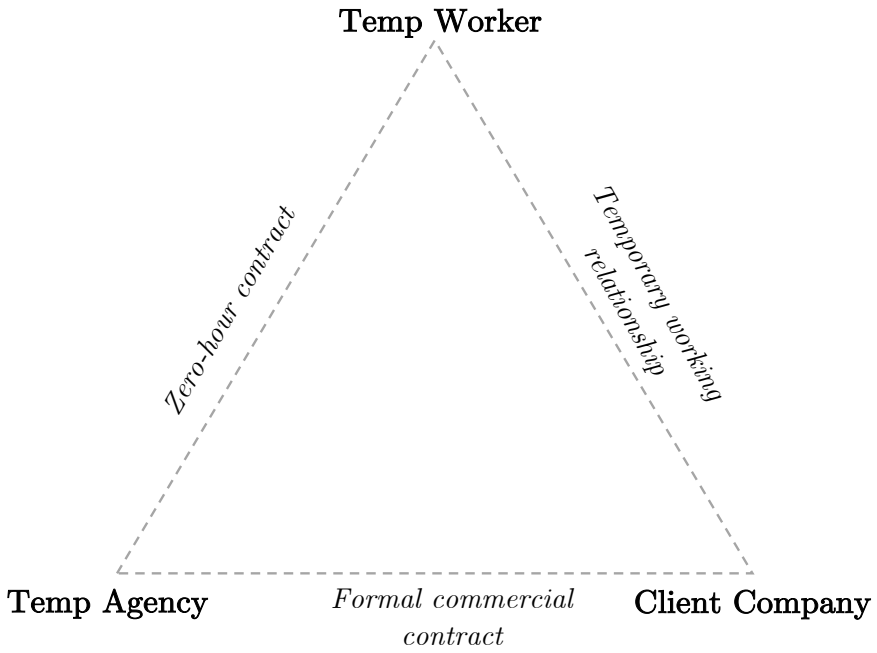

Figure 1: The triangulated employment relationship

However, temporary staffing cannot fully be equated with low-wage labour as temporary staffing markets are highly localized and constantly evolving, thus meaning that third party labour mediation can be prevalent even in industries generally associated with higher wages and specialized knowledge. Indeed, it has recently been observed in industries such as pharma production, insurance or finance in which transnational corporations are outsourcing some mid-level white collar work to temporary staffing agencies (Enright, 2013; Lewchuk, 2017; Rodgers, 1989). Departments that are most affected include low and mid-level accounting (for example for a regional branch or back-office), human resource management and labour force recruitment (Enright, 2013; Enright & Pemberton, 2016; Yip & Coe, 2018).

Contract, short-term as well as contingent labour are all defined by temporally constrained employment relationships. The three terms are distinguished by their varying lengths and income associated with them. Contract labour, which includes forced self-employment and fixed-term contracts (Hesmondhalgh & Baker, 2010), typically has the longest contracts and highest wages (Vosko et al., 2009). Short-term labour, a term that includes both gig labour and seasonal labour, as well as contingent labour describe short contracts– multi-month to as short as day-long contracts– and are differentiated by the level of control and labour insecurity workers experience (Kalleberg, 2000; Peck & Theodore, 2001).

Although non-standard work cannot be equated with precarity, the absence of the social security nets associated within the *standard employment relationship* increase the likelihood of workers experiencing labour insecurities (Kalleberg, 2000) – many of which have spatial impacts on the individual and their labour practices (Enright, 2013; Lewchuk, 2017). As with non-standard labour, precarity in itself lacks a standardized definition and rather is defined by a set of conditions that in combination create insecurity. In particular Rodgers' (1989) definition of precarity remains foundational (see Jacquemond & Breau, 2015; Vosko, 2000 for examples). In it, Rodger outlines that four instable conditions in the employment relationship lead to precarity: uncertainty regarding the future of the employment relationship in the short and long-term, lack of control over the employment conditions, absence of legal protection preventing employers to terminate the employment relationship or discriminate, and finally low income. Reich (1992) notes that the loss of well-paying 'routine production' (i.e. manufacturing) jobs in particular forced workers into lesser-paying and temporally unstable service jobs, which are seen as mainly auxiliary to the smooth working of the knowledge sector. The frequency in jobs changes has multiple consequences for workers: periods of downtime between gigs must be bridged, which is often financed by debt

(Enright, 2013). Further, the surplus working population weakens the collective bargaining power of workers (Peck, 1996; Sparke, 1994; Vosko, 2006). Subsequently, wages have stagnated, and employers are 'off-loading the risks of increased economic uncertainty onto workers' (Enright, 2013).

Non-standard labour practices additionally have spatial consequences (Friedman, 2014), which must be considered in employment-based models. First, based on 2016 census data, Ali et al (2021) estimate that approximately one third of the Canadian urban population is employed under non-standard employment contracts with involuntary part-time labour (12% on average) and temporary contract labour (10% on average) forming the largest portions. This implies that many workers either hold multiple employment positions concurrently or switch their employment location regularly. Due to this growth of non-standard labour, some economic geographers– including myself in collaboration with Richard Shearmur– have theorized that a trajectory-based approach capable of observing complex and evolving movement patterns may be needed in the study of economic urban form (see Kraak, 2003; Massey, 2005; Shearmur, 2018; Stevens & Shearmur, 2020) – although there have been few case studies outlining the benefits of this approach empirically. Central to this debate is the limited employment location data collected for participants in non-standard labour arrangements during the census (I discuss which geographic information is and is not captured in the Canadian census in detail in Chapter Four), meaning that location-based methodologies of measuring urban form may be insufficiently capturing where economic activity in cities is performed (Shearmur, 2018).

Further, the precarity associated with non-standard labour affects the spatial relationship between urban economic centres and residential neighbourhoods, which is of concern to urban planners. Walks (2001) and Hulchanski (2010), among others, find that low income housing was increasingly dispersing throughout Canadian metropolitan

areas due to the gentrification of the central city. As a result, a substantial amount of low-income housing is suburbanizing. These patterns are a departure from the residential distribution typical of the monocentric city in which low income neighbourhoods were predominantly concentrated in close proximity to the central core (Breau et al., 2018). The suburbanization of both low-wage work and low-income residential areas in the post-Fordist economy increases the amount of commutes taking place on the periphery of metropolitan areas which tend to be underserved by public transit (Attoh, 2012; Gottfried & Fasenfest, 2001; Peck & Theodore, 2001). Further, there are some indications that the suburbanization of low-wage work is contributing to longer and more unpredictable commutes as workers work multiple jobs concurrently (Burger et al., 2014; Premji, 2017; Stevens, 2021), although the validity of these patterns is debated, as I will outline in detail later in this chapter.

To summarize, non-standard labour is an umbrella term that encompasses diverse contractual arrangements that institutionalize flexibility in the labour markets. As such, workers switch jobs frequently or even hold multiple gigs, thereby complicating their labour geographies. In Canada, the use of non-standard labour practices has consistently grown since the 1990s and by the 2016 census approximately one third of the working population's employment is governed by flexible contracts, thus increasing their likelihood of experiencing geographic unpredictability and precarity (Ali et al., 2021). Although the effects of non-standard labour on North American urban form are understudied, the pervasiveness of such labour practices provides theoretical challenges to the employment location-based approaches.

ICTs, the gig economy and urban form

As outlined in the section on polycentricity in North America, few new observations have been made about the distribution of economic activity in North

American urban regions since the 1990s. It is generally agreed upon that the last large theoretical debate over the stability of the polycentric city was settled in the mid-2000s (Agarwal et al., 2012). However, the apparent stability of employment location in the polycentric city stands in sharp contrast with observations collected by scholars in the fields of Mobility as well as Management and Organizational Studies who study the effects of ICTs on the workplace. In their view, the introduction of communication technologies such as the laptop, ubiquitous internet access, and the smartphone in the mid-2000s have– in conjunction with the gig economy– dramatically changed the nature of work and where it is performed. Two concepts from these fields are central here: *co-presence* as well as *multi-locational work*.

Co-presence describes the ICT-facilitated ability to be virtually mobile in situations when physical mobility is not convenient or possible (Kellerman, 2016). Physical mobility is supplemented or even replaced with virtual mobility – for example through telecommuting or the ability to transfer data virtually (Sheller & Urry, 2006). The spatial and social effects of ICTs have been studied extensively since the 1990s when portable devices first became available to the broad population[1]. Overall, it has been observed that ICTs have led to *time-space compression* (Warf, 2008) in which the easy transfer of data as well as the ability to meet virtually at low cost have led to greater global network ties (Cairncross, 2002; Canzler et al., 2008)[2]. For many, ICTs have created categories of activities, some of which are performed virtually while others take place in-person (Schwanen & Kwan, 2008). Activities such as responding to emails, taking phone calls or reading reports can be performed instantaneously and from most

[1] Although mobile communication technologies first emerged in the 1990s, the possibility of mobile work only became pervasive in the mid-2000s with ubiquitous WIFI access and the introduction of the smartphone (Felstead et al., 2005). Their widespread use thus still is a fairly recent development.
[2] These strengthened global network ties facilitated by virtual mobility have actually led to increased physical mobility among some hyper-mobile workers. International business travel has grown in tandem with the use of ICTs, and airports are often discussed as important spaces from which virtual work is completed on the go (Cresswell, 2006; Kellerman, 2016)

locations, including during the physical commute (Hislop, 2013; Kesselring, 2006; Lyons & Urry, 2005). In conjunction with non-standard labour, ICTs also increase the number of small administrative tasks workers need to perform, also known as *micro-work* (Schwanen & Kwan, 2008; Stevens & Shearmur, 2020).

Further, it has been contended that ICTs have changed where office-based or communication-related labour is performed (Hislop & Axtell, 2009). As many tasks are no longer bound to a specific place, *multi-locational work* has proliferated in which the office is only one of many spaces where labour is performed. This can mean remote work but also hybrid models in which the work week– or even day– is split between multiple locations. In particular the home has emerged as an important work location (especially during the COVID-19 pandemic) at which some or all tasks are completed (Elldér, 2019; Hislop & Axtell, 2009). Additionally, *third spaces*, a term that describes commercial spaces designed for mobile work such as cafés or co-working spaces, have emerged in cities (Kingma, 2016). However, how they are used by workers and their geographic relationship to other places of work such as the office or the home are not well understood (Pajević, 2020).

ICTs' impacts on the spatiality of work have additionally been discussed in the context of *platform labour*, a term that describes work facilitated through apps like *UBER* or *Deliveroo* (Altenried et al., 2021; Popan & Anaya-Boig, 2021; Srnicek, 2017). However, such platforms have largely been adopted in transportation services, food and package delivery, as well as personal service care (Rosenblat, 2018) – industries in which workplace mobility was the norm prior to the normalization of the gig economy. Changes to the labour geographies of workers in those industries include the need to perform microwork as well as an increase of unpaid waiting time while workers wait for their next order (Popan, 2021).

Within the field of urban economic geography, questions remain about the stability of the polycentric urban form in light of ICT-facilitated changes to the geographies and social norms of labour. Pajević (2020) sums up this tension by stating that 'either economic geography and planning scholars have not yet adapted the way they think about work and its spatiality to include workplace mobility, or these new ways of working are not large enough a phenomenon to warrant a paradigm shift (pg. 140)'. Indeed, there are at least two theories explaining why so few changes to the spatial organization of cities have been seen observed since the development of the polycentric city in the 1980s and 90s.

The first argues that the methodologies traditionally used to define and measure polycentricity based on public census data must be changed or at least re-examined. As the census data, at least in the U.S. and Canada, only provide geographic information for respondents who declare a regular place of work and do not record the nuanced geographies of hybrid or non-standard work arrangements, it may no longer accurately reflect and approximate how people interact with their place of work. Shearmur (2017), for instance, contends that underlying earlier conceptualizations of economic urban form is the assumption that 'economic activity (and its concomitant value-creation) has a location' (pg. 65), and that this assumption cannot be taken for granted and must be re-examined in the digital age when many people are able to perform all or at least some of their work remotely.

Partially in response to ICT-facilitated virtual mobility and information flows, researchers primarily studying the urban regions of northwestern Europe (Burger et al., 2014; Meijers et al., 2018) and China (Liu et al., 2018; Liu & Wang, 2016) have thus argued for multivariate regression analyses in which physical work location is considered as one variable among many. The use of multiple variables aims at combating the

overemphasis of work location and commutes by creating relationally and temporally flexible models of metropolitan urban form (Louail et al., 2015). Methodologically, the models locate the topographical distribution of subcentres, the network links which exist between them as well as the density of network flows based on variables such as email or leisure commutes taking place in the evening (Green, 2007; Vasanen, 2012, 2013). However, such models have been critiqued for their lack of a standardized methodology as well as the somewhat arbitrary inclusion criteria for variables, particularly relating to information flow (Rauhut, 2017). Further, multivariate regression analyses have not been applied to North American metropolitan areas with the exception of Meijers and Burger (2010) due to the methodologies' close association with *polycentric urban regions* (PUR) of northwestern Europe – a typology of metropolitan region comprised of multiple, non-hierarchal small and mid-sized cities uncommon in North America.

In contrast, the second theoretical argument has been made that ICTs extended rather than disrupted geographies of work and thus have led to only minor adjustments in urban form (Dadashpoor & Yousefi, 2018; Kellerman, 2009, 2016; Tranos & Nijkamp, 2013). Underlying this argument is the theoretical assumption that changes to urban form have historically been driven by the introduction of new disruptive transportation technologies such as the automobile and subsequent highway construction (Anas et al., 1998) – the last of which is the suburbanization of office work facilitated by telecommunication technologies (Garreau, 1991; Lang, 2003; Phelps, 2012; Shearmur et al., 2007). While ICTs have changed the way urban space is used, they have not contributed to any additional changes in the built environment. In particular Kellerman (2009, 2016) argues that ICTs run on the same physical infrastructure– satellites and fiber optic cables– as digital phone systems and computers did in the 1980s. Therefore, Kellerman argues that 'contemporary ICTs do not require any significant pieces of land on their own and at the same time do not facilitate additional urban growth which

could not be facilitated by previous technologies' (2016, pg. 154). The main exception is the acceleration of *logistics sprawl* (Schorung, 2021), a term that describes the development of large warehouses in peri-urban areas that began with the *edge city* but has intensified with the emergence of internet retailers such as Amazon (Dablanc et al., 2017; Giuliano, 2013).

Further, some of the same researchers contend that travel time and distance as well as physical proximity are still of importance in the selection of from where virtual work is performed (Dadashpoor & Yousefi, 2018; Lee et al., 2014). Ojala and Pyöriä (2018) in their study of work mobility in the EU, for example, demonstrate that even knowledge workers capable of working remotely still largely work at their place of employment and that this location is supplemented with work from home or third spaces. Felstead (2012) or Vilhelmson and Thulin (2016) similarly conclude that the majority of telework takes place in rather ordinary locations, for example during the commute between the regular place of work and home.

Sheamur (2021) thus suggests conceptualizing work location as a probability space in which the likelihood of work being performed at the home, a regular workplace or a third space– as well as its location in urban space– is determinable by summing up the proportion of total work time spent by each worker in each of their diverse work locations. Under this framework, an office worker who declares a regular place of work is still likely to perform a large percentage of their work time at their employer's location, which tends to be co-located with other office-based sectors in an economic centre such as the CBD. The remaining work time is split between other locations that are not chosen at random but are influenced by geographic anchor points such as the home or the office. Indeed, this conceptualization reflects the findings of the few existing studies on work mobility within urban areas: there are indications that workers able to perform

some or all of their work remotely, their mobility is still anchored by a physical location such as an office or the home, and that other work spaces such as cafés are still in close proximity to these centres (Martins, 2015; Pajević, 2020; Stevens & Shearmur, 2020).

Questions about the impact of ICTs on the theoretical and empirical understanding of urban form remain, however. Conceptualizations such as work location as probability space remain fairly theoretical and must be corroborated in further empirical studies (Shearmur, Ananian, et al., 2021). Additionally, studies on the changing spatiality of work and the workplace facilitated by ICTs have also largely focused on office labour (Burchell et al., 2020), a point I will engage with in detail in the next section. While the traditional location-based methodologies of measuring urban form have been challenged theoretically, few empirical studies exist that outline which work locations these density-based models capture and which they do not (Pajević, 2020; Shearmur, 2021) – despite long-standing calls to include qualitative methods into the empirical measurement of urban form (Parr, 2008). Further, this doctoral research project was conducted in the midst of the COVID-19 pandemic – a time when the geographies of particularly ICT-based office labour are being renegotiated. Much has been written about the future of the office as a physical space in the post-pandemic labour market with some foreseeing its demise while others contend that it will once again be an important location for physical interactions (Molla, 2020; Mouratidis & Papagiannakis, 2021; Shearmur, Parra-Lokhorst, et al., 2021). We are therefore in a time of flux.

Precarity and urban workplace (im)mobility

In this section I outline how the focus on the flexibility of particularly office-based labour is likely leading to an oversimplification and perhaps even exaggeration of the changes ICTs and the gig economy have brought to urban labour geographies across the entire workforce. This oversimplification has gendered and class-based implications.

As briefly alluded to, much of the academic research on the spatial impacts of flexible work arrangements is currently focused office-based labour in high-income sectors where ICTs are of central importance (Elldér, 2019; Pajević, 2020). Many such workers, through their workplace power, have the ability to shape their personal geographies – whether by travelling extensively (Büscher, 2014; Kesselring, 2006), optimizing their geographic positioning in the labour market through interregional and even global movement into high-wage urban centres (Hutton, 2015; Martin et al., 2016), or by making use of virtual mobility to avoid travel and commuting altogether (Elldér, 2015)[3]. Burchell et al (2020) contend that due to this singular focus on office labour where ICTSs are of importance to the function of the workplace 'many current debates about place of work are also premised on the assumption that places of work have been evolving rapidly with the introduction of new ICTs' (pg. 2227), thus leading to a tautological argument.

However, many studies counter the assumption that workplace mobility facilitated by ICTs is explosively growing across the entire workforce (Alexander et al., 2010; Cooke, 2011; Ojala & Pyöriä, 2018). Putri and Shearmur (2020), for example, find that while the number of mobile workers has grown in the Canadian context, their growth has been continuous rather than rapid throughout the past 15 years. Burchell et al (2020) further contend that hybrid work models and multi-locational work is largely concentrated among a small number of male-dominated professions in the knowledge sector. This finding corroborates Alexander et al (2010, 2011) observation that highly educated populations have a higher reliance on ICTs to perform their labour and therefore are more likely to experience daily workplace mobility.

[3] This is a particular pertinent point in the midst of the COVID-19 pandemic where there is a societal division, often along income, between those that can perform work from the safety of the home and those that cannot.

Burchell et al (2020) additionally find that part-time or gig workers – employment relationships that tend to be gendered as well as associated with higher levels of precarity and lower wages (Vosko et al., 2009)– are more likely to either perform all their labour on their employers' premises or work in traditionally mobile industries such as personal service and care work as well as vehicle-based professions. In particular the COVID-19 pandemic demonstrated that while a sizeable percentage of the Canadian working population was able to switch to telework when the need presented itself (39%), the majority of the workforce's labour was still tied to specific geographies (Shearmur, Parra-Lokhorst, et al., 2021). In particular blue-collar labour in part-time positions were more likely required to perform their labour outside of the home. Therefore, a differentiation between the labour geographies of low- and high-wage jobs must be made.

Preece (2018) argues that the singular focus on the mobility of knowledge workers is a reflection of the hegemonic preoccupation with autonomy in the field of mobility studies. Indeed, it has been acknowledged even among mobility scholars that underlying both the concept and study of mobility is a hegemonic preoccupation with personal freedom in which control over ones' geographies is viewed as the ideal (Kellerman, 2016). For example, Kesselring (2008) states that 'the mobility discourse is deeply connected with notions of freedom' (pg. 85) while Boltanski and Chiapello (2005) argue that the post-Fordist gig economy fosters societal division in which mobile *great men* exploit immobile *little people*. Thus, Preece (2018) argues that stillness in the context of mobility 'largely signifies the failure of mobility to places of opportunity and growth'(pg. 1786) and has therefore largely been ignored.

Of course, this characterization is an oversimplification and ignores that mobility can also be forced. Kesselring (2015) outlines how the individual's time and geographies

are controlled by corporate structures during business travel, and the blurring of work and leisure to the detriment of the employee due to ICT-facilitated virtual mobility is well documented (see Elliott & Urry, 2010; Hislop & Axtell, 2009). Further, research conducted predominantly in the fields of public health and labour studies found that in urban areas the need to hold multiple concurrent jobs can lead to complex commutes along multiple trajectories, high transportation costs, and diminished health among the precariously employed (Bohle et al., 2004; Premji & Shakya, 2016; Premji, 2017; Vosko et al., 2009). Such complex commutes are involuntary and have come to dominate the perception of precarious workers' urban labour geographies. However, Premji (2017) concludes that 'most of the available literature has examined these dynamics only cursorily in the context of studies focused on precarious employment more generally' and thus 'the relationship between employment precarity and geographic mobility remains poorly understood'.

The conclusion that must be therefore drawn is that both mobility and immobility are socially constructed and that global, interregional and intra-urban workplace (im)mobility– both physical and virtual–cannot be divorced from a class division in which education, status, wage and ability to work remotely determine the individual's potential to shape their own geographies. Autonomy and organizational ability are therefore central to determining individuals' mobility potential, often referred to as *motility* (Kellerman, 2016). Kaufman (2002) as well as Kellerman (2016) propose that *motility* can be analyzed and is determined by three elements: *physical ability*, *acquired skills*, and *organizational skills*. *Physical ability* describes one's access to physically or virtually mobility, *acquired skills* refers to the ability to access knowledge (i.e. having a driver's license or knowing how to operate a smartphone), and lastly, *organizational skill* is characterized by the ability to plan and synchronize activities with others, which in the context of labour means not only planning ones' schedule but also

coordinating with employers. Workplace power is thus essential to *motility* in the context of labour as mobility must be either granted or forced by the employer: in this framework, which I apply in my discussion in Chapter Seven, physical or virtual mobility is not only predicated upon the ability and willingness to be mobile but also to envision, organize, and achieve improvement through it (Coulter & Scott, 2015; Kley, 2011). Thus, it can be used to explain, for example, why those in higher-wage positions, or otherwise desirable employment, repeatedly report longer average commute times in urban areas than those in precarious employment (Burger et al., 2014; Shearmur, 2006; Stevens & Shearmur, 2020)[4].

To counter the focus on the *hyper-mobile* knowledge worker, some scholars have therefore called for a greater focus on immobility within the field of mobilities studies (Cooke, 2011; Meier & Frank, 2016; Preece, 2018). Cooke (2011) in particular challenges the 'grand narrative' (pg. 203) that presents such *hyper-mobility* as a common and rapidly growing phenomenon by pointing to evidence that residential mobility at the interurban scale has been declining in the U.S. and United Kingdom. Declining residential mobility is used as evidence to counter the assumption that as the potential for *hyper-mobility* grows, people are more likely move towards markets in which higher wages can be earned[5]. The argument underlying the need for *immobility studies* is that urban workers in precarious economic positions are often characterized as disempowered, and that their inability to participate in interregional migration patterns overshadows formal and informal processes of place-making and resourcefulness at the urban or even neighbourhood scale (Cumbers et al., 2010; MacKinnon & Derickson, 2013).

[4] This framework also explains the flight of urban *knowledge workers* with the ability to telecommute to second homes during the early stages of the COVID-19 pandemic (Gallent, 2020). Improvement in this case means more freedom and a lower likelihood of infection.

[5] While residential and workday mobility cannot be equated, the assumption underlying the use of both measures within the field of mobility studies is the same: people behave as economic agents and therefore will either commute further or move between regions to gain better access to a central market.

Indeed, the mobility of those experiencing precarity is most often studied in the context of migration patterns from the Global South to the Global North (Anderson, 2010; Buckley et al., 2017), while the (im)mobility patterns at urban region scale are underexplored (Preece, 2018). Even studies on urban commutes in the fields of public health and labour studies, which outline how precarious workers involuntarily travel along complex trajectories, are most often focused on recent migrants who are more likely to experience precarious employment conditions (Fuller & Vosko, 2008; Lewchuk, 2017). Premji (2016; 2017), importantly, concludes however that such complex travel among immigrants is a momentary snapshot which stabilizes as newcomers find more consistent (although still precarious) employment at fewer and more accessible locations and learn to navigate transportation networks. Precarious workers, in particular recent migrants, may therefore quickly transition from forced urban *hyper-mobility* towards self-imposed immobility, although the processes through which their labour geographies become more stable are underexplored (Bohle et al., 2004; Preece, 2018; Premji, 2017).

To my knowledge, few other studies on the impacts of the gig economy and ICTs on precarious workers' urban labour mobility exist. Studies on diverse North American cities of varying size such as Chicago (Peck & Theodore, 2001), Syracuse (Attoh, 2012), Detroit (Gottfried & Fasenfest, 2001), Montreal (Stevens, 2021), and Toronto (Premji, 2017) consistently conclude that precarious labour, both fixed and non-fixed, is suburbanizing. Thus, a *dual labour market* (Houseman et al., 2003) is created in which workers in high and low-wage positions are spatially divided (both by residential and job location) and in which each market has its own wage dynamics, contractual norms and hiring processes. Workers in the low-wage sector in particular are dependent on labour intermediaries such as platforms or, more often, temporary staffing agencies to access employment which tends to be non-standard and offers limited stability (Enright,

2013). Further, the majority of both fixed and non-fixed labour takes place in locations which lack accessible public transportation options, such as suburban residential areas, back offices, warehouses and factories (Attoh, 2012; Gottfried & Fasenfest, 2001; Peck & Theodore, 2001; Pelzelmayer, 2018; Ward, 2005).

Similar to the findings by Premji (2017), it appears that low-wage workers respond to such spatial and organizational labour insecurity by limiting their mobility within urban areas: Peck and Theodore (2001) as well as Vosko (2000) report that the precariously employed will often rely on staffing agencies located closest to them to minimize travel[6]. McPhee (2016) in a study on recent migrants in low-wage temporary staffing positions in Dublin concludes that the participants 'are active agents, and possess some degrees of liberty and choice, even though they are constrained by their migrant status and by the nature of their work' (pg. 412), which is reflected in their preference for work locations in close proximity to their homes. My own research concludes that nannies in the Plateau neighbourhood in Montreal limit their geographic service area and reject irregular shifts that require long commutes or high transportation costs (Stevens & Shearmur, 2020). Participants are more willing to commute farther if the position entails benefits such as a long-term, full-time employment, a regular schedule, or the inclusion of a transit pass.

Overall, it appears that the proliferation of non-standard employment has altered the labour geographies of low-wage work in North American cities. Studies of recent migrants show that workers can experience forced hyper-mobility in urban areas in which they travel along complex and unpredictable trajectories, have multiple sites of employment and complicated schedule. However, it appears that low-wage workers will

[6] However, this proximity is a double-edged sword: Peck and Theodore conclude that agencies locating in the lowest income neighbourhoods is a predatory practice in which agencies are looking for a source of cheap labour and thus further a cycle of labour insecurity among residents.

quickly exercise their limited autonomy, which is predicated on familiarity with the urban environment and (in)formal community building, to reduce commute times, the number of employers or clients, and the geographic area in which they operate. Some questions remain, however. First, it is unclear to what extent the precariously employed are able to reduce their forced mobility. The continued reliance on labour mediators such as staffing agencies or platforms suggests that a certain degree of mobility is required. However, it is unclear how many gigs workers will hold concurrently and how long gigs will last– two points that influence the amount of physical and virtual mobility workers have to engage in. Further, the long-term ability among low-wage workers to secure long-term employment and thus further control their mobility is unclear (Fuller, 2015).

COVID-19 and the location of work

Before turning the attention towards the research questions guiding this doctoral research project, I would like to briefly provide an overview of the literature on the impacts of COVID-19 on the location of labour. It must be noted that this chapter was written in the spring of 2022– two years into the pandemic– when the initial shock of COVID-19's disruption in the labour market had subsided, some early speculation regarding the death of downtown retail and office space had been critically examined (Anik et al., 2021; Milder, 2020), and initial empirical evidence regarding changes in the geographies of labour had been collected. However, while workers were tentatively returning to the office at the time this chapter was written (Kalmbach, 2022) and measures of mobility such as public transit and air travel use were returning to pre-pandemic levels, the long-term impacts of COVID-19 on labour mobility are unclear.

Literature on the geographic impacts of COVID-19 consistently finds that the effects of the pandemic on urban labour mobility have been uneven (Kantamneni, 2020;

Molla, 2020; Mouratidis & Papagiannakis, 2021; Shearmur, Parra-Lokhorst, et al., 2021). Thus, a differentiation must be made between higher-wage office labour and low-wage blue collar labour. For white-collar labour, the on-set of the pandemic caused a shift towards working from home. This shift was enabled by the ubiquity of digital infrastructure previously available in people's homes which allowed them to perform all tasks from a remote location. Shearmur et al (2021) therefore argue that the switch to the home office during the pandemic must be understood as an acceleration of a pre-pandemic pattern among office workers; as touched upon earlier in this literature review, hybrid or multi-locational work patterns had been observed previously and were becoming more common in the decade leading up to the COVID-19 pandemic (Elldér, 2015; Felstead & Henseke, 2017; Ojala & Pyöriä, 2018).

While the future of the office was unclear in the initial pandemic months of 2020, it appears that initial predictions of its demise were pre-emptive. Although productivity among workers did not decline, early studies find that there are significant drawbacks to remote work for both managers and employees (Boland et al., 2020; Kane et al., 2021; Kang, 2022). Kane et al (2021) identify that in particular innovation, workplace culture and mentorship suffer in fully virtual workspaces and that coordinating and collaborating in the beginning stages of projects proves to be more difficult. Multiple studies have found that both workers and employers are aware of these drawbacks and, if safe, generally favour at least a partial return to in-person office work (Alves et al., 2021; Beno & Hvorecky, 2021; Boland et al., 2020; Lee, 2021). However, only a minority of office workers– for example approximate 20% in the Austrian context (Beno & Hvorecky, 2021)– favour a full-time return whereas the majority prefers hybrid work models. Therefore, while the office will likely still be of central importance to white-collar labour in the future, early evidence suggests that the COVID-19 pandemic has accelerated pre-existing developments of multi-locational and hybrid work arrangements.

For work that cannot be performed from the home (a broad category that for example includes personal service work, medical professions as well as transportation and manufacturing labour) there is little empirical evidence how the COVID-19 pandemic impacted these workers' geographies of labour – presumably as such work continued to take place in the same locations as before (Anderson et al., 2021; Stevens, 2021). Labourers in these fields rather record health and psychological impacts from risking exposure to COVID-19, which have been directly linked to subsequent labour shortages in low-wage positions as fewer people are willing to engage in in-person service work (Autor & Reynolds, 2020; Krumel et al., 2021; Nieuwenhuis & Yerkes, 2021).

Key take-aways

In the remainder of this chapter I will first reiterate the key takeaways that have emerged from the literature review thus far before turning my attention to the research questions guiding the remainder of this research project. The purpose of this summary is to clearly outline the gaps in the literature which will be addressed in the coming chapters.

First, urban economic geography in North America has historically assumed that work takes place in single fixed location. Methodologies to capture the location of economic activity– most often in the form of agglomerations– in North America are predominantly based on census data, which provides geographic information on the workplaces of those with a regular employment location. These methodologies have in turn been used to quantify and conceptualize urban form, which for large metropolitan areas in North America is believed to be polycentric, and inform planning decisions (Pajević, 2020).

However, in recent years the validity of the assumption that most work has a fixed location is being challenged theoretically with some researchers suggesting that a trajectory-based approach may be needed (Kraak, 2003; Massey, 2005; Shearmur, 2018). Two reasons are central to this theoretical argument. First, there has been a steady growth of the working population employed under non-standard employment contracts since the 1970s – and particularly the 1990s– as a result the post-Fordist reorganization of the labour market (Hatton, 2015; Kalleberg, 2000). In the Canadian context, approximately one third of the urban population is now employed under concurrent or consecutive contractual arrangements that are part-time or temporally restricted (Ali et al., 2021). The proliferation of non-standard labour means that the percentage of jobs that are locatable with the data sets traditionally used to measure urban form– such as the census– is declining, thus calling into question their reliability to approximate where economic activity is performed in urban areas (Shearmur, 2018). Second, the use of ICTs such as smartphones and laptops, whose effects on the geographies of work were first documented by mobility scholars (Sheller & Urry, 2006), enable much work to be performed on the go or at multiple locations (Hislop & Axtell, 2009; Schwanen & Kwan, 2008). Therefore, even for workers with indefinite contracts that declare a locatable place of work under the census such as the employer's addresses or the home, their employment geographies are likely not fixed but rather include multiple locations, hybrid work models or partial remote work (Pajević, 2020).

Still, location-based methodologies have consistently reaffirmed since the 1990s that large metropolitan areas in North America tend to be polycentric and long-term comparative studies of single metropolitan areas based on census data from several collection years show stability in the spatial organization of economic activity (Arribas-Bel & Sanz-Gracia, 2014; Duquet & Brunelle, 2020). The interpretation of this stability is debated within the field of economic geography with some discounting location-based

models in favour of models including network flows (Burger & Meijers, 2012; Vasanen, 2013), others claiming that the use of ICTs have not fundamentally changed the spatiality of employment infrastructure in urban areas (Dadashpoor & Yousefi, 2018; Kellerman, 2009), and yet others challenging and testing the theoretical assumptions inherent in the location-based conceptualizations of urban space (Martins, 2015; Pajević, 2020; Shearmur, 2021).

A concern that is central to this debate is that little is known about the spatial relationships of multiple workplaces. Empirical studies on the use of *third spaces* among knowledge workers show that most workers are less mobile than initially assumed and that the regular place of work is still important (Felstead, 2012; Ojala & Pyöriä, 2018). Further, it is unclear how often low-wage workers change gigs and how many gigs workers hold concurrently, although there is evidence that those in precarious employment situations tend towards immobility and seek out stable positions (Preece, 2018; Premji, 2017). Kellerman (2009, 2016) therefore suggests that the actual and potential mobility– *motility*– granted by ICTs are being conflated, meaning that their effects on geographies of workers are being overestimated. To counter this mis-conceptualization, Kellerman argues that economic geographers need to place a stronger emphasis on the social processes through which (labour) mobility is negotiated. As most of this debate is theoretical, however, more empirical studies are needed.

Research Questions

Three distinct research gaps have emerged from the literature review. First, there is a well-recognized need within the field of economic geography to incorporate qualitative research methods into the study of urban form – in particular to test the assumptions underlying traditional location-based methodologies (Pajević, 2020; Parr, 2008; Phelps, 2017; Stevens & Shearmur, 2020). To my knowledge, there has been no

attempt at a comparative study which uses both a location and trajectory-based approach to urban form based on both quantitative and qualitative data.

Second, the labour mobility of workers precariously employed under non-standard contracts– a large and growing portion of the labour market– is understudied (Burchell et al., 2021; Preece, 2018), which poses a problem to the theorization of urban form as the labour geographies of workers in such contractual arrangements are less likely to be captured by census data (Putri & Shearmur, 2020). Furthermore, from an urban planning perspective, the lack of data regarding the trajectories of precariously employed workers, which often take place at the periphery of urban areas (Attoh, 2012; Breau et al., 2018; Peck & Theodore, 2001), can contribute to further spatial inequality in urban areas (Premji, 2017). Third, while it has been acknowledged that work mobility is negotiated through social processes in which employees' workplace power and agency must be considered (Kellerman, 2016; Kesselring, 2015; Shearmur, 2018), these processes are not well understood within economic geography research and can only be explored through qualitative research methods. In particular the tendency towards self-imposed immobility among the precariously employed observed by labour scholars (McPhee, 2016; Preece, 2018; Premji, 2017) counters the assumption that non-standard labour, low workplace status and the use of ICTs necessarily lead to more complex labour trajectories (Burger et al., 2014; Cooke, 2011).

For the remainder of this thesis, I will turn my attention to the original research produced as part of my doctoral project which begins addressing these gaps. The study's primary goal is to provide an empirical foundation to test and discuss the ongoing validity– or lack thereof– of location-based methodologies to approximate employment location for those employed under non-standard contracts. However, it also aims to provide exploratory qualitative data from an economic geography perspective on how

work locations are negotiated between multiple actors under precarious employment conditions. For this purpose, I designed a mixed-methodology case study using traditional location-based methodologies as well as qualitative interview data to chronicle the labour geographies of temporary staffing workers– commonly referred to as temp workers– in Toronto. The following three research questions are guiding my research:

1.) Where do temp workers perform their employment activities in the Toronto metropolitan region, and to what extent can their geographies be captured by census data that assumes workers perform these activities in a single location?
2.) How do the work conditions of temp workers affect their experience of urban space as it pertains to housing, transportation and the accessibility of work locations, and how does it differ from descriptions of higher-wage workers found in the literature?
3.) How are the terms of employment negotiated between the three parties– the worker, agency and client firm– and how do these terms affect the labour geographies of temp workers?

With these questions in mind, I now turn my attention to the methodology used in this research project in the next chapter.

Chapter Three: Methodology

In the previous chapter I outlined the key objectives and research questions based on the gaps that emerge from the literature review. To summarize, there currently is an epistemological– yet empirically underexplored– debate about the ongoing validity of quantitatively measuring North American urban form based on location-based methodologies. In particular the impacts of non-standard labour arrangements and ICTs on the ability of traditional data sets, such as the census, to approximate employment location are debated. However, there are indications that the geographic impacts of such communication technologies and the gig economy on the urban form of North American cities may be overestimated, especially since low-wage employees with limited workplace power tend to not work as flexibly as their higher-wage counterparts. I therefore set out to provide a mixed-method case study in which I provide a comparative analysis of the labour geographies of the Toronto region's temporary staffing workers as determined both by a quantitative analysis as well as interview data. For the remainder of the thesis, I now turn my attention to this original research.

In this chapter, I describe and justify the methodological choices made during the design and field-work stages of my doctoral research project. I begin by providing a broad overview of the research design before justifying why my research population (temp workers) as well as study location (the Toronto Census Metropolitan Area) are well suited to empirically answer the research questions I presented in the previous chapter. I spend the majority of the chapter describing and substantiating my methodological choices during the data gathering and analysis phases of this research and explaining the methods I employ to analyze the Statistics Canada 2016 micro census data and process the qualitative interview data.

Research Design

In this doctoral project I use a mixed methodology case study approach based on both qualitative and quantitative data collection and analysis. As outlined in the previous two chapters, there currently are discussions within the field of economic geography about the role of employment location data in determining the form of urban areas and mapping the economy (Burger et al., 2014; López-Sánchez & Roca, 2021; Parr, 2002, 2008; Phelps, 2017; Reuschke & Ekinsmyth, 2021; Stevens & Shearmur, 2020). In particular such data's ability to approximate where economic activity actually takes place has come under theoretical scrutiny in recent years and methodological alternatives such as the inclusion of qualitative research methods and multi-variate measurements of urban form are being introduced into this research area, which until recently almost homogeneously relied on employment location data (Agarwal et al., 2012; Vasanen, 2012). Two types of workplace mobility are of importance here: the mobility of workers who occupy a series of concurrent or consecutive jobs which could be geographically disbursed as well as the daily mobility of workers, often in stable jobs, who split their work among multiple locations such as the office, home and *third spaces* (Reuschke & Ekinsmyth, 2021). The choices I make in this thesis as I determine the study objective, research questions and study design are informed by these epistemological debates.

In this thesis, I contribute a better understanding of the urban workplace mobility among workers precariously employed in short-term contracts – an understudied area in the field of urban economic geography (Stevens & Shearmur, 2020). Specifically, I empirically inquire whether employment location data, as usually collected by Federal statistical bureaus, can still approximate where economic activity takes place for such working populations. Additionally, I investigate how the urban geographies of low-wage labour are socially and organizationally negotiated between the

employers and employees in order to propose a theoretical understanding of how precarity interacts with and affects where economic activity takes place. The approach I take in my research design is therefore inductive: although it is informed by the aforementioned theoretical discussions on the limits of employment location data in determining the urban form of North American cities in the 21st century, the lack of empirical research on the topic thus far leads me to not formulate a hypothesis as to whether such data are or are not a sufficient measure to determine the form of urban areas.

I design a mixed-methodology case study based on a single urban area and a single employment type– employment services workers (colloquially known as temp workers)– to explore whether geographic information pertinent to the location of economic activity is lost in analyses based solely on place of work census data (a typical source of location data for urban economic activity), investigate the social and organizational construction of low-wage workplace mobility, and to propose and discuss alternative theories. I therefore draw on the precedent of case studies, often conducted in a single urban area and based on descriptive data analyses, to inform theoretical and empirical debates in the field of economic geography – for example seen in Garreau (1991) and Giuliano and Small's (1991) contributions to theories of polycentricity in North American urban areas.

The case study is conducted in two phases, one quantitative and the other qualitative. The quantitative portion draws on the location-based methods used to identify how economic activity is spatially distributed in metropolitan areas, which has been a standard methodological approach to urban form in urban economic geography since the 1980s and continues to be regularly employed by researchers (Agarwal et al., 2012; Hajrasouliha & Hamidi, 2017). Such data analyses typically allow analysts to

articulate broad facts about the location of economic activity, such as that high-order service activities occur in the downtown core or that certain industries and sectors tends to co-locate. My own data analysis enables similar broad facts to be articulated for the temporary staffing industry– both for the agencies and workers– in the Toronto CMA as they emerge from Statistics Canada census data.

Additionally, I conduct a qualitative interview study, which draws on the methods of projects with the similar objective of examining the social and spatial implications of labour geographies (Kesselring, 2015; Cameron, 2018). For this purpose, I conduct interviews with 26 temp workers and 6 key informants to inquire about the temporary staffing industry's labour geographies in the Toronto CMA. The qualitative data I gather allow me to confront the broad patterns found during the quantitative data analysis with the actual geographic trajectories and experience of temp workers found during the interview. First, the data allow me to determine if the key assumption underlying these facts (that work location can be approximated to a single administrative address) is accurate. Second, the data also allow me to discuss whether the approximation that temp workers broadly work in the vicinity of their client companies' locations as measured by traditional data is accurate. Finally, the interviews provide information about the spatial experiences of temp workers that population-level data simply cannot reveal, such as their geographic relationship to their agency, how they negotiate their labour geographies or how they are affected by urban planning decisions.

Although not a side by side comparison of the same research population (interviewees were not necessarily respondents to the 2016 census, nor were they necessarily employment services workers or even residents of Canada at the time the census was collected), this mixed methodology case study approach allows me to

compare and contrast as well as interpret the location-based quantitative data analysis in light of the additional spatial data gathered through the interview process. More broadly speaking, the case study design allows me to situate the empirical differences between the two methodologies within the current discourse on the use of census employment location data in measuring urban form– in particular as it relates to more precarious labour forms with multiple intraurban work trajectories and workplaces (Burger et al., 2014). I therefore discuss these empirical differences in light of the theoretical debates on the use of employment location as an approximation for economic activity and propose new theoretical and methodological approaches to empirically conceptualizing and measuring urban form. Lastly, I incorporate the concept of *motility*, or mobility potential, to propose a new understanding of the social and organizational construction of workplace mobility among precariously employed temp workers, whose urban labour geographies were previously understudied.

Research Population

The population studied in this doctoral research project for both the quantitative and qualitative portions of the mixed-methods case study is employment services workers within the Toronto Census Metropolitan Region (CMA). For the quantitative analysis, the research population thus includes all respondents to the 2016 Statistics Canada census who 1) live and work within Toronto CMA and 2) for whom the *industry of employed person* variable is classified in the 'Employment Services' sector of the North American Industry Classification System (NAICS), meaning it falls into the four-digit code NAICS 5613. The 'Employment Services' sector is an umbrella term for the labour mediation industry which largely is comprised of temp workers but also includes niche services such as executive recruitment. It must be noted that this thesis specifically sets out to record the labour geographies of low-wage workers – a category which executive recruitment personnel likely do not fall under (Enright, 2013; Kalleberg,

2000). Based on the NAICS code 5613 alone, it is impossible to differentiate between respondents in the niche executive recruitment branch and those in temporary staffing who make up the majority of respondents. Therefore, I use the census variable for *Employment income groups* to roughly differentiate between the groups during the quantitative data analysis and control for meaningful differences between high and low-wage employment services agents.

For the qualitative interviews, the population from which interviewees are selected encompassed those whose current residential and employment status at the time of the interview would be categorized as residents of the Toronto CMA and employees within the NAICS 5613 code by Statistics Canada. Given the high turnover rate in the industry– key informants and interviewees confirm that most temp workers remain in the industry only for approximately one year–, no other time constraints (for example that participants had to be working as temp workers in Toronto during the time of the 2016 census data collection) are placed on participants. The high turnover rates mean that only some of the participants can speak to the changes brought by the onset of the COVID-19 pandemic in March 2020 since interviews were conducted in the summer and fall of 2021.

I choose temporary staffers as the research population for this doctoral research project primarily due to their pervasiveness across diverse industries, and their reputation for indicating trends in employment relations as well as overall labour market deregulation (Enright, 2013). Further, temp work includes a large population with inconsistent work locations and high levels of precarity (Vosko, 2000; Weil, 2014). Most importantly, however, the industry also holds an unusual hybrid role in the Canadian labour market: the service provided by temporary staffing industry, also referred to as 'Temporary Help Services' within the NAICS, is the negotiation and institution of the

triangular contractual structure described in the previous chapter in which the staffers' workplace and duration is mediated by a temporary staffing agency and client firm without the involvement of the worker (Gonos, 1997). The product and service provided by the employment services industry therefore is a flexible labour force which client companies can purchase for limited time. As such, *employment services* is a descriptive term for how the conditions of employment are negotiated (recruited by a third party and, in the case of temporary staffing, flexible and temporary).

Importantly, however, it is also an industry recognized within the NAICS, the transnational system used by the Canadian, American and Mexican statistical agencies. Therefore, Statistics Canada collects information for the employment services sector such as the size and revenue of the industry and the location where temp workers with fixed places of work perform their labour as part of the census survey (Fudge & Strauss, 2014). The dual function of temporary staffing as a NAICS-recognized industry in addition to a contractual arrangement is of paramount importance to my project as it distinguishes temporary staffing from other employment structures: for example, Statistics Canada does not compile the prevalence, revenue and geographies of gig work or platform labour under the umbrella of a NAICS code, despite these also being descriptive classification of the employment conditions and contractual structures. Contrary to temporary staffing, a traditional analysis of the industry-specific intraurban geographies based on census data is therefore currently not possible for platform labour or other forms of gig work.

At the same time, the employment services classification also distinguishes itself from most other industry categories within the NAICS, which predominantly classify sectors according to a specialized good that is produced or a service that is provided such as finance and insurance, agriculture or educational services. The main service

provided by the temporary staffing sector, as argued before, is flexibility and not *per se* specialized skills (although flexibility and specialized skills can of course co-exist). Thus, employment services as an industry is defined by *how* labour is negotiated, not by *what* it produces or the skilled services it offers. Mediated, flexible labour as classified within the NAICS employment services code therefore is divorced from a specific profession and its contractual structure, at least in theory, can apply to any job. Indeed, temporary staffing is found in both blue and white collar industries (Enright & Pemberton, 2016). The uniting factor between the low-wage positions and higher-wage office positions found in temporary staffing is that the skills needed for these types of work, such as the handling of accounting software or knowledge of assembly line labour, are transferable from one workplace to the other and thus require limited training by new employers. In practice, the structure of third-party labour mediation creates and intensifies precarious labour conditions, as discussed in the previous chapter.

To summarize, temporary staffing refers to a heterogeneous group of workers as there is great variation in the length of placements, how frequently locations are changed as well as what industries use temporary staffing agencies and for what purposes temporary staffers are relied on. The uniting factor of this industry is the means through which workers find employment, not what is being produced or the specialized service that is being provided. This hybrid role of the employment services industry served this doctoral research project in three ways. First, its status as an industry as part of the North American Industry Classification System allows me to perform a quantitative analysis of both the agencies' and employment sites' locations through the use of Statistics Canada census microdata. I therefore am able to empirically map the geographies of the employment services industry in the Toronto CMA as they emerged from census data and compare this industry vis-a-vis Toronto's urban form based on employment data as a whole using traditional methods found in

the economic geography literature. My location-based geographic analysis looks at the overall geography of temp work in Toronto. Furthermore, I differentiate these workers by sub-groups according to income and industry. I hypothesise that each sub-group will have different geographies– both in terms of their location and mobility of workers– based on the spatial division of industries (Enright & Pemberton, 2016; Peck & Theodore, 2006) and how staffing is used in low- and high-wage sectors (Enright, 2013).

Second, the selection of workers within a heterogeneous industry as the research population has the potential to produce more broadly applicable observations on the spatial realities of flexible work than a study of a specific service or manufacturing industry, which are often bound by their industry-specific agglomeration patterns (Shearmur & Alvergne, 2002). The decision to focus on temporary staffing for its unusual hybrid form is informed by my previous work on the labour geographies of child care workers in Montreal (Stevens & Shearmur, 2020): the specificity of the tasks performed by the workers led to child-care specific, concentrated geographies that had little in common with the results found in two control interviews with cleaners, despite all participants being personal service workers employed under similar contractual stipulations.

Previous studies on the urban geographies of temporary staffing have demonstrated that both the agencies themselves as well as the client companies to which labour is brokered tend to be spatially segregated depending on whether their specialization lies in blue or white collar labour (Gottfried & Fasenfest, 2001; Peck & Theodore, 2001; Ward, 2005) – the details of which I will return to later in this thesis. Studying temp workers allows me to compare and contrast the spatial experiences found within a research population whose work is governed by similar contractual agreements – working at an employment location mediated by a staffing agency on a temporary

basis– but who perform their tasks in different industries with unique locational needs and dynamics. Employment services therefore allows me to discuss which observations, in particular relating to labour geographies, are specific to the industries workers are active in (manufacturing, warehousing, finance and accounting, etc.) and which are pervasive in the employment services industry as a whole. Furthermore, the variety of experiences ranging from stop-gap solutions to long-term placements associated with *permatemps* allows me to comment on which labour geographies are included and excluded by census data for both full-time and part-time staff and whether that impacts the ability of labour location to approximate urban form.

Lastly, and similar to my previous argument, the employment services industry allows me to diversify the population whose urban labour geographies are studied to include precarious workers while still allowing me to compare and contrast with higher wage workers whose labour has also been mediated by a temporary staffing agency. Thus, I am able to discuss how the labour geographies of precarious workers may differ from those earning higher wages under similar contractual agreements.

Study Location

The study site for my doctoral research project fieldwork and data analysis is the Toronto census metropolitan area (CMA). The census metropolitan area is a geographically defined classification unit used by the federal Statistics Canada agency for the purpose of categorizing larger urban systems. Contrary to municipalities, regions and counties, CMAs do not have any political power or function within the Canadian federal system.

The Toronto CMA is Canada's largest metropolitan area by population and consists of 23 municipalities in seven regions or counties that are either wholly (the City

of Toronto itself, Peel Region, York Region, Dufferin County and Simcoe County) or partially (Durham Region and Halton Region) located within the CMA (Figure 2). It is important to note that the Toronto CMA does not necessarily fully describe the polycentric region surrounding the City of Toronto; for example, the nearby cities of Hamilton and Oshawa are classified as their own CMAs by Statistics Canada, yet function, at least in part, as important economic and residential subcentres within the Toronto metropolitan region (El Khafif & Przybylski, 2020). The Toronto metropolitan region is thus often referred to as the *Greater Toronto Area* (GTA) or, less frequently, the *Greater Toronto and Hamilton Area* (GTHA) by residents and official political documents at the municipal and regional level, and includes municipalities located outside of the Toronto CMA boundaries.

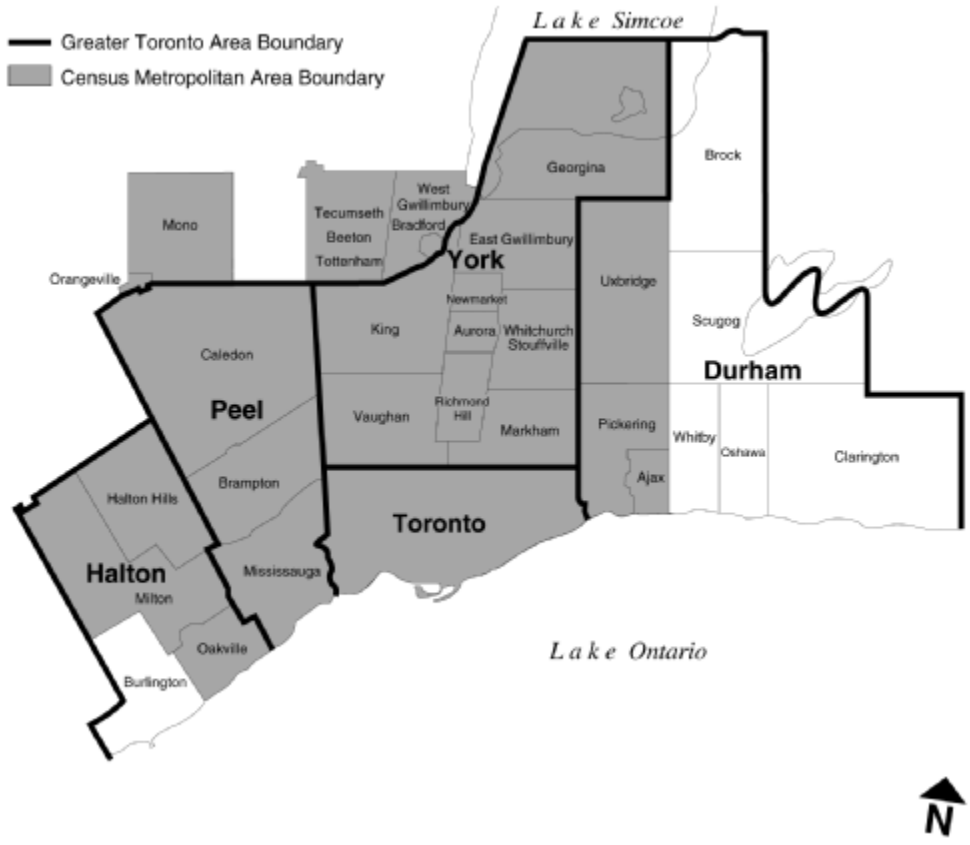

Figure 2: Municipalities and Regions in the Toronto CMA, Source: City of Toronto (2022)

However, as this study is in part based on a quantitative analysis of 2016 census data, I use Statistic Canada's CMA classification of the Toronto metropolitan region. All interview participants live and are associated with staffing agencies registered within the Toronto CMA. Further, with only one exception, the client companies which interviewees are mediated to are also located in the Toronto CMA. However, as participants conceptualize the Toronto metropolitan area as the GTA and refer to it as such in the interviews, I frequently refer to the functional *Greater Toronto Area* name in the thesis and specify when I am explicitly referring to results for the CMA.

The Toronto region is selected as the geographic area for this case study for a number of reasons. First, Toronto appears to be the metropolitan area in Canada in which the temporary staffing market is the most established (Fudge & Strauss, 2014), although conclusive data is limited as the Government of Ontario does not have a commercial license requirement for the temporary staffing and recruitment industry and thus does not know how many agencies are operating. High estimates of the number of agencies operating in the Toronto region put the total at over 1,700. Through a methodology of compiling locational data for temporary staffing agencies from yellowpages.ca and cross-referencing its accuracy with municipal business registries as well as agencies' websites, I am able to confirm and map 763 unique agencies[7] operating in the Toronto CMA. 62 of these observations are branches of the 20 largest transnational agencies worldwide by revenue as identified by Coe et al (2011). As transnational agencies frequently serve the white-collar sector of the staffing market associated with higher wages (Coe et al., 2007, 2012; Ward, 2004), their presence in the

[7] Many agencies operate under multiple names registered at the same address, thus contributing to duplicated observations. The original number of observations scrapped from yellowpages.ca is n=1192. 218 observations of these observations were falsely labelled as temporary staffing agencies by Yellow pages and further 211 observations were duplicates, defunct agencies or registered at the same address under multiple names, thus reaching n= 763.

Toronto market thus ensures a temporary staffing population with diverse qualifications, labour geographies and wage expectations mediated into various industries.

Second, Toronto exemplifies many trends observed in both the study of workplace mobility and theorizations of urban form such as polycentric urban development with decentralized employment centres, growing income inequality leading to a large population living in precarity, and a crisis of affordable housing in central locations with good public transit connectivity (Breau et al., 2018; Hulchanski, 2010). Furthermore, Toronto's economic development strategy reflects the trend of planning for the globally mobile elite (City of Toronto, 2013). Scholarship on workplace mobility and regional has warned against the potential negative effects the narrow focus on the mobility of such elites may have on the local population as local development– particularly in the periphery– is neglected in favour of prestige development investments primarily in the urban core (Amekudzi et al., 2012; Attoh, 2012; Keil & Young, 2008).

In summary, conducting my research in Toronto, Ontario allows me to draw comparisons between case studies in both mobility studies and urban economic geography theory in North America. Further, the exemplary nature of Toronto will allow for iterative case studies in diverse metropolitan areas beyond my doctoral work.

Data Collection

Quantitative Data

The data set used in the qualitative portion of the mixed methodology study is the 20% long-form sample of the 2016 Census of Population collected by Statistics Canada, the federal data collection bureau, in the spring and summer of 2016. As census data in Canada is collected every five years and is published the year following its

collection, the 2016 census was the latest available data set as I conducted my data analysis in the spring of 2021. The 2016 census data is chosen as the appropriate data set for the analysis of the spatial distribution of temp work in Toronto as national census data collected by Federal statistical bureaus is frequently used in the theorization and measurement of urban form in academic scholarship (Hudalah et al., 2013) and is frequently used by planning professionals to reference demographic data (Maguire, 2021). Thus, the use of census data allows me to draw on the common methodologies of measuring urban form as the geographic principles that govern the census (for example, allocating work to the address of an establishment) are typical of all data used in the location-based methods discussed in the previous chapter.

Specifically, the non-aggregated census microdata files from the 2016 census long-form sample are used. In microdata, each observation represents an individual Canadian whose data was collected through the long-form questionnaire and coded according to variables describing geographic, social and demographic traits of the household's residents. As the detailed and sensitive information collected in individual surveys raises the risk of individual respondents being identified, Statistics Canada governs the access to non-aggregated microdata at secured research data centres and requires researchers to obtain security screening-dependent project approval, which was granted to this doctoral research project on January 19th, 2021. The publication of research based on microdata depends on transformative data analyses, which protect the anonymity of respondents, as well as on the use of weighted variables, which multiply the analysis results to representatively apply to the Canadian population as a whole. For this project, I accessed the non-aggregated microdata through the McGill-Concordia Laboratory of the Quebec Inter-University Centre for Social Statistics (QICSS) in accordance with Statistics Canada's confidentiality policies.

The total number of observations in the 2016 microdata set is n= 8,651,677. For the purpose of this study, however, the observations are initially limited to individuals living within the study area, the Toronto census metropolitan area. This filtered data set is used to contextualize the emerging geographies of temp workers through an updated analysis of Toronto's employment centres and subcentres for the total working population as a whole. In a second data analysis to determine the geographies of the temporary staffing industry, observations are further filtered to only include respondents living in the Toronto CMA and employed in the *Employment Services* industry according to the North American Industry Classification System (NAICS Code 5613), resulting in n= 37,055 weighted observations. It is important to note that I initially requested access to data compiled under NAICS code 56132, which is a subset of the observations in NAICS code 5613 and only includes those employed in the Temporary Help Services industry specifically. However, because of the much smaller sample size and confidentiality requirements for disclosure purposes, Statistics Canada did not approve access to such fine-grained data for this research.

Although access was provided to all variables specified in the 2016 Census Research Data Centre (RDC) File Documentation and User Guide, the variables most pertinent to the analysis of the Toronto CMA's urban form and the employment service industry's geographic patterns were locational variables in the labour category (*place of work census tract name*, *place of work commuting destination*, *place of work status*). Statistics Canada codes these variables based on the response to the 2016 Census of Population Longform Questionnaire's question 42 (*At what address did this person usually work most of the time?*) and subsequent follow-up questions in which the respondent declares where work is usually performed or that their work does not take place at a fixed location. The answer to question 42 is intended to be specific to respondent's employment situation during the week of May 1 to May 7, 2016 or, if the

person did not hold a job during that specific week, refer to the job the respondent held the longest since January 1st, 2015. If a respondent held more than one job, the answers should be given for the job at which the most hours were worked. Additionally, I use the *place of residence census tract* variable, which is coded based on the question 2 (*what is the address of this dwelling?*) and provides geographic information on residential location.

In light of the parameters guiding the answers to question 42, it must be noted that the geography that is captured for a temp worker declaring a usual place of work is the client company they spent the most time at during a specific week. The location of potential secondary workplaces or their agencies is not captured. Further, the location of temporary staffing agencies is only captured through respondents who are managerial workers in the industry, i.e. a manager or recruiter that performs their work at the location of the staffing agency they are directly employed by. The empirical and theoretical implications of this limited geographic data will be discussed throughout the remaining chapters, yet these are limitations to keep in mind.

Further, I use additional variables coded from the Labour Market Activities section of the 2016 census questionnaire. The *occupation* variable, which is derived from the National Occupational Classification (NOC) system, provides information about what tasks workers perform as well as, indirectly, which industries they are mediated into, as tasks are sorted by sector. The *occupation* variable is coded from question 38 (*What was this person's work or occupation?*). The *nujob* variable provides some insight into the stability of employment services workers' labour market activities as it records whether respondents are actively employed and, for those who are not, set to begin a new position within the next four weeks. It is coded from questions 30 to 34 which inquire about the labour market activities– including whether a position had been

offered to individuals out of work– within the month prior to the data collection. However, the utility of the *nujob* variable is limited by the triangulated employment structure of the temporary staffing industry where the lines between employer– technically the agency– and job are blurred. I will be discussing this limitation in detail in the next chapter.

Additional demographic data such as the income and education variable are considered to differentiate between lower-wage temp workers and managerial staff who are assumed to be more educated and in a hire income bracket. The *Employment income groups* variable, which is coded based on the respondents' *Canada Revenue Agency* tax information accessed by Statistics Canada, groups respondents into income brackets in $10,000 increments and is used in addition to the *occupation* variable to differentiate between high and low-wage temporary staffing workers. The demographic data variables *Sex*, *Age*, *Immigration status*, and *Highest certificate, diploma or degree* are used to create a profile of temp workers in the Toronto CMA that informs the participant recruitment for the qualitative data collection portion of this doctoral research project. These variables are largely coded based on introductory questions posed in the 2016 Census of Population Longform Questionnaire to capture the demographic data of all occupants within the dwelling.

All data are aggregated at the census tract level, a unit of analysis based on the *population* variable created by Statistics Canada which subdivides Canada into geographic portions with a preferred number of 4,000 residents per tract (StatsCan, 2017) and generally ranges from 1400 to 8000 residents. Census tracts are geographically small enough in urban areas to provide a fine-grained analysis of the location of economic activity (tracts tend to be smaller in densely populated urban residential areas and increase in geographic size in urban areas with industrial land uses as well as rural

areas) while still protecting the confidentiality of individual census respondents. The strict rules governing the publication of data analyses based on census microdata limit the utility of census tracts since non-transformative, descriptive data tables must have a minimum of 50 weighted and rounded observations per cell. However, as there are 1,151 census tracts and only 37,055 temporary staffing workers in the Toronto CMA, the average cell count is 32 workers per tract. Low density census tracts are therefore aggregated to meet the minimum cell count threshold. This does not affect the overall analysis as the main objective is to identify peaks of employment concentration – all of which exceed the minimum count.

Qualitative Data Collection

For this project I interviewed a total of 32 interviewees of whom 6 are key informants and 26 are temporary workers in the summer and fall of 2021. The semi-structured interviews lasted between 30 and 60 minutes. Semi-structured interviews– in place of structured interviews based on a standardized survey– are deemed appropriate due to the inductive approach used in this research project. Due to university guidelines implemented during the COVID-19 pandemic which restricted inter-provincial travel for fieldwork in 2021, participant recruitment and interviews were completed remotely. The majority of interviews were conducted over the phone (30) while some (2) occurred over the video-conferencing app Zoom. All participants but one consented that the interview could be recorded.

Of the key informants, half ($n = 3$) are either volunteers or staff for non-profit labour rights organizations active in the Peel region and the City of Toronto, two are recruiters employed by transnational temporary staffing agencies (one office is located in the Toronto CBD, the other in Mississauga), and one is a recruiter employed by an agency specializing in the mediation of skilled workers into white collar positions. Of the

26 temporary staffing workers, 14 are women and 12 are men. 12 participants are exclusively mediated into the warehousing and manufacturing industries, 10 work in white-collar, office environments (only one of which was recruited for his specialized skill in the finance sector) and 4 are mediated exclusively in the medical administrative sector. All temporary staffing participants live and– with one exception– work exclusively within the Toronto CMA (the exception had held one placement located in the neighbouring Oshawa CMA in addition to regular placements in the Toronto CMA). 14 of the 26 interviewees confirmed during the interview that they had immigrated to Canada as adults. All 14 recent immigrants had arrived within the four years prior to the interview and as recently as two months beforehand. While some of the interviewees emigrated from Ghana, Sudan, Russia or Great Britain, the majority (8) of interviewees spent their adolescence in India. With the exception of the British citizen who could gain access to a work permit, all international interviewees entered Canada to pursue post-secondary education– predominantly at the college-level– with the hopes of gaining a full-time work permit and permanent residency afterwards. Indeed, 10 of the interviewees were still in the midst of their post-secondary education at the time of the interview (3 at the university and 7 at the college level). The majority of participants (15) appear to be in their mid to late 20s with the oldest participants being in their late 40s. Almost all participants only started using temporary staffing agencies within the previous 18 months, although 3 had been temp workers intermittently for the past 5 to 10 years.

Table 1: List of interviewees

a) Key informants

Name	Gender	Role	Geography
Gabriela	F	Recruiter	City of Toronto

Fiona	F	Recruiter	Peel Region
Kate	F	Recruiter	City of Toronto
Christine	F	Labour Rights Activist, Labour Lawyer	City of Toronto
Gita	F	Labour Rights Activist	Peel Region
Robert	M	Labour Rights Activist	Peel Region

b) Temp workers

Name	Gender	Immigration status	Main Labour Geography	NOC code
Sohan	M	Student Visa (Indian citizen)	Bolton subcentre	Assemblers in manufacturing (95)
Isabel	F	Canadian citizen	CBD	Office support occupations (14)/ Assisting occupations in support of health services (34)
Laura	F	Canadian citizen	CBD	Finance, insurance and related business administrative occupations (13)
Claire	F	Permanent Resident (British citizen)	CBD	Office support occupations (14)
Priya	F	Student Visa (Indian citizen)	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)
David	M	Student Visa (Ghanaian citizen)	Vaughan Subcentre	Labourers in processing, manufacturing and utilities (96)
Mark	M	Canadian citizen	Ajax subcentre	Assemblers in manufacturing (95)
Rahul	M	Student Visa (Indian citizen)	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)
Viraj	M	Post-Graduation Work Permit (Indian citizen)	Work from home	Finance and Insurance (52)
Keshav	M	Student Visa (Indian citizen)	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)

Ariana	F	Canadian citizen	Downtown Mississauga	Finance, insurance and related business administrative occupations (13)
Fatima	F	Post-Graduation Work Permit (Sudanese citizen)	Greater downtown	Office support occupations (14)
Samantha	F	Canadian citizen	North York residual subcentre	Sales support occupations (66)
Becky	F	Canadian citizen	Midtown	Office support occupations (14)
Angelina	F	Canadian citizen	Vaughan and Markham subcentres	Office support occupations (14)
Julia	F	Canadian citizen	CBD/ Downtown Mississauga	Office support occupations (14)
Ivan	M	Student Visa (Russian citizen)	Vaughan Subcentre	Labourers in processing, manufacturing and utilities (96)
Steph	F	Canadian citizen	Mobile workers (CBD, Midtown, North York residual subcentre)	Assisting occupations in support of health services (34)
Rachel	F	Canadian citizen	Work from home	Office support occupations (14)
Emma	F	Canadian citizen	Work from home	Office support occupations (14)
Allan	M	Canadian citizen	Vaughan Subcentre	Labourers in processing, manufacturing and utilities (96)
Meena	F	Post-Graduation Work Permit (Indian citizen)	Mobile worker (CBD, Pearson International subcentre, Bolton subcentre)	Assisting occupations in support of health services (34)
Isaac	M	Post-Graduation Work Permit (Indian citizen)	Vaughan subcentre	Labourers in processing, manufacturing and utilities (96)
Farid	M	Student Visa (Indian citizen)	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)
Ashwani	M	Student Visa (Indian citizen)	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)

Vinita	F	Canadian citizen	Pearson International subcentre	Labourers in processing, manufacturing and utilities (96)

The exact number of participants was not determined before qualitative data collection began. Rather, I set the tentative goal of interviewing at least five key informants and at least 25 temp workers. This approach is informed by Small's (2009) theorization of the role of *knowledge saturation* in qualitative data collection. Small argues that as qualitative data does not aim to be statistically representative or provide generalizable results, high n numbers is a false metric by which to evaluate the success of the qualitative data collection. As an alternative, Small proposes a methodology of evaluating at which point new interviews no longer provide knowledge that was previously unknown to the researcher – a process that usually begins at approximately 20 interviews (although it is dependent on the interview method and scope of the project). In order to determine when knowledge saturation is reached, I use a method of iterative reading and coding where data collection and analysis is conducted simultaneously, a process which I explain in detail in the *qualitative data analysis* section of this chapter. Further, I set a maximum limit of 40 total interviews for the qualitative data collection phase. Had that number been reached, I would have ended further interview recruitment even if knowledge saturation had not been met. This limitation was set to ensure that the scope and timeline of my doctoral research project would be kept.

The key informant interviews and quantitative census microdata analysis were conducted concurrently to articulate and critically examine assumptions about the employment service industry's geographic distribution, demographic make-up and labour market functions within the Toronto metropolitan area. With this knowledge, I then

proceeded with the recruitment of temporary staffing workers that reflected the key informants' description of Toronto's staffing market. I was also able to assess whether I was over-recruiting interviewees of profiles that served niche functions within the staffing market (for example only interviewees employed by globally acting agencies and working as temporary staffers with a specialization in accounting).

Initial participant recruitment for both the key informant and temp worker interviews was attempted from a variety of entry points: labour rights organizations, government-funded employment services providers, my personal network, temporary staffing agencies as well as workplaces known for their reliance on temporary staffers. Further, I posted notices in Facebook groups dedicated to finding short-term employment in the Toronto region (for example, one was titled *Toronto Day Jobs*) and hung up recruitment posters in residential and industrial areas with a high density of temp workers within the Toronto CMA in late June 2021. Personal network connections and labour rights organizations were asked to establish contact between myself and the potential interviewees, so I could send a personalized information letter about the purpose of the study. In the case of employment services offices, staffing agencies and client companies, all of whom legally cannot provide personal information of their staff and clients, I provided the point of contact at these organizations with a generic information letter and requested that it be circulated among their staff. The information letter included details about the study, a notice of a $20 honorarium paid to every participant as well as my personal information for interested parties to contact me directly.

The social media and poster recruitment strategy proved to be the most successful. While all key informants were found through entry points in my personal network as well as by cold-contacting labour rights organizations operating primarily

within the Peel Region and City of Toronto, the majority of temp workers were found through poster and social media recruitment. Contacting temporary staffing agencies was unsuccessful (cold-emailing with follow-up emails sent a week later produced a response rate of 0%). However, the unwillingness of temp agencies and client companies to engage with the project is an unsurprising limitation: it is estimated that 75% of Toronto's temp work agencies regularly break labour laws designed to protect employees, thus making it unlikely from the outset that such actors within the industry would be willing to participate in an academic study (Mojtehedzadeh, 2015).

Further participant recruitment took place through snowballing in which interviewees referred me to people they knew– usually friends, family and close colleagues– who were also active within the temporary staffing industry. Two limitations were set for the recruitment through snow-balling before the interview process began. First, it was decided that snow-balling chains that lead to a homogeneous group of participants would be abandoned – in particular chains that led to a large number of recruits who did not reflect the diversity of experiences within the temporary staffing industry as they emerged from both the quantitative data analysis as well as from the literature review.[8] The purpose of this limitation is to ensure that, while not representative, the amount of interview data collected on the geographies of different labour segments of the temporary staffing market would be somewhat proportional to their size, thus allowing outliers to be discussed and used to compare and contrast with other observations while still being able to relativize their experience (Small, 2009).

[8] I approached the initial participant recruitment process with the assumption that, as is the case in other urban staffing markets in the Global North, a large majority of recruits are employed by independent temporary staffing agencies, are employed in low-wage positions, likely to be racialized women, and tend to be recruited from low income neighbourhoods (Coe et al., 2007; Enright & Pemberton, 2016; McPhee, 2016; Peck & Theodore, 2001; Theodore & Peck, 2002). White-collar temp workers placed by transnational staffing agencies tend to make up a small fraction of such temporary staffing markets (Coe et al., 2012).

The second limitation on snow-balling was set to protect participants who could potentially face harm for participating in this project and to comply with the Research Ethic Board guidelines on interviewing vulnerable populations. Studies on the temporary staffing industry in North America suggest that both the agencies and temp workers commonly operate on the edge of legality and often do not comply with labour laws (Vosko, 2000; Peck & Theodore, 2001; Fudge & Strauss, 2014). Temp workers are often recent immigrants with temporary visas (such as student visas) that limit the number of hours they can work per week, and agencies, workers and client companies frequently knowingly circumvent such visa provisions through direct cash payments for hours worked beyond the legal limit.

While such patterns have yet to be formally recorded for Toronto's temporary staffing industry specifically, investigative journalism by the Toronto Star suggests that such illegal practice is also wide-spread in the Toronto metropolitan region (Mojtehedzadeh & Kenndedy, 2017). Both workers and the agencies therefore could face legal consequences should they be identified, such as the suspension of their business license (in case of the agency) or the revocation of their visa (in the case of temporary staffers with temporary status in Canada). Further, workers, regardless of their status in Canada, could face economic consequences such as the dismissal, if the agency finds out – or simply suspects– that the worker has disclosed illegal activity by the agency in the interview. To protect participants, interviewees were thus asked to only refer me to potential recruits who worked for a different temp agency and client company. This measure prevents interviewees from knowing about other colleagues' participation within a single agency, thus protecting interviewee's privacy and confidentiality. Given these limitations, only four participants were recruited through snowballing.

To additionally protect participants, my line of inquiry in the qualitative data collection and analysis phases aimed to factually record the work locations and trajectories of temp workers. While the social and economic impacts of their work is considered throughout this thesis, this information is filtered through the implicit geographies: for example, questions related to pay are phrased to record if and where participants have to travel within the Toronto CMA to collect it and how often these trips occurred – not if the pay is provided in cash, by cheque or money transfer.

Two sets of core questions were prepared, the first specific to key informants and the second for temp workers. For key informants, questions were divided into four topics: 1) questions relating to their own personal role and expertise with the temporary staffing industry, 2) questions relating to the geographies and demographics of temp workers in the Toronto CMA, 3) questions relating to the practices and geographies of temporary staffing agencies, and 4) questions about the organization of the temporary staffing industry in the Toronto region as a whole. Key informant questions were re-phrased to make sense within the context of three types of roles – recruiter for an agency, community organizer and non-governmental employment services officer– but with the intent of eliciting the same information.

Interview participants employed as temp workers were first asked a series of questions inspired from the long-form version of the Statistics Canada 2016 Census Population questionnaire, which related to labour market activities, mobility and personal geographic data.[9] The answers were subsequently coded according to the

[9] Statistics Canada structures its questions in a survey format. As the interviews for this doctoral research project were conducted remotely and therefore did not allow for participants to fill out a physical survey without additional administrative effort, questions are reworded to make sense within the context of the semi-structured interview format. The essence of the information elicited by the census questions is maintained and the interviewee's answers are coded according to the format of the census survey, even if additional information was given by the participant.

Statistics Canada variable classifications I used during the quantitative data analysis, thus allowing for a direct comparison between the geographic patterns emerging from the quantitative versus qualitative data analyses for the 26 interview participants. The core questions were grouped into four sections asking about the participants' 1) personal profiles, education and employment history, 2) work related locations and movements throughout the Toronto GTA, 3) communication patterns with their agency and client companies, and 4) employment related preparation and planning tasks. Interviewees were also asked to describe how they viewed their ethnicity during the interview, thus allowing me to code participants according to their self-described versus perceived ethnicity (Roth, 2016). Participants were initially provided with the same core set of questions. However, as my qualitative data analysis method relies on an iterative reading process associated with grounded theory methods to identify nuanced themes (Charmaz, 2000), the questionnaires changed throughout the course of the data collection. Coding and the analysis occur simultaneously and are refined both through re-reading as well as re-coding. Themes identified in a later interview therefore are revisited and explored in previous ones. Thus, the questions posed to temp workers evolved throughout the fieldwork process to collect more data on particular patterns and themes.

Further, as the qualitative data collection took place in 2021 during the COVID-19 pandemic when regular employment patterns – geographic and otherwise– in many professions were being disrupted due to lock-downs, and the long-term effects on employment geographies were unclear, each section included a question asking participants to describe how COVID-19 had impacted their experience relating to work-related travel, communication and preparation. I then asked follow-up questions to encourage participants to consider which aspects were similar to their pre-pandemic employment (for those who had been in the temporary staffing industry beforehand) and

which aspects had changed. I deemed the inclusion of these questions as necessary as I use interview data to discuss the benefits and limitations of an approach to urban form based on location data with the goal of proposing new theory and methods. Due to the disruptive nature of COVID-19 in the labour market, the data collected during the 2016 census did not reflect the realities of labour geographies in the spring and summer of 2021 when I was conducting fieldwork. Further, the Statistics Canada 2021 census data would a) not become available in time to be considered for this doctoral research project and b) also provide a momentary snapshot of labour geography patterns during a global pandemic, thus providing limited insight on the spatial realities of labour in both a pre- and post-pandemic world.

Data Analysis

Quantitative Data Analysis

The quantitative data analysis for this project proceeds in two stages. First, I perform a standard analysis of Toronto's urban form based on traditional location-based methodologies of determining employment distribution. I then turn my attention to a sector specific analysis of the temporary staffing industry based on both census and agency location data.

Employment centre distribution analysis

First, I perform an analysis of the 2016 employment location data to map the central business district and further economic subcentres of the Toronto CMA. The urban form of the Toronto region is assumed to be polycentric (versus monocentric or economic activity being scattered) based on previous studies of the city's economic distribution, which consistently find clusters of employment not only located in the

CBD but also along the 401/407 highway corridor (Duquet & Brunelle, 2020; El Khafif & Przybylski, 2020; Shearmur et al., 2007). Despite the quite recent mappings of Toronto's urban form based on 2016 census data by Duquet and Brunelle as well as El Khafif and Przybylsky, I still conduct an analysis myself to a) use the analytical method most suited to the census microdata and the scope of my project, and b) be able to map the employment industry's geographies in relation to the distribution of economic activity in the Toronto region as a whole with a consistent methodology.

Urban economic geography scholarship has historically lacked a definitive method to empirically determine the distribution of employment locations in metropolitan areas and whether existing clusters of employment are large enough to be defined as economic centres. Although different schools of thought exist as to which theoretical lens should be used to approach employment data –as briefly touched upon in the literature review–, it is largely agreed upon that the appropriate method is determined by the number of observations, geographic context, familiarity with the metropolitan area itself, as well as the industry one is studying (Arribas-Bel & Sanz-Gracia, 2014; Griffith & Wong, 2007; Hajrasouliha & Hamidi, 2017)[10]. In light of this, I considered the following three methodological approaches identified by Agarwal et al (2012) as the most common ways to quantify and define economic centres in urban areas:

- Economic centres, or the lack thereof, are defined by density thresholds (i.e. jobs per census tract or predetermined geographic area such as square kilometre) and minimum size (see Giuliano & Small, 1991)

[10] It is important to note that I am specifically referring to methods of determining urban form based on a single variable: employment location. The various multivariate methods based on additional data sources, generally grouped under the heading of *functional polycentricity* (Burger & Meijers, 2012; Green, 2007), were not considered as the whole objective of this thesis is to examine to what extent the singular variable of employment location can be used to measure urban form.

- Subcentres are statistically defined in relationship to the central business district through negative logarithmic functions by focusing on tracts with the highest employment density (Craig & Ng, 2001)
- Locally weighted, non-parametric regression (LWR) models to identify centres based on the assumption of regular distribution (Redfearn, 2007)

I ultimately opt for a variation of the methods based on density thresholds which also considers the ratio between jobs and residents in each census tract. The employment to residential ratio analysis (E/R) is first proposed by McDonald (1987) and still frequently used by economic geographers to determine urban form (see Coffey & Shearmur, 2001; Fernández-Maldonado et al., 2014; Garcia-López, 2010; Hudalah et al., 2013; Pan et al., 2018 for examples). The E/R method relies on calculating a ratio of the population whose employment location is registered in a geographic unit (in the case of this study, the census tracts) versus the population residing within it. Its benefit lies in accounting for the varying geographic size of census tracts, which cause issues of comparability between observations in studies based on employment density models by prioritizing industries with few specific spatial limitations that thus often take place in small, dense tracts (most often office work) over manufacturing and industrial uses that often are located in large, low density census tracts. The ratio therefore emphasizes in-commuting over employment density as the main indicator of an employment centre.

I also employ the E/R analysis as models relying on density-based methods alone are frequently criticized for their arbitrary cut off points to define centres and subcentres as well as for their frequent reliance on subjective knowledge of the study site (Agarwal et al., 2012; Hajrasouliha & Hamidi, 2017). Indeed, statistical methods based on regression analyses and logarithmic functions were primarily developed to provide less descriptive alternatives to study the distribution of economic activity and which

could be used for comparative studies of multiple metropolitan areas, including contexts with which the researcher is not familiar (Craig & Ng, 2001; McMillen, 2001; McMillen & Smith, 2003).

However, as the objective of this thesis is to inspect the ability of the variable itself – employment location– used in both parametric and non-parametric methods to approximate where economic activity takes place in the city, the method by which this variable is transformed, while obviously important, is secondary to this study. Parametric, density-based methods continue to be used precisely for their simplicity, which is why I opted for this option as well. Agarwal et al (2012) in their comparative review of studies of employment centres in the Los Angeles metropolitan region based on the same data set found that LWR and other non-parametric methods (Lee, 2007; Redfearn, 2007) yielded similar amounts of economic centres to the density-based model (Giuliano et al., 2007)– 44, 41 and 46 respectively. The locations of the centres identified in these studies are largely identical, and variation in numbers stems from whether an employment corridor is deemed continuous or is defined as multiple individual centres. As my study is not a comparative analysis of multiple metropolitan areas and my familiarity with the Toronto region allowed me to apply my local knowledge to the identification of subcentres and their boundaries, I deem a density-based methodology sufficient.

Consequently, the census tracts I therefore examine in this analysis are those whose E/R ratio is greater than 1, indicating a higher portion of employment than residents in the area. Secondly, I draw on previous studies of Canadian employment centre distribution to determine the minimum total number of jobs that must be located in a census tract to be considered potentially part of a centre (Duquet & Brunelle, 2020; Shearmur et al., 2007). Duquet & Brunelle (2020) in their comparative study of

Canada's six largest CMAs propose that only tracts are considered to be large subcentres which "contain at least 1% of all jobs in the CMA" or exceed 10,000 jobs. For small centres, this number is lowered to 0.5% of total jobs or more than 5,000 jobs. Shearmur et al. (2007), who use the smaller *dissemination area* (DA) geographic census unit – formerly enumeration area– which is approximately one tenth in population size of a census tract and in urban areas encompasses, set a threshold of 500 employees per DA, which, if extrapolated to the size of census tracts, is comparable to Duquet & Brunelle's small centre classification.

As the Toronto CMA is the metropolitan area with the highest concentration of locatable jobs in Canada, 1% of the total employment recorded in the 2016 census (n=2,694,235) would denote n=26,942 jobs per census tract that qualify as an individual or part of a large centre, thus almost double of Shearmur et al.'s classification. Based on literature suggesting that approximately two thirds of employment in North American metropolitan areas tends to be located in employment zones (Giuliano et al., 2007; Hajrasouliha & Hamidi, 2017; Shearmur et al., 2007), the threshold was ultimately adjusted in 1,000 job increments to reach the following classification, which captured 59% of employment in the Toronto CMA:

- Large centre: $\mathrm{E/R} \geq 1$ and $\mathrm{E} > 20{,}000$
- Sub-centre: $\mathrm{E/R} \geq 1$ and $\mathrm{E} > 10{,}000$

Further, a third category is included that captures smaller employment clusters that still have E/R ratio that is higher than one but are likely of regional importance within the Toronto CMA. This category is defined the following way:

- Residual employment centre: $\mathrm{E/R} \geq 1$ and $\mathrm{E} > 5{,}000$

Employment Services Sector-specific spatial analysis

For the second part of the quantitative data analysis, I focus on the industry-specific geographies for observations classified within the NAICS code 5613 (employment services). Spatial analyses of specific industries in metropolitan areas have thus far been predominantly conducted by innovation scholars and economic geographers for Knowledge Intensive Business Services (KIBS) sectors, which is why I look to the methodologies used in academic studies in this field (Jacobs et al., 2014; Shearmur, 2012; Tether et al., 2012). When applied to the *place of work census tract* variable, these methodologies provide an overview of the temporary staffing industry's spatial configuration (i.e. in zones, corridors, dispersed, etc.) as well as how the TSI's employment patterns relate to the distribution of economic (sub-)centres within the Toronto CMA. This sector-specific analysis is undertaken in two steps, which are a descriptive and a spatial analysis.

First, I provide a descriptive census microdata analysis in which I compare respondents working in the NAICS 5613 sector to the rest of the Toronto CMA's labour force. The purpose of this descriptive analysis is to establish potential differences in the employment conditions temp workers in the Toronto CMA experience, and determine the employment service industry's embeddedness in the Toronto CMA's overall labour market. I begin by comparing the *place of work status* of temp and non-temp workers for the ten most common *occupation* sectors (based on the 2-digit NOC code system) NAICS 5613 respondents are mediated into. This analysis intends to determine whether temporary staffing workers are, as assumed based on the literature, more mobile than their non-staffing counterparts or whether temporary staffing is simply more widespread in industries with high levels of workplace mobility. The analysis uses Putri and Shearmur's (2020) definition of mobile workers based on Canadian census data in which

respondents whose *Place of Work Status* variable is coded as *Works from Home* or *No Fixed Place of Work* are grouped as mobile workers. Respondents declaring a usual place of work are classified as immobile. The small number of respondents who report a work location outside of Canada are deleted for this analysis. The table also provides a descriptive analysis of the pervasiveness of temporary staffing in each of the ten most common *occupation* variable sectors to determine how embedded the temporary staffing industry is in each of these job types. The purpose of this analysis is to determine any uneven distribution concerning which job types are 'temped out' and to establish broader claims about the industries relying on temporary staffing by using the NOC major group categorization. The *place of work status* analysis is complimented with an additional table that provides the five most common occupations based on the 2-digit NOC code by income group with the purpose of identifying differences in the types of jobs individuals working in the high- and low-wage staffing market perform. For this purpose, the NAICS 5613 census data are grouped into three income brackets– *high* (>$100, 000 annually), *medium* ($50,000 – $100,000) and *low* (<$50,000)– based on the *employment income groups* variable[11].

The second step is a series of spatial analyses of the temporary staffing industry's geographic distribution within the Toronto CMA, meaning that the geographies of

[11] As mentioned earlier in this chapter, the NAICS 5613 code includes not only the temporary staffing industry but also the elite and highly paid executive search services sector (Faulconbridge et al., 2009; Meriläinen et al., 2015). Further, the data not only include staffing workers but also management and recruitment staff for agencies and it is impossible to differentiate between these groups based on the census data alone. Given that the product of the temporary staffing industry is flexible and often low-paid labour, however, it can be assumed that most observations in the microdata are lower wage temp workers. The assumption I make is that observations with an annual salary above $100,000 (4.5% of observations) are unlikely to be employed as staffing workers but rather can be considered as part of the managerial class. Respondents in the $50,000 to $100,000 category thus are assumed to be specialized staffing workers in white collar positions while those with an income of less than $50,000 are likely to be employed in low-wage blue, pink and repetitive white collar positions such as data entry (Enright, 2013; Hatton, 2011). I considered further division in which <$42,000 – the Toronto living wage standard– would form the lowest income category and an additional $42,000 to $75,000 category would be added. However, the inclusion of additional categories had limited effect on the results and were thus dismissed.

workers, agencies and client companies alike are considered. The analyses, which are similar to the identification of employment clusters I discussed in detail in the previous section, aim to identify employment clustering patterns among high and low-wage NAICS 5613 respondents as well as temporary staffing agencies. While the E/R method is deemed most appropriate to map employment distribution and identify clusters for the Toronto CMA's population, an alternative method must be considered for these analyses due to low n number for both NAICS 5613 respondents declaring a regular place of work as well as active agencies (n=763), especially in relation to the 1,151 census tracts in the Toronto CMA. Alternatively, I thus use the locally weighted spatial regression model Getis-ORD Gi*– another commonly used method of analyzing the location and strength of economic agglomerations (Agarwal et al., 2012). Such non-parametric, locally weighted regression (LWR) models offer a solution to the existence of individual census tracts of varying size with high employment density (perhaps due to the existence of a single large employer) by triangulating employment location to provide a smooth and continuous distribution of employment over space (McMillen, 2001; McMillen & Smith, 2003; Redfearn, 2007). Getis-ORD Gi* is one of a few common equations to measure and statistically evaluate the type and significance of spatial autocorrelation by using spatial weight matrices in which neighbouring geographies (adjacent census tracts, in the case of my analysis) are considered to determine concentration (Baumont et al., 2004).

This method is deemed appropriate for multiple reasons. First, since little is known about the geographies of the Toronto CMA's temporary staffing industry, concentration or scatteration cannot be assumed. Indeed, any analysis of industry-specific spatial patterns is complicated by sectors' ability to be simultaneously highly concentrated as well as dispersed (Shearmur & Alvergne, 2002). This is especially likely for heterogeneous sectors such as temporary staffing where variegation between white

and blue collar markets have been observed, thus meaning that temp workers are used by firms in many industries with various locational patterns. (Coe et al., 2011, 2012; Shearmur & Alvergne, 2002; Yip & Coe, 2018). Further, while locally weighted regression models still measure concentration, they do not presuppose the existence of a geographic centre such as the CBD, and therefore are able to better capture locational patterns that may not be centred around an urban core (McMillen, 2001; McMillen & Smith, 2003). Lastly, LWR methods are more sensitive to peaks of agglomeration and can be used to identify micro-centres at smaller geographic scales (Redfearn, 2007).

The analyses use the standard Getis-ORD Gi* fixed distance band setting in which the mean distance to the 8 nearest neighbours of each observation is calculated and each neighbour is weighted equally[12]. For the 1,151 census tracts in the Toronto CMA, this mean distance is 2728m. The analysis differentiates between positive spatial autocorrelation, which indicates clustering, at the significance level of 5% and 1% (Baumont et al., 2004). This p-value is derived from the standard deviation (z-score) in which a z-score of 1.96 to 2.58 corresponds to p=5% and z>2.58 is associated with 1% significance level.

In addition to the basic spatial analysis of employment location for temp workers based on the *place of work census tract* variable derived from the census microdata, one additional Getis-ORD Gi* analysis is conducted to empirically measure and map potential differences in the spatial organization of high and low-wage staffing markets. I conduct a two-sided hot-cold spot analysis of temporary staffing agency location in which negative spatial autocorrelation is also considered. For this purpose, observations are coded as either general labour (a term that describes manual labour requiring little

[12] Inverse distance weighting in which nearby tracts are weighted less the farther they are from the observation was also considered. However, both weighting matrices produced similar results, thus leading me to choose the default fixed distance band setting.

training and previous specialized knowledge) (1) or specialized services agencies (0). Cold and hot spots in this analysis indicate clusters of low (i.e. general labour agencies) or high-value (i.e. specialized agencies) observations, thus showing potential spatial divisions between agency location (Peck & Theodore, 2006; Ward, 2005).

Two descriptive measures compliment the LWR analyses. First, I provide a descriptive mapping of residential location among NAICS 5613 workers earning less than $50,000. The purpose of this analysis is to determine the relationship between temp workers' place of residence and places of work, and to infer information about the resulting labour trajectories. This descriptive mapping can only be completed for workers earning less than $50,000 due to the low cell counts per tract in the middle- and high-income groups, which do not pass microdata confidentiality clearance. Second, in addition to analyses measuring concentration, I also employ descriptive measures of employment dispersal. Drawing on Shearmur and Alvergne (2002), I calculate the minimum number of census tracts (n) that in sum compromised a given percentage of the temporary staffing industry's total employment in the Toronto CMA ($n_{x\%}$), thus meaning that the number of tracts (ct) to make up these percentages could range from 1 (total concentration) to 1151 (total dispersal):

$$\Sigma_{ct=1 \text{ to n}}\, ct = \text{x}\%$$

The use of this calculation lies in its ability to capture and map the locations of high employment concentration or dispersal, as well as the locations of residual employment outside of centres. Three complementary variables– $n_{50\%}$, $n_{100\%}$ and $n_{100\%}$-$n_{90\%}$– are calculated based on the *place of work census tract* variables in which

- $n_{50\%}$ functions as a measure of employment concentration where the small n number captures how many of the tracts with the highest employment concentration make up 50% of total temporary staffing jobs,
- $n_{100\%}$ functions as a measure of employment dispersal where a high n number indicates that staffing jobs are disbursed,
- and $n_{100\%}$-$n_{90\%}$ functions as a measure of employment locations outside of the highest density tracts for the last 10% of jobs, thereby capturing the location of residual jobs.

Additionally, I add the further residual calculation of $n_{100\%}$-$n_{70\%}$ as the variegated nature of the temporary staffing industry differs from the KIBS sectors analyzed by Shearmur and Alvergne: as the employment services industry– contrary to employment in KIBS– includes jobs in the personal service sector (Fudge & Strauss, 2014; Stevens, 2021), and it has been observed that temporary staffing agencies do partially locate in close proximity to residential areas (Fudge & Strauss, 2014; Peck & Theodore, 2001), I approached the data analysis with the assumption that the TSI would have a higher amount of residual dispersion in residential census tracts with low employment numbers. I perform this additional residual dispersion calculation to examine this assumption.

Qualitative Data Analysis

The coding and analysis of the interview data occurred in tandem with the data collection through an iterative reading approach. Iterative reading as an analytical strategy draws on the constructivist grounded theory method as described by Charmaz (2000). In this method, both data collection as well as the analysis is approached inductively, meaning that it does not rely on clearly articulated hypotheses that are either proven or disproven by the data. Rather, hunches informed by previous literature are followed. Such iterative reading is useful for theory building in a context such as my

doctoral study where, as outlined in the previous chapter, the use of qualitative data is underexplored. Indeed, Charmaz contends that 'coding starts the chain of theory development' and that 'codes that account for our data take form together as nascent theory that, in turn, explains these data and directs further data collection' (2000, 515), thus resulting in a cyclical process of data collection, analysis and theory building where interviews conducted early on during the data collection phase are continuously revisited in light of later ones through re-reading as well as re-coding. As a result, the code book, questionnaires and coded transcripts themselves are living documents during the data collection and analysis phase where findings in early interviews influence the questions that are asked in later ones, and where themes identified in later interviews are revisited and explored in the transcripts of previous ones through iterative coding.

A constructivist iterative reading process is beneficial to my doctoral research project in two ways. First, it allows for unique observations and outliers to be recognized, which are of particular importance when capturing social processes such as how precarity manifests itself (Burawoy, 1998, Roulston, 2014). The simultaneous analysis and recruitment of further interviewees allows me to explore information gathered in early interviews in later ones by amending the questionnaire or targeting a specific participant that is able to speak more directly to emerging themes, thereby enabling me to explore where outliers were indeed unique or simply under-recorded due to my positioning as a researcher. The interviews with key informants, conducted and analyzed before beginning the interview process with the temporary staffers, function as a further reference to determine which observations are unique and to what extent the observations on changing geographies of work can be generalized.

Practically, the interviews with participants that agreed to be recorded were transcribed verbatim within a few days of the interview. The key informant interviews

were completed, transcribed, coded and analyzed before my interviews with temporary staffing workers commenced. Further, the interviews were coded manually as the small sample number and analysis methods used in this study would not make use of the benefits provided by qualitative data analysis (QDA) software (i.e. the ability to process large samples, work in collaborative research settings and quantitatively code and analyze interview data) (Deterding & Waters, 2021).

The first round of coding occurred in two phases. First, a deductive, structural approach was used to classify geographic pattern among temporary staffers such as the degree of their daily and weekly mobility, the location types where certain tasks take place, and how land use and transportation affect workplace choices. Such geographic data capturing interviewee's agency and workplace location or their usual modes of transportation are approached, and mapped, as factual for the purpose of comparing them to the geographies emerging from the census data analysis[13]. Interviewees were also categorized according to their demographic data to identify any differences in the labour geographies of workers according to the type of agency temp workers are employed by (local vs. transnational agencies), their legal status or their housing location within the metropolitan area. Ethnicity is also considered as visible minorities are more likely to experience spatial inequality and precarity not only in the City of Toronto but Canada as a whole (Breau et al., 2018; Lewchuk, 2017), as well as in the temporary staffing industry more generally (Axelsson et al., 2017; Fudge & Strauss, 2014).

In a second step, I use the inductive In Vivo analysis method, in which interviews are coded according to phrases and words used by the participants themselves, thus

[13] Of course, whether these locations are objectively true representations is debateable. Indeed, my entire PhD project is driven by the question to what extent locational data collected during the census can be viewed as factual and thus be used to measure urban form.

allowing unforeseen themes to emerge (Charmaz, 2006; Manning, 2017; Saldana, 2011). This method allows me to recognize and reflect upon my interpretation of the data and move towards a participant-led categorization of themes. The In Vivo analysis is applied to data on the social, economic and spatial dynamics which influence the labour geographies – for example by discussing how participants themselves feel constrained by transit or how their job conditions do and do not contribute to economic and social precarity (Breau et al., 2018; Peck & Theodore, 2001). It is here that the data is viewed through the *motility* framework to determine how the labour geographies of temp workers and the staffing industry as a whole are socially and organizationally constructed.

The results are organized and presented in two separate analytical perspectives, each of which has a chapter devoted to it. The first is an analysis and discussion of the interview data from the *agency perspective*, an analytical perspective which focuses on the corporate strategies of transnational temporary staffing agencies, the processes through which temporary staffing becomes established entity in the labour market, as well as the relationship between agencies and client firms (Coe et al., 2010; Enright & Pemberton, 2016). From this analytical perspective, interviews both with key informants and temp workers are examined for data on the function agencies have in the Toronto labour market and the ways in which client firms use staffing labour (i.e. as a temporary solution, flexible seasonal labour, *permatemps*, etc.). The purpose of this perspective is to then evaluate individual respondents' labour geographies against the broader patterns in which temp work is employed by client companies in the Toronto CMA. In Chapter Six, I further provide an analysis and discussion of the interview data from the *workers perspective*, which was originally conceived of in opposition to the *agency perspective* (Booth et al., 2002; Hatton, 2011; Vosko, 2000) and emphasizes social relations as well as the experiences of workers as a key issue in local market making (McPhee, 2016). It is

in this chapter that I analyze the subjective economic and social constraints interviewees face and determine how it affects their social and economic mobility. The purpose of this analysis is to understand how Toronto's temporary staffing workers are able to shape their own labour geographies and the roles autonomy and outside economic pressures have in influencing their work-related *mobility* or *immobility*.

Conclusion

The primary goal of this research project is to provide an empirical case study which tests the ability of location-based methods of measuring urban form to capture the labour geographies of low-wage workers. In this chapter I have justified why a mixed-methodology case study based on the analysis of both quantitative census data as well as interviews is the best approach to answer the research questions laid out in the previous chapter. Further, I have provided a detailed overview over the specific data sources and analytical methods I use in this study as well as discussed some of the limitations of the research.

As we turn our attention towards the research results in the next three chapters, a few take-aways from this chapter must be kept in mind. First, temp workers are chosen as the research population specifically due to their unusual positioning in the labour market where they are both part of an industry captured in the North American Industry Classification System but also are defined by their contractual arrangement rather than their type of employment. I am thereby able to perform an industry-specific analysis of their agglomeration dynamics based on census data while capturing the experiences of a broad population employed in both white and blue-collar positions. Second, the data analysis is conducted in two steps in which I first perform a quantitative analysis of census data using common methods of measuring urban form before I use qualitative data to determine how temp workers' urban labour geographies

as well as mobility are negotiated, and whether census data accurately approximates where their labour is performed. Lastly, this qualitative analysis is conducted in two steps, the first of which focuses on the agglomeration dynamics of the temporary staffing industry while the second is devoted entirely to the *workers perspective*. It is with these points in mind that I next present the results found during the census data analysis.

Chapter Four: Quantitative Data Analysis Results

In this chapter I present the results of the quantitative analysis of census data to determine the geographies of employment services agents in the Toronto region. Additionally, I briefly discuss how to interpret these results in light of economic geography theories on the distribution of labour in urban areas as well as industry-specific geographic studies. This discussion is based solely on the analysis of Statistics Canada census microdata and the geographies and demographic profiles that emerge from it. I present the qualitative results in the next two chapters while a holistic discussion on how to interpret the census data analysis in light of the interviews with temp workers and key informants is found in Chapter Seven. Furthermore, the theoretical and methodological implications of this analysis for the economic geography and planning literature as well as the implications of how temp workers in precarious employment relationships interact with urban space will only briefly be touched upon as they are also discussed in detail in Chapter Seven.

Overall, the main finding of the quantitative data analysis is that the employment services industry– including both the agencies and client companies where temporary staffers perform their work– is concentrated in and around economic clusters in the Toronto CMA's polycentric urban system, which includes the CBD and subcentres located along the 401/407 highway corridor. Temporary staffing labour in the Toronto metropolitan area is organized in regions– meaning that many staffers live in close proximity to the economic centres where their place of work and agencies are located. Furthermore, the temporary staffing industry is spatially divided by specialization and income with general labour being performed in subcentres while staffers mediated into the KIBS sectors generally work in the CBD. The data also reveal that although temporary staffing is imagined as a flexible and mobile industry (Fuller & Stecy-Hildebrandt, 2014; Theodore & Peck, 2002), the majority of labour in the Toronto

CMA's staffing market takes place in fixed work locations at which workers are placed for long periods of time. However, staffers are still more mobile than their non-staffing counterpoints working in the same industries. This divide between temporary workers and fixed contract employees is more pronounced in the transportation, manufacturing and warehousing sectors where temp workers are notably more mobile.

Questions remain, however: the census data do not provide information on the temporality of staffing labour, meaning that the frequency at which staffers are mediated to new client firms– an important piece of information when researching workers with flexible labour contracts– is indeterminable from the data used in this analysis. Additionally, as triangulated employment relationships challenge the definitions of workplace, employer, and job used in the census questionnaire's questions on Labour Market Activities section, it must be contemplated that the analysis provides incomplete or inaccurate information on the employment services industry in the Toronto CMA.

Results

The polycentric urban form of the Toronto metropolitan region

In order to assess the industry specific geographies of the employment services sector, it is first necessary to briefly analyze the locations of economic activity in the Toronto region as a point of reference. As can be seen in Figure 3, which maps the locations of employment agglomeration using the E/R ratio, the Toronto census metropolitan region is polycentric, meaning that the majority of employment clusters in economic centres. This result was expected as shifts in the geographic distribution of employment evolve slowly and Shearmur et al (2007) as well as, more recently, Duquet and Brunelle (2020), who also used 2016 Statistics Canada census microdata,

determined that the urban form of the Toronto CMA is polycentric by mapping economic activity.

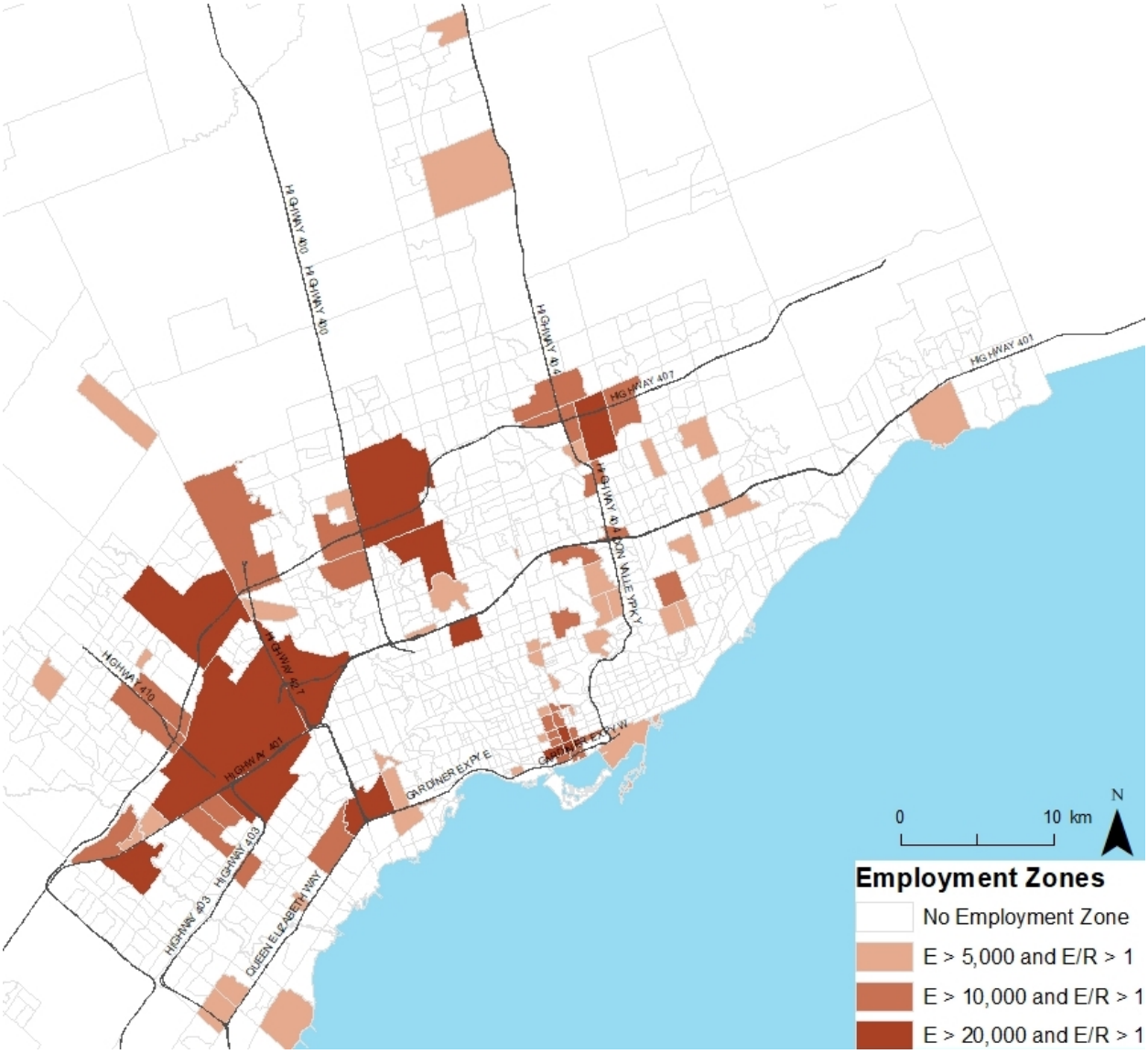

Figure 3: Map of Toronto CMA Employment Zones

Apart from the central business district (CBD) located in the City of Toronto's urban core, I identify seven further major subcentres predominantly located along the 401/407 highway corridor, which runs through the Toronto CMA along an east-west axis approximately 10km parallel to Lake Ontario. Of these subcentres, the largest (geographically as well as by the number of workers whose employment is registered

there) is located in the area including and surrounding Pearson International Airport, which is situated on the Mississauga/ Brampton border approximately 15 kilometers to the northwest (measured by Euclidian distance) of the CBD. This subcentre extends eastward between the 401 and 407 highways in what either can be interpreted as a continuous corridor or a separate major subcentre around the 407/427 interchange: the E/R ratio as well as number of employees in this area suggests that these centres have merged into a continuous corridor, yet there are large spikes in the employment numbers in the census tracts immediately surrounding specific interchanges that show that the distribution of employees in this corridor is not even. Whether or not the centres are interpreted as independent or continuous, the 10 tracts with the highest employment numbers and E/R ratios (the highest being E/R=81) are found either in the CBD or around the Pearson Airport, indicating that these are the most important economic centres within the Toronto CMA.

Further major subcentres are located east of the airport along the 407 corridor – in particular at highway interchanges, such as the 407/400 interchanges in the Vaughan and York University region as well as the 407/404 highway interchange in Markham. Geographically smaller centres, which still are defined as major subcentres based on the E/R ratio and total employment number, are found surrounding the 403/427 interchange on the western border of the City of Toronto with Mississauga as well as in the southeastern quadrant of the 401/Don Valley Expressway interchange in North York.

Minor subcentres in the Toronto CMA are primarily found in two locations: along north-south highway corridors, such as the Don Valley Expressway on the eastern edge of the City of Toronto, as well as on the periphery of major subcentres. Notable minor subcentres are the westward extension of the Pearson International Airport

subcentre along the 401 highway as well as the centre in between the Vaughan and Markham subcentres, thus connecting them. Indeed, the mapping of both major and minor subcentres reveals a continuous corridor of economic agglomeration along the 401/407 highway corridor through the entire Toronto CMA, stretching from Mississauga in the west to Markham in the east, with points of employment concentration at major highway interchanges.

The E/R method produces a third category of residual employment zones where tracts exceed an E/R ratio of one and have between 5,000 and 10,000 employees. Their geographic distribution is scattered throughout the Toronto CMA but tend to be loosely agglomerated along highway corridors between major and minor subcentres as well as along major commercial thoroughfares within the City of Toronto. While their overall importance as employment destinations within the Toronto metropolitan region's agglomeration economy may be limited, the location of such residual employment zones is of particular importance in the context of the temporary staffing industry since agencies, as I discuss later in this chapter, tend to locate along major commercial streets in tracts of this third category.

The industry distribution within each subcentre based on the two-digit NAICS codes indicates a spatial division (Massey, 1995) typical of North American cities in which sectors within the KIBS are predominantly clustered in CBD while manufacturing, warehousing, logistics services and other space-intensive industries are co-located in major subcentres along the 401/407 corridor. Overall, employment in the Toronto CMA is highly concentrated within a small number of census tracts located in major subcentres. 50% of employment with a fixed place of work takes place in 7.1% of

census tracts (n=81)[14] and 90% of jobs are distributed among 297 tracts, thus meaning that the residual last 10% of employment is spread out among 916 tracts (all 1151 census tracts within the Toronto CMA have at least one job located in them). To conclude, the City of Toronto has a polycentric urban form, in which subcentres and the industries located in them are distributed according to principles repeatedly observed among polycentric North American cities – a central business district with peripheral subcentres, usually along transportation corridors (Arribas-Bel & Sanz-Gracia, 2014; Garreau, 1991; Leslie & HUallacháin, 2006). It is with this in mind that I turn to the Toronto CMA's staffing-specific geographies as they emerge from the census microdata analysis.

Temporary staffing and the limitations of census data

Before presenting results on the geographies of staffing labour in the Toronto CMA, I would like to first briefly spend some time on the geographic information that can be gleaned from the 2016 census microdata for the employment services industry code – and what information might be missing or inaccurate. As temporary staffing is a mediated labour relationship, there are two locations to consider in the analysis of the temporary staffing industry based on census data: the agency as well as the location where labour is performed – most often the address of a client company who purchased flexible labour. However, the *place of work census tract* variable coded by Statistics Canada for the census specifies only the location where labour is performed, which in the case of the temporary staffers with fixed places of work is the client company. As mentioned in the previous chapter, the agency's location is not recorded as part of the census. Thus, the explanatory power of this variable to describe the geographies of the

[14] The spatial analysis of employment centres relies on locating employment. Thus, workers whose place is not fixed or who work outside of Canada was not considered.

employment services industry in the Toronto CMA is limited – a point I will return to in the discussion section of this chapter.

Furthermore, little can be said about the temporal stability of staffing labour, the length of placements based on the census data and whether temp workers perform all their labour onsite. As discussed in the previous chapter, the information given by 2016 census respondents on their labour market activities is supposed to be specific to the week of May 1st to 6th, 2016. If the person did not hold a job during that week, the answers should refer to the job held the longest between the beginning of the 2015 calendar year and the moment of data collection. Therefore, without the aid of an auxiliary variable, it is impossible to determine whether the respondent is referring to an ongoing employment relationship at the time of their census response or whether they are giving information on a job that had concluded prior to May 1st, 2016.

Indeed, the *NUJOB* variable, which asks respondents currently out of a job to declare whether they had plans to start a new job within the next four weeks, shows that 34.3% of respondents (n=12,705) within the employment services sector did not work the week of the census data collection (28.6% declared no intentions of starting a new job within the next four weeks in addition to the 5.7% who did). Therefore, the data show that approximately one third of the respondents were out of work the week of May 1st, 2016 and were referring to a past employment situation during their census response. How long respondents have been unemployed for, how frequently such periods of joblessness occur, whether there are seasonal peaks in the staffing industry are unknown from the census data alone.

The temporary staffing industry's embeddedness in the Toronto CMA

While secondary to this project, the analysis of microdata and staffing agency location as part of my doctoral fieldwork produces an updated picture of the employment service industry's embeddedness in the Toronto labour market. Overall, there are 37,055 people classified as working in the employment services industry within the Toronto CMA as part 2016 long form census. This translates to 1.35% of the Toronto CMA's work force, which is less than the 2% penetration rate expected in matured staffing markets (Coe et al., 2010; Enright, 2013; Enright & Pemberton, 2016)[15]. The division of the Toronto employment services industry into distinct high-wage and low-wage sectors is evidenced by the use of labour market intermediaries in the KIBS sectors and the presence of leading transnational staffing agencies such as Adecco, Randstad, Manpower and Robert Half Recruiters, which tend to service the high-wage sector (Coe et al., 2007). Furthermore, there is a large number of locally owned agencies which tend to service the low-wage sector. The presence of both locally owned and transnational agencies usually indicates that the employment services industry plays a large institutional role in the local labour market (Peck et al., 2005).

As with the analysis of employment centres, the evaluation of where workers whose labour is classified under the employment services industry code NAICS 5613 perform their labour can only be undertaken with people who declared a regular place of work as part of the *place of work status* variable. Of the 37,055 census respondents in this industry, 74.6% (n=27,630) declared such a regular work location. This number suggests that temporary staffers are more mobile– meaning that their work does not

[15] Although it must be considered that the few studies on large metropolitan regions in mature national staffing markets, such as New York City, Chicago or Tokyo, recorded a lower rate of labour market penetration in large urban regions than smaller metropolitan areas with the same national regulatory framework – yet could still be considered mature markets with limited room for industry growth (Coe et al., 2012; Theodore & Peck, 2002).

take place at a fixed location– than workers in the general labour population within the Toronto CMA (25.4% without a fixed place of employment among NAICS 5613 workers vs. 20.57% for the general working population) (Putri & Shearmur, 2020).

However, a detailed analysis of the *occupation* variable reveals more nuanced information about the nature of this variation. The occupation variable records the type of work respondents perform but also broadly categorizes by industry, thus recording the client companies' sectors. Table 2 presents a cross-sectoral comparison of *place of work status* between employment service and non-employment service workers for the ten most common *National Occupational Classification* (NOC) codes in which staffing labour is used in the Toronto CMA. This comparison reveals discrepancies in terms of *place of work status*: some occupations falling under the major NOC umbrella categories *Management Occupations (00– 09)* as well as *Business, Finance and Administration Occupations (11– 15)*– positions predominantly associated with the KIBS sectors– have comparable levels of respondents declaring a regular place of work between temp workers and non-temp workers (differing by a few percentage points). For jobs in the blue-collar sector *Labourers in processing, manufacturing and utilities (96)*, temporary staffing workers are up to 23 percentage points more mobile than non-staffing workers in the same industry.

Furthermore, the analysis of the *occupation* variable reveals an uneven reliance on staffing labour by industries. Occupations in the *Occupations in Manufacturing and Utilities* sector (NOC 92– 96) are especially 'temped out'. In particular in the *Labourers in processing, manufacturing and utilities (96)* category, which the majority of NAICS 5613 respondents in the Toronto CMA fall under, is noteworthy as 13.75% of census respondents in this type of work are temporary staffers, thus far exceeding the 1.35% penetration rate the temporary staffing industry has for the entire Toronto region's

labour market. Similarly, 5.95% of workers in the *Other installers, repairers and servicers and material handlers* occupation (NOC 74) are staffing workers. These sectors with the highest reliance on temporary staffing labour are also the industries in which temporary staffing workers are noticeably more mobile than those whose employment is not mediated by an agency. As mentioned, staffing workers in the *Labourers in processing, manufacturing and utilities (96)* category are 23 percentage points more mobile than those whose employment is not mediated by an agency (62% of temp workers declared a fixed place of work vs 85% for the non-staffers) while temp workers in the *Other installers, repairers and servicers and material handlers* occupation are 14 percentage points more mobile than their non-staffing colleagues. Furthermore, a spatial division emerges as the industries most reliant on temporary staffing also tend to be located in peripheral metropolitan locations, as evidenced by the industry distribution within employment clusters in the Toronto CMA presented earlier in this chapter.

Table 2: Place of work status comparison between temp and non-temp workers by occupation

NOC code	Percentage temped out	Place of work status	Temp workers	Non-temp workers	Difference in mobility (percentage points)	NAICS 5613 n
96 Labourers in processing, manufacturing and utilities	13.75%	mobile fixed place of work	38% 62%	15% 85%	+23	9,285
12 Administrative and financial supervisors and administrative occupations	2.83%	mobile fixed place of work	21% 79%	14% 86%	+7	5,305
74 Other installers, repairers and servicers and material handlers	5.95%	mobile fixed place of work	34% 66%	20% 80%	+14	3,675
14 Office support occupations	1.75%	mobile fixed place of work	21% 79%	13% 87%	+8	2,795
01 -05 Specialized middle management occupations	0.94%	mobile fixed place of work	21% 79%	13% 87%	+8	1,550
11 Professional occupations in business and finance	0.80%	mobile fixed place of work	25% 75%	18% 82%	+7	1,485
65 Service representatives and other customer and personal services occupations	0.59%	mobile fixed place of work	33% 67%	16% 84%	+17	1,085
15 Distribution, tracking and scheduling co-ordination occupations	1.46%	mobile fixed place of work	24% 76%	11% 89%	+13	990
95 Assemblers in manufacturing	2.09%	mobile fixed place of work	17% 83%	6% 94%	+11	975
41 Professional occupations in law and social, community and government services	0.85%	mobile fixed place of work	15% 85%	18% 82%	-3	925

This cross-sectoral comparison based on the *occupation* variable therefore reveals a tiered system. Temp workers in KIBS fields not only make up a smaller percentage of the workforce in those sectors but also have comparable levels of labour mobility to others in their industry. The high presence of temp workers in manufacturing, transportation and warehousing industries as well as the discrepancies in labour mobility between staffer and non-staffers in those sectors therefore indicate a system in which contractual arrangement affects individual workers' labour geographies: temp workers appear to have less geographic stability than other workers and while a good proportion of temp workers do declare a fixed place of work, considerably fewer declare a regular work location than in the general working population, thus indicating that they either perform mobile jobs (i.e. in vehicle-based occupations such as logistics) or have multiple concurrent or consecutive workplaces.

The labour geographies of Toronto's employment services workers

A hotspot analysis of the observations using the GWR equation Getis Ord Gi* with a fixed distance band measure set to 2728m– the median distance to the nearest eight neighbouring tracts for the Toronto CMA– produces similar results to the mapping of major and minor employment (sub)centres for the general labour population (Figure 4). This indicates that employment services labour largely is concentrated in the same employment zones as general labour. However, in light of how locational data are collected by Statistics Canada, this is an expected result: the place of work census tract variable codes the location in which the majority of the respondent's labour is performed, which in the case of employment services workers is the location of the client firm purchasing the flexible labour power from agencies. The locations where temporary staffers perform their labour therefore are subject to the agglomeration economies of the client companies' industries with KIBS sectors located within City of Toronto's CBD

while manufacturing and warehousing services are located in the large subcentres along the 401/407 highway corridor.

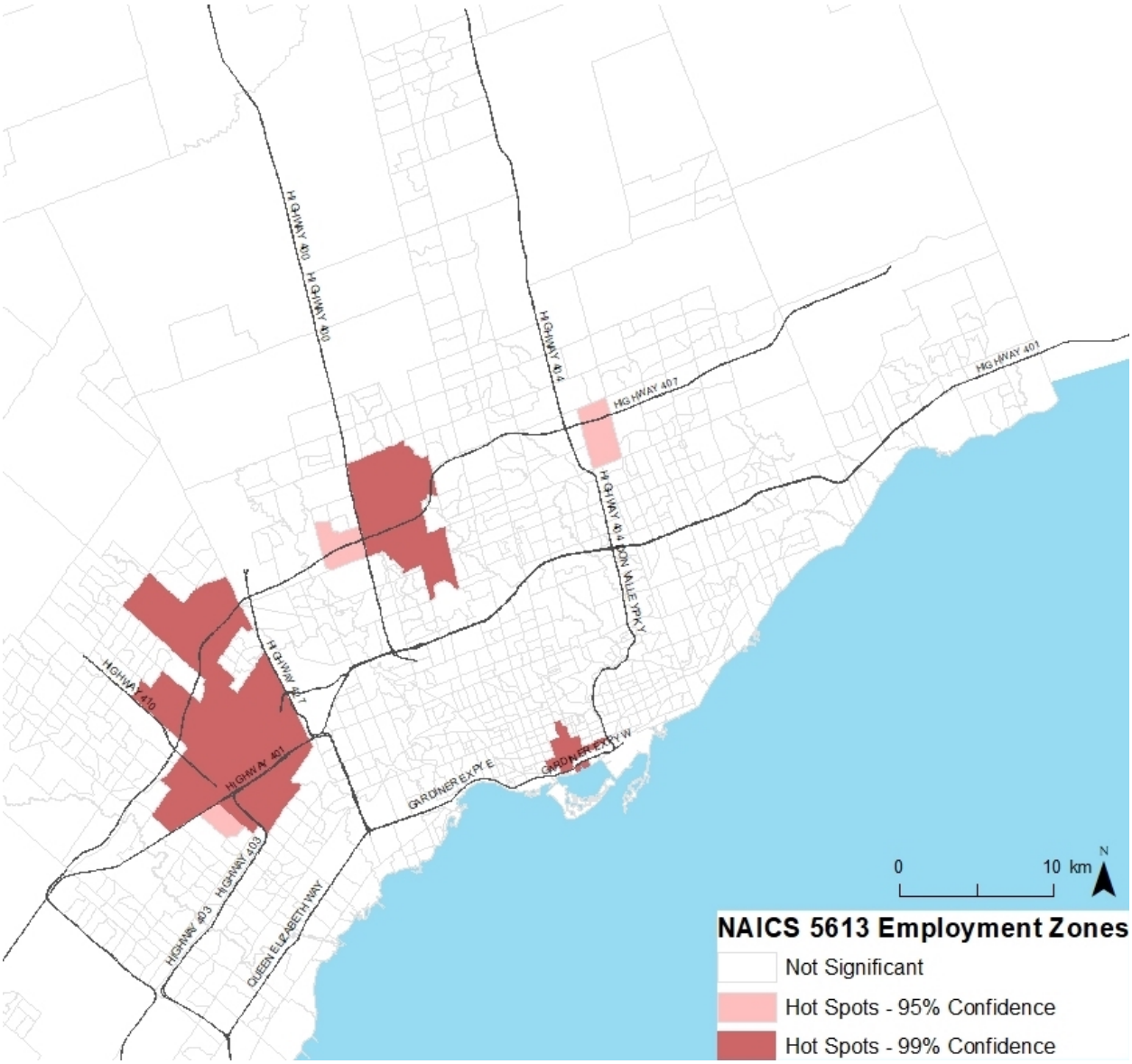

Figure 4: Map of Employment Zones for NAICS 5613 Respondents

Overall, the microdata analysis indicates that the labour locations of the employment services industry are highly concentrated – indeed more concentrated than for the general employment population in the Toronto metropolitan region. Staffing labour is performed in 749 of the Toronto CMA's 1151 census tracts, which can be

attributed to the small size of the sector. 50% of that labour is concentrated in 34 tracts (4.5% of tracts in which staffing labour is performed). While not a formal hypothesis, studies on the widespread reliance on temporary staffing in personal service work (such as eldercare), which is usually performed in residential neighbourhoods (Fudge & Strauss, 2014; Le Bihan et al., 2013; Pelzelmayer, 2018), led me to suspect that residual employment would be scattered widely across the Toronto CMA. However, an analysis of the NOC category *Health Occupations (30–34)* derived from the *occupation* variable which most personal service labour would be classified as, demonstrates that such labour does not appear to be a 'temped out' industry in the Toronto CMA as only 2.2% of respondents work in this sector. Additionally, the last 10% of temporary staffing employment are dispersed over 665 tracts. As this translates to few observations whose employment is dispersed– approximately 4 respondents per tract– little can be said about the dispersion patterns of temp workers in the Toronto CMA and the industries they work in.

The spatial division of income

Studies on urban temporary staffing markets have repeatedly observed spatial divisions between workers in specialized fields and those in general labour (Enright & Pemberton, 2016; Peck et al., 2005; Ward, 2005). The analysis of microdata reveals similar patterns for the Toronto staffing market as well. Table 3 sorts the census respondents into three income groups– above $100,000 annual income (4.5% of observations), between $50,000 and $100,000 in annual income (11.5% of observations) and below $50,000 in annual income– based on the *employment income group* variable. Furthermore, the table lists the 5 most common occupations in each of these income brackets based on the two-digit NOC codes. The table shows that high and middle-income positions predominantly work in office-based managerial and administrative positions while those earning below $50,000 are mostly employed in general labour

positions. Thus, a geographic separation between workers of differing pay scales, in which high-wage labour is located in the CBD and lower wage labour is performed in peripheral subcentres, is expected, as the spatial division of labour based on industry sectors and the pay associated with these industries is well documented (Massey, 1995; Shearmur & Alvergne, 2002).

Table 3: Most common occupation groups by income

High Income	Percentage	Medium Income	Percentage	Low Income	Percentage
12 Administrative and financial supervisors and administrative occupations	28.4%	12 Administrative and financial supervisors and administrative occupations	33.3%	96 Labourers in processing, manufacturing and utilities	29.6%
01 -05 Specialized middle management occupations	20.9%	01 -05 Specialized middle management occupations	12.9%	74 Other installers, repairers and servicers and material handlers	11.3%
11 Professional occupations in business and finance	11.9%	11 Professional occupations in business and finance	9.8%	12 Administrative and financial supervisors and administrative occupations	10.9%
00 Senior management occupations	11.7%	41 Professional occupations in law and social, community and government services	6.2%	14 Office support occupations	8.3%
41 Professional occupations in law and social, community and government services	5.0%	21 Professional occupations in natural and applied sciences	4.7%	15 Distribution, tracking and scheduling co-ordination occupations	3.2%

This spatial division between temporary staffers of differing income groups appears to extend to the location of temp workers' place of residences as well (Figure 5). A descriptive mapping of the *place of residence census tract* variable, which maps the home location of the respondent earning less than $50,000 per year, reveals that staffing workers in the low-wage sector predominantly live in suburban communities located in the municipalities immediately surrounding the City of Toronto. The largest concentrations of workers are in the City of Brampton located to the northwest of Toronto as well as in the northern portion Mississauga, located immediately south of Brampton. Further agglomerations are found in the City of Toronto's peripheral suburban neighbourhoods Scarborough as well as Jane/Finch, named after the intersection at the centre of the neighbourhood. The residential locations of low income workers identified in this analysis closely coincide with the patterns of income segmentation among Toronto CMA residents as first described by Hulchanski (2010), who noted that poverty in the Toronto CMA is suburbanizing.

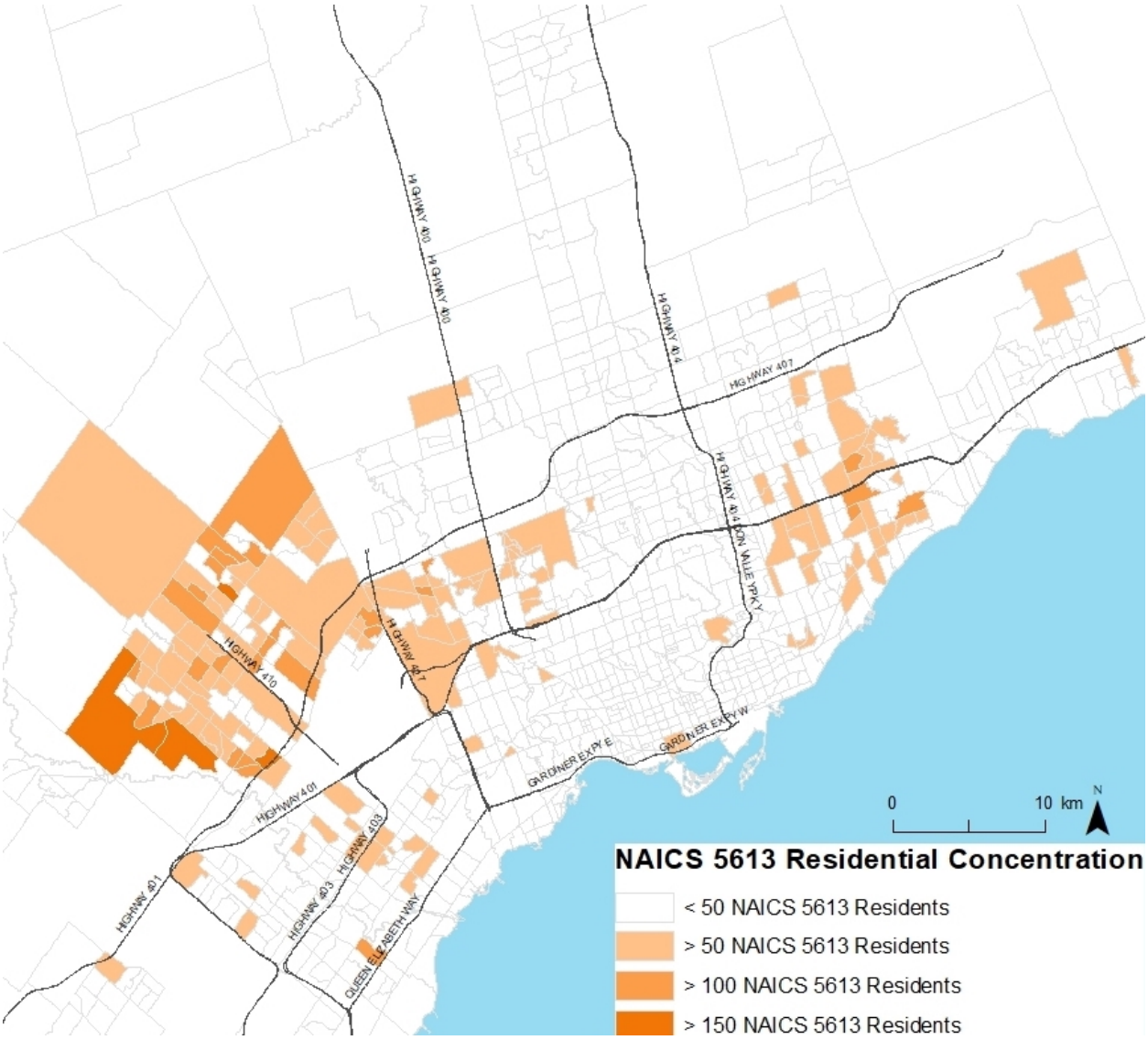

Figure 5: Residential location for NAICS 5613 respondents earning $<$ \$50,000

Thus, the analysis of both work and residential locations collected by the census reveals that workers appear to frequently live in close proximity to the employment centres where their usual place of work is located. Residential concentrations of workers earning below \$50,000 are located on the immediate periphery of the large subcentres where the majority of lower wage staffing labour is performed: the Jane/Finch neighbourhood and residential concentrations in Brampton and Mississauga form a ring

around the Pearson International Airport subcentre while the Scarborough residential agglomeration borders on the subcentre south of the 401/404 highway interchange. While a similar residential spatial analysis of middle- and high-income groups in the NAICS 5613 sector could not be performed due to the low number of observations, the comparable mean commute times of income groups suggests that those in higher wage positions also live in closer proximity to their work: high-income and middle-income workers commute for 35 minutes while low-income temp workers commute for 37 minutes.

The spatial distribution of temporary staffing agencies according to census data

Because the location of the temporary staffing agencies in the Toronto CMA are not apparent from the census microdata– the *place of work census tract* variable only indicates the location where labour is performed, which in the case of workers in the employment services industry usually is the client company[16]–, a separate dataset is required to determine where they are located. The individual addresses and names of agencies were collected from the online directory Yellow Pages and cross-referenced with municipal business registries to create a large– although likely not comprehensive– sample of employment service providers in the Toronto CMA. These agencies were then categorized as specialized firms in the high-wage sector, which includes executive search firms, agencies specializing in placing knowledge workers in the KIBS sector and transnational staffing agencies (Coe et al., 2007) (n=58), as well as agencies mediating in general labour (n=682).

[16] As discussed in the Methodology chapter, some agency locations are presumably captured in the census microdata because some observations classified under the NAICS 5613 code are managers and recruiters and thus perform their labour at a staffing agency. It is impossible to distinguish these observations from temporary staffers whose employment location is being mediated to third party clients based on the *occupation* variables. The number of managerial staff, however, is expected to be relatively small in comparison to the overall number of workers in the temporary staffing industry.

The analysis of agency location in the Toronto CMA indicates that they are 1) spatially divided based on high or low-wage industry specialization, and 2) tend to be located in employment (sub)centres and residual employment zones. A hot-cold spot analysis measuring the spatial autocorrelation of agencies servicing the high-wage sector identifies that the largest cluster of transnational and executive search firm agencies is located in the CBD at the 99% confidence interval (Figure 6). In contrast, the largest statistically significant agglomeration of general labour agencies in the Toronto CMA– indicated by the cold spot– is in between the 401 and 407 highways on the eastern border and periphery of the Pearson International Airport subcentre. As the cold spot in this analysis indicates a cluster of general labour agencies with few or no high-wage agencies located in close proximity, the hot-cold spot analysis reveals a spatial division between agencies focusing on the high and low-wage temporary staffing markets, which are consistent with the geographic patterns seen in the analysis of microdata: client companies and agencies in the specialized staffing sector tend to be located in the CBD while general labour is concentrated around peripheral subcentres.

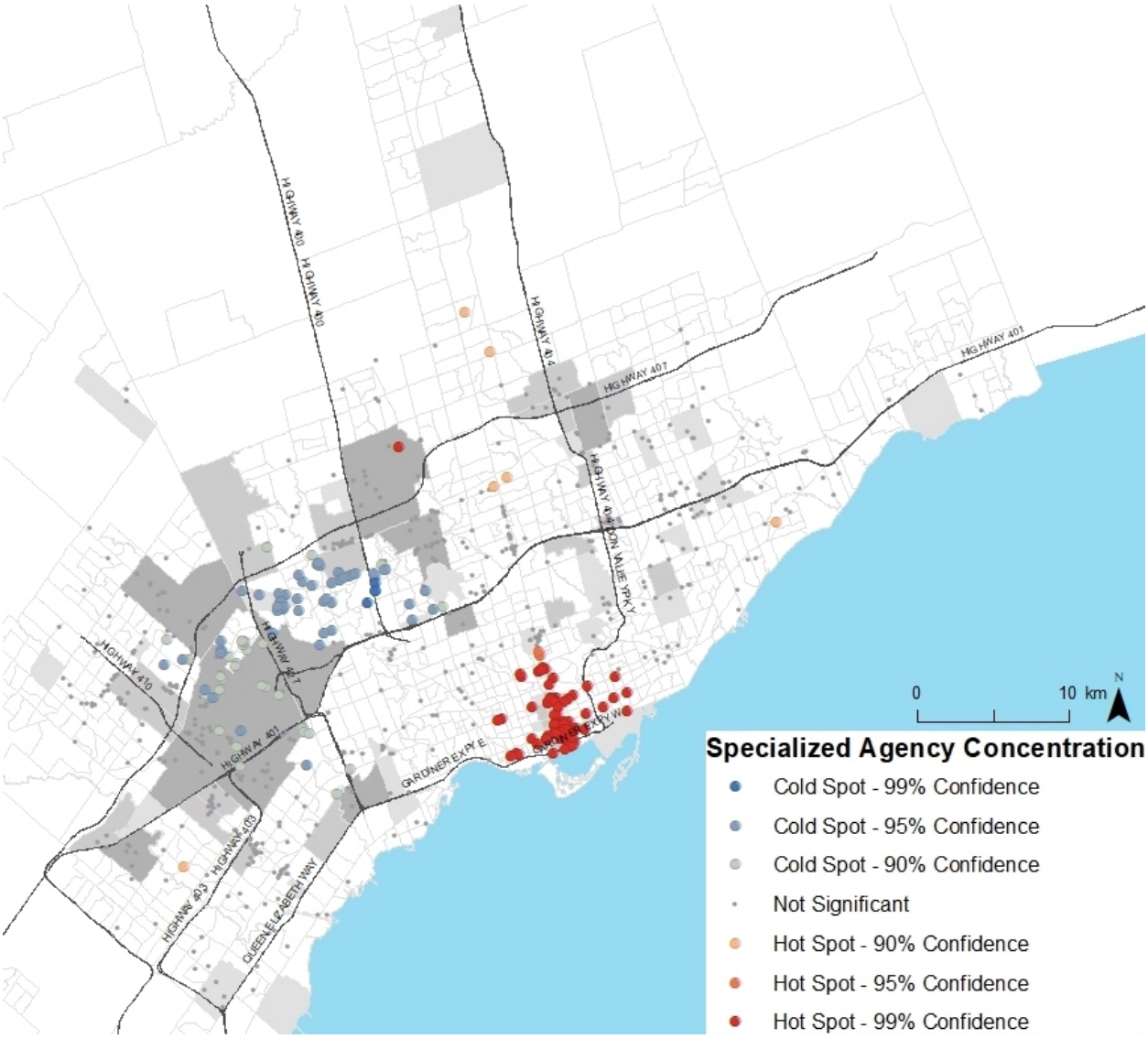

Figure 6: Map of agency location based on specialization

Approximately 40% of agencies (n=306) are located in tracts classified as being part of a major or minor employment centres based on the E/R method. A further 72 agencies are found in the residual employment zones – defined by an E/R ration >1 and total employment numbers exceeding 5,000 but less than 10,000– that tend to be located along major commercial corridors. Thus, 49% of agencies (n=362) are located outside of employment zones.

Discussion

This analysis highlights some previously unknown findings about the spatial organization of the temporary staffing industry in the Toronto CMA. Temp work is geographically concentrated within a small number of tracts and is usually performed in existing employment centres. The analysis indicates a spatial division of staffing labour in which low income work largely takes place in peripheral industrial centres in the manufacturing and warehousing sectors. These industries are more 'temped out' than office-based industries, meaning that a larger than expected percentage of employment in those sectors is organized through a triangulated employment contract. Furthermore, most temp workers generally live in close proximity to their employment sites and– while still more mobile than their directly hire counterparts– do not appear to travel widely throughout the Toronto metropolitan area. Temporary staffing agencies also tend to locate in residual employment centres which can be assumed to be of neighbourhood rather than metropolitan function.

The empirical findings presented in this chapter stand in contrast to theories in the field of urban economic geography, which often assume that labour is increasingly mobile and spatially flexible due to technological innovations and changing labour law standards (Burger et al., 2014; Parr, 2008; Wilson et al., 2011). However, they are consistent with research in the field of labour studies that suggests that low-wage workers tend towards self-imposed immobility (Preece, 2018; Premji, 2017). Indeed, my analysis suggests that fixed workplaces appear to be common even among workers whose contractual structure lead to expectations of flexibility. Furthermore, economic (sub)centres are still of central importance to where most labour is performed. The results are therefore consistent with previous empirical studies which suggest that the prevalence of flexible work taking place outside of a fixed location is gradual instead of disruptive (Putri & Shearmur, 2020) and that few precarious workers travel throughout

urban regions along unexpected trajectories due to their insecure labour conditions (Premji, 2017).

However, some of the complexities of using locational census data when determining the geographies of a specific industry or measuring and theorizing urban form emerge. While employment services, which due to its mandate of providing flexible labour is perceived as an industry with high workplace mobility (Wheatley, 2017), appear to be surprisingly concentrated in fixed places of employment located in economic (sub)centres, the accuracy of the geographic information provided by Statistics Canada census data may be limited. Two aspects in particular are central to the discussion of what can and cannot be understood about the employment services industry based on census data: temporality (i.e. the length of time for which staffers are mediated to a client company) as well as the definition of the employment location.

I suggest three possible reasons why fixed labour locations are common among temp workers in the supposedly flexible employment services industry, some of which relate to the data collection and coding process used by Statistics Canada. The first possible explanation is that the employment services industry in the Toronto CMA predominantly brokers workers into *permatemp* positions, a term that describes workers whose labour relationship is continuously managed by a staffing agency but who work only for one client company for prolonged periods of time (Enright, 2013). Like renewable short-term contracts, perpetual freelance labour for the same employer and other forms of gig work in knowledge intensive industries (Hesmondhalgh & Baker, 2010), *permatemp* positions are beneficial to employers as they allow companies to circumvent benefit payments associated with long-term and permanent contracts, minimum wage regulations and union rules while still maintaining institutional knowledge within their company. The flexibility provided by the employment services

industry in the case of permatemp therefore is organizational rather than geographic: client companies reserve the ability to increase and reduce qualified and trained staff quickly and without bureaucratic hurdles when faced with economic up- and downturns (Peck & Theodore, 2006). Due to economic and social uncertainty, such human resource strategies increase the likelihood of economic precarity among workers (Lewchuk, 2017). If the majority of workers are mediated into permatemp positions, equating contractual flexibility with geographic mobility would be a misinterpretation. In this scenario, *just-in-time labour* practices, in which client companies purchase staffing labour on an *ad hoc* basis and which subsequently increase the geographic flexibility of the workers, may only play a minor role.

A second possibility is that temporary staffers may work flexibly but that assignments to new client companies occur consecutively rather than concurrently, meaning that respondents to the census usually work for a single– or at least main– client company with a fixed employment location for multiple weeks or months. This possibility largely arises from the phrasing used in the census questionnaire which asks respondents to record the address of the work location they spent the most time at during the week prior to when the census is being completed. As this answer is then coded into the *place of work status* and, if applicable, *place of work census tract* variables, I conclude that most labour does predominantly take place at a dominant location for 74.6% of employment services workers.

However, questions of temporality remain: the census does not collect information on how often workers are mediated to new employment locations throughout the year or how long assignments to these client companies last. Neither does it adequately record mobility during the day. Thus, while the microdata analysis indicates that the majority of temp workers in the Toronto CMA have a principle job, the exact contractual details

of these positions are unclear and could range from a *just in time* labour relationships, where staffers work weeklong contracts for a single client on a per need basis, to a *permatemp* employment structure in which staffers are mediated to single employment sites for week- or month-long periods. Furthermore, it is unclear whether consecutive placements happen immediately or whether workers experience downtime in between.

One can look to the *nujob* variable for possible explanations. As explained in the previous chapter, Statistics Canada does collect data on whether currently unemployed census respondents are poised to start a new job in the near future, which is then coded into the categorical *nujob* variable. Nearly one third of NAICS 5613 respondents did not work the week of the census collection, yet only 5.7% of respondents answered that they did have definite plans to start a new position in the near future. This would indicate that workers do experience downtime and that new placements are not usually scheduled far in advance. However, the correct interpretation of this variable is complicated by the triangulated employment relationship of the temporary staffing industry in which the staffing agency is usually categorized as the official employer – a contested categorization as labour market intermediaries offer no guaranteed hours (Hatton, 2014)[17]. Furthermore, the census relies on self-classification and questions remain whether respondents interpret the term employer as referring to their agency or their client company. Therefore, even with the *nujob* variable, it is still unclear whether workers are in a period of downtime (but still associated with an agency) or unemployed. Either way, the finding that so many respondents are out of work the week of the census collection does provided insight into the precarious nature of temporary staffing employment in the Toronto CMA (Lewchuk, 2017; Rodgers, 1989; Vosko, 2006). Questions remain about how long periods without paid employment last as well as what

[17] Statistics Canada, along with other Canadian government entities (Bernstein & Vallée, 2013), categorize the agency as the employer.

type of labour arrangement workers are subsequently mediated into – short-term staffing labour, permatemp positions or a contract of medium length.

A third possibility, which is related to the previous point, is that the census is an insufficient tool to describe the labour locations of triangulated labour arrangement involving a worker, client company and agency, and that the results presented in this chapter thus paint an incomplete, misleading or even false picture of the labour locations among temp workers in the Toronto CMA. A consulting analyst at Statistics Canada, whom I contacted as part of this data analysis, confirmed that mediated employment relationships reveal the methodological weaknesses of self-declaration in the census questionnaire as staffing labour falls into the definitional gray-zones of terms such as "employer" or "job" used in the questions regarding labour market activities, thus requiring a close reading of the accompanying guide on part of the respondent[18]. The Statistics Canada analyst confirmed that self-classification errors were unusual in the census collection process as a whole but did present the hypothetical situation in which staffing labourers that may report to a shift at a depot or agency before being dispatched to a client company for the day as one of the most common scenarios vulnerable to data collection errors; the correct classification in this scenario would be *no fixed place of work* yet the respondent might provide the address at which they report to the shift, thus resulting in a false categorization of *fixed place of work*. As my analysis only looks at observations where the likelihood of self-classification errors is highest, the results must therefore be approached critically.

[18] This is not a coincidence: employment service industry workers were chosen as the research population precisely for their complicated contractual and locational structures.

Conclusion

The data analysis presented in this chapter focuses on the labour geographies of workers in the employment services industry as they emerge from a census data analysis using common economic geography methods. Previous literature has theorized that flexible labour practices, which the employment services industry helps facilitate and advances (Coe et al., 2008; Ferreira, 2017), increasingly challenge these location-based methodologies due to the prevalence of short-term work contracts and negotiable labour locations, which are insufficiently captured by census data (Parr, 2008; Rauhut, 2017); as the portion of workers with fixed workplaces declines, the practice of extrapolating locations of economic productivity from census data and analyzing their spatial patterns to identify urban form and map the economy is called into question.

Using Canadian census data for the Toronto CMA, I find that at least prior to the COVID-19 pandemic, whose long-term effects on labour geographies and specifically labour mobility remain to be seen, the majority of temp workers declare a fixed place of work. Furthermore, the rate of mobility among temporary staffing labourers appears to be determined by the industry into which they are mediated. The distribution of workers with fixed and non-fixed workplaces within an industry is often comparable among workers hired directly and those mediated by a staffing agency (exceptions being in the low-wage sectors of warehousing, manufacturing and transportation). This finding suggests that while flexible contractual structures do lead to higher levels of mobility, fixed and presumably long-term employment locations are still common among temp workers.

I also find that the majority of staffing labour is performed within economic centres in the Toronto CMA and is spatially divided by industry. Office-based labour in the KIBS sectors is predominantly located in the CBD while commercial warehousing

and manufacturing labour takes place in peripheral subcentres located along the 401/407 highway corridor, often outside of the City of Toronto's municipal boundaries. Staffing agencies and the workers' residential locations are situated within or on the periphery of these centres, thus resulting in regionalized economies where agencies, workers and client companies are clustered within a small geographic area. This clustering of agency, workers and clients suggests that labour mobility between economic centres or along unpredictable trajectories throughout the entire Toronto metropolitan region may be rare among staffers who declared a regular place of work.

These findings are consistent with previous studies which suggest that the adoption of flexible labour practices, at least in the Canadian context, is a gradual change rather than a disruptive force within the labour market (Ali, 2021; Putri & Shearmur, 2020). The implications of these findings are that the theoretical challenges to longstanding quantitative methodologies of measuring urban form (primarily by mapping labour location) due to changing labour practices must be considered, but that these methods still are useful: the majority of labour, even among workers with flexible work contracts, appears to take place in a fixed place of work that can be located. However, a traditional data analysis alone cannot address the broader epistemological question within the field of urban economic geography on whether employment location as collected in census data can provide an accurate picture of where economic production takes place in urban space – and which trajectories and locations are not recorded (Burger et al., 2014; Rauhut, 2017; Vasanen, 2013). Furthermore, the data do not provide information about the daily mobility of temp workers as well as how their placement length and location is negotiated between all parties in the triangulated working relationship. For empirical data capable of addressing these questions, I next turn to the labour geographies of temporary staffing within the Toronto CMA as they emerge from interviews.

Chapter Five: Qualitative Results – Agency Perspective

In this chapter and the next I present the results gathered during my qualitative fieldwork. The focus of this chapter is to analyze and briefly discuss the interview data on Toronto's staffing industry from the *agency perspective*, a term which describes the approach of studying the financial and economic market strategies of temporary staffing agencies as well as their relationship to the companies relying on staffing labour (Coe et al., 2007). It is important to reiterate that the analysis from the *agency perspective* does not exclusively rely on information provided by managerial staff and those familiar with the industry's dynamics, although much of the information in this chapter stems from the six key informant interviews with three recruiters and three labour rights activists. Rather, the *agency perspective* is an analytical lens through which all 32 interviews are read to gather information about the organization structures of the temporary staffing industry in the Toronto CMA.

This chapter fills a threefold purpose within this thesis. First, I qualitatively record the spatial organization of client companies in the Toronto CMA, thus giving me the ability to test and discuss to what extent census microdata captures the locations where temp work is performed. Second, the data provide additional evidence on the location of temporary staffing agencies. Lastly, an analysis from the *agency perspective* reveals the economic dynamics that influence how agencies serving high and low-wage staffing markets chose their location, how agencies recruit workers as well as how client companies use staffing labour. I will return to this information in the discussion chapter, in particular as it helps the discussion of how temp workers' (im)mobility is socially and organizationally constructed.

Accordingly, this chapter is divided into two sections with the first being focused on geography and the second on the industry's organizational and market dynamics.

First, I present data on how different types of agencies decide upon their office location (or lack thereof in the case of some agencies without fixed office locations), where they recruit workers, as well as the service area in which their client companies are located. I then showcase the findings on how client companies in different industries use temporary labour as part of their staffing strategies. Lastly, I briefly discuss the effects of the COVID-19 pandemic on the Toronto employment services market.

Overall, the interview participants provide further evidence of the regionalized nature of the Toronto staffing industry as determined through census and agency location data. Additionally, my qualitative fieldwork reveals that this regionalization results in small geographic service areas where agencies, workers and client companies are located in close proximity to each other. Further, client companies whose workplaces are located in the peripheral subcentres along the 401/407 highway corridor rely on multiple agencies to draw on workers from all neighbourhoods surrounding their subcentre. The main reasons repeatedly reported by key informants and interviewees for this regionalization are specialization– agencies tend to focus on mediating labour to one specific industry, whether that be general labour, medical administrative staff, or data entry– as well as competition between agencies for a small pool of workers who demand short commute times and stable placements.

The spatial distribution of temporary staffing agencies according to interview data

In this section I further address where staffing agencies in the Toronto region are located and elaborate on the apparent reasons why those locations are chosen. The broad finding during fieldwork is that agencies' geographic service area and how they operate within those areas is regionalized, meaning that the Toronto CMA cannot be understood as a homogeneous staffing market but rather as multiple markets which tend to not overlap geographically. The results from interviews with key informants and

temporary staffers indicate a spatial clustering of agencies offering the same specialization. These clusters are spatially separated from each other and the markets tend to not overlap. I therefore begin by describing the geographic settings and service areas of three types of agencies I identify as common in the GTA– general labour agencies, downtown agencies, and a-locational agencies– before describing the regionalized service areas of these different types.

General labour agencies

General labour agencies most often are located outside or on the border of the City of Toronto in the peripheral (yet highly populated) Peel and York regions and mediate workers to client companies located in large subcentres along the 401/407 highways. Further, general labour agencies appear to cluster along low density commercial corridors. Two corridors in particular exemplify these locational dynamics and emerge as hubs for low-wage labour mediation in the GTA: Steeles Avenue, which forms the northern municipal border of the City of Toronto, as well as Hurontario Street, a major north-south corridor in the western part of the Toronto CMA which runs through central Mississauga and Brampton.

The first indication of Steeles Avenue's importance as an agency location came from a key informant working as a recruiter for a boutique transnational staffing agency focusing on the recruitment of IT workers who did not herself have any experience working with general labour placements. When asked to elaborate on why she believed general labour agencies located there, she remarked on the avenue's geographic centrality in the Toronto CMA:

> Because they [the client companies] are in manufacturing. Imagine downtown Toronto. The cost of every square foot is expensive. The [manufacturing]

> companies went up north, outside of Toronto, and Steeles Avenue is right where Toronto finishes. The south of Steeles Ave is Toronto and the north is another city. It is also more commutable for those agencies. What those agencies tend to do is have a recruiter in the office and they call and say 'we have work tomorrow in this location for this place'. So they actually have a lobby with chairs where people go and from there they will be driven to where their assignments are. So in terms of location, they are right there and perhaps the location [the client company] is right around the corner or it is just another 15-20 minute drive. (Gabriela, recruiter)

The importance of agencies as hubs with waiting rooms from which workers are dispatched on a daily basis (or were disbursed pre-COVID-19) could not be confirmed and is even contradicted in subsequent interviews with staffers and key informants. However, the centrality of Steeles Ave as a location for agencies focused on general labour is repeatedly evident from the interviews with temping staff: five of 26 interviewees primarily use agencies located on Steeles Avenue while two others use agencies located on cross streets just below the Steeles intersection.

Agencies on the Steeles Avenue corridor are not homogeneous, even though the majority of them provide general labour services. Steeles Avenue runs parallel to the 401/407 highway corridor along which most peripheral subcentres in the Toronto CMA are located. The service area as well as the specific specialization agencies provide therefore changes depending on which economic subcentre is nearest. For example, agencies located further east primarily mediate workers to the Markham subcentre located near the 407/404 interchange while those located on the north-western border of the City of Toronto primarily mediate clients to the Vaughan subcentre, as is evidenced by the quote below:

> Many other places I work at were close to other factories. I work for some places that were furniture shops close to other smaller furniture shops, but they would have a big warehouse. [...] So it's either a factory around other factories or like a small shop type arrangement with a warehouse in the back. [They are all in] Vaughan. In that area. (David, interviewee)

Similarly, four interviewees who are placed through Steeles Avenue agencies and live in central North York – located along the Northern border of the City of Toronto near Yonge Street– primarily find work in central Scarborough near the 401/Don Valley Expressway interchange, which is a minor economic subcentre.

Recruiters and managers at general labour agencies did not reply to requests to participate in this research project, thus making it impossible to collect evidence from managerial staff as to why Steeles Ave functions as a hub. Yet, I suggest some possible reasons which emerge from the interviews. Steeles Avenue's streetscape, at least in the portions in which staffing agencies are located, is dominated by strip mall development and mid-rise back-office buildings with little residential development and high vacancy rates, thereby providing cheaper commercial space for agencies to establish an office location. Two key informants working as community advocates point to the low initial financial cost of starting an agency in which access to cheap storefront or office space was more important than centrality, thus suggesting that cheap rent may be a factor. One elaborated that "they [the agencies] can start up with very little capital cost and don't necessarily even need a physical space. And they can close up shop and open a new one with very little difficulty" (Christine, legal worker).

A second possible reason may be Steeles Avenue's importance within the Toronto CMA's public transportation network as a transfer point between the Toronto transit system (TTC) and the York Region's bus network (York Region Transit). This not only makes Steeles Avenue a central node from which many possible destinations are reached (as suggested by the key informant Gabriela on the previous page) but also an important point of worker recruitment: during my fieldwork I documented strategically placed lawn signs and posters near bus stops and intersections on Steeles Avenue near agencies (see Figure 7), which suggest that agencies' office location plays a role in the recruitment of workers. Further, agencies are most often located on the ground floor with visible recruitment signage. While Steeles Avenue itself is not residentially zoned, many of the interviewees living in the Toronto borough of North York with workplaces located primarily in the York region subcentres of Vaughan and Markham reported transferring between the two transit systems during their commute, thus requiring them to wait at bus stops near or on Steeles Avenue.

Figure 7: Hiring signs near bus stops on Steeles Avenue

In addition to Steeles Avenue, Hurontario Street, an important commercial corridor in the Peel Region, emerges as another axis for general labour agencies in the GTA. As with Steeles Avenue, agencies on Hurontario Street focus on mediating placements primarily to companies located in close proximity to them. Interviewees associated with agencies located north of the 401 highway on Hurontario Street are frequently mediated to work locations in Mississauga's warehousing district west of Pearson International Airport. In contrast, one interviewee associated with multiple agencies in Mississauga's centre is placed exclusively in back office positions located along the 401 and 403 highway corridors.

A main reason for the presence of agencies on Hurontario Street– in addition to reasons such as its cheaper commercial rent and centrality in the Peel region transportation system– is that many post-secondary colleges are located on or in close proximity to Hurontario Street, the largest ones being Seneca College and Lambton College. The presence of such post-secondary institutions is of importance to the

placement of agencies as many international students, largely of South Asian and specifically Indian descent, entering college degrees in the Peel region rely on staffing work upon their arrival in Canada. One key informant, a labour activist in the Peel Region, identifies a symbiotic relationship between colleges and agencies in the region:

> In the Peel region, especially in Brampton, a lot of the work force that are in the precarious sector are migrant students. So migrant students make up a huge percentage of the work force and they are mostly working through temporary agencies as temporary workers. I do understand that their work permit only allows them to work legally for up to 20 hours. [...] . Some of them have just done their high school education back home and they came her for maybe for a two-year diploma. They are enrolled at one of the accredited colleges. There is a list of colleges that is approved by the administration in Canada who can offer study permits. And ever since this study permit thing happened, I have seen colleges popping up everywhere in our region [Peel] too. So tons of colleges. I've heard that they are quite flexible at adjusting students' schedules, so they offer night classes and they will do them late. So they offer that flexibility which encourages students to work as much as they can during the day. (Gita, labour rights activist).

To summarize, the location of general labour agencies in the GTA appears to be determined by close proximity to central hubs in the public transportation system, access to a population willing to work in general labour positions, such as students, as well as cheap commercial rent. Further, we begin to see a pattern emerge where general labour agencies predominately mediate workers to client companies located in close proximity to them. These client companies tend to be located in peripheral subcentres.

White-collar agencies

The location patterns of agencies servicing office labour and specialized recruitment differ from general labour agencies. Whereas general labour agencies primarily are located along peripheral corridors, interviewees living and working south of the 401 highway and within Toronto's municipal limits rely exclusively on staffing agencies clustered within a few blocks from each other within the CBD, especially along the Bay and Yonge Street corridor. Such downtown agencies share many commonalities beyond their geographical proximity to each other. First, their offices are located within the high-rise office towers which typically house commercial office space in North American CBDs. Thus, there is no street-level indication where staffing agencies are located as they are usually one of many tenants in the building and also are located on upper floors. Participants who had visited the agencies for interviews and administrative tasks pre-COVID 19 (all participants who found positions through staffing agencies located downtown since March 2020 reported that their interviews had taken place using online video chat programs such as Zoom) report that the agencies' offices look typical for commercial space located in the CBD, that interviews take place in board rooms, and that the hiring process is 'like any other job [in an office environment]' (Isabel, interviewee).

It thus appears street-level visibility is unimportant to agencies located in the CBD due to their worker recruitment strategies which rely on professional job postings. This stands in sharp contrast to general labour agencies where recruitment reportedly relies on walk-ins and informal networks such as Whatsapp, Facebook groups or Kijiji. One key informant working as a recruiter for an internationally active agency located in the CBD specifically points to online job search platforms as well as pre-existing partnerships with other organizations as the main avenues through which temp workers are recruited:

> I use LinkedIn quite a bit, if there is a specific skillset I am looking for. We have a database system that we use to sort candidates. And we also put up ads for different positions and when an application comes through responding to our ad on Indeed or our website, then they are in our data base and we can search our data base for specific skills. The recruitment method– there are a lot of different pieces to it and it depends on what the job is. We don't do newspaper advertisements. [...] I do a little bit of recruiting through job fairs. And we also do some presentations and sort of mini job recruiting in educational institutions, so there are a few different ways in which we source candidates from them. I have a couple of contacts in a couple of government-funded employment agencies where I do presentations to their client base. [...] And that is a beneficial and very rewarding part of my job because we actually get to work with an NGO or a government funded non-profit. (Kate, recruiter)

In terms of service area, it initially appeared that agencies located in the City of Toronto's CBD almost exclusively mediated staffers to positions also located nearby in the city's core. This impression was largely the result of interviewees describing their work as taking place 'downtown'. However, the mapping of the work locations provided by workers affiliated with downtown agencies reveals that a larger number of workplaces are located outside of the CBD. A re-reading of the interviews reveals that participants often distinguish between two different types of 'downtowns' in Toronto, often referring to the CBD with terms such as 'right downtown' or the 'downtown core', as exemplified by the following quote:

> Because of their [the agency's] location, they only do [mediate labour within] downtown. So with them all the roles are between University and Yonge street and Bloor to the north, so right downtown. (Laura)

Such descriptions of the CBD stand in contrast with the 'downtown' which describes a larger undefined area within Toronto's inner city that the participants appeared to have a shared sense of. In subsequent interviews I asked participants located within the City of Toronto to define the downtown's geographic boundaries. While definitions varied, the commonly agreed upon boundaries are High Park to the West and anything west of the inner suburban neighbourhood The Junction (approximately 7 kilometers from the CBD), the Don Valley Parkway to the East (approximately 3 kilometers from the CBD), and St Clair Avenue to the North (approximately 4 kilometres from the CBD) – thus describing an area approximately 40 square kilometers in size (6% of Toronto's land area), which includes Toronto's main commercial corridors as well as inner suburbs, and can be best described as the inner city (Figure 8).

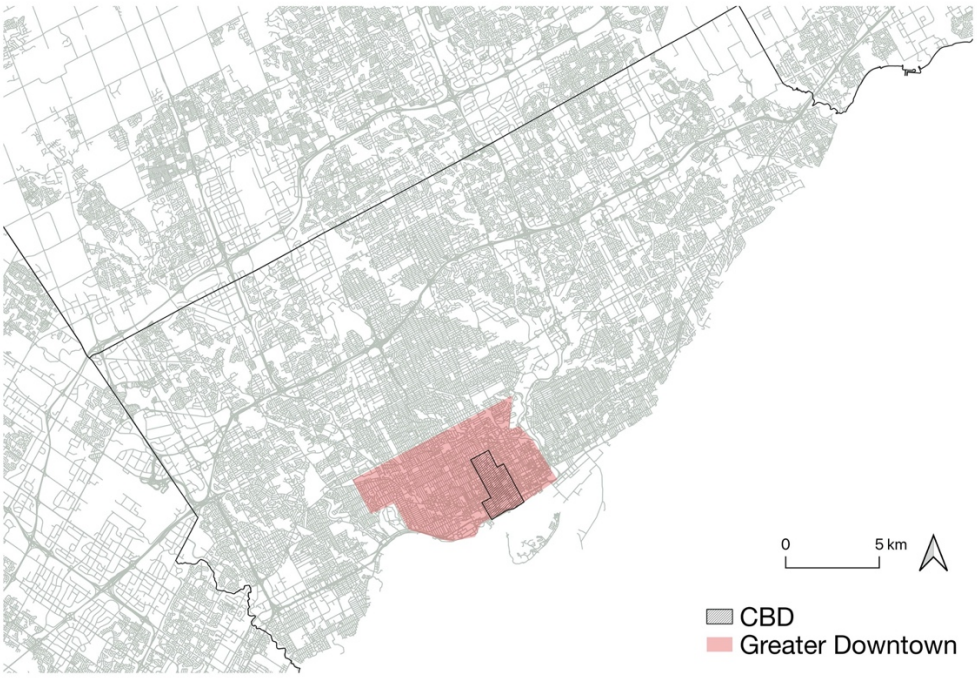

Figure 8: Map of the City of Toronto's Greater Downtown

The interviews provide evidence that the participants' geographic definition of Toronto's larger downtown– or inner city– coincides with the area in which temp agencies located in the CBD find their client companies. For example, the same participant quoted in the previous paragraph describes the locations of her workplaces, which were mediated by three agencies with offices in the CBD over the course of several years, the following way:

> One [job] was Keele and Bloor, the next was King and Wellington. The next location was on University Ave by Mount Sinai Hospital. I had two roles through different agencies in Liberty Village, within the same block. I also worked at Osgoode Hall, which is at the corner of Queen and University. Then I also worked at Bay and Gerrard. [...] The two previous permanent roles... one was at [...] Bay and Dupont. And then the first job was [...] on Front Street. And there

> are even more smaller jobs! I worked [...] right on Bay and Dundas. I also did a brief gig at a place called Space Savers, so I worked several different high-rise buildings helping them organize files and stuff. [...] I worked everywhere![19] (Laura)

Six of the eleven positions listed in the quote are located within Toronto's CBD employment centre as defined by the mapping of census data in the previous chapter. In contrast, the offices at Keele and Bloor, the Liberty Village as well as Bay and Dupont are close to the outer boundary of the inner city, yet within local employment sub-centres as identified by census data. The pattern of CBD agencies mediating interviewees into positions in the downtown core as well as local Toronto employment hubs, such as the Liberty Village, is consistent with data collected in other interviews.

A-locational agencies

In addition to agencies located in the downtown core and along major peripheral corridors, a third type of agency emerges from the interview data: a-locational agencies which appear to function entirely online and which all share key commonalities. First, all of them exclusively mediate qualified staffing personnel into positions within medical and especially dental offices. Secondly, these agencies present themselves to be akin to gig labour platforms such as UBER or Foodora, which provide the digital infrastructure for service providers (drivers, independent food delivers) and customers (people who want a ride or are hungry) but have no involvement in the recruitment of workers and clients beyond advertisement (Srnicek, 2017)[20]. Thirdly, despite presenting as a-

[19] The quote was edited to remove mentions of specific companies and organizations to protect the confidentiality of the interviewee. No geographic information was removed.
[20] Digital labour platforms differ from staffing agencies in that agencies actively seek both workers and clients and are central to the mediation process. Labour platforms only provide the digital infrastructure for service providers and clients to find each other.

locational, such agencies do not provide services outside of the Toronto metropolitan region – indeed, their services might even be restricted to the City of Toronto itself as all interviewees who reported using such agencies are mediated widely within the municipal limits but never beyond it to locations in the rest of the Toronto CMA. Lastly, and importantly, agencies conceal the physical infrastructure such as their office location behind their operations as their addresses are not immediately available; however, the addresses provided on hidden corners of their websites and on municipal businesses registrations are located within suburban locations in the Toronto CMA – for example, one is on a crescent of a subdivision in Milton, Ontario, another in a quiet residential neighbourhood in East York.

This evidence suggests that presenting as a-locational primarily is a marketing tool and that such agencies still need to be physically located in close proximity to staffing agents and client companies to function effectively within the Toronto CMA. However, since the locations where recruiters for a-locational agencies perform their labour are unknown (it could be from a regular office, from home, a revolving set of cafes and co-working spaces, or a tropical beach far from the GTA), this claim cannot be made with certainty. Contrary to staffing agencies with physical locations where workers often are assigned to a single recruiter who they have a personal relationship with, the identity of recruitment staff at a-locational agencies is often concealed:

> So we submit the availability every week. They give us shifts, so through apps and sheets, and websites so they have it all in one place. And then we get a notification that we've been given a shift. And then you accept it, you show up, you work. I have never spoken to anyone from any agency. For these two years, I have never spoken to anyone. Even for a last-minute shift, they will text me or email me. Not a phone call, never. But email and text, I have gotten if they are

short-staffed or someone cancelled on them last minute. So they normally text or email then to ask if I am available or not. Other than that, no communication at all. (Meena, Interviewee)

Overall, it appears that a-locational agencies are an anomaly in the Toronto CMA's temporary staffing industry. However, they appear to be the norm in industries related to health services – a professional area that has been 'temped out' quite recently (Ferreira, 2017). Therefore, their existence is noteworthy and should be monitored in future studies on the market development within the temporary staffing industry.

GTA staffing agencies and regionalized service areas

The descriptions of agency locations and their respective service areas demonstrate that staffing agencies in the Toronto CMA mediate workers to client firms within small geographic areas, usually within a specific employment centre or subcentre close to the agencies' offices. Even agencies that on first glance are a-locational appear to exhibit this pattern. In this section I present the data collected during interviews that begin to explain why agencies focus on mediating within small regions of the GTA.

Interviewees working as temporary staffers and key informants in recruitment roles are aware of the regionalized staffing market in the Toronto CMA. One interview participant astutely summarizes the geographic division of the GTA by agencies the following way:

I definitely don't remember requesting it [being placed primarily in the downtown, where she lives]. I might have been asked and probably said I was open to it. But I think in terms of proximity, they [the agencies] are located downtown and there is just a lot of businesses downtown. And they are all

> fighting for the same clients. [...] If I registered in Brampton, I would expect to be working in Brampton. But that's how it works. They all have their geographical area. And a lot of them have multiple offices in Mississauga, Toronto, Brampton. The Robert Half's, the Randstad's are all across Canada. Everyone has their little geographical area they take care of. (Isabel, interviewee)

The first reason that agencies focus on small geographic areas within the GTA is the need to retain their main resource and product: a steady supply of workers. Throughout the interviews, it became clear that temporary staffers in the GTA can easily find work through agencies and frequently change agencies to ensure that they are placed in work positions suited to their – primarily geographic– needs (a point I will discuss in-depth in the next chapter). The ease with which participants find positions and can therefore switch work locations and agencies, if they are indiscriminate about the work they perform, is demonstrated here:

> So you talk to the seniors at college or the friends that you make here, and everyone tells you the same thing: just google the recruiting agencies near me. Which I also did - I made a list of recruiting agencies near me in Excel and then you register with them. Some require online registration, some require in person registration, some also require police verifications [background checks], and then these agencies call you and leave voice messages saying 'hey, we have this work' and then you can simply give your information to them. (Sohan, interviewee)

Therefore, recruiters need to consider their workers' commutes in the mediation process in order to retain them. One key informant who had worked as a recruitment agent in the York region primarily placing staffing agents in general labour positions in

the Markham subcentre and currently works as a recruiter in Mississauga outlines how she imposed geographic restrictions on where she recruits from:

> I keep my searches to Mississauga, Brampton and Etobicoke. Some in Oakville too. Anything further east or west, I find typically people don't want to commute that far – Toronto is huge. The transit system isn't the greatest, if they're taking transit, which a lot of these people are because, again, the work that I recruit for is fairly low-wage and a lot of them can't afford to get a car on the wages that they're making in these positions. So most of the people that I work with are taking transit and a commute from central Toronto to Mississauga by transit is not feasible. So most of the recruitment I do is specifically in the Mississauga and Brampton area. [...] They need to be able to feasibly commute by transit to the positions you're recruiting for. (Fiona, recruiter)

Similarly, one participant reports that her agency has a policy aimed at reducing commute times, likely in order to retain workers:

> They have a rule that it'd have to be under an hour commute. Even an hour commute would be a lot. They try their best... most of their jobs were downtown, so it was easy. (Fatima, interviewee)

This particular agency's commute policy is consistent with the travel expectations workers mention in their interviews. Participants frequently express that their commute time between their home and workplace ideally should take 30 minutes or less by public transit (thereby confirming the mean commute time of temp workers determined by census data). Without being prompted, participants most often identify 45-minute one-way commutes as a soft limit while all participants identified 1-hour

commutes as the point at which they would be unwilling to accept a placement or would have to weigh if the position's benefits were worth the commute (two interviewees were willing to travel further, if there were financial incentives or the work related to their education and professional development). Thus, even if agencies would want to service client companies within the entire GTA, they would likely be unable to find staff willing to travel, as exemplified here:

> So with Kelly Services [the downtown location] [...] they cater to all of the GTA, so sometimes they pitch you roles in North York or deep Etobicoke or even Mississauga or something. And I had to be realistic with them. If there is a job I am interested in, I would maybe see what the distance was and maybe did a few interviews for those places. But for me it was always that I said 'this is where I am located, can you get me assignments in this location?'. (Isabel, interviewee)

The ease with which workers can switch agencies to find more suitable work as well as clear expectations of acceptable commute times are the strongest explanations as to why staffing work is regionalized in the GTA – and why general labour agencies on Hurontario Street and Steeles Avenue do not have overlapping geographic service areas despite their client companies being in the same industries.

None of the interviewees clearly articulated why they had chosen staffing agencies– locations they often never visited and certainly did not work at– located near their place of residence. Further, they were usually stumped by my inquiries why they (correctly, I might add) assumed that an agency near them would place them in workplaces nearby. Thus, it appears that agencies are dependent on workers who live close to their agency's offices and would ideally only commute 45 minutes or less to their placements with client companies. Agencies are therefore restricted to finding

client companies ideally located within that radius. Indeed, only a single interviewee found an assignment through an agency located neither in close proximity to her home or place of work[21]. However, this particular mediation was a targeted placement, meaning that the agency was tasked with filling a specific long-term staffing placement in which the worker is only ever placed once (a rare, yet not uncommon experience, as I will elaborate in the next chapter). It is therefore atypical of the usual geographic placement strategy taken by agencies.

An important additional finding is that transnational agencies, for example Adecco, as well as independent, single branch agencies both focus on servicing small geographic areas within the Toronto CMA. Therefore, a regionalized focus is not a function of limited capacity by small agencies since transnational agencies follow the same pattern. For instance, a recruitment agent for an Adecco branch outlines how individual branches in the GTA also service a limited area and work independently from each other:

> Yeah, there were other Adecco branches. So, we had to be region specific as much as we could, unless something outside of our region that was something we really specialized in and then other branches would want to work with us. So, there would be occasions where we would work with another Adecco branch because of expertise. Because... for instance one branch will focus a bit more on general labour and then one of their clients would ask them 'hey, I need a legal assistant' and then they can't find that within their pool of candidates, they would ask us for help. (Kate, recruiter)

[21] The place of work was located in the CBD while the interviewee lived in the Leslieville area, an inner suburb located approximately 5km Euclidean distance and a 30-minute transit commute to the west of the CBD. The agency was located along the 401 corridor in central Scarborough, approximately 20km from both the interviewee's home and workplace.

Additionally, it appears that switching between different regionalized labour markets in the GTA is difficult for recruiters – regardless of if the client companies and job markets served by the agencies are similar. For example, the key informant working for an agency with branches in the Markham and Mississauga regions reports that switching between branch locations is challenging as rapport is needed between the recruiter and their client companies and workers:

> It (agencies focusing on a regionalized labour market within the GTA) is a more effective business model. If you're trying to find people to work in Mississauga, having a team specifically focused on building up a base with the people that live and who want to work in Mississauga is more effective than one big team who could just kind of goes all over the place. It's more focused. It's more effective. I was occasionally asked when I was in Markham– just because our business volume was a bit lower– to help with recruitment in Mississauga in addition. It's actually pretty difficult to kind of juggle both at once because it's unfocused. You're kind of like juggling two different groups of clients. (Fiona, key informant)

Interviewees' descriptions of interactions with their recruiters outline why agencies might prefer focusing on smaller geographic areas. Participants – particularly in general labour and short-term placement temping positions– describe an involved communication process with their recruiter, which I will detail from the workers' perspectives in the next chapter. Some report daily phone calls with their recruiter to confirm shifts while others receive bulk messages by email, Whatsapp or text message. Weekly check-in phone calls with recruiters, which ensure a good relationship between the worker and client company, also appear to be a standard procedure, regardless of the length of the placement. Additionally, interviewees willing to take last-minute

positions report receiving frequent calls and emails. It must be noted that all the communications described in this paragraph are between the recruiter and worker and exclude interactions between the recruiter and client company. On aggregate, recruiters therefore engage in time-intensive communication which requires intimate knowledge of the workers' and client companies' needs, as exemplified by this quote by the key informant Kate:

> I have a roster of individuals that I have screened in advance that have applied to that type of position [last-minute placements] and when I have a position come through in the morning or late at night, I have a roster I just start calling who have kind of said yes to that type of temporary on call work. You do need quite a few people in that roster because if something comes through, we can't guarantee that someone who said that they were definitely available for anything. [...] We just kind of give them a call in the morning or the night before and ask them if they are available. And we don't discriminate if they are not, we just keep calling to fill a position. It's a very niche type of thing but a lot of people are open to that type of work for one reason or another. [...] So, I work with two other recruiters. I have a roster, they have a roster. For me, it would be around 20 people at once let's say for reception coverage that I would be able to call but then I also have access to my two colleagues' rosters, if no one is available to me.

It is unclear from the interviews to what extent agencies' management staff take service area limitations into account when establishing a new branch or founding a new agency. Further, it is equally unclear how client companies contribute to the geographic regionalization of the temporary staffing market in the Toronto CMA. The three key informants working as recruitment agents as well as one interviewee who had also worked as a recruiter in the past confirmed that agencies find client companies through

internal sales teams, yet none of the informants could confirm whether the agencies restrict themselves geographically from the outset. What is known, however, is that regionalized staffing markets in the GTA affect most if not all agencies in the Toronto CMA – downtown, peripheral and a-locational alike.

In summary, temporary staffing agencies in the Toronto CMA consistently and intentionally service small geographic areas in which the majority of their client services appear to be located in close proximity. This pattern applies to all agencies, including branches of transnational staffing companies such as Adecco or Randstad. The focus on small services areas can be attributed to at least two reasons. First, workers have a strong preference for short commute times which agencies need to respect to retain them. Second, recruiters report that their work relies on establishing rapport with client companies and workers alike – a process that is difficult to scale due to the intimate knowledge of client companies' hiring needs that is required.

The geographies and hiring practices of client companies

In this section I will be covering the spatial distribution of agencies' client companies, the industries participants most often are mediated into, as well as how companies use staffing labour – such as to fill seasonal labour shortages or as a trial period before full-time employment. Overall, the interviews confirm the findings of the census data analysis: there are key industries such as warehousing, manufacturing, or banking which rely on staffing labour in the GTA. These industries agglomerate in economic centres typical of the North American city. The interviews additionally reveal that these industries use temporary staffing to fulfill their hiring needs in various ways: some use temp workers as their main employment strategy while others treat staffing as a trial period before permanent employment. The labour geographies and employment

conditions of temporary staffers in the Toronto CMA thus depend on the industry they are primarily placed in.

Client companies in general labour industries

According to the interviews conducted with key informants and temporary staffing agents, warehousing, logistics and light manufacturing are the industries most reliant on mediated labour in the Toronto CMA. For instance, one key informant who works as a recruiter for general labour positions gave an overview of her agency's client companies:

> One is a distribution company for a centre that makes hand tools, hammers, drills, screwdrivers. Another one's a distribution center for a company that makes mattresses. Distribution center for a company that makes shoes and purses. A production site for a company that makes condiments, you know, like ketchup, mustard, relish. It's not just distribution. They're actually producing the product on sites. Production of electrical wires and cables. Production of shoes. Packaging and distribution of pharmaceutical products. Packaging and distribution of food products. I won't do the whole list, but it is a wide variety of things. (Fiona, recruiter)

Fiona's description of her agency's client companies mirrors the types of placements the twelve interview participants who worked general labour staffing positions access through their respective agencies. Seven interviewees report working in commercial bakeries – some in the productions of the baked goods, others in the packaging and distribution– while several others work in distribution centres as well as light manufacturing, for example assembling furniture. Auto part manufacturing and assembly, a historically important manufacturing industry in the Toronto CMA and

southern Ontario as a whole (Vinodrai, 2014), also is mentioned by three participants as an industry in which they were placed.

The reliance on staffing labour in the manufacturing and warehousing industries in the Toronto CMA appears to be systemic. Interviewees working in industries ranging from commercial bakeries, meat processing, order fulfillment, mail sorting, to car assembly frequently estimate that more than half and up to 80% of the other staff they encounter at their workplaces are mediated through agencies. Often permanent employees are distinguishable by their uniform – or as one participant put it, 'they have their dresses, they have the name of the bakery.' (Priya, interviewee). One participant, a warehouse worker and part-time student at the University of Toronto, chalks up the systemic reliance on staffing labour to a need for easily fireable staff as well as convenience and organizational incompetence on part of the client companies:

> It's much easier to write off the people when they aren't on payroll. You need capable management and HR to manage the whole process, if you have employees and payroll, right? Most of these companies, they have like one guy who's a manager and the thing is that, you know, that person has been with the company for 30 years or whatever. So the thing is that they basically picked the team leaders to manage the whole process. And they are not capable to bring people on payroll. With temp agencies it's easy because it's just one bill at the end of the month for everyone and they're done. But imagine having to pay 30, 40, 100 people on the payroll. The majority of these companies are so badly run. (Allan, interviewee)

Geographically, almost all workplaces reported by interviewees working in general labour positions are located in the large economic subcentres along the 401/407 highway

corridor – in particular the subcentres to the west of Pearson International Airport on the Mississauga/Brampton border as well as the Vaughan subcentre clustered around the 407/400 highway interchange. There is no reason to believe that similar patterns do not occur in other major suburban centres that house similar industries. For example, one recruiter mentions that staffing labour is concentrated in eastern subcentres along the 401/407, especially in Scarborough, as well:

> Most of the clients we worked with were sort of clustered around North Markham or around intersection of Highways, 407 and Highway 404. A lot of the people we worked with were clustered around that intersection. So it's sort of south of Richmond Hill, north of Scarborough, very close to the highway. (Fiona, recruiter)

Fiona additionally states that the types of client companies located in the Markham subcentre are similar to those in Mississauga, Brampton or Vaughan and their use of mediated labour is identical. Indeed, the sole interviewee living near Toronto CMA's eastern border with the Oshawa CMA also reports similar placements in distribution and auto part installation, thus suggesting consistent patterns for industries reliant on general labour staffers across the GTA.

Notably, several interviewees report a concentration of client companies in the Bolton region of the Toronto CMA. The Village of Bolton as a hub where general labour is performed is an anomaly in the Toronto CMA as its location on smaller regional highway makes it the only economic subcentre in the Toronto CMA not abutting a highway classified with the 400-level designation reserved for Ontario's largest highways. While the Bolton area has long been identified as an economic subcentre in studies of the Toronto CMA relying on older Canadian census data (Duquet & Brunelle, 2020;

Shearmur et al., 2007), its location on the border of the Ontario Greenbelt– an area surrounding the polycentric urban network of the Greater Toronto Hamilton Area in which development is prohibited with the goal of stopping urban sprawl and preserving agricultural land (Pond, 2009)– further means that it is almost completely surrounded by farmland and thus is atypical of the built environment surrounding other subcentres[22].

Despite its geography, Bolton is identified by four participants– two key informants active in the Peel Region's labour rights community as well as two interviewees who had worked there– as a growing economic hub in the Toronto CMA in which general labour is performed. Although Bolton has been classifiable as a subcentre since at least the 1990s, participants report that its importance is growing due to an agglomeration of warehousing and light manufacturing companies on the southern edge of the town (often exemplified by the recent development of distribution centres by Amazon and Canadian Tire), which one key informant chalks up to rising land cost in the Toronto CMA:

> And a lot of these warehouses are adjacent to farmland. So people are going all over the place and the GTA is expanding. People just start new facilities that are being built further and further away where things are cheaper. So people are going further and further. We found out with some of the newer, bigger warehouses, like in Bolton. Bolton has several warehouses. And Bolton is in the middle of nowhere. Nobody working in Bolton lives in Bolton. (Robert, key informant)

[22] Bolton's importance as a subcentre thereby addresses issues of how to frame the urban-rural dichotomy. Indeed, Bolton matches Nicholas Phelps' description of the *interplace*, a recent form of economic centre seemingly disconnected from the urban fabric of its nearby city or cities (Phelps, 2017).

This quote hints at some of the problems temporary staffers working in Bolton face, for example a lack of public transit connectivity, and which will be discussed in detail in the next chapter. As few people live in Bolton, interviewees report that client companies in Bolton draw on staffing agencies located nearest to them, which are the agencies specialized in mediating student labour located along the Hurontario/ Main Street corridor in northern Mississauga and Brampton:

> The places where we go to work, like the ones that are in Bolton, there are a lot of warehouses there and the people there are mostly students, because those are the people that need to do the job. Otherwise when you graduate, you find a new job, a professional one. So the places I go to are 70 to 80% student crowd who came to Canada and need work. (Sohan, interviewee)

Thus, although the Bolton subcentre's geographic setting is unique in the Toronto CMA, client companies there still follow the patterns of a regionalized temporary staffing industry in which client companies draw on nearby staffing agencies, which in turn draw on a pool of temporary staffers living in close proximity to the agency.

To summarize, client companies reliant on general labour are predominantly located in peripheral subcentres. Further, while there are slight variations in the geographic distribution of these industries across the Toronto CMA– Bolton, for example, appears to be a hub for warehousing while light manufacturing predominantly occurs near the airport–, the industries into which general labour agencies mediate their labour are consistent across the entire metropolitan area.

Client companies in white-collar labour

The main white-collar industry using mediated staffing labour in the Toronto is the finance, banking and insurance sector. In particular some of Canada's largest banks– six of eight participants mediated into white-collar office employment worked at the Royal Bank of Canada, TD Canada Trust, Bank of Montreal or another prominent financial institution– appear to use temporary staffing as an employment strategy. A particularly striking finding is that mediated labour seems to be an integrated hiring strategy at some banks regardless of paygrade. One participant, who had recently completed an MBA, was hired through a staffing agency for a financial risk analyst position while others were hired for lower wage jobs in data entry, customer service, and filing. The importance of staffing agencies to the hiring process is exemplified by the case of the following interviewee in which the agency is used by the client company as a passive participant in an HR ruse:

> So I worked for TD Bank and my sister worked there first. She knew that her department was hiring, so she got my resume from me, gave it to her manager, they called me in for an interview. And when they decided to hire me, they told me 'we can't hire you, an agency has to. They will call you'. I didn't get to choose my agency, the agents just called me and sent me my offer letter. And it was all done over email. And this was all before remote work, before the pandemic. They still did everything completely over email. I was able to call her, if I needed to, but otherwise it was all over email. (Becky, interviewee)

When prompted to speculate the reasons why TD used a staffing agency to hire her, the participant mentions that banks use a long-term hiring strategy of testing workers before offering the highest performing workers full-time employment. These reasons are consistent with what other interviewees report.

Financial institutions rely on staffing agencies for many of their main office and back office functions. Those hired in the banks' financial sector report working at the head office towers located in the CBD on Bay Street[23], Canada's prestigious financial centre akin to Wall Street in New York City. In contrast, the two participants mediated into positions in a financial institutions' insurance branches work in back offices located along the 401 and Don Valley Parkway highway corridors. One participant who works for a bank's insurance branch in Mississauga along the 401 describes an environment of mid-rise back offices and malls surrounding her workplace, thus painting a contrasting picture to the built environment surrounding Bay Street in the CBD:

> It's nine floors and there were two buildings. One is for insurance and one is for banking. And then there is a bunch of offices around it. There is Maple Leaf [Foods], there's the Peel Police Headquarters across the street, they built another office while I was there. There's Microsoft across the street and then there's a bunch of food places to eat and one plaza. It's kind of all over. (Ariana, interviewee).

Interestingly, financial institutions with multiple branches and offices in the Toronto CMA still rely on the regionalized staffing system described in the previous section rather than a centralized partnership with one agency. All participants placed at positions at banks in the CBD are mediated by staffing agencies located within the downtown core whereas those working in back offices are mediated by agencies located on Steeles Avenue or in Mississauga. Further, branches rely on multiple agencies to

[23] For those in lower wage positions, however, Bay Street offers little glamour. One interviewee who worked at RBC's downtown tower as a filing clerk reports spending the summer 'in the basement working on their filing system that was just dusty' (Laura, interviewee), thus indicating a spatial division between low and higher wage workers even within the same building.

fulfill their hiring needs; Ariana, who I quoted above, was mediated into positions in the same insurance office on two different occasions by two different agencies located in Mississauga. This is not uncommon as the TD worker hired among a cohort of six reports that most of the other five had been mediated by other agencies – a surprising finding considering she applied directly to TD before being referred to the agency. Additionally, one participant who did data entry at a financial institution reports that she was hired alongside eleven colleagues with 'four or five from Manpower, four or five from Randstad, four or five from another one' (Angelina, interviewee). She further adds that everyone lived near the office located in the Vaughan subcentre, yet commuted to it from different directions and were mediated by different agencies accordingly:

> If I remember correctly, everyone was all from different places. There was a handful from North York. There was someone from Etobicoke, Mississauga. They were scattered. They were all from different agencies too. (Angelina)

Three types of white-collar client companies are more geographically scattered than the financial sector concentrated in the CBD and subcentres – yet still predominantly located in the City of Toronto's greater downtown area. These include medical clinics (primarily dental clinics), non-governmental organizations (for example national church bodies), as well as government-adjacent organizations such as orders governing regulated professions like law, urban planning and nursing. All organizations in these industries hire staffing agents for administrative office work. The length of the assignments varies: interviewees working non-governmental organizations report receiving contracts for several months which were frequently renewed whereas government and medical clinic labour tends to be shorter term. What unites these three separate industries geographically is that they tend to locate on or at the intersection of major commercial corridors, which in the City of Toronto most often run along the

city's east-west axis (for example Bloor Street or Eglington Avenue). Further, in particular medical clinics and NGOs that rely on staffing labour are often located in wealthier inner-city neighbourhoods such as Liberty Village and The Junction which are typical of Toronto and also serve as local economic hubs (McLean et al., 2015; Murdie & Teixeira, 2011).

Additionally, five interviewees report performing short-term placements lasting between a single day and two weeks in pink-collar positions – a term describing gendered administrative office labour that was among the first tasks to be systematically 'temped out' (Hatton, 2014). Geographically locating and registering the industries of these offices proved difficult during the interviews as placements for these workers are short, participants change positions frequently, and the labour most often associated with pink-collar jobs is impersonal and divorced from the services the client companies provide:

> If it's just a day, you get nothing [referring to on-job training]. But if you are there for a bit, you are lucky if there is a manual at the desk. Some of the people who really rely on temps, they usually have a binder that tells you how you answer the phone, how you respond to a courier. The scene is always the same at every front desk. They all work with the same courier company, so you know the company. The switch board is always the same. The mail routine. Some things are different, but for the most part it's similar. If you are lucky, you just greet people and keep things moving. They might not expect too much from you if you are just passing through for a day or two. But if it's longer, you should get an onboarding. But you don't get forms, they don't introduce you to people. It's more like, here's a binder. If you have any questions, email me. (Isabel, interviewee)

The industries which rely on stop-gap receptionists varied widely; interviewees report working for luxury car dealerships, doctors' offices, a video gaming company, accounting firms, as well as Canadian headquarters for international retail brands. As with other white-collar administrative work, the client companies' geographic locations are exclusively concentrated within the City of Toronto, most often in the CBD or local economic centres such as Liberty Village. Lastly, while staffing agents in white collar positions most often report that offices moved to remote work during COVID-19, interviewees working as receptionist were still required to work in the physical offices, thus highlighting that certain office functions such as receiving and sending packages cannot be moved online. One receptionist, who found a long-term staffing placement after two years of doing stop-gap labour, describes being the only staff at the office for eight months:

> So I started this job during COVID, in October 2020. When I did first start, they hired me to be the person in the office. I was the only one in the offices until maybe a month [June 2021] ago until my managers said that they would do a rotating shift to give me a chance also to work from home, which is great for me.

Overall, mediated office labour in the Toronto CMA is performed either in the inner city, which includes the CBD, or in back offices located in the periphery. These patterns are consistent with the usual distribution of office labour in North American metropolitan regions. Further, the geographies and hiring strategies for white collar temp worker are less homogeneous than their general labour counterparts and more dependent on client companies' hiring needs. For instance, companies in the financial services are either clustered in the CBD or along highway corridors and appear to use staffing agencies as part of an institutionalized hiring system to outsource human

resources functions. In contrast, companies in the medical services industry as well as firms reliant on pink-collar labour tend to be more scattered and use staffing labour as part of a stop-gap hiring solution.

Temporary staffing and the seasonal fluctuation in labour demand

An additional finding resulting from the qualitative fieldwork is that the temporary staffing industry is subject to seasonal fluctuations that affect how much staffing labour client companies rely on throughout the year. Further, labour supply also fluctuates throughout the year as international students, which are a large subgroup of workers in the Toronto CMA's staffing industry, are only legally able to work full-time positions from May to August as well as during the December break.

Seasonal fluctuations in labour demand appear to affect certain industries more than others. Particularly warehousing and manufacturing in the Toronto CMA undergo a cycle of periods of high and low labour demand throughout the year. Speaking of the increased labour demand, key informant Fiona who mediates workers into the manufacturing and warehousing sectors identifies the four months leading up to Christmas as particularly busy:

> We are heading into what we call peak season right now [August 2021], which is just really high demand of temporary workers just for the Christmas season. Everyone has a lot of work to do. In warehousing everyone is ordering stuff. You get twice as much business as you usually do and you need people. You need the staff to support them for the Christmas season, but you're not going to need these people after Christmas is over. Your business goes back to normal. So that's basically why we are used. (Fiona, key informant)

Seasonal labour demands are therefore another reason why client companies rely on staffing agencies, in addition to hiring labour for a trial period and the desire to outsource administrative labour. Again, Fiona summarizes this point succinctly:

> A lot of them I think they don't really know exactly what their staffing needs are going to be. So if, for example, if they have a huge project to do for the month of September, but they're not sure what their business is going to look like in October – no, that's a bad example because everyone's busy September to November. But say someone has a huge project to complete in March, but then they don't know what their business is going to look like after March in April, May, June. Instead of hiring someone on full-time and then hoping that this person will have work after this project is complete, getting someone to work on a temporary contract just in the month of March makes more sense. So, they can extend this contract, you know, if this person's needed after March. They can extend the contract, or they can hire them on full-time, if they really like the person, if they're a good team fit. So, I guess general uncertainty of what business is going to look like in the future. (Fiona, key informant)

Such fluctuations in labour demand described above are only reported by staffing workers and key informants who have experience with the general labour industry in warehousing and light manufacturing. Interviewees in office and other forms of administrative labour do not report such seasonal changes. Interestingly, however, changes in labour supply through the influx of international student labour in the summer months does affect general labour workers and office workers equally. Interviewees' perception of the summer months and how it affects their income streams differs depending on their immigration status, education level and work experience in Canada. Isabel, a Canadian citizen by birth with a completed college degree who works in administration, summarizes her experience of the summer months the following way:

> And summer time too – you don't hear from them [the agencies] because there is this influx of students and a whole bunch of other people. Summer time... you might get work consistently before and then you just kind of don't hear from them, which is why you need to register with multiple agencies to cover your bases. (Isabel, interviewee)

In contrast, international students who are still completing their degrees and have no prior Canadian work experience outside of temporary staffing have a very different perception of the summer months as they are able to secure work with ease. I will discuss the reasons why client companies prefer to rely on full-time student labour in the summer months in the next chapter as it relates to the geographic and economic precarity international students in the post-secondary college system experience. For now, an important take-away is that the temporary staffing industry fluctuates between phases of an employers' and employee's labour market throughout the year, which is dependent on labour supply and whether manufacturing and warehousing industries are within their high-volume production period. Further, different demographics of temp workers are able to find work with more ease during certain periods of the year.

COVID-19 and the Toronto staffing market

As previously mentioned, I conducted the fieldwork for this doctoral research project in the summer of 2021, approximately 16 months after Toronto and the rest of Canada went into the first COVID-19 lockdown in March 2020. Participants often reflect on the effects of COVID-19 on their employment, which were uneven across industries. In warehousing and manufacturing it appears that apart from the very first lockdown during which agencies as well as factories shut down, the work itself did not change: as before COVID-19, work is performed on site and companies operated at full

capacity even during subsequent lockdowns. Indeed, respondents report that the labour shortage had worked in their favour:

> Well, at first there wasn't any work. When COVID started it was pretty serious because the factories were closing down because they had COVID. A lot of time when I called my agency, there wasn't anyone on the phone to pick up. It was closed. And when I managed to talk to her [the supervisor], she said the COVID made it harder to find jobs. [...] The shifts came back because for the factories it is very important for them to continue production. Most of the factories I work for have very important products, so I eventually I knew most of them would have to reopen. And they take a lot of long orders to, so when they were closed, I knew it couldn't be too long. So right now [June 2021] there is a lot of work coming back and I guess there is a shortage of workers. (David, interviewee)

A similar pattern can be observed among staffers working in the medical offices. They too were initially affected by the initial lockdown but faced a favourable employment market as of summer 2020. One interviewee summarizes her experience of the initial phase of the COVID-19 pandemic the following way:

> So I had been working full-time and I was laid off because of COVID. And CERB [the Canadian government aid for COVID-related unemployment] wasn't coming in fast enough. So I started looking to see what I could do. But my entire industry had pretty much shut down, but I started reaching out to anyone that I could to see if there was work for me to do. And then I found these temp agencies because I was looking on Indeed because I felt like I need something. I can't be without a job and without income. So I started doing that and then I found that as offices started opening up again, they had workers who didn't want

> to go back. So they were sort of scrambling. And I was able to get a decent amount of work. (Steph, interviewee)

For office labour, a more nuanced pattern emerges. While many respondents in office labour positions, including the key informants working as recruiters, report that their work had been restructured for remote work, the subgroup of respondents working as receptionists still had to work onsite in the office – often the only worker in the company. Their presence is required to deal with the physical components of office work, for example sending and receiving packages such as the laptops other employees required for their home offices. One interviewee describes her onsite labour the following way:

> Currently I am an administrative assistant, so there is a lot of manual work. Printing, scanning, dealing with mail. (Claire, interviewee)

To summarize, the COVID-19 pandemic has had uneven effects on the hiring practices and labour geographies of Toronto's temporary staffing industry. Apart from the initial lockdown in Spring 2020, it appears that general labour, which most often needs to be completed onsite, has undergone few changes. Participants and recruiters working in these industries report that their daily work practices, including where and how their labour is performed, have remained similar to the pre-pandemic era. Similarly, the interviews reveal the existence of a type office labour that also continues to be tied to the workplace: receptionist labour in the medical fields and corporate office environments also report that their work saw few spatial changes. Lastly, white-collar workers mediated into positions in the financial services or NGO sector were able to switch to remote work and continue to perform all of their labour from home.

Discussion

The findings in this chapter begin to illustrate and test the strengths and limitations of location-based methodologies of measuring where work is performed for the purpose of theorizing urban form. On the one hand, the interviews confirm the temporary staffing industry's spatial organization observed in the census data: most client companies in both general labour and office-based industries cluster in economic centres. Further, temporary staffing agencies mediate workers within a small geographic area, thus indicating that the location of employment collected during the census can generally approximate where future employment will take place as long as the worker remains with the same agency. On the other hand, the findings also reveal some of the weaknesses inherent to a static model of urban form. Specifically, the interviews show seasonal fluctuations in the supply and demand of staffing labour– at least in the general labour industries– which are not captured in the census analysis. I will engage with the theoretical implications of these findings for the field of urban economic geography in detail in Chapter Seven. For now, I briefly discuss the underlying reasons why agencies and client companies alike may prefer long-term staffing placements over stop-gap hiring. This analysis will later aid in the discussion how temp workers' labour geographies and mobility are negotiated, and how the mobility potential of low-wage workers should be understood.

Non-fixed labour and the length of staffing placements

Evidence from the interviews demonstrates that temporary staffing is part of an institutionalized hiring practice in many industries in which client companies secure a stable labour supply that can be flexibly adjusted to seasonal fluctuations or be used to determine which workers perform the best. Apart from the stop-gap markets for medical assistants and receptionists where day-long placements are common, longer-term

placements of multiple weeks and months thus appear to be the norm. I will discuss the reasons why workers may seek out longer-term placements in the next two chapters, yet there are reasons to believe that client companies as well as agencies also prefer the stability of longer mediations.

Agencies are interested in mediating workers into longer placements for multiple reasons. First, recruiters are engaged in time-intensive administrative work to coordinate placements and build relationships with client companies and workers, which appears to not be scalable. Stop gap labour in particular requires recruiters to contact a roster of workers, often by calling through a list of potential candidates. The advantage of stable mediations therefore lies in reducing administrative labour: during long-term placements, recruiters and workers alike report that their communication with each other is limited to the occasional check-in call or email, which frees up time for the recruiters to perform other tasks. Second, Toronto has an established staffing market in which many agencies compete for a limited pool of workers. Interviewees report that they prefer the stability of longer placements and are willing to switch agencies if this stability if not provided – a point I return to in the next chapter[24]. Thus, agencies' success relies on meeting their workers' expectations, which often means reducing commute times and supplying multi-month contracts. Lastly, the staffing industry's business model in which client companies pay agencies a mediation fee incentivizes agencies to pursue positions in which they can passively collect money for a lasting mediation. The most effective placements therefore are ones that are long-term and require little ongoing administrative oversight.

[24] This point must be examined carefully due to the moment in the COVID-19 pandemic during which fieldwork was conducted and this thesis was written. Participants who had found work through staffing agencies before the pandemic reported that by the summer of 2020 the process of finding work, switching agencies and performing the workplace itself was similar to the pre-pandemic market. However, they did acknowledge that many workplaces and agencies were facing labour shortages, thus suggesting that the data was collected during a time when temp workers held more power than usually to determine the conditions of their employment.

Many client companies have similar incentives to prefer long-term placements. For client companies in government-adjacent NGO work as well as major Canadian banks and insurance companies, mediated labour is part of an institutionalized hiring practice based on hiring staffers for multiple months with the intention of retaining the best-performing workers afterwards. Client companies in the general labour sector do not appear to be as systematic in their hiring and do not offer well-performing staffing workers direct employment as often. Yet interviewees report that client companies in warehousing and manufacturing also prefer long-term placements to outsource HR management, reduce the need to train workers and still maintain institutional knowledge. Further, companies are able to better respond to seasonal fluctuations in hiring needs as temporary staffing agents can be laid off and later re-hired with ease due to their *zero-hour* labour contracts.

Conclusion

The fieldwork results relating to the geographies of agencies and client companies presented in this chapter begin to confirm some of the patterns that emerged from the census data analysis. For example, participant interviews provide further evidence that the Toronto staffing industry is regionalized. Further, the interviews support the claim that most staffing labour is performed within economic centres located in the CBD as well as the 401/407 highway corridor. The interviews with key informants suggest that regionalization is in part a result of the limited worker pool– who are therefore able to dictate some of the employment conditions– as well as the need for recruiters to intimately know their workers and client companies' industry-specific and geographic needs, thereby incentivizing specialization and a focus on a smaller service area.

Additionally, the interviews reveal information on the mobility and temporality of the Toronto staffing industry, which is absent from the census data. In particular we begin to see how workplace mobility may be interpreted for staffing workers in the Toronto CMA. The interviews thus far demonstrate that for many workers– even those whose labour geographies would be classified a *non-fixed* in the census– may not be that mobile as it is in the interest of client companies, agencies and workers alike seek stable placements. Further, much of their work is performed within the same economic subcentre, albeit with different client companies, due to the regionalized nature of the staffing market. However, it remains unclear thus far how workers in precarious labour conditions are able to shape their geographies of work – a crucial bit of information as we begin to theorize how labour mobility among low-wage workers is determined. I tackle this question in the next chapter.

Chapter Six: Qualitative Results – Workers Perspective

In this chapter I examine the geographies of temporary staffing work in Toronto based on the *workers perspective*, which emphasizes the individual and collective labour conditions experienced as an employee of the staffing industry. The purpose of this chapter is to investigate the second question that guides my thesis: how do the work conditions of low-wage, part time workers affect their experience of urban space as it pertains to housing, transportation and the accessibility of work locations, and how does it differ from descriptions of higher-wage workers found in the literature?

Thus far, the previous two results chapters have covered the empirical data on the geographies of temporary staffing in Toronto as they emerge from census data as well as the dynamics of the staffing industry chronicled from the *agency perspective*. They are centred around questions of the temporary staffing industry's market dynamics in relation to the Toronto region's urban form. This chapter, however, provides an account of the power dynamics at play in the Toronto staffing industry and describes the ways in which workers can and cannot shape their own geographies. I first present the findings on the role of precarity in shaping participants' work locations and schedules before describing the workers' geographies and trajectories based on the same 32 interviews with temporary staffing agents and key informants in the Toronto CMA. I then briefly discuss these findings in the context of the previous two results chapters and begin to reflect on their theoretical implications regarding the empirical measurement of urban form.

Spatial and economic precarity in the temporary staffing industry

In this section I present the data on the extent to which interviewees experience precarious working conditions. Precarity, as discussed in the literature review chapter,

lacks a simple definition but rather is comprised of a series of compounding conditions such as low-wages, lack of control over ones schedule, lack of benefits, unaffordable housing markets, the need to balance productive and reproductive labour, or uncertain immigration status (Jacquemond & Breau, 2015; Lewchuk, 2017; Vosko et al., 2009). Most of these conditions have direct and indirect spatial consequences. Further, not all conditions have to be met for work to be considered precarious. I have organized this section in accordance with the four central elements of precarity as outlined by Rodgers (1989) which are pertinent to the measuring of urban form based on employment location: contract length, scheduling, pay, and immigration status.

Overall, all interview participants in meditated employment arrangements experience at least some facets of precarity, although the spectrum is wide. Central to the debate of measuring urban form based on the location of employment, however, temporary staffers in the Toronto CMA do appear to have the ability to reduce travel time, choose their employment locations, and secure placements with medium to long-term contracts with a single client company. Therefore, participants tend to have stable labour geographies while they are placed at medium to long-term staffing positions – albeit with some limitations.

Placement length and contractual security

Interviewees describe multiple norms regarding placement duration which were guided by the client companies' industry-specific conventions – meaning that workers mediated into the same industry (warehousing, banking, etc.) describe similar norms around assignment lengths and conditions. Overall, regardless of their industry, most participants are regularly mediated into positions with a single employer with medium (multi-week) to longer-term (multi-month) placement length. These positions generally provide full-time employment or, in the case of international student labour, the

maximum hours their visa stipulations allow for. The few interviewees who accept short-term placements (day-long to week-long) often take them for personal reasons and would be able to secure longer assignments if they wanted to. For instance, one participant rejected offers for full-time placements and even permanent employment outside of the mediated labour system as she feels short-term temping is more beneficial to her career and provides her the opportunity to learn about new industries:

> There have been instance where the offices offer to hire us [her and her friend]. And because of the contract, they have to go through the temp agency or we have to let the agency know that they hired us full-time and stuff like that. But yes, we have been given options to go full-time. Even at the airport [the participant is working at a COVID-19 vaccination site located at the Toronto airport] I was asked to become a manager if I give more hours and more days. [...] But the offers have not been what I am looking for or for what I have studied. If I'm offered a job in my field, I would happily take it and work full-time. But all these assignments that we were talking about, it's not my industry. So I'm happy working at different places, getting to know different people and making connections. I don't work to earn money but to make connections, go to places, see how the work industry is. So I work for connections, opportunities or maybe to see what is out there. Maybe I switch my field or maybe there are people who can guide me better. (Meena, interviewee)

A few other interviewees appreciate the flexibility of short-term placements as it allows them to decide spontaneously whether or not they want to work on a certain day. This flexibility appears to be of particular importance to some students whose availability fluctuates according to their course work, as well as the two dental

assistants who have steady employment but supplement their income with temp work. The following two quotes outline such instances:

> I was also studying at that time as well. So let's say if I have time off in between semesters or anything like that, and I just want to find myself a quick job to do. I know that I won't have to go through that whole like long training process. The expectation of those jobs is that you're not going to be working there for more than a week if you're not looking for a permanent position, because these are all just temporary jobs for a week or two. So that it's a much easier for those kinds of circumstances. (Ivan, interviewee)

> I love where I work full-time and I wouldn't change that for the world, but there's not enough hours. So I feel like I'm somewhat limited but I also enjoy doing the temping because it's low stakes. You go in, there aren't huge expectations of you and you do what you need to do and then you leave and you kind of don't have to worry about it again. (Steph, interviewee)

While the norm of long-term mediation in the Toronto temporary staffing industry provides workers with some stability, the precarity experienced by interviewees in such positions is demonstrated by the renewal process of placements coming to an end. One participant placed as an administrative worker with a professional order reports that she was only informed by the agency on the last day of her six-month placement that her assignment was being extended and she was expected to be back at the office the following Monday. Her previous requests to the client company and agency for clarity around whether the placement would be extended went unheard. Similarly, another participant, mediated into a long-term administrative position,

reports frequent placement extensions which are also communicated by the agency shortly before the expiry of the previous agreement:

> I did 37.5 hours a week. So it's consistent, it's on a contract. When I first started in October 2020, the contract was supposed to end in December. They renewed it again until April 2021. And then they renewed it again until the end of this year [2021]. (Claire, interviewee)

Participants, as exemplified by the quote, often refer to multi-month placements as 'contracts', yet the conditions of their placement are negotiated by their agency and client company and the worker has no safeguarding against pre-emptive termination. As is standard in mediated employment relationships, the participants only sign a contract with the agency, which does not provide guaranteed hours. Workers do not themselves enter a formal agreement with the client company. Indeed, upon clarification, the participant Claire quoted above confirms that the placement renewal "was an agreement between my workplace and the agency, no new contract was signed" (Claire, interviewee). The sudden termination of such multi-month assignments appears to be rare. However, the case of one participant fired in the midst of long-term placement highlights the hidden precarity of mediated employment relationships that appear stable:

> Honestly, I don't even know what I did. I was doing my work one day, and I finished going through the voicemails and stuff like that. And when I left, the same person that I would report to and correspond with called me and said 'hey, do you have a minute to talk' and I said 'yeah, sure'. So he said 'yeah, we have made the decision to no longer move forward with you. You were really great and you did the work well. We have positive things to say but we are no longer

> moving forward anymore'. So they didn't give me any explanation as to why, he just said we'll figure it out and will sort it out. And then the next time I tried to contact him, I was told he no longer works there. (Samantha, interviewee)

The practice of predetermining the length of placements and extending them is only reported by interviewees in white collar positions. The norm in the general labour sector is that placements are expected to be indefinite, which on the one hand eliminates the instability of placement renewals but also decreases the likelihood of being offered direct employment by the client company[25]. Contrary to white collar assignments where all communication regarding placements conditions is conducted through the agency, participants working in general labour industries frequently report building a rapport with the manager similar– yet not the same– to those hired directly, as outlined by the following quote:

> So we only have communication with the supervisors of our bakery. They are just normal, we just ask them to provide us with normal shifts or something. Nothing special. There are some people that they already hired directly but we are through an agency, so we are not important to them. They give more importance to the people that are directly hired. (Priya, interviewee)

Overall, it appears that temporary staffers have the ability to secure full-time work with a single client company for multiple months which is rarely terminated. Thus, while the mediated employment relationship is precarious, participants generally report that the conventions of temporary staffing placements in the Toronto CMA lead to relatively stable labour geographies– yet only in the short-term as interviewees report

[25] As mentioned in the previous chapter, office workers are frequently hired on directly. None of the general labour workers report being offered direct employment by the client company.

that most placements are terminated before the one-year mark (workers are either hired directly by the company by that point, find direct employment elsewhere, or change placements and agencies). Outliers exist who prefer short-term placements with multiple client companies ranging from one day to two weeks, as well as regular part-time placements such as one day a week. However, all interviewees who perform such short-term gigs indicate that it is either a personal choice or that another job or educational pursuit prevents them from seeking full-time employment through an agency.

Scheduling

The apparent preference for longer-term placements among workers, agencies and client companies alike is reflected in the scheduling of work days as well. Interviewees in long-term placements report that their schedules are regular and predictable, thus requiring little communication with the agency. For white collar worker this mostly means following the typical 9am to 5pm conventions of office labour, as highlighted by the following quote by a long-time staffing worker, who also alludes to the structural differences (such as the provision of medical benefits) between direct hires and mediated labour:

> So it varied job to job, I was full-time for the most part. It would be slightly under 40 hours because there are so many regulations – if it's over 40 hours you have to add benefits. So I was usually flirting with just under 40 hours a week but for most places it was 9 to 5. (Laura, interviewee)

Shift work in general labour industries complicates scheduling as interviewees in those fields report that warehousing, manufacturing and logistics companies tend to operate throughout the weekend as well as around the clock with three available shifts (morning, afternoon and night). However, participants with longer-term placements in

those industries report consistent schedules in which their preference for shift times and work days– most often Monday through Friday– are respected and become their unspoken hours. Therefore, their schedules do not need to be discussed daily with the agency or the client company management. Even interviewees on a rotating schedule generally reported clear communication about schedule changes, as highlighted by one participant:

> [I get the schedule] about a week before. Yeah, it's Monday through Friday. We have two shifts. The morning shifts and the afternoon shifts. It works on a bit of a rolling basis. If you work for a month at the morning shift, you can expect that the next month you're on afternoons. So some people like the afternoon, some like the morning. But most people can work either, depending on their flexibility. (Allan, interviewee)

While regular schedules bring some predictability to interviewees, the precarity of staffing work is highlighted by the unspoken expectation that mediated personnel will work overtime hours. The same participant quoted above reports that he works 10 to 12 hours of overtime per week and that the client company does not communicate in advance when workers need to stay longer. When asked what the consequences would be of declining overtime hours due to scheduling issues, Allan stated that "probably they [the client company] will let my agency know and I will probably lose my job", thus meaning that the interviewee has to schedule his days, including leisure time, with the expectation of working two to three extra hours per shift. Another interviewee expressed similar pressures at their workplace, an auto-parts factory which follows a Monday to Friday schedule:

> We start at 3pm and we sign in, check what our assignment is for the day and what work we'll be doing. [...] It ends at 11pm and that's how it is the whole week. Sometimes we work an extra two or three hours into the night. And very rarely we'll be made to come in on Saturday. (Mark, interviewee)

For those interviewees mediated for part-time hours, the scheduling of shifts requires daily communication with the agency as available positions are only posted one day in advance. Client companies appear to communicate daily with the agencies about their labour needs for the next day, thus meaning that workers can only know by the late afternoon or evening whether or not they will be working the next day:

> If I need a shift tomorrow, I have to call them a day before. The companies send in their requirements of labour and people before 4pm, so you have to call after 4pm. When we call the agency, they just check the requirements and confirm a shift. And then they'll message us to information of the shift for us to keep track and for us to show them at the factory. The date and time of the shift, so that when we go in to get our pay we can show them. (Priya, interviewee)

The uncertainty brought on by last minute work scheduling varies among respondents. For some (including Priya), the calls are merely an inconvenient administrative task as they are always able to secure a shift for the next day. For others, however, scheduling a shift the next day is a competitive and urgent task: some agencies post the limited number of available jobs for the next day through mass emails, text message and Whatsapp groups and, in one case, even Instagram which are distributed to workers on a first come-first serve basis. Both respondents working in general labour and office settings report such scheduling norms, as is evidenced by the following two quotes:

> There are some agencies that use email or text messages. One of my friends works for an agency and what happens is that they have a Whatsapp group and there are a lot of people in it. They need some immediate workers for some shift, so they just put up the shift details and people write 'I am interested, I am interested'. And they need like three people so the first three messages that responded get picked out. And they get the shift. Some places work like this. (Sohan, interviewee)

> They send out a mass email to anyone who is available and then the first or second person who writes back gets that position. Or they send out multiple positions saying that they need people at these offices for these shifts. Are you able to do anything? And if I don't write back, then they know I'm not available. If I do write back, then it depends on how quickly I write back. (Steph, interviewee)

Respondents avoid such competitive scheduling by switching agencies, which workers do quite frequently and easily, as alluded to in the previous chapter. The most common reason for an agency change listed by respondents is precisely the unavailability of regular shifts. However, particularly in general labour settings, respondents are forced to rank their priorities: regular shifts often are only available with client companies that pay less, have less safe working conditions and require more physically demanding labour. Industrial bakeries in particular, which seven respondents work or have worked at, are named as particularly unsafe and demanding positions. Those unwilling to perform harder work in exchange for stability can face uncertain schedules and economic precarity, as exemplified by one respondent who only wants to be placed at a client company which has safe and easy working conditions but provides him with inconsistent hours:

> Some weeks I get good work, but some weeks I get five or six hours. It is not what you would call a fixed job. [...] Every day I have to call them [the agency] and they will confirm if I will go or not. The place where I go, the work environment is good but you know, in good places you sometimes don't get job security. If you want work every day, the work can be hard and working conditions are not good. No one wants to go there and if you go there, they may give you work but it takes a lot of hard work. The place where I go, the work is easy. (Keshav, interviewee)

Client companies' practice of communicating their staffing needs last minute also means that those in part-time positions are occasionally surprised by the sudden cancellations of shifts they usually work every week. As with shift confirmation, cancellations are communicated the day before – thus leaving little time for workers to find an alternative with another client company to account for the sudden loss of income:

> I would work there normally every Friday but they cancelled my day for today, and they cancelled next week. So it's sort of irregular but it's usually a regular Friday gig. [...] For this week I found out yesterday and then they also told me about next week yesterday. But in the past I usually find out like a day before [that they cancelled]. (Steph, interviewee)

One participant notes that despite the practice of last-minute shift scheduling, client companies can think of temporary staffers who regularly take those shifts as on-call and obligated to accept them. Workers who regularly do not accept employment offers for the next day face the risk of losing the relationship with the client company:

> So some agencies won't mind as much [if the workers says no to shifts] but basically what happens is that the employer, because you have been coming regularly and are a contact and they've trained you, they sometimes blacklist you. I have a friend who this happened to, she was blacklisted from the employer. So you don't get shifts again just because you were taking a lot of holidays and weren't going there, so they drop you. (Sohan, interviewee)

One key informant who works as a labour rights activist and consults the Ontario government on policy issues relating to temporary staffing confirms this anecdotal evidence:

> So there are a lot of what I would call perma-temps where they are working for years at the same place. You know, temp agency workers will be in manufacturing and warehousing where they are part of the staffing model. They tend to be on an ongoing basis where they work over a long period of time. Where they kind of backfill for staffing at trucking or manufacturing facilities and get called in on daily basis. And so usually the reason people leave an agency is largely, I would say, as a reprisal for either speaking up or taking a sick day or trying to take a vacation day. That's usually when the quote-unquote "employment relationship" is severed when the worker tries to assert any of their rights. Other than that, they just stay on the roles. (Christine, labour rights activist)

To summarize, it is possible to secure full-time labour with a regular schedule through temporary staffing agencies in the Toronto CMA and it appears that the majority of workers prefer and seek out positions that provide such regularity. Stable

shifts are also available to those in part-time positions, although the need to confirm with the agency the day before can lead to shifts being cancelled last minute as client companies assess their staffing requirements daily. Further, some agencies and client companies in general labour fields uphold a system of competitive scheduling in which positions are distributed on a first come-first served, thus leading to precarious working conditions in which no shift is guaranteed. Lastly, participants in both full-time and part-time positions often forgo easier and safer work conditions, a control over their schedules due to forced over-time labour, as well as higher hourly pay for regular work, and their employment with a client company is predicated on compliance.

Pay

The hourly wage of staffing workers appears to be comparable to that of permanent employees in the same position. Participants in white collar positions regularly estimate that if they were to be hired on directly by the client company, their pay would remain similar to the rate paid by the staffing agency. The main difference of direct employment rather lies in the inclusion of benefits and contributions to social programs such as employment insurance and pensions, as demonstrated by the following quote:

> I don't think there will be a big jump in my pay. It will give me some increase. But if they hire me full-time, my pay will be less because they'll be taking off more deductions that my agency doesn't. For example, they might deduct more employment insurance. (Viraj, interviewee).

For those in general labour positions, social and medical benefits play a secondary role – presumably as full-time staff also do not receive them. Rather, economic stability in the form of guaranteed pay and shifts are the main draw of direct

employment. The exception is one participant who despite still being in a triangulated employment contract had been appointed shift lead at his placement:

> I mean, it would come with a bit of a raise. Let's say 10 to 12 percent if you will, depending on the company. And you get benefits. Contributions your RRSP, a bit of healthcare. That's pretty much it. (Allan, interviewee)

The process of receiving pay varies. While the majority of participants report receiving weekly or biweekly deposits from their agencies into their bank accounts, others report the need to pick up a cheque or even cash from their agency, place of work or a third location. Participants prefer direct deposits from the agencies as it reduces the need for travel– a point I will return to when discussing staffing workers' labour geographies in the next section– but also reduces the likelihood of not receiving pay from the agency or client company:

> When you are temping you can't guarantee that you are going to get paid, even if you assume that you are going to get paid. But sometime you have to fight to get that money. And she [the recruiter] advocated on my behalf to get me payment for like a week and a half worth of money. It [the pay] comes from the office. I wish it came from the agency. If it came from the agency, it would be easier because then, you know you're going to have a relationship with them. Usually, what happens is you get paid at the end of your shift or they say, oh, we'll e-mail money transfer you. The one that I'm temping at now on Fridays, they transfer me money, but I have to sometimes send them a reminder saying, hey guess what, I'm still waiting for that money. So I know they'll send it to me, which is why I go, but sometimes it's delayed. (Steph, interviewee)

While only one interviewee reports not receiving their pay at some point[26], international students in general labour settings in particular note that many in their peer group had experienced such scenarios and therefore avoid certain agencies. Additionally, some participants are willing to take lower wages if it means that payments are guaranteed. An example of this is outlined in the following quote:

> And I've heard of some agencies that then don't pay students the money. But the agencies through which I go pay. Even though they pay only minimum wage, they pay on time and there's no problem, no conflict. (Keshav, interviewee)

Overall, the hourly wage paid by client companies and agencies does not differ significantly from the pay of full-time employees. In some general labour industries, this means participants receive Ontario minimum wage ($14.35/hour at the point of data collection) – a rate which in the Toronto CMA is widely considered to guarantee economic precarity (Wilson et al., 2011). Specialized white-collar workers in longer placements can receive competitive wages of up to $30/hour, although the rate for entry-level office labour appears to be $15 to $18/hour. Interviewees report that their main concern lies not in the wage itself but rather the lack of a social net in the triangulated employment relationship – for example, respondents do not qualify for employment insurance if they lose their source of income–, as well as the risk of not receiving their pay for hours already worked.

[26] The interviewee stated the following: 'The employer was not so good. He had not given me my pay stub. He didn't pay me for the work that I did, that's why I left the work. I also used to work like an animal too.' (Rahul, interviewee)

Immigration Status

As mentioned in the Methodology chapter, the majority of interviewees (14) immigrated to Canada as adults. Two reasons emerge from the interviews as to why recent immigrants in the Toronto region often rely on mediated employment. First, Canadian employers do not accept the degrees and work experience gathered abroad and recent immigrants thus face what one key informant described as economic 'downward mobility for people who come with credentials from outside the country' (Christine, key informant). In practice, this means that participants who applied directly even to entry-level jobs at companies such as Walmart or Tim Hortons were rejected and told to first gain experience in the Canadian labour market. Mediated labour, which interviewees report does not require previous experience, therefore becomes the only plausible employment form for such newcomers. Indeed, many interviewees who had immigrated to Canada did not even attempt to be hired directly as they were informed by their informal immigrant communities (in-person or online) that finding direct employment as a newcomer to the Toronto CMA is unlikely. One key informant who is a labour rights activist and herself an adult immigrant from India describes the informal community support network which helps newcomers to the Peel region find employment:

> Whenever someone new is coming – a new immigrant– that's where they go first [a temporary staffing agency]. And I myself welcomed some of my family members in my time in Canada and then I took them to these temp agencies just to get them their first job. [...] Sometimes they are really comfortable, they know the work, they have some solution to get there and they don't want to leave it. I have seen a trend as well that all the newcomers to Canada are just going to that one agency, that one workplace. Because apparently, they found out from one person 'hey, this agency is good, and they pay you on time, they won't bother

> you for anything and they will be available year-round for you'. (Gita, labour rights activist)

Notably, one of the two interviewees who had emigrated from a country in the Global North (Great Britain) also describes that companies do not recognize her British university degree and work experience, thus also forcing her into a mediated labour relationship. Further, she heard about staffing through similar informal immigrant networks:

> Before I came to Canada, I applied for jobs online and then I stumbled across a Facebook page for Brits moving to Toronto where they said that you should start with a temporary job and then eventually, once you have that Canadian experience on your resume, you should be able to find a job in the career that you are trying to get into. It makes it easier, so that's why I decided that once I moved, I would go through an agency. And then pay the bills until I find something permanent. (Claire, interviewee)

The second reason recent immigrants pursue work through temporary staffing is that many agencies in the general labour sector appear to turn a blind eye on or even encourage informal work arrangements, such as untaxed cash payments or the provision of hours that exceed the limit recent immigrants are allowed to work according to their visa requirements. Three key informants working as labour rights activists report that the high international tuition fees often are prohibitive for those immigrating to Canada from the Global South for education. Students thus must rely on the additional income earned through full-time employment. However, the visa stipulation that students cannot work more than 20 hours per week during the semester limits how much students can earn through official employment and forces them into informal work

arrangements, which violate their visa stipulations. Labour rights activist Christine describes such informal agreements between immigrants and staffing agencies the following way – while also adding that immigration status and racial discrimination in the labour market are closely linked:

> You see workers who have precarious immigration status working through temp agencies because they will pay in a more informal basis. They will be able to get paid cash as opposed to getting a cheque, which helps them negotiate living with their precarious immigration status. And then there are low-wage racialized workers to whom temp agencies provide work when they face racism in the labour market. (Christine, labour rights activist)

None of the participants on student visas overtly confirmed that they worked beyond 20 hours during the semester or that they received undeclared cash payments. However, inconsistencies such as participants reporting that they worked five eight-hour shifts per week during their semester or stating that they had to travel to the agency weekly to pick up pay – despite having told me earlier in the interview that the agency paid them through direct-deposit– emerged in some of the interviews. When I asked participants to clarify such inconsistencies, they always declined to answer.

Informal arrangements not only jeopardize recent immigrants' status in Canada but also appear to increase the risk of workplace accidents. While those mediated through transnational agencies report receiving extensive training on dangerous machinery as well as being encouraged by their agencies to flag workplace safety violations at the client, student interviewees in seemingly informal arrangements regularly appear to receive little to no training by their agencies and client companies. One interviewee expressed it like this:

> Usually you have to do training because of their safety and health. Most companies require you to do that. They ask you to do that before you begin. Depending on the job, they are very strict with it. Some jobs are not. [David, interviewee]

In particular jobs in industrial food production such as bakeries, which seven of the international student interviewees have worked in, seem to have the fewest safety requirements and carry an increased risk of workplace accidents. One key informant remarked that 'five temp agency workers died [in industrial bakeries] this year' [Christine, interviewee] – a regular and well-documented occurrence in the industrial food production sector in the Toronto CMA (Mojtehedzadeh, 2017). An example of the relaxed safety standards at some agencies and workplaces is one participant who is a college student from India and at the time of the interview in September 2021 had been working full-time at an industrial bakery for one month in apparent violation of his visa requirements. He had not heard of the Health and Safety Awareness Training, a one-hour online training module mandated by the Ontario Ministry of Labour, which workers must renew annually and which most participants had to complete before being mediated. After I explained its function, he stated 'I don't remember doing that, there was definitely no such training'. [Ashwani, interviewee]

Overall, participants' immigration status contributes to their economic precarity as their qualifications and work experience gathered abroad are not recognized by the state and employers. Due to their lack of experience in the Canadian labour market, participants are excluded from direct employment relationships and systematically pushed into mediated low-wage employment relationships facilitated by staffing agencies, most often in the general labour sector. In particular for participants who are

international students from the Global South, their economic precarity can force them into informal working relationships with agencies where their working hours are not reported and are paid in cash, thus jeopardizing their immigration status and pushing them towards client companies in sectors with an increased risk of workplace injury. While there are some exceptions, it also appears from the interviews that the Toronto staffing market is divided with those with permanent residency and Canadian work experience mediated into the white-collar sector while those who are racialized and have instable immigration status are employed in the general labour sector.

The daily geographies of staffing labour

In this section I present the data on staffing agents' geographies in the Toronto CAM based on my qualitative fieldwork. This includes descriptions of the work locations, tasks and trajectories interviewees experience in the process of securing and maintaining placements, as well as how the location of housing and the access to transportation networks impact where they can work. Discussions of how the four factors of precarity– contract length, schedules, pay and immigration status– express themselves geographically are interwoven throughout the descriptions. Lastly, I present the results on the spatial divisions between white-collar and blue-collar labour.

Job training, microwork, and other staffing-related tasks

In this section I will describe the commonalities and variations among interviewees' labour geographies as they sign up for, are mediated into, and perform staffing labour in the Toronto CMA. The first contact participants make with the

staffing industry is by signing up with one or more agencies[27], which for both white collar and general labour interviewees usually is preceded by a prolonged period of unsuccessfully applying to direct employment. Participants report that agencies are either selected based on recommendations by acquaintances (in particular among students) or through a simple Google search. The process of signing up for agencies requires interviewees to perform at least a few hours of administrative labour– which can be performed at home or another location– to research and contact agencies and, in some cases, physical travel to the agencies and even police stations to receive background checks[28]:

> I made a list of recruiting agencies near me in Excel and then you register with them. Some require online registration, some require in person registration, some also require police verifications [background checks], and then these agencies call you and leave voice messages saying 'hey, we have this work' and then you can simply give your information to them. [Sohan, interviewee]

For general labour staffing agencies, the online registration and the subsequent phone call with the agency can be the only administrative labour prior to mediation to a client company. In white collar fields, however, participants often undergo a pre-screening process with the agency which takes multiple weeks to complete and involves travelling to the agency for intake interviews as well as unpaid tests performed either online or at the agency location. This process is exemplified by the following quote:

[27] There are some exceptions. Two participants in white collar positions were targeted by staffing agencies to fulfill a particular role due to their expertise; one is a recent MBA graduate while the other has a masters degree in project management.

[28] Participants generally try to avoid friction in the registration process and thus prefer agencies where physical travel to the agency and police checks are not necessary. The same interviewee, Sohan, did not register with agencies requiring in-person registration, stating that 'there were two agencies that were very good but they needed in person registration and police verification, so they charged $25 for that before giving us any work of promising us anything.' [Sohan, interviewee]

> So I signed up a while ago, pre-COVID and I had to do all these tests. You do a lot of tests, Excel tests. [...] The agency is downtown. I only went once or twice because they did an intake interview to go over the results of your tests. It is all very intense. The tests were online. And to be very candid, a waste of time that took several hours to complete. The Excel one took two hours and I'm not even getting paid. And it didn't make a lot of sense to me because the jobs are very... the majority of the ones they are posting, particularly the temporary work, are entry level or clerical by nature. (Emma, interviewee)

Once mediated, job training in the temporary staffing industry in Toronto is generally provided by the client companies without involvement from the agencies. As with direct hires, training occurs on-site (or online in the case of remote office labour) during regular working hours and is paid. The intensity of training varies widely among participants with some one-day receptionists reporting that they received no training apart from being provided a manual while those handling dangerous machinery or working jobs in the banking industry can be trained for up to a week. The most common form of job training, however, appears to be a day-long session during which the managerial staff of a client company inform participants about workflow processes. In general labour positions a particular emphasis is placed on workplace safety, which at the time of the interviews included COVID-19 guidelines:

> The first day you get briefed about COVID. And then you're also schooled about safety, what you should do, not do. If you have to pick up something and you can't, you need to call for help. It's basically about safety. Your right to participate, your right to refuse, your right to reject something that you think is not good for your health. (Talia, interviewee)

Only one respondent reports that she was trained by her agency rather than by the client companies. This participant, registered with a general labour agency, describes how the agency provided pre-emptive training for all potential client companies. Contrary to all other interviewees' experiences, this training took place at the agency (apart from the mandatory online Ontario Health and Safety module) and was unpaid:

> They [the agency] gave me the specific training for four companies where they told me that if there is work, we will send you there. I did four orientation sessions, which was just reading a book on the rules and regulations and on the last page there were questions to solve. I only did the health and safety training at home. For the other training, I went to the agency and there I read the book. (Priya, interviewee)

Once registered, mediated and trained, all participants perform at least some unpaid microwork in addition to their paid hours at the client company. The most common – apart from responding to competitive scheduling calls, collecting cash and cheque payments, and communicating with agencies about the extension of long-term staffing placements– is the check-in call with the agency. Recruiters regularly contact their staffing agents to ensure that the placement is going well, that both the worker and client company are happy, and to address any administrative concerns. Such calls are typically conducted outside of the staffing agents' work hours as recruiters do not want to disrupt the tasks staffers perform for the client companies. This is evidenced by the following quote from a key informant working as a recruiter for a transnational staffing agency:

> If I know they are on assignment, I am not going to call them [the workers]. That would interrupt their work. Typically, I will email them asking what is a good time to chat, can you call me on a lunch? So, I will email to initiate the conversation and then I call, or they call to follow up. (Kate, recruiter)

Recruiters' practice of initiating contact with the staffing agents outside of the client companies' work hours means that respondents are regularly (usually monthly but as frequently as weekly) required to communicate with their recruiter by email or phone during their leisure time. Often such calls will therefore take place in the early morning, evening, or on the weekends:

> She [the agency recruiter] calls at least every couple weeks to check in to see how I'm doing, what I like, what I don't like, if I'm sticking to the hours, etc. She likes to call at like 8am in the morning, which is when I do start work personally because I prefer it. But yeah, she calls at like 7pm, 8am in the morning or on Saturday at noon. The time means nothing to her. But I'm just like NO. My phone is on Do Not Disturb a lot, so it goes straight to voicemail. (Emma, interviewee)

None of the other respondents appear as comfortable ignoring their recruiters' calls as the participant quoted above, thus meaning that staffing workers often are forced to perform unscheduled and spontaneous microwork whenever they are contacted by their recruiters. The most commonly mentioned locations in which workers perform this microwork are the home, transit (particularly for email communication via smartphone) as well as the breakrooms at their client companies since recruiters will often call when they know that their workers are on lunch break.

Spontaneous microwork also is a necessity among interviewees associated with agencies who have competitive scheduling practices in which shifts are distributed among workers on a rolling basis. While participants have a sense of when agencies tend to send out the available shifts for the next day (usually in the late afternoon), the exact timing is unclear. Respondents therefore must be within the reach of their computer or phone and have service in order to respond to calls. One interviewee reports that she uses a smart watch to ensure that she immediately sees and is able to respond to notifications for shift openings regardless of her geographic location:

> I have my phone on me all the time and I get notifications. I just recently got a smart watch, so I have notifications that come into my watch. Usually on the website they [the agency] upload a calendar and you can put in when you are already working. So they only send you notifications to your stuff you're available for. So you know that if you're working on Monday, you're not going to get something for Monday. (Steph, interviewee)

The only other required work-related travel five participants perform is picking up their pay (in the form of a cheque or cash) from the agency. The frequency of this task varies from weekly to monthly. The five respondents, all of whom work for different agencies and do not know each other, report that they perform this task after their shift at the client company ends in the late afternoon and early, usually on Fridays. While the task of picking up pay is time intensive and unpaid, participants who have to perform this task report that their agency is located in close proximity to their home or place of work, thus making the task more convenient:

> I go once a week to pick up my cheque at the agency. I get there the same way as I do to get to work, just TTC. It takes about the same time as my regular

commute [approximately 20 minutes], but you don't have to walk. So the agency and the place I work are close. (David, interviewee)

Overall, while all participants perform some microwork at home or another non-workplace location, temporary staffing workers who have been successfully mediated to a client company very rarely have to visit other locations beyond their place of work. All participants but one (Meena, the most mobile participant who enjoys being mediated to multiple workplaces) only ever work at one client company per day[29]. Additionally, most respondents do not need to visit their agencies as the administrative correspondence takes place via phone or email – and did so even prior to the COVID-19 pandemic. Therefore, staffing agents' daily geographies in the Toronto CMA often resemble those of workers in fixed positions at a single location in which travel occurs along a single trajectory: they commute to a fixed place of work and back home.

Housing

Despite the home being the central point from which client companies and the agencies are accessed (as well as a location where participants perform much of their micro-work), respondents do not appear to consider the location of their housing in relation to their work locations. When prompted as to why interviewees choose to live in their neighbourhood, none of the respondents mention the accessibility of workplaces. Instead, participants mostly speak of the amenities available in their neighbourhood. This is exemplified by one respondent who lives in Scarborough:

[29] And even Meena avoids taking multiple shifts, stating that "I have to make sure that I am not double booked. And if I am, I have to text or email them [the agency] to give my shift away. But if I tell them the day before that I won't be able to work the next day after all, they will take away the next two weeks of shifts. Even if I'm scheduled, that's the penalty." (Meena, interviewee)

> Although it's a little far, I think that the bike trails up here are very nice. And the peacefulness of the neighbourhood and the amount of space that I get in my current unit is more ideal. I like that, I guess, after a long day of being surrounded by a lot of things in the environment I want to pretend that it's quiet and more peaceful. (Rachel, interviewee)

For those living within the City of Toronto, a core consideration when choosing their housing location is the proximity to the subway system. Indeed, one respondent who lives close to a subway station empathized with those without easy access by stating that 'not everyone has that situation and I don't know how other people do it, honestly' [Julia, interviewee]. However, while the easy accessibility of staffing jobs is a convenient side-effect of good transportation access, respondents evaluate the benefits of such access in light of their private lives, as exemplified by the following quote:

> How close was the subway – that was something that was very important to me. Originally, we weren't going to go any further than Dundas West station, but we ended up at Keele, which is where I stayed for many years. There were many reasons... there was a convenience store in the building, so that was a huge help, especially when I ran out of eggs. It was a 10-minute walk to other things like the LCBO [the Ontario liquor store]. But for me it was about the subway being close, it was a six-minute walk to the platform of the subway. So if I was meeting with a friend, I could zip over and go anywhere. (Laura, interviewee)

Correspondingly, most interviewees express contentedness with where they are living when prompted with the question of whether there would be any benefit to moving and what an optimal location for their private and professional lives look like. Those that do want to optimize their housing mentioned reasons outside of their

association with the staffing industry. For example, a student who had begun his studies during the COVID-19 pandemic and thus was taking online courses could imagine moving closer to campus once in-person classes resume:

> I have a friend from India who lives here [in Etobicoke]. So, I went directly to his place [when I moved to Canada] and I only live here because of him. If he wasn't here, I would have probably moved to Mississauga. Right now all the classes are online, so there is no question of where you live. Maybe I will move to Mississauga when classes start because I should be close to my college. (Keshav, interviewee)

When asked specifically if there would be a better location for the accessibility of staffing positions, respondents appeared apathetic or did not see any benefit to being located elsewhere in the Toronto CMA as the conditions within the temporary staffing industry are similar. The respondent quoted above stated "I usually just go to the warehouses and factories that are close to me. I prefer that" [Keshav, interviewee] while another said that "I'm happy where I live. You just go to where work is. You don't get to decide where it is." [Allan, interviewee].

There are two outliers who chose their current home location to optimize the accessibility of their staffing jobs. The first, Meena, is the most mobile of interviewees (by choice, not due to economic pressure) and lives in the heart of Toronto's CBD as both the TTC as well as the regional transit system are easily accessible. The second– Viraj– by contrast is among the least mobile participants as his staffing placement as a financial advisor in the banking industry, which he specifically moved to Toronto for, is secure for a year and he has a good prospect of being hired on full-time afterwards.

Thus, he chose his home location to have an easy commute once his job mandated a return to the office post-COVID-19:

> [I chose my home location] because of my office. They said that I might need to be working in the downtown, so I was looking at the transport cost and the bike cost and I found the place in downtown. Because even if you stay somewhere far you would spend $135 for your monthly transit pass. So I thought if I put that in my rent, I could get a place downtown where I could walk. So I chose downtown. (Viraj, interviewee)

What unites these two outliers is that they are among the most qualified participants and have found staffing placements in industries related to their education. Viraj has a MBA and works as a financial advisor while Meena is a university-trained health-care professional. Overall, however, most participants do not appear to consider their housing in relation to their work in the temporary staffing industry.

Transportation

The accessibility of transportation networks and modes has the largest influence on respondents' labour geographies in the Toronto CMA[30]. As discussed in the previous chapter, participants set a maximum commute duration acceptable to them, which they often communicate to their agencies. There appears to be consensus among interviewees that half-hour commutes are considered preferable and commutes beyond one hour are unacceptable. Interviewees generally reject long-term placements further than one hour from their house and, if necessary, switch agencies to guarantee a staffing position at a more conveniently located client company. The distance– and therefore the amount of

[30] Of course, excluding those able to tele-commute from home during the COVID-19 pandemic.

accessible potential staffing placements– that can be travelled in the Toronto CMA within that one hour depends on interviewees' transportation mode, the centrality of their home location, the industry in which participants are placed, as well as the built environment of the client company's surroundings. Respondents thus report highly uneven access to workplaces across the GTA in which those mediated into general labour positions often face longer commute times yet cover shorter distances. Further, the lack of a unified ticketing system between municipal transit authorities effectively barres some participants from accessing workplaces located closest to their house due to the financial burden.

Most respondents (17) rely exclusively on public transit to commute to their staffing placements. Four respondents use a private vehicle alone while an additional three occasionally carpool with colleagues or through agency-organized ride services. Additionally, three participants rely on active transportation: two report walking to work while one uses her bicycle in addition to public transit.

Interviewees who work in subcentres along the 401/407 highway corridor and use public transit often highlight how much shorter their commute time would be if they had access to a car. Such dissatisfaction is universal not only among participants located in the peripheral Peel, York and Durham regions but also those living and working outside the City of Toronto's downtown core, for example in Scarborough or North York. The added commute time stems from the low-density built environment and limited transit accessibility in the Toronto CMA's subcentres where the warehousing and manufacturing industries who rely on mediated general labour are located. Participants describe that while transit stops are located in close proximity to their houses and the service frequency is reasonable, the final walk between the last transit stop and workplace is often far and adds to their commute time. This pattern is

exemplified by the following quote of an interviewee living in North York and working in an industrial bakery located in the Vaughan subcentre:

> I take one bus and then walk [to the bakery]. But walking can take a while, 11 to 15 minutes. It [the entire commute] takes maybe 40 minutes. (David, interviewee)

While for most participants the potential time savings of using a car are abstract as they do not have access to a personal or shared vehicle (and thus accept their placements knowing that they will be commuting by transit), the uneven access to workplaces in the periphery of the Toronto CMA based on transportation mode is highlighted by one interviewee who relies on his colleague to carpool. The participant lives in Mississauga and works at a single client company which manufactures chairs and is located in the 401/410 Mississauga subcentre near the Toronto international airport, approximately 10 km from his apartment. On days when his friend is not available, the participant is forced to take public transit, which adds approximately one hour to the commute:

> By car it's 15-20 minutes and by public transit it takes about 1 to 1.5 hours. [...] From my house, I have to take transit and the stop is within two to three-minute walking distance. And after that I have to change at a major intersection. I have to take another bus, I take two buses total. The transit takes a lot of time because the buses make a lot of stops in between. It's a long time, not so good. You spend 15, 20 or even more than half an hour in transit. Then it's a twelve-minute walk [to the factory] from where the transit drops me. (Rahul, interviewee)

The reported discrepancy in commute time between taking the car and public transit is especially stark among participants living and working in the periphery of the

Toronto CMA. However, one interviewee living the City of Toronto's greater downtown area reports a similar pattern. Contrary to most other downtown participants whose placements are primarily located in the CBD, this particular interviewee lives and works on the west end of Toronto's downtown. Her home is located in Liberty Village while her staffing placement is in The Junction neighbourhood. Although the distance between her apartment and work is only 5 kilometers, the need to transfer and walk to and from the nearest stops when using public transit doubles the commute time when compared to driving (or cycling):

> [I take] TTC or Uber, depending on how I late I would be. But I will be driving soon, next week. [It takes] like 40 with the TTC and like maybe 16 or 17 minutes with UBER. Less than 20 minutes. (Fatima, interviewee)

In contrast, interviewees working in the CBD never mention the potential time-savings of driving to their place of work, most likely due to the downtown core's high connectivity via multiple public transit modes and the impracticality and cost of parking downtown. Indeed, the uneven access of workplaces across the Greater Toronto Area in which the CBD is the most connected node is exemplified by one participant who lives in an inner-suburban community in Scarborough but has commuted to various temporary staffing placements in Toronto's business district for years. Despite a distance of nearly 20 kilometers between the participant's house and staffing positions, the location of her house near a subway station and GO Train (the Toronto CMA's regional rail system) grants her multiple ways of customizing her commute depending on the destination's location in the CBD – all within a commute time of 30 minutes door-to-door:

> So it really depends. Because if I work on the yellow line or near the station [Union Station, Toronto's central train station], then I take the Go Train. So for me where I live, I am conveniently situated five minutes to either a subway station or GO train. [...] If it's on the green line, I take the subway. On the yellow line and closer to Union Station, I'll take the Go Train. It [the commute] takes half an hour. (Julia, interviewee)

An additional factor which influences uneven geographic access to staffing positions in the Toronto CMA is the lack of integration between municipal transportation agencies. As outlined in the previous chapter, the municipalities of Brampton and Mississauga as well as the York Region have their own independent transit systems in addition to the City of Toronto's TTC and the regional GO Transit system, which services the entire Greater Toronto and Hamilton Area. The existence of multiple transit authorities provides an additional barrier to the potential workplaces participants can reach within their accepted travel times as interviewees must purchase a new ticket when transitioning between municipal transit systems. The participants most affected by the existence of multiple transit systems in the Toronto CMA are those living in residential areas near municipal borders where transit service areas end: residents of the North York area living in close proximity to the City of Toronto/York Region border as well as students living near the Brampton/Mississauga municipal boundary where colleges popular among international students, for example Sheridan or Lambton College, are located.

The main barrier to using multiple municipal transit systems is not the lack of physical integration– participants report that transfers between transit systems are easy– but rather the prohibitive financial cost of paying multiple times for various transit authorities during a single commute, all of which charge approximately $3 per

trip. As discussed earlier in this chapter, a spatial division exists within the Toronto CMA where low-wage, general labour staffing work largely is performed in peripheral subcentres located near the City of Toronto, Peel Region and York Region borders where issues of transit integration arise. Thus, interviewees most affected by multiple independent transit authorities are those earning the lowest wages. Participants therefore reject or quit positions which require them to regularly use more than one transit system as they cannot afford to pay to use more than one transit authority daily, as highlighted by the following two quotes:

> I had to use two buses, so that was a bad thing. I used public transit to get there [the former placement the participant had recently told the agency she did not want to work at anymore]. I live in Toronto, so I had to take Toronto transit. But the factory was in the York Region, so I had to tap my card [i.e. pay] as well for that bus. (Priya, interviewee)

> Mississauga Transit, Toronto Transit, York Transit, Brampton Transit... they are all connected, so it's easy to find ways to get to a location. But it's not worth it, the amount of money and time. In transit, it was like two, three transfers [to go to a placement she no longer wants to go to], so you would be looking at around nine to ten dollars [each way] for that trip. (Meena, interviewee)

In some cases, agencies address the lack of transit connectivity by providing private bus and carpooling services to workers they have mediated to client companies in inaccessible locations. In particular the Bolton subcentre, whose peri-urban character, growing importance in the warehousing industry and lack of public transit connectivity to the rest of the Toronto CMA I discussed in the previous chapter, is mentioned by several key informants and two staffing workers as a destination where such private

transportation services are used. While the provision of private transportation services appears to be an unusual practice in the Toronto temporary staffing industry outside of the Bolton example, such private transportation is not uncommon for other forms of precarious and contingent labour in the GTA. One labour rights activist associates this practice with informal day labourers working in peripheral locations in the Peel and York Regions but living in low-income neighbourhoods within the City of Toronto, such as Parkdale, where 'we've got vans that come pick people up say at 6am and deposit them at various workplaces – so that would be a bit more word of mouth' (Christine, labour rights activist).

The two respondents who rely on their agencies' private transportation to their placements in the Bolton subcentre are international college students working in the low-wage general labour sector. Both live in Brampton near the college they attend. It is unclear why both participants do not find staffing positions located closer and accessible by transit (for example, two additional interviewees that live in the same neighbourhood have placements in warehouses and light industrial factories in the nearby Pearson International Airport subcentre)[31], especially since the daily transportation rate charged by the agencies– in addition to the mediation fees they already deduct from staffing workers' pay– are a significant financial burden:

> Usually what happens is that the warehouses in which the agencies hire are very far from the main city. So I have been to one warehouse that is in Bolton and in fact there is no means of public transportation there. Because I don't have a car, there is no means of transportation. If I take an Uber from my home there, it

[31] A possible explanation is that the agency and client company are willing to provide employment conditions which violate the participants' student visa conditions, either by providing hours exceeding 20 hours per week or paying in cash. When asked how he received his pay, one of the participants working in Bolton answered 'What can I say... I think I would like to skip this question actually.' (Sohan, interviewee)

> costs around $40 one way. So if I go there for my work for an eight hour shift, I hardly make $100 and I'll have to spend $80 on transportation. But the agencies have the solution where they have a few cars providing transportation as ride services in which you have to pay like $10 to $20 and then the car will pick you up from your home and then drop you at the warehouse and then pick you up at the end of your shift and drop you at home. (Sohan, interviewee)

While Bolton's inaccessibility by public transit still makes it an outlier among the typical labour geographies for temporary staffing workers in the GTA, those familiar with the warehousing industry in the Toronto CMA see Bolton as part of a larger emerging phenomenon in which larger facilities are being built on peri-urban land where public transit service to the rest of the Toronto region is non-existent. Thus, it is possible that the provision of ride services by agencies may become more common in the long-term, if the trend continues. One labour rights activist knowledgeable about the Toronto CMA's distribution and logistics industry contends that the establishment of new warehouses is driven by land cost:

> A lot of these new warehouses are adjacent to farmland. So people are going all over the place and the GTA is expanding. People just start new facilities that are being built further and further away where things are cheaper. So people are going further and further. They [the staffing workers] will carpool with each other because Bolton exists where nothing is. So public transit is really bad. (Robert, labour rights activist)

Overall, while all participants are able to control their maximum commute time and labour geographies by seeking a new placement or, if necessary, switching agencies, the number of potential client companies that can actually be accessed within the

specified time depends on transportation mode, transit availability and cost. These limitations create highly uneven labour geographies where general labourers in particular are restricted to client companies usually clustered in one or two subcentres located nearby.

The spatial division between low- and high-wage staffing markets

While interviewees are able to control their immediate geographies by seeking out agencies that will mediate them into long-term and full-time placements in close proximity to their place of residence, evidence of larger structural barriers in the staffing and broader labour market emerged throughout the interviews which limit the mobility of workers. The pattern is that in particular recent immigrants are restricted to low-wage general labour largely performed in peripheral subcentres while those with Canadian citizenship or permanent residency are able to access white collar labour performed in the CBD or back-offices located within the City of Toronto. While there are exceptions, this spatial division is often racialized and cannot be easily bridged.

As outlined earlier in this chapter, recent immigrants without Canadian experience are systematically excluded from the standard labour market, especially in white-collar sectors. The spatial effects of this exclusion is that newcomers are not only barred from higher-wage labour, often performed in offices, but also from traditional entry-level positions in retail or food-services, which tend to be located along easily accessible commercial corridors, and forces them into the temporary staffing industry:

> Basically, international students, when they come to Canada, cannot find a job through LinkedIn, Indeed or something because they do not have Canadian experience. When you come to Canada, the first thing people ask is where is your experience. So people apply at Walmart, Tim Hortons because they are desperate

> [...]. But Walmart and Tim Hortons also need references and check on them on a regular basis. So if you don't know anyone, it is really hard to get into this. So you talk to the seniors at college or the friends that you make here, and everyone tells you the same thing: just google the recruiting agencies near me. (Sohan, interviewee)

Within the temporary staffing industry, participants appear to be sorted by general and white-collar labour skills and are mediated accordingly, even when switching to other agencies. In part, this pattern can be traced back to participants' desire to reduce commute time – interviewees are thus restricted to the agencies and client companies located nearby, which tend to cluster by industry. However, the participant with the longest experience in the staffing industry as both a worker and recruitment agent, suggests that the division between high and low-wage staffing markets is structural:

> Yes, you do have to go to the agency first, absolutely. It's like any other job. They're not testing you, it's more to see where can we place her. Is she corporate, is she blue collar. How you present influences the type of work you get. That's just the reality of it. And I know that because I worked as a recruiter. So they always look at you to see if you're put together. It's very superficial. But I guess that happens in a lot of interviews anyway. So they make their judgement based on how you present. And even if you say this is what I am looking to do but it's not what their clients are looking for, they will take your resume and try to sell you on something else until they can find you what you want. It depends on how desperate you are. How bad do you need the cash. (Isabel, interviewee)

The participant quoted above does not outline the criteria recruiters use to sort applicants, yet the contextual evidence of my fieldwork suggests that immigration status as well as Canadian education and experience are central considerations. All but one interviewee working in the general labour sector had immigrated to Canada within the previous three years. The exception is Mark, a White Canadian citizen who works in an auto-parts factory in Ajax. He further is an outlier among the interviewees as, despite having the fewest qualifications (Mark is the only participant without any post-secondary education), he is the only general labour worker offered direct employment, stating that 'I started in June 2020 [...] and on November 2nd, 2020 I stopped working through the agency and was brought on' (Mark, interviewee). In contrast, three of the four participants who had immigrated to Canada in the previous five years and were mediated into white-collar labour positions located in the City of Toronto had graduated from Canadian universities while the other is a university-educated Black British citizen. Thus, these four outliers either have professional experience in Canada or hail from an English-speaking country whose university degrees are more easily recognized within Canada. Their status thereby differentiates them from other recent immigrants from the Global South who are still pursuing Canadian post-secondary education.

The existence of institutional and systemic barriers in the Toronto region's temporary staffing industry is particularly evident among participants living near the City of Toronto's borders to neighbouring municipalities. Neighbourhoods such a North York or Scarborough are ostensibly the only residential areas in the Toronto CMA from which white-collar staffing jobs in the City of Toronto– clustered in the CBD, scattered within the greater downtown or located in back offices along the 400-level highways– are just as accessible within participants' preferred commute time as the major peripheral subcentres along the 401/407 highway corridor where most of the general labour

placements are located. Yet, despite this equal geographic access, the institutional barriers are still evident. The three participants who live in the North York area and have Canadian citizenship or degrees from Canadian universities are mediated into white-collar staffing positions located in the CBD, Toronto's midtown, or in back offices near the Don Valley Expressway, as highlighted through the following quotes:

> [The workplace is] little bit past Eglington and Don Valley. Basically, I would ride the bus for 25 minutes along Eglington. And then it's on a little side street there [...]. But I've changed roles a few times. I work downtown now. (Becky, interviewee)

> I live in North York, but east. The ones that I was temping in back in March [2021] are North York, but the West End. And then where I'm working now – the temp one that's once a week– is in the heart of the financial district downtown. (Steph, interviewee)

In contrast, the four participants who are recent immigrants are exclusively mediated into general labour positions located in the Vaughan and Markham subcentres, exemplified by the following quote:

> I live close to downtown Toronto. Some people like to call it Sherwood Park area [on the North York border]. They [the warehouses he works at] are located in Vaughan and Markham area. (Allan, interviewee)

While for two of the four participants mediated into general labour fields there may be language barriers preventing them from accessing white-collar positions, two others– an economics student at the University of Toronto and an engineering

undergraduate at York University– have full professional fluency in English and could ostensibly be mediated into placements in higher-wage industries.

In summary, temporary staffing agents in the Toronto CMA tend to have stable labour geographies in which they commute within a small geographic area or along a fixed trajectory. While participants are able to have short commute times, various structural issues such as immigration status, education and experience determine whether staffing workers are placed in high or low-wage industries. Further, the access to transportation networks– both spatially and financially– limits the number of client companies workers can reach within their commute time. Due to these structural issues, there is little upward mobility within the temporary staffing industry and few benefits to being located elsewhere in the Toronto CMA.

Discussion

In the Toronto CMA's staffing industry, the ability to secure long-term placements at a single place of work appears to be a privilege granted by agencies and client companies rather than a power held by workers: as outlined in the previous chapter, it is in the economic interest of client companies to build institutional knowledge and for agencies to minimize the administrative cost of mediating workers into multiple positions. The analysis from the *workers perspective* presented in this chapter shows that interviewees have little recourse to last-minute contract extensions beyond switching to another agency and can face immediate termination if they decline overtime hours or take time off. Another indication that workers hold little power in determining their placement duration is that, with few exceptions, interviewees came to the staffing industry after failing to secure direct employment in the labour market and therefore have little negotiating power. The prevalence of informal work practices, especially among international college students, additionally indicates that staffing

labour in the Toronto CMA is one of the most precarious forms of employment and that participants, at least at the time of the interview, have few other options in the labour market[32].

As a result, interviewees experience precarity in the form of insecure work contracts, low-wages and a lack of social and medical benefits. Yet, their daily labour geographies are predictable and, apart from some microwork each month, the default appears to be that work is performed at a single location with a regular commute. Indeed (and somewhat counterintuitively given the reputation of the temporary staffing industry), short-term flexibility and high geographic mobility appears to be something temporary staffing workers in the Toronto region opt into rather than out of. All participants who work day or week-long placements– either as receptionists, dental assistants, or students wanting to work during lulls in their course work– had opportunities to secure medium to long-term placements or even direct employment, which they actively rejected in favour of their personal flexibility.

The advantage of the mediated employment relationship for client companies in the Toronto CMA therefore may lie in medium to long-term placements which balance the benefits of non-standard labour– reduced HR costs, flexibility and the ability to respond to seasonal staffing needs (Hatton, 2011; Weil, 2014)– while maintaining a knowledgeable and well-trained staff. These findings leave compelling room to discuss how flexible labour practices affect the ability to measure economic urban form based on census data. As highlighted in the literature review, non-standard labour and the gig economy are often equated with workers holding multiple short-term positions concurrently and travelling along complex trajectories due to their reduced workplace

[32] That being said, for most participants staffing labour is a temporary solution. All but one interviewee working in the general labour are pursuing post-secondary education and there are some indications that Canadian experience and a completed degree grants access to full-time employment.

power – although contrary evidence from the *immobility* perspective exists. Yet, at least in the context of the Toronto staffing industry, such presumed hyper-mobility is experienced by few outlier cases. The majority of interviewees report rather stable geographies for reasons (client companies' desire for both stability and flexibility, workers' hope to reduce the negative impacts inherent in precarious labour arrangements, and all parties' goal to reduce administrative work) transferable to other non-standard and precarious labour practices. There are indications that both personal autonomy and external pressures (such as discriminatory labour market dynamics) lead to (self-)imposed immobility. Further, workplace mobility is often discussed within a dichotomy between highly mobile privileged workers and the precariously employed. However, the results in this chapter show that a third class of workers may exist whose wages are close to the median Toronto income and who achieve economic and personal benefits through labour trajectories that take them throughout the entire metropolitan area. I will further discuss these findings in detail in the next chapter.

Conclusion

The findings presented in this chapter, which concludes the results section of my dissertation, confirm and expand upon some of the evidence summarized in the previous two chapters. While it was known that most temporary staffing labour in the Toronto CMA is performed in economic centres and subcentres and that workers tend to minimize their commute time, I demonstrate in this chapter how uneven the access to workplaces in the Toronto CMA is for participants. The Toronto staffing industry can be subdivided into two geographically separate markets– general and white-collar labour– which are largely independent from each other and draw on different labour pools. Which of these staffing markets can be accessed by participants depends not only on interviewees' location in the Toronto region and their physical and monetary access to transportation networks but also on their immigration status, education, amount of

Canadian experience as well as how dire their economic situation is. While all interviewees experience precarity and insecurity as defined by Rodgers (1989), those is general labour placements face even lower wages, fewer chances for direct employment and a higher risk for workplace injury. Overall, and most importantly to this project, multi-month placements at a single client company appears to be the most common standard in the Toronto staffing industry and is desired by all three parties in the triangulated employment arrangement. While their work arrangement may be temporary and precarious, participants' daily trajectories often resemble those of workers in long-term employment arrangements associated with the standard employment relationship. I will tackle the broader theoretical implications of these findings in the next chapter.

Chapter Seven: Discussion

In the previous three chapters I presented the fieldwork results stemming from a census microdata analysis as well as qualitative data collected during 32 interviews with temporary staffers and key informants in Toronto, Ontario. Each of the three results chapters– the quantitative analysis of census microdata as well as the two analyses of interview data from the *agency* and *worker perspective*– ended with a brief discussion section which outlined the chapter's main findings and questions that emerge. However, in this chapter I finally synthesize the overarching findings of all three results chapters and return to the objectives and research questions set at the end of the literature chapter. The purpose of this chapter is to discuss the theoretical and methodological implications of this research.

As a brief reminder, the objective of this PhD thesis is to critically examine the validity of location-based methodologies to approximate urban form in light of the wide-spread adoption of non-standard labour forms by incorporating qualitative research. Further, I aim to understand the social processes through which precariously employed temp workers negotiate their workplaces in the Toronto CMA. As this thesis is written in partial fulfillment for a doctoral degree in urban planning, the objectives are therefore also approached from a planning perspective – meaning that the spatial implications of these findings (particularly as they relate to the built environment and transportation networks) are viewed through a normative lens in which some outcomes are more desirable than others. As such, the chapter is divided into three sections. First, I discuss the implications of my mixed-methodology research for the conceptualization and measurement of urban form based on census data. In the second section I propose how inclusion of the *motility* framework can aid our understanding of how workplaces are negotiated and theorize how the geographies of non-standard labour should be understood. Thirdly, I briefly outline how the Toronto CMA can be understood as

polycentric from a planning perspective and use this case study as an example to argue for the broader inclusion of urban economic geography literature in the field of urban planning.

Census data, interviews and the methodologies of measuring urban form

A main finding of this doctoral study is that location-based methodologies, which approximate economic urban form based on publicly collected data such as the census, do generally capture where temp workers in the Toronto CMA perform their labour. As highlighted in Chapter Four, the use of urban economic geography methodologies to identify the location and size of employment centres based on census microdata show that the Toronto CMA is polycentric, which is consistent with previous studies conducted by Duquet & Brunelle (2020) and Shearmur et al (2007). Further, the census data show that for the majority of temp workers who declare a regular place of work, the declared address is within one of the Toronto CMA's economic centres. The interview data subsequently confirm that even participants whose work would not be locatable with census data– and therefore are part of the roughly 30% of workers whose place of work classification would be categorized as *no fixed place of work* under the Canadian census (Ali et al., 2021; Putri & Shearmur, 2020)– predominantly work for one client company at a time. These client companies most often are located in Toronto's economic centres. Further, while there are exceptions, interviewees tend to be assigned for longer periods of time (i.e. multiple months or at least weeks) and consecutive mediations take place at client companies co-located in close proximity to each other within the same economic centre. Daily mobility in the form of remote and microwork also is a rare occurrence for most temp workers. Therefore, while such participants do not have a stable employer, their labour geographies tend to not be that different from interviewees in more stable placements and census data do, on aggregate, approximate where most temporary staffing labour is performed. These findings are

consistent for both interviewees in white collar positions whose work takes place in the CBD and back-offices near the 401/407 highway corridor (although some transitioned to remote work during the COVID-19 pandemic) as well as those in blue collar positions who are mediated into manufacturing jobs located in subcentres.

A main conclusion I draw from this research is that the theoretical and methodological take-aways for the future of measuring and conceptualizing urban form strongly depend on the theoretical lens one applies to the research. As outlined in the literature review, the empirical measurement of urban form using census data was born out of the need to establish broad facts about the location of economic activity in metropolitan areas and to describe the changes– specifically the suburbanization of workplaces– that were occurring as a result globalization and advances of transportation technologies beginning in the 1970s (Fujita & Ogawa, 1982; Giuliano & Small, 1991; McDonald, 1987). The purpose of the density-based methodologies is to track long-term changes to the size and spatial distribution of agglomerations as well as identify where specific industries are and whether co-location patterns between these industries exist. Partially in response to the uncertainty surrounding the extent to which non-standard labour and ICT-facilitated mobile work (both virtual and physical) are changing the organization of urban economic space, however, some researchers are arguing for more dynamic models of measuring urban form which draw on network theory to establish a temporally and relationally flexible understanding metropolitan areas (Burger & Meijers, 2012; Louail et al., 2015; Meijers et al., 2018; Vasanen, 2012, 2013). Further, functional polycentricity aims to determine the actual integration of centres as proximity does not guarantee interaction (Pain, 2008). While these two streams, summarized as *morphological* and *functional polycentricity*, are often presented as dichotomous and as standing in opposition to each other (Green, 2007), their concerns are not necessarily incompatible: it is indeed possible to map the broader facts about the distribution of

economic production while also investigating how physical and virtual network flows as well as how economic integration between centres occur (Burger & Meijers, 2012). Particularly the evidence gathered during the interviews, which show that the demand for temp work fluctuates throughout the year but that workers tend to work within a regionalized geographic area, can be used both in support of a morphological approach to urban form concerned with long-term changes to the spatial distribution of the economy as well as dynamic model in which temporal changes in the use of networks are a central consideration.

From a morphological perspective, the findings presented in this research project offer further evidence that although the number of respondents that do not declare a locatable place of work has steadily grown, census data– at least in the Canadian and specifically the Toronto CMA context– can still be used to map where work is generally performed and to infer the broader organization of economic activity from it. As outlined in the literature review chapter, the location-based methods developed in the 1980s and 1990s acknowledged that the geographies of some employment– specifically vehicle-based jobs such as trucking but also mobile personal service work– would not be captured by census data (Fujita & Ogawa, 1982; Giuliano & Small, 1991; McDonald, 1987). However, as the purpose of these analyses was to approximate the distribution of economic activity, the impact on the overall results was expected to be marginal. As the number of workers who do not declare a fixed place of work has grown in recent years– in large part driven by non-standard labour contracts (Ali et al., 2021)–, the ability of respondents who declare fixed places of work to approximate the distribution of the economy for the entire population has come under theoretical scrutiny (Burger & Meijers, 2012; Shearmur, 2018; Stevens & Shearmur, 2020). Daily work mobility facilitated by ICTs, i.e. the ability to perform some or most labour free from specific geographic restraints, further adds to the theoretical uncertainty concerning the

empirical accuracy of census based methods (Hislop, 2013; Pajević, 2020; Schwanen & Kwan, 2008).

Despite the presumed flexibility of temp workers (Fudge & Strauss, 2014), a central finding in this case study on Toronto is that both client companies that rely on longer-term staffing placements as well as those that rely on stop-gap labour in the form of day long placements are predominantly located in economic centres and subcentres as identified by the census analysis. While these findings are of course specific to the Toronto CMA and especially the region's temporary staffing industry, there are indications that these patterns are not unique but may apply to other metropolitan areas and other flexible labour arrangements as well. As discussed in the literature review, non-standard labour arrangements have grown especially in low-wage positions and a direct link between non-standard labour and an increase in the amount of work that cannot be located using census data has been drawn (Ali et al., 2021; Hatton, 2015; Kalleberg, 2000). The findings presented in this thesis are therefore consistent with other empirical studies that find that the effects of ICTs and non-standard labour arrangements on the spatial organization of work in cities may be over-estimated (Elldér, 2015; Shearmur, Parra-Lokhorst, et al., 2021). They also support Alexander et al (2010, 2011) and Burchell et al's (2020) conclusion that the majority of labour performed by workers under precarious employment conditions takes place on the employers' premises and that ICTs do not play a large role in most low-wage jobs apart from some scheduling and coordination[33].

[33] While coordination and scheduling may not have large impacts on the overall distribution of economic centres, the rise of this type of additional labour in the gig economy is still noteworthy as it is unpaid and also can lead to spontaneous and on-call work relationships which change precarious workers' interactions with their employment sites (Stevens & Shearmur, 2020).

In light of this existing literature, this thesis' findings are not unexpected. As workers in low-wage positions are expected to perform their labour on site, their places of work are in part decided by industry-specific agglomeration economies and zoning laws. For instance, industries such as logistics, warehousing and manufacturing– but also some administrative office labour which may require specialized computers, proximity to paper data archives, or for a person to be physically present to send and receive packages– are constrained by land use and zoning restrictions. These restrictions mean that there are limited areas in which companies can locate and in which precariously employed workers therefore can work, most often in warehouses or back offices located in peripheral subcentres (Anas et al., 1998; Jacobs et al., 2014). An additional finding of theoretical importance is that mobile work in *third spaces* as well as hybrid work arrangements are not common in the Toronto CMA's temporary staffing industry, even among higher wage white collar workers or even the key informant recruiters. It must be acknowledged that this is likely in part due to the timing of data collection during the COVID-19 pandemic when many of the traditional mobile work locations such as cafés and coworking spaces were closed and most computer-based office-based labour was confined to the home (Alves et al., 2021; Kingma, 2016). However, even during the pandemic, client companies' physical office was still integral to the labour of temp workers as many of the respondents working in receptionist and administrative labour were still performing all or most of their computer-based labour onsite due to their client-facing role (for example in medical offices) or the need to have someone be able to scan and email digitized versions of paper documents. Further, interviewees who were permitted to work from home all expected to make a full return to the office post-pandemic, thus indicating that workplace locations are not only decided by land use but also by organizational structures and management decisions – a point I will return to in the next section.

While the finding that workers most often perform their employment in the CBD and economic subcentres is largely expected, the regionalized nature of temporary staffing in the Toronto CMA leaves compelling room for discussion and theoretical assumptions that may be made in future research. Previous studies on temporary staffing assume that the spread out distribution of client firms in Canadian CMAs as well as the propensity of general labour agencies to located in close proximity to low-income neighbourhoods means that temp workers travel within the entire metropolitan region (Peck & Theodore, 2001; Stevens, 2021; Vosko, 2006). Yet the interview data provides evidence of the control even the most precariously employed temp workers have over their labour location and trajectories, which most workers use to work in close proximity to their residential location. While I will discuss the process how the labour geographies of temporary staffing agents are negotiated and why such labour immobility may indeed be common within the broader low-wage labour market in the next section, the regionalized nature of the Toronto staffing market does support Shearmur (2021) as well as Shearmur, Ananian et al's (2021) proposal of approaching labour mobility through the lens of probability space. Methodologically and theoretically, the likely labour locations of census respondents with *non-fixed places of work* (Putri & Shearmur, 2020) may therefore be approximated by considering their residential location: according to the findings in this thesis, it is probable that the majority of such mobile workers may be consecutively or concurrently employed in the economic centre nearest to their place of residence.[34]

[34] If the purpose of future analyses is to establish the broader spatial structure of the economy, stating the theoretical assumption that most census respondents with non-fixed placed of work likely work in the nearest subcentre may likely be sufficient. While it would be possible to create a predictive mapping of such respondents' labour geographies based on their place of residence, this step may be unnecessary as other respondents' place of work data would already provide indication where the majority of non-fixed census participants work. Furthermore, there would be some error to this approach as the labour geographies of respondents in truly mobile jobs– for example in the transportation and logistics sectors– would be wrongly labelled. However, as the impact of these respondents on the overall mapping of the economy has always been deemed negligible, such mapping errors may be assumed to have limited impact on the analysis.

However, the results presented in this thesis also support the argument that census data– captured once every five years and meant to provide a snapshot of the particular moment it was collected in– is too static to fully capture the morphology and functionality of urban form on its own. From this perspective, additional data sources such as interviews, communication information flow or live commute data are needed in addition to location data collected during the census to fully understand how urban space is used (Green, 2007; Pain, 2008; Vasanen, 2012). In particular, three findings made during the qualitative data collection portion, which reveal information about the geography and temporality of temporary staffing in the Toronto CMA and are not observable when using census data alone, can be used to argue for a more dynamic approach to measuring urban form.

First, the analysis of interview data from the *agency perspective* demonstrates that the temporary staffing industry undergoes multiple seasonal changes throughout the year in which the ability for workers to find placements fluctuates according to the hiring needs of client companies. These seasonal fluctuations cannot be seen in census data. In particular, client companies in the warehousing, logistics and manufacturing sectors– all of which are largely located in the peripheral subcentres along the 401/407 highway corridor– need more staff during the months leading up to December and downsize during the spring. This evidence shows that employment density in economic centres fluctuates throughout the year and that this fluctuation is at least in part facilitated by flexible hiring practices. While further research is needed to identify exactly how much of their temping staff client companies lay off and re-hire throughout the year, the initial findings in this thesis suggest that the changes to employment density in Toronto's peripheral subcentres could be quite substantial throughout the year: both key informant as well as temp worker interviewees state that at some client

companies up to 80% of workers in the manufacturing and warehousing sector are mediated by an agency. It is therefore plausible that some subcentres in the Toronto CMA which I classify as major or minor employment zones based on the employment to residential ratio method using census data would change classification (i.e. a major subcentre may be classified as a minor subcentre) if the data were collected during a different time of year. I will be returning to the implications of these findings for urban planning theory and practice later in this chapter.

The issues that may arise from using static census data as the only foundation for measuring and describing employment distribution in metropolitan areas are especially underscored by the finding that Statistics Canada conducts its census precisely during a time when Toronto's staffing market is being renegotiated. As stated in previous chapters, the 2016 Canadian census questionnaire asks respondents to specify their employment situation during the first week of May that year. Incidentally, as the university and college semesters end in April, early May is precisely the time when the Toronto staffing market sees an influx of international students who are allowed to work full-time during the summer months, thus making it more difficult for non-students to find placements. Additionally, participants report that certain industries reliant on staffing labour such as auto insurance are re-hiring during this time while manufacturing and warehousing still require fewer staff than during peak season. In light of these findings, it is interesting to speculate how the census data analysis of the Toronto staffing market presented in Chapter Four would change if the data had been collected at a different moment in time. As the census is based on self-classification, it is entirely plausible to imagine that more census respondents classified as temporary staffing agents would declare a *fixed place of work* during an August census when many staffers in Toronto are in the midst of a multi-month placement with a single employer. Further, it is equally plausible that fewer respondents would have been without a

placement (as mentioned in Chapter Four, 34.3% of census respondents in the employment services sector did not work the week of the data collection) if the census were collected during a different week in which the staffing market is not experiencing the sudden influx of student labour.

A second finding which presented itself only during the interviews and which can be used in support of a more dynamic approach to urban form is the widespread practice of workers needing to physically pick up their pay at third locations– i.e. their agency or in some cases payday loan establishments. While only few participants undertook these trips themselves at the time of the interview, many had previously experienced the need to pick up cheque or cash payments. Further, such trips are observed in other contingent labour arrangements such as day labour in North America (Purser, 2019; Theodore, 2003; Theodore & Peck, 2002) and have even been reported within the Toronto CMA itself (Mojtehedzadeh & Kennedy, 2017; Vosko, 2000). A consistent finding in both this thesis as well as other studies is the norm that physical pay needs to be picked up on Friday afternoon after workers complete their shift. Additionally, this practice appears to be particularly widespread in general labour positions which are usually performed in peripheral subcentres. The conclusion that therefore must be drawn is that a sizeable number of people concurrently display unusual commute patterns in the periphery of the Toronto CMA on Friday afternoons in which their usual movement patterns are altered to accommodate a stop to pick up their pay for the week. While these patterns do not affect where work is performed, they do demonstrate how network ties in urban areas are relationally and temporally flexible and therefore can take on different meaning throughout the day, week or year – a central argument for scholars arguing for more dynamic approaches to urban form (Barthelemy, 2016; Burger et al., 2014; Louail et al., 2015; Sarkar et al., 2019).

Lastly, this study offers further arguments for the inclusion of qualitative research methods into the field of urban economic geography not only to study changing labour mobility but also to confirm whether results from quantitative analyses of urban form are recognizable to residents of the study area (Pain, 2008). Indeed, researchers using employment density-based methods of measuring urban form have long drawn on their local knowledge of metropolitan areas to reflect upon the empirical categorization and differentiation of minor or major subcentres and the definition of continuous employment corridors (see Anas et al., 1998; Bogart & Ferry, 1999; Giuliano & Small, 1991; Small & Song, 1994). The need for a qualitative line of inquiry is especially evidenced by the growing importance of the Bolton subcentre as a hub for online retail warehousing within the Toronto CMA. This development is consistent with recent observations of peri-urban *logistics sprawl* related to online retail in other North American metropolitan areas such as Chicago, Baltimore and Washington (Dablanc et al., 2017; Schorung, 2021). However, since Bolton has consistently been classifiable as an economic centre in census-based studies of the Toronto CMA's urban form since the 1990s (Duquet & Brunelle, 2020; Shearmur et al., 2007), its changing role in the online retail logistics system goes unnoticed using quantitative methods alone. As the industries historically located in the Bolton subcentre also appear to have been in the warehousing and logistics sector according to key informant interviews, a sectoral-specific analysis using industry classification is also not possible as Warehousing and Storage (NAICS 493) (the most detailed census category) does not specify which goods are stored.

To conclude this section, the evidence presented in this study further adds to the growing body of research that suggests that the effects of ICTs, gig work and subsequent labour mobility on morphological economic urban form may be overestimated from a methodological perspective concerned with mapping broader

economic developments in North American cities. Despite temp work's association with flexible labour practices that are assumed to result in complex labour geographies, the interviews confirm that census data does generally capture where temporary staffing labour is performed in the Toronto CMA. The interview data further demonstrate that contrary to the assumptions often made in research on low-wage labour mobility (Popan, 2021; Stevens, 2021; Vosko, 2006), the majority of low-wage labour is performed onsite and in close proximity to workers' homes (Burchell et al., 2020; Schewel, 2020). Thus, both daily mobility in the form of hybrid work arrangements and multiple consecutive gigs appear to be uncommon within mediated labour arrangements.

Methodologically, the inclusion of a mixed-methodology case study on the labour geographies of precariously employed workers who commonly declare a *non-fixed place of employment* provides evidence that location-based methodologies of mapping economic urban form based on Canadian census data still sufficiently map the location of employment centres. Furthermore, these centres can approximate where the majority of mobile labour whose employment locations are not captured by the census perform their labour. Given the pervasiveness of such census data-based methodologies and the geographic similarities found international adoption of mediated labour arrangements (Coe et al., 2007, 2011; Fudge & Strauss, 2014), there is no reason *per se* to believe that the findings made in this study apply only to the Toronto CMA or even Canada as a whole. However, the interview data do reveal temporally dynamic employment patterns within the Toronto temporary staffing industry that affect the labour geographies of participants throughout the year and are not captured by census data. Further, the inclusion of qualitative data demonstrates that the functionality and meaning of economic centres can evolve over time– as exemplified by the Bolton subcentre– and that this change may not necessarily be reflected by morphological changes in the urban form. While these findings do not preclude the use of morphological methodologies based

on employment location data, they do demonstrate the usefulness of including alternative data sources as well as the need for future studies on urban form to state the objectives and methodological decisions of the research clearly.

Motility and labour (im)mobility

As mentioned throughout this thesis, a central concern in both the economic geography and mobility scholarship is how to understand and conceptualize the movement patterns of workers whose labour cannot be assigned to a fixed place of work (Felstead, 2012; Hermelin & Trygg, 2012; Shearmur, 2018). We must differentiate between two types of mobility here: first, there are the broad changes to the organization of the labour market in which many workers have multiple concurrent or consecutive gigs throughout the year and thus can longer be assigned to a single employer (Altenried et al., 2021; Popan, 2021; Stevens & Shearmur, 2020). Second, there are questions about daily mobility in which workers have the ability to work in hybrid arrangements, third spaces and cafes (Kellerman, 2016; Kingma, 2016; Pajević, 2020) – thus even for workers with a fixed place of work the question becomes whether the employer's address fully captures where work is actually performed.

The findings made particularly during the qualitative portion of this research project contribute a better understanding of not only *where* mobile workers perform their labour but also *how* these workplaces are negotiated between the worker, employers, and– at least in the case of temp workers– a client company. This is of importance because *how* labour mobility is negotiated is understudied: with the exception of Kesselring (2015), empirical studies usually simply record places of work and their related trajectories while discussions about the power relations and economic pressures that influence where work is performed tend to be largely theoretical (Boltanski & Chiapello, 2005; Kesselring, 2006; Shearmur, 2018). Yet the inclusion of

the *how* into the empirical study of workplace mobility is paramount. Shearmur (2021)– like others (Elldér, 2019; Kellerman, 2009, 2016)– concludes that the effects of ICTs and the gig economy on where work is performed may be overestimated and argues that workplace mobility should be approached through probability. Shearmur et al (2021) have begun the process of demonstrating the importance of proximity and probability in selecting workplace locations empirically. The assertion of this theory is that the locations where work is performed are not chosen at random but that some workplaces are more likely to be chosen than others – for example cafés or co-working spaces in close proximity to the employer's address or the home. In this section I build upon this theory and demonstrate the value of integrating qualitative research into economic geography research concerned with the location and movement patterns of labour by discussing the results through the *motility* (i.e. mobility potential) as well as *immobility* frameworks (Kellerman, 2016; Preece, 2018). I use these frameworks to argue that power relations as well as workers' economic reasoning must be considered in future theorizations of workplace mobility and how work locations are negotiated – especially for low-wage positions that have historically been assumed to be highly mobile due to their weak negotiation position in the labour market (Burchell et al., 2020; Premji & Shakya, 2016; Premji, 2017).

The consideration of the *motility* framework (also known as mobility potential) in the empirical measurement of labour mobility and urban form is particularly helpful as it allows us to differentiate between the power the worker holds to shape their own labour geographies, the pressures that may exist from employers and clients, and lastly external constraints (i.e. access to transportation, etc.) – all of which are deciding factors in determining the constraints on how mobile workers can be. This framework is helpful in light of the precarious employment conditions temp workers experience as participants' ability to control their immediate labour geographies by limiting their

commute time can be interpreted and discussed in multiple ways: on the one hand, it can be understood as an assertion of labour power by an otherwise precarious workforce. On the other hand, there are indications that such short commutes are the result of workers' precarity rather than in defiance of it, and instead can also be attributed to the interchangeability of entry-level staffing jobs, low pay, poor transit connections and punitive measures enforced by client companies and agencies[35]. In this section I break down and discuss the evidence on how temp workers' labour mobility is negotiated using the three factors– *physical ability*, *acquired skill* and *organizational skill*– Kaufman (2002) and Kellerman (2016) identify as central to determining mobility potential.

Findings about access to transportation modes and networks as well as the ability to perform work remotely are central to the discussion of the interview data from the *physical ability* perspective, which describes the access to physical and virtual mobility. It is here that a division between the mobility patterns of lower and higher wage temp workers become apparent. First, a differentiation must be made between workers who have access to virtual mobility and those who do not. Despite the timing of this research in the midst of the COVID-19 pandemic which pushed respondents in office-based administrative labour into remote work in ways that are consistent with the overall office-based labour force (Alves et al., 2021; Gallent, 2020), the majority of workers participating in this study were still performing their labour on site. This pattern can be attributed to the prevalence of essential labour sectors using temp work in the Toronto CMA, for example in logistics and healthcare (Anderson et al., 2021; Anik et al., 2021). Further, while at least some ICT-based microwork is performed by almost all respondents (the most common are the check-in call and the process of finding new agencies), few respondents engage in regular ICT-based administrative work regarding

[35] It should be noted that the assertion of independence by the worker and external limitations on their labour geographies are not necessarily contrasting ideas but can very much occur concurrently.

scheduling or the coordination of multiple gigs on the go. Rather, the majority of administrative work is performed from the home, which is a pattern that has long been recorded and predates the adoption of ICTs by the general population (Olson, 1983; Salomon, 1986).

As for physical mobility, this study contributes to a growing body of research that demonstrates that low-wage workers who do have to perform their labour on site are geographically limited by uneven access to transportation choices, thus giving them fewer options as to where their work can potentially be performed (Attoh, 2012; Blumenberg & King 2019; Verlinghieri & Schwanen, 2020). While I will discuss implications for the field of urban planning in the next section, the extent to which respondents are limited by uneven access is linked to their residential location as well as the industries they are mediated into, with those working and living in and around peripheral subcentres reporting more complicated commutes involving more transfers, irregular schedules and longer walks to and from stops. It is well-recorded that the suburbanization of low-wage residential and work locations creates the potential for longer commute times than for those living or working in the CBD (Blumenberg & King, 2019; Hulchanski, 2010; Manaugh et al., 2010). Yet, the finding that all respondents aim for a similar commute time – ideally 30 minutes with a maximum of an hour– despite their residential location demonstrates that even precarious workers are still active agents capable of asserting some spatial and temporal control over their geographies (Odih, 2003; Premji, 2017).

However, the ability to travel within the Toronto CMA is not only affected by uneven physical but also financial access to transportation networks. The finding that the non-integrated ticketing system in the Toronto CMA is a barrier to which job locations can be physically accessed draws attention to the need to consider how

individuals use economic reasoning to determine their labour geographies. General labour workers living near the Toronto–York Region and York Region–Peel Region borders regularly discern whether or not jobs are worth the extra transit cost, thus showing consistency with other studies that demonstrate that labour immobility is at least in part an economic decision on the part of the worker (Altenried et al., 2021; McPhee, 2016; Preece, 2018; Stevens & Shearmur, 2020). The extent to which limited financial means reduce the mobility potential particularly among precarious workers is evident from the higher income respondents for whom transit cost is less of a concern or who may even have access to a personal vehicle. While some of the patterns regarding uneven access to transit are specific to the Toronto CMA– for example the existence of multiple transit authorities with non–integrated ticketing–, this research further demonstrates that points of friction in transit networks and low-wage workers' potential responses to them must be considered when discussing the labour mobility of precarious workers (Attoh, 2012; Premji, 2017).

In addition to *physical ability*, the second factor that influences the geographic access temp workers in the Toronto CMA have to workplaces is *acquired skill*, which describes the access to knowledge and qualifications. The discussion here is complicated as both internal and external factors influence what geographies can be accessed. The relative stability of temp workers' contracts as well as the small geographic area in which they commute can be interpreted as an assertion of control by the worker. In this interpretation, temp workers acquire knowledge of the Toronto CMA's staffing industry, learn which placements are accessible within their commute time and, as seen multiple times throughout the interviews, seek out specific agencies that can ensure stable positions in close proximity. Indeed, this interpretation is consistent with recent studies on the mobility of low-wage workers which consistently find that participants limit their

geographies as they build informal networks and get to know their transit system (McPhee, 2016; Preece, 2018; Premji, 2017; Stevens & Shearmur, 2020).

However, throughout the interview analysis it becomes apparent that both education and immigration status– which I, imperfectly, categorize as a 'qualification' for the sake of this discussion– are deciding external factors that influence which geographies workers are granted access to. As demonstrated throughout the results chapters, temporary staffing in the Toronto CMA, like in many other metropolitan regions, is divided into two distinct staffing markets: the low-wage general and higher-wage entry-level white-collar labour markets (Gottfried & Fasenfest, 2001; Peck & Theodore, 2001; Ward, 2004, 2005). These two markets are, at least broadly speaking, geographically separated with general labour being performed in peripheral subcentres along the 401/407 highway corridor while most white-collar labour, even in lower-wage positions, is performed within the City of Toronto and especially the greater downtown. The interviews reveal that participants are almost exclusively sorted into one of those two streams based on Canadian education and immigration status.

In particular for workers sorted into the low-wage general labour stream by their agency– most of which are recent immigrants and often still post-secondary students– the quality of placements is fairly evenly distributed throughout the Toronto CMA, at least within peripheral subcentres. The short commutes of most temp workers in lower-wage positions who access jobs located in the nearest subcentre can thus be interpreted as a recognition that there is no locational advantage to accessing jobs in one economic centre over the other: a warehousing placement in the Markham subcentre offers the same employment conditions as one in Brampton. Similarly, there is no economic incentive for entry-level white-collar workers to pursue a data entry placement in the CBD over a back office in Mississauga or North York. The finding that participants

usually do not optimize their residential location to access better staffing jobs further indicates that other factors– such as education, gaining Canadian experience and continuously applying to positions offering direct employment– are the keys to economic upward mobility rather than geographic relocation (Fuller & Stecy-Hildebrandt, 2014).

Indeed, evidence that supports this interpretation is not found by looking at the geographies of higher-wage white collar workers who favour long-term placements that can lead to permanent employment but rather the few outliers that expressed willingness to accept shorter gigs and travel along longer and more complex trajectories in exchange for higher wages and experience in their professional field. What unites these outliers is their professional training at Canadian post-secondary institutions in fields such as project management and health services. Further, they use temporary staffing agencies as only one avenue of many (including platform labour, LinkedIn and job databases such as Indeed) to secure gigs. It is these outliers that are the only participants who regularly work both within the CBD, peripheral subcentres as well as the residual employment zones that are of neighbourhood importance, and who optimize their residential location to provide better transportation access within the entire Toronto CMA. The complex trajectories of these outliers are partially enabled by their positioning in the job market: project management and receptionist skills are transferable to multiple different industries found across the economy while medical offices are– apart from specialists– neighbourhood level services that are found throughout the metropolitan area.

The finding that both interviewees in the highest and lowest income brackets tend towards immobility due to *acquired skills*– or in the case of precariously employed labour workers, the lack thereof– while some middle-income workers travel along complex trajectories is relevant in light of current discussions and conceptualizations of

workplace mobility. Thus far the research tends to make a dichotomous distinction between high and low-wage workers in which the urban labour mobility of high-wage workers is discussed in the context of hybrid work arrangements, the emergence of *third spaces*, global mobility, and– particularly in light of the COVID-19 pandemic– work from home arrangements (Alves et al., 2021; Caywood & Rinaca, 2021; Gallent, 2020; Hislop & Axtell, 2009; Kesselring, 2006; Kingma, 2016). Discussions of mobility relating to low-wage work revolve around questions of (im)mobility and the control workers have over their labour geographies (Burchell et al., 2020; Popan, 2021; Premji & Shakya, 2016; Premji, 2017; Stevens & Shearmur, 2020). However, this thesis points towards the potential existence of a third category of temp workers in the Toronto CMA whose educational and professional experience in fields with highly transferable skills grants them access to a labour market with wages that are close to the median income in the Toronto CMA and complex trajectories that resembles the geographies generally associated with gig labour and the *hustle economy* (Friedman, 2014; Hesmondhalgh & Baker, 2010; Menger, 2017; Ravenelle, 2019; Thieme, 2018)[36]. These findings closely mirror Loacker and Sliwa's (2016) conclusion in their study of labour mobility among academics and artists that the most mobile individuals are middle-income participants striving for more stable employment positions. Due to the low number of respondents in this category, little can be said about this class of workers in this thesis beyond acknowledging their existence. Yet their reliance on temporary staffing in addition to other employment resources such as job banks, social media groups and labour platforms indicate that while a minority, such highly mobile middle-income workers are likely quite common in the Toronto CMA's labour market. Additionally, the job search resources described above are all commonly observed in liberalized labour markets

[36] The higher wages do not exclude these workers from experiencing some precarity though. Especially respondents working in medical administration report that they use temporary staffing to earn extra income as their permanent employment does not provide enough hours. Furthermore, these respondents are more likely to double-book themselves due to their complex schedules and experience punitive measures from their employers.

around the world and the experiences described by respondents are therefore likely not unique to the Toronto CMA or even Canada (Coe et al., 2007; Enright, 2013; Fuller & Stecy-Hildebrandt, 2014).

The most direct impact on the workplace mobility of temp workers in the Toronto CMA is seen from the *organizational skills* framework, which describes the ability of all parties involved to plan and synchronize work-related activities, as it most clearly demonstrates that a reduction of geographic movement and a simplification of trajectories is in the interest of workers, agencies and client companies alike. The analysis from the *organizational skills* framework further provides the strongest insight into the negotiation process and exertion of power that underpins how workers' labour geographies are constructed.

As already briefly discussed at the end of Chapter Five, recruiters aim to reduce the administrative burden on themselves and the agency as a whole. The main reason for this is that the mediated labour business model incentivizes long-term placements as agencies will collect a passive fee from the client companies while providing little administrative oversight. Second, recruiters need to build personal relationships with workers and client companies alike, thus requiring time intensive communication that can be reduced by finding long-term placements in which the worker and client company take on a majority of the administrative labour concerning pay and scheduling. Client companies aim to maintain a well-trained employment base that can still be flexibly adjusted. Concurrently, client companies in both general labour and office-based industries reduce their administrative costs by outsourcing human resources – a well-documented use of staffing agencies by client companies around the world (Coe et al., 2008, 2012; Enright & Pemberton, 2016; Peck et al., 2005). Workers, while still employed under precarious non-standard employment conditions, generally aim to find

medium to long-term placements in order to experience stable schedules, regular income and a predictable work location. This is desirable for the majority of respondents as the performance of microwork such as scheduling shifts daily or performing additional administrative labour to collect their wages is seen as burdensome.

However, while temp workers have some influence on the social and organizational process of negotiating their labour geographies, the results do suggest that stable employment is a side effect of client companies and agencies alike striving for maintaining an administratively flexible (i.e. easily fireable) yet long-lasting workforce. Thus, the analysis from the *organizational skills* perspective has important theoretical implications for how we may understand daily labour mobility (i.e. the process of working at multiple locations throughout the day either in a hybrid work arrangement or as consecutive gigs) for low-wage workers and may explain why empirical studies on labour trajectories find that labour mobility patterns are often less complex than initially theorized (Burchell et al., 2020; Elldér, 2015; Hislop & Axtell, 2009; Popan, 2021; Premji, 2017; Stevens & Shearmur, 2020). An indication for the reasons why client companies and agencies may want to reduce their staffing workers' mobility is found in the punitive regimes that exist in the Toronto CMA's staffing industry. The findings that client companies and agencies enforce temporary bans or even the termination of placement relationships when participants accidently double-book multiple shifts, cancel a regular placement or assert employment rights such as taking a vacation provides insight into how flexible labour practices are viewed by client companies that rely on temporary staffing labour in the Toronto CMA. Indeed, similar punitive patterns have been observed in other precarious employment relationships as well, for example among nannies in Montreal (Stevens & Shearmur, 2020), restaurant workers in Sweden (Axelsson et al., 2017) or care work in Switzerland (Pelzelmayer, 2018). There are indications throughout the interviews that the root of such punitive measures is the lack

of organizational ability by agencies and client companies alike to respond to labour shortages; recruiters describe that the process of finding last-minute replacements requires an intensive administrative effort that they often perform in the evening or early in the morning. Workers report that client companies' outsourcing of HR functions diminishes these companies' ability to address short-term staffing issues as they do not have in-house personnel capable of quickly responding to staffing shortages. Furthermore, the last-minute contract extensions reported by office workers in long-term placements demonstrate that much of the administrative work performed by recruiters and HR personal at client companies occurs *ad hoc*.

Of course, *organizational skill* cannot be divorced from workplace power. The weak negotiating position of temp workers as well as the additional complications of a triangulated versus a direct employment relationship must be considered. Yet there is reason to believe that the desire to reduce organizational friction does contribute to employers aiming to control the labour mobility among their employees in other contractual arrangements as well – even those with more workplace power for whom business travel is part of the job (Kesselring, 2015; Kesselring & Vogl, 2010). Kesselring (2015) describes this process through which employers exert control over the *motility* of workers even outside of the working hours as *corporate mobility regimes*. Pajevic (2020) similarly finds that even among tech workers with high levels of geographic independence, the location and medium of meetings (virtual vs in-person) strongly depends on the manager and their preferences, and that meetings deemed important by the manager often take place on-site. In particular, companies' responses to the COVID-19 pandemic further demonstrate that even high-power employees such as tech workers– most of which moved toward remote work during the initial stages of the pandemic– have limited power in negotiating their labour geographies: the auto-manufacturer Tesla ordered a return to the office in June 2022 (Bernstien, 2022) and many employers places

geographic restrictions on where employees could perform remote work, for example by mandating that workers had to remain within a jurisdictional boundary to avoid administrative complications (Liu, 2021).

To tie this discussion back to the broader literature, the inclusion of the *motility* perspective demonstrates some of the theoretical issues that arise from studying the economic geography of labour primarily through spatial analysis. Specifically, while some observed patterns such as some respondents' decision to travel further for higher paying jobs are consistent with classic location theory principles foundational to the field of economic geography, the extent to which employment conditions are socially, rather than economically, constructed must be acknowledged (Boltanski & Chiapello, 2005; Rosenfeld, 2021). Especially the exclusion of recent migrants– despite often being university educated and fluent or even native English speakers– from the direct employment labour market is consistent with long-standing observations by Feminist and Marxist economic geographers of gender, education and ethnicity-based labour market segregation (Hanson & Pratt, 1988; Massey, 1995; McDowell, 2015). As touched upon in the literature review, Hanson and Pratt (1988), but also Pain (2008) and Phelps (2017), criticize the focus on workers in the KIBS sectors' labour geographies and attribute this overemphasis to the demographic similarities that exist between the mostly male and university educated researchers and third sector workers.

A pertinent yet underexplored point that arises from the analysis of interview data using the *motility* framework is that both economic reasoning and social construction are essential to the spatial organization of labour markets, and that both co-exist on a gradient. Hanson and Pratt, Pain, as well as Phelps correctly attribute the focus on the KIBS sectors to the profiles of researchers studying their labour geographies. However, such workers, through their workplace power, are also least

affected by the social construction and segmentation of labour geographies and are thus most quantifiable according to location theory principles. Their *motility* allows for the geographic flexibility needed to act economically by engaging in longer commutes, displaying intraregional commuting patterns or even moving between regions in pursuit of higher wages (Burger et al., 2014; Cooke, 2011). Research based on high workplace power respondents can therefore, in isolation, be used in support of neoclassical economic theories of labour market construction in which individuals maximize their earning potential through locational advantages, yet requires such research to overlook the managerial restrictions placed on such workers (Kesselring, 2015; Pajević, 2020; Scott, 2011). While this oversight might be negligible for high-wage workers, the overemphasis of location theory principles is inaccurate among precariously employed workers who are limited by the social construction of labour markets (Adamson & Roper, 2019; Burchell et al., 2020; Gray et al., 2017; Reuschke & Ekinsmyth, 2021). The proposed solution to counter this inaccuracy has been the inclusion of qualitative data collection to better understand the social processes through which labour markets are negotiated and through which gendered and racialized labour market segregation occur (Hanson & Pratt, 1988; Pain, 2008; Phelps, 2017). This thesis provides additional evidence that qualitative research is needed– especially in light of COVID-19 which has further entrenched spatial employment inequities (Reuschke & Ekinsmyth, 2021)– and proposes that the *motility* framework could be used to differentiate between labour geographies that are consistent with location theory principles and those that can be attributed to social labour market segregation.

To summarize, the discussion of the data using the *motility* framework gives important insights into the physical organization of the temporary staffing industry in the Toronto CMA and how the labour mobility of workers employed under precarious labour contracts is negotiated. Temp work in theory has the potential for high degrees

of geographic flexibility– for example in the form of multiple concurrent and consecutive gigs–, yet the *motility* of workers in this industry is greatly reduced by several factors. While many of these findings are unique to the temporary staffing industry and the Toronto CMA, the discussion of the interview data in light of the *motility* framework provides important contributions to the empirical measurement and theoretical conceptualization of urban labour mobility.

First, the results further indicate that the most mobile workers in the North American urban job market may be ambitious middle-income employees, while precarious workers and high-income earners may tend towards more stable labour geographies (Loacker & Śliwa, 2016). However, this pattern needs to be further explored as the majority of studies on urban labour mobility have focused on high-income workers (Hislop & Axtell, 2009; Kesselring, 2006; Pajević, 2020) and, to a lesser extent, low-wage workers (Anderson, 2010; Odih, 2003; Stevens & Shearmur, 2020). Empirically, this discussion outlines that future studies on urban labour mobility need to place a stronger emphasis on the physical and financial accessibility of transit networks as a determining factor for the actual and probable labour geographies of individuals. The reason for this inclusion is that precariously employed temp workers in the Toronto CMA appear to limit their geographies based on economic reasoning in which they aim to reduce both commute time and cost. While some of these patterns are of course unique to the Toronto CMA and also shaped by respondents' ability to secure longer-term gigs (which may not be possible in other urban areas), there is no reason to believe that this economic reasoning does not apply to low-wage workers elsewhere. Lastly, the analysis from the *organizational ability* perspective outlines that a stronger differentiation between organizational and geographic flexibility is needed in the study of labour mobility. The field of labour studies has long distinguished between the two concepts by acknowledging that non-standard labour practices do contribute to

long-term yet insecure work arrangements, for example through forced part-time labour (Hatton, 2014), *permatemp* positions (Enright & Pemberton, 2016) or perpetual freelance labour contracts (Hesmondhalgh & Baker, 2010). The punitive measures by employers to assert geographic and temporal control over their workers recorded in this as well as other studies (Anderson, 2010; Kesselring, 2015; Kesselring & Vogl, 2010; Peck & Theodore, 2001) as well as the self-imposed immobility of many high and low-wage workers indicate that despite the geographically flexible reputation of temp work and other non-standard labour forms, a reduction of complicated trajectories and gig arrangements may be in the interest of employers, client companies and the workers alike.

Implications for planning theory and practice

In this section I will briefly discuss the results within the context of planning theory and practice in Canada and Toronto. Of course, the Toronto metropolitan region has a limited utility as an example for other Canadian planning contexts as its status as a North American megaregion and second tier global city must be considered (Ali & Keil, 2006; Brail, 2021; Todd, 1998). As highlighted in the literature review, the promise of labour mobility enabled by ICTs creates the potential of metropolitan regions attracting highly-skilled workers. This promise has resulted in planning and policy strategies aimed at incentivizing workers (and industries) to temporarily or permanently relocate to metropolitan areas with the purpose of being competitive in a global economy (Hutton, 2015; Institute for Mobility Research, 2013). Kesselring (2013) as well as Amekudzi et al (2012) argue that megaregions thus are especially susceptible to intraregional mobility inequality with investment disparity between infrastructure projects that serve global competition–a pattern Keil and Young (2008) explicitly observe in the Toronto region and is exemplified by express rail connections between the CBD and airport opened in 2015 (Amar & Teelucksingh, 2015)– and those that are of

local importance. Thus, some of the planning implications related to findings specifically concerning the existence and integration of multiple municipal transit networks may be pertinent only in other megaregions.

Overall, however, the findings in this thesis do suggest that the morphological and functional polycentricity of the Toronto region as expressed by the distribution of economic centres and the subsequent mobility patterns of respondents is under-considered in planning decisions, which likely applies to other polycentric urban regions in Canada as well. To an extent, this is not surprising: it has long been argued that the lack of collaboration between the fields of economic geography and urban planning can be attributed to an ideological division relating to the epistemological approach and methods of the fields (Alexander et al., 1987; Frey, 2003; Rydin, 2013; Shearmur, 2010). In particular Frey (2003) argues that the normative and interventionist approach of planning practitioners influenced by human geography is at odds with the historically positivist thinking of urban economic geographers who link urban economic distribution to larger path-dependent shifts in the global economy[37]. Yet, the results therefore demonstrate a need for better integration and collaboration of urban economic geography and planning practice and research. The census analysis demonstrates that while the CBD is still the economic centre with the most workers within the Toronto CMA, the subcentres located along the 401/407 highway corridor do, on aggregate, attract more workers. As re-iterated throughout this thesis, polycentricity has been a dominant morphological and functional urban form in large North American metropolitan areas– including the Toronto CMA (Duquet & Brunelle, 2020)– since the early 1990s. However, the qualitative interviews expose that transportation networks have not been sufficiently adapted to adequately serve the resulting transportation needs

[37] As shown earlier in this chapter, this positivist thinking has long been challenged from within the economic geography discipline as well (Hanson & Pratt, 1988; Massey, 1995; McDowell, 2015).

and patterns and thus further contribute to the uneven access to workplaces in the Toronto CMA. Three findings in particular are of relevance here that can be improved with transportation planning tools.

First, the interviews suggest that while most respondents are able to easily reach adequate transit stops near their place of residence and that service frequency and transfers between lines are not an issue, the majority of respondents working in peripheral subcentres have difficulty accessing their workplaces due to the lack of public transit options in areas with industrial land use which forces them to walk for the last 10 to 15 minutes of their commute. Furthermore, the lack of connectivity in the periphery offers few lateral connections to economic subcentres, which are necessary for non-car using cross-commuters. These findings demonstrate that while the growth in peripheral cross-commuting in polycentric urban areas has long been recorded by urban economic geographers (see De Goei et al., 2010; Dökmeci & Berköz, 1994; Giuliano & Small, 1993; Gordon et al., 1989) and transit planners (Amar & Teelucksingh, 2015; Leck et al., 2008), this problem is underexplored in North American planning practice.

Planning solutions for the densification of transit availability in peripheral areas have centred around the development of transit-oriented development (TOD) which aim to increase residential density around high-impact transit stops (Boarnet & Crane, 2001; Qviström et al., 2019), which may explain why even respondents in low-density suburban communities report good transit connectivity to the CBD within walking distance from their homes. However, TODs are usually centred around suburban/urban commute patterns and thus have been criticized for their limited utility towards addressing peripheral commute patterns and reaching economic subcentres (Belzer et al., 2011; Deboosere et al., 2018). Furthermore, the need to improve the accessibility of low-wage jobs in peripheral subcentres is a matter of planning equity, which is demonstrated

by Boarnet et al's (2017) finding in the San Diego context that car commuters are able to access 30 times as many low-wage jobs within a half hour commute as transit users, which is linked to the high number of low-wage jobs located on the periphery.

On the surface, the most pressing issue thus appears to be the densification of transit stops in peripheral subcentres with industrial use as it is especially here that workers are underserved despite the high density of on-site employment in those regions. However, while the densification of transit stops would undoubtedly have some positive impact on the commute times of temp workers in the manufacturing and warehousing sectors, the far walks in peripheral subcentres are more likely attributed to land use planning. The spatial requirements of the sectors located in the periphery, which include large building footprints for warehouses and expansive parking lots for trucks, lead to sprawling employment centres where– despite the high number of workers– the density of workers per square kilometre may still be low. Some of these spatial requirements are inherent to the functionality of these industries, yet the finding that the number of workers present in peripheral subcentres fluctuates throughout the year based on labour supply demand leaves compelling room for further exploration regarding the theorization of urban economic space as it relates to land use planning. The design problems that emerge from planning for such peak use– especially relating to sprawl, urban heat island effects and streetscape design– have been discussed in the context of automobile dependence (Goodwin, 2013; Newman, 2012) and retail parking lots (Davis et al., 2010) but can be applied to industrial land use planning as well. As with street design and parking lots, restrictive land use planning may disincentive unnecessary industrial sprawl and lead to denser development. Such restrictions may be especially useful in the context of expanding *logistics sprawl* in peripheral subcentres such as Bolton where warehouses accommodating online retail– a known culprit of designing infrastructure

capable of handling demand peaks around Black Friday or holiday shopping (Laseter et al., 2018; Schorung, 2021)– are being built.

Second, and related to the previous point, this thesis finds that workers employed by client companies located in peripheral subcentres are underserved by transit schedules that are geared towards serving peak commute hours in the morning and late afternoon. It is well-recorded that the optimization of public transit systems to accommodate the 9 to 5 work schedules associated with office labour is to the detriment of the precariously employed and gendered reproductive work (Attoh, 2012; Blumenberg & King, 2019; Markusen, 1980; Randal et al., 2020). The specific related planning problem within the Toronto CMA that emerges from this thesis is that companies in the warehousing, manufacturing and logistics sectors tend to maintain a two-shift system in which a shift from 7am to 3pm is followed by one from 3pm to 11pm, with some adding an additional night shift. Currently, however, while transit service is deemed adequate to reach employment sites in the morning and the afternoon, respondents report that commuting after 11pm is difficult due to the reduced night schedule. However, as the two-shift system appears to be structurally embedded among industries located in the peripheral subcentre (multiple respondents working in several sectors and economic centres report the same shift times and resulting issues), it is therefore likely that a high number of workers experience difficult evening commutes concurrently and daily. Transit authorities in the Toronto CMA must therefore consider responding to this need by adding to their late evening service frequency for bus lines passing by peripheral employment centres.

Lastly, the results demonstrate the adverse effects non-integrated fare systems can have on the access and connectivity of transit destinations in metropolitan regions as many respondents are unable to access geographically proximate placements due to

the extra cost associated with transfers. Many North American multi-agency regions are affected by non-integrated fare systems– for example the multi-fare transfer between the PATH system and MTA in New York City (Gong et al., 2012) or between Pasadena Transit and LAPT in the Los Angeles region (Peraza, 2019)–, yet the impacts on ridership are understudied in the North American context. Examples from the Barcelona and Haifa metropolitan regions, however, demonstrate that the integration of fares leads to increased transit use and more transfers between multiple transit agencies, especially among the precariously employed (Matas et al., 2020; Sharaby & Shiftan, 2012). A recent example of the integration of fare systems in the North American context can be found in the Montreal metropolitan region where three previously separate municipal transit agencies consolidated their non-integrated fare systems into a multi-zonal system in July 2022 (MacLellan, 2022). While the impact of this change in Montreal is yet to be seen, evidence from the European context as well as the qualitative interviews indicate that transit fare integration is a planning tool that may be worth exploring in the Toronto CMA, especially to integrate fares between the City of Toronto's TTC as well as the multiple agencies operating in the Peel and York Regions. The finding that agency work in the Toronto CMA is regionalized and that many respondents live and work in peripheral subcentres is consistent with previous studies showing the suburbanization of workplace and residence among the precariously employed, thus leading to longer commutes on the periphery (Attoh, 2012; Blumenberg & King, 2019; Randal et al., 2020; Vecchio, 2020). From a transit fare perspective, planners in the Toronto CMA may therefore want to consider implementing a concentric ring faring system radiating outward from the City of Toronto in which movement within the same zone is cheaper than inter-zone commutes as such ticketing models are associated both with increased revenue and transit access equity (Lipscombe, 2016; Montella et al., 2010; Wang et al., 2021). From an academic perspective, the interview data suggest that

further research into the adverse effects of non-integrated ticketing systems is needed in the field of transit planning.

It is in the context of the future of transportation planning in the polycentric city that we finally must discuss the impacts of COVID-19 on employees' relationship to workplaces. While my empirical work for this doctoral thesis took place during the early stages of the pandemic– arguably the most disruptive event to the spatial organization of labour in modern history– and thus loomed large, COVID-19 had few effects on the labour geographies of most participants in general labour positions and even some office workers and therefore has played a secondary role within this thesis. Apart from the initial lockdown, many participants recorded that their daily trajectories and work locations had changed little due to pandemic and that the process of finding new in-person gigs had on the contrary become easier. In many ways this finding is paramount to how we conceptualize planning– and particularly transportation planning– in the post-pandemic world. Much of the research on the future of work after COVID-19 revolves around the future of the office and, by extension, auxiliary services located in the CBD with a focus on post-pandemic recovery of the North American downtown (Brail, 2021; Chapple et al., 2022; Florida & Kotkin, 2021; Ramani & Bloom, 2021). Bereitschaft and Scheller (2020) meanwhile predict that the drop in transit use by high-wage workers may lead to further disinvestment in public transit development. This research empirically demonstrates, however, what much of the focus on the geographic division between in-person essential labour and home-bound office labour in the early days of the COVID-19 pandemic already suggested: a large percentage of the working population in the Toronto CMA– many of whom are precariously employed– is unaffected by remote or hybrid work arrangements and will continue to perform the majority of their labour on site. Such work is largely performed in peripheral subcentres that are already underserved by public transit due to structural issues such as

inadequate planning responses to increased economic polycentricity in the past 30 years or the focus on global competitiveness. This thesis therefore demonstrates that while the changes to the labour geographies of low-wage labour in light of COVID-19 may be less dramatic than those of office workers, research into these geographies specifically by planning scholars is of utmost importance. Otherwise planners run the risk of further entrenching already existing inequities and uneven access to transportation networks.

Conclusion and key take-aways

In this chapter I have discussed the theoretical and methodological implications of this dissertation's findings, which were presented in the previous three chapters, in light of pre-existing scholarship in the fields of urban economic geography, mobility studies as well as planning scholarship and practice. Within the field of economic geography, I propose some key assumptions that can be made by researchers aiming to map the size, distribution and morphology of economic activity. This research contributes to a growing body of literature that suggests that many precariously employed workers perform their labour on-site and that daily mobility in the form of frequenting multiple job sites or performing administrative labour remotely is uncommon. Low-wage workers with multiple jobs will rather devote an entire day, week or even month to a single employer and consecutive gigs tend to take place in close proximity to each other. The findings that the temporary staffing industry is regionalized into small geographic areas mostly centred around mediating labour into a single economic (sub)centre therefore provides further evidence for the theory that workplaces are not chosen at random but can be conceptualized by probability. Methodologically, I conclude that while the number of census respondents that declare a *non-fixed place of work* has grown– which is commonly attributed to the ubiquity of flexible and non-standard labour contracts in the modern labour market–, many of these workers are indeed likely working on-site in employment centres and are not

traditionally mobile workers in service work, transportation or logistics. Thus, their labour geographies are approximated by mapping other respondents who declare their employers' addresses as their workplaces.

Concurrently, however, the qualitative interviews provide insight into annual fluctuations in labour demand and supply within the temporary staffing industry and specifically the warehousing and manufacturing sectors. These fluctuations may affect the number of workers that are present particularly in peripheral subcentres throughout the year, thereby demonstrating the validity and importance of multi-variate methodologies aimed at understanding the spatial and temporal dynamics and functionality of polycentricity within urban economic geography research.

Drawing on and contributing to the field of *(im)mobility studies*, I apply the *motility* framework to provide better theoretical understanding of the process through which placement length and location are negotiated by the worker, agency and client company within the Toronto metropolitan region's temporary staffing industry. I use this framework specifically to respond to the finding that the contractual flexibility enabled by mediated labour arrangement does not translate to geographic flexibility as the majority of respondents tend to work for one employer for prolonged periods of time. The discussion demonstrates that most temp workers' mobility potential is greatly reduced by the accessibility and cost of transit as well as by the unavailability of higher paying jobs for those lacking Canadian experience, permanent residency and post-secondary education. Furthermore, the analysis also shows that while agencies and client companies are interested in maintaining organizational flexibility, they concurrently often attempt to reduce the administrative labour associated with coordinating mobile workers by building a medium-term working relationship with temp workers. Respondents both in high and low-wage positions are equally interested in geographic

stability and reducing commute distances, which is consistent with previous research and contributes to regionalized service areas as well as longer placements. A gap in the research that emerges from this thesis, however, is demonstrated by the hyper-mobility of medium-income workers who use gig work to build their employment profile and therefore travel along complex trajectories throughout the Toronto CMA. While similar trajectories have been observed in other research (see Loacker & Śliwa, 2016), the urban labour geographies of such medium-income workers are not well understood and call for further research.

Lastly, I discuss some of the implications this research has for both planning scholarship and practice, specifically as it relates to public transportation. While some of these findings are specific to the Toronto context and its positioning in the global urban hierarchy, many of the observations speak to the broader disconnect between urban economic geography and planning in which North American metropolitan regions have failed to adjust their transportation planning to the emergence of polycentricity in the 1980s and 90s. Specifically, my research demonstrates that Toronto's public transportation networks do not accommodate the trajectories resulting from the metropolitan region's morphological and functional polycentricity, which lead to an increase of peripheral cross-commuting. As a result, the mobility needs of temp workers working in economic subcentres are underserved in ways that would apply to the broader population working and living in the Toronto CMA's periphery as well. I suggest three distinct policy interventions, which are the densification of bus stops in peripheral subcentres, an increase in service frequency to accommodate the norm of late shifts in the warehousing, logistics and manufacturing sectors as well as the integration of fares between the multiple municipal transportation agencies operating in the Toronto region. I also call for an increased focus on the geographic impacts of COVID-19 on precarious labour in future research on the of pandemic's effects on urban

development, transportation and recovery in order to avoid perpetuating further inequity in the access of transportation and workplaces in the North American city. It is with these key takeaways that I now turn to the concluding chapter of this dissertation.

Chapter Eight: Conclusion

In this thesis, I contribute a better understanding of the urban workplace mobility of precariously employed workers in North American metropolitan areas. In particular, I address two gaps in the theoretical and empirical debate concerning the spatiotemporal changes geographically and contractually flexible work arrangements as well as ICT-enabled workplace mobility have brought to the organization of urban space. First, I engage with the question of whether census data, which is used to identify employment clusters and map the urban economy, can still approximate where low-wage workers, who are hired through flexible labour contracts and presumably engage in non-locational organizational tasks known as microwork, perform their labour. Second, I aim to better understand the social and organizational mechanisms through which employers and employees negotiate workplace mobility as these processes, while foundational to informed assumptions about urban workplace mobility, are currently understudied.

For this purpose, I conduct a mixed-methodology case study of temporary staffers, or temp workers, in the Toronto metropolitan area based on a quantitative Canadian census data analysis and 32 semi-structured interviews with key informants and workers. The research questions and study design are informed by a review of the existing literature, which I present in Chapter Two. Specifically, I engage with the literature on the empirical measurement of urban form in the field of economic geography, the changes to urban space brought by ICTs and non-standard employment contracts as reviewed by mobility scholars and economic geographers, and previous work on the geographies of precarious labour found in mobilities and labour studies scholarship. In the literature review chapter, I outline the debate on the extent to which workplace mobility has changed urban space or simply revealed pre-existing mobility patterns. Further, I highlight studies that empirically demonstrate how low-wage workers tend towards self-imposed immobility and present how the *motility* framework

can be used to gain a better theoretical understanding of how such immobility and its resulting labour geographies are negotiated.

After an overview of the research design, methodology and specific methods in Chapter Three, I turn my attention to three results chapters in which I present the original research findings. Chapter Four is based on a 2016 Statistics Canada census microdata analysis and maps residential and employment location patterns for the Toronto CMA's temporary staffing industry while comparing it to the metropolitan region's labour force. Based on census data alone, I find that most temporary staffing labour is performed in the Toronto CMA's employment centres and subcentres, which are found in the City of Toronto's urban core as well as along highway corridors located in the periphery. Furthermore, a demographic divide based on income and employment tasks emerges in which high-wage temp workers who perform managerial tasks in the *knowledge intensive business services* (KIBS) sector work within the urban core. In contrast, low-wage workers performing general labour tasks in manufacturing and warehousing work and reside in the periphery, thus suggesting a dual labour market. Temporary staffing agencies, which can be divided into specialized staffing services and general labour agencies, also display this spatial division.

In my fifth chapter, I outline the temporary staffing industry's spatial and temporal organization based on interviews with key informants and temp workers in the Toronto CMA. I confirm the existence of a dual labour market as seen in the census data analysis and further show how the temporary staffing industry is *regionalized*, meaning that agencies draw on a labour pool living in close proximity and mediate workers to client companies most often located in the nearest subcentre. Client companies and agencies favour medium to long-term placements to maintain a trained work force and reduce the need for organizational tasks. Furthermore, some industries

such as warehousing but also insurance experience seasonal fluctuations in labour demand, thus enabling broad temporal labour mobility patterns in which a high number of temp workers are mediated to client companies during peak periods, for example in the late fall, and are dismissed afterwards.

In Chapter Six I present my findings on the workplaces and trajectories of temp workers, which includes their daily and long-term mobility. Participants do have some meaningful control over their immediate geographies as they are able to easily find medium to long-term placements in close proximity to their residential location and switch between agencies to meet their needs. Complex daily mobility patterns, which include multiple concurrent workplaces or microwork performed on the go, are rare among the Toronto CMA's temp workers and appear to be primarily found among upwardly mobile, college educated workers who use temporary staffing agencies as one of many avenues to secure gigs. However, temp workers' geographies are limited by social and economic precarity. In particular uncertain immigration status and a lack of postsecondary education act as barriers to higher wage staffing markets or even low-wage direct employment in retail or food services. Furthermore, workers' access to workplaces located in the periphery is not only limited by insufficient public transit connections but also the Toronto CMA's non-integrated fare system, which required transit users to pay for multiple transit authorities.

Within my seventh chapter, I engage with the theoretical and empirical implications of my research. As this dissertation is theoretically underpinned by literature in the fields of urban economic geography and mobility studies, the findings are useful to address gaps in both of these fields. From an economic geography perspective concerned with the empirical use of census of population data to approximate the locations of economic production and urban form, I provide further

evidence that census data can still be used to identify employment centres. Furthermore, these locations describe where workers who do not declare a fixed place of employment perform much of their labour – at least among low-wage workers who are more likely to perform their labour on an employment site. Concurrently, however, the qualitative portion of this dissertation further highlights the limitations of census place-of-work data in capturing daily mobility patterns which are the result of changes to the labour market. While these patterns have previously been discussed largely in the context of hybrid work arrangements and mobile microwork using ICTs, I highlight that seasonal fluctuations in labour market demand and supply as a result of non-standard labour arrangements may also contribute to changes in macro-level labour geography and commute patterns. Employment centres may thus experience fluctuations of the number of people performing work in them throughout the year.

In light of the ongoing debate on the spatiotemporal effects of workplace mobility, I argue for the inclusion of qualitative research data, and specifically the analytical framework of *motility*– or mobility potential– into labour mobility research. Its use lies particularly in identifying the social and organizational processes through which multiple parties negotiate individuals' labour geographies. I demonstrate how education and immigration status as well as limited organizational capacity by agencies and client companies contribute to low-wage workers' immobility patterns. From a theoretical standpoint, I emphasize that these processes must be better understood to gain not only a holistic understanding of the geographic and temporal changes to the work patterns but also to acknowledge discriminatory labour market segregation that has long been recorded by Feminist and Marxist economic geographers (Hanson & Pratt, 1988; Massey, 1995; McDowell, 2015).

Lastly, I address some of the planning and policy concerns that emerge from this dissertation, especially related to transportation planning. While these findings are specific to the Toronto metropolitan region, many of these concerns are likely found in other North American polycentric regions as well. I make three key recommendations here. First, my research highlights the prevalence of cross-commuting in the periphery, which is a function of polycentric urban form but has insufficiently been addressed by public transportation planning. While network density in suburban residential areas appears to be sufficient, these networks primarily service urban-suburban commute patterns. Thus, more peripheral transit connections must be made. Second, my research highlights that employers in manufacturing and warehousing, which are located in peripheral subcentres, operate on a two or three shift schedule that results in workers commuting in the late evening. These commute patterns are underserved by public transit schedules, which follow traditional commute times in the morning and late afternoon. I therefore recommend that public transit routes servicing peripheral subcentres increase their late evening service to accommodate those geography-specific commute patterns. Third, the interviews show that the existence of multiple transit authorities without an integrated fare system acts as a major economic barrier to the accessibility of workplaces for low-wage workers in the Toronto region. Following the Montreal metropolitan region's lead, I therefore recommend integrating the ticketing system, for example through the introduction of a concentric ring faring system.

Overall, this thesis makes three key research contributions. First, I demonstrate that census of population data can still be used to broadly approximate the metropolitan geography of economic activity, including the workplaces of populations with flexible labour arrangements. However, I also show that complex spatiotemporal patterns exist which change throughout the day and season. These patterns have little impact on economic urban form at the metropolitan scale but show that examining

labour mobility adds to rather than detracts from location-based approaches to understanding the urban geography of economic activity. Second, I contribute a much-needed study on the urban labour mobility patterns of the precariously employed, as exemplified by temp workers. I specifically argue that greater emphasis must be placed on the social and organizational processes through which mobility is determined. This is necessary because while high workers primarily negotiate their labour mobility using economic reasoning as enabled by their workplace power, low-wage workers' autonomy, although still existent, is limited by their positioning in the labour market. Third, I demonstrate the transportation problems that arise for workers in flexible contractual arrangements due to public transportation systems planned for peak movement. These issues are particularly visible in suburban employment centres that are poorly connected to their surroundings and are of particular interest in the post-COVID urban landscape in which the economic and geographic divide between higher-wage office workers in hybrid work arrangements and those performing their labour on-site will widen.

In conclusion, in this thesis I have engaged with the changes that globalization, digitization and labour market liberalization have brought to the urban locations where we perform our work and how we engage with those spaces. As I have demonstrated throughout, it is difficult to parse which of these changes are truly new, which have simply accelerated trends that have been taking place for decades and which have simply revealed patterns that have existed previously. In particular in light of the COVID-19 pandemic, which unfolded while this thesis was written, it is easy to focus on the disruptive changes that ICTs have brought to office labour but also the ways in which we hail our taxis and order our food. As I show, however, we must broaden our approach to include professions and income groups where the changes have been subtler, especially to include the precariously employed. In urban economic geography scholarship concerned with the changing geographies of labour, it is only so that a

holistic picture of our changing workplace mobility emerges. Yet, the stakes are higher in urban planning practice and policy: here, it is a matter of equity.

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Appendix

Semi-structured key informant interview guide – community organizers

Position and Employer

- How would you describe your position?
    - How long have you worked or volunteered there?
    - What is your role?
    - How did you end up there?
- Can you tell me about the history of your organization?
- What is your involvement with temp workers specifically?

Employee profile

- How many temp workers does your organization work with?
    - Do you have a sense of what percentage of the general temp industry that is?
- Can you tell me about the temp workers general profiles that you work with?
    - Education level, immigration status, ethnicity
    - Are there any specializations?
    - What type of labour is the most common?
- To your knowledge, how do the temp workers end up in the staffing industry?
- Do you have a sense what neighbourhoods/municipalities within the GTA temp workers live in?
    - Specific to organization and in general
- Can you tell me about the temp workers' schedules to your knowledge?
    - How often do they frequent the head office?
    - How often are they mediated to a new employment site?
    - Is the home location of the recruit considered in the mediation process? Are recruits able to provide geographic restrictions?
    - What happens if workers don't accept a position mediated by their agency?
- Do you have a sense how staffers navigate the city?
- What do the staffers you work with say about communication between them, their agencies and the companies they work for?
- What are the biggest concerns among staffers in your experience?

Client company profile

- Can you describe the types of firms that the workers' work at?
    - Big corporations/independent warehouses/etc.
    - How long do contracts usually last for?
    - Where are these firms located?

Toronto's temporary staffing industry

- Can you describe the temporary staffing industry in the GTA?
    - To your knowledge, how has it changed over the years?
    - How big is the staffing industry (i.e. how many people work in it)?
- How is the profile of the worker you engage with typical or atypical of temp work more generally in the GTA?
- How would you describe the landscape of agencies that exist within the GTA?
    - Do they provide a different function within the GTA?
    - Do the client companies they serve differ?

Semi-structured key informant interview guide – recruiters

Position and Employer

- How would you describe your position?
    - How long have you worked there?
    - What is your role?
    - How did you end up there?
    - Where do you work from?
- Can you tell me about the history of your employer in Toronto?

Employee profile

- Can you tell me about the employees (temporary staffing agents) general profiles?
    - Suggest education level, immigration status, ethnicity
- How many recruits does your firm have on file?
- Are there any particular specializations you look for in your recruits?
- How do you find recruits?
- Do you have a sense what neighbourhoods/municipalities within the GTA your recruits live in?
- Can you tell me about your employees work schedules?
    - How often do they frequent the head office?
    - How often are they mediated to a new employment site?
    - Is the home location of the recruit considered in the mediation process? Are recruits able to provide geographic restrictions?
- Do you have a sense how (your) staffers navigate the city?
- How do you communicate with staffers?

Client company profile

- Can you describe the types of firms that purchase your services?
    - How to you build contact?
    - How long do contracts usually last for?
    - Where are these firms located?

Toronto's temporary staffing industry

- Can you describe the temporary staffing industry in the GTA?
    - To your knowledge, how has it changed over the years?

    - How big is the staffing industry (i.e. how many people work in it)?
    - How is your employer typical or atypical?
- You mentioned your employer is an international firm. What do you know about locally owned firms?
    - Do they provide a different function within the GTA?
    - Do the client companies they serve differ?

[reverse question if you employer is a locally owned firm]

Semi-structured interview guide – temp workers

Census questions

- What is your postal code?
- Was it the same last year?
- In the last week, how many hours did you spend working for pay or in self-employment?
- Who do you work for? What is the address of your employer?
- At what address do you usually work most of the time?
- How do you get to work?
    - If car: How many people, including this person, usually shared the ride to work in this car, truck or van?
- How many minutes does it take you to get to work?

Employment profile

- Can you tell me how you found your way into temporary staffing?
- Can you describe what type of work you generally do?
- How does your employment relate to the formal education you received/are receiving?

Location

- Can you walk me through a typical work day?
    - Where are you working right now?
    - How often has the location changed in the past year?
    - How would you describe the neighbourhoods/ parts of the city your workplaces are in?
- Can you walk me through a typical commute?
    - What modes of transportation do you use?
    - How long does it take?
    - Does the timing change?
- How often do you frequent your agency's head office?
    - What do you do there?
- Do you have any other job related locations you need to frequent (training programs, orientation sessions for new jobs, etc.)

Communication

- Can you describe how you interact with your agency during the day?
    - Activities (meetings, work dates, workplaces)
    - What channels do you use for this communication?
    - Can you describe where you usually do these tasks?
    - When do you do these tasks?
- Can you describe how you coordinate with your place(s) of work during the day?
    - Activities (meetings, work dates, workplaces)
    - What channels do you use for this communication?
    - Can you describe where you usually do these tasks?
    - When do you do these tasks?
- Can you describe how you interact with your colleagues during the day?
    - Activities (meetings, work dates, workplaces)
    - What channels do you use for this communication?
    - Can you describe where you usually do these tasks?

Preparation and Planning

- Can you describe what happens when you get take a new job mediated by the agency?
    - How are you prepared?
    - Where do you prepare?
- Can you walk me through your feelings when mediated to a new position?
    - How do you feel considered or not considered during the process?
    - Are you able to influence the location?
    - What outside pressures exist (i.e. financial, transportation)?
- What are your plans and hopes for your future career?

Any other work-related activity

- Can you think of any other work-related activity that you perform?
- What would you consider work (sending an email on the bus, shopping for work related material, etc.)?

General questions (asked if not addressed in the interviews so far)

- How important is a flexible schedule and workplace to you when you applied to the position?
- How do you select places from which to perform your work?
    - Flexible places
    - Agency placements you either accept of decline

- What role does mobile communication play in your work?
    - How does this communication make you feel in your day to day live?
- How do you feel about your work? What aspects do you enjoy? Which do you not enjoy?