

New ways of working and residing: Towards temporary arrangements in large city regions in Germany

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ABSTRACT

The acceleration of everyday life, increasing mobility and the individualization of society are giving rise to postmodern living and working arrangements that are often designed to be temporary. For the last decades, permanent and full-time employment relationships have increasingly been replaced by atypical forms of employment, characterized by flexible working hours and temporary employment. Such working relationships are often associated with the implementation of the New Work concept from a company perspective. With the results of the representative standardized survey, which took place in two large city regions in Germany in spring 2023, we analysed the spatial and social effects of temporary forms of working and residing and their interdependence. We see that temporary employment is directly related to self-assessments of temporary residency. While the diversity of working arrangements is increasing, many regional specifics, such as distressed labour and housing markets, significantly influence employees' location decisions. Our findings will enable more precise planning of both working and living spaces across entire city regions.

1. Introduction

In recent decades, the labour market has changed in many ways, including an increase in the diversity of employment relationships. Atypical employment relationships, including temporary employment, are often understood as part of the flexible design of working time. In Germany, the share of atypical employment relationships, as distinct from typical employment relationships (permanent and full-time), is 20%, and one third of these jobs have a temporary contract (DESTATIS, 2023). Atypical forms of employment are considered more flexible because they make it easier for companies to react to short-term needs.

Under the concept of New Work (Bergmann, 2019), the establishment of flexible working time is described as a method of focusing on the needs of employees. Crucially, companies tend to see economic advantages in the establishment of temporary employment relationships, such as (Ternès, 2018) as the possibility to increase adaptability regarding the business situation or in times of crisis. At the same time, the uncertainties and risks associated with temporary forms of employment, which have been exacerbated by the COVID-19 pandemic, are often neglected. Atypical employment relationships differ from typical employment relationships primarily in terms of time, as they include all

types of employment that are either temporary (with a fixed-end of contract), part-time (less than 20 h a week), marginal, or in the sub-contracting field sector.

However, it is also highly relevant to take a closer look at temporary work arrangements and their effects on the different spatial spheres. Employment relationships and housing arrangements are not dichotomous phenomena: they are closely intertwined and have far-reaching effects shaping both lives and the spaces in which they exist. The decision-making processes related to household relocation can be understood through microeconomic migration theories. It is assumed that a household will decide to move if the advantages outweigh the overall costs. These costs include not only tangible expenses, like moving costs, but also intangible factors, such as the loss of social connections (Reuschke, 2010). While job opportunities often serve as the initial motivation for relocating (Peter et al., 2022), the availability of suitable housing and the overall quality of life in the new location also play a significant role in the final decision. Considering the various factors involved in relocation decisions, it becomes clear that personal, professional, and practical aspects all play a role in shaping individuals' choices. Additionally, the temporary nature of both job contracts and stays adds another layer of complexity to the decision-making process.

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Individuals must not only consider their immediate needs and preferences, but also anticipate how their choices will impact their future prospects.

In this article, we explore the extent to which temporary employment conditions are related to self-assessments of temporary residency. Additionally, we will investigate the demographic and personal characteristics that have a specific impact on how temporary employment is perceived and its effects. Ultimately, we want to check if our findings regarding temporary living and working conditions suggest that these forms are becoming the new normal. Our findings will contribute to the planning of labour and housing markets across entire city regions.

In the following sections, we will discuss the current state of research on this topic. Firstly, we will explore the extent to which forms of employment have changed in recent years, both at national and international levels. We will also highlight the significance of temporary employment as an important segment of the labour market today. Next, we will position temporary employment within the context of new work, emphasizing the importance of considering different types of employment relationships in the emergence of new ways of working. Afterwards, we will outline the methods we have employed and provide an overview of the data structure used in our study. Subsequently, we will describe the results of our statistical analysis. Utilizing our findings, we will elucidate the relationship between temporary working and housing by examining the socio-demographic groups that engage in such lifestyles. Additionally, we will discuss how future developments in temporary working and housing arrangements will shape our society and cities regions.

2. State of the art

2.1. Geographies of work: transformation of employment structures

The increasing importance of the spatially flexible organization of work, characterized by “flexible production volume[s], production on demand, varying numbers of employees, flexible forms of work, flexible production machines and equipment, and flexible network organisations” (Hermelin & Trygg, 2012, p. 127) has played a significant role in the disciplinary debate over the Geographies of Work. Early on, Harvey (1990) noted that these developments had led to a shift from regular forms of employment to temporary, part-time, or subcontracting work. Numerous European and international studies support this ongoing trend (Gunderson, 2013; Schoukens & Barrio, 2017).

In Germany, atypical forms of employment are gaining popularity, while the importance of permanent full-time jobs, often regarded as “normal”, is declining. Currently, 7 million people in Germany are in atypical employment, accounting for approximately 19% of the core labor force (15–65 years, not in education) (DESTATIS, 2023). Among these, 2.4 million individuals are in temporary employment, constituting a significant portion (one third) of those in atypical employment. This article will focus on this subgroup of 2.4 million temporary workers. These temporary employees are often found in professions that are concentrated in urban areas, which serve as central hubs for economic, social, and cultural activities (Kujath & Schmidt, 2007; Scott & Storper, 2007) and are known for their high levels of innovation and knowledge exchange (Combes et al., 2012; Soo, 2018). However, the spatial distribution of employment within cities is increasingly shifting from monocentric to polycentric or dispersed models (Dadashpoor & Alidadi, 2017). The move towards more flexible and mobile working arrangements has diminished the dominance of metropolitan centers, making locations outside of these urban areas increasingly important (Wagner & Growe, 2022). Thus, studying the effects of temporary work in both urban and suburban areas is essential for understanding its geographic patterns and dynamics.

If you are hired temporarily in Germany without a material reason, the temporary employment must last for at least one year and may extend for a maximum of two years. Material reasons might include

standing in for another employee, being tested for the job, or a temporary operational need for your work (German Federal Ministry of Justice TzBfG, 2022). In practice, most temporary contracts in Germany are for periods shorter than one year to less than three years. However, it is still possible to be employed on a temporary basis for an extended duration, such as through chain contracts. Since the term “fixed term” is often associated internationally with particularly short employment relationships (typically less than one year), we will use the term “temporary employment” in this context.

On average, 12.1% of employment contracts in the European Union are temporary, peaking at 14.4% in 2017. In comparison to other European countries, Germany, with 11.5% of its employment contracts being temporary in 2022, falls in the upper mid-range. This positions it between countries with lower temporary employment rates, such as Lithuania (1.6%) and Austria (7.7%), and those with higher rates, such as Spain (18.1%) and the Netherlands (23.2%). According to Eurostat, temporary contracts are primarily held by young people, women, and individuals with low levels of education across Europe (eurostat, 2023).

The changing composition of the workforce, in terms of socio-demographic characteristics and sectors, often referred to as the “shift effect”, is attributed to the rise of atypical forms of employment, including temporary employment (Walwei, 2013). In Germany contributing factors to this effect include the increasing employment of women, changes in labor market participation among different age groups (e.g., a growing number of older employees), a higher proportion of skilled workers in the labor force, and the expanding importance of service industries. Additionally Germany's institutional framework supports flexible employment arrangements, such as strong protections against dismissal and a robust social security system (Walwei & Muschik, 2023).

2.2. New work: the role of temporary employment

The term “new work” emerged in the 1970s from a critical perspective on contemporary working conditions. It was developed to describe the shift toward a more modern work environment that prioritizes the needs of employees (Bergmann, 2019). This concept encompasses approaches to flexible work arrangements, self-determination, meaningful work and improved work-life balance, all of which relate to the employment relationship. According to the founder of this theory, Austrian-American philosopher Fritjof Bergmann, a new form of economy and society should arise in which technologies foster greater personal freedom and enable individuals to engage in enriching tasks. However, today various stakeholders use the term “new work” to refer to different approaches, measures, or concepts that often aim merely to enhance a company's adaptability and profitability, rather than addressing the genuine needs of employees (Olk et al., 2019).

Scholars have increasingly turned to concepts such as “new work” in response to the transforming labor market and the consequences of these changes. The question is, what significance does this concept have in relation to temporary employment relationships? The aim of temporary work is to create a working environment that meets workers' needs for self-fulfillment and flexibility (Bergmann, 1996) while also satisfying companies' requirements for efficiency and adaptability. Companies need to implement the classic concept of new work, which emphasizes autonomy, competence, involvement, emotional connection to the workplace, and employee empowerment. The nature of the employment contract can be seen as a decisive factor, significantly influencing employees' loyalty to their company (Kot-Radojewska & Timenko, 2018).

Stasiowski and Klobuszewska (2019) demonstrated that temporary employment is linked to lower job satisfaction among young people in Europe. This effect is even more pronounced in countries with higher unemployment rates and lower unionization. Temporary work arrangements are often utilized during uncertain business conditions, whether to test employees, substitute for permanent staff, or for training purposes. While temporary contracts are frequently viewed as a stepping

stone into the labor market and subsequently into permanent employment, they also carry various risks related to job security and income (Boockmann & Hagen, 2008; Gebel, 2013).

In recent years, it has become evident that the traditional working life, characterized by tight time constraints and limited leisure time, is giving way to increasing individualization of work. With accelerating globalization and the rise of new technologies, people are changing how they work and earn a living. Work has lost its clearly defined temporal boundaries; individualized and flexible daily routines are replacing standardized rhythms, raising questions about time availability and organization (Mückenberger, 2015), as well as work-life balance. Furthermore, during the COVID-19 pandemic, particularly in its first year, individuals in atypical employment relationships faced significant pressure. Generally, it is true that during difficult times, companies can more easily let go of temporary employees than of permanent staff (Hohendanner & Möller, 2022).

2.3. Temporary working and temporary residence: an interrelationship

The rise of mobility and the accelerated pace of life are key characteristics of postmodernity (Rosa, 2020). These factors significantly influence how people reside and work in large urban areas today. Postmodern life is reflected in structural changes in the economy, the processes of globalization, and the increasing demand for mobility. Consequently, atypical forms of employment, such as temporary jobs, and temporary stays are becoming more prevalent. Individualized lifestyles, greater work flexibility, co-working spaces, advancements in information and communication technologies, and new transportation options all contribute to these developments (Höcker et al., 2022; Reuschke & Ekinsmyth, 2021; Ciccarelli, Mariotti, & Rossi, 2025).

When considering the various housing options available today, it is essential to examine multiple temporal and spatial dimensions. Temporary stays refers to arrangements that residents consider temporary. These can include accommodations for a limited period of education or training, seasonal or contract employment, short-term job assignments, internships, project-based work, or the intention to relocate for personal reasons later in life. Additionally, multilocal housing is a subset of temporary arrangements. This concept encompasses two temporal dimensions: firstly, a rhythmicity typical of this housing practice, where residents stay temporarily at various locations; and secondly, the multilocal lifestyle can be either a long-term or temporary arrangement in itself. The self-assessment of being a temporary resident covers a wide range of scenarios where the current housing situation is not intended to be permanent. However, it is important to note that unintentional migration processes are not included in this survey.

Temporary stays and working arrangements are increasingly common among young adults who are still in education or just starting their careers. Many of these individuals, despite moving out for studies, stays abroad, internships, or early career jobs, often maintain multilocal arrangements, keeping one foot in their parents' home (Holton & Finn, 2020). This pattern aligns with findings that young adults in shared rental housing prioritize proximity to employment centers and transport hubs over other location characteristics, reflecting their need for flexibility and accessibility (Li & Deng, 2024). Such preferences underscore the interrelation between temporary stays and the demands of the labor market.

Certain professions are particularly well-suited for temporary forms of housing, such as multilocal living arrangements, which typically require a high degree of flexibility and mobility. These include IT specialists, consultants, scientists, and creative professionals whose work can be done digitally from virtually anywhere. In these multilocal living arrangements the use of co-working spaces is also widespread, which are themselves also a temporary phenomenon (Ciccarelli et al., 2025)). Furthermore, the COVID-19 pandemic has established remote working as a prevalent mode—both forced and voluntary—which continues to persist in many sectors today (Adrian et al., 2021). Working from home

impacts commuting behavior and can prompt a reassessment of residing conditions and locations as new lifestyles become feasible. In contrast, professions that require constant physical presence, such as those in healthcare, cleaning services, retail, craftsmanship, or manufacturing, do not allow for flexible work locations.

Postmodern residing and working situations involve complex relationships that incorporate both belonging and mobility: “People can indeed be said to dwell in various mobilities” (Urry, 1999, p. 157). Dynamic phenomena in residing, such as limited durations and high fluctuation rates, have predominantly been addressed in specific, mostly urban contexts. A study conducted by Jorck et al. (2018) found that temporary employment leads to increased commuting times, which have far-reaching implications for various aspects of life. Similarly, Tong et al. (2024) highlight the significant influence of the built environment — such as transport infrastructure, job-housing balance, and mixed-use land — on commuting patterns. They emphasize that poorly connected areas can exacerbate commuting challenges. Prolonged absences from the family home, resulting from specific mobility demands due to work, disrupt the balance between family and work. Additionally, regular commutes and second residences hinder the ability to maintain a sustainable lifestyle. Furthermore, one's profession can be a contextual factor influencing mobility and decisions about where to live. The significance of a profession in this context depends on how personally meaningful one's vocational activities are, as highlighted by Toppel (2019).

Existing literature often overlooks the interconnectedness between working and residing arrangements and how they influence each other. Our objective is to illuminate the complex relationship between temporary employment and the self-assessment of the housing situations through a thorough analysis of the data we have collected. We aim to socio-demographically characterize individuals experiencing temporary stays and temporary working situations and investigate whether these circumstances are becoming a new normal in German large city regions today.

3. Methods and data

3.1. Research area

This paper is based on data collected during the project “Temporality of Housing and Working” funded by the German Research Foundation. The project is fundamentally concerned with housing/residing, working and living practices that are designed to be temporary and their effects. The cities of Frankfurt am Main and Leipzig, along with their respective surrounding municipalities, were chosen as the study sites (Fig. 1). Frankfurt am Main, the fifth largest city in Germany, and Leipzig, the eighth largest city in Germany and the largest city in former eastern Germany, were chosen as areas of study because they show a high degree of heterogeneity in their urban functions. Their size and their internationally active companies and universities enable phenomena of temporality to be recorded in many dimensions. The four suburban municipalities are characterised by their close links with the nearby metropolis, but in recent decades they have developed independent profiles as places to live, work, and spend leisure time. They are part of their respective city's supplementary area or closer commuter linkage area (BBSR, 2023; Wagner & Growe, 2022).

3.2. Data collection

This paper is based on the data from a quantitative survey, using a standardised questionnaire, which was conducted from February to May 2023. In view of the central research interest of the project, a stratified random sample was drawn according to reporting status. The sampling followed a three-part stratification by registration status. Based on the Tailored Design Method of Dillman et al. (2015), the registration offices of the studied municipalities were commissioned to draw 10,000

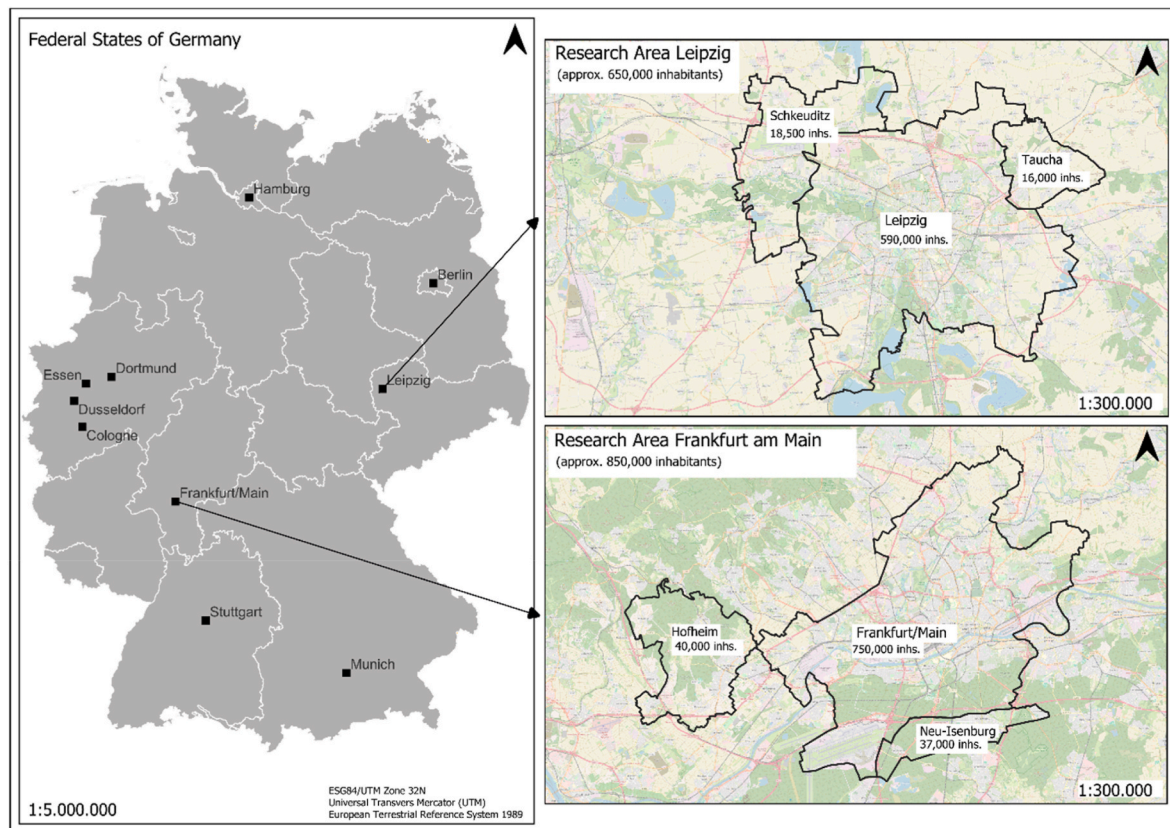


Fig. 1. Location of the research area in Germany and the position of the suburban communities in relation to the metropolis.

random addresses (2500 each in the cities and 1250 each in the small towns), to which the questionnaire was sent. The survey was also available online and could be accessed via QR code or link in several languages. To maintain the integrity of the sample, access to the questionnaire was limited to a unique pin provided on the printed version. Approximately one third of the participants utilized the online access option. The questionnaire, consisting of eight pages, contained questions about various aspects of personal life. These questions covered topics such as the respondent's current housing and employment situation, Likert Scales to measure emotional belonging, perceptions of temporary residence and employment arrangements, the impact of COVID-19, and thoughts and desires regarding future stays and employment arrangements.

3.3. Sample description

A total of 1589 people took part in the survey, which corresponds to a response rate of 16%. In the suburban areas, the response rate was somewhat lower (14%) than in the big cities. Our sample was equally distributed in terms of the two genders (male and female) and age. The sample was made up of 65% employed persons, 19% retirees, 10% university students, and 7% others (e.g., housewives or husbands, trainees, unemployed persons). The proportion of highly educated people in our sample (51%) is higher than the average in German city regions (around 40%).¹ This discrepancy must be considered in subsequent interpretations.

We were able to counter the disproportionate response rate of the questionnaires with design weighting. Since the survey data were also to

be used to make general statements about the underlying population, assigning (standardised) design weights to the target persons was indispensable (Sand & Kunz, 2020). To address this issue, we implemented a weighting adjustment that takes into account the residential status of individuals (a sole residence, two residences, or a secondary residence). As a result of applying design weighting, our sample now accurately aligns with the actual figures of age distribution and residential status in the research area.

3.4. Statistical analysis

To be able to conduct the evaluation in a way that fit the topic, various items from the questionnaire needed to be combined into suitable variables. The non-standardised χ^2 -Test (χ^2) was used to test the correlation of nominal variables. Since this test is only of limited use for comparability, Cramér's-V was used to assess the strength of the correlation of variables (Duller, 2019).

In addition to nominal categorical questions, multidimensional Likert scales were firmly anchored in our survey design, as they are considered a reliable tool for measuring opinions, perceptions, and behaviour (Carifio & Perla, 2007). The attitudes of individuals who experience temporary employment and housing arrangements played a significant role in addressing our research questions. To examine this, we utilized a five-point Likert scale with statements focused on the impacts of temporary employment relationships and correlated them with the variable of the self-assessment as a temporary resident. For the further multivariate analysis procedures, it should be noted that our Likert scale has a ranking from 1 (no agreement) to 4 (full agreement), and the data are therefore interpreted as ordinally scaled (Göb et al., 2007).

Ordinal logistic regression model as a type of a generalized linear model (GLM) can be used to model the dependence of a polytomous ordinal response variable on certain factors (Kumar, 2020; McCullagh,

¹ We selected the benchmark value for German large city regions because our study is also conducted in such a region (Authors' group education reporting, 2020).

1980). We used the Nagelkerke index, where the value given for our modelling needed to be at least 0 (Eid et al., 2017). We tested the influence of several categorical variables on the respective items, always using one category of the variable as a reference category. The combination of descriptive statistics and robust multivariate analysis procedures aimed to provide a valid evaluation and interpretation of the available data.

4. Results

4.1. Analysing the prevalence of temporary employment and residence

This paper focuses on the prevalence of temporary employment in the postmodern labour market and its impact on certain forms of residing. Table 1 presents a detailed breakdown of the respondents' distribution based on their work and the self-assessment of their residing arrangements. It considers different demographic and educational factors, along with the regional context. Overall, 74% of our sample was in standard employment (permanent and full-time) and 19% was in atypical employment (7% are self-employed). In our sample 7% were working on temporary contracts, which is close to the overall German statistics where 7.8% of employees are employed on temporary contracts (DESTATIS, 2023). The analysis of the residing arrangements of the respondents shows that only 58% of respondents have a permanent residing situation. In contrast, 42% of respondents have a temporary residing arrangement. In addition, 30% have multiple places of residence and are therefore considered multilocal. Because registration data cannot adequately quantify temporary residing arrangements and multilocality, it is necessary to conduct specific research studies in order to estimate these phenomena.

By examining residing arrangements in relation to working arrangements (Table 1), we can identify three characteristics that define the temporary nature of the working arrangement. A proportion of 72% of those currently in temporary employment stated that they consider their residing situation to be temporary. A multilocal lifestyle, as a subgroup of temporary residing, was practised by 55% of those currently employed on a temporary basis. Slightly more people with experience in temporary employment view their stay as temporary compared to those without such experience. Permanent residents are the largest group among those currently not employed on a temporary basis. There is a significant statistical correlation between the variables of residing arrangements and temporary employment (Estimates see note).

Temporary residing conditions are often associated with temporary work, especially among younger individuals, and those with higher qualifications, particularly in urban areas. In Table 2, a detailed breakdown of the distribution of respondents is provided based on their working and residing conditions, as well as various demographic and educational factors.

Table 1
Distribution of temporary working and temporary residing arrangements (self-assessment of the respondents).

Variable	Characteristics	Working Arrangements			Total Sample
		currently temporary employed	Experience with temporary Employment in the past	Never employed on a temporary basis	
Residing Arrangement	Permanent residing	28%	53%	63%	58%
	Temporary residing	72%	47%	37%	42%
	Subgroup of temporary residing: multilocal	55%	32%	28%	31%
Total cases (96 missing values)		105 (7%)	457 (31%)	931 (62%)	1589

Note:

Correlation measurements (Significance levels: $*p < 0.1$).

Permanent/temporary with working arrangement: $\chi^2 = 54.517^*$, $V = .191^*$.

Multilocality with working arrangement: $\chi^2 = 31.704^*$, $V = .147^*$.

Question as included in the Questionnaire:

Have you ever been employed on a temporary basis, or do you currently have a temporary employment contract?.

Would you describe yourself as a person who is living in (name of the place) for a certain period of time?.

Among permanent employees, 53% are female, while among temporary employees, this proportion is 58%. In terms of residing conditions, there is no gender-specific difference among permanent residents. However, among temporary residents, 58% are female. It is evident that women are more likely than men to have temporary working and living conditions. The variables of gender and residing arrangement are statistically correlated ($\chi^2 = 8.143$, $V = .073$), while the correlation between gender and working arrangement is not significant.

Of those employed on a permanent basis, 65% fall within the age range of 30–64, while only 13% are aged between 18 and 30. On the other hand, among individuals with temporary employment, younger people from 18 to 30 years make up the majority with 55%, although they only account for a share of 16% in the whole sample. When considering residing conditions, it is observed that 68% of permanent residents are aged 45 and above, whereas most temporary residents (57%) are under 45. Consequently, younger individuals are more likely to have temporary employment and residing arrangements, while older age groups are more inclined towards permanent employment and stable residing arrangements. The variables working arrangement and self-assessment of residing arrangement are both statistically significant in relation to the variable of age.

Of the individuals in permanent employment, 49% possess an academic qualification, compared to 68% of those in temporary employment. Moreover, a higher percentage of temporary employees (17%) (still) lack vocational training when compared to their counterparts in permanent employment (7%). Among temporary residents, the majority hold an academic qualification, while 9% (still) have no training, slightly higher than the percentage among permanent residents. The variables working arrangement and residing arrangement are both statistically significant in relation to the variable of vocational education.

While 55% of permanent employees reside in the cities, the figure rises to 82% for temporary employees. The distinction in residing conditions is not as definitive, but 53% of permanent residents live in the city compared to 62% of temporary residents. As expected, those who view their stay as temporary are more likely to rent their home (76%) compared to those who do not share this view (53%). Individuals with temporary employment and residing are more inclined to reside in urban areas than in suburban ones. The variables working arrangement and residing arrangement are both statistically significant in relation to the variable of regional type (WA: $\chi^2 = 28.726$, $V = .139$; HA: $\chi^2 = 11.366$, $V = .085$).

4.2. Perceptions of temporary employment and its relationship with residing arrangements

In this chapter, we will discuss the perception of the effects of temporary employment and explore the differences in the residing situation. We will compare the agreement levels of individuals with different

Table 2

Distribution of demographic and educational factors in work and residing arrangements (self-assessment of the respondents).

Variable	Characteristics	Work Arrangement		Residing Arrangement		Total Sample
		Permanent employment	Temporary employment	Permanent residency	Temporary residency	
Gender	female	53%	58%	51%	58%	54%
	male	47%	42%	49%	42%	46%
Age	65 and older	22%	0%	30%	14%	23%
	45–64	38%	10%	38%	29%	34%
	30–44	27%	36%	22%	34%	27%
	18–29	13%	55%	11%	23%	16%
Vocational education ^c	no professional qualification	7%	17%	7%	9%	7%
	professional qualification	44%	15%	49%	32%	43%
	higher education institution	49%	68%	44%	59%	50%
Regional type	Urban	55%	82%	53%	62%	57%
	Suburban	45%	18%	47%	38%	43%
Total cases^{a,b}		93% (1388)	7% (105)	58% (917)	42% (662)	1589

Note:

Questions as included in the Questionnaire:

Are there any other locations (postal codes) besides your residence in this city, where you regularly stay overnight?

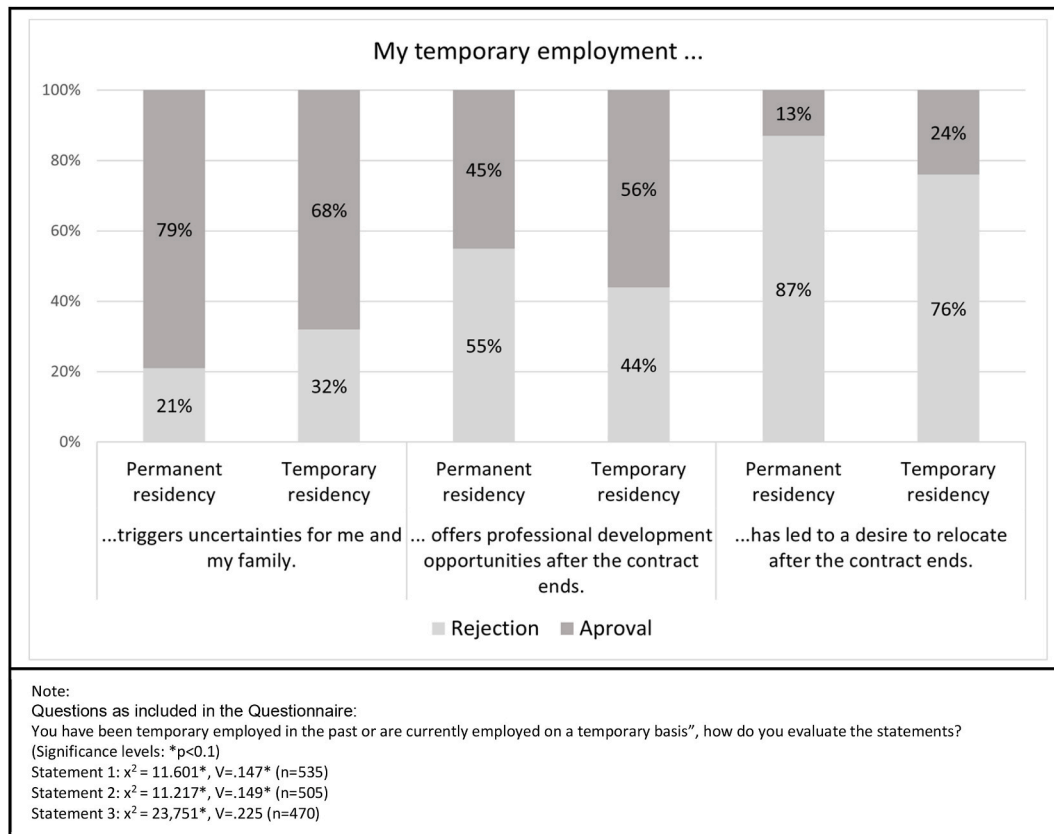
Would you describe yourself as a person who is living in (name of the place) for a certain period of time?

^a Working Arrangement: 96 missing values.^b Housing Arrangement: 10 missing values.

^c German training qualifications are meant here: no professional qualification: no completion of vocational training in the German training system (People who have a high school diploma but are still in (vocational) education or studying fall into this category) professional qualification: completion of vocational training (at least 3 years of vocational or school-based training in the German training system) higher education institution: degree from a university or a university of applied sciences (UAS).

residing situations regarding various statements related to temporary employment (Fig. 2). The analysis will reveal the extent to which temporary employment is associated with feelings of uncertainty, career development opportunities and the desire of relocation in different residing arrangements.

- Uncertainty for me and the family: 79% of permanent residents and 68% of temporary residents agree, that temporary employment causes insecurity for them and their families. This data suggest that temporary residing conditions are associated with a slightly higher level of uncertainty compared to permanent housing conditions.

**Fig. 2.** Approval levels for statements on temporary employment differed based on residing situation.

- Professional development: 45% of permanent residents and 56% of temporary residents agree that temporary employment offers them the opportunity to develop their careers after their contracts end. Therefore, most temporary residents perceive more professional development prospects through temporary employment.
- Desire of relocation: 87% of permanent residents working in a temporary employment do not desire to move. Even among residents who consider their housing arrangement as temporary, only 24% express a desire to relocate after the end of their temporary employment. These findings clearly indicate that, for most respondents the current place of residence is very attractive. Even temporary employment does not necessarily act as a catalyst for a desire to move, regardless of their present residing situation.

The data indicate a strong relationship between temporary residing conditions and the perception of the effects of temporary employment. Temporary residents tend to perceive more professional development opportunities, but also face greater social and emotional challenges. To gain a better understanding of how temporary employment affects different population groups, we will use ordinal regression analyses to assess the impact of various demographic and personal characteristics on agreement levels with three statements (see Table 3).

Looking at the demographic variables, women are more likely than men to agree that temporary employment offers career development opportunities (estimate: .329, SE: .186). However, there is no significant gender difference for the other statements. In terms of age, respondents aged 30–64 are significantly more likely to agree (estimates: .820 and .883) that temporary employment causes insecurity for them and their families than older respondents (over 65). On the other hand, younger respondents (18–29 years) see a higher potential for career development (estimate: .602) than those over 65 years. As expected from Fig. 2, for temporary residents, the end of their temporary employment is more likely to be related to the desire to move (estimate: .984). Multilocal individuals agree significantly more often with the statement that temporary employment offers career development opportunities (estimate: .415). Even though many respondents can certainly see positive aspects of a temporary employment, the majority would like to see more

security in the future. More than 91% agreed with the statement “In the future, I would like to be employed on a permanent basis”, irrespective of age, gender or qualification.

The model fitting information and pseudo R-squared values indicate varying model quality, with the best fit observed for the statement that temporary employment causes insecurities for the respondents and their families ($\chi^2 = 52.099$, $p < 0.000$, Nagelkerke $R^2 = .106$). These results highlight that certain demographic and personal factors significantly influence the perception of the impacts of temporary employment. It is also remarkable that the variable “Regional type” shows no significant influence on the level of agreement with the three statements regarding the effects of temporary employment, so the above illustrated findings are ubiquitous in the two German city regions.

5. Discussion

The results provide insights into the complex relationship between temporary employment and the self-assessment, as “living here for a certain period of time”. This discussion aims to delve into the extent to which temporary employment and residing arrangements are connected, and to identify the specific demographic and personal characteristics that significantly influence the perception of temporary employment and its effects.

It has been discovered that 72% of temporary employees also consider their stay at the current location as temporary. Additionally, a notable portion of individuals in temporary employment (55%) also follow a multilocal lifestyle, which is a subset of temporary residing. Those who have previous experience with temporary employment (biographical) are more likely to have a temporary housing situation compared to those without such experience. The data indicates a close correlation between temporary employment and temporary residing situations. The connection between employment and residing is influenced by various demographic and educational factors, as well as the regional context.

- Women are more likely to engage in atypical employment (temporary, part-time) and are more prevalent in sectors that frequently

Table 3
Results of ordinal regression model for statements to temporal employment.

Variable	Characteristics	Statement of Uncertainty ^d	Statement of Prof. develop. ^e	Statement of Relocation ^f
		Estimates ^b (n = 510) ^c	Estimates ^b (n = 484) ^c	Estimates ^b (n = 446) ^c
Gender	female	.255 (.169)	.329* (.186)	-.291 (.113)
	male ^a	0 ^a	0 ^a	0 ^a
Age	18–29	.318 (.307)	.602** (.322)	.510* (.351)
	30–44	.820*** (.275)	-.099 (.285)	.548* (.312)
	45–64	.883*** (.288)	.198 (.299)	.312 (.328)
	65 and older ^a	0 ^a	0 ^a	0 ^a
Vocational education	no professional qualification	-.589* (.323)	.323 (.332)	-.193*** (.389)
	professional qualification	.835*** (.191)	.186 (.861)	-.194 (.200)
	higher education institution ^a	0 ^a	0 ^a	0 ^a
Regional type	Urban	-.042 (.178)	.218 (.177)	-.114 (.193)
	Suburban ^a	0 ^a	0 ^a	0 ^a
Residing Arrangement	Temporary residing	-.273 (.191)	.244 (.192)	.984*** (.211)
	Permanent residing ^a	0 ^a	0 ^a	0 ^a
	Subgroup: Multilocality (not multilocal ^a)	-.071 (.183)	.415** (.188)	.243 (.200)
Ordinal regression model (Linking function: Logit)	Model Fitting Information $\chi^2(p)$	52.099 (.000)	29.154 (.001)	48.290 (.000)
	Pseudo R-Quadrat: Nagelkerke	.106	.063	.114

Note:

Full Statements see Fig. 2.

All significant values are underlined: Labelling of the significance levels: * $p < 0.1$; ** $p < 0.05$; *** $p < 0.01$.

^a Parameter is set to zero, because it is the reference category.

^b Standard errors in parentheses.

^c Number of cases available for calculation.

offer temporary contracts (IAB, 2018). This tendency is due to the additional household and childcare responsibilities that they often have to fulfil in addition to their employment. It is possible that these circumstances contribute to women perceiving temporary employment more frequently as an opportunity for professional growth than men. Nevertheless, despite the male-breadwinner model (Lewis, 1992) suggesting that men would experience greater uncertainties due to temporary employment, our study found no differences in the perception of uncertainty between men and women. Overall, traditional gender roles pose challenges for both men and women in securing stable, long-term professional positions.

- It is notable that temporary working and residing arrangements are more commonly used by individuals in the phase of training and professional establishment (eurostat, 2023; Greinke, 2023; Hilti, 2020). The perception of higher insecurities among the middle-aged generation may be due to their increased likelihood of having familial responsibilities, making them more reliant on financial stability compared to those who have not yet entered the family phase or retirees.
- Highly qualified individuals often work in project-based sectors, such as research, consulting, or specialized technical fields, which are often tied to fixed-term contracts, which require flexibility and mobility. The protests within the “I am Hanna” movement (Simon, 2021) show the resistance to these requirements. Individuals without formal education often find themselves dependent on temporary employment in sectors such as hospitality, cleaning, or warehouse work. These sectors are well-known for the financial instability they often entail, which in turn leads to more insecure and precarious residing situations.
- The data show that temporary working and residing conditions are more common in urban areas than in suburbs. The perception of temporary employment as stressful or not did not differ between cities and suburbs. This could be since sectors such as high-skilled, knowledge-intensive services, where temporary employment is common, have increasingly shifted to the surrounding communities and are coming to be considered normal in suburbia (Wagner & Growe, 2022).

In the end, the question is whether temporary forms of employment and residing will become the new normal if younger generations no longer see them as insecure, but rather as flexible and offering diverse opportunities. If temporary stays and working arrangements become more and more usual, this could result in a shift in the working and housing landscape. We know that the number of temporary employees in Germany has more than doubled since 1991 (Walwei & Muschik, 2023). Our data support the assumption of a simultaneous increase in temporary forms of residing. Younger respondents exhibit lower levels of uncertainty, a greater perception of career development opportunities, and a desire to change residence in connection with temporary employment. These findings raise questions about whether they align with the typical descriptions for this age group or if they indicate a broader generational shift towards accepting temporary residing and work arrangements as the new norm. It remains to be seen whether the younger generation will continue to see temporality as “normal” as they get older or whether the desire for permanence will increase. Regardless of age the vast majority of our respondents is looking for a permanent employment.

Therefore, it is crucial to scrutinize company practices that normalize temporary employment under the guise of flexible work organization, often justified by market needs and short-term staffing. Despite flexible work originating from the employee-centred New Work approach (Bergmann, 2019), companies frequently exploit it to serve their own interests. However, companies should acknowledge that temporary employment can have profound psychosocial effects on employees, diminishing their loyalty to the company and which is proven to lead to substantial economic costs for the companies (Gallup, 2023).

This emphasizes the importance of considering the impact of employment contract types and residing arrangements on employee well-being and organizational effectiveness. It also highlights the need for companies to recognize their responsibility in managing both aspects.

5.1. Planning perspective

We have shown that temporary employment often coincides with residing arrangements that are perceived as temporary. In particular, cities in Western Germany will increasingly have populations whose lifestyles are characterized by temporary work and stays. Temporary living concepts, like multilocality, are common nowadays and affect every aspect of our lives. With the increase in mobility, residing is no longer exclusively designed or planned for the long-term housing.

The increasing shortage of skilled workers, combined with tight housing markets in metropolitan areas, is leading companies to provide housing to gain an advantage in the competition for workers. But not only the pressure of the market should lead this strategy. If the guiding principle of sustainable spatial development is pursued, which strives for “equal living conditions” (German Federal Ministry of Justice ROG, 2008; § 1 & 2), then residing should not only be understood and planned as permanent “settling down”, but flexible and temporary forms of residing should also be offered. The aspect of responsibility and care should ensure that housing and working should be thought of together. Example solutions could be the establishment of modern company housing or co-living offers, where people live together in apartments and share services. This could be particularly attractive for temporary employees. When companies assemble teams for specific projects, it could be helpful if residing and working spaces are planned to be easily adaptable and offer special areas for intensive collaboration, in terms of both concentrated work and social interaction.

5.2. Critical reflection

Our study was able to partially close the research gap on the effects of temporary working and residing arrangements in metropolitan regions in Germany. Nevertheless, the study must be critically reflected upon to classify the results appropriately. For example, the study was conducted in only two metropolitan regions in Germany. To strengthen the results, it will be necessary to consider further study locations. Furthermore, the sample size could be increased significantly to improve the statistical analysis. Despite the design weighting, which contributed to an approximation of the total population, there is a bias in the sample, which was considered in the interpretation of the results. Such a bias is difficult to avoid, as educated people with a German background are significantly more likely to participate in such studies than people with a language barrier or lower level of education. In general, however, we can say that our data are well suited to address the relevant questions and can provide meaningful results regarding temporary living and working arrangements in metropolitan areas.

Moreover, it is essential to assess whether our research findings and proposed solutions are inclusive and equitable for all demographic groups. This is particularly important in addressing the needs of older workers and individuals with less educational background. Our study emphasizes the need for additional research to comprehend the long-term effects of temporary employment and residing on various age groups and socioeconomic classes. The data we gathered are well-suited to address the pertinent queries and offer valuable insights into temporary living and working arrangements in metropolitan areas. However, future studies should strive to incorporate a more diverse population to ensure comprehensive and representative outcomes.

6. Conclusion

In Germany today, approximately 2.4 million people, or 11.5% of the workforce, are employed on a temporary basis. Temporary employment

has always been associated with insecurity, and the COVID-19 pandemic has only exacerbated this issue. However, in recent times, temporary employment has been viewed as part of a postmodern labour market, with its justification rooted in the concept of new work. This study aims to explore the relationship between temporary employment and residing situations in German city regions. To do so, it examines demographic and personal characteristics that have a specific impact on how temporary employment and its effects are perceived. The paper presents findings from an empirical survey conducted in two large German city regions to shed light on this issue.

The results show that temporary work is often associated with self-assessments of temporary residency. Among individuals who practice these arrangements, women, younger individuals, and those with higher qualifications living in urban areas are more prevalent. We question whether the findings suggest a potential generational shift towards temporary stays and work arrangements as becoming the new norm. On the other hand, it is crucial to continue considering the uncertainties perceived and acknowledge that companies have a greater responsibility in addressing these concerns and catering to the needs of their employees. The study highlighted the importance of inclusive and equitable solutions for all demographic groups, emphasizing the need for further research to understand the long-term effects of temporary employment and residing on population and spaces.

In a highly globalized, mobile, and technologized world, cities and city regions must adapt to the increasingly transient nature of work and residency. On the one hand decision-makers and policies need to better incorporate the rising demand for temporary spaces into their strategies. This could involve designing housing and mobility infrastructure that caters to specific needs and supports temporary uses. On the other hand, permanent employment is still the ideal that people strive for and should still be offered. Finding an appropriate balance between flexibility and continuity will be the challenge for individuals, companies and regions alike in order to create livable working and living arrangements. Adapting planning to accommodate the needs of all stakeholders is now considered the central challenge of urban and regional planning, not just in large city regions.

CRedit authorship contribution statement

Leonie Wächter: Writing – review & editing, Writing – original draft, Methodology, Investigation, Formal analysis. **Caroline Kramer:** Writing – review & editing, Project administration, Investigation, Funding acquisition, Conceptualization.

Declaration of generative AI

During the preparation of this work, the author(s) used DeepL and editGPT in order to address language issues. After using this tool/service, the author(s) reviewed and edited the content as needed and take (s) full responsibility for the content of the publication.

Declaration of interest statement

The authors declare no conflicts of interest. The research was conducted independently.

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