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(Work)Life Before & After Children: Women's Career Paths Pre- and Post-Parenting
Leave in Austria, Based on a New Administrative Data Framework

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The best way to **understand what CAN be done is no longer** – if it ever was – **to ask what things could**, in the current state of our skill techniques, **be confirmed** [...]. Even more understanding is *lost* if we consider each thing we can do to data *only* in terms of some set of very restrictive assumptions under which that thing is best possible – *assumptions we know we CANNOT check in practice*.

John W. Tukey (1977, vii, emphases in original)

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1. Introduction & Research Objectives

This thesis analyses women's labour market activity before and after phases of childbirth and parenting leave.¹ Roughly half of the Austrian labour force are women. One of the main differences between female and male labour market activity is the interruption of female labour market careers due to childbearing and parenting leave. After parenting leave, care work associated with childrearing further limits women's opportunities regarding their labour market activity or more specifically, the intensity of their labour market activity. Hence, childbirth and the ensuing care work often lead to different career trajectories, part-time employment, lower overall income and therefore lower accrual of unemployment or pension benefits.

The various phenomena associated with the interruption of women's labour market careers and the limitation of their career prospects due to childbirth, parenting leave, and childcare responsibilities – such as unpaid care work, limited childcare services, reduced working hours and earnings, the gender pay gap, and lower pension benefits – have been the subject of policy debates for many years. Most recently, in Austria, the debate has resurfaced with respect to shortages of skilled labour and women's part-time employment, as well as lower tax and social insurance contributions of part-time workers, particularly against the backdrop of a high budget deficit (e.g., Ickert 2025; Gepp 2025; Krammer 2024; Pramer 2024; ORF 2024; Szigetvari 2023). These interrelated phenomena are a topic of interest – both nationally and internationally – for sociologists, economists, and other social science researchers. In 2023, Claudia Goldin was awarded the Nobel Memorial Prize in Economic Sciences “for having advanced our understanding of women’s labour market outcomes” (Nobel Prize Outreach, n.d.), something that highlights the importance of this topic.

A wide body of research has provided insights and identified various factors that play a role in women's labour market careers. Given the breadth of the subtopics involved, it is not surprising that different aspects have been researched from different angles, with different methods, and using different data sources. It is also not surprising that the results of empirical studies, even within one country, cannot always be easily compared. It can be difficult to reconcile or relate different results or facts and integrate different aspects of the same phenomenon, as the disparate data sources used cannot usually be harmonised. Moreover, the dynamic nature of these phenomena cannot always be adequately investigated due to missing or insufficient data. We still know little about the *development* of women's career *pathways*, especially pertaining to the time before and after parenting leave interruptions.

To overcome some of these issues, Walch, Dorofeenko, and Fage (2024) have created a data framework based on administrative data from the Austrian social insurance system. This repository enables an

¹ The term “parenting leave” is used in this thesis as an umbrella term to refer to leave relating to childbirth and early parenting, following the *Research Handbook on Leave Policy* terminology (Dobrotić, Blum, and Koslowski 2022). For the discussion of results from previous literature, this term may include paid and unpaid forms of leave depending on the specific study. In the empirical data and analyses in this project, only *paid* forms of parenting leave are considered, since these constitute the social insurance-relevant statuses registered in Austrian administrative data (for exact definitions, see section 3.3.2).

integrated and comprehensive analysis of a wide set of aspects relating to women's labour market activity before and after childbirth and parenting leave. Most importantly, the microdata used allows tracking individuals over time. In this thesis, this data framework is used in order to analyse the period in women's lives marked by childbirth and parenting leave in the broader context of their labour market careers. The conceptualisation of novel indicators generated within this data framework – designed to capture typical career trajectories – contributes to the advancement of measurement tools in the social sciences. By generating indicators that more accurately reflect social phenomena and social realities, measurement validity and thereby the quality of labour market analyses can be enhanced. Additionally, uncovering previously undocumented patterns in women's career pathways can provide valuable insights for more targeted policymaking. The aim of this thesis is to shed light on some of these patterns.

Objectives & main research questions

Nationally and internationally, there is a wide body of literature studying the role that childbearing and childrearing play in women's labour market activity. Given the research topic of this thesis, the breadth and depth of the data used, as well as the lack of a more comprehensive description of the entire phenomenon, this thesis addresses several dimensions of this research area.

The two common, most important aspects in the international literature on women's employment are the interruption of careers due to childbearing and their ensuing reduced labour market activity due to childrearing (Goldin 1990; Esping-Andersen 2010; Thévenon 2013; Jaumotte 2003; Gangl and Ziefle 2009; Bardasi and Gornick 2003). The findings from national and international literature that constitute the starting point of the analysis in this thesis are the following:

- (i) women's reduced labour force participation rate (LFPR) after parenting leave, and
- (ii) women's reduced intensity of employment activity after parenting leave.

These two main developments also apply to Austria: First, the labour force participation rate of women with children is depressed, especially when children are young. Second, a large share of women only work part-time, many of them reporting that the prime reason for this is care work associated with childcare, which is reflected in the disproportionately high share of working mothers in part-time jobs (Statistics Austria 2024; Riederer and Berghammer 2020; Rechnungshof Österreich 2020, 147–48). While these phenomena are well-documented at the aggregate level, the underlying labour market patterns and career trajectories that give rise to them remain insufficiently explored.

Furthermore, investigations of micro phenomena or specific, singular aspects relating to this topic can often not be fully contextualised, as a systematic analysis and overview of career patterns before and after parenting leave interruptions, has not been established yet. Basic magnitudes of fundamental phenomena or patterns are still unknown – for example, there is no information available regarding the specific LFPR of (different groups of) women after parenting leave, compared to the time before, or how they transition into and out of parenting leave. As a result, it remains unclear how such interruptions can be mapped onto women's overall employment histories.

The recognition of this fact represents the motivation for the main research questions of this thesis, which are:

1. *What are women's typical labour market patterns and trajectories before and after their periods of parenting leave?*
2. *How do these typical patterns and trajectories differ among various socio-demographic sub-groups?*
3. *What are the associations between different socio-demographic characteristics and women's career paths before and after their periods of parenting leave?*

Drawing on the data framework developed by Walch, Dorofeenko, and Fage (2024), the main research questions are investigated in a series of steps:

- *General trends*: characterisation of average labour market patterns in the time intervals before and after periods of parenting leave
- *Typical career paths*: presentation & characterisation of typical labour market trajectories before and after periods of parenting leave
- *Overall career profiles*: typical labour market trajectories that jointly characterise the time before and after women's periods of parenting leave
- *Socio-demographic factors*: (i) characterisation of different subgroups based on this typology of career paths, and (ii) identification of associations between women's career paths and different factors – at the individual, couple, and structural level

The expected contributions of this thesis are threefold, namely to: (i) investigate career paths of women with children and establish a systematic overview of typical patterns and outcomes in Austria; (ii) address the two main aspects handled in the literature – a reduced LFPR and reduced labour market activity after having children – and address related questions; and (iii) extend the current data basis and state of knowledge on this topic through the use of a new set of indicators and novel data framework/repository. By doing so, I aim to provide a more comprehensive context – both in terms of factual information, as well as data and indicators – for the future analysis of more specific questions regarding micro-, but also macro-level phenomena. Moreover, this thesis, as well as the development of the data framework it is based on, have a strong exploratory dimension and approach. The results are intended to facilitate the generation of new research questions and hypotheses, and to point towards avenues of future research, which for the first time can be developed and pursued on the basis of a comprehensive, integrated, and expandable data framework.

2. Research Context & Literature

The development of the data framework, its design, and its application in this thesis are motivated by an extensive body of empirical findings and theoretical considerations.

2.1. General considerations

Childbearing means childrearing: care work & reduced labour force participation and employment intensity

The increased participation of women in the labour market is considered one of the most important shifts in the structure and functioning of labour markets in industrialised states in the 20th century. This development has not only changed the composition of the work force, but has had wide-ranging consequences for changing fertility patterns, the organisation of the family, changing gender norms, the introduction of equality policies, the availability of childcare services, and social security benefits (Nolan and Lenski 2009, 278–99; Goldin 2006; Oppenheimer 1970). But even with the educational expansion and the second-wave feminist movement starting in the 1960s, women's entry into different occupational fields, gender equality policies, and changing norms and values about women's career choices, women's and men's employment situation remains unequal.

Across cohorts, there is a steadily rising employment rate of women in most advanced economies (Grigoli, Koczan, and Topalova 2021). In recent decades the family model of the male breadwinner has become less representative of the majority, the image of women's roles has evolved, and their employment rates have risen. Yet family members are not entirely self-sufficient and women continue to bear the brunt of **unpaid domestic and reproductive work** in most countries (Lewis 2001; Esping-Andersen et al. 2013; OECD.stat, n.d.). Over time, men have become more open to contributing to domestic work as well, but they still do not usually take on an equal share of household chores and care work (Hook and Paek 2020, 683). This also applies to Austria – in 2021/22 on average, women in Austria performed almost 2 hours more unpaid work per day than men, and although they worked less in gainful employment, their total hours of paid and unpaid work exceeded those of men. The gap in unpaid work is even wider when only those with children living in the household are considered: for women, this amounted to about 5 hours 40 minutes, which is almost twice as much as for men. Furthermore, women with children under 18 spend an average of 2 hours a day on childcare as a main activity, whereas men spend less than half that amount of time doing the same. This pattern also applies when childcare done either as the main activity or alongside another activity. These inequalities in the distribution of childcare tasks become more pronounced the younger children are (Trap 2023).²

² E.g., women whose youngest child is under 3 years old spend an average of 4 hours and 12 minutes a day caring for children as the main activity, compared to 1 hour and 34 minutes for men (Trap 2023).

Since the bulk of unpaid domestic and care work still resides in women's sphere of work, women's labour force participation and employment generally show a dip around and beyond childbearing and childrearing years. In most OECD countries this is the case, as **motherhood**, particularly for mothers with young children, was found to be one of the most important factors that hinder employment (Pettit and Hook 2009; Van der Lippe and Van Dijk 2001; Jaumotte 2003; Esping-Andersen 2010). This dampening effect has shifted later in the life course and has weakened over time however, due to trends like the educational expansion, the postponement of marriage and children at a later age, evolving family policies and childcare services, as well as changing social norms about gender roles (Hook and Paek 2020; Goldin 2006; Riederer and Berghammer 2020; Nieuwenhuis, Need, and Van Der Kolk 2012).

This pattern of the female labour force participation and employment life cycle, which is characterised by higher participation rates up to women's late 20s, but decreases in their middle years between the ages 30 to 40 – so around the time women generally have children and childcare is most demanding – has been termed by Goldin and Mitchell (2017) as “**the sagging middle**”. Women in Austria – especially younger cohorts – also present quickly increasing employment rates in their younger adulthood years. But then, as they get into their later 20s or 30s, depending on their education level, employment rates plummet (or stagnate, for the most recent cohorts) and only show an increasing trend again starting with their 30s (Horvath et al. 2021, 56). Even though the magnitude of this drop has weakened over time, the trend still remains. In Austria most educational groups reach their previous employment rates again, or exceed them by their late 30s or their 40s (Horvath et al. 2021, 60). However, in the context of rising part-time employment, especially for younger cohorts of women, the question arises also whether, despite high employment rates, they ever reach their previous employment *volume*.

As employment rates rise across cohorts, in the Austrian context the proportion of women who work part-time is similarly increasing, so even though younger cohorts have a higher employment rate, they have a lower proportion of women who work full-time (Riederer and Berghammer 2020). Riederer and Berghammer (2020) find that this trend particularly applies to mothers of more recent cohorts who have young children, which means a decrease in the total work volume, as well as individual income, despite increases in participation rates (Horvath et al. 2021). The provision of formal childcare services can help mitigate this effect. However, a lack of extensive, region-wide accessibility, childcare services of a sufficient quality, or that are compatible with full-time work might compel women to only take up marginal or part-time work. A considerable share of women in Austria are in **part-time employment** and in 2024, the proportion of employed women working part-time was 51% (of which a majority are mothers) compared to 14% for men (Statistics Austria 2025a). Of employed mothers, around two thirds only work part-time, this share rising to almost three quarters of mothers with children under 15 (Statistics Austria 2025a). And although mothers with higher education levels generally work full-time more often, in recent cohorts they have been found to be become increasingly more likely to work part-time in the long term (Riederer and Berghammer 2020). Among recent higher education graduates, the gender and motherhood gap regarding the employment rate and part-time work widens as soon as children are involved, and these differences are more

pronounced in Austria, compared to other European countries (Astleithner, Seewann, and Mayerl 2024; Pramer 2024). The importance of this factor is supported by self-reported reasons for working part-time in Austria: the most common reason named by women for engaging only in part-time work is to **care for children** or dependent adults. The care for children can be considered to take precedence in this context, since out of all women working part-time with children under 15, an overwhelming majority names this as a reason (Rechnungshof Österreich 2020; 2022; 2024).

As women's employment has increased in Austria, a familistic orientation has contributed to more women than men working part-time, maintaining the disparity in unpaid care work (Berghammer 2014). However, enduring traditional social views on parental responsibilities and gender roles, as well as the tendency to relegate care responsibilities to women may also be traced to men's higher incomes (Berghammer and Verwiebe 2015; Bittman et al. 2003). Across all age groups and cohorts, men's earnings are higher than women's (Horvath et al. 2021), so the opportunity costs of childcare work and taking (longer) parenting leave are higher for men, which is relevant for total household income. As a result, women go on leave much more often than men, with the proportion of men on parenting leave even slightly declining in recent years (Riesenfelder and Danzer 2023). It is telling that if women earn well before going on parenting leave, i.e. the same as or more than their partners, parenting leave is more likely to be shared (Riesenfelder and Danzer 2023). All things considered, parenting leave and (child)care work plays a crucial role in women's activity on the labour market, since taking parenting leave leads by definition to interruptions in employment, and the context of increased and unequally distributed childcare responsibilities, makes it more challenging to return to work (Lutz 2003; Ziefle 2004).

Consequences of reduced labour market participation and reduced intensity of employment

Therefore, as women continue taking primary responsibility for social reproductive work, their ensuing lower participation in the labour force around childrearing years, as well as their higher probability of working part-time around this time and beyond, directly contribute to reduced **entitlements to social security** claims such as unemployment benefits or pension payments. The unpaid (child)care and domestic work that women do is often regarded as "nonwork" in industrialised market-based societies, and is therefore not usually considered in the calculations for social welfare entitlements (Hausen 1977; Lutz 2003; Margolis 2000, 122). Such developments are as a result also intrinsically connected to the gender pension gap and the phenomenon of female poverty. In Austria, the gender pension gap amounted to about 40% in 2024, and the risk of poverty for female pensioners living alone was 32%, which is twice as high as for men (APA 2025; Statistics Austria 2025c). Part-time employees do not only have lower gross earnings than those working full-time, but lower gross *hourly* earnings, as well. Women are also generally more likely to be in **atypical employment** (in Austria, but also cross-nationally), which includes part-time work, as well as marginal employment, fixed-term contracts, agency work and temporary work, types of work that are strongly associated with lower gross (hourly) incomes (Rechnungshof Österreich 2022, 33, 150; Eurostat 2024).

The **gender pay gap** in Austria is decreasing over time, but at a slow rate. From 22.3% in 2013, the unadjusted gender pay gap in gross hourly earnings decreased to 18.7% in 2022. This is one of the highest in the

EU and is partly a result of the relatively high female part-time employment rate in Austria. In addition to women's reduced employment intensity – especially pronounced around childrearing years – their employment interruptions due to maternity/parenting leave entail a loss in the accumulation of (firm-specific) work experience during this time, further contributing to this gap (Statistics Austria 2025b; Geisberger and Glaser 2025). Another source for this inequality lies in the **gendered structure of occupations**. Compared to men, women are more likely to work in economic sectors and positions that are reconcilable with family responsibilities but generally less well paid (Lutz 2003; Blau and Kahn 2003). Despite the educational expansion of the last decades, many fields of study in Austria remain male or female-dominated (Zucha et al. 2023; Dibiasi et al. 2024; Astleithner, Seewann, and Mayerl 2024). Consequently, many economic sectors and occupations also tend to be highly gender-segregated. This is relevant because, first, the earning potential in economic sectors that primarily employ women is generally lower, and second, even within the same positions/professional groups, women are still more likely to experience an income disadvantage compared to men than vice versa (Rechnungshof Österreich 2024, 115, 126–34).³

A part of the gender pay gap can be attributed to factors like full-/part-time employment, economic sector of activity, and profession, and to others like age, education, contract and firm characteristics, tenure with the firm, or region. However, almost two thirds of Austria's gender pay gap remain unexplained by such factors (Geisberger and Glaser 2025). A similar phenomenon can be observed across different countries, and is captured by the term “wage discrimination”, referring to the proportion of the pay gap that cannot be accounted for by tangible, quantifiable differences between men and women that have an impact on productivity (Goldin 1990, 83–84; Blau and Kahn 2017). It is argued that this residual could be due to societal expectations of behaviour for men and women, the glass ceiling effect, differences in negotiation and competition behaviour, or more or less intentional discrimination (Goldin 2014; Goldin, Kerr, and Olivetti 2022; Blau and Kahn 2017; Böheim, Fink, and Zulehner 2025).

Goldin (2014) notes that as differences in human capital between men and women are decreasing, the explained part of the gender pay gap is also decreasing over time, while the unexplained proportion is increasing. Research using data from Denmark, Sweden, the US and the UK shows that the child penalty, i.e. the unequal effects of having children, increasingly accounts for the unexplained proportion of the gender pay gap (Kleven, Landais, and Sjøgaard 2019; Kleven et al. 2019; Kuziemko et al. 2018; Angelov, Johansson, and Lindahl 2016). Addressing the **parental gender gap**, Goldin, Kerr, and Olivetti (2022) decompose it into the “motherhood penalty” plus the “price of being female” and the “fatherhood premium” using US data. By comparing the earnings of women with and without children they find the motherhood penalty is greatest when children are younger, and mothers reduce their working hours. Fathers, on the other hand, continuously advancing their careers, achieve a boost in their incomes – a fatherhood advantage. But as even women without children earn less than men with children, the so-called “price of being female” (i.e., the gender wage residual unexplained by known variables) additionally contributes to a persisting gender and parental income gap.

³ (based on full-time employees working all year round).

Indications for the significance of these components of the parental wage gap can be found in Austria, as well. Women who have children and go on parenting leave were found to experience a decrease in their lifetime income compared to women who do not, with the greatest losses being concentrated in the years after the birth of their first child. These losses may be offset by shorter parenting leave durations but even so, they persist beyond the time the youngest child reaches adult age (Lutz 2003). Additionally, while women's earnings suffer after childbirth and parenting leave, men who return to employment after taking parenting leave are actually better off than before (Riesenfelder and Danzer 2021, 79–81).

2.2. Factors impacting women's post-childbirth labour market activity

Previous research has identified a myriad of drivers, observed and yet unobserved, that seem to contribute to the persisting inequality of mothers' situation in the labour market after childbirth and parenting leave. The following sections focus on a selection of such factors, which can be roughly clustered into two groups:

- First, personal and institutional factors that affect fertility decisions, the possibility – or necessity – to work or stay at home after childbirth, and the sharing of care work within the couple.
- Second, factors associated with women's labour market career itself, such as labour market integration prior to having children, sector of industry, or employer characteristics (pre and post childbirth).

The factors examined here are grounded in theoretical perspectives that address both individual decision-making and the interplay between individual behaviour and broader institutional and structural contexts. The rationale underlying this analysis draws on both economic and sociological theory. These include microeconomic concepts such as human capital, mechanisms such as the opportunity-cost or income effect, as well as time allocation in household decision-making processes. In this framework, the household is viewed as an economic unit, emphasising the interdependence of employment decisions within couples (Becker 1991; Mincer 1962; Mincer and Polachek 1974).

However, microeconomic assumptions of 'rational' behaviour aimed at maximising some form of 'utility' in this project – such as weighing potential wages against childcare costs, or career advancement against time spent with children – do not imply that such behaviour is universal or rooted in human nature. Rather, it is considered a product of 'WEIRD' socialisation, that is, 'Western', 'Educated', 'Industrialised', 'Rich', and 'Democratic' societies (see Henrich, Heine, and Norenzayan (2010) on this concept highlighting the risk of ethnocentric bias in Western academic research). As a result, such posited mechanisms may not hold across all historical contexts, cultures, or even apply consistently across different groups of women or couples within the same society. This limitation underscores the need to complement microeconomic models with sociological perspectives that situate individual choices within broader structures of power, stratification, and cultural reproduction (Lenski 1966; Bourdieu 1977; Esping-Andersen 1990).

While many of the subsequent factors influencing women's post-childbearing labour market careers refer to the individual (and couple) level, they should be therefore understood as embedded within broader structural and institutional conditions. These range from parenting leave policies and childcare provision and accessibility, to employment regulations, (regional) economic structures, educational and occupational segmentation, as well as workplace organisational structures (Van der Lippe and Van Dijk 2001; Goldin 2006; 2014; Esping-Andersen 2010; England and Farkas 2017; Blau and Kahn 2003; Nolan and Lenski 2009; Pfau-Effinger 2004; Acker 1990; Thévenon 2013; Wyrwich 2019). Furthermore, issues regarding the endogeneity of women's fertility decisions and their labour supply, including interactions between elements like education, productivity, age at first childbirth, and number of children, should be understood in the

historical context of the educational expansion and the transformation of the mode of production in Western societies over the last century (Goldin 1990; 1994; Margolis 2000).

Much of the previous empirical literature on women's employment in the context of motherhood is grounded in a microeconomic human capital framework. Sociological approaches, most prominently Bourdieu's conceptualisation of habitus and multiple forms of capital (social, economic, cultural, and symbolic), provide a complementary lens by situating resources within social structures and cultural reproduction (Bourdieu 1977; 1986). These perspectives build on materialist theories in sociology and anthropology, which emphasise that individuals' behaviours, capacities, and values are conditioned by material conditions, social structures, and processes of socialisation (Marx 1859; Lenski 1966).

Taken together, previously documented interactions between individual behaviour and structural conditions underscore the importance of viewing women's labour market activity from a macrosociological and materialist perspective. In this view, women's employment outcomes are not only influenced by individual and household-level cost-benefit calculations but are also situated within historical conditions and processes of economic and institutional change, as well as enduring structures of stratification and inequality that shape labour markets and societies as a whole. Women's employment patterns are therefore understood arising at the interplay between labour supply and labour demand factors – where individual decisions are embedded in broader social, institutional, and structural conditions (Nolan and Lenski 2009; Goldin 2006; Esping-Andersen 1990; Oppenheimer 1967; 1970).

2.2.1. Personal characteristics, couple-level decisions & institutional factors

As already mentioned above, the care work associated with childrearing still mainly remains in women's sphere of responsibility. Personal characteristics, the role of women's partners, parenting leave policy, as well as the availability of childcare services, can help to attenuate restrictions related to the unequally distributed share of care work within the couple. While the first elements refer to factors at the individual level, the latter constitute structural aspects that reflect institutional conditions and policies.

Age at first childbirth, number of children & duration of parenting leave interruptions

The age at which women have their first child has been found to have marked implications for their labour market participation. Across cohorts, rising education and employment before motherhood have coincided with higher ages at childbirth and shorter childcare-related career breaks in industrialised countries (Goldin and Mitchell 2017; Grigoli, Koczan, and Topalova 2021). Women with higher educational attainment are generally more likely to support gender equality, be more attached to the labour market, have better employment opportunities, and be less likely to work part-time than those with lower levels of education (Hook and Paek 2020; Esping-Andersen 2010). A later first birth is therefore closely linked to higher educational levels and to stronger labour market attachment, as older mothers tend to spend more time in the labour market before their first child compared to younger mothers. In Austria, Berghammer (2014) finds that this leads to quicker returns to work after having children and a decreased probability of choosing a family model where the male is the sole breadwinner.

Due to a persisting unequal distribution of domestic and care work, a higher number of children entails increased care responsibilities for mothers, making it more difficult to minimise their absences from the labour force or to further invest in the accumulation of human capital e.g., through additional education. However, having more children also increases the financial needs of a couple as children grow up, and women might be compelled to enter the workforce in order to provide a second income (Kahn, García-Mangano, and Bianchi 2014, 58). Such apparently contradicting mechanisms might apply to different groups of women, e.g. higher vs. lower earning and educated women, and also be dependent on their partners' earnings, as mentioned above. Furthermore, the number of children and the associated duration from the birth of the first child until the end of parenting leave associated with the last child may play an important role. First, longer absences from the labour market are assumed to bring about a depreciation (or the lack of further appreciation) of human capital and specific skills (Becker 1985; Mincer and Ofek 1982), and second, the legal right to return to the same firm might have expired. Additionally, Austrian labour market seniority rules may result in a reduction in income increases and opportunities for promotion (Lutz 2003). Since cross-nationally, as well as in Austria specifically, mothers' labour force participation and employment intensity decline particularly when children are young (Pettit and Hook 2009; Riederer and Berghammer 2020; Steiber and Haas 2010), an extended time marked by repeated childbirth, parenting leave interruptions, and the presence of young children can be assumed to have a long-term impact on mothers' labour market activity and earnings.

Decisions within the couple

Women's decision to enter or stay in the labour market after having children is – except in the case of single mothers – usually not independent from their partners. Within the couple, an interdependence of employment decisions can be assumed to exist (Mincer 1962; Steiber and Haas 2010). Family decisions at the couple level do not only affect fertility decisions in the first place, such as whether to have children, when to have them, or how many to have, but also have an influence on women's employment and the sharing of care work after having children. Concerning the interplay between couple-level fertility decisions and employment constellations, Berghammer (2014) finds that a higher number of children, by increasing the demands of childcare, predicts more frequent opting for the male breadwinner model, where women are not employed and only men work full-time. The “modernised breadwinner” model, in which men work full-time, and women work part-time, as well as the dual breadwinner model (both working full-time), are only increasingly chosen when children are older. Riederer and Berghammer (2020), as well as Steiber and Haas (2010), find that the re-entry into the workplace becomes mostly concentrated when children reach the age of 3 to 5 years, so a weakening of the parenthood effect over cohorts is only discernible after children are of school age, implicitly also pointing to the importance of childcare services accessibility.

However, a simple one-way causality cannot be presumed – women's **fertility** decisions have been shown to be **endogenous to their labour supply**, as within couples, family planning and labour supply decisions are not disconnected, independent aspects (Steiber and Haas 2012). Rather, it seems that fertility and work decisions are jointly determined – women with stronger career orientations may have fewer children, or

time childbirth at a higher age, to be able to pursue their career goals. So, factors like the number of children might not directly cause women to be more or less active in the labour market, but fertility and (subsequent) employment decisions at the couple level are both rather being influenced by a common factor (Goldin 1990, 125; Angrist and Evans 1998).

Additionally, available household resources play a role. Economic theory postulates that women's home production value is U-shaped across the life-cycle, and is the greatest during childrearing years (Blau and Winkler 2006). Due to the so-called “**income effect**”, when partners’ earnings are high, women might be less motivated to engage in labour-market work during this time, since an additional income might not be absolutely necessary for the household. If the partner’s income is low, there might be a higher economic need for women to work, in order to supplement household income (Goldin 2006; Berghammer 2014; Pettit and Hook 2005).

Parenting leave models & childcare services

Alongside individual characteristics and household-level decisions, there are also structural factors at play that influence aggregate female labour force participation. For example, institutional condition such as formal childcare accessibility and parenting leave policies depend on welfare regimes (Van der Lippe and Van Dijk 2001). It is generally agreed in labour market theories that career interruptions negatively affect career paths. Human capital theory posits that employment interruptions result in negative consequences on wages, by preventing increases in productivity through ongoing work experience, i.e., no new human capital being created in this “lost” time (Becker 1985; Mincer and Ofek 1982). Hence, the longer the interruption, the greater its impact is assumed to be. Different parenting leave models determine the possible choices regarding the length of time women can stay at home after childbirth, and therefore also the general timing of the return to the labour force. While extensions of childcare allowance duration in Austria were found to bring about longer periods of inactivity on the labour market and decreased earnings, reductions in leave duration resulted in quicker returns to work (Lalive and Zweimüller 2009; Lutz 2004). However, the Kleven et al. (2020) find that the effects of parenting leave duration on gender gaps seem to apply only in the short run, and the long-run effects were found to be practically non-existent. As a possible explanation, they propose that self-selection mechanisms may be at play, with households anticipating potential career costs – or the absence of high costs – when choosing a parenting leave model.

The ensuing care work associated with childrearing when children are young can be mitigated by the provision of childcare services. Child-friendly policies and subsidies for childcare have been found to promote the labour participation of women with children and young women at the beginning of their careers (Lefebvre and Merrigan 2008; Steiber and Haas 2010; Cipollone, Patacchini, and Vallanti 2014). In Austria, regional disparities concerning the availability of childcare services and their compatibility with (full-time) work are expected to have an effect that is not to be underestimated. The share of children in formal care, especially young children up to 2 years old, has been historically low in the federal states compared to Vienna, with differences still remaining today (Statistics Austria 2023; Wall 2022).

In 2023, Austria achieved the European Council's 2002 Barcelona objective of an average of 33% of children between 0 and 2 years old attending childcare facilities. However, this figure varies across the country, ranging from 46% in Vienna to 21-22% in Styria and Upper Austria (Wall 2024; European Commission 2013). The VIF-Indicator, developed by the Chamber of Labour is an indicator of the reconciliation of childcare services with full-time employment⁴ ("Vereinbarkeitsindikator Familie und Beruf") and shows a similar trend. Among 0 to 2-year-old children attending childcare facilities in 2023, 63% were in facilities that meet VIF standards. However, there are considerable differences between regions: whereas this figure is highest in Vienna with 89%, it is lowest in Upper Austria (28%) and Styria (38%). 3- to 5-year-olds have high daycare attendance rates, but regional differences persist in the share that visit VIF-compliant facilities (from 39% of attendees in Upper Austria, to 90% in Vienna) (Wall 2024).

2.2.2. Pre-parenting leave career

If we view parenting leave as an interruption of women's labour market career, the level of labour market activity prior to their first child is probably the most important factor for assessing and interpreting post-childbirth careers. Pre-careers play two roles: first, they are an assessment of a person's human capital, and second, they serve as a benchmark for the interpretation of post-parenting leave career patterns. Generally, women's labour market careers before their first child can be considered a good indicator of productivity because it reflects human capital to the degree that is relevant on the labour market, as it manifests without the constraints that domestic and reproductive work impose on women once they have children. Human capital theory is based on the assumption that the skills and knowledge of workers determine their productivity, and so, their value on the labour market (Becker 1991; Abraham and Hinz 2018, 26–30). According to microeconomic theories of labour supply, women's decisions to remain active in the labour market are mainly determined by their expected income and the shadow price of their time (Becker 1965; Gronau 1977; Ben-Porath 1973; quoted in Fosu 1999; Hook and Paek 2020).

Higher levels of education are usually associated with jobs that have higher financial, as well as intrinsic rewards – the so-called **"opportunity-cost effect"** means that higher-educated women are assumed to be more motivated to work, in order to avoid losing (higher) earnings (Becker 1991; Berghammer 2014). Over time, increasing education levels and higher labour force participation early on in more recent cohorts of women have accompanied higher ages at childbirth, as well as shorter career interruptions due to childcare (Horvath et al. 2021; Lutz 2003; Goldin and Mitchell 2017). In accordance with neoclassical theory, in the last few decades, the opportunity-cost effect has been found to predominate in Western countries (England, Gornick, and Fitzgibbons Shafer 2012). Earnings are therefore a critical aspect of women's pre-parenting leave careers in the context of Western industrialised nations – it represents the ultimate, tangible expression of their human capital and productivity value. In Austria, due to the seniority principle, incomes rise in time due to ageing and the accumulation of specific work experience. However, given the

⁴ VIF criteria of compatibility with full-time employment: open at least 47 weeks/year, for 45 hours a week, from Monday to Friday, whereby 9.5 hours must be achieved on four days a week; with lunch provided (Wall 2024).

heterogeneous wage structure across industry sectors due to the existence of collective labour agreements, income alone may not be sufficient for comparisons across sectors. In this project, women's pre-parenting leave career patterns, as well as their individual previous earnings, will therefore serve as a summary of skills and knowledge, of general and specific human capital without the constraints related to childcare responsibilities.

Tenure with the firm, stability of the career

Besides labour market participation in general, measured at certain sampling dates, the importance of the stability of a specific employment relationship or the career in general is acknowledged in the literature. The first relates to the tenure with an employer, and its associated level of firm-specific human capital, the second relates to the employment history in general. Across all educational levels, more **stable employment** histories are associated with higher incomes and vice versa. Despite increases in the career stability of women across cohorts, there still is a difference between the share of women and men with stable employment careers in Austria. And even if time on parenting leave (especially relevant for women) and military or civilian service (relevant for men) are included in the calculation of “extended periods of employment”, a marked difference still persists (Horvath et al. 2021). As Kahn et al. (2014, 58) also point out, if the aim is to assess the long-term costs that motherhood can have on women's careers, the continuity or stability of employment relationships should be considered.

Economic sector

Theories of labour demand emphasise the role that the expansion of the service sector has had in the sharp increase of women's formal employment over the last century, the rise of service and information industries being considered as the most important pull-factor in this context (Thévenon 2013; England and Farkas 2017; Goldin 2006; Harris 1981). Currently, the structure and makeup of industry sectors were also found to play a role in women's labour force participation, as well as their income. Concerning the stability of employment, one of the most important aspects in this context is that different economic sectors are characterised by different employment patterns. For example, tourism exhibits strong seasonal fluctuations, while the public sector traditionally offers stable long term career perspectives. While disparities in male and female income are first fuelled by the fact that women are employed part-time more often than men, the gender pay gap is also driven by the fact that the earning potential in sectors (and occupations) that primarily employ women are generally lower (Rechnungshof Österreich 2024, 115, 126–34), thereby also reducing the opportunity costs of staying at home. In addition, economic sectors are also important for the interpretation of wages, since wage levels can differ across sectors for similar levels of educational attainment due to the existence of collective bargaining agreements.

Furthermore, in order to remain in the work force despite childcare responsibilities, women who previously held full-time jobs might not only be compelled to reduce working hours but also to transition to jobs with lower hourly earnings that do not match their qualifications and previous work experience, or even shift to occupations in another industry sector that offer more flexible or family-friendly schedules (Lutz 2003; Blau and Kahn 2003). Restrictions imposed by childcare responsibilities therefore reduce mothers'

bargaining power, and coupled with the loss of industry or firm-specific human capital, and can bring about lower wages (Gangl and Ziefle 2009, 343; Waldfogel 1998; Budig and England 2001).

Firm size

The firm size of women's last employers before parenting leave can play a decisive role in determining their ability to return to work. First, from a managerial point of view, larger firms usually have wider human resources capabilities and therefore the capacity to internally substitute for women during parenting leave more easily. Second, "Elternteilzeit", the right to work part-time at the old firm up to the child's 7th birthday, is only possible for parents employed at firms with more than 20 employees (Bundesministerium für Arbeit und Wirtschaft 2024), so if childcare responsibilities are not compatible with a previously held full-time job in a small firm, women might be forced to give up their previous position.

2.3. Previous research in Austria based on administrative data

In principle, administrative data from the Austrian social insurance system are an excellent data source for a detailed labour market analysis. For instance, studies of the Austrian Institute of Economic Research (WIFO) like Horvath's et al. "Employment and income trajectories in Austria" (2021) or Lutz's studies on mother's employment (Lutz 2003; 2004) show that these data can also be used to investigate phenomena related to the current topic.

The most comprehensive analysis of women's employment after having children based on social insurance data in Austria (AMDB) is carried out every few years in the form of a (re-)entry monitoring by the Vienna Chamber of Labour (Riesenfelder and Danzer 2021; 2019). This provides valuable insights about women's labour market activity of prior to and post-parenting leave, following different cohorts of women after childbirth. However, due to its design certain aspects cannot be fully investigated. For instance, labour market activity is analysed as a distribution over different labour market states at different sampling dates, without considering individual careers from a longitudinal point of view, individual or typical career trajectories therefore remaining uninvestigated. Furthermore, the main focus of this (re-)entry monitoring is on women who do not enter parenting leave again (Riesenfelder and Danzer 2021, 4), and thereby an integrated view that considers the whole period when women have children is still missing in research so far. Additionally, in several of the previous studies based on Austrian social insurance data, those who were (wage or salaried) employees are treated separately from persons who were predominantly not employed during a specified period before childbirth, most analyses being limited to those who were previously employed (Lutz 2004; 2003; Riesenfelder and Danzer 2021; Kleven et al. 2020). However, such restrictions unnecessarily exclude, for example, women who have children at a young age, who might still be completing their education, or women who have recently immigrated to Austria.

An extensive review of the impact of parenting leave policies of the last decades in Austria is provided by Kleven et al. (2020), particularly the effects of extensions and reductions of paid parenting leave durations. Their analysis focuses on parenting leave policies before the reform of 2002, when paid leave eligibility was still dependent on prior employment. A previous strategy to cluster mother's careers after childbirth was undertaken by Frühwirth-Schnatter et al. (2016). They consider women's employment patterns after their first childbirth and find that employment trajectories of most groups converge to a steady state 3-5 years after – except for one group of mothers, many of whom go again on maternity leave. Their careers were found to be quite heterogenous, even in the long run.

To address such challenges and ensure a broad and inclusive analysis, the present data basis and research strategy was designed to enable comparability, while minimising the exclusion of certain groups or aspects from the analysis.

3. Data & Framework

This thesis is based on administrative data from the Austrian social insurance system. The methods used in this thesis are descriptive and exploratory. These data cannot be immediately used for scientific purposes or research. For any research question we want to analyse, it is first necessary to set the correct definitions and then properly extract the information and map it into a file that can be used for analysis. In case of the current project – as it is necessary to integrate and harmonise data from different sources of the social insurance system and additionally set up an environment that can be updated and extended, a full data framework was created. This framework is not a single file or table but a specific data repository that forms the basis for extracting countless datasets and panels, depending on the research question related to women's labour market integration before and after PLP.

In section 1, I describe the institutional context of parenting leave regulations in Austria. In section 2, the basic facts of the Austrian social insurance system and the type of data it generates are summarised. In section 3, I describe the basic properties of the data framework, how it was created, including the most basic steps and building blocks. This includes also the main definitions and concepts and their operationalisation. In section 4, the target population is defined. In section 5 I will briefly describe my approach.

3.1. Institutional context

Family policies in Austria are generally considered to be based on conservative-corporatist welfare state principles, much like Germany. The maximum duration of paid parenting leave/childcare benefits is relatively long compared to other (European) countries (Esping-Andersen 2010; Berghammer and Verwiebe 2015; Schulze and Gergoric 2015). In Austria, childcare allowance follows **maternity protection**, during which maternity benefit/allowance is paid. This usually starts 8 weeks before the baby's due date and ends 8 weeks after birth, during which mothers may no longer be employed ("Mutterschutz"/"Wochengeld").⁵

The last decades have seen several changes in parenting leave/**childcare allowance models**. In 2002, a major reform took place and a new childcare allowance model – the "Kinderbetreuungsgeld" was introduced.⁶ This allowance was prolonged to a maximum duration of 30 months (+6, if partners also take leave). Previously, entitlement was dependent on requirements relating to previous employment. The 2002 reform extended the receipt of childcare allowance beyond only those who had previously been employed, thereby considerably increasing the circle of recipients (Rille-Pfeiffer and Kapella 2022; Jusline, n.d.).

⁵ Usually this amounts to the full previous net salary. For previously marginally/self-employed/unemployed women, daily allowance varies (see https://www.oesterreich.gv.at/themen/familie_und_partnerschaft/geburt-eines-kind/5/1/wochengeld.html).

⁶ Previous reforms took place in 1961, 1990, and 1997, with an extension of maximum leave duration to 12 months, to 24 months, and respectively, a reduction to 18 months (+6, if childcare allowance is shared) (Kleven et al. 2020; Kreimer, Sturn, and Dujmovits 2011).

In 2008 and 2010, models of childcare allowance with a shorter duration were introduced: in 2008, the options for 20 (+4) and 15 (+3) months, and in 2010, shortest model with 12 (+2) months – with higher daily entitlements. In addition, 2010 also saw the introduction of the shortest model of 12 (+2) months as an income-dependent allowance. This model is mostly used by mothers with higher previous earnings. Since March 2017, the childcare allowance account (“Kinderbetreuungsgeld-Konto”) offers very flexible durations. The duration can freely be chosen, from 365 to max. 851 days after birth – or 456 to 1,063 days, if childcare allowance is shared by both parents (Rille-Pfeiffer and Kapella 2022). Hence, the number of parenting leave/childcare allowance models that parents can choose has periodically increased. Today women can choose the allowance model that they see fit to best meet their individual needs.

Up to the child’s 2nd birthday, previously employed parents can take **parental leave** (“Elternkarenz”) in the sense of entitlement to time off from work entailing loss of pay, which offers protection against dismissal and redundancy.⁷ It is worth noting that this protection is valid for a shorter period than the maximum childcare allowance duration. During parental leave and while receiving of childcare allowance, certain earning limits apply (generally up to the marginal employment threshold). In 2004, the right to parental part-time work was introduced for firms of 20 employees or more, valid up the child’s 7th birthday (Kreimer, Sturn, and Dujmovits 2011).

3.2. Data from the Austrian social insurance system

The Austrian social insurance system is a Bismarck-type social insurance system that insures against the risks of unemployment, sickness, and old age. It is financed through social insurance contributions which are based on wages and salaries. Predefined shares of the contributions are earmarked for health, pension, and unemployment insurance. As social insurance is mandatory, basically everyone living/working in Austria is covered. The social insurance legislation and its numerous regulations provide a legal and institutional framework for the public sphere and the welfare system, structuring the labour market, the health system, and the pension system. In order to determine eligibility and benefit accrual it is necessary to document individuals’ lives on a daily basis. Every status that is of relevance for the social insurance system must be accounted for, including all forms of employment, unemployment, and out-of-labour-force (OLF) statuses, which are electronically documented.

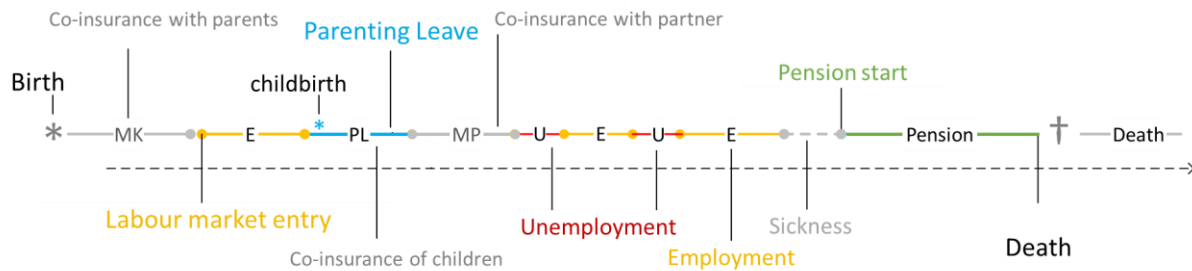
The Ministry of Labour and the Economy and the Public Employment Service Austria (AMS) provide a pseudonymised version of these data called the Austrian Labour Market Database (AMDB, “Arbeitsmarktdatenbank”).⁸ Qualified research institutions such as the Institute of Advanced Studies (IHS) can access this data for scientific research purposes. This database covers a wide range of aspects and is technically a relational database, i.e. a Linked Employer-Employee Database (LEED). The entities in the database, i.e. persons and

⁷ Generally, parental leave protection is valid until the child’s second birthday if both parents take leave. If only one parent takes parental leave or if the other parent is not eligible (e.g., because they are not employed), it is valid until the child is 22 months old (see https://www.oesterreich.gv.at/themen/arbeit_beruf_und_pension/Karenz-und-Mutterschutz/elternkarenz_und_eltern-teilzeit/Seite.3590007.html).

⁸ See <https://arbeitsmarktdatenbank.at/>.

firms/institutional bodies, are related to each other through social insurance episodes/spells of a certain period of time. Both types of entities are tagged with a unique identifier that allow for the construction of social insurance careers, hence enabling the tracking of individuals over time. In addition, through co-insurance episodes, persons can also be linked to their parents or partners (AMS 2023; Walch, Dorofeenko, and Fage 2024). Figure 1 below exemplifies a simplified timeline of a person's social insurance career ranging from birth to death.

Figure 1: Social insurance career: symbolical representation of individual timeline



Based on Walch, Dorofeenko, and Fage (2024).

This type of administrative data has several advantages: the fact that by law, employment and social insurance information must be registered, typical survey problems like sampling or response bias do not arise. Additionally, by definition, the data is not only available for a sample, but for the entire population of interest. The major drawback of this type of data is rooted in its very nature – it is administrative data that was originally not designed for scientific research. Also, by definition, subjective views like e.g., women's personal motivations etc. are not present in administrative records. However, a growing number of studies are based on this type of data. To be able to work with it, a lot of work on data preparation is needed – adequate ways of aggregations have to be developed, meaningful variables have to be constructed.

3.3. Operationalisation: Data framework & definitions

Different subsystems of the social insurance systems are governed by different legal setups and institutions. Whenever data from different subsystems are to be jointly analysed, a framework for the integration of the underlying heterogeneous data is needed. In order to be able to analyse parenting leave in the context of a social insurance or labour market career, Walch, Dorofeenko, and Fage (2024) created such a framework using the AMDB, which this thesis is based on.

3.3.1. Basic steps of data integration

For creating this data framework, the following steps were necessary:

1. Linking women to their children and partners:

Using co-insurance data, the relationships between mothers, children, and partners were established.

2. Joining consecutive social insurance episodes relating to parenting leave:

In the data, parenting leave episodes are all the social insurance spells related to childbirth, maternity leave⁹ and childcare allowance. It is usually a sequence starting with the social insurance status “Wochengeld” – maternity benefit associated with maternity leave protection – and ending with an episode of “Kinderbetreuungsgeld” – paid parenting leave/childcare allowance. These episodes were joined to create parenting leave intervals (for the different definitions, see below).

3. Linking parenting leave intervals to different children:

In case of several children, parenting leave intervals were matched to each child (this applies to women, but potentially also to their partners).

4. Creation of the Parenting Leave Phase (PLP):

We define the Parenting Leave Phase (PLP) as the period starting with the first parenting leave interval associated with the first child, and ending with the last parenting leave interval related to the last child (see below).

5. Embedding the PLP into the timeline of women's social insurance careers:

To link parenting leave and overall social insurance activity, the PLP is embedded each woman's social insurance career. Links were established between the PLP and employment spells before and after (see below).

6. Regionalisation:

Based on the social insurance carrier, an assignment of individuals to federal states was undertaken.¹⁰

7. Construction of separate datasets for different data analysis approaches/formats:

To enable the analysis of different indicators, individual-, period-, and sampling dates-based datasets were created (i.e., in wide and long formats).

⁹ Or in the case of fathers, paternity leave during which family-time bonus is paid (see definition box below).

¹⁰ In this thesis, the federal state of the first parenting leave episode is considered. In the data framework, further information exists on the federal state of the last parenting leave spell, of the last employment before and the first employment after the PLP.

This thesis represents a first implementation of this framework. The indicators created and the results of the present analysis will serve as a basis for updating and extending the framework.

3.3.2. Conceptualisation & definitions

Parenting leave

In Austria, childbirth, the immediate times before and after childbirth, as well as the subsequent stages of leave associated with early parenting are subject to different legal regulations in labour law, social insurance law, and family law (also see section 3.1 above). By labour law, for example, it is forbidden for mothers to work in the 8 weeks before and after childbirth (maternity leave/protection, “Mutterschutz”).¹¹ Labour law also defines the rules regarding the entitlement to parental leave (“Elternkarenz”) and protection from dismissal during this time.¹² Social insurance law defines aspects of social insurance such as health and pension insurance. It also regulates the receipt of maternity benefit (“Wochengeld”) during maternity leave.¹³ Lastly, part of social law defines and regulates the financial support both parents are entitled to receive in the form of childcare allowance (Kinderbetreuungsgeld)¹⁴, as well as paternity leave (“Papamonat”/“Väterfrühkarenz”) and the afferent allowance.¹⁵

Different definitions and regulations in these laws are overlap but are not always fully congruent. For example, the maximum duration of parental leave (i.e., unpaid time off work with protection against redundancy) is up to the child’s 2nd birthday. This is shorter than the maximum duration of childcare allowance – 30 months (+6, if shared by both parents). And while the periods during which parents receive maternity/paternity benefits and childcare allowance are relevant for their social insurance activity (i.e. parents are socially insured during this time), being on parental leave without receiving such benefits is not. Across countries, there is a plethora of different definitions, each specific to their respective social systems. These definitions cannot easily be mapped into one singular English definition. Additionally, the terminology used by international organisations also varies (Meil and Romero-Balsas 2025; Dobrotić 2023).

In this project, following the *Research Handbook on Leave Policy* (Dobrotić, Blum, and Koslowski 2022), “parenting leave” (PL) is used as an umbrella term to refer to all the different *social insurance-relevant* statuses of *paid leave* that parents can take, relating to childbirth and early parenting, as specified below:¹⁶

¹¹ This period can be longer if this is necessary due to medical or family reasons (e.g., danger for the mother/child, multiple births).

¹² See *Mutterschutzgesetz (MSchG)*, *Väter-Karenzgesetz (VKG)* for waged employees. For self-employment, see *Gewerbliches Sozialversicherungsgesetz (GSVG)* and *Bauern-Sozialversicherungsgesetz (BSVG)*. For registered unemployment, see *Arbeitslosenversicherungsgesetz (ALVG)*.

¹³ See *Allgemeines Sozialversicherungsgesetz (ASVG)*.

¹⁴ See *Kinderbetreuungsgeldgesetz (KBGG)*.

¹⁵ This allows fathers to take a month's leave (within the first few months) immediately after the birth of their child, during which they receive the so-called family-time bonus (“Familienzeitbonus”, see *Familienzeitbonusgesetz (FamZeitbG)*).

¹⁶ With the specification that (later) leave for taking care of children who are ill is not included, in contrast to e.g., Meil and Romero-Balsas (2025), who also use this umbrella term. Other forms of (partial) leave, like parental part-time (“Elternteilzeit”) are also not included (i.e., the right to work part-time in the previous job up to the child’s 7th birthday (Bundesministerium für Arbeit und Wirtschaft 2024)) (see definition box below).

Parenting Leave (PL):

The term “**parenting leave**” (PL) refers to all statuses of *paid leave relating to childbirth and early parenting* that are *social insurance-relevant* in Austria, as recorded in the AMDB.

Therefore, for the construction of **parenting leave intervals**, these social insurance-relevant statuses are:

1. maternity leave, during which maternity benefit is paid (“Mutterschutz”/“Wochengeld”),¹⁷ usually in the 8 weeks before the baby’s due date and the 8 weeks after birth (longer if medically necessary; during this time mothers may no longer be employed);
2. childcare allowance (“Kinderbetreuungsgeld”), payable for up to 3 years after birth, and claimable whether parents were previously employed and on parental leave (“Elternkarenz”)¹⁸ or not;

and only relevant for women's partners:

3. paternity leave, during which family-time bonus is paid (“Papamonat”/“Väterfrühkarenz”/“Familienzeitbonus”), which has the duration of 1 month and can be taken within the first few months immediately after the birth of the child.

¹⁷ Conditioned on previous employment, see [Mutterschutzgesetz \(MSchG\)](#) and [Allgemeines Sozialversicherungsgesetz \(ASVG\)](#)..

¹⁸ (i.e., unpaid time off work with protection against dismissal/redundancy, which is valid up to the child’s 2nd birthday).

The Parenting Leave Phase (PLP)

To embed women's (repeated) periods of parenting leave into their overall labour market careers, and to render the time before and after these periods comparable, we have defined the Parenting Leave Phase (PLP) and set the observation periods before and after as follows (Walch, Dorofeenko, and Fage 2024).

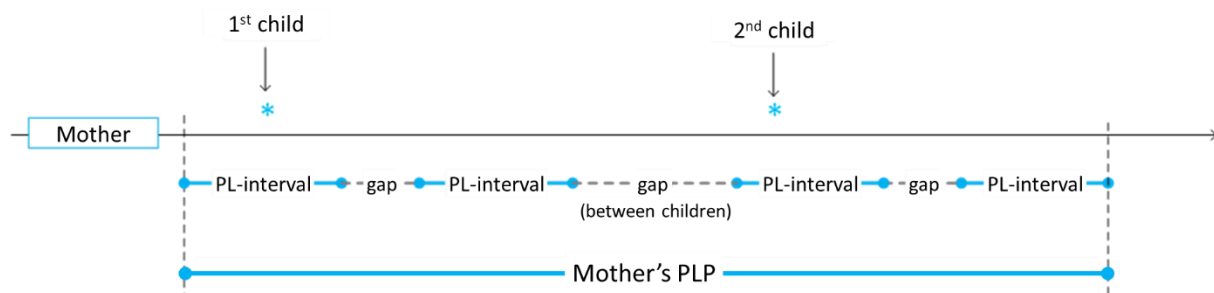
The Parenting Leave Phase (PLP) is the period:

- starting with the first parenting leave interval, associated with the first child, and
- ending with the last parenting leave interval, associated with the last child.

The parenting leave phase therefore starts with the first day a woman is on parenting leave (usually maternity leave, “Mutterschutz”) and ends with the last day she receives childcare allowance (“Kinderbetreuungsgeld”). The end of the PLP therefore corresponds to the last day of a designated Out-of-Labour-Force status associated with parenting leave.

As an example, Figure 2 below shows the construction of the individual PLP in the case of a mother with two children.

Figure 2: Construction of the Parenting Leave Phase (PLP)



Based on Walch, Dorofeenko, and Fage (2024).

The PLP was deliberately designed in this way, to partition women's social insurance career into **3 phases**:

- (i) the period before having children (pre-PLP career),
- (ii) the phase of (potentially repeated) childbearing with its associated labour market interruptions (the PLP), and
- (iii) the post-childbearing/parenting leave period, i.e. after the last interruption by childbearing/parenting leave (post-PLP career).

This setup allows us to aggregate across women with different numbers of children. Regardless of the number of children, the conditions of women's pre- and post-PLP careers are identical in the following respects: (1) before the PLP, women's labour market careers are not restricted by childcare responsibilities; and (2) after the PLP, women's labour market careers are not further interrupted by childbirth and parenting leave. This enables us to focus on women's post-childbirth, post-parenting-leave labour market careers by setting a stable context for long-term career development, without having to control for further fertility decisions.

The duration of each person's PLP can therefore vary, depending on the number of children, the duration of each single parenting leave interval, and the spacing of births.¹⁹ Also, the PLP might contain intermittent labour market activity, which can occur during a parenting leave interval²⁰ or between children. At this stage such activity – most notably, returns to the labour market between parenting leave intervals for subsequent children – is present in the data but is not analysed here explicitly. However, it can be used in future research.²¹

We know from previous studies that motherhood generally hinders women's labour force participation, particularly when their children are young (Pettit and Hook 2009) – a pattern that Goldin and Mitchell (2017) very visually termed the "sagging middle". The question then becomes, once mothers have completed their childbearing phase, often marked by repeated career interruptions, and begin planning their middle- to long-term careers, what are their return paths? In Austria, mothers' re-entry rates into employment were also found to increase with the age of their youngest child (Steiber and Haas 2010). Before children reach the age of 3, employment rates remain low. This can be linked to the increased availability of childcare services, to cultural norms of mothering when children are young (Riederer and Berghammer 2020), and to Austria's childcare allowance policies, which can be claimed for a maximum of 3 years after birth.

This makes the end of the parenting leave interval for the youngest child a key anchor in time for observing women's (re-)entry paths into the labour force. As the duration of this final parenting leave typically reflects mothers' planned timing of labour market return (given the childcare allowance options available), this design therefore maximises the likelihood of capturing women's enduring labour market reintegration trajectories. Therefore, while the length of the PLP varies, defining it as the period from the first parenting leave to the last – when the leave for the youngest child ends – serves three purposes:

- (i) to map the phase in women's lives characterised by the special circumstances of childbirth and repeated periods of parenting leave, when childcare responsibilities are most intense;
- (ii) to embed this phase in the context of women's overall labour market careers; and
- (iii) to enable a more meaningful comparison of two structurally similar, uninterrupted career stages – before the first child, and after the last – allowing a cleaner assessment of the middle-to-long-term impact of motherhood on employment trajectories, once family expansion is complete.

¹⁹ Note: Spielauer and Städtner (2002) find that most women in Austria tend to space subsequent births within a period of one to three years. If we look at the median PLP duration in our data (see Table 3 in the next section on the target population), we see that most of this time interval is spent in parenting leave, irrespective of the number of children. This also suggests that on average, periods of parenting leave related to successive childbirths tend not to be exceedingly far apart.

²⁰ (generally marginal employment while receiving childcare allowance).

²¹ Whether or not women return to work in the period of time after parenting leave and before having their next child (or for example, if they time births closely to minimise or group their absences from the labour market together) can be an important determinant of their subsequent careers. This type of information on women's employment during their PLP exists in the data framework and will be considered in future research but will not be discussed in further detail here.

Pre- and post-Parenting Leave Phase observation intervals

For the analysis of women's labour market activity before and after their parenting leave phase, we define a pre- and post-PLP observation period:

- 1. Pre-PLP interval:** the period from PLP start, dating back to the beginning of the 5th calendar year before PLP;
- 2. Post-PLP interval:** the period from PLP end until the end of the 5th calendar year after PLP.

Since parenting leave episodes can start and end at any time during the year,²² this ensures that 5 full calendar years before and after women's PLP can be analysed. Full calendar years are important to ensure the comparability of annual income (Walch, Dorofeenko, and Fage 2024).

By setting the pre-PLP observation period to extend to the 5 calendar years before women's first parenting leave (i.e., before PLP start), phenomena like labour market entry of younger women or migrant women can adequately be captured. Furthermore, defining the post-PLP interval to extend to the end of the 5th calendar year after PLP ensures that the youngest child will have more or less reached school age by the end of the interval, even if the shortest regular childcare allowance model was chosen.^{23,24}

As mentioned above, previous research in Austria shows that women's (re-)entry into the workforce increases with the age of their youngest child, being mostly concentrated when children are 3 to 5 years old – with school entry marking a strong increase in mothers' labour market participation (Riederer and Berghammer 2020; Steiber and Haas 2010; Frühwirth-Schnatter et al. 2016).²⁵ The post-PLP observation window therefore captures the key years in which the probability of re-entering employment²⁶ is highest, regardless of the chosen length of the last parenting leave.

Note:

To assess the longer-term development of career trajectories and earnings after the PLP and their implications for outcomes such as pension benefits, the observation periods – especially the post-PLP phase – can be extended to include all observable data for each cohort.

²² Pre- and post-PLP observation periods therefore vary marginally in length due to different start and end dates of the first and last parenting leave episodes.

²³ The shortest childcare allowance model is of 10 months (+2, if shared by partners). The very flexible model introduced in 2017 ("Kinderbetreuungsgeld-Konto") is not relevant here due to the selection of the target population (see section 3.1 and 3.3.3). However, even in the case of minimal duration of the chosen model, the youngest child would be at least 5 years old by the end of the post-interval.

²⁴ Moreover, for the most recent cohorts, allowing for a full 5-calendar-year-period after the end of the last observed parenting leave decreases the probability that women will plan to have another child after this time.

²⁵ There are considerable regional differences in the availability and accessibility of daycare (especially for children under 3, and compatible with full-time work, see previous chapter, section 2.2.1). But once children start primary school, virtually all mothers have – at least in theory – the possibility of pursuing employment during school hours which is above the marginal employment threshold.

²⁶ (which is above the permitted limits during the receipt of childcare allowance, usually marginal employment).

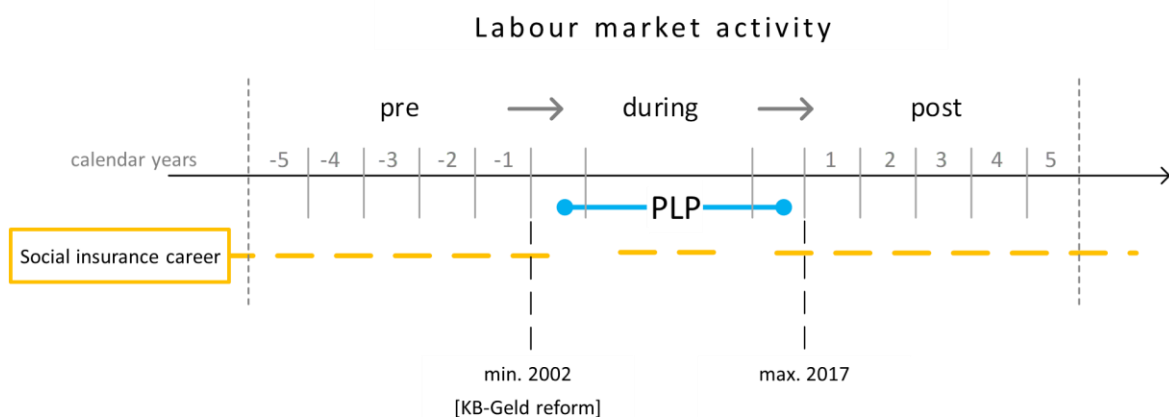
3.3.3. Target population

The population consists of all women registered in the AMDB starting with 1997.²⁷ In order to ensure comparability, (i) of childcare allowance regulations and (ii) the availability of the same observation periods of 5 full calendar years before and after PLP, we restrict the target population to:

- women registered in the Austrian social insurance system between 1997 and 2022,
- who start their first parenting leave episode in 2002 or later, and
- whose last parenting leave episode ends in 2017 at the latest, and
- who have no children outside the timeframe 2002-2017, and
- who have maximum 4 children.²⁸

Figure 3 illustrates how the parenting leave phase is embedded in women's social insurance timelines, showing the two observation periods – pre- and post-PLP – with the PLP start and end year restrictions for the target population.

Figure 3: Target population: Integration of parenting leave phases (PLP) into labour market careers



Based on Walch, Dorofeenko, and Fage (2024).

²⁷ The availability of consistent AMDB data starts with 01.01.1997. Data for time periods before 1997 do exist in the AMDB (AMS 2023) but they are historicised and therefore not included in this thesis.

²⁸ The target population is restricted to women with a maximum of 4 children due to the existence of so-called crisis foster parents. These may look after children at risk in family crisis situations for a limited time, and a large number of children might be co-insured with these foster parents for short periods.

In total, the target population consists of 339,355 women who can be analysed (see Table 1).

Table 1: Selection of the target population

	Number of women
Population with any social insurance episode between 1997 and 2022	7,074,224
Population with information about parenting leave and children only between 1997 and 2022	1,156,430
Target population: Women with...	
- children born only within the timeframe 2002 to 2017	339,355
- first & last parenting leave episodes only within the timeframe 2002 to 2017	
- max. 4 children	

The following tables provide basic characteristics of the target population, on the number of children, partners, age at PLP start and at PLP end, PLP duration, the duration of PL-intervals, and PLP start and end year cohorts (Table 2, Table 3, Table 4).

Table 2: Number of children and linked partners

Number of children	Total %				N			
	No partner	1 Partner	Multiple partners	Total	No partner	1 Partner	Multiple partners	Total
1	7%	32%	0.5%	39%	22,332	109,478	1,604	133,414
2	2%	47%	1%	50%	6,467	158,008	3,568	168,043
3	0.2%	9%	0.4%	10%	632	31,514	1,481	33,627
4	0.0%	1%	0.1%	1%	75	3,914	282	4,271
Total	9%	89%	2%	100%	29,506	302,914	6,935	339,355

Table 3: Ø Age at PLP start and PLP end, Ø PLP, Ø duration of PL-intervals (in months) by number of children

Number of children	Ø Age at PLP start	Ø Age at PLP end	Duration of PLP ¹ (in months)		Duration of PL-intervals ¹ (in months)		Share %	N
			Ø	Median	Ø	Median		
1	31.0	33.0	25.7	28	25.1	27	39%	133,414
2	28.4	33.7	64.2	62	50.5	54	50%	168,043
3	26.6	34.6	97.7	95	74.0	77	10%	33,627
4	25.4	35.3	118.8	118	92.4	95	1%	4,271
Total	29.2	33.6	53.1	48	43.4	37	100%	339,355

¹ Months on parenting leave are rounded up here, so overestimation of 1-2 months per child can occur (if e.g., due to childcare allowance sharing between partners, women have two alternating parenting leave intervals associated with the same child).

Table 4: PLP start year, PLP end year, Ø age at PLP start and PLP end

Year	Cohort				Age	
	PLP start year		PLP end year		Ø Age at PLP start	Ø Age at PLP end
	Share %	N	Share %	N		
2002	9%	29,361	0.0%	105	27.9	33.2
2003	9%	28,951	0.1%	393	28.0	33.6
2004	9%	29,398	1%	3,597	28.2	32.8
2005	9%	28,920	3%	9,612	28.5	32.9
2006	8%	28,284	3%	11,532	28.7	32.8
2007	8%	27,050	5%	16,713	28.9	33.0
2008	8%	26,585	6%	19,859	29.1	33.2
2009	8%	25,512	8%	25,464	29.3	33.3
2010	7%	24,945	8%	26,410	29.6	33.4
2011	6%	21,770	8%	28,137	29.9	33.6
2012	6%	20,350	9%	29,401	30.3	33.6
2013	5%	17,221	9%	30,735	30.7	33.7
2014	4%	14,262	9%	31,674	31.1	33.8
2015	3%	10,313	10%	33,406	31.5	33.8
2016	2%	6,052	10%	35,103	32.5	33.8
2017	0.1%	381	11%	37,214	32.9	33.8
Total	100%	339,355	100%	339,355	29.2	33.6

3.4. Methods & indicators

Given that the data used for analyses in this thesis is not made up of a sample from a population, but rather comprises the *whole* population under study, testing differences with the help of significance tests make little sense and are even inappropriate, since it is not necessary to draw conclusions from a sample to a population – the sample and the population being identical in this case (Walters 2021, 5; Morrison and Henkel 1969, 132–34). This research strategy contrasts previous literature which usually compares mothers with non-mothers (e.g., Lutz 2003), but is similar to Frühwirth-Schnatter et al. (2016) in that it only characterises and compares women who do have children. By excluding women who do not have children, a source of endogeneity and self-selection problems is eliminated.

The approach of this thesis is descriptive and exploratory

The data framework constitutes a newly developed, integrated data source. It enables the analysis of a wide range of known aspects, addressing questions that could not be answered in an integrated way before, and also detecting new phenomena. Therefore, in order to establish a context of data and facts relating to women's career trajectories before and after their PLP, the approach of the analyses in thesis is descriptive and exploratory. An exploratory approach is a mindset for letting the data speak before the formal step of hypothesis testing. In his foundational text on exploratory data analysis (EDA), John W. Tukey argues for the value of EDA in scientific research: “Exploratory data analysis can never be the whole story, but nothing else can serve as the foundation stone – as the first step” (Tukey 1977, 3). Moreover, the case is made for using exploratory and confirmatory analysis complementarily, since each one can benefit and inform the other (Tukey 1980).

An exploratory, descriptive approach can be adopted to reveal patterns and structures in the data without imposing predefined models. Descriptive multivariate techniques can help to identify groupings and relationships that might not be evident (Everitt and Hothorn 2011). Furthermore, such methods help reducing data complexity and distilling relationships among variables or cases. They serve as a valuable tool for uncovering underlying structures and provide a foundation for deeper analyses (Tabachnick and Fidell 2013; Hair 2010). In the current age of big datasets, such techniques are becoming increasingly useful, with EDA serving as a guidance to assess what phenomena are “striking enough” to warrant further investigation (Klein 2024). Furthermore, in order to draw insights from an exploratory approach, restrictive assumptions – as frequently imposed by formal hypothesis testing – might be counterproductive. According to John W. Tukey,

The best way to **understand what CAN be done is no longer** – if it ever was – **to ask what things could**, in the current state of our skill techniques, **be confirmed** (positively or negatively). Even more understanding is *lost* if we consider each thing we can do to data *only* in terms of some set of very restrictive assumptions under which that thing is best possible. (Tukey 1977, vii [emphasis in original])

Guided by this principle, the present analyses (as well as the construction of the data framework) avoids a priori restrictions that could limit the discovery of phenomena unnecessarily. For instance, the population

was not narrowed down to only certain subgroups of women (e.g., only waged employees, or those who were already in the Austrian social insurance system before having children). Similarly, outcome variables were not restricted to those that are convenient for a pre-chosen statistical model (e.g., only continuous variables with specific distribution properties, such as income).

While the analyses in this thesis are informed by theoretical considerations and previous research results, many indicators are based on such considerations but are also a result of freely exploring the data. The first step is to implement classical labour market indicators and to apply procedures and algorithms for AMDB data that were created at the IHS. For certain aspects or phenomena, new indicators must be developed. The resulting magnitudes and proportions must then be described and summarised. Given the size of the population – which of course is very heterogeneous – and the fact that we can observe it on a daily basis, one of the main challenges is to adequately reduce the complexity. To this end, for instance, women are clustered based on certain properties of their careers. For the presentation of results, I use classical frequency tables, cross tables, as well as graphs that visualise the dynamic nature of the phenomena, at times in multipanel plots.

The newly created data framework on which the present analysis is based is very extensive, and by combining different indicators, the data can be explored and new phenomena can be detected. At this stage no immediate statistical modelling is performed. However, the results established here form the basis for further analysis, in which statistical models can be specified and applied, informed by the context of empirical results.

3.4.1. Labour market states

In terms of the labour market states/statuses considered, my analysis is based on an extension of the classical separation into: 1. Employment (E), 2. Unemployment (U), and 3. Out of Labour Force (OLF) as conceptualised by Walch, Dorofeenko, and Fage (2024). For the present analysis, employment includes all types of paid, social-insurance-relevant employment. This includes waged and salaried employment, marginal employment, self-employment (including farmers), public service, apprenticeship. Full-time and part-time employment are both included here – as information on the exact working hours is not available in AMDB administrative data, part-time employment is not recorded as such. An exception is marginal employment, which is legally restricted to a maximum of 10 working hours a week. Unemployment refers to the time during which a person is registered with the Public Employment Service (AMS) as unemployed or as participating in training courses (see below).

The extension of the classical labour market states in this project includes a differentiation between (i) stable and non-stable employment and (ii) different OLF states.²⁹ Most notably, we introduce co-insurance with the partner as a separate OLF state, as this turns out to be the most relevant OLF state for women after the end of their parenting leave. Additionally, a status outside of the social insurance system is introduced, to be able to account for changes in the population due to migration. For technical reasons, short interruptions of employment during which a person is neither employed nor formally registered as unemployed – yet clearly still part of the labour force – are assigned an individual status.³⁰

²⁹ A similar approach was used in Walch and Dorofeenko (2024).

³⁰ Contrary to the Labour Force Survey (Klapfer and Moser 2023), in the AMDB employment and unemployment is registered at a daily basis, which provides the exact stocks of people in each status. Often, an employment episode ends at time t but the person does not start the next job at time $t+1$, or is not immediately registered as unemployed the next day, but a few days later. Additionally, there may be the case that employment ends during the month, the next job starts on the first day of the next month, and during these days the person is neither employed nor registered as unemployed. To be consistent with official AMS or employment statistics, our stocks are based on those who are employed or officially registered as unemployed, and a person between two jobs neither appears as employed nor as unemployed. At the same time, in such cases the person has not really left the labour force – they are simply in an intermediate state (Walch, Dorofeenko, and Fage 2024).

This extension gives rise to the following 8 disjoint states, in addition to PLP, that are used for the analysis:

1-E-stable employment

Stable employment is defined as going beyond the boundaries of a calendar year. All possible types of employment are included, except marginal employment (“geringfügige Beschäftigung”).

2-E-non-stable employment

Non-stable employment is either marginal employment (“geringfügige Beschäftigung”), irrespective of its length, or employment spells in other employment statuses that do not go beyond the boundaries of a full calendar year.

3-Short interruption

Any short interruption of employment of up to three months, where a person is not officially registered as unemployed but is clearly still part of the labour force.³¹

4-(Registered) Unemployment

Any type of unemployment during which a person is registered with the Public Employment Service (AMS) (including training courses/“Schulung”).

5-OLF-MP

A special form of Out of Labour Force (OLF) status, when women are co-insured with their partner (MP, “Mitversicherung mit Partner”).

6-OLF

Any Out of Labour Force (OLF) status during midcareer, excluding OLF while co-insured with the partner (maternity benefits and childcare allowance are not included here, as they are by definition part of the PLP).

7-OLF-B-A

Out of Labour Force (OLF) status before (after) labour market entry (exit).

8-NIS

Not in System (NIS) accounts for members of a cohort at the points in time when they are not in the Austrian social insurance system, as implied by the absence of any social insurance activity for more than one full calendar year.

PLP

The Parenting Leave Phase (PLP), as previously defined, is the time interval encompassing the time from the first to the last recorded maternity/parenting leave episode in the Austrian social insurance system.

The 8 states outlined above are used to characterise labour market activity during the pre- and post-PLP observation periods, while the PLP interval is distinguished as a separate phase (for further details see chapter 3).

Note: The Austrian social insurance data covers relevant activity for every person on a daily basis. However, one of the main drawbacks when analysing employment is the absence of information regarding actual working hours. Section 4.3.3 presents a pragmatic approach to dealing with this issue.

³¹ See previous footnote.

3.4.2. Summary of the labour market integration

Using these labour market states, the labour market integration can be characterised in two ways: First, labour market integration can be summarised by the shares of women in different labour market states at predefined **quarterly sampling dates** prior to and post-PLP (see Figure 4 and Figure 5 in the next section). Alternatively, as this analysis is based on daily data, we can determine for every person the exact number of days they spend in any of these states during the observation period. Based on that, a groups' labour market integration can be summarised by calculating the **average time shares** of members in each respective state (see Figure 6 in the next section).

- The first representation illustrates the relevance of the different labour market at specific dates and their changes over time, and is suited for visualizing the dynamic nature of the labour market integration over a time span, especially before and after important events.
- The second representation provides a compact summary of the full observation periods.

In addition, there are two versions of this analysis in terms of the labour market states. One is based on all 8 states, the other one excludes the status "8-NIS", when women are **not in the system**:

- Including the status 8-NIS is important to be able to capture women who are not yet in the social insurance system or those who have left the system. It ensures that the number of women observed stays stable over time. When characterising a cohort, especially by nationality, it is important to include this state.
- For other statements, it is necessary to condition on the presence of women in the system (i.e. in Austria, for all purposes) at a certain point in time, in order to account for the phenomenon of system entry or migration which results in a change of the population over time. Whenever a statement about the actual labour market activity is made, such as labour force participation, it is based on those women who are actually registered in Austria, and not based on a "potential" population. Therefore, in these cases, excluding women in the status 8-NIS is necessary.

3.4.3. Labour market rates

The labour force participation rate (LFPR), the employment rate (E-rate), and the unemployment rate (U-rate) are classical aggregate labour market indicators. As mentioned above, the labour market states chosen for the analysis represent an extension of the classical employment, unemployment, and out-of-labour-force definitions. Therefore, in addition to the classical labour market rates, the importance of stable and non-stable employment, or the special OLF state of co-insurance, can be illustrated through calculating their respective rates (Walch, Dorofeenko, and Fage 2024).³²

At any given point in time t , for any group I , the population POP_{It} comprises all persons that are in the system, either as part of the Labour Force at that date (LF_{It}) or Out of the Labour Force (OLF_{It}).

$$POP_{It} = LF_{It} + OLF_{It}$$

The **Labour Force** is comprised of the following states:

- stable employment (*1-E-stable*),
- non-stable employment (*2-E-non-stable*),
- short interruption (*3-short-interruption*), and
- unemployment (*4-unemployment*).

The proportion of persons **Out of the Labour Force** is composed of three OLF states:

- OLF co-insurance with partner (*5-OLF-MP*),
- OLF during midcareer (*6-OLF*), and
- OLF before/after labour market entry/exit (*7-OLF-B-A*).

This allows for an application of the classical labour market rates:

$$(1) \text{ Labour Force Participation Rate: } LFPR_{It} = \frac{LF_{It}}{POP_{It}}$$

$$(2) \text{ Employment rate: } E\text{-rate}_{It} = \frac{E_{It}}{POP_{It}}$$

$$(4) \text{ Unemployment rate: } U\text{-rate}_{It} = \frac{U_{It}}{LF_{It}}$$

As we can differentiate between stable and non-stable employment, we can also calculate their respective rates. Comparing these two employment rates will allow for a first possibility of assessing the composition of the workforce:

$$(5) \text{ Stable employment rate: } E\text{-stable-rate}_{It} = \frac{E\text{-stable}_{It}}{POP_{It}}$$

$$(6) \text{ Non-stable employment rate: } E\text{-non-stable-rate}_{It} = \frac{E\text{-non-stable}_{It}}{POP_{It}}$$

³² A similar approach was used in Walch and Dorofeenko (2024).

As an addition, the co-insurance rate can also be calculated at any point in time, conveying the share of women relative to the total population (present in the system) who are in an OLF status while being co-insured with their partners.

$$(7) \text{ Co-insurance rate}_{It} = \frac{OLF-MP_{It}}{POP_{It}}$$

Similarly to the summary of labour market states (subsection above) these rates can be calculated at (monthly) sampling dates, or thanks to the availability of daily data, the rates can also be calculated for any chosen interval T . In this case, this strategy will be applied to the pre- and the post-parenting leave phase observation periods.

4. General Trends: Labour Market Integration Pre- & Post-Parenting Leave Phase (PLP)

In this chapter, average trends regarding women's labour market integration before and after their parenting leave phase (PLP) are presented. The most important definitions, and different indicators and statistics are outlined. In section 1, the labour market states/statuses that the analysis is based on are introduced. In section 2, I present shares of women in their respective labour market states at quarterly sampling dates over the course of time. Furthermore, as the analysis is based on daily measurements, the average shares over the full pre- and post-observation periods will be summarised. In section 3, I characterise women's labour market integration by the most important macro labour market indicators, i.e. the labour force participation rate, the employment rate, and the unemployment rate. In section 4, women's average annual income for their pre- and post-parenting leave phase observation periods will be presented. Most importantly, the share of women whose annual post-PLP income is below their pre-PLP levels will be shown. The analysis in this chapter is focused on the totality of the target population, without differentiating between the different cohorts of women starting/ending their parenting leave phase in a specific year. However, most results show a remarkable stability of patterns over time. For ease of exposition, this is shown in the Appendix, where the stability of the results across time/cohorts will be addressed illustratively.³³

4.1. Labour market patterns

In this section I present a summary of the labour market patterns and integration in the respective observation periods based on the shares of women at different sampling dates before and after their parenting leave phase (PLP) (Figure 4 and Figure 5), which illustrate the dynamic aspect and the changes over time. Figure 6 provides a compact summary during the full pre and post period in terms of average shares.

In Figure 4 and Figure 5, the horizontal axis shows the different sampling dates. Here an extract from the monthly sampling dates was chosen, namely quarterly dates, which are relative to the individual start and end of each person's PLP:³⁴

- the pre-PLP period: starting 58 months before PLP until the day before PLP start (labelled -1)
- the post-PLP period: starting the day after PLP end (labelled 1) until 58 months after
- "0" represents the (entire) PLP time interval, in order to separate the pre- and post-periods.

³³ See Figure 37 onwards.

³⁴ As women's pre- and post-PLP observation periods vary in length due to different start and end dates of their parenting leave episodes during a calendar year, the chosen quarterly sampling dates provide a comparable extract of women's careers before and after PLP. These sampling dates cover most of the pre- and post-PLP periods but do not necessarily coincide with each individual woman's exact pre-interval start or post-interval end.

At each sampling date, each woman's labour market or social insurance status is determined, and the labour market integration of a cohort is summarised by the number and share of women in one of the 8 disjoint states (multinomial distribution). Figure 4 shows that at sampling point -58 (that is, 58 months before the individual PLP), roughly 20% of women in the target population have not yet entered the social insurance system. These are mainly young and migrant women. During the pre-PLP period these women gradually enter the system. The share of women in status 8-NIS (in brown) decreases.

We can also observe that women gradually enter the labour force (status 1 to 4). The combined shares of stable and non-stable employment (blue and orange) increase steadily. The share of women in stable employment (blue) also increases. It peaks roughly two years before PLP starts and then decreases, while the share of women in non-stable employment continues to increase (see also see Figure 5). The share of women in non-stable employment right before PLP consists of two groups:

- First, young women and migrant women who have just entered the labour market usually start with non-stable employment before finding a stable job.
- Second, women who have lost or quit their stable job and have not yet returned to stable employment but are either in temporary employment or in a job that has not lasted long enough to be categorised as stable by the time they enter PLP (these two groups will be accounted for as a separate career type in the next chapter).

Directly after their PLP ends, only about 50% of women are employed (blue and orange). A large proportion of women – over 40% – being out of the labour force. Co-insurance with the partner (light blue) plays an important role in this time. Towards the end of the post-observation period, employment shares increase again, but co-insurance shares after PLP remain higher than before, throughout the post-period.

Figure 4: Target population: Quarterly labour market status pre- & post-PLP

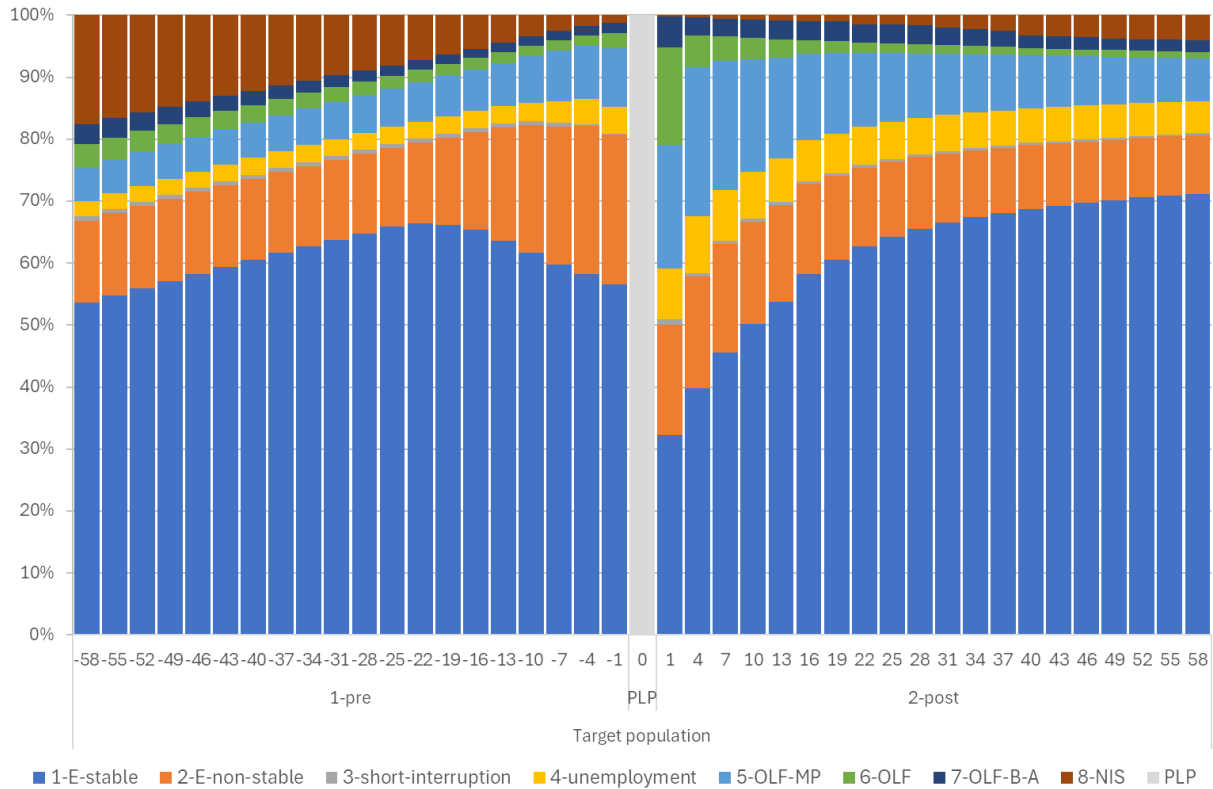


Figure 5: Population present in the system: Quarterly labour market status pre- & post-PLP

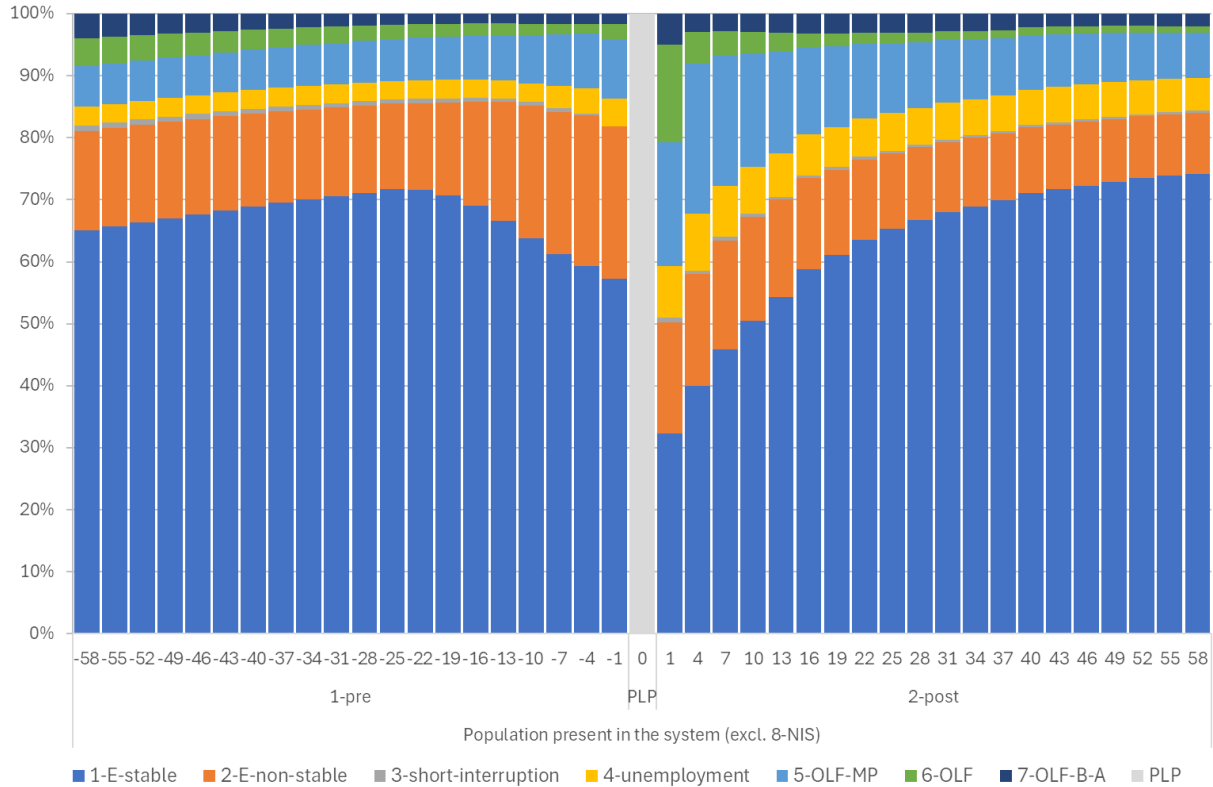
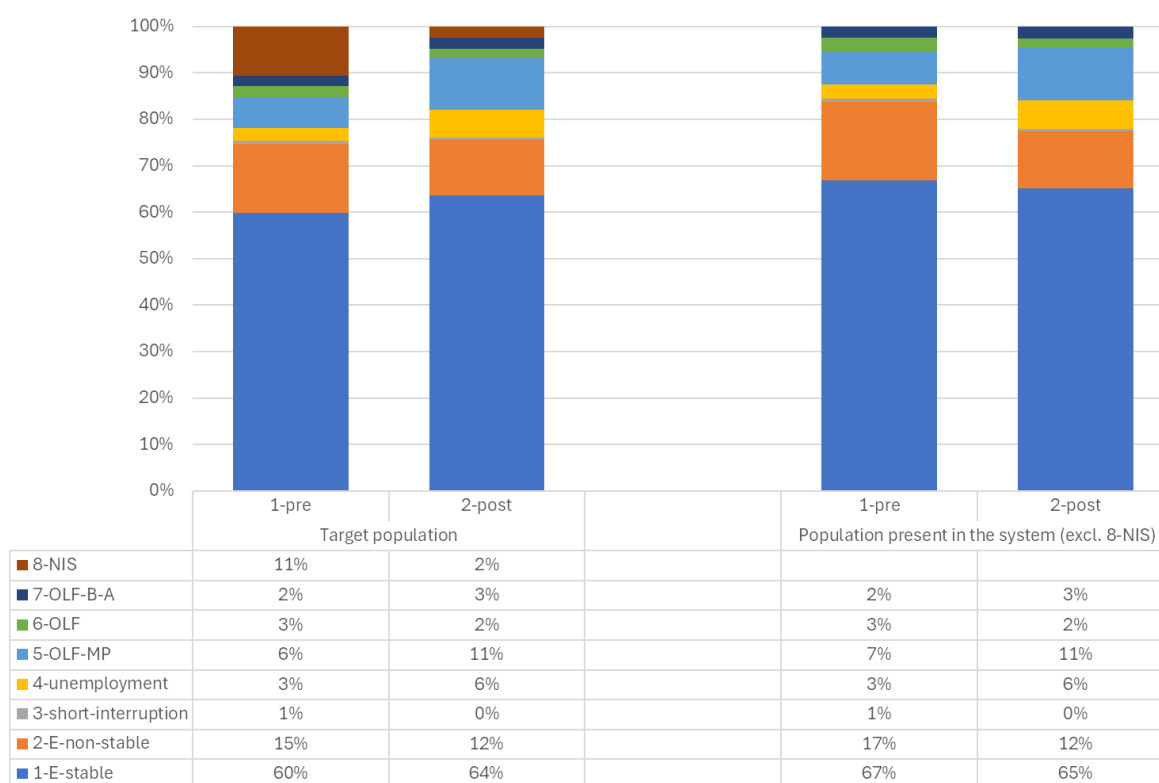


Figure 6 shows the time shares that women spend in the labour market different states, on average over the two whole time intervals. Focusing on the population present in the system (section on the right side) we can see:

- On average, women spend more time in the labour force (status 1 through 4) during the period before their parenting leave phase than in the period after.
- In the post-PLP period, unemployment is higher than in the pre-period of time.
- The dominant OLF status is co-insurance (status 5-OLF-MP), its average share being 7% in the pre-period and rising to 11% in the post-period.

Figure 6: Average labour market integration pre- & post-PLP



4.2. Labour force participation rate, employment rates, and unemployment rate

A more compact summary of the labour market integration can be expressed in terms of the classical aggregate labour market rates. In addition to the daily Labour Force Participation Rate (LFPR), the employment rate, and the unemployment rate, stable and non-stable employment are differentiated, and their respective rates calculated. Also, the share of co-insurance, as a co-insurance-to-population rate, is separately reported.

In Figure 7, these rates are plotted over time for the pre- and post-observation periods, Table 5 below summarising the average rates over the two observation periods. Looking at Figure 7, in the **pre-parenting leave period** we can see an increase in the LFPR and the employment rate. This is consistent with the fact that we are looking at young(er) women or women who are completing their education, some of them still in the process of entering the labour market. However, the composition of the total employment rate changes with time. The rate of women in stable employment rises, and the rate in non-stable employment declines – a pattern also consistent with labour market entry sequences and subsequent advancing in age.

Interestingly, around two years before the start of women's PLP, this trend reverses: stable employment peaks and then declines, while non-stable employment and unemployment (to a lesser extent) increase. At the same time, the share of women who are co-insured goes up, the LFPR going slightly down. This development points to the question of the relatedness of fertility and labour market decisions (Goldin 1990, 125; Angrist and Evans 1998; Steiber and Haas 2012), and the difficulty in disentangling these effects. One possible interpretation is that women who are in an unstable part of their career, e.g. after reorientation or losing a stable job, may decide to have children sooner rather than later. The fact that non-stable employment (and to a lesser extent, unemployment and OLF co-insurance with partners) increase mostly to the detriment of stable employment – which is linked to higher incomes³⁵ – suggests that women who are already experiencing a downward career trajectory may choose to have children during this period. In doing so, they face lower opportunity costs related to the further advancement of a stable and successful career (see the next chapter on career path typology for a further discussion of this development).

At the start of women's **post-PLP interval**, so directly after the end of their parenting leave phase, the labour force participation and the employment rate are low. At this point, the LFPR only reaches about two thirds of its previous level, and the employment rate even less than that. This drop in mothers' LFPR and employment rate following their PLP is consistent with the trends identified elsewhere in the literature (Pettit and Hook 2009; Goldin, Kerr, and Olivetti 2022; Riesenfelder and Danzer 2021). Concurrently, the co-insurance rate gains in importance in this time, and unemployment is nearly three times higher than right before the start of the PLP. This drop in employment rates and LFPR, more generally, is substantial,

³⁵ (see Chapter 5 on career types and Horvath et al. (2021)).

particularly if we bear in mind that women's LFPR and employment rates were already on a downward trend before the birth of their first child.

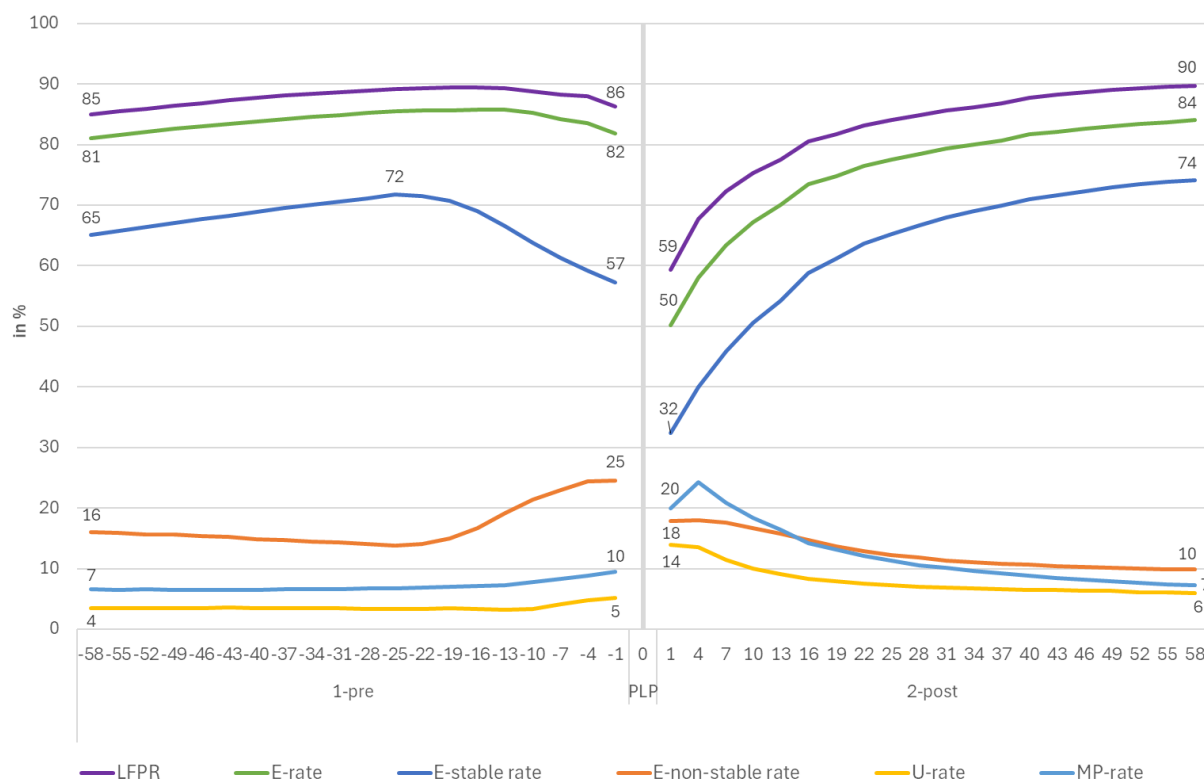
Over the course of the post-PLP period, there is a trend of returning to the labour market. The LFPR steadily rises during this time and towards the end of the post-period, it surpasses pre-PLP levels. However, on average over the interval, women's LFPR remains under the value achieved in their pre-PLP period (84% vs. 87%). The co-insurance rate is higher right after mother's last parenting leave but declines along the post-PLP time period. However, over the post-interval, it still remains above pre-PLP levels, resulting in an average rate of 11%, compared to the 7% over the pre-period (see Table 5). As women (re-)enter the labour market after their PLP, their employment rate and stable employment rate also rises. The role of non-stable employment steadily decreases after the last parenting leave, its levels being persistently lower than before PLP (12% pre vs. 17% post). This points to a change in labour market patterns as the composition stable/non-stable employment changes.

Stable employment surpasses its most recent pre-PLP level (57%) about 16 months after the end of the last parenting leave. Women's stable employment rate continues to rise, but it only reaches its highest value achieved during women's pre-careers about 3,5 years into the post-interval (see Figure 7). Taking into account that the (last) parenting leave interval can last up to about 3 years after (the last) childbirth,³⁶ this finding mirrors the trend identified by Riederer and Berghammer (2020), as well as Steiber and Haas (2010), who find a concentration of (re-)entry into work around the time children are of school age. However, through the distinction introduced in the present data basis between stable and non-stable employment (see chapter on data & data framework), this distinction allows for a more differentiated view – it reveals which *type* of employment drives this overall development – namely, the increase in stable employment.

At the end of the 5 calendar years after PLP, the stable employment rate surpasses the highest value ever reached in the pre-period. Despite this increase however, the average rate over the post-PLP period remains slightly lower than before (65% vs. 67%). Additionally, as mentioned above, unemployment rates are higher after PLP (with the highest values in the first year post-PLP) and remain above pre-PLP levels throughout. On average over the observation periods, the unemployment rate before PLP is 4%, rising to 7% after PLP (see Table 5).

³⁶ The longest childcare allowance model lasts until 30 months after birth (+6, if shared between partners).

Figure 7: Quarterly labour market rates pre- & post-PLP



Data labels: in %. X-axis: months before and after the parenting leave phase.

U-rate: in contrast to the other rates, the unemployment rate is calculated based on the labour force, and not the population present in the system (see section 3.4.3 on labour market rates).

Table 5: Average labour market rates pre- & post-PLP

	1-pre	2-post
LFPR	87%	84%
Employment rate	84%	77%
Stable employment rate	67%	65%
Non-stable employment rate	17%	12%
Unemployment rate	4%	7%
Co-insurance-rate (MP-rate)	7%	11%

4.3. Earnings

To complement the picture of women's labour market activity before and after their parenting leave phase, as painted by the development of labour market rates above, this section presents women's gross employment incomes over these two observation intervals, before and after the phase in their lives when they have children and go on parenting leave. For each person, their gross employment income for each calendar year in the pre- and post-periods was calculated. The focus is on the full five calendar years before and after their PLP. The years of women's PLP start and end were excluded from the calculation of income summary variables.

Income figures encompass only employment income (i.e., linked to employment episodes), and exclude social transfers like unemployment and sickness benefits, emergency assistance, educational leave etc. The calculation of average values includes those not employed, but excludes employed individuals whose income information is missing or who are not in the system in a given calendar year (see Table 39 on missing values in the Appendix). All incomes are adjusted for inflation and scaled to 2022 values – on the basis of the change in the maximum contribution base for social insurance, as determined by social insurance carriers.

4.3.1. Average gross annual income over the pre- and post-PLP intervals

As a summary variable, the pre- and post-PLP periods can be characterised by the average of the individual annual gross employment incomes during the pre- and post-period. For each person, the average annual income for each full observation period is calculated based on the respective gross employment income in each calendar year (see Table 6). On average, in the pre-PLP interval, women earned a gross annual income of about 29,600€. Over the post-PLP observation period, this dropped to around 20,700€.

Table 6: Average gross annual income pre- & post-PLP

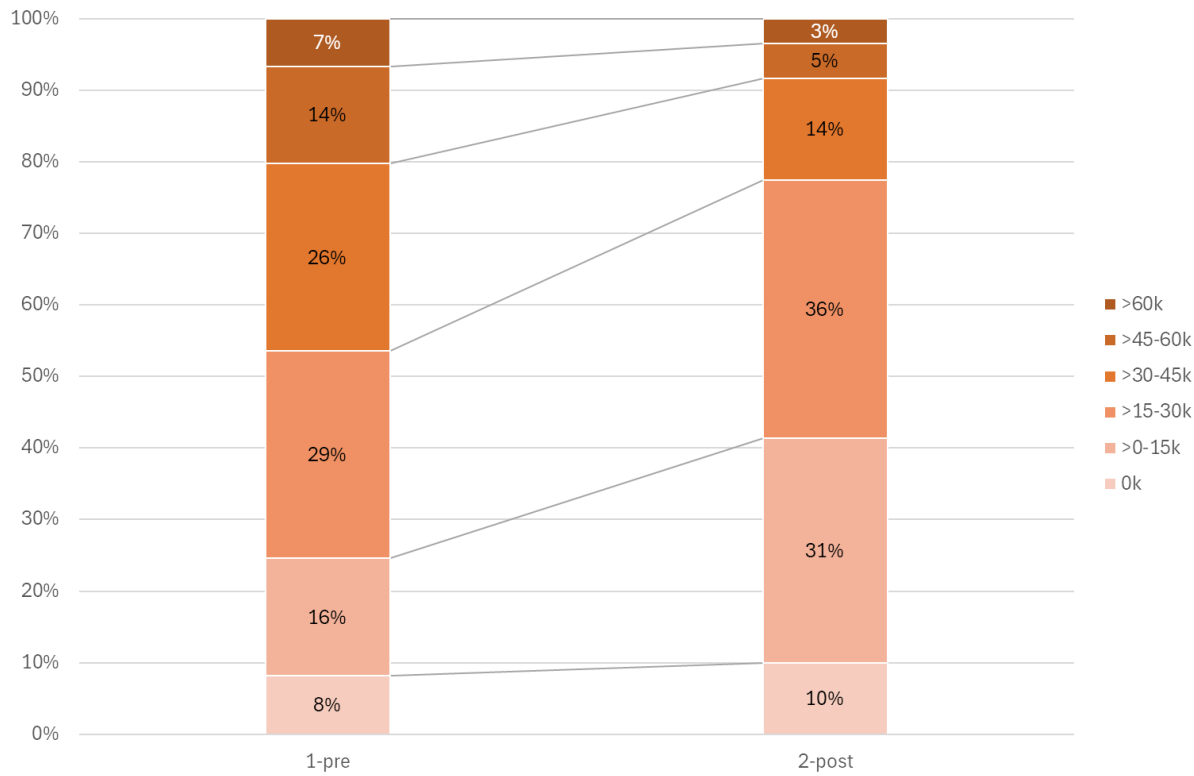
	1-pre	2-post
Average over women's average gross annual incomes	29,566€	20,661€

Adjusted for inflation and scaled to 2022 values.

Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

To illustrate the distribution of the average annual income over the pre- and post-parenting leave phase intervals, Figure 8 shows the shares of women in different income categories. The drop in average annual income from the pre- to post-PLP interval is reflected in the change in shares: Almost 80% of women have a gross annual average income below 30,000€ in the period after their PLP, compared to only 53% in the period before.

Figure 8: Share of women by average gross annual income categories pre- & post-PLP

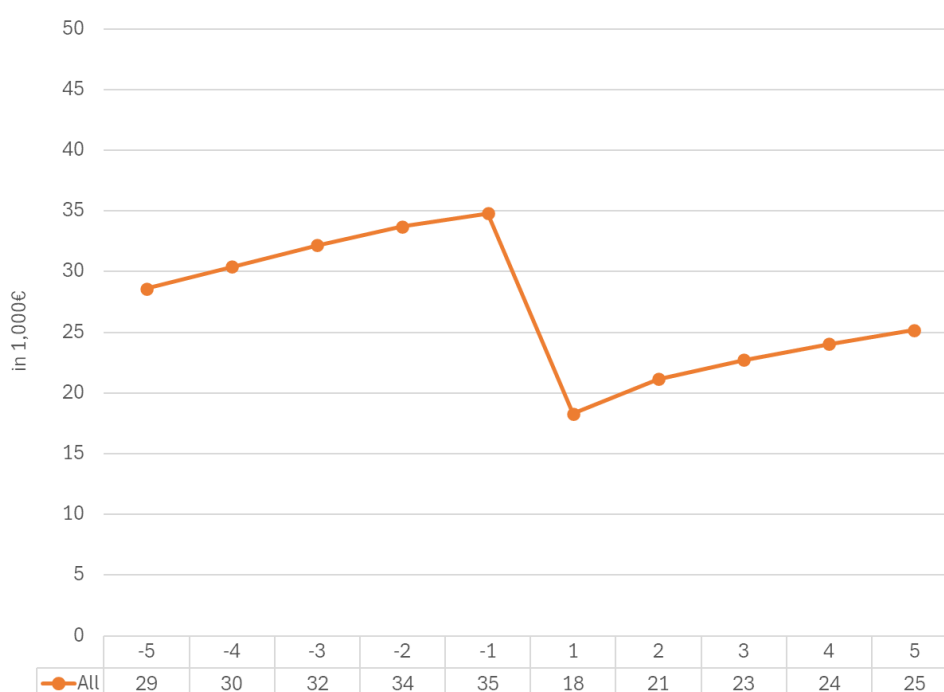


k: 1,000€. Adjusted for inflation and scaled to 2022 values.
Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

4.3.2. Average gross income per calendar year

The average income over all women (for which income information is not missing) for each calendar year of the pre- and the post-period is plotted in Figure 9. This illustrates that incomes increase in the pre-period, something that is consistent with patterns of labour market entry or early careers. The average gross annual income in the calendar year before PLP starts is around 35,000€. The parenting leave phase constitutes an interruption: Consistent with the labour integration immediately after PLP and the patterns of women's return to the labour market, the average gross annual income after PLP is lower than before and increases over time. However, even in year 5 after women's parenting leave phases end, the average annual income is around 25,000€, which is considerably lower than before starting PLP, and lower than it was during the whole pre-childbirth period.

Figure 9: Average gross income per calendar year pre- & post-PLP



Values are expressed in 1,000€. Adjusted for inflation and scaled to 2022 values.

X-axis: calendar years before and after PLP.

Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Note:

Due to the changing population and the exclusion of women for whom employment income information is missing in a given year, the summary average for the pre- and post-period gross annual incomes (in Table 6) is not equivalent to the average of incomes over each calendar year in Figure 9 (see Table 39 on missing values in the Appendix).

4.3.3. Employment intensity: post-PLP income, relative to pre-PLP income

As illustrated above, on average, there is a drop in women's income after their parenting leave phase, and they have considerably lower employment income even 5 years after this has ended. This is however an average, and in order to assess such changes at the individual level, women's income in each calendar year after their PLP is compared to their base income in their pre-career.

The base pre-PLP income is defined as the gross employment income from the *last calendar year before the start of women's PLP*, since this reflects the latest human capital or productivity level – as expressed through its (monetary) value on the labour market – achieved by women without the constraints that childcare responsibilities impose. Taking the gross income of the last calendar year pre-PLP as an individual benchmark or base (level = 100%), women's income level of each post-PLP calendar year – and so, their relative **employment intensity** – can be expressed with respect to their own base year.

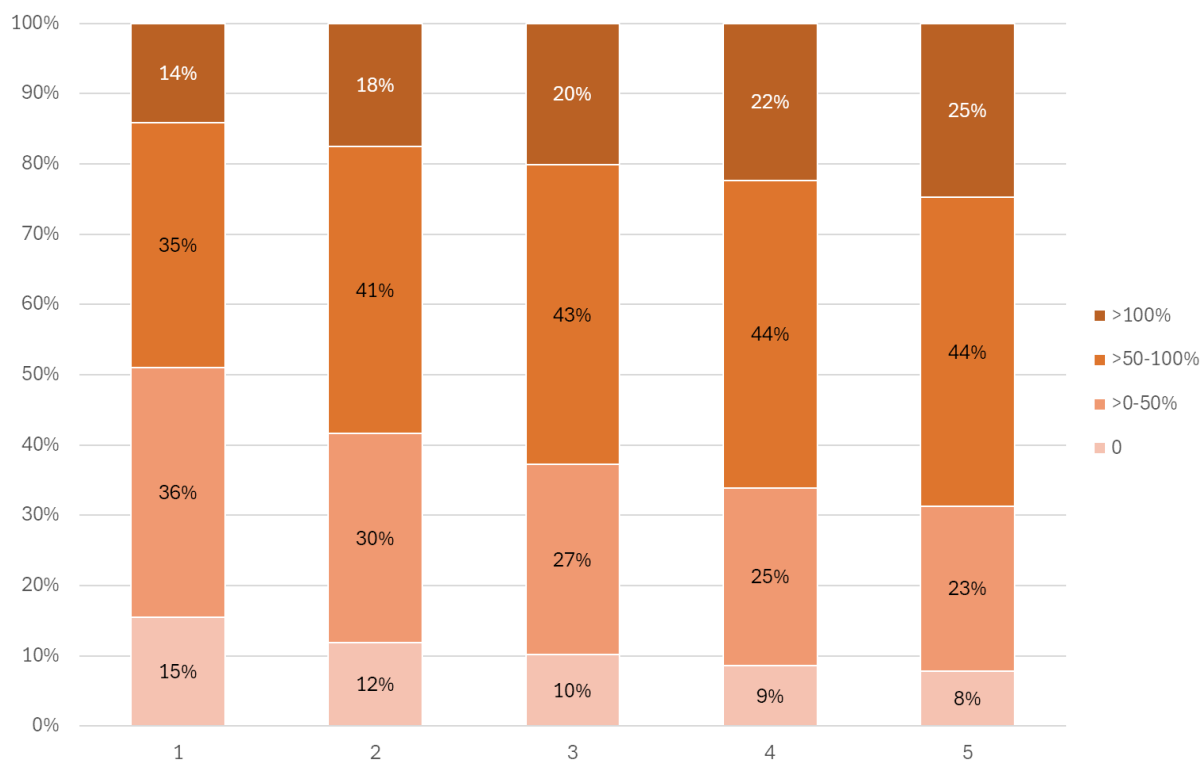
Here, women are grouped in the following employment intensity levels as measured against their base year pre-PLP:

- 0: no employment income
- >0-50%: over 0 and up to 50% of base year income (calendar year -1 pre-PLP)
- >50-100%: over 50% and up to 100% of base year income
- >100%: over 100% of base year income, i.e., above income level in base year

The following Figure 10 plots the shares of women who reached different income levels in each successive calendar year of their post-parenting leave phase interval. In the first calendar year after women's last child and parenting leave, many women's employment intensity is reduced. 86% of women attain an income level below or up to their benchmark income level. However, in this year, 50% earn only half or less than what they had previously earned.

Over time, the share of women with an income level below or up to their pre-PLP income also declines, whereas the share of women earning more than before PLP increases. In the 5th year after PLP, 8% of women still have no employment income. However, five years after their parenting leave phase ends, only one quarter achieves an income that is above its pre-PLP base level.

Figure 10: Employment intensity each calendar year post-PLP



Including those not employed, but excluding those with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

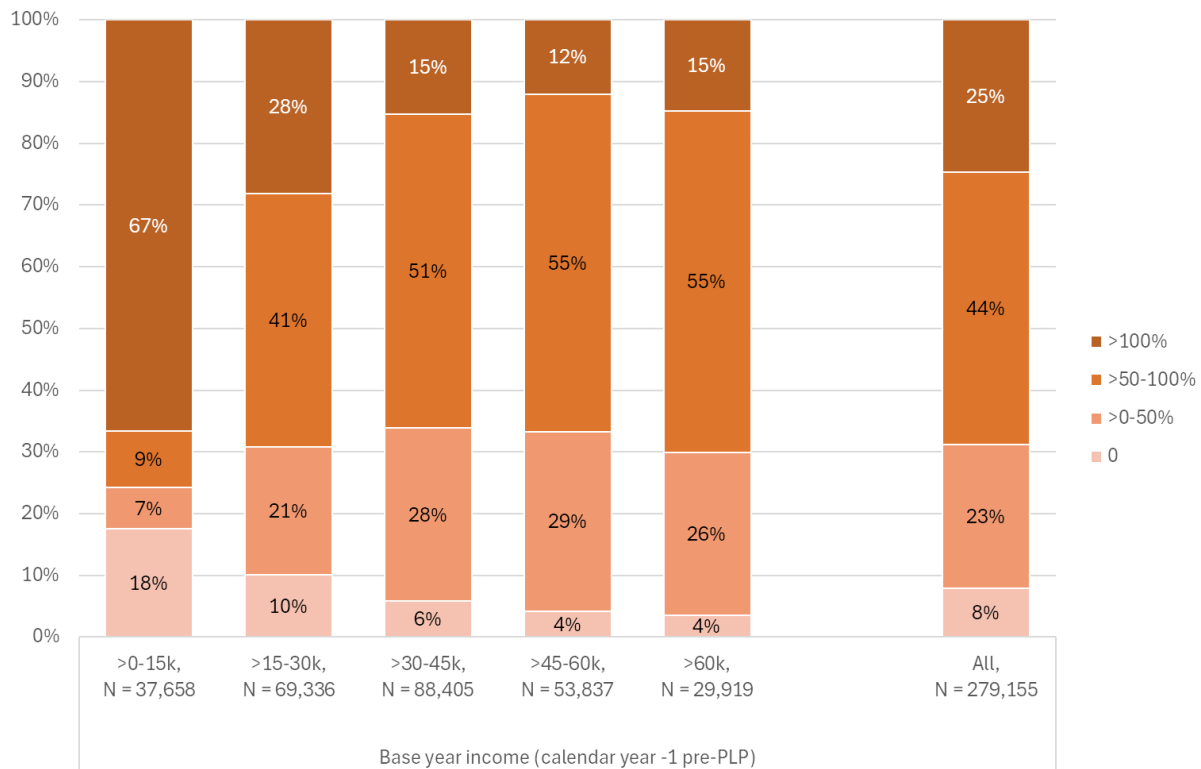
Whereas the decrease in the proportion of women with no income at all is consistent with the incremental return of women to the labour force (see section above) post-PLP, their lower employment intensity as measured by relative income levels after five years seem to contradict the patterns of a successful return to the labour market.

Women have indeed successfully returned to the labour market in terms of employment patterns (specifically stable employment), their incomes levels however seem to be depressed relative to their previous earnings. Remembering the development of general labour market rates delineated above, in year 5 post-PLP women's LFPR and the rate of stable employment is higher than in the last calendar year before PLP start (see Figure 7). The non-stable employment rate (which includes low-paying marginal or temporary jobs) is much lower on the other hand, the co-insurance rate is also lower, and unemployment is only slightly higher than in the base year. Hence, the difference in income between the base year and the last calendar year of our post observation period (year 5) is not a result of the differences in the shares of women's labour market status. Women work, they are mainly in stable employment, but simply earn less than they did before. This rather suggests that women mostly seek (and find) stable employment relationships after having children, but reduce their working hours – something that is consistent with previous empirical research (Riederer and Berghammer 2020; Berghammer 2014; Rechnungshof Österreich 2020, 147–48).

Naturally, it is easier to surpass pre-income levels if women had a low income in their base year. The following chart shows the employment intensity of women in the 5th year post-PLP, differentiated by the

income categories of their base year, so before their parenting leave phase (see Figure 11). Except for the relatively small group with a base year income below 15,000€ – most of whom indeed surpass their previous benchmark income – we see that after PLP, only a small share of women earn more than they did before having children, across all other base year income groups (from 28% to 12%).

Figure 11: Employment intensity in calendar year 5 post-PLP, by base year gross income categories



k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Including those not employed, but excluding those with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

Note:

The share of women who earn the same as they did in their base year, i.e. who have an employment intensity of exactly 100% in the 5th calendar year post-PLP, is negligible.³⁷

In this chapter I have presented overall results that describe the average patterns of labour market integration for the population studied. In the next chapter, I will address the heterogeneity in women's career paths before and after the parenting leave phase.

³⁷ This mostly occurs in the >60,000€ gross income category, due to the existence of the maximum contribution limit for social insurance (see Table 56 in the Appendix).

5. Types of Labour Market Career Paths

One of the main research goals of this thesis is to analyse *typical labour market patterns before and after women's periods of parenting leave and so, more generally, their typical overall careers*. In the previous chapter, general trends regarding the overall labour market (LM) integration patterns of women before and after their parenting leave phase (PLP) were presented. The results represent average outcomes of the overall target population, and they are remarkably stable over time, i.e. across different cohorts.

However, given the heterogeneity of women and their careers, this population consists of many possible subpopulations. Women differ with respect to personal characteristics (e.g. nationality) PLP-related attributes (e.g. age at first childbirth or the number of children), and characteristics of their individual labour market activity (e.g. sector of employment). Therefore, it is not surprising that women have very different individual career trajectories both before and after parenting leave. At the same time, women from different subpopulations may have certain similarities regarding their careers. To address these differences and similarities, a useful grouping or clustering of individual labour market careers is necessary. Such a categorisation should reduce the existing complexity by grouping women with similar career patterns, while adequately accounting for the underlying heterogeneity in the target population. As the Austrian social insurance data allows tracking individuals on a daily basis, longitudinal aspects and dynamic properties of individual careers can be observed.

For this purpose, my colleagues Walch and Dorofeenko suggested to focus on stable employment, its evolution over time and the immediate social insurance status transitions at the start and end of the PLP.³⁸ Stable employment is not only the dominant status (see previous chapter) but also a point of reference in women's pre and post-PLP observation periods as it is generally associated with job security and high incomes (Horvath et al. 2021; Van Aerden et al. 2014).

In the following sections 5.1 and 5.2, the construction of pre-, respectively post-PLP career types is presented, based on a few qualitative and dynamic aspects of individual careers. Their labour market activity and integration are described for both the pre- and post-PLP intervals.

³⁸ The clustering of career types that follows was created in cooperation with my colleagues Dominik Walch and Viktor Dorofeenko, to whom I am very grateful, during the development of the data framework.

5.1. Pre-PLP career types

The focus of this section is on women's pre-parenting leave phase observation interval. Figure 12 below shows the basis for the identification of typical pre-PLP careers. Highlighting the shares of women in different LM statuses at key sampling points, most notably the day immediately before PLP starts, this figure serves as the basis for the identification of typical pre-PLP careers. We use:

The transition from the labour market into parenting leave

Sampling date -1 is the day right before PLP starts. The labour market state on this day tells us the status of origin for women's *transition into PLP*. The largest group are women who transition into PLP directly from stable employment. The rest enters PLP from non-stable employment, unemployment, or an out-of-labour-force status like co-insurance with their partner.

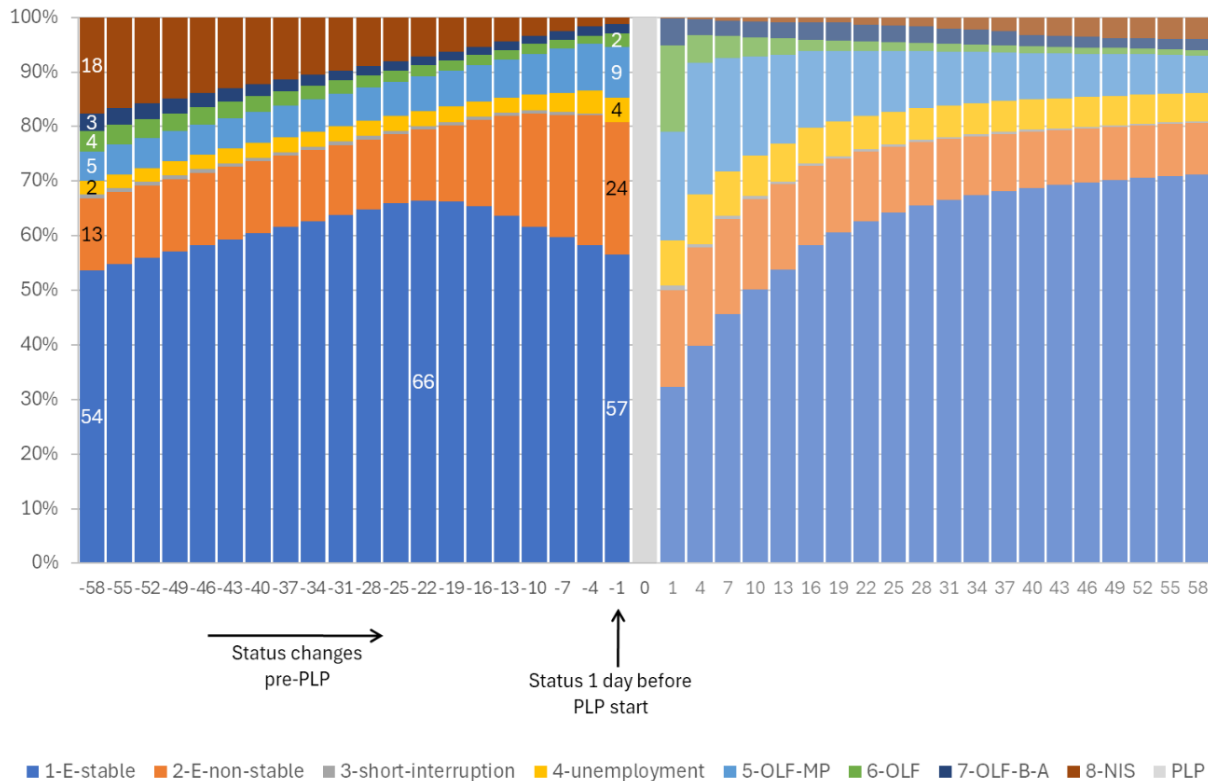
The evolution of labour market status shares over time during the pre-period

Around the start of the pre-PLP observation period (sampling date -58), we see that some women are already present on the labour market and employed at this point (E-stable/non-stable), whereas some are not (yet) present in the Austrian social insurance system or the labour market (status NIS/OLF-B-A).³⁹

Still, stable employment is not only the dominant status immediately before the start of women's parenting leave phase, but also over the full pre-PLP observation period. Its share steadily increases over time, something consistent with an overall increasing labour market integration as time goes on. However, stable employment peaks about 2 years before the start of women's PLP and then gradually declines. This implies that some women who do not enter PLP directly from stable employment did hold a stable job at some point before going on parenting leave. In addition, it is possible that some women have only been in non-stable employment, or in no employment at all during the pre-PLP period.

³⁹ Some of these women are simply still young at this time, or they might migrate to Austria at a later time, and their pre-PLP careers on the (Austrian) labour market are inevitably shorter than those of women who have entered the labour market before.

Figure 12: Basis for clustering: Pre-PLP career types



Data labels: in %.

Based on these observations, 4 groups of pre-PLP careers ("pre-types") can be formed (see Table 7 below):

1. Direct transition from stable employment to PLP (1-stable-direct):

Women who enter PLP directly from stable employment form the largest group. 57% of women were in a stable job the day before PLP start. For them, PLP represents an interruption of an active stable employment relationship. This is particularly relevant for the right to return to the same, stable job under the same conditions as before.⁴⁰

2. Indirect transition from stable employment to PLP (2-stable-indirect):

Almost a quarter (23%) of all women were in stable employment before their PLP, but their stable job did not continue up to PLP start. Between the end of their (last) stable employment and the start of PLP, these women had another labour market status. Their transition from stable employment to PLP is therefore indirect.

3. No stable employment before PLP (3-no-stable):

15% of women were employed before their PLP, but only in non-stable employment.

4. No labour market activity before PLP (4-no-lm-activity):

The smallest group consists of women who had no employment/labour market activity before PLP (6%).

⁴⁰ The right to return to the previous job is valid up to around the child's second birthday. PLP can of course last longer, especially for women with more than one child. However, after PLP, two thirds of women with 1 child who enter PLP directly from stable employment return to their last employer from before PLP and so do almost half of women with 2 children (Note: together, women with max. 2 children make up ca. 90% of the target population – in total, but also within this career type).

Table 7 below shows the absolute size and relative shares of these types of pre-PLP careers in the target population. We can also see that the shares are quite stable over time/across cohorts: Apart from a slightly rising proportion of women with pre-type 1 and a slightly decreasing proportion with pre-type 2 careers, there are few shifts across women with different PLP starting years.⁴¹

Table 7: Pre-types: Number and share of women, incl. by PLP start year cohorts

	All		PLP start year (Share in %)														
Pre-types	N	Share %	2002, N=29,361	2003, N=28,951	2004, N=29,398	2005, N=28,920	2006, N=28,284	2007, N=27,050	2008, N=26,585	2009, N=25,512	2010, N=24,945	2011, N=21,770	2012, N=20,350	2013, N=17,221	2014, N=14,262	2015, N=10,313	2016, N=6,052
1-stable-direct	191,925	57	56	56	53	53	56	56	56	57	59	59	59	60	59	58	65
2-stable-indirect	76,578	23	24	24	25	25	23	22	22	22	22	22	22	20	21	20	16
3-no-stable	49,649	15	15	15	15	15	15	15	15	15	14	13	14	14	15	16	13
4-no-lm-activity	21,203	6	5	6	7	7	7	7	7	6	6	6	5	6	5	6	6
All	339,355	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Values in %. Excl. PLP start year 2017.⁴²

5.1.1. Labour market integration of pre-PLP career types

To illustrate the different labour market activity patterns of women grouped by the types of careers thus defined, several indicators are used. While the main focus is first on the pre-PLP interval, the post-interval is also included, in order to get a sense of how women with different types of pre-careers fare on average after their parenting leave phase.⁴³ Figure 13 illustrates the dynamic patterns based on the shares of women in different social insurance states at quarterly sampling dates (analogous to Figure 12). For each pre-type, the left side represents the pre-PLP observation period, and the right side the post-PLP interval (slightly greyed out).

Table 8 contains the labour market rates introduced in the previous chapter. Based on all daily observations, the labour market integration of each pre-type can be characterised through average LM rates such as the labour force participation rate (LFPR) or the employment rate. This yields a compact summary of each career types' LM integration for both observation periods. In addition, the table contains a ranking of pre-PLP career types according to their average employment and stable employment rates, which are an important characterisation of a successful presence on/return to the labour market. Figure 14 shows the development of average gross income over time for each pre-type in the five calendar years before and after PLP.

⁴¹ PLP start year 2016: the number of women who start their PLP in 2016 is comparatively small, due to the selection of the target population to include only women whose PLP ends in 2017. These are mostly women with one child and higher ages at PLP start, groups who are generally well-integrated in the labour market pre-PLP, therefore the share who enter directly from stable employment is somewhat higher than for other cohorts.

⁴² PLP start year 2017: the number of women who start (and end) their PLP in 2017 is very small (N = 381) and might be subject to distortions due to the selection of the target population to include only women whose PLP ends in 2017. They are therefore excluded from the table.

⁴³ Additionally, the summary showing the average shares of each labour market status on the basis of calendar days in the two observation periods as a whole can be found in the Appendix (Figure 46).

Figure 13: Pre-types: Quarterly labour market status pre- & post-PLP

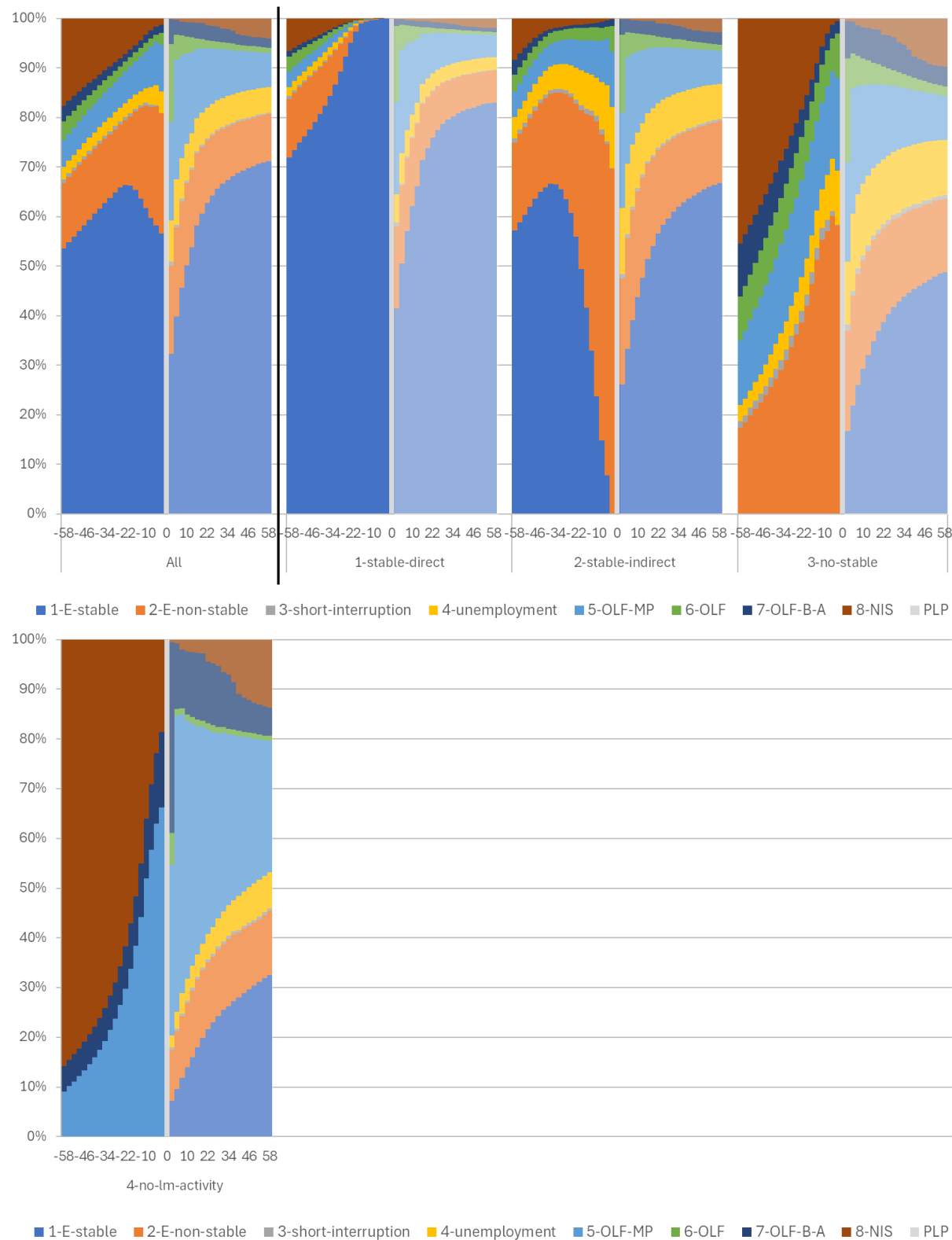
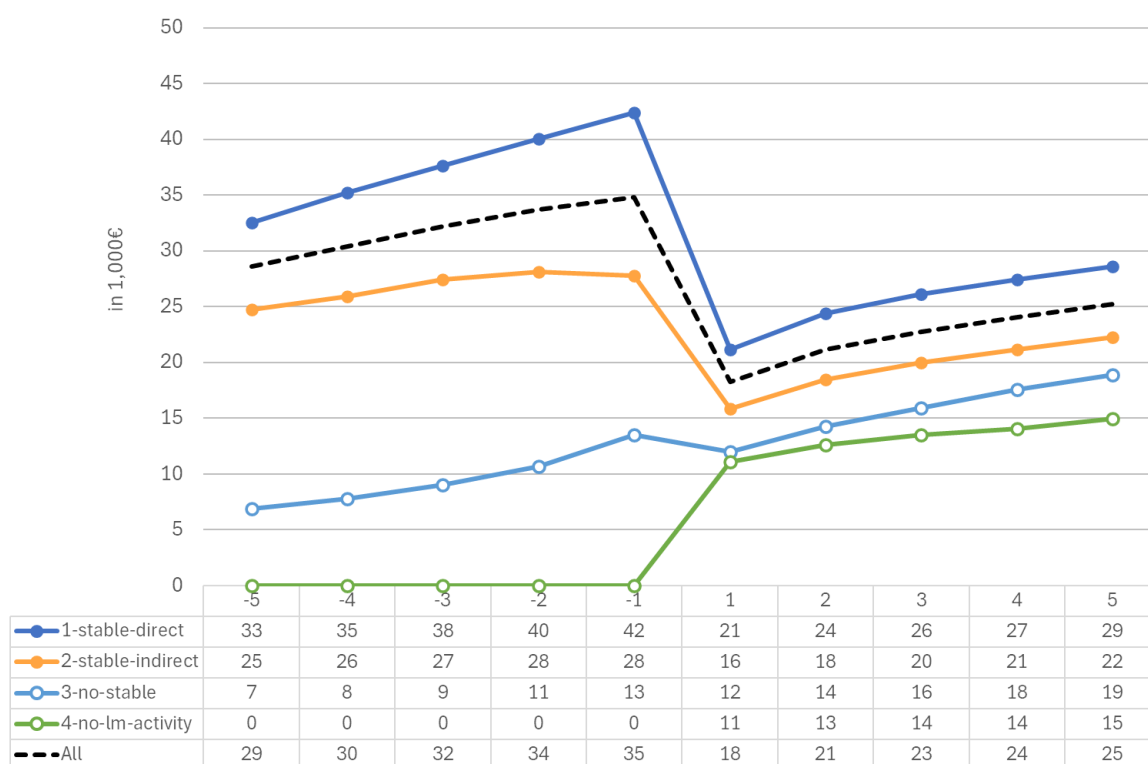


Table 8: Pre-types: Average labour market rates pre- & post-PLP

Pre-types	1-pre						2-post					
	LFPR	Employment rate (Rank)	Stable employment rate (Rank)	Non-stable employment rate	Unemployment rate	Co-insurance rate	LFPR	Employment rate (Rank)	Stable employment rate (Rank)	Non-stable employment rate	Unemployment rate	Co-insurance rate
1-stable-direct	96	95 (1)	88 (1)	7	1	2	89	86 (1)	77 (1)	9	4	8
2-stable-indirect	90	83 (2)	53 (2)	30	7	6	84	75 (2)	59 (2)	16	11	11
3-no-stable	55	45 (3)	0	45	14	24	76	62 (3)	44 (3)	19	17	14
4-no-lm-activity	0	0	0	0	0	78	48	41 (4)	27 (4)	14	13	40
All	87	84	67	17	4	7	84	77	65	12	7	11

Values in %.

Figure 14: Pre-types: Average gross income per calendar year pre- & post-PLP



Values are expressed in and rounded to 1,000€. X-axis: calendar years before and after PLP.

Adjusted for inflation and scaled to 2022 values. Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Labour market activity in the pre-PLP period

For the pre-interval, the patterns in the figures above clearly reflect the career properties used to construct the pre-PLP career types.⁴⁴ However, these differences in labour market patterns do not only exist at the dates used for their construction but extend to the full pre-period. Women of different pre-PLP career types exhibit different labour market patterns over time, i.e., sampling dates. These differences are reflected by variations in the average LM rates. Furthermore, pre-types with a higher labour market integration also exhibit more favourable income trajectories on average than those with a lower one. Women with a direct transition from stable employment to their parenting leave phase exhibit a higher LFPR, employment rate, and stable employment rate in the pre-period than those with an indirect transition. On the other hand, women who were never (stably) employed have the lowest levels of labour market activity. The four groups are therefore distinctly different, and their LM activity can clearly be ranked (see figures and table above):

- **Pre-type 1** (with a direct transition from stable employment to PLP): A large share of women of this type is already in a stable job around the beginning of the pre-period, 5 years before PLP start, this proportion steadily increasing over time. Women of this career type have the highest pre-PLP LFPR (96%), employment rate (95%), and stable employment rate (88%) out of all pre-career types. They therefore have the highest overall LM integration, hardly ever being unemployed or out of the labour force and co-insured with their partners during the pre-interval.
- **Pre-type 2** women (with an indirect transition from stable employment to PLP) start the pre-interval with more than 50% being employed in a stable job and around 20% in a non-stable job. The share in stable employment increases but then decreases towards PLP, peaking 3 years before. The large majority of women of type 2 (70%) transition to PLP from a non-stable job⁴⁵ and almost 25% from unemployment or OLF co-insurance with partners. They have the second highest overall LM integration.
- **Pre-type 3** women (no stable employment pre-PLP) have a majority that have not yet entered the Austrian labour market around the start of the observation period, most of which have not even entered the system (yet). Over the course of the pre-period they do, with almost 60% transitioning to PLP from non-stable employment, about 10% from unemployment, and 20% from OLF co-insurance. Among women with some LM activity pre-PLP, they are the least integrated in the labour market during this time.
- **Pre-type 4** (no LM activity pre-PLP): Only 15% of women of this type were registered in the Austrian system around the start of the pre-PLP observation interval. Over the course of the period, they gradually enter the system but remain out of the labour force being mostly co-insured with their partners.

⁴⁴ For example, all women with a direct transition from stable employment to PLP (type “1-stable-direct”) are in stable employment the day before their PLP starts.

⁴⁵ It is worth noting that around 50% of these women changed their sector of employment between their last stable job and their last non-stable job before PLP. A higher career fragmentation is also indicated by the number of times they change jobs during this interval, see Table 43 in the Appendix.

Pre-PLP career types 3 and 4 display patterns typical of labour market entrants. Here, young age and migration play a role: these groups are comprised of higher shares of younger women and women with a non-Austrian nationality, compared to those who do have a stable job pre-PLP (see Figure 49 in the Appendix). These patterns are mirrored by the average earnings of each career type (see Figure 14 above). For example, the decline in the share of stable employment among women of pre-type 2 (stable-indirect) is reflected in a stagnating average gross income in the two calendar years before PLP. Overall, pre-types with a higher labour market integration also exhibit more favourable income trajectories than those with a lower LM integration. This is to be expected, based on the accumulation of general and firm-specific human capital implied by their (stable) employment rates.

Labour market activity in the post-PLP period

Compared to the time before having children, there is an overall drop in women's labour market integration in the time immediately after PLP (see previous chapter). For all career types with some previous LM activity this is the case.⁴⁶ This suggests that no matter the type of one's previous career, employment interruptions due to parenting leave tend to *last longer than the actual duration of the leave*.⁴⁷

There is an evident connection between women's pre-PLP and post-PLP labour market integration. In principle, the post-PLP labour market activity patterns of each career type at the different sampling points exhibit the same basic shape, indicating a steady increase in the proportion in stable employment (see Figure 13). However, within this basic shape the levels are shifted. The better the pre-PLP labour market integration and the more favourable the transition into PLP, the better the level of post-PLP labour market activity, also summarised by the LM rates: There is a clear ranking of the pre-types' post-PLP labour market outcomes, which is consistent with their pre-PLP careers.

Similarly, in the post-PLP period, all pre-types show the same overall pattern of increasing average gross income. The different levels in this period reflect their pre-PLP labour market success and their seniority. However, pre-types with a relatively good LM integration before having children (i.e., with stable employment) experience an income decline after their PLP, compared to the last year(s) before. For pre-type 1, representing more than half of all women in the target group, average earnings drop by 50% in the first calendar year post-PLP, and even by the 5th year post-PLP they only reach two thirds of what they were right before (see Figure 14).

⁴⁶ For groups who were less well-integrated in the labour market before having children as others, it is of course easier to reach similar or higher (stable) employment levels than before PLP, since these were overall lower. However, immediately after PLP end, total employment levels are lower for all career types with some pre-PLP LM activity compared to right before PLP start.

⁴⁷ And there is no reason to think that this might not be similar for the time after each parenting leave interval *during* PLP, e.g., in the case of women with more than one child.

5.2. Post-PLP career types

Analogous to the approach used for the time period before women's parenting leave phase, typical careers in women's post-PLP observation interval can be identified. The focus is similarly on the immediate transition from PLP to the labour market and the evolution of labour market statuses over time. Figure 15 shows the basis for the clustering of post-PLP careers. We take into account:

The transition from the parenting leave phase into the labour market

The distribution of women in different labour market statuses at sampling date 1, the next day after PLP ends, illustrates women's *transitions out of their parenting leave phase*. One third of all women transition from PLP directly to stable employment, while 18% transition to non-stable employment.⁴⁸ 8% of women are unemployed right after their PLP and 40% do not immediately return to the labour force, being mostly co-insured with their partners or otherwise out of the labour force.

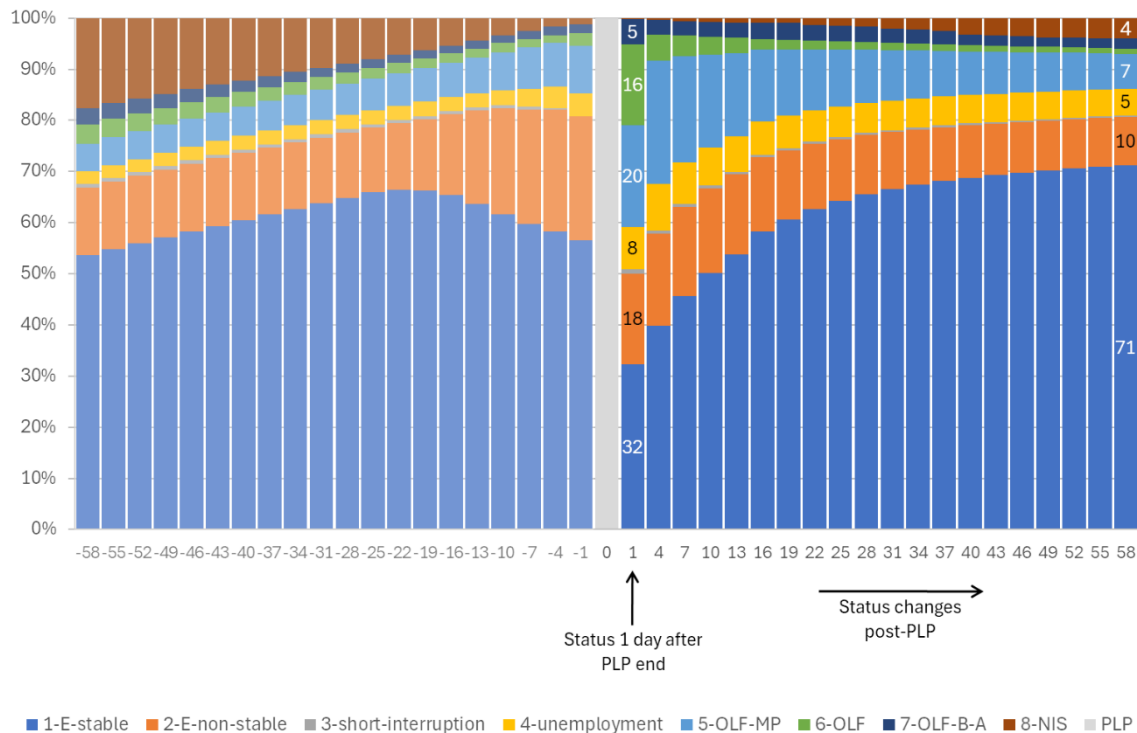
The evolution of labour market status shares over time during the post-period

The most dominant status in the post-PLP period is stable employment, whose share constantly increases over the course of the period: by the end of the interval, over 70% of women are in stable employment. 10% are in non-stable employment at this point, some women are unemployed or co-insured with their partners, and only a small share has left the system.

Stable employment evidently is the attracting status for women post-PLP. However, the distribution of LM statuses immediately after PLP (which is more heterogeneous than before), as well as the evolution of other LM statuses suggest that there are slightly more differentiated pathways (back) into stable employment after PLP for a larger share of women. Besides direct transitions, there are indirect transitions from non-stable employment, as well as from nonemployment.

⁴⁸ Employment might either start exactly the next day after PLP, but also during PLP.

Figure 15: Basis for clustering: Post-PLP career types



Data labels: in %.

Based on these observations about women's (re-)entry into the labour market, the following career types are defined in relation to the post-PLP interval (see Table 9):

1. Direct transition from PLP to stable employment (1-direct-stable):

The largest group (32%) are women with a direct transition from PLP to stable employment, i.e., they are in stable employment the next day after PLP end.

2. Gap between PLP and stable employment (2-gap-stable):

Women with a gap between PLP and their first employment, which is stable, form the second largest group (19%). During the gap, these women are not employed.

3. Gradual transition from PLP to stable employment (3-gradual-stable):

Some women are in non-stable employment the next day after PLP ends, and only later enter stable employment, i.e., they have a gradual (re-)entry into stable employment (14%).

4. Fragmented transition from PLP to stable employment (4-fragmented-stable):

On the other hand, there are women who first have a gap between PLP and their first employment, which is non-stable, only later entering stable employment, i.e., they have a fragmented (re-)entry into stable employment (14%).

5. No stable employment post-PLP (5-no-stable):

Similarly to the pre-period, some women are employed, but only in non-stable employment during the post-PLP interval. They represent 12% of the population.

6. No employment post-PLP (6-no-employment):

A small group of women (8%) have no employment activity in the post-PLP interval.

Table 9 shows the size and relative shares of post-PLP career types in the target population overall and across cohorts. While post-type 1 with a direct transition from PLP to stable employment forms the largest group, it is considerably smaller than its corresponding group pre-PLP (pre-type 1, 32% vs. 57%). Post-type 4 women can be characterised by a more fragmented path to the first stable job. In contrast to type 3, these women are not immediately employed after PLP. This may involve a job search right after PLP, one that first leads to non-stable employment before a stable job is found. The smallest groups are those of women who only have non-stable employment or no employment at all even 5 calendar years post-PLP. Still, together they make up one fifth of the target population.

Table 9: Post-types: Number and share of women, incl. by PLP end year cohorts

Post-types	All		PLP end year (Share in %)													
	N	Share %	2004, N = 3,597	2005, N = 9,612	2006, N = 11,532	2007, N = 16,713	2008, N = 19,859	2009, N = 25,464	2010, N = 26,410	2011, N = 28,137	2012, N = 29,401	2013, N = 30,735	2014, N = 31,674	2015, N = 33,406	2016, N = 35,103	2017, N = 37,214
1-direct-stable	109,486	32	45	42	42	38	39	38	36	33	32	30	30	28	27	24
2-gap-stable	64,541	19	11	13	13	13	13	14	16	18	19	21	22	22	23	24
3-gradual-stable	49,182	14	14	14	13	13	14	13	14	14	15	15	15	15	16	16
4-fragmented-stable	47,724	14	12	13	14	13	12	12	13	14	14	14	15	16	16	15
5-no-stable	42,249	12	12	12	14	13	13	13	13	13	13	12	11	11	11	14
6-no-employment	26,173	8	5	5	5	9	9	9	9	8	8	8	8	8	7	7
All	339,355	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

Values in %. Excl. PLP end years 2002 and 2003.⁴⁹

Concerning the shares of women with different types of post-PLP careers over time/across PLP end year cohorts, a major systematic change is the shift between the shares of women with post-type 1 and 2 careers. While the proportion with a direct transition into stable employment continuously decreases, that of women with a gap before their first stable employment increases. This shift intensifies starting with the year 2010. The introduction of shorter parenting leave/childcare allowance in 2008 (20 months, +4 if the partner also goes on leave, and 15 months, +3) and especially the income-dependent model in 2010 (12 months, +2) (Rille-Pfeiffer and Kapella 2022, 28) might be responsible for the acceleration of this trend. Starting with the PLP end year cohort of 2010, there is a marked increase in the proportion of previously well-earning women who (may afford to) have a gap after PLP and whose first employment after that is stable.⁵⁰

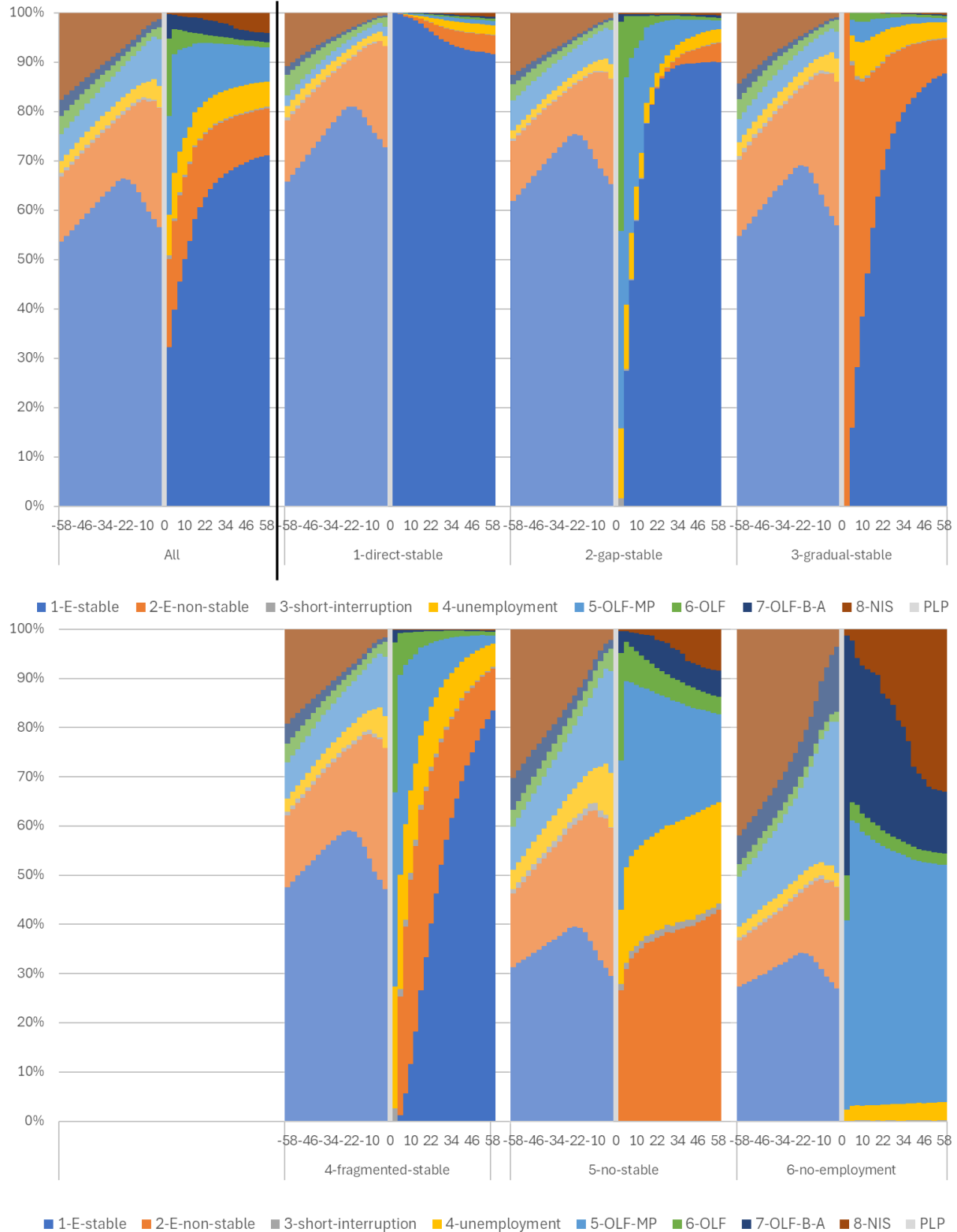
⁴⁹ PLP end years 2002, 2003: the number of women who end (and start) their PLP in 2002 and 2003 is comparatively very small (N = 105 and 393, respectively), due to the selection of the target population to include only women whose earliest PLP start year is 2002. At this time, the standard parenting leave/childcare allowance had a duration of 30 months (+6, if partners also went on leave) (Rille-Pfeiffer and Kapella 2022, 28). These are mostly women who only have one child, who tend to be well-integrated in the labour market pre-PLP, and therefore more prone to transition from PLP directly into stable employment. Here they are therefore excluded from the table.

⁵⁰ Even though the average duration of parenting leave/childcare allowance intervals generally goes down over time, women of post-type 2 have one of the sharpest decreases (see Figure 50 and Figure 51). Riesenfelder and Danzer (2019, 31) also find that women who choose the income-dependent model take longer breaks from employment than the (max.) 12-month leave duration.

5.2.1. Labour market integration of post-PLP career types

Similarly to pre-PLP career types, the labour market integration of post-PLP career types is illustrated by the distribution of labour market states over time (Figure 16), labour market rates (Table 10) and average gross income trajectories per calendar year in the pre- & post-PLP periods (Figure 17).⁵¹

Figure 16: Post-types: Quarterly labour market status pre- & post-PLP



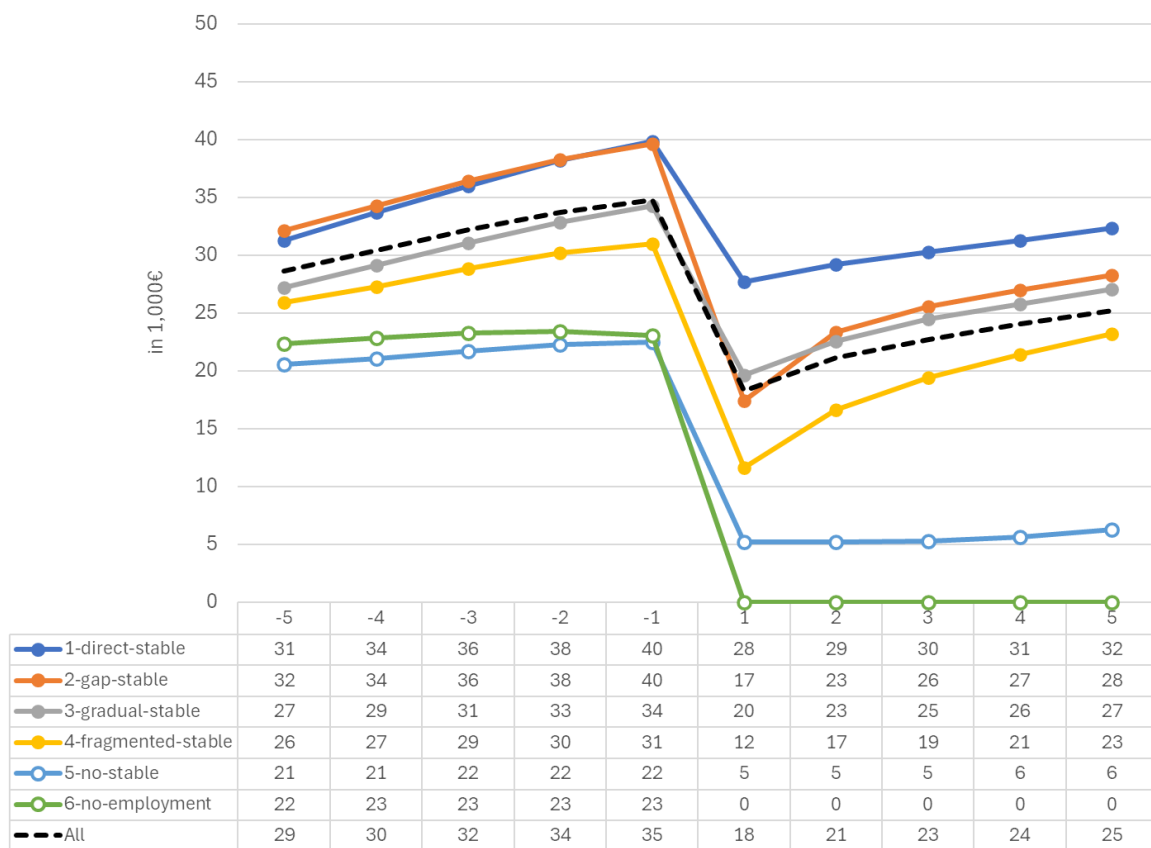
⁵¹ Additionally, the summary showing the average share of each labour market status on the basis of calendar days in the two observation periods as a whole can be found in the Appendix (Figure 47).

Table 10: Post-types: Average labour market rates pre- & post-PLP

Post-types	1-pre						2-post					
	LFR	Employment rate (Rank)	Stable employment rate (Rank)	Non-stable employment rate	Unemployment rate	Co-insurance rate	LFR	Employment rate (Rank)	Stable employment rate (Rank)	Non-stable employment rate	Unemployment rate	Co-insurance rate
1-direct-stable	94	92 (1)	78 (1)	13	2	2	99	97 (1)	95 (1)	3	1	0.6
2-gap-stable	90	88 (2)	74 (2)	14	2	6	86	82 (3)	80 (2)	2	5	11
3-gradual-stable	90	86 (3)	67 (3)	19	3	5	97	92 (2)	71 (3)	22	5	2
4-fragmented-stable	85	80 (4)	60 (4)	20	4	10	86	75 (4)	54 (4)	21	12	11
5-no-stable	76	68 (5)	43 (5)	25	9	15	63	41 (5)	0	41	33	27
6-no-employment	64	60 (6)	42 (6)	17	6	23	4	0	0	0	96	65
All	87	84	67	17	4	7	84	77	65	12	7	11

Values in %.

Figure 17: Post-types: Average gross income per calendar year pre- & post-PLP



Values are expressed in and rounded to 1,000€. X-axis: calendar years before and after PLP.

Adjusted for inflation and scaled to 2022 values. Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Labour market activity in the post-PLP period

The properties used to construct post-PLP career types can easily be seen in the different labour market patterns.⁵² These characteristics can be observed at specific sampling dates (e.g., sampling date 1) and also over the full post PLP interval, directly translating into differential levels of labour market indicators such as the LFPR or the employment rate. This results in a clear ranking in terms of the labour market success after PLP: different levels of employment and different levels of income trajectories (see figures and table above).

- **Post-type 1** women who directly return to/enter stable employment after PLP have the highest labour market integration in the post-PLP period. They retain the highest share in stable employment throughout the post-interval (95% on average), and they have the best average income trajectory. However, they experience a drop in their annual average earnings. Initially they earn 30% less than in the last calendar year before PLP, and even by the 5th year post-PLP, they do not reach their previous income level. Nevertheless, they reach the highest employment intensities measured by the last calendar year before PLP.⁵³
- **Post-type 2** women with a gap between the end of their PLP and their first, stable job after have the second highest proportion in stable employment in the post-period (on average 80%); in bridging this gap, women are mostly out of the labour force, relying on co-insurance with their partners. However, for almost three quarters of women, this gap lasts up to 12 months or less, making post-type 2 women the second fastest on average to (re-)enter a stable job.⁵⁴ This gap in employment is visible in their income trajectories: in the first calendar year post-PLP, their average income is lower than that of women who are employed right after PLP end (post-type 1 and 3).
- **Post-type 3** women have a gradual return/entry into stable employment, i.e. via immediate non-stable employment after PLP (half of them marginally employed)⁵⁵ and then gradually switch to a stable job. The transition out of PLP, defined by the presence of employment on the next day, results in the second highest LFPR and employment rate in the post-PLP period (97% and 92%, respectively). However, in terms of the stable employment rate, they rank 3rd among post-types, after women with post-type 2 careers (71% vs. 80% respectively). The value of an immediate transition to employment after PLP is reflected in income trajectories. As post-type 3 women are already employed right after PLP, they have slightly higher average earnings in the first calendar year post-PLP than type 2 women. However, they tend to (re-)enter stable employment at a slower rate and their average earnings are lower for the remainder of the post-interval, if only marginally so.⁵⁶

⁵² For instance, those with a direct transition to stable employment (post-type 1) are all stably employed the day after PLP ends.

⁵³ See Figure 48 in the Appendix. To avoid distortions, only women with income >15,000€ in base year are shown.

⁵⁴ See Table 41 in the Appendix.

⁵⁵ See Table 42 in the Appendix.

⁵⁶ Even though the average income trajectories of post-PLP career types 2 and 3 are very similar, this average comes about as a result of qualitatively different phenomena. While post-type 2 women's first job is stable after a (mostly) short gap, type 3 women are at first either marginally employed or (repeatedly) in short-lasting employment before holding a stable job. While only around

- **Post-type 4** consists of women whose labour market integration between the end of PLP and their first stable employment is fragmented – at first, they are not employed, then they are in non-stable employment, and only then go into a stable job. Among all groups whose members eventually go into stable employment, this group has the lowest employment and stable employment rate in the post-PLP period (75% and 54%), and the lowest income trajectory. For them too (as for post-type 2 women), co-insurance is important in the time they are not employed or out of the labour force.
- **Post-type 5** women enter/return to employment but do not hold a stable job post-PLP. Among groups who enter employment, they have the lowest LFPR and employment rate in this period (63% and 41%), and the highest unemployment (33%) and co-insurance rate (27%). Their average annual gross earnings are low, and there is almost no increase over time.
- **Post-type 6:** Roughly 8% of all women analysed are not employed at all during the post-PLP period, i.e. until the end of the 5th calendar year after their parenting leave phase. A few register as unemployed, and the majority is out of the labour force (OLF) and mainly co-insured with their partners. By the end of the post-period, about a third have left the social insurance system.⁵⁷

Overall (and as seen in the previous chapter on general trends), women's gross earnings tend to be worse off after their parenting leave phase than they were before having children. This is the case for women with all types of post-PLP careers (see Figure 17). Their average gross earnings all gradually increase over time (except of course, for the group with no employment), but they do not reach the level they were previously at in the calendar year before their first child/parenting leave, not even by the 5th year after PLP.

Labour market activity in the pre-PLP period

The dimensions used to group women according to their post-PLP career type results in a clear ordering not only of their average labour market success after their parenting leave phase, but also before their first child and parenting leave. Groups with a more favourable transition from PLP into the labour market and into stable employment also had a better average LM activity before PLP, compared to groups with less favourable transitions.

The overall shape of LM patterns over the pre-PLP period follows the same average tendency for all post-PLP career types: we see a gradual increase of labour market activity before PLP (see Figure 16 above). Stable employment also increases, but peaks before PLP and then declines towards PLP start. Within this basic shape over time however, the curves are shifted, illustrating the different LM integration levels of each post-PLP career type. Specifically, their pre-PLP labour market integration is strictly ordered from post-type 1 to 6, as indicated by the rates of women in stable employment, but also in total employment and in

20% of post-type 2 women change their (stable) employer post-PLP, this share is 80% for women of type 3. In addition, 68% of women with a post-type 3 career have three or more different employment episodes in the post-PLP interval, compared to only 13% of women with a type 2 career. This shows how different the labour market activity of these groups of women are (see Table 44 in the Appendix).

⁵⁷ It is only for the latter two types of post-PLP careers that system exit plays a role – overall, it can be said that once women find stable employment after PLP, they tend to stay in stable jobs and in the Austrian social insurance system.

the labour force over the pre-PLP interval (see Table 10). This suggests that evidently, there is a connection between women's pre- and post-PLP careers – the better their LM integration before the first child and parenting leave, the better the transition, career type, and consequently the labour market success after the last. Moreover, this again highlights the importance of labour market experience, especially in terms of time spent in stable employment, prior to the constraints imposed by childcare, for the likelihood of a favourable LM (re-)entry following parenting leave interruptions.

However, the *type of transition out of PLP* seems to offset some of these effects. For example, women with an initial gap before starting a stable job (post-type 2) had a higher stable (and total) employment rate, as well as higher earnings in the pre-period, compared to women with a gradual transition to stable employment (post-type 3). Nevertheless, the latter (who are immediately in a non-stable job the next day after PLP) have an average income trajectory that is only marginally lower throughout the post-period. And while the average gross annual earnings of women with post-PLP career types 1 and 2 (with the two best overall LM integration) are almost identical in the pre-interval, the employment gap takes its toll on type 2 women's income after PLP and is indicative of the rest of their income trajectory. Even by the end of the post-PLP interval, they do not reach the average earnings of type 1 women, who transitioned directly into stable employment after PLP.

Interestingly, although women of post-PLP career types 1, 2, and 3 have higher stable employment rates post-PLP than they did in the pre-interval, they all have lower earnings after PLP. Coupled with the fact that even women who go directly into stable employment after their last parenting leave experience a considerable drop in gross annual earnings, from 40,000€ in the calendar year before PLP to 28,000€ in the first year after – which is by definition fully covered by a stable employment relationship – strongly suggests a reduction in working hours (see Figure 17 above).

In the next chapter I will combine these career types to fully characterise women's career paths before and after the parenting leave phase.

6. Full Career Profiles

In the previous chapter, we have created pre and post PLP career types to summarise the labour market activity before and after PLP. We have seen that labour market patterns before and after women's parenting leave phase are related:

- Women with a pre-PLP career type characterised by a higher labour market integration before PLP have a better average labour market integration and are more often in stable employment after PLP than those with a lower pre-PLP labour market activity.
- Conversely, women of post-PLP career types with a better post-PLP labour market integration have a better average labour market integration in the period before PLP than women with a lower post-PLP labour market activity.

In this chapter I characterise women's full careers based on the type of their pre- and post-PLP careers. In section 6.1, pre- and post-career types are combined to form “full” career profiles. In section 6.2, the labour market integration for 5 selected career profiles (i.e., combinations of pre- and post-career types) are illustrated.

6.1. Full career profiles: Pre- and post-PLP career combinations

Crossing the four pre- and the six post-PLP types will yield 24 different “full” career profiles, characterising women's LM careers before *and* after their parenting leave phase. In Table 11, the number and shares of women with different career profiles (pre- and post-type combinations) are shown. The marginal distributions show the shares of pre- and post-PLP career types in the population (as in chapter 5). Each cell/combination constitutes a full career profile, jointly characterising women's pre- and post-PLP career.

The two most common career profiles are those of women who directly enter PLP from stable employment (pre-type 1 “1-stable-direct”), and who (i) either directly return to stable employment (post-type “1-direct-stable” 23%) or who (ii) have a gap of non-employment before returning to a stable job (post-type “2-gap-stable”, respectively 12%).⁵⁸ Career profiles where women who do not have any labour market integration before PLP, and who after PLP either directly enter stable employment or have a gap of non-employment before entering a stable job are very uncommon (0.4% or 0.8% respectively).

⁵⁸ This gap does not generally last very long. 50% are back in a stable job within 6 months, and another 25% within one year (see Table 45 in the Appendix).

Table 11: Full career profiles: Pre-PLP career types by post-PLP career types (total %, N)

		Post-types						All
Total %		1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	
Pre-types	1-stable-direct	23%	12%	8%	7%	4%	2%	57%
	2-stable-indirect	6%	4%	4%	4%	3%	2%	23%
	3-no-stable	2%	2%	2%	3%	4%	2%	15%
	4-no-lm-activity	0.4%	0.8%	0.4%	1%	2%	2%	6%
	All	32%	19%	14%	14%	12%	8%	100%
N								
Pre-types	1-stable-direct	79,715	42,150	28,004	22,526	12,473	7,057	191,925
	2-stable-indirect	19,969	13,132	13,016	13,143	11,833	5,485	76,578
	3-no-stable	8,277	6,616	6,761	8,652	12,649	6,694	49,649
	4-no-lm-activity	1,525	2,643	1,401	3,403	5,294	6,937	21,203
	All	109,486	64,541	49,182	47,724	42,249	26,173	339,355

The dotted lines partition Table 11 into four quadrants, which constitute the coarsest categorisation of career profiles. Taking stable employment as a point of reference in a woman's career, we see that:

- a total of 68% of all women had stable employment both before and after PLP (the sum of all coloured cells in the table);
- around 12% of women only had non-stable jobs or had no employment at all before PLP but then eventually find stable employment post-PLP.
- 11% were in stable employment before PLP but then have no stable employment or no employment at all post-PLP.
- 9% of all women were neither in stable employment before, nor after PLP.

It is worth noting that these two latter groups account for one fifth of all women. These are women that have not entered stable employment even by the end of the 5th calendar year after their parenting leave phase.

Each cell in Table 11 (i.e., each career profile) represents a transition/flow from a pre-PLP to a post-PLP career type. The marginal distributions in Table 5 show the proportions of pre- and post-PLP career types. This dynamic view of women's careers can be visualised in a Sankey diagram (Figure 18). In this way, the relative importance of each of the 24 possible full career profiles – and therefore the most dominant overall career trajectories in the target population – can be visualised. This type of visual assessment will later also allow a comparison between groups of women with different socio-demographic characteristics.

Figure 18: Full career profiles: Pre-PLP career types by post-PLP career types (flows)

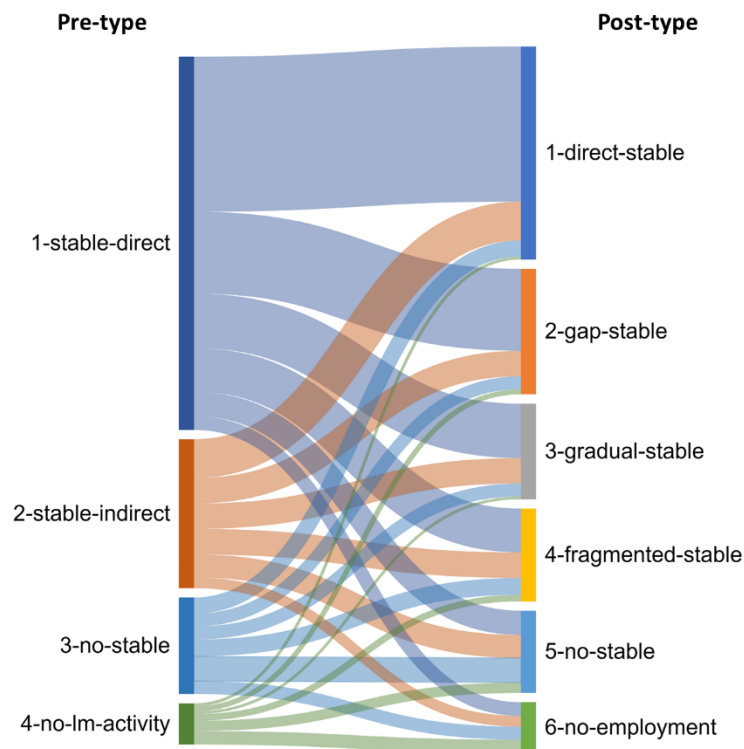
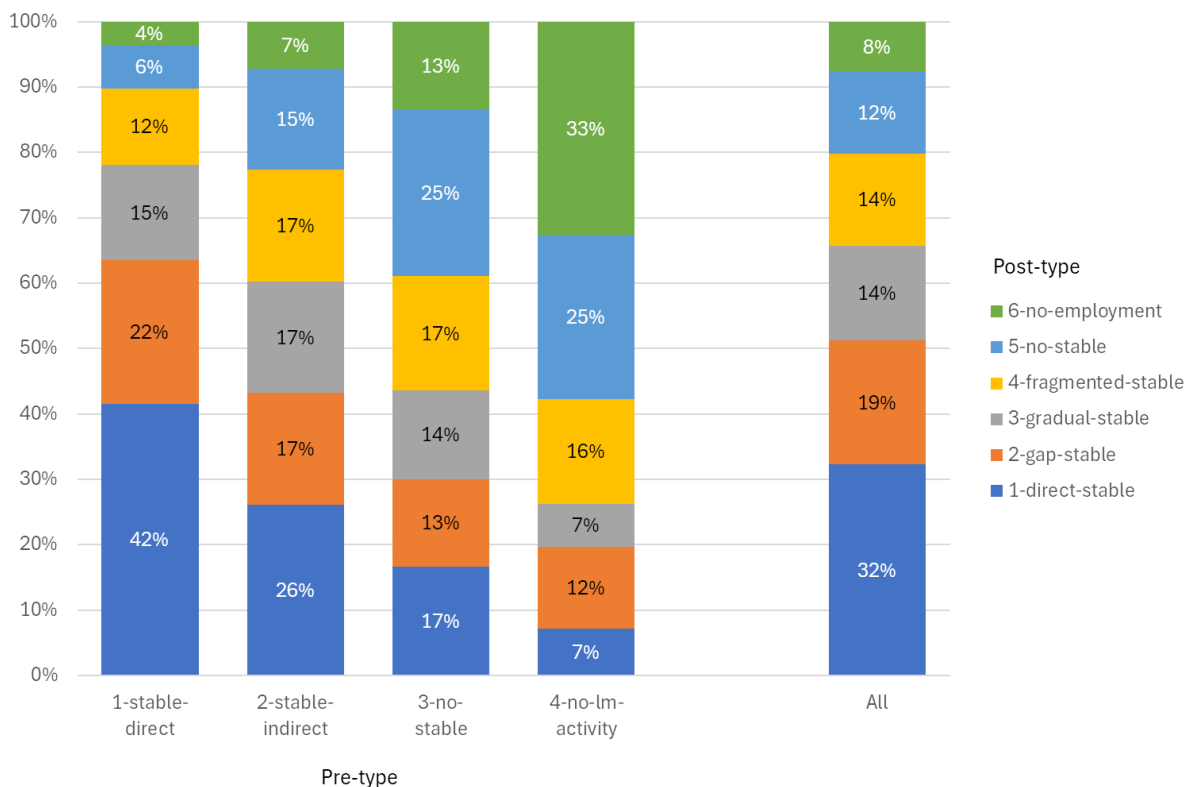


Figure 19 below contains the conditional frequencies of Table 11, showing the shares of post-PLP career types for each type of pre-PLP career (row percent). This underscores our findings from chapter 5, namely that women with a more favourable type of pre-career also tend to have better post-PLP outcomes than those with a less favourable one. The shares of women either directly returning to stable employment after PLP (dark blue, 42%) or starting a stable job after a gap of non-employment (orange, 22%) are highest among women who directly entered PLP from stable employment. The lower the pre-PLP labour market activity, the higher the shares of women who either do not find a stable job (light blue) or who do not work at all in the five years after PLP (green). Among women with no labour market activity before PLP, these proportions are 25% and 33%, respectively.

Figure 19: Post-PLP career types by pre-PLP career types (row %)



6.2. Labour market integration of selected full career profiles

The labour market characteristics associated with each pre- and post-PLP career type (see chapter 5) also translate to a labour market characterisation for the full career profiles. To illustrate this, I present the labour market activity summaries and indicators for five selected career profiles shown in Table 12 (the labour market rates for all 24 career profiles can be found at the end of this section).

Table 12: Selected full career profiles (% in target population, N)

Pre-type	Post-type	Share % in target population	N
1-stable-direct →	1-direct-stable	23%	79,715
1-stable-direct →	4-fragmented-stable	7%	22,526
3-no-stable →	1-direct-stable	2%	8,277
3-no-stable →	4-fragmented-stable	3%	8,652
3-no-stable →	5-no-stable	4%	12,649

Figure 20 shows the shares of women in different labour market states at quarterly sampling points in the pre- and post-PLP interval. The change of shares over time illustrates the dynamics of LM activity. The labour market rates used to summarise the average level of LM integration during both observation intervals are shown in Table 13. Figure 21 shows the income trajectories of the average annual gross income over the 5 calendar years pre- and post-PLP. We can observe the following:

- First, the career profiles are all different. Each profile also is associated with a different level of pre-PLP and post-PLP labour market integration (also see Table 14 for all 24 profiles).
- Second, the overall labour market patterns and trajectories typical of women's respective pre- and post-PLP career type are preserved in the full career profiles.
- Third, the combination of career types unveils a variation/heterogeneity within the same pre- or post-career types. Comparing their income trajectories, we see:
 - A higher level of LM integration in the pre-period is associated with a higher level of LM integration in the post-PLP period, even if the post-type is the same. The post-PLP income of career profile:
 - “1-stable-direct → 1-direct-stable” is higher than “3-no-stable → 1-direct-stable”;
 - “1-stable-direct → 4-fragmented-stable” is higher than “3-no-stable → 4-fragmented-stable”.
 - A higher level of post LM integration is associated with a higher level of pre-PLP LM integration even if the pre-type is the same. The pre-PLP income of career profile:
 - “1-stable-direct → 1-direct-stable” is higher than “1-stable-direct → 4-fragmented-stable”;
 - “3-no-stable → 1-direct-stable” is higher than “3-no-stable → 4-fragmented-stable”.

Figure 20: Selected full career profiles: Quarterly labour market status pre- & post-PLP

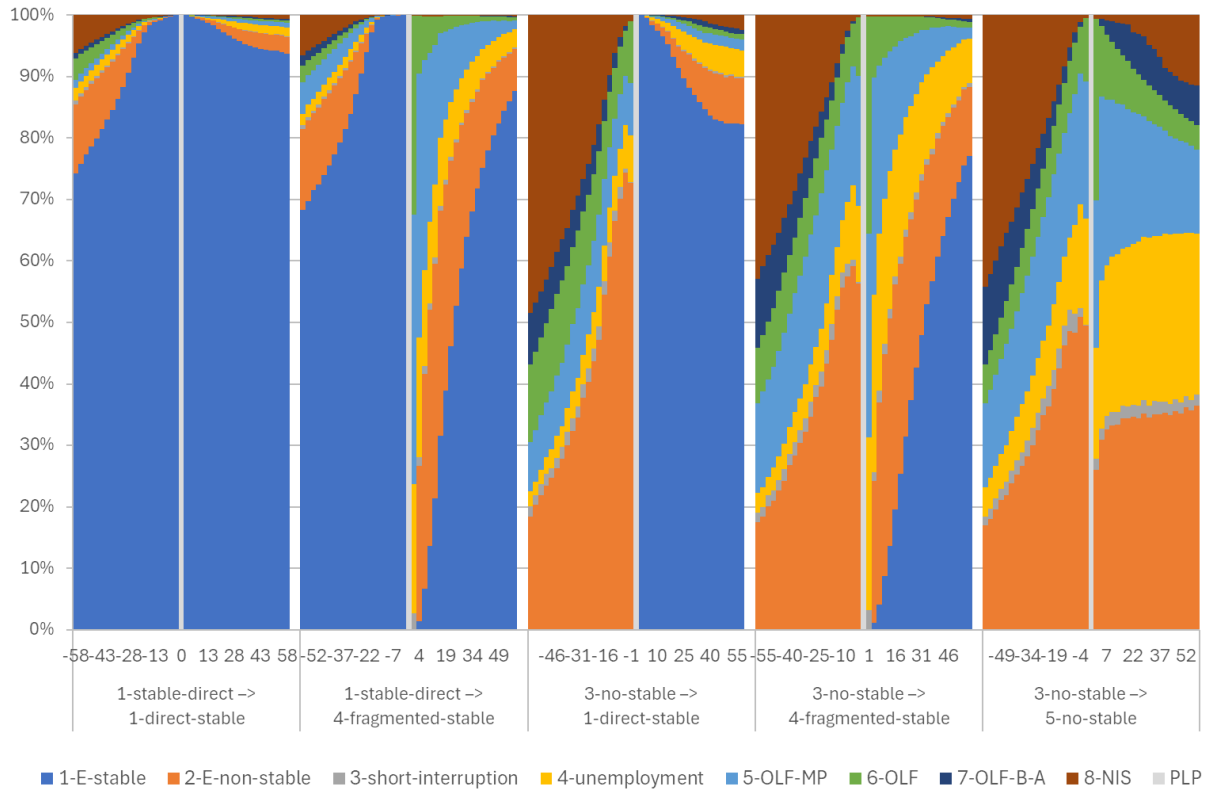
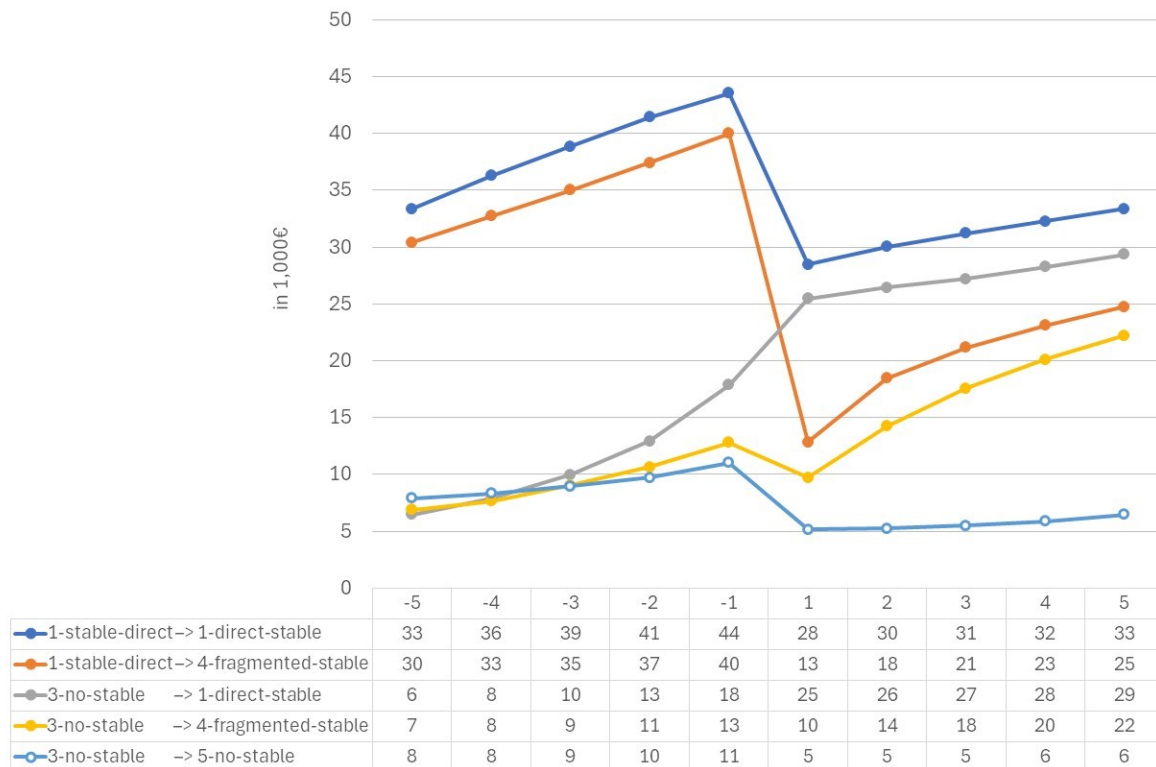


Table 13: Selected full career profiles: Average labour market rates pre- & post-PLP

Selected career profiles	1-pre						2-post					
	LFPR	Employment rate	Stable employment rate	Non-stable employment rate	Unemployment rate	Co-insurance rate	LFPR	Employment rate	Stable employment rate	Non-stable employment rate	Unemployment rate	Co-insurance rate
1-stable-direct → 1-direct-stable	97	96	89	6	1	0.7	99	98	96	2	1	0.5
1-stable-direct → 4-fragmented-stable	95	94	86	8	1	3	87	79	59	19	9	11
3-no-stable → 1-direct-stable	62	54	0	54	10	15	98	94	89	5	3	1
3-no-stable → 4-fragmented-stable	54	44	0	44	14	27	86	70	48	22	17	11
3-no-stable → 5-no-stable	56	41	0	41	20	25	67	37	0	37	41	21
All	87	84	67	17	4	7	84	77	65	12	7	11

Values in %.

Figure 21: Selected full career profiles: Average gross income per calendar year pre- & post-PLP



Values are expressed in and rounded to 1,000€. Adjusted for inflation and scaled to 2022 values.

X-axis: calendar years before and after PLP. Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

6.3. Labour market rates: all career profiles

Table 14: Full career profiles: Average labour market rates pre- & post-PLP

	LM rates (in %)												Ø Gross annual income (in 1,000€)	
Full career profiles	1-pre						2-post						1-pre	2-post
	LFPR	Employment rate	Stable employment rate	Non-stable employment rate	Unemployment rate	Co-insurance rate	LFPR	Employment rate	Stable employment rate	Non-stable employment rate	Unemployment rate	Co-insurance rate	Base year (-1 pre-PLP)	Year 5 post-PLP
1-stable-direct --> 1-direct-stable	97	96	89	6	1	1	99	98	96	2	1	0	44k	33k
1-stable-direct --> 2-gap-stable	96	95	90	6	1	2	87	85	83	1	3	10	45k	30k
1-stable-direct --> 3-gradual-stable	96	95	87	8	1	2	97	94	75	19	3	2	41k	29k
1-stable-direct --> 4-fragmented-stable	95	94	86	8	1	3	87	79	59	19	9	11	40k	25k
1-stable-direct --> 5-fragmented-only	94	92	83	8	2	4	61	46	0	46	24	30	35k	6k
1-stable-direct --> 6-no-employment	95	93	87	6	1	3	4	0	0	0	96	74	37k	0
2-stable-indirect --> 1-direct-stable	94	89	60	29	5	2	99	97	93	4	2	1	33k	30k
2-stable-indirect --> 2-gap-stable	90	85	57	28	5	6	87	81	78	3	7	10	31k	26k
2-stable-indirect --> 3-gradual-stable	92	86	53	32	6	4	97	91	67	24	6	2	28k	25k
2-stable-indirect --> 4-fragmented-stable	89	82	51	31	7	7	88	75	54	21	14	9	26k	22k
2-stable-indirect --> 5-fragmented-only	86	75	43	32	11	10	70	43	0	43	35	21	20k	7k
2-stable-indirect --> 6-no-employment	74	67	44	23	8	14	7	0	0	0	95	58	18k	0
3-no-stable --> 1-direct-stable	62	54	0	54	10	15	98	94	89	5	3	1	18k	29k
3-no-stable --> 2-gap-stable	53	46	0	46	10	28	85	77	73	3	10	11	15k	25k
3-no-stable --> 3-gradual-stable	59	51	0	51	10	20	96	88	62	26	8	3	15k	26k
3-no-stable --> 4-fragmented-stable	54	44	0	44	14	27	86	70	48	22	17	11	13k	22k
3-no-stable --> 5-fragmented-only	56	41	0	41	20	25	67	37	0	37	41	21	11k	6k
3-no-stable --> 6-no-employment	44	35	0	35	14	30	7	0	0	0	95	49	10k	0
4-no-lm-activity --> 1-direct-stable	0	0	0	0	-	69	96	91	85	6	5	2	0	24k
4-no-lm-activity --> 2-gap-stable	0	0	0	0	-	80	70	64	62	3	7	25	0	20k
4-no-lm-activity --> 3-gradual-stable	0	0	0	0	-	76	95	87	61	25	8	4	0	21k
4-no-lm-activity --> 4-fragmented-stable	0	0	0	0	-	80	73	64	44	20	11	23	0	19k
4-no-lm-activity --> 5-fragmented-only	0	0	0	0	-	75	44	30	0	30	28	45	0	5k
4-no-lm-activity --> 6-no-employment	0	0	0	0	-	80	1	0	0	0	95	75	0	0
All	87	84	67	17	4	7	84	77	65	12	7	11	35k	25k

For the employment intensity of each full career profile at the end of the post-PLP observation interval (compared to the last year before PLP), see Figure 52 in the Appendix. In the next chapter I will use these career profiles, which are compact summary of women's career trajectories in the full observation period (pre- and post-PLP jointly).

7. Socio-Demographic Factors

Combining the four different pre-PLP and the six different post-PLP types of career paths resulted in 24 career profiles. These profiles represent a compact summary of women's labour market integration around the time they have children. They capture dynamic aspects related to the transitions into PLP, the return to the labour market after PLP, and the patterns over the full pre- and post-PLP period. The career trajectories of the career profiles are not only qualitatively different, they are also representative of different levels of labour market integration.

In this chapter I use these profiles as a tool to characterise and analyse the labour market activity of different socio-demographic subgroups of the population. The aims of this chapter are twofold: The first goal is to describe the labour market integration of a group in terms of this novel tool. What is the share of women with a specific career profile in a certain subpopulation? For example, what is the share of women in a group who directly enter PLP from stable employment and directly return to stable employment after PLP (*1-stable-direct* → *1-direct-stable*)? In this way I establish the basic magnitudes and proportions for each group that I analyse.

The second goal is to compare different groups based on this novel typology of career paths. The population is partitioned based on different variables (e.g. number of children) and then each subgroup is characterised based on their career profiles and the respective shares thereof. Comparing the differences in career profiles amounts to analysing the variation in outcomes associated with the variation in independent variables. The variables chosen to form the subgroups are known to be factors of influence regarding women's labour market outcomes after childbirth/parenting leave. This constitutes a link to the literature, allowing a discussion of previous research in the light of this new approach.

The factors that I focus on run along three main dimensions of determinants known in the literature to play a role in women's LM activity after childbirth and parenting leave:

1. Demographic aspects: In section 7.1, women are differentiated by age when first entering parenting leave, the number of children, nationality, and region.
2. Characteristics of (previous) LM activity: In section 7.2, aspects of women's previous labour market activity, such as economic sector of employment and employer size are considered.
3. Partner/couple characteristics: In section 7.3, the role of the partners' take-up of parenting leave is discussed.

Methods in each section

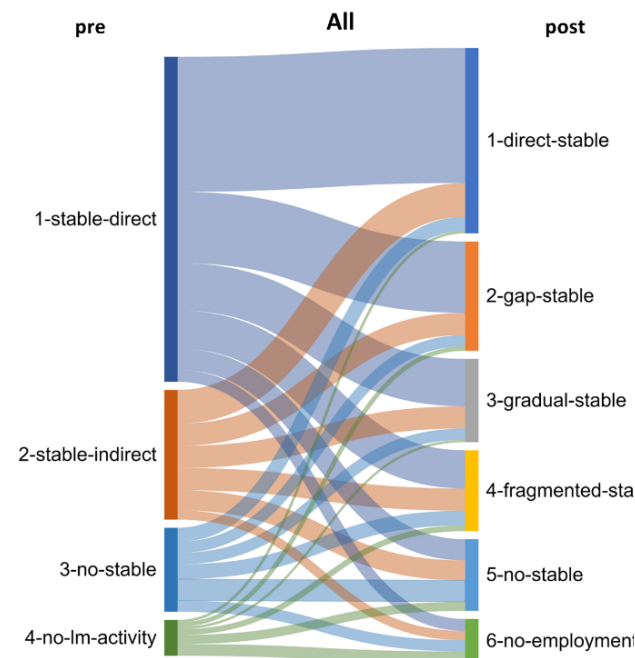
For the analysis of each factor, the matrices containing the total numbers and shares of pre- and post-PLP career types serve as a vehicle to illustrate differences between socio-demographic groups. Each cell represents a specific “full” career profile. The marginal distributions show the proportions of career path types before and after women's parenting leave phase, respectively. A pre-post combination, i.e. a career profile, can also be interpreted as a transition from a specific pre-PLP career type to a post-PLP career type and I will use Sankey diagrams to visualise these differences between different subgroups of the population.

In addition, conditioning on women's career type before PLP, the row percentages are presented which give the probabilities of post-PLP career type for each pre-type. In every table, the shares of the two most favourable career patterns are highlighted:

- *1-stable-direct* → *1-direct-stable*: women directly entering PLP from and directly returning to stable employment after PLP, and
- *1-stable-direct* → *2-gap-stable*: women directly entering PLP from stable employment and returning to stable employment after a gap of non-employment.

Figure 22, Figure 18 and Table 15 constitute the reference points for comparison, showing the average values for the target population (as in chapter 6).

Figure 22: Full career profiles: Pre- by post-PLP career types (flows)



N=339,355.

Table 15: Full career profiles (total %) and post- by pre-PLP career types (row %)

Total %	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
All, N=339,355 (100%)							
1-stable-direct	23	12	8	7	4	2	57
2-stable-indirect	6	4	4	4	3	2	23
3-no-stable	2	2	2	3	4	2	15
4-no-lm-activity	0.4	0.8	0.4	1	2	2	6
All	32	19	14	14	12	8	100

Row %	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
All, N=339,355 (100%)							
1-stable-direct	42	22	15	12	6	4	100
2-stable-indirect	26	17	17	17	15	7	100
3-no-stable	17	13	14	17	25	13	100
4-no-lm-activity	7	12	7	16	25	33	100
All	32	19	14	14	12	8	100

Values in %.

Note: To exclude influences resulting from a differential composition of the population, for the analysis of certain factors only Austrian women aged 30-34 at the start of their parenting leave phase are compared.

7.1. Demographics

7.1.1. Age when first entering parenting leave

The age at which women have their first child has been found to have marked implications for their labour market participation. Women with a higher age at first childbirth tend to spend more time in the labour market before having children, which increases the likelihood of being employed and returning to work quickly after parenting leave (Berghammer 2014; Horvath et al. 2021; Lutz 2003).

Table 16 shows the share of women of different ages at the start of their first parenting leave. 62% of all women in the target population are between 25 and 34 years old when they start their parenting leave phase. 21% are below the age of 25, and 17% are over 35 years old at this point. This means that some women enter PLP shortly after their training/education. The majority has their first child at a relatively early stage of their career, and some in mid-career.

Table 16: Age at PLP start (share, N)

Age at PLP start	Share %	N
<20	3%	9,367
20-24	18%	60,767
25-29	32%	109,798
30-34	30%	101,462
35-39	14%	46,679
40+	3%	11,282
All	100%	339,355

Early stages of the labour market career are characterised by a higher mobility. Young workers move between firms and sectors before finally settling in and finding an adequate match.⁵⁹ The older women are at first childbirth, the more likely that they are in stable employment. The marginal distributions of the different age groups in Table 17 below illustrate this pattern:

- Among women who were older at PLP start, there is a higher proportion of women who had previously been in stable employment and who enter the parenting leave phase directly from a stable job.
- Conversely, in the younger age groups, there is a higher proportion of women who had only been in non-stable employment pre-PLP.

As we have seen, the better women's career type and labour market integration before their PLP, the better their return patterns after PLP. This is indicated by the shares of women with the two most favourable career profiles. The share of women who directly enter PLP from stable employment increases with age and hence the share with the two most favourable career profiles also monotonically increases in age group. Their combined shares are 18% among women aged 20 to 24 at PLP start, while it is 46% among those over 40.

⁵⁹ Women in the younger age groups are on average the most mobile between sectors and employers during the pre-PLP period, see Table 46 in the Appendix.

Table 17: Full career profiles by age at PLP start (total %)

<20, N=9,367 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	4	2	3	4	3	0.6	16
2-stable-indirect	4	3	5	4	4	0.7	20
3-no-stable	6	4	6	9	15	3	44
4-no-lm-activity	2	2	2	3	7	4	19
All	16	11	16	19	29	9	100
25-29, N=109,798 (32%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	12	9	7	4	2	59
2-stable-indirect	6	4	4	4	3	1	21
3-no-stable	3	2	2	2	3	2	14
4-no-lm-activity	0.4	0.7	0.4	0.9	1	2	6
All	34	18	15	14	12	7	100
35-39, N=46,679 (14%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	17	8	7	4	3	67
2-stable-indirect	5	4	3	3	3	2	21
3-no-stable	1	1	0.8	1	2	2	8
4-no-lm-activity	0.2	0.5	0.1	0.5	0.8	2	4
All	35	22	12	12	10	8	100

20-24, N=60,767 (18%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	13	5	7	5	3	1	34
2-stable-indirect	7	4	6	6	6	1	29
3-no-stable	4	3	4	5	7	3	26
4-no-lm-activity	0.9	1	0.9	2	3	3	11
All	25	13	17	17	19	8	100
30-34, N=101,462 (30%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	27	16	9	7	4	3	66
2-stable-indirect	6	4	3	3	3	2	21
3-no-stable	2	1	1	2	2	2	10
4-no-lm-activity	0.3	0.5	0.2	0.6	0.8	2	4
All	35	22	13	13	9	7	100
40+, N=11,282 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	16	7	5	4	3	65
2-stable-indirect	5	4	2	3	4	3	22
3-no-stable	0.9	0.8	0.7	0.9	2	2	8
4-no-lm-activity	0.2	0.4	0.1	0.4	1	3	5
All	36	21	11	10	11	11	100

To visualise these differences in the composition of career profiles of women of different ages, the Sankey diagram below shows them for the groups aged 20-24 vs. 30-34 at their first parenting leave (see Figure 23).

Figure 23: Full career profiles by age at PLP start: only women aged 20-24 vs. 30-34 (flows)



20-24: N=60,767. 30-34: N=101,462.

Conditioning on pre-PLP career paths, we see different return patterns for these age groups (see Table 18). The better women's pre-PLP career type, the better their return. However, women who start their PLP at a higher age generally have a higher probability of making a favourable re-entry into the labour market than younger women. Interestingly, among younger women without any previous labour market activity, the share of women who do not enter employment after PLP is considerably lower (26%) than among older women (40%). Younger women simply had less time to engage in labour market activity before PLP due to their age, while the older group of women without pre-PLP labour market activity is mostly either composed of migrant women or women with a lower degree of career orientation.⁶⁰

Table 18: Post- by pre-PLP career types & age at PLP start: Women aged 20-24 vs. 30-34 (row %)

20-24, N=60,767 (18%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	15	19	14	10	3	100
2-stable-indirect	24	13	20	19	19	5	100
3-no-stable	16	12	15	19	27	11	100
4-no-lm-activity	8	13	8	18	27	26	100
All	25	13	17	17	19	8	100

30-34, N=101,462 (30%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	41	24	14	11	6	4	100
2-stable-indirect	28	20	15	16	13	8	100
3-no-stable	17	15	12	16	23	17	100
4-no-lm-activity	6	13	5	14	21	40	100
All	35	22	13	13	9	7	100

⁶⁰ Also see Figure 49 in the Appendix.

These observations regarding the differences in the careers of women of different age groups are in line with previous findings and theoretical considerations. Women who become mothers at a later age have a more stable employment history – associated with higher earnings – are more motivated to return to work (earlier) after having children than younger women, due to higher opportunity costs. Furthermore, due to the educational expansion and the fact that women with higher education tend to have children at a later age (Horvath et al. 2021; Lutz 2003; Neuwirth, Buber-Ennsner, and Fux 2023), older age groups at PLP start are composed of women with higher average education levels than younger age groups. Higher education levels are associated with jobs that offer both higher financial (and intrinsic) rewards, and due to the opportunity-cost effect, higher-educated women are more likely than lower-educated women to return to work after having children, in order to avoid losing earnings (Becker 1991; Berghammer 2014).

On the other hand, even though the shares of women with better career types before having children and better re-entries into stable employment post-PLP increase with age, the share of women who do not return to stable employment or any employment at all post-PLP decreases only up to the age group of 30 to 34 at PLP start. For women 35 or older, this proportion increases again. This finding is consistent with Frühwirth-Schnatter et al. (2016). The relationship between age at first childbirth and subsequent LM outcomes might therefore not always be linear, and rather a function of women's previous LM career paths.⁶¹

Horvath et al. (2021) find that for women and men in Austria alike, a higher labour market integration before the age of 30 tends to lead to higher labour market activity afterwards. Therefore, if women are young when they have children, interruptions due to parenting leave and childcare responsibilities are bound to affect their LM integration, experience, skills, and education level achieved before this age. This leads to lower labour market activity afterwards compared to their older peers. The present findings seem to corroborate 30 as such a threshold for women's age at their first parenting leave. The proportions of women's full career profiles in the groups who were 30 or older at PLP start are quite similar to each other, suggesting a slowdown of the age effect on women's labour market careers.

⁶¹ A more nuanced picture emerges when looking at the shares of women's type of labour market (re-)entry after PLP for women of the same career type before having children (row percent, see Figure 53 in the Appendix). The relationship between a higher age at first parenting leave and post-PLP outcomes seems to be approximately monotonically positive only for women who transition to PLP directly from stable employment, i.e. who were relatively well integrated into the labour market before having children.

On the other hand, in the groups with less favourable pre-PLP careers, the share of women with advantageous (re-)entry patterns first increases up to around the age of 30 but then drops with higher ages at first parenting leave. At the same time, the combined proportion with no stable or no employment at all post-PLP first drops but then decreases with a higher age at PLP start.

7.1.2. Number of children

Childbearing and parenting leave constitute an interruption of the labour market career, and the ensuing care work due to childrearing can bring about reduced flexibility in career decisions and reduced labour market activity. The higher the number of children, the longer the potential interruptions due to parenting leave. Longer absences from the labour market are associated with a supposed depreciation of human capital or at least a lack of further investment in specific skills (Becker 1985; Mincer and Ofek 1982; Ziefle 2004). Furthermore, seniority rules on the Austrian labour market might entail a loss in income increases and promotion opportunities (Lutz 2003). The target population of this study are women with 1 to 4 children. Table 19 shows their shares in the population: the large majority (almost 90%) of women have 1 or 2 children, the share of women with 3 and 4 children being relatively small.

Table 19: Number of children (share, N)

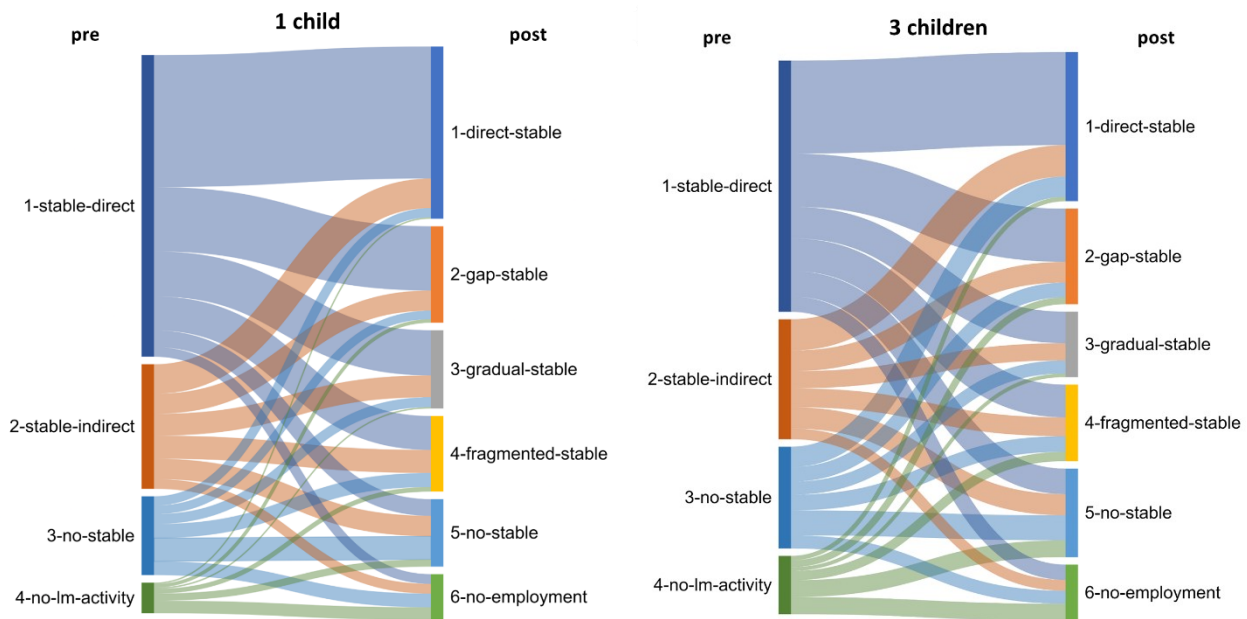
Number of children	Share %	N
1 child	39%	133,414
2 children	50%	168,043
3 children	10%	33,627
4 children	1%	4,271
All	100%	339,355

Table 20 and Figure 24 below show the total share of women's career profiles by the number of their children. Comparing the post-parenting leave phase careers of women with 2, 3, and 4 children respectively, we see that the shares of women who (re-)enter stable employment directly or after a gap decline with an increasing number of children, while the proportions of women with no (stable) employment in the five calendar years after PLP increase.

Table 20: Full career profiles by number of children (total %)

1 child, N=133,414 (39%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	12	8	6	3	2	56
2-stable-indirect	6	4	4	4	4	2	23
3-no-stable	2	2	2	3	4	3	15
4-no-lm-activity	0.3	0.7	0.3	0.9	1	2	6
All	32	18	15	14	13	9	100
3 children, N=33,627 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	18	10	6	6	5	3	47
2-stable-indirect	6	4	3	4	4	2	23
3-no-stable	4	3	2	3	5	2	19
4-no-lm-activity	0.8	1	0.7	2	3	3	11
All	28	18	12	14	17	11	100
2 children, N=168,043 (50%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	24	13	9	7	4	2	59
2-stable-indirect	6	4	4	4	3	1	22
3-no-stable	3	2	2	2	3	1	13
4-no-lm-activity	0.5	0.8	0.5	0.9	1	1	5
All	33	20	15	14	11	6	100
4 children, N=4,271 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	13	7	4	4	4	4	35
2-stable-indirect	6	3	3	3	5	3	21
3-no-stable	4	3	2	4	7	4	25
4-no-lm-activity	1	2	1	2	5	7	18
All	23	15	10	13	22	18	100

Figure 24: Full career profiles: Women with 1 child vs. 3 children (flows)



1 child: N=133,414. 3 children: N=33,627.

Overall, as expected, a lower number of children is associated with better types of re-entry into the labour market after the parenting leave phase. These results correspond to previous findings: Cross-nationally, a higher number of children is generally associated with a lower probability of mothers' employment (Pettit and Hook 2005). However, a simplistic one-way causality cannot be presumed in this context. Women's fertility decisions have been shown to be endogenous to their labour supply, as fertility and work decisions are not disconnected aspects. Rather, they are jointly determined, as women who want to pursue certain career goals may have fewer children and/or delay childbirth (Goldin 1990, 125; Angrist and Evans 1998; Steiber and Haas 2012).

The labour market patterns of women with 3 and 4 children clearly point in the direction of some self-selection mechanism and endogeneity of the fertility decision. Regardless of return patterns – which are less favourable than those of women with fewer children – we also see that:

- The proportion who goes directly from stable employment into PLP is lower among women with 3 or 4 children (47% and 35% respectively vs. 57% on average).
- The share of women without any labour market activity before PLP is considerably higher among women 3 or 4 children: While among women with 1 and 2 children only 5-6% had no LM activity before, a total of 11%, respectively 18% of women with 3 and 4 children were not active in the labour market before having their first child (also visible in Figure 24).⁶²

A general argument is that due to the persisting unequal distribution of domestic and care work, a higher number of children also entails increased care responsibilities for mothers (Hook and Paek 2020; OECD.stat

⁶² Note: There are notable differences in the number of children by nationality – while only 10% of Austrian women have 3 or 4 children, this share is 29% for Turkish women (see the next section and Table 48 in the Appendix).

2023), making it more difficult to minimise their absences from the labour force or further invest in the accumulation of human capital e.g., through additional education. At first glance there is not much difference between career profiles of women with one child and women with two children. In terms of the return patterns, the PLP interruption does not seem to have a very different effect. However, the employment intensity of women with two (or more) children (i.e., working hours) differs compared to the time before having children, most probably due to an increased amount of care work.⁶³

Table 21 shows the return patterns of each pre-PLP career type. When looking at women of less favourable career types before having children, the above relationship reverses: Women with 3 children are more likely than those with 1 child to enter stable employment directly following their parenting leave phase (in fact, the same is true for women with 2 and 4 children, see Figure 54 in the Appendix). This might be indicative of increased financial household needs, compelling women to enter the workforce earlier in order to provide a (stable) second income (Kahn, García-Mangano, and Bianchi 2014, 58).

Table 21: Post- by pre-PLP career types: Women with 1 child vs. 3 children (row %)

1 child, N=133,414 (39%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	44	21	15	11	6	3	100
2-stable-indirect	24	16	18	18	16	8	100
3-no-stable	12	11	13	18	30	17	100
4-no-lm-activity	5	11	5	15	23	41	100
All	32	18	15	14	13	9	100

3 children, N=33,627 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	37	21	13	13	10	6	100
2-stable-indirect	26	17	14	16	18	9	100
3-no-stable	20	14	13	15	25	13	100
4-no-lm-activity	8	12	6	16	29	29	100
All	28	18	12	14	17	11	100

⁶³ The employment intensity, i.e. gross earnings compared to the year before PLP, suggests higher (long-term) reductions in working hours for women with more children, compared to those with one child (as indicated by the share of women e.g., earning less than 50% of previous earnings, see Figure 55 in the Appendix).

7.1.3. Nationality

In every analysis of the (Austrian) labour market, nationality of labour force participants (or non-participants) plays an important role. Workers of different nationalities have different migration backgrounds; they can differ in terms of education systems and the shares of different levels of educational levels. There are also differences in terms of cultural background. For instance, for Germans there is no language barrier, and the education system is very similar to the Austrian one. These differences generally translate to different labour market patterns of workers with different nationalities. Different cultural backgrounds may also be associated with different fertility patterns (age at childbirth, number of children) and with different female labour force participation rates and attitudes towards women in the workforce. After having children, women with non-Austrian nationality are generally more likely than Austrian women to adopt a family model in which only their male partners work (Berghammer 2014). This suggests that cultural norms regarding gender roles and work-life balance differ between Austrian and migrant populations.

Gender norms correlate with child penalties across countries, as shown by Kleven et al. (2019), differences in societal expectations regarding gender roles being associated with variations in how having children impacts women's careers. Furthermore, origin country culture and home-country LFPR has been found to influence migrant women's employment and labour force participation rates in different European countries and the US (Schieckoff and Sprengholz 2021; Antecol 2000; He and Gerber 2020). However, e.g., for the US, He and Gerber (He and Gerber 2020) find that the negative effect on employment is smaller for lead and unmarried migrant women who self-select for migration based on economic reasons, compared to follower migrants. Similar effects were found in EU15 countries for female family migrants and refugees vs. labour migrants (Cangiano 2014). This might help explain differences between women from EU and ex-Yugoslavian vs. Turkish or other non-EU nationalities, as the most important reason for immigration to Austria for migrants from e.g., new EU countries was work, while for Turkish immigrants, it was family or partnership (Wiedenhofer-Galik and Baumgartner 2022).

On the other hand, for women with a migration background (also in the second generation), gender norms might be maintained through the family environment. For example, Kleven, Landais, and Søgaaard (2019) find that in Denmark, child penalties are transmitted through generations and girls who grow up in families with traditional division of labour later have higher child penalties than those who don't.

For our analysis we group women of different nationalities based on the different regulations and rules that apply regarding their access to the Austrian labour market. Basically, there are Austrians, EU citizens and non-EU citizens. Within the group of EU citizens, a distinction is made between EU 'Old' and EU 'New' citizens.⁶⁴ Within the group of non-EU citizens, it is useful to distinguish between citizens of former Yugoslavia and Turkey, and those of the remaining non-EU countries. The former two do not only constitute the largest single nations of non-EU citizens in Austria, but they are also countries with a special migration history dating back to the 1960s. The last group comprises all the other non-EU countries and has grown considerably over the last two decades as it also includes refugees.

This gives rise to 6 different nationality groups: (1) Austrians (2) EU 'Old', (3) EU 'New', (4) Ex-Yugoslavian (5) Turkish (6) Non-EU Rest. Table 22 contains the proportions of women in each of these nationality groups.

Table 22: Nationality groups (share, N)

Nationality group	Share %	N
AT	74%	251,100
EU 'Old'	5%	15,503
EU 'New'	7%	25,222
Non-EU Ex-YU	6%	20,668
Non-EU TR	4%	12,887
Non-EU Rest	4%	13,975
All	100%	339,355

Nationality groups: see table below.

Table 23 below shows the pre- and post-parenting leave phase careers of women belonging to different nationality groups, which seem to conform to these considerations. In terms of both their pre- and post-PLP labour market integration, Austrian women have the highest proportions of favourable types of careers. This translates into the fact that Austrians also have the highest overall share of women with the most favourable full career profiles (direct transition from stable employment to first parenting leave and return to stable employment directly or after a gap). In contrast, Turkish and other non-EU women have a lower proportion of women directly entering PLP from stable employment. They also exhibit large shares of women not returning to employment at all in the five calendar years after their parenting leave phase (more than 20%).

⁶⁴ EU 'Old' citizens include the pre-2004 EU states and EFTA countries (with the exception of the United Kingdom, which is a very small group) but in Austria this group is predominately composed of Germans. EU 'New' citizens are citizens from the former Central and Eastern European countries who only gained full access to the Austrian labour market in 2011 and 2014 respectively (states that joined the EU starting with the 2004 enlargement).

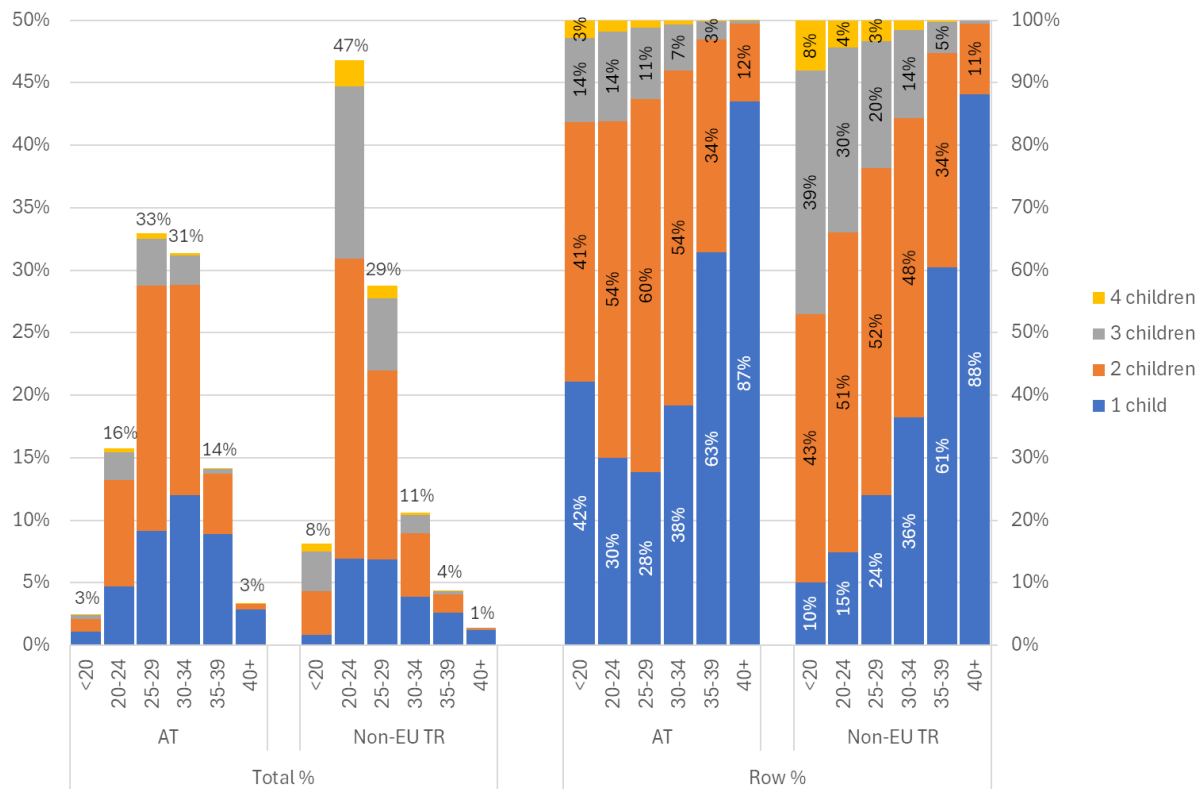
Table 23: Full career profiles by nationality group (total %)

AT, N=251,100 (74%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	15	10	8	4	2	66
2-stable-indirect	7	4	4	4	3	2	25
3-no-stable	2	1	1	2	2	0.8	9
4-no-lm-activity	0.1	0.1	0.0	0.1	0.1	0.1	0.5
All	37	20	15	14	9	5	100
EU 'New', N=25,222 (7%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	11	7	5	4	3	2	32
2-stable-indirect	3	2	2	3	3	1	14
3-no-stable	5	5	4	6	9	5	34
4-no-lm-activity	2	3	1	3	4	7	20
All	20	17	12	17	19	15	100
Non-EU TR, N=12,887 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	7	4	3	3	4	2	23
2-stable-indirect	3	2	2	4	6	3	21
3-no-stable	3	3	2	4	10	6	27
4-no-lm-activity	1	2	1	4	9	10	28
All	14	11	9	16	30	21	100
EU 'Old', N=15,503 (5%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	14	8	5	4	5	5	41
2-stable-indirect	3	2	2	2	2	2	14
3-no-stable	5	4	4	4	8	9	34
4-no-lm-activity	1	1	0.7	1	2	5	12
All	24	15	11	11	17	22	100
Non-EU Ex-YU, N=20,668 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	11	6	5	4	3	1	31
2-stable-indirect	5	3	4	4	5	1	22
3-no-stable	4	3	4	5	8	2	26
4-no-lm-activity	2	4	2	5	5	4	21
All	22	16	15	18	20	9	100
Non-EU Rest, N=13,975 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	8	4	3	3	2	1	21
2-stable-indirect	2	1	1	2	2	1	10
3-no-stable	5	4	4	5	9	5	32
4-no-lm-activity	2	4	2	5	10	14	37
All	16	14	10	15	23	22	100

Nationality groups: AT: Austria. EU 'Old': Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland. EU 'New': Bulgaria, Croatia, Cyprus, Czech Republic, former Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia. Non-EU Ex-YU: Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Serbia and Montenegro, Yugoslavia. Non-EU TR: Turkey.

It is important to bear in mind that women of different nationalities might have different fertility patterns. For example, Austrian and Turkish women differ with respect to their age at first childbirth and number of children (see Figure 25).⁶⁵

Figure 25: Number of children by age at PLP start: Austrian vs. Turkish women



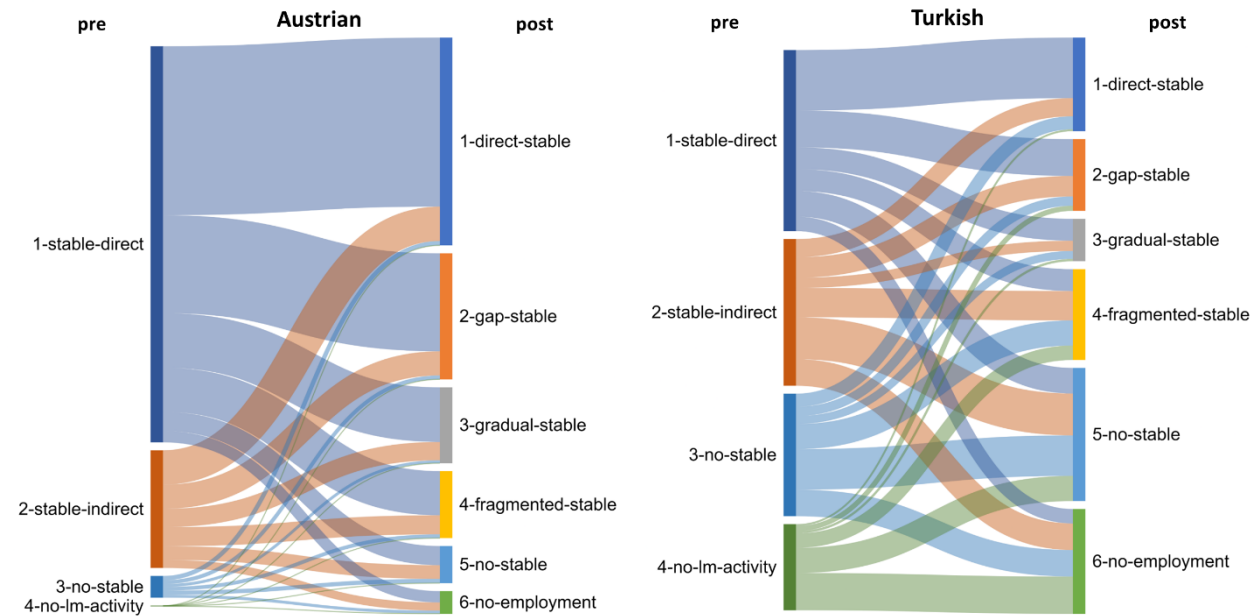
AT: N=251,100. Non-EU TR: N=12,887.

Therefore, it is useful to control for some of these factors, to make groups more comparable. If we focus on women aged between 30 and 34 at the start of their parenting leave phase, who only have one or two children, we get the following results, shown in the Sankey diagram below. Even for this selected group of women, the size of the flows – the total proportion of each “full” career profile – still suggests considerable differences between Turkish and Austrian women on the labour market (see Figure 26 and Table 24 below).

Austrian women have more than double the share of Turkish women with a direct transition from stable employment to PLP, while Turkish women have higher proportions who were not in a stable job or active on the labour market before having children. This is partly because some of them only enter the Austrian social insurance system during the pre-interval.

⁶⁵ For average age at PLP start and number of children by nationality groups, see Table 47 and Table 48 in the Appendix.

Figure 26: Full career profiles: Austrian vs. Turkish women, aged 30-34 at PLP start 30-34, with 1-2 children (flows)



Only women aged 30-34 at PLP start, with 1 or 2 children. Austrian: N=78,762. Turkish: N=1,366.

Table 24: Full career profiles: Austrian vs. Turkish women aged 30-34 at PLP start, with 1-2 children (total %)

AT (30-34), N=78,762 (78%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	32	18	10	8	4	2	74
2-stable-indirect	6	5	3	4	3	2	22
3-no-stable	0.8	0.7	0.5	0.7	0.8	0.5	4
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.1	0.1
All	39	23	14	12	7	4	100

Non-EU TR (30-34), N=1,366 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	11	7	4	4	5	3	34
2-stable-indirect	3	4	2	5	8	5	27
3-no-stable	2	2	1	5	8	5	23
4-no-lm-activity	0.3	1	0.4	3	5	7	16
All	17	13	8	17	25	20	100

Only women aged 30-34 at PLP start, with 1 or 2 children. AT: Austria. Non-EU TR: Turkey.

In Table 25 below we see the proportions of post-PLP career types within each pre-PLP career type (row percentages) for Austrian and Turkish women aged 30-34 at PLP start. Even among Turkish women who directly enter PLP from stable employment, the share of those returning to work after PLP is considerably lower than among Austrians. More specifically, Turkish women whose stable job is interrupted by their first parenting leave are less likely than Austrians to return to stable employment – or to any work at all – within five calendar years after their parenting leave phase ends.⁶⁶ The same applies within each pre-PLP career type, pointing to possible persisting cultural differences.

⁶⁶ This trend remains even if filtering out women who enter the Austrian labour market for the first time during the pre-interval. Also see Figure 56 for the target population.

Table 25: Post- by pre-PLP career types: Austrian vs. Turkish women aged 30-34 at PLP start, with 1-2 children (row %)

AT (30-34), N=78,762 (78%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	43	25	14	11	5	3	100
2-stable-indirect	29	21	16	16	12	7	100
3-no-stable	20	17	13	17	19	13	100
4-no-lm-activity	7	12	9	6	20	46	100
All	39	23	14	12	7	4	100

Non-EU TR (30-34), N=1,366 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	33	20	12	12	14	8	100
2-stable-indirect	12	14	7	20	29	18	100
3-no-stable	11	8	6	21	33	22	100
4-no-lm-activity	2	6	3	17	29	43	100
All	17	13	8	17	25	20	100

Only women aged 30-34 at PLP start, with 1 or 2 children. AT: Austria. Non-EU TR: Turkey.

7.1.4. Region

Despite Austria being a relatively small country, regional differences do exist. Key labour market indicators such as the unemployment rate and female labour force participation show noticeable regional variation (Statistics Austria 2024). A number of different factors might influence women's career patterns before and after their PLP. The expansion of the service sector is thought to have been major factor in the rise in women's employment over the last century (Thévenon 2013; England and Farkas 2017; Goldin 2006; Harris 1981). Furthermore, specific regional development of industry structure has been found to play a significant role. For example, Wyrwich (2019) shows that in Germany, the degree of early 20th century industrialisation – associated with increasing blue and white-collar employment opportunities – can explain regional differences in female labour force participation. This suggests that historical shifts in production have long-lasting effects on labour market patterns and the social acceptance of working women.

The various regions in Austria differ from one another historically. The economic development during the past century varied regionally, leading to different industry structures. Certain industries with particular employment patterns are more dominant in certain regions than in others: for instance, seasonal employment fluctuations play a larger role in Tirol due to the importance of tourism. Different regions also have a different demographic composition of the work force. Kleven et al. (2019) have shown that gender norms correlate with child penalties across countries and it is not unreasonable to expect similar patterns to exist within regions of a country. Furthermore, push factors such as costs of living that increase faster than the wages of male breadwinners and rising labour market risks can lead to an increasing necessity for women to work in order to maintain a certain living standard (Steiber and Haas 2010; Kreyenfeld, Konietzka, and Böhm 2007; Harris 1981). The structure of industry in different regions might determine the degree to which households are affected by this development (e.g. men's higher average wages in Vorarlberg might (still) contribute to a lower need for mothers to work compared to other regions (Rechnungshof Österreich 2020; 2022; 2024)).

In addition to this, childcare availability and parenting norms may reinforce employment patterns: Female labour supply is a key driver of childcare demand (formal and informal, across different European countries), but childcare provision can in turn feed back into women's labour force participation (Thil, Lawson, and Lefebvre 2023). Regional disparities concerning the availability of childcare services in Austria are pronounced. The share of children in formal care, especially young children up to two years old, has been historically low in the federal states compared to Vienna, with differences still remaining today (Statistics Austria 2023; Wall 2022). The lack of childcare services of a sufficient accessibility and quality, or that are compatible with full-time work, might compel mothers to delay going to work, or only take up marginal or part-time work. Furthermore, the regional structure of industry and the general demand for jobs might be more or less compatible with family demands. In this context, the regional availability and opening hours of childcare services can play an important role.

Table 26 below shows the distribution of women in the target population by region.

Table 26: Region (share, N)

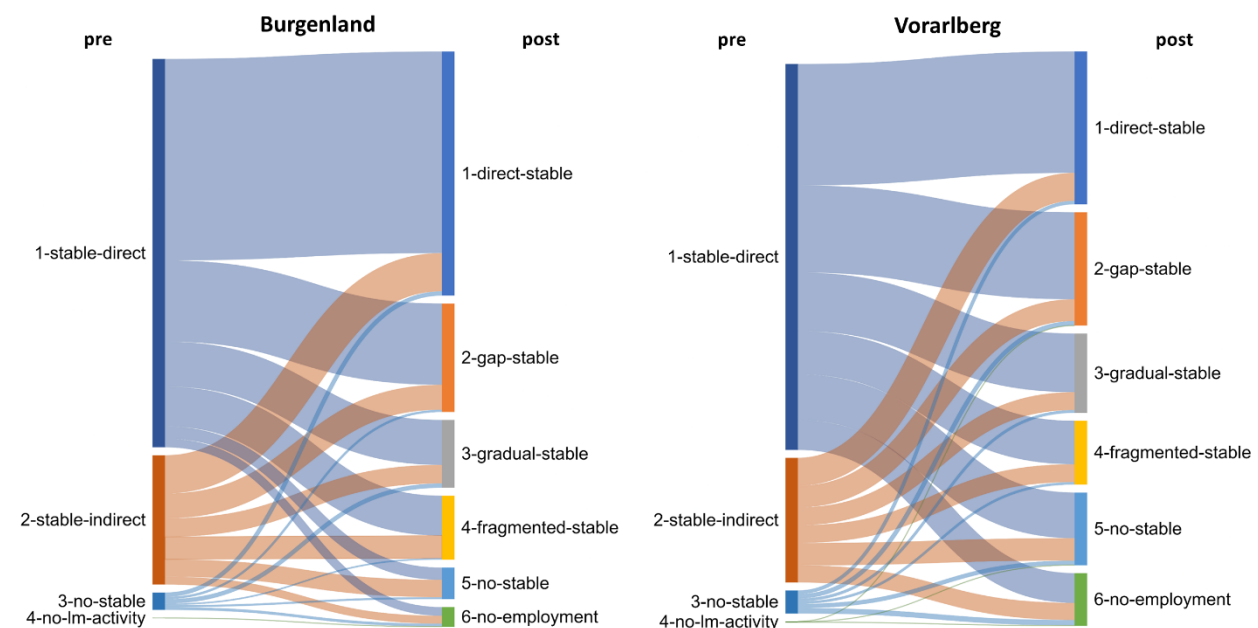
Region	Share %	N
Burgenland	2%	6,351
Kärnten	5%	17,599
Niederösterreich	12%	41,589
Oberösterreich	15%	52,061
Salzburg	6%	20,942
Steiermark	12%	39,775
Tirol	8%	27,008
Vorarlberg	4%	13,939
Wien	25%	84,973
Rest	10%	34,415
All	100%	338,652

Region: federal state of first parenting leave episode. Rest: nationwide collective social insurance accounts (occurs mostly in public administration, self-employment, and education). Excl. NA (not assignable, N = 703).

To illustrate the most pronounced regional differences the following figures and tables compare women in Burgenland and Vorarlberg. In order to control for nationality and age at the start of the parenting leave phase, only women with Austrian nationality between 30 and 34 years old at PLP start are compared.⁶⁷

Women's careers before having children are comparable between these regions. The shares of women of different pre-PLP career types are very similar. For instance, in both regions more than 70% of Austrian women of the chosen age group enter PLP directly from stable employment. However, women's labour market return patterns are quite different (see Figure 27 and Table 27): The share of women directly going into stable employment after PLP is considerably lower in Vorarlberg (29%) than in Burgenland (46%).

Figure 27: Full career profiles by region: Burgenland vs. Vorarlberg, only Austrian women, aged 30-34 at PLP start (flows)



Only Austrian women, aged 30-34 at PLP start. Region: federal state of first parenting leave episode. Burgenland N=1,358. Vorarlberg N=3,127.

⁶⁷ For all other federal states and for all women (no group selection) see Table 49 and Table 50 in the Appendix.

Table 27: Full career profiles by region: Burgenland vs. Vorarlberg, only Austrian women, aged 30-34 at PLP start (total %)

Burgenland (AT, 30-34), N=1,358 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	15	8	7	2	2	73
2-stable-indirect	7	5	3	4	3	1	24
3-no-stable	0.8	0.4	0.8	0.3	0.4	0.5	3
4-no-lm-activity	0	0	0	0	0	0.1	0.1
All	46	20	13	12	6	4	100

Vorarlberg (AT, 30-34), N=3,127 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	16	11	8	9	6	72
2-stable-indirect	5	4	3	3	4	3	23
3-no-stable	0.7	0.8	0.5	0.5	0.8	1	4
4-no-lm-activity	0	0.0	0	0	0.1	0.1	0.2
All	29	21	15	12	14	10	100

Only Austrian women, aged 30-34 at PLP start.
Region: federal state of first parenting leave episode.

The differences in return patterns between Burgenland and Vorarlberg become even more obvious when conditioning on pre-PLP career types, especially when comparing women who had directly entered their PLP from stable employment i.e., women with a high previous labour market integration (see Table 28). In this group:

- 52% of women directly return to stable employment after PLP in Burgenland, while only 31% do so in Vorarlberg.
- The share of women dropping out of employment post-PLP is only 2% in Burgenland, while in Vorarlberg it is 8%.

Table 28: Post- by pre-PLP career types & region: (row %)

Burgenland (AT, 30-34), N=1,358 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	52	21	12	10	3	2	100
2-stable-indirect	30	19	14	17	13	6	100
3-no-stable	25	14	25	9	11	16	100
4-no-lm-activity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All	46	20	13	12	6	4	100

Vorarlberg (AT, 30-34), N=3,127 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	23	15	11	12	8	100
2-stable-indirect	22	17	14	14	18	14	100
3-no-stable	16	19	13	11	19	23	100
4-no-lm-activity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All	29	21	15	12	14	10	100

Only Austrian women, aged 30-34 at PLP start. Region: federal state of first parenting leave episode.
n.a.: number of cases <30.

While there are differences in childcare availability between the two regions, childcare attendance in Vorarlberg is not among the lowest levels in Austria (among under 3- but also under 5-year-olds, generally but also in VIF-compliant facilities) (Wall 2024). However, on average, women in Vorarlberg display the least favourable post-PLP return patterns (see Table 49 and Table 50 in the Appendix), pointing to the additional role of contextual factors such as those mentioned above.

7.2. Aspects of the individual labour market activity

Properties of employment, such as the economic sector or various employer characteristics play an important role in women's labour market outcomes.⁶⁸ Such factors are discussed in most sociological and econometric analyses.⁶⁹ Employer, occupation, and economic sector can all influence labour market participation, career progression, and wage disparities.

Despite narrowing educational and human capital differences between women and men, the gender pay gap and the child penalty persist across countries, suggesting the need for different explanations (Kleven et al. 2019; Goldin 2014; Blau and Kahn 2003). Goldin (2014) finds that firms and occupations requiring long and inflexible work hours tend to have the highest gender pay gaps based on US data, although this may apply more generally. As flexibility is important in women's individual choices especially after having children, in industries and firms where workers are better substitutes for each other (also in high-income occupations), the cost of flexible employment decreases, thereby reducing gender disparities. The extent to which these conditions apply depends on technological advancements and the structure of the economic sector.

The Austrian labour market is highly regulated and segmented. Different sectors are governed by different collective bargaining agreements, working hours, and different labour market dynamics. Given these structural differences, it is expected that the sector of occupation plays an important role in shaping women's employment patterns. To illustrate the role of this type of factors in the context of women's LM activity before and after having children, the following sections examine differences regarding the economic sector of employment and employer size (in terms of the number of employees).

⁶⁸ It is important to note that the grouping of women's careers is based solely on a few key observation points/transition patterns at the start and at the end of their parenting leave phase, relating to the labour market and specifically, to stable employment. Beside these abstract aspects of the structure of social insurance spells, no other details of women's labour market activity were considered for the clustering.

⁶⁹ (e.g., see Goldin 2014; Waldfogel 1998; Goldin 2022; Gangl and Ziefle 2009; Kleven, Landais, and Søgaaard 2019).

7.2.1. Economic sector

Sectoral differences play a role in women's labour market patterns, as different economic sectors have distinct employment patterns. For instance, the public sector typically provides long-term career stability. Different regulations regarding maternity leave and the right to be reinstated apply. Hence, Kleven et al. (2019) for instance treat the public sector differently in their analysis. On the other hand, seasonal fluctuations and working hours render tourism less compatible with raising children. Also, since the earning potential in sectors that primarily employ women is lower (Rechnungshof Österreich 2024, 115), average opportunity costs of staying at home after parenting leave are also bound to be lower in more female dominated sectors than in others.

To analyse differences in women's pre- and post-PLP careers associated with the sector of economic activity, the sector of their last employer before PLP is distinguished (based on the [ÖNACE 2008](#) classification). For illustration, women in manufacturing (ÖNACE C), tourism (ÖNACE I), and financial and insurance activities (ÖNACE K) are considered in the following.⁷⁰ Similarly to the previous section, to control for demographic differences, I focus on Austrian women aged 30-34 at the start of their parenting leave phase.

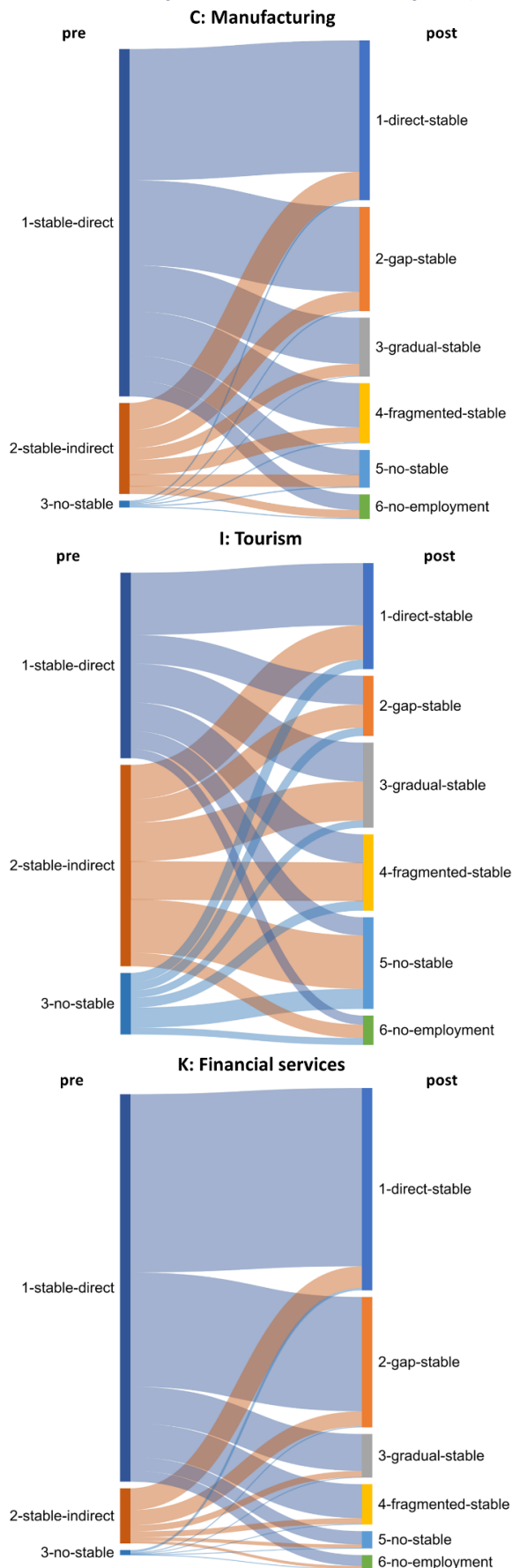
Differences in women's career profiles between the three sectors are pronounced (see Figure 28 and Table 29).⁷¹ Financial services have the highest shares of women with favourable career paths, while tourism has exhibits more precarious career patterns:

- In financial services, 87% of women directly enter their PLP from stable employment; in manufacturing this share is somewhat lower (78%), and in tourism it is lowest (41%).
- In contrast, only 7% of women in financial services remain in non-stable employment or not employed in the five calendar years following PLP; in manufacturing this share doubles, and in tourism, it is four times higher.
- The overall shares of the two most favourable career profiles “1-stable-direct → 1-direct-stable” and “1-stable-direct → 2-gap-stable” also differ considerably: While two thirds of women in financial services have one of these two career patterns, only 48% of women in manufacturing and 20% in tourism do so.

⁷⁰ These three sectors account for 10%, 9%, and 4% of all employed women, respectively. For the distribution of women's sector of economic activity in the target population, see Table 51 in the Appendix, which displays the dominance of the service sector, while the typically male-dominated primary and secondary sectors are less represented (e.g. construction).

⁷¹ For all other economic sectors and for all women (no group selection) see Table 52 and Table 53 in the Appendix.

Figure 28: Full career profiles by economic sector:
Manufact./Tourism/Finance (flows)¹



¹ Only Austrian women, aged 30-34 at PLP start. Economic sector of last employment pre-PLP. Classification: ÖNACE 2008.

Table 29: Full career profiles by economic sector:
Manufact./Tourism/Finance (total %)¹

C: Manufacturing (AT, 30-34), N=7,607 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	19	10	10	6	4	78
2-stable-indirect	6	4	3	3	3	2	20
3-no-stable	0.3	0.3	0.2	0.3	0.3	0.2	2
4-no-lm-activity	-	-	-	-	-	-	-
All	36	23	13	14	8	6	100

I: Tourism (AT, 30-34), N=2,952 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	14	6	9	6	4	2	41
2-stable-indirect	8	5	9	8	12	3	45
3-no-stable	2	2	2	2	4	2	14
4-no-lm-activity	-	-	-	-	-	-	-
All	24	13	19	17	20	7	100

K: Financial services (AT, 30-34), N=4,603 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	40	26	8	8	3	2	87
2-stable-indirect	5	3	1	1	0.8	0.6	12
3-no-stable	0.5	0.2	0.1	0.2	0.1	0.1	1
4-no-lm-activity	-	-	-	-	-	-	-
All	45	29	10	9	4	3	100

¹ Only Austrian women, aged 30-34 at PLP start. Economic sector of last employment pre-PLP. Classification: ÖNACE 2008.

Table 30 shows the relative shares of women's return paths to the labour market by their pre-PLP career type. Focusing on those who enter PLP directly from stable employment we see that:

- In financial services, 76% of women return to stable employment directly or after a typically short gap of non-employment. In manufacturing this combined share is 62%, whereas in tourism, only less than half of women (48%) return to stable employment directly or after a gap.⁷²
- In contrast, women who do not return to stable employment post-PLP account for only 6% of women in financial services, while for manufacturing and tourism, this combined share is 12% and 15%, respectively.
- The two return patterns “3-gradual stable” and “4-fragmented stable” account for 18% of women in financial services, while 26%, respectively 36% have such career paths in manufacturing and tourism respectively. In addition, these re-entry paths are also more prevalent in tourism even among women with favourable previous careers (with a direct entry from stable employment into PLP).

Especially the shares of these latter two return paths to stable employment (gradual and fragmented transition) point to a possible reorientation after PLP in certain sectors (see also chapter 8 on further research).

Table 30: Post- by pre-PLP career types & economic sector: Manufacturing vs. Tourism vs. Finance, only Austrian women, aged 30-34 at PLP start (row %)

C: Manufacturing (AT, 30-34), N=7,607 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	24	13	13	7	5	100
2-stable-indirect	30	20	13	16	13	9	100
3-no-stable	20	17	12	18	18	16	100
4-no-lm-activity	-	-	-	-	-	-	-
All	36	23	13	14	8	6	100

I: Tourism (AT, 30-34), N=2,952 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	33	15	21	15	10	5	100
2-stable-indirect	17	12	19	19	27	7	100
3-no-stable	15	13	12	16	33	11	100
4-no-lm-activity	-	-	-	-	-	-	-
All	24	13	19	17	20	7	100

K: Financial services (AT, 30-34), N=4,603 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	46	30	10	9	3	3	100
2-stable-indirect	40	27	11	10	7	5	100
3-no-stable	45	20	10	14	6	6	100
4-no-lm-activity	-	-	-	-	-	-	-
All	45	29	10	9	4	3	100

Only Austrian women, aged 30-34 at PLP start. Economic sector of last employment pre-PLP. Classification: ÖNACE 2008.

⁷² Among women who enter their PLP directly from a stable job, tourism has the lowest rates of direct re-entry into stable employment post-PLP, not only compared to manufacturing and finance, but also relative to all other sectors. Controlling for only women with one child does not change this tendency.

7.2.2. Employer size

In international literature, the role of family-friendliness and flexibility within firms and occupations for gender equality has been discussed (e.g., Goldin 2014; Goldin and Katz 2016). For instance, in Germany Bächmann and Frodermann (2020) find that the most important factor in motivating women to continue in their previous job after childbirth are specific company family-friendly measures. Also, larger firms were found to be more likely to offer family-friendly arrangements (Bächmann, Frodermann, and Müller 2020).

While parenting leave for women means an interruption at the individual level, for the employer, it means the absence of an employee who must temporarily be replaced. Due to a larger pool of employees, larger firms might be better equipped to manage parenting leave absences due to their ability to internally reallocate tasks for the duration of parenting leave. In contrast, smaller firms might have increased costs of recruitment, onboarding, and training, and possibly suffer a loss of human capital investment when employees return after parenting leave and their substitutes have to go. In addition, larger firms might offer flexible or reduced working hours more easily, e.g. facilitating a gradual increase in working hours after parents take leave.

Therefore, we can expect the firm size to influence women's career paths before and after parenting leave. Hence, beside the economic sector, the role of the firm size is illustrated below. As in the case of the economic sector, women's last employer before PLP is considered, in terms of the number of employees (see the distribution in Table 31 below).⁷³

Table 31: Employer size (share, N)

Employer size	Share %	N
A: <10	19%	60,454
B: 10-19	9%	28,638
C: 20-49	11%	35,632
D: 50-249	20%	63,612
E: 250+	40%	128,074
All	100%	316,410

Employer size of last employment pre-PLP (number of employees).
Excl. women whose employer size is not available (N = 22,945).

The following Sankey diagrams and tables show women's career profiles for the smallest and largest firms, with less than 10 and more than 250 employees. To control for the different demographic composition of economic sectors, the focus is again on Austrian women aged 30 to 34 at the start of their parenting leave phase (Figure 29, Table 32, and Table 33).⁷⁴ The differences in pre- and post-PLP career paths and overall career profiles between small and large firms are immediately apparent:

- While 58% of women who were in the smallest firms enter PLP directly from stable employment, 81% from the largest firms do so.

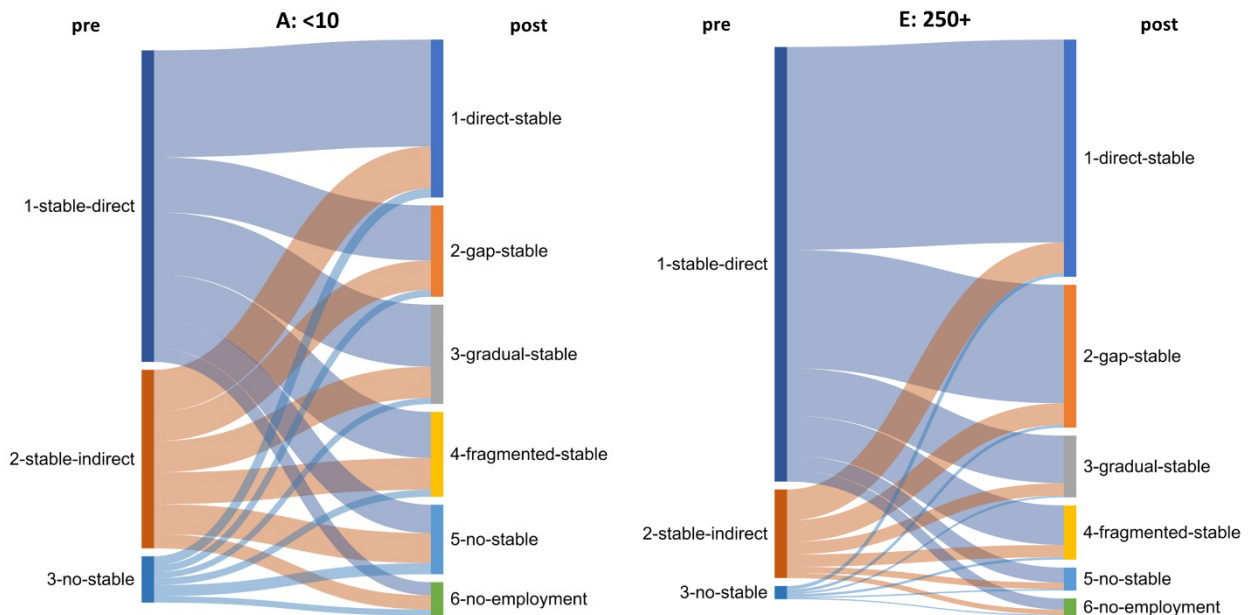
⁷³ The typical categorisation used by Statistics Austria is used.

⁷⁴ For the target population and other employer sizes, see Table 54 and Table 55 in the Appendix.

- 46% of women from the smallest firms, as opposed to 71% of women from the largest firms, return to stable employment directly or after a gap.
- In the largest firms, 60% of women have one of the two most favourable overall career profiles (“1-stable-direct → 1-direct-stable” and “1-stable-direct → 2-gap-stable”); this is twice the proportion of women in the smallest firms, where the combined share is only 30%.

A selection of women who are more career-oriented into large firms, where remuneration might be higher, can be assumed here, and it is true that women in larger firms are more likely to have higher earnings compared to those in smaller firms.⁷⁵ However, the same general trend applies when looking at women in each of the income categories individually, or when excluding those who were employed in public administration.

Figure 29: Full career profiles by employer size: smallest vs. largest (flows)



Only Austrian women, aged 30-34 at PLP start. Employer size of last employment pre-PLP (number of employees). A <10: N=12,054. E 250+: N=36,481.

⁷⁵ See Table 57 in the Appendix.

Table 32: Full career profiles by employer size: smallest vs. largest (total %)

A: <10 (AT, 30-34), N=12,054 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	20	10	12	9	5	2	58
2-stable-indirect	8	5	6	6	6	3	33
3-no-stable	2	1	1	1	2	1	9
4-no-lm-activity	-	-	-	-	-	-	-
All	29	17	19	16	13	6	100

E: 250+ (AT, 30-34), N=36,481 (47%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	22	9	7	3	2	81
2-stable-indirect	6	4	2	2	1	1	17
3-no-stable	1	1	0.3	0.4	0.3	0.2	2
4-no-lm-activity	-	-	-	-	-	-	-
All	44	27	12	10	4	3	100

Only Austrian women, aged 30-34 at PLP start. Employer size of last employment pre-PLP (number of employees).
Women whose employer size is not available not shown.

Table 33 shows the relative shares of women's return patterns for each type of pre-PLP career. Conditioning on a direct entry from stable employment to women's PLP, we can see pronounced differences, which are in line with the above considerations. The share with favourable return patterns (direct re-entry to stable employment, or after a gap) is considerably lower in the smallest firms, compared to the largest. The combined shares are 52%, as opposed to 74%, respectively.

Table 33: Post- by pre-PLP career types & employer size: smallest vs. largest (row %)

A: <10 (AT, 30-34), N=12,054 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	34	18	20	15	9	4	100
2-stable-indirect	24	16	18	18	17	8	100
3-no-stable	20	15	13	15	24	14	100
4-no-lm-activity	-	-	-	-	-	-	-
All	29	17	19	16	13	6	100

E: 250+ (AT, 30-34), N=36,481 (47%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	47	27	11	9	3	3	100
2-stable-indirect	35	24	14	14	7	6	100
3-no-stable	26	21	14	18	11	9	100
4-no-lm-activity	-	-	-	-	-	-	-
All	44	27	12	10	4	3	100

Only Austrian women, aged 30-34 at PLP start. Employer size of last employment pre-PLP (number of employees).
Women whose employer size is not available not shown.

7.3. Partners and their take-up of parenting leave

In the present data framework, we have not only linked children to their mothers, but also women to their (male) partners⁷⁶ (if they could be identified, see chapter 3). Partner and couple characteristics play an important role in fertility, childrearing, and joint career decisions. In this section, the focus is on the uptake of parenting leave by women's partners (for additional variables concerning the partner see chapter 8). Riesenfelder and Danzer (2021, 37–38) also consider men who go on parenting leave in Austria. They find that sharing parenting leave, especially when men interrupt their employment for more than 6 months, promotes the successful re-entry of women into the workforce and reduces their employment interruptions.

In this section, we will distinguish between women with a partner that could be linked through co-insurance data and those for whom we could not identify a partner. Among women with a partner, we distinguish between those whose partner has taken some form of parenting leave and those whose partner has not. Table 34 shows that a large majority of women could be linked to a partner, while for 9% a partner could not be identified.⁷⁷ In total, 18% of women have a partner who has taken up parenting leave.⁷⁸

Table 34: Partners and their take-up of parenting leave (share, N)

Partner characteristics	Share %	N
No partner	9%	29,506
Partner <u>with</u> parenting leave	18%	59,641
Partner <u>without</u> parenting leave	73%	243,273
All	100%	332,420

Excl. women with multiple linked partners.

In the diagrams and tables below, career profiles of women who are linked to a partner are compared to those who are not (Figure 30, Table 35, Table 36; for comparability, only Austrians aged 30-34 at first parenting leave are shown). What is obvious at first glance is that women without a partner have different return patterns after PLP:

- 51% of all women without a partner directly go into stable employment. This share is 37% for women with a partner who does not take parenting leave and 40% for women with a partner who has some form of PL uptake.

⁷⁶ Partners of other genders are excluded in this project, due to the presence of cases in which children are co-insured with relatives, e.g., grandmothers.

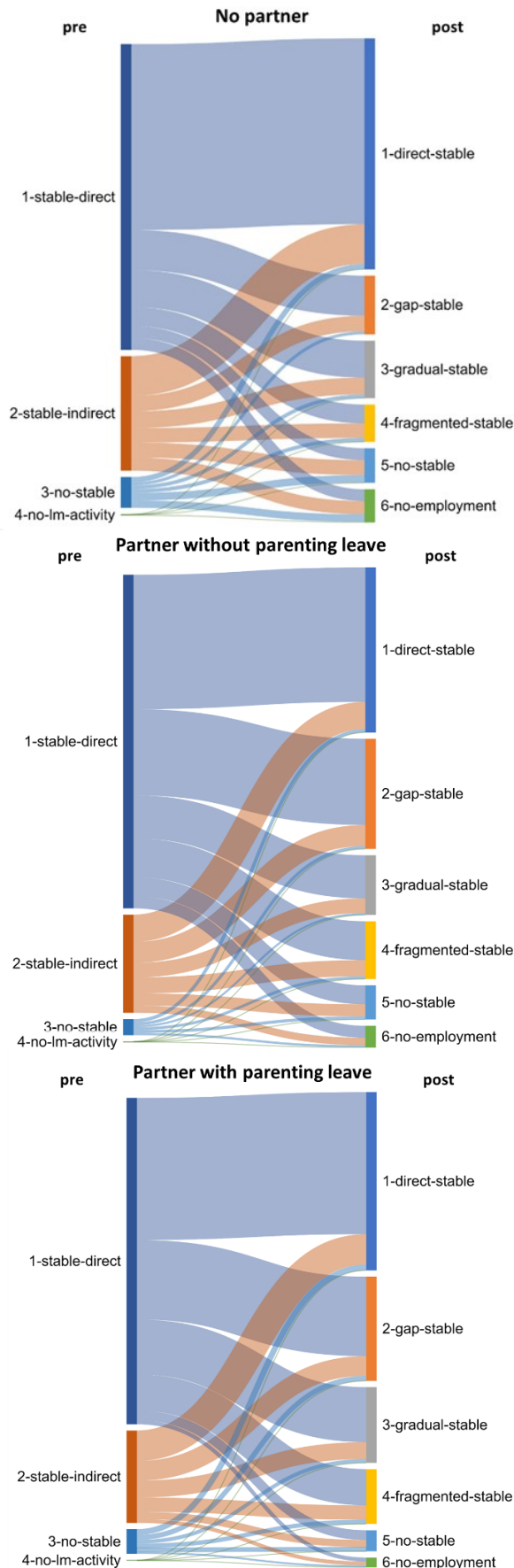
⁷⁷ Women with multiple linked partners only make up 2% of the target population (women with 2 partners: N = 6,480; women with more than 2 partners: N = 455).

⁷⁸ Among women with identifiable partners, this share is 20%. This is slightly higher than in available (cross-sectional) annual statistics, which measure the proportion of men in a parenting leave cohort or per 100 births in a given year (Riesenfelder and Danzer 2023, 16; OECD 2022). Here, on the other hand, the share of women with male partners who have ever taken parenting leave (associated with common children) are shown. This has increased with each cohort (partly relating to the introduction of the shorter and income-dependent parenting leave models), but with each new childbirth cohort, the proportion of men in Austria who take parenting leave has started to reverse in recent years (Riesenfelder and Danzer 2023; 2019). For a differentiation by region and number of children, see Table 58 in the Appendix.

- The share of women without a partner who can afford a gap of non-employment after PLP before they start stable employment is considerably lower than among women with a partner (9% vs. 19% and 18%).

The differences between women whose partner takes up some form of parenting leave and those whose partners do not are smaller:

- The share of women entering stable employment after PLP either directly or after a gap are similar (37% vs. 40%).
- However, the share of women who neither return to stable employment, nor to any employment at all post-PLP, is almost twice as high for women whose partners do not take up any form of PL, compared to women whose partners do (13% vs. 7%).

Figure 30: Full career profiles by partners & their PL take-up (flows)¹

¹ Only Austrian women, aged 30-34 at PLP start. Excl. women with multiple linked partners.

Table 35: Full career profiles by partners & their PL take-up (total %)¹

No partner (AT, 30-34), N=6,175 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	41	9	8	4	3	3	68
2-stable-indirect	9	3	4	3	3	3	25
3-no-stable	1	0.7	0.8	0.8	2	2	7
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.1	0.2
All	51	13	13	8	8	7	100

Partner without parenting leave, N=56,956 (73%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	19	10	9	4	3	74
2-stable-indirect	6	5	3	4	3	2	22
3-no-stable	0.7	0.6	0.4	0.6	0.7	0.5	4
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.1	0.1
All	37	25	13	13	8	5	100

Partner with parenting leave, N=14,959 (19%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	32	18	12	8	2	0.9	74
2-stable-indirect	7	4	4	3	2	0.9	21
3-no-stable	1	1	0.8	1	0.9	0.4	6
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.0	0.1
All	40	23	17	12	5	2	100

¹ Only Austrian women, aged 30-34 at PLP start. Excl. women with multiple linked partners.

In Table 36 women's return paths after PLP are compared, relative to their pre-PLP career type. Almost for all types of pre-careers,

- women without a partner have the highest shares who directly return to stable employment and the lowest shares of women returning to stable employment after a gap;
- among women with a partner, those whose partner also have some type of PL have slightly larger shares with a direct return, and smaller shares of women with a gap until their first stable employment post-PLP.

It seems that the absence of a partner makes it financially necessary to quickly return to the labour market.⁷⁹ The differences between women whose partners take up PL and those whose partners do not might point to a different family model. This could mean different values/attitudes or simply be an economic necessity, or both. For a further discussion, see chapter 8.

Table 36: Post- by pre-PLP career types, partners & their take-up of parenting leave (row %)

No partner (AT, 30-34), N=6,175 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	61	13	12	6	4	4	100
2-stable-indirect	35	13	15	13	13	12	100
3-no-stable	17	10	12	12	25	24	100
4-no-lm-activity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All	51	13	13	8	8	7	100

Partner <u>without</u> parenting leave, N=56,956 (79%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	40	26	13	12	6	4	100
2-stable-indirect	28	21	15	16	12	7	100
3-no-stable	21	18	12	17	19	13	100
4-no-lm-activity	6	16	9	6	19	43	100
All	37	25	13	13	8	5	100

Partner <u>with</u> parenting leave, N=14,959 (21%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	44	24	17	11	3	1	100
2-stable-indirect	33	21	18	16	8	4	100
3-no-stable	23	20	15	17	17	8	100
4-no-lm-activity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All	40	23	17	12	5	2	100

Only Austrian women, aged 30-34 at PLP start. Excl. women with multiple linked partners. n.a.: number of cases <30.

⁷⁹ Also see Figure 57 in the Appendix for the target population.

8. Next Steps & Further Research

The developed career profiles provide a compact summary of women's labour market patterns/trajectories before and after their parenting leave phase. In chapter 7, I applied them to different subgroups of the target population. First, to establish the most basic magnitudes and relationships regarding women's labour market careers using our approach. Second, to link this new approach to the literature. Basic relationships between different factors were presented, enabling the results based on this data framework to be linked to previous research. It was demonstrated that the framework allows a lot of aspects and questions from different strands of the literature to be addressed in an integrated way, and that central results/findings can be reproduced. Based on the work and results so far, there are immediate next steps to be taken. Also, two concrete ideas for further research arise.

8.1. Next steps

8.1.1. Updating and extending the framework

In terms of data work, the natural next steps are the extension of the time series and the incorporation of additional data. Updating the data will allow the inclusion of the most recent cohorts. Keeping the same requirement of a 5-year post-PLP observation period, women with a PLP end year up to 2019 can now be integrated. We expect a change in post-PLP patterns due to the lockdowns and other effects of the COVID-19 pandemic. In addition, it is also possible to integrate all available data for each cohort after PLP, thereby extending the observation period for specific analyses.⁸⁰

Another important next step in terms of data work will be to incorporate more detailed information about the PLP,⁸¹ such as the exact parenting leave model(s) chosen – especially the details of sharing parenting leave with the partner – and further information on women labour market activity in the time between children (i.e., during their PLP). The take-up of educational leave (“Bildungskarenz”) right after parenting leave has been a more recent phenomenon which we will also integrate, as it can be used to “extend” the time spent at home after parenting leave.⁸² We will also incorporate a more detailed account of partners' careers and incomes, since this can provide a clearer picture of the couple situation (see below).

In a long-term data strategy, certain limitations of the data source will be addressed. First, certain administrative data are not part of the social insurance system. We aim to integrate some of these. For example, information about the educational level is not readily available for the full population from social insurance data at the moment. By linking this information from other data sources like the AMDC, such additional

⁸⁰ For example, in a test run for the cohort of women who ended their parenting leave phase in 2010, we saw that even 10 years after PLP end, only about 50% of women have exceeded their previous employment intensity, i.e. have exceeded what they earned the year before their first child and parenting leave.

⁸¹ So far, we have not specified more details of the PLP beyond its location on the timeline, i.e. start/end and its duration.

⁸² (due to partly very lax regulations, this has come under criticism recently).

details can be integrated. Second, the administrative data does not contain information about motivations or attitudes. In principle, it is possible to set up an environment for surveys dealing with such aspects, which would allow survey results to be linked to the social insurance data.

8.1.2. Implementing statistical models

The number of variables integrated in the framework is high, and the state-space is highly dimensional. The next step is to implement statistical and econometric models that help to account for interactions, estimate individual and joint effects, reduce the complexity, and ultimately condense information. The findings so far and the descriptive results provide a context that helps to choose and specify models more accurately. For example, the identified post-PLP career types constitute an ordered outcome variable (see chapter 5). Hence, these six types of career paths are a natural starting point for the implementation of an ordered discrete choice model. Another example would be the implementation of a duration analysis for the duration until the first stable employment after PLP; conversely, here women's type of pre-PLP career paths could be used as predictors.

8.2. Further research

One of the advantages of the framework is that it allows to explore many dimensions related to mothers' employment in an integrated way. Based on the descriptive results presented above and the exploration of the data, two main questions for the next research steps arise:

- The first research area is how to interpret the PLP in the context of a woman's career. Is childbirth and PLP a simple interruption of the career or is it a disruption with long-lasting effects?
- The second topic relates to the couple/household aspect. The fertility decision, the labour market integration, the income situation pre- and post-childbirth, and ultimately the family model, i.e. how child-care and employment/earning activities are shared between partners, are closely related and mutually influence each other.

In the following sections, a few details regarding these two further topics are presented, which serve as a starting point for more in-depth future research.

8.2.1. PLP: Interruption vs. Disruption

The results above naturally raise the question of whether the parenting leave phase can be seen as an interruption or as a disruption of women's careers. From a legal perspective, PLP could in principle simply be a temporary interruption of an employer-employee match, as the Austrian Maternity Leave Act ("Mutterschutzgesetz", MSchG) not only grants the right to maternity leave and provides protection from dismissal but also grants the right to be reinstated in the previous job. The data however suggest deviations from this "ideal case":

- Some women immediately return to stable employment after PLP, and they continue their career without a reduction in employment intensity and earnings. For these women, at first glance, PLP seems like a simple temporary interruption.
- At the other end of the spectrum, there are women who were stably employed until PLP start but who do not return to stable employment afterwards or even leave employment altogether. For them, the PLP seems to be a notable disruption of their career.
- For women whose last stable job ended some time before their first parenting leave, the question arises as to whether PLP constitutes a disruption, or whether a disruption occurred before, and PLP simply started during this period (i.e., with the fertility decision taken during a time outside of stable employment, e.g. during marginal employment or unemployment).
- For those who entered the labour market shortly before PLP but did not have the chance to secure a stable job in this time and who only enter stable employment after PLP, it seems that an upward trajectory of increasing labour market activity is continued after the parenting leave phase.

Therefore, the question is how to interpret the PLP in the context of a woman's career. To what extent is the PLP a simple temporary interruption, to what extent does it constitute a disruption? What are the determinants thereof? And what are the middle to long-term career consequences? As a first approach, let us define (i) an interruption of the career as the continuation of an employment relationship with the same firm as before PLP, and a disruption as either (ii) a change of employer, (iii) a change of the sector of economic activity or (iv) dropping out of the labour force altogether.⁸³ Focusing on women who directly enter PLP from stable employment,⁸⁴ the following Table 37 shows the shares of women in each of these four cases, differentiated by their post-PLP career paths.

Of all women who enter PLP directly from stable employment, 54% continue working with the same employer in their first job after PLP. 15% change employer within the same sector, 28% change the sector, and 4% drop out of employment (they do not return to work within our post-PLP observation period). Hence,

⁸³ In this case, the last employment pre-PLP vs. the first employment post-PLP are compared.

⁸⁴ For these women, the question whether PLP constitutes an interruption or disruption is more clear-cut, as we do not have to ask ourselves whether the ending of the last stable employment well before PLP constitutes the disruption.

if we define returning to the same employer as an interruption, we see that 54% of women experience an interruption and that for 46%, the PLP constitutes some form of career disruption.

Table 37: Interruption vs. disruption (pre-PLP career type “1-stable-direct”)

Pre-type “1-stable-direct”		Same employer	Different employer	Sector change	No employment	Total
Post-type	1-direct-stable	69%	13%	19%	0%	100%
	2-gap-stable	60%	15%	25%	0%	100%
	3-gradual-stable	47%	18%	35%	0%	100%
	4-fragmented-stable	30%	20%	50%	0%	100%
	5-no-stable	24%	18%	58%	0%	100%
	6-no-employment	0%	0%	0%	100%	100%
Total “1-stable-direct”		54%	15%	28%	4%	100%

Last employment pre-PLP vs. first employment post-PLP.

Only women with a direct transition into the PLP from stable employment (pre-PLP career type 1-stable-direct). N = 191,925.

Differentiating between women's post-PLP career paths, we can also see that different return patterns are associated with different rates of interruption and disruption:

- Women who return directly to stable employment after PLP (“1-direct-stable”) or who transition to stable employment after a gap (“2-gap stable”) have the largest share of women continuing with the same employer (69% and 60% respectively). Only 19%, respectively 25% of women with these post-PLP types of transitions have changed economic sector.
- Less favourable return patterns are associated with higher shares of women who change firm or even sector. Among those who do not return to stable employment, less than a quarter of women return to the same firm. Three quarters experience a disruption: 18% change employer and 58% of these women change the economic sector.

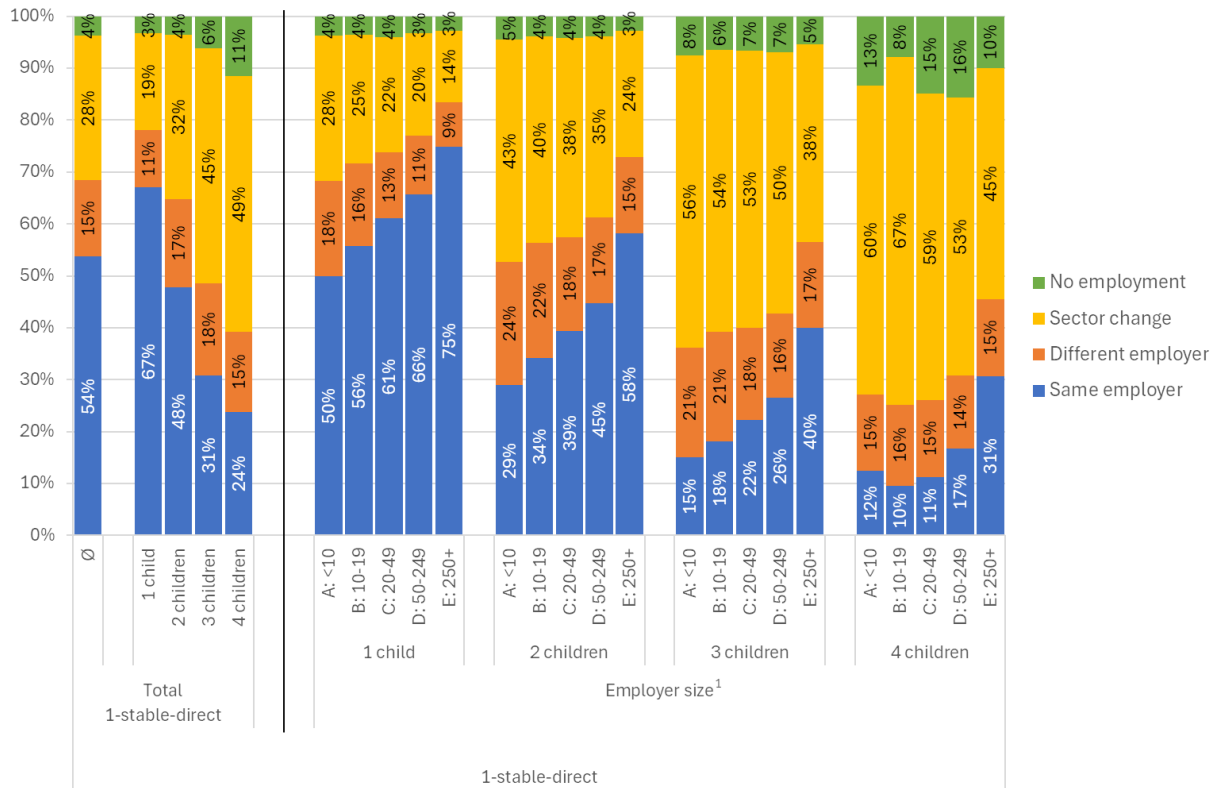
One reason why women do not return to their previous firm is that they could have forgone the legal right to return. For instance, the duration of parental leave entitlement associated with job protection (“Elternkarenz”) is shorter than the maximum childcare allowance model (“Kinderbetreuungsgeld”). If a woman chooses to opt for the longest model (30 months, +6 if partners also take leave), she automatically gives up her legal entitlement to return to the same job. Another reason for women not continuing their career at their old firm is that they might have deliberately chosen to look for another (type of) job which is more compatible with the exigencies of childrearing. For instance, they could look for a job that offers more family-friendly working conditions.

The role of the firm for an interruption/disruption of the career

In previous studies, the role of family-friendliness in occupations for both the gender gap and the part-time penalty has been highlighted (e.g., Goldin 2014; Goldin and Katz 2016, using US data). As noted in chapter 7, characteristics of the employer, such as the economic sector or the employer size are associated with more, or with less favourable career paths. As larger employers may be more likely to offer family-friendly arrangements (as e.g., Bächmann, Frodermann, and Müller 2020 find for Germany), Figure 31 below shows

the shares of women with an interruption/disruption, differentiated by the size of the last employer before PLP and the number of children (for pre-type “1-stable-direct”).

Figure 31: Interruption vs. disruption by number of children & employer size (pre-PLP career type “1-stable-direct”)



Last employment pre-PLP vs. first employment post-PLP. Employer size of last employment pre-PLP (number of employees).

Only women with a direct transition into the PLP from stable employment (pre-PLP career type 1-stable-direct). N = 191,925.

¹ Employer size: excl. self-employment. N = 181,421.

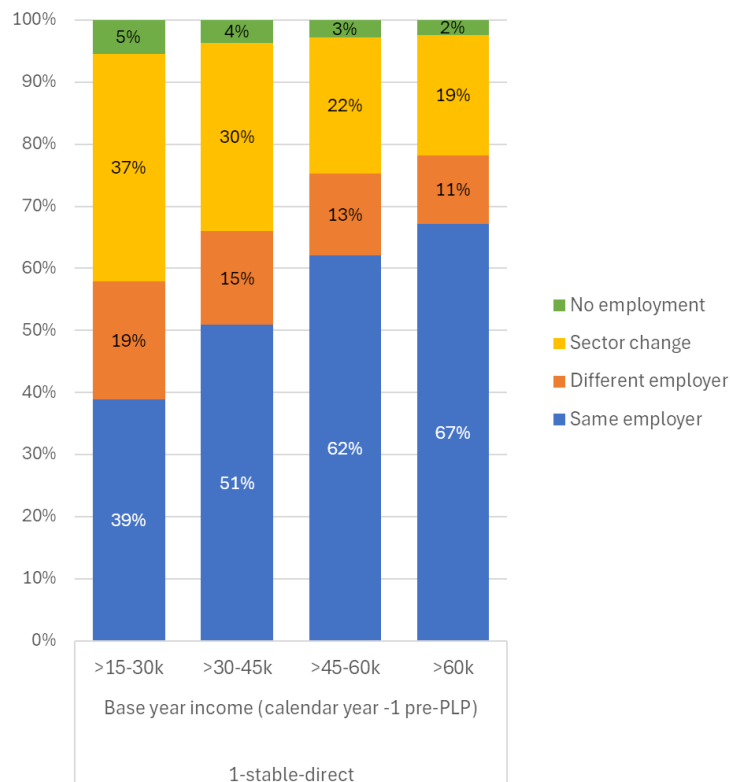
We can see the following central tendencies: First, the share of women for whom PLP represents an interruption (i.e., that continue at the same firm after PLP) drops with the number of children, while the share of women with a disruption increases. Two thirds of women with one child and almost half of women with two children continue with the old employer. At the other end of the spectrum, women with four children have the highest shares of employment dropouts (11%) and sector changes (49%). The more children women have (i.e., the longer their PLP), the more likely it is that the legal entitlement to be reinstated in the previous job before PLP has expired. Also, more children mean an increased load of care work and so a change into a job that is more compatible might be necessary.

Second, the size of the firm/employer where women were (in this case, before their first parenting leave) also plays a role. The larger the employer before PLP, the higher the share of women who return. Larger firms may retain employees more easily, they can better accommodate part-time work, they might even offer childcare facilities (e.g. “Betriebskindergarten”). Also, larger firms may find it easier to fill vacancies due to women (and men) who are on parental leave internally (see also the discussion of firm size in chapter 7). The fact that even among women with four children – who are most likely to lose the legal right to return to their previous job from before PLP – 31% in large firms return to the same employer, suggests

that it may also serve the employer's interests to continue the employer-employee match, as it allows the firm to preserve its value (i.e., skills/firm-specific human capital).

The following Figure 32 shows that the shares of women continuing their career after PLP at the same employer are higher for women with high previous earnings, which supports a human capital value argument. Among those with a previous gross income above 60,000€ for instance, PLP constitutes an interruption for two thirds of women, and only 19% change the economic sector after PLP. For women with lower earnings, a disruptive pattern (change of employer/sector or LM dropout) is more prevalent.

Figure 32: Interruption vs. disruption by base year gross income (pre-PLP career type "1-stable-direct")



Last employment pre-PLP vs. first employment post-PLP. k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Only women with a direct transition into the PLP from stable employment (pre-PLP career type 1-stable-direct).

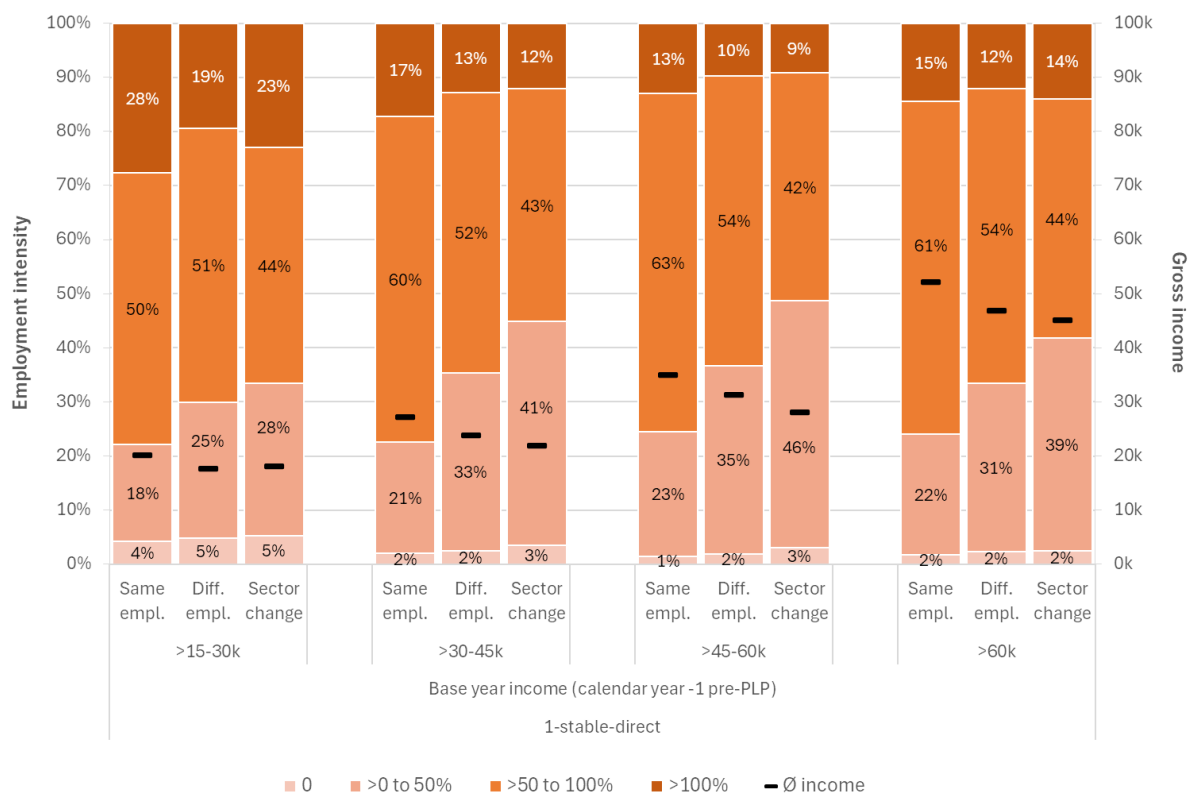
Excl. women with base year gross income <15k and no comparable information (missing/no income in base year, missing/not in system in calendar year 5 post-PLP). N = 188,201.

Long-run effect of an interruption/disruption of the career

To show the different middle to long-term effects of an interruption vs. a disruption, we look at women's earnings situation in the 5th year after PLP, compared to the year before their first parenting leave. For each income category, Figure 33 shows the average gross income (indicated by the black markers) and the share of women with different employment intensities.

For all income groups, we see that women experiencing a disruption (change of employer or sector) have a lower average gross income 5 years post-PLP than those who experiencing an interruption (returning to the same employer). Furthermore, a larger proportion of women with a disruption have an income that only reaches up to 50% of their previous earnings, irrespective of their previous income level. The reason for lower income levels could be due to a reduction of working hours (which nota bene, we also see among women returning to the same firm) and/or due to lower hourly wages that women might have to accept in a different job, e.g. in return for more flexibility.

Figure 33: Employment intensity & annual gross income in calendar year 5 post-PLP by interruption vs. disruption (pre-PLP career type "1-stable-direct")



Last employment pre-PLP vs. first employment post-PLP. k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Only women with a direct transition into the PLP from stable employment (pre-PLP career type 1-stable-direct).

Excl. women with base year gross income <15k and no comparable information (missing/no income in base year, missing/not in system in calendar year 5 post-PLP). N = 169,469.

A common argument in the literature is that women's earnings plummet after having children because they are not only compelled to reduce their working hours but also because many shift to jobs with other employers or in other economic sectors, which offer more flexible or family-friendly working conditions. These new roles might not match their qualifications, and the loss of firm-specific human capital or

seniority in the economic sector reduces their bargaining power, resulting in lower wages (Lutz 2003; Blau and Kahn 2003; Gangl and Ziefle 2009; Waldfogel 1998; Budig and England 2001).

As we saw above, it is true that women who do not continue with their previous employer after their PLP or who change economic sector generally have lower average earnings and relative employment intensities than those who do. However, even among women for whom the PLP constitutes a simple interruption and who continue with the same employer right after PLP, the large majority do not exceed their previous employment intensity/their previous earnings, even by the 5th year after their parenting leave phase has ended.⁸⁵ Furthermore, it is questionable whether such a large proportion of women would be willing to accept lower wages than before having children for the same or a similar number of working hours, and to do so for extended periods of time.⁸⁶

For example, women who earn 50% or less of their previous income 5 years after their last parenting leave – whether with the same employer or in a different sector – cannot be assumed to accept *such* a significant reduction in their hourly wages in return for e.g., more flexibility. This strongly suggests that lower incomes after parenting leave are more likely to be predominantly caused by a reduction in working hours rather than mainly a decrease in bargaining power caused by changes in employers or economic sectors.

⁸⁵ As noted above, if women return to work within the job protection period, employers are prohibited by law to offer mothers lesser roles or lower pay for the same working hours.

⁸⁶ The share of women who have an employment intensity of exactly 100% compared to the calendar year before PLP start is very small and mostly occurs in the >60,000€ gross income category (see Table 56 in the Appendix).

8.2.2. Couple decisions and women's post-PLP careers

A second area of further research involves integrating more detailed aspects related to women's partners into my analysis and into the future implementation of statistical models. Fertility decisions, the choice of childcare allowance model (including whether partners also take up parenting leave), the extent to which care work is shared, and ultimately the decisions whether and to what extent partners participate in the labour market after having children are all interdependent and hence, to a large degree couple decisions/possibilities. Jointly, these could be viewed as a decision on a “family model”. In this context, (i) attitudes and cultural norms, the availability of (ii) adequate parenting leave models, (iii) part-time work models and (iv) childcare services will play a role, and ultimately, (v) financial resources and the necessity to provide a sufficient family income.⁸⁷

There are contradictory findings concerning the effect that partners' resources have on women's labour market participation in general. While some studies find a negative effect, some find a positive effect, and others report no effect at all (e.g., Brynin and Schupp 2000; Konietzka and Kreyenfeld 2010; Bernasco, de Graaf, and Ultee 2024; Verbakel 2010; Verbakel and de Graaf 2009; quoted in Berghammer 2014). On the other hand, some studies find effects only when children are present (Verbakel 2010; quoted in Berghammer 2014), something that supports the importance of considering partner effects in this research project. For example, due to the so-called “income effect”, when partners' earnings are high, women might engage less in labour market work during this time, since an additional income might not be absolutely necessary for the household. If the partner's income is low, there might be a higher economic need for women to work, in order to supplement household income (Goldin 2006; Berghammer 2014; Pettit and Hook 2005).

The social insurance data allow us to integrate partners and detailed information about their labour market activity and earnings into the framework. To illustrate the relevance of including partners and considering the couple's (joint) income, I will quickly present a few results. First, I will look at the labour market return patterns of women differentiated by the income level of their partners. Second, I will analyse the share of partners taking up parenting leave for different couple income levels and compositions. Third, I will present the long-run employment intensity (compared to previous income levels) of women differentiated by their partners' decision to take up parenting leave and the joint couple income composition.

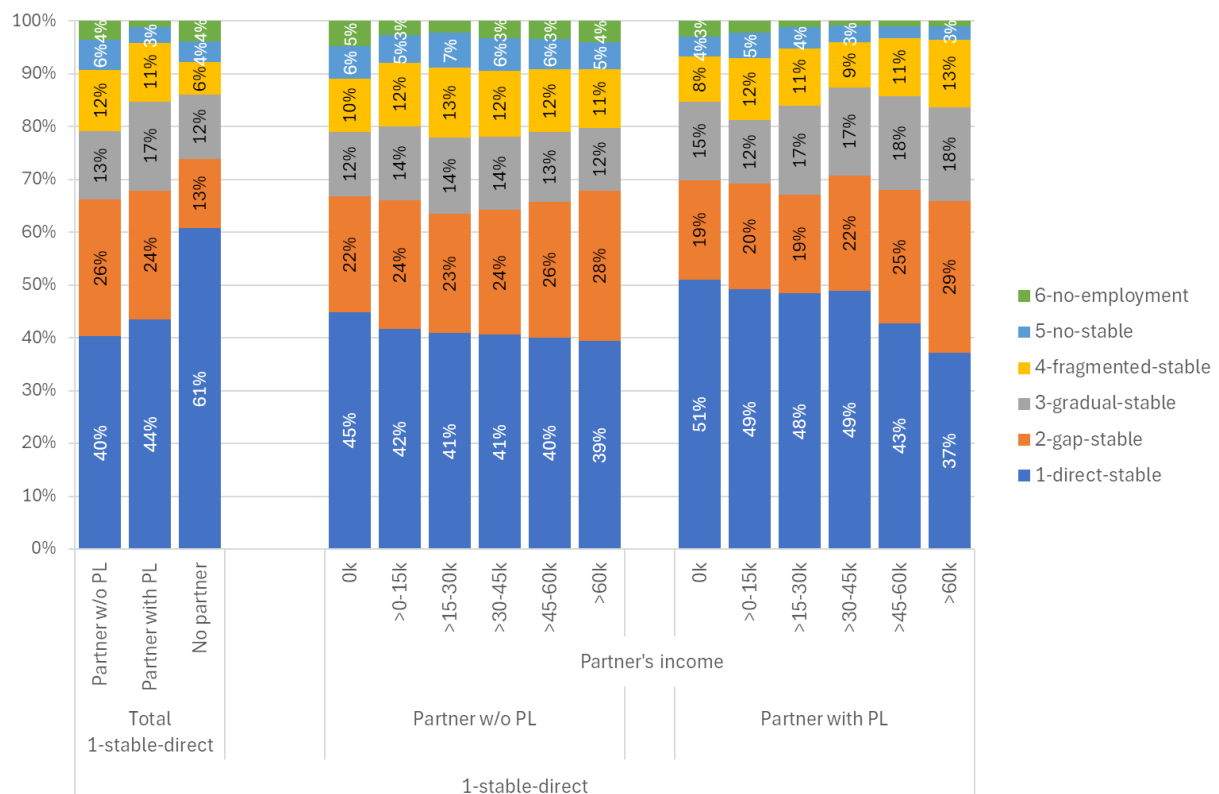
⁸⁷ For instance, see chapter 7.1.2 for the shares of women who did not enter PLP directly from stable employment, where women with 3 children have higher shares of returning directly to stable employment after PLP than women with one child.

Labour market return patterns and partner's income

One aspect of the relationship between couple characteristics and mothers' labour market activity are their transition paths into the labour market after their parenting leave phase. The following graph – once again focusing on women with a direct transition into PLP from stable employment – shows the proportions of women with different post-PLP career paths, differentiated by their partner's gross income⁸⁸ and whether the partner also takes up some form of parenting leave (Figure 34, Austrian women aged 30-34 at PLP start). As we have seen in chapter 7, the types of women's transition patterns out of PLP depend on the presence of a partner and whether partners also go on parenting leave. Women without a partner (who could be identified) have a larger share of direct returns to stable employment (61%) than women with a partner do (40-44%). If we further differentiate by the partner's earnings, we see a clear trend:

- The share of women with a direct re-entry into a stable job decreases with an increase in their partner's income, and the share of women who (can afford) a gap between PLP and their first, stable job increases.⁸⁹
- For each partner income category, the proportion of women with a direct return to stable employment is slightly higher if their partners go on parenting leave.

Figure 34: Post-PLP career type by partner's income & their PL take-up (pre-PLP career type "1-stable-direct"), only Austrian women, aged 30-34 at PLP start



Only Austrian women, aged 30-34 at PLP start, pre-type 1-stable-direct. Excl. women with multiple linked partners. N = 57,545.
Partner's income: base year (calendar year -1 pre-PLP). k: 1,000€. Adjusted for inflation and scaled to 2022 values.

⁸⁸ For comparability, both partners' gross annual employment income in the calendar year before women's PLP start (-1 pre-PLP) is considered. However, data for any desired year can be extracted.

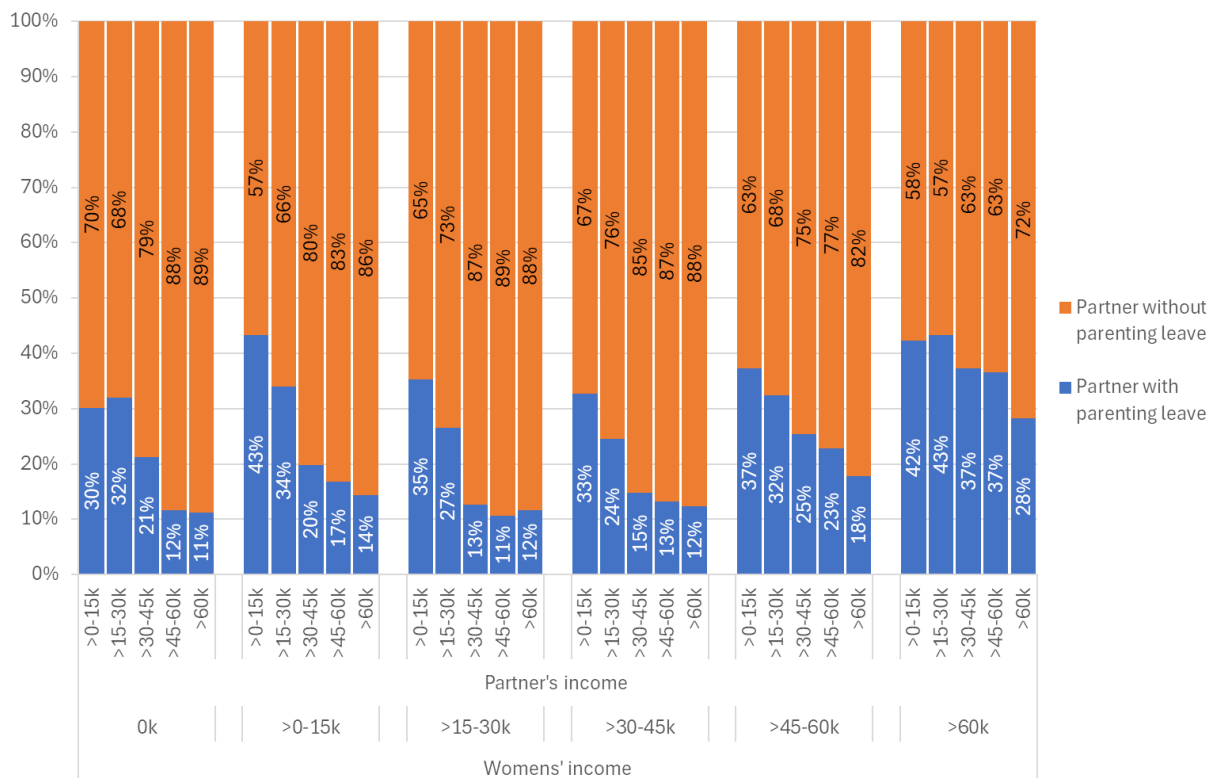
⁸⁹ And as we have seen above, for a majority of women who return to stable employment post-PLP after a gap, this job is more or less "aligned", as they return to the same employer from before (see previous section).

Different partner PL take-up rates for different couple income compositions

Having identified partners' earnings in the data, we can differentiate couples by both partners' income.⁹⁰ The following figure displays the parenting leave take-up rates of women's partners, differentiated by their respective income categories (here as well, any form of parenting leave is considered, and to control for demographic differences, only Austrian women aged 30-34 at PLP start are selected).

Figure 35 shows that (i) the higher women's previous (and presumably, potential) earnings, the more likely it is that their partners also take parenting leave; additionally, (ii) the higher partners' earnings, the less likely it is they go on parenting leave. We can see this across all levels of women's earnings. Interestingly, when women earn more than their partners, there is a considerable jump in partners' take-up of parenting leave. For example, take women in the 30,000€ to 45,000€ income bracket (which is the most common): their partners are up to twice as likely to take parenting leave if they earn less than them, compared to when they earn more.⁹¹ Therefore, the choice of the partner taking PL seems to depend considerably on the partners' income levels and the couple's income composition.

Figure 35: Partner's take-up of parenting leave by women's and partners' gross income, only Austrian women, aged 30-34 at PLP start



Only Austrian women with partner, ages 30-34 at PLP start. Excl. women with multiple linked partners.

k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Women's & partners' income: base year (calendar year -1 pre-PLP). Excl. partners with missing or no income. N = 65,054.

⁹⁰ As above, gross annual employment income in the calendar year before women's PLP start.

⁹¹ This contrasts somewhat with the findings of Riesenfelder and Danzer (2023), warranting a closer analysis of this phenomenon.

Long-run effect of partner's PL take-up and couple income composition

To provide a first idea about the relationship between aspects of the family model (partner's take up of parenting leave and the financial situation of the couple) and women's careers we can look at the average income of women in the fifth year after PLP, as well as their employment intensity compared to the time before their first child.

For simplicity, four groups of couple income composition are formed. Women and men are classified based on their pre-PLP gross income (the calendar year before PLP). Earnings up to 45,000€ annually are considered low (and middle), while earnings above 45,000€ are considered high. Crossing low and high female and partner earners yields four different groups of a couple's income composition. Table 38 below shows the share of partners with PL take-up for each of these groups among Austrian women aged 30 to 34 at PLP start.⁹²

Table 38: Partner's take-up of parenting leave by couple income composition, only Austrian women, aged 30-34 at PLP start

		Partner's income		
		Low	High	Total
Women's income	Low	21	13	17
	High	30	24	26
	Total	24	19	21

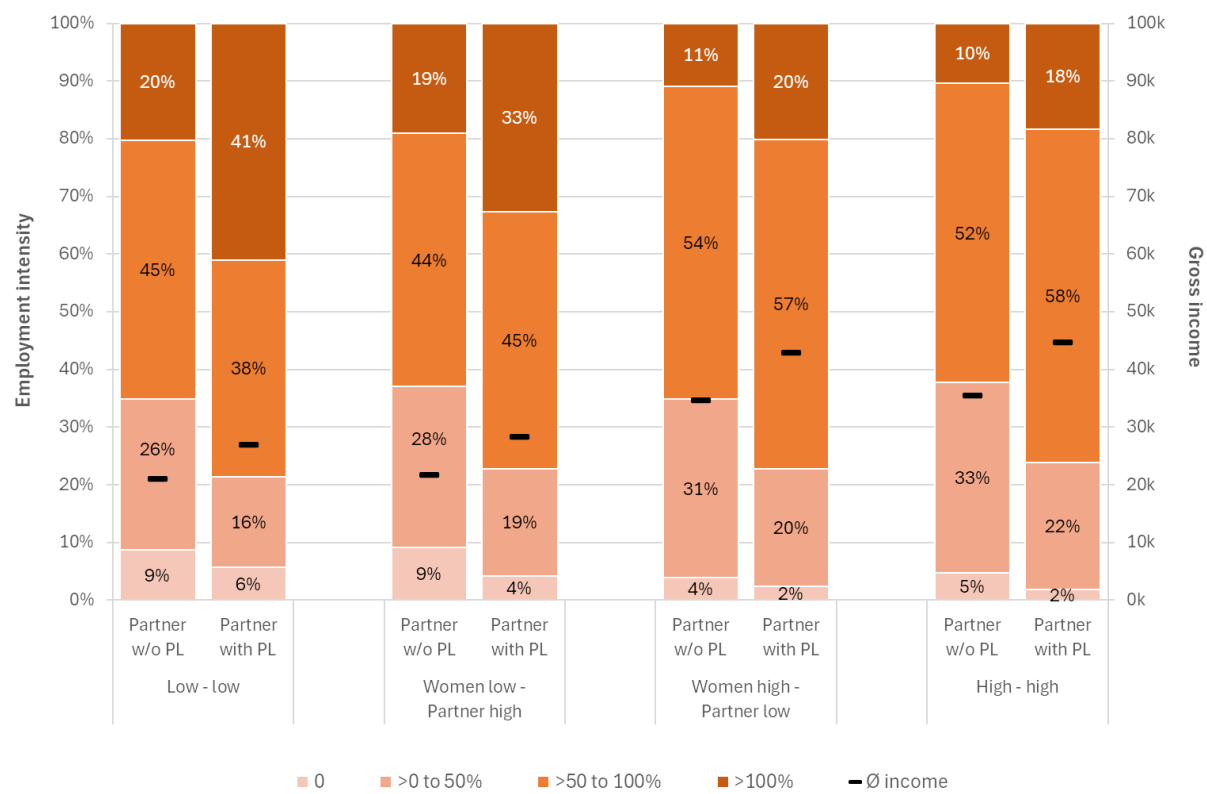
Values in %. Only Austrian women, aged 30-34 at PLP start. Excl. women with multiple linked partners. N = 70,128. Gross income in base year (calendar year -1 pre-PLP). Low: 0-45,000€ . High: >45,000€.

As seen above, the partner's PL take-up depends on the income situation of a couple. In the group of high earning women with low earning partners the share of partners taking parenting leave is considerably higher (30%). In the group with low earning women and high earnings partners it is considerably lower (13%). The following Figure 36 illustrates women's average income in the 5th year after PLP as well as the shares of women with different employment intensities (compared to the year before PLP):

- In all four income composition groups, we see that in the 5th year post-PLP, women's average earnings are higher if their partners also took parenting leave, and the proportion of women whose income exceeds their previous earnings is also higher.
- In contrast, among women whose partners do not take parenting leave, the share of women earning 50% or less of their previous income is considerably higher, even by the 5th year post-PLP.

⁹² For the relative frequencies of each income composition group, see Table 59 in the Appendix. For the more detailed couple income composition for the target population, see Figure 58 in the Appendix.

Figure 36: Employment intensity & average gross income in calendar year 5 post-PLP by partner’s PL take-up & couple income composition, only Austrian women, aged 30-34 at PLP start



Only Austrian women, aged 30-34 at PLP start. Excl. women with no or multiple linked partners.
Excl. women with no/missing income in base year (calendar year -1 pre-PLP) and missing income in 5th calendar year post-PLP. N = 66,121.
Gross income in base year (calendar year -1 pre-PLP). Low: 0-45,000€ . High: >45,000€.
k: 1,000€. Adjusted for inflation and scaled to 2022 values.

9. Summary & Conclusion

The analysis in this thesis focuses on women's labour market activity before and after phases of childbirth and parenting leave. Drawing on a newly created data framework based on administrative records from the Austrian social insurance system, the thesis outlines the main steps of its construction and presents the first application of these data. While existing research on women's labour market careers is vast, it often relies on different data, methods, and perspectives, which makes results difficult to compare or integrate, as disparate data sources cannot usually be harmonised. Moreover, the dynamic aspects of women's employment paths frequently remain unexplored, due to limitations in available data.

The objectives of this thesis and the underlying data framework were therefore to (i) enable a wide range of questions and different phenomena to be addressed in an integrated and consistent way, (ii) compare and confront labour market patterns and relationships between variables with previous research (both national and international), and (iii) enable the discovery of new dynamics and phenomena, facilitating the generation of new hypotheses. For this purpose, the guiding research questions of this thesis address general trends in women's dynamic labour market patterns, the identification of typical career paths, differences across socio-demographic groups, and associations between various factors and women's career paths before and after phases of childbirth and parenting leave.

The data framework

The created repository is based on data from the Austrian social insurance system and was developed for the purpose of analysing women's labour market careers before and after they have children and experience career disruptions due to potentially repeated parenting leave in a consistent, integrated way (Walch, Dorofeenko, and Fage 2024). The Austrian social insurance system is a Bismarck-type social insurance system that insures against the risks of unemployment, sickness, and old age, and is financed through wage/salary social insurance contributions. As social insurance is mandatory, basically everyone living/working in Austria is covered. To determine eligibility and benefit accrual, individuals' labour market/social insurance activity is documented on a daily basis. Additionally, for every person and every firm a unique identifier exists which makes it possible to construct individual social insurance careers. Qualified research institutions such as the Institute of Advanced Studies (IHS) can access this data for scientific research purposes via the AMDB which provides a pseudonymised version of the original data. These are administrative data, originating from administrative processes, and their use for scientific research requires certain preparations:

- In order to analyse women's careers before and after (repeated) childbirth and parenting leave interruptions, a data repository was created that integrates and harmonises data from different subsystems of the social insurance system.

- One of the central aspects is the definition and construction of the **Parenting Leave Phase (PLP)**. This is the time period starting with maternity/parenting leave at the birth of the first child and ending with the expiration of parenting leave/childcare allowance associated with the last child.⁹³
- The PLP partitions a woman's timeline into a pre- and a post-parenting leave period. We select the time span until 5 full calendar years before the first child, and until 5 full calendar years after the last child as observation periods.

In this way, the PLP captures the life phase marked by intense childcare demands and potentially repeated interruptions to employment, while bracketing it between two structurally comparable career stages – the time before the first child (so before responsibilities associated with childcare arise) and the time after the last (when subsequent labour market activity is not interrupted by renewed childbirth or parenting leave). By partitioning women's career timelines in this way, the pre- and post-PLP phases provide structurally similar observation windows that are free from direct fertility-related disruptions. This provides a stable context for examining middle- to long-term career trajectories, once family expansion is complete. In addition, prior research shows that in Austria, mothers' return to the labour force after reduced participation due to childbirth(s) mainly occurs once their youngest child is 3 to 5 years old (Riederer and Berghammer 2020; Steiber and Haas 2010) – making the end of women's last parenting leave a key anchor point for capturing women's enduring reintegration paths into the labour market.

The population of the present analysis are all women registered in the Austrian social insurance system who (i) start their first parenting leave episode in 2002 or later, and (ii) whose last parenting leave episode ends in 2017 at the latest, and (iii) who have no children outside the timeframe 2002-2017, and (iv) who have maximum 4 children. The year 2002 as earliest possible start of PLP was chosen as a new childcare allowance reform ("Kinderbetreuungsgeld") was introduced that year. The year 2017 as the last possible PLP end year was chosen as it allowed 5 full calendar years of post-PLP observations for the most recent cohort, given the availability of data at the time the framework was first constructed. The total target population of this study consists of 339,355 different women whose labour market activity can be analysed on a daily basis.

⁹³ As a reminder, parenting leave is defined as an umbrella term to refer to all types of paid leave relating to childbirth and early parenting, that are relevant from a social insurance point of view – maternity leave/benefit, childcare allowance, and paternity leave (for women's partners).

General trends before & after women's Parenting Leave Phase

In chapter 4, the overall LM integration of the target population was analysed to establish what are the most basic average patterns of labour market activity in the observation periods of 5 full calendar years before and after PLP. To summarise the labour market integration, in the data framework, the classical labour market states/statuses were extended (employment, unemployment, and Out of Labour Force, OLF):

- For employment, we distinguish between stable employment (employment that goes beyond the boundaries of a full calendar year) and non-stable employment (either marginal or temporary employment).
- For states Out of the Labour Force, we differentiate between parenting leave, times of co-insurance with the partner, and all other OLF states.
- Additionally, we also capture times when a person of in target population is not present in the system. This allows keeping the population stable over time, while also accounting for migration.

We can observe in which of these disjoint labour market states women are, at any given point in time:

- To illustrate the development of women's labour market integration over time, the shares of women in one of these states at quarterly sampling dates before and after PLP were analysed.
- As the data is available on a daily basis, the total labour market integration in the pre- and post-PLP intervals can be compactly summarised by calculating average values over all calendar days.
- These labour market states are defined in a way that make it possible to directly implement the classical labour market rates: the LFPR, employment rate, and unemployment rate. For employment, we can also calculate the stable employment rate.

Results show that during the pre-PLP period, women gradually enter the system and the labour force. These are mainly young women and migrant women. By the end of the pre-PLP period, the LFPR has increased to 86%. With the start of their PLP, women temporarily drop out of the labour force. After their parenting leave phase, they gradually return. By the end of the post-observation period (5th calendar year after PLP), the LFPR has reached 90%. During the pre-period, not only the share of women in employment increases, but also the share of women in stable employment. However, stable employment peaks 2 years before PLP at 66% and then declines, while non-stable employment increases. Directly before PLP, 57% of women were in stable employment. With the return of women to the labour market after PLP, we observe an increase in stable employment. This share steadily increases from 32% directly after PLP, to 74% at end of the post-PLP observation period, which is above the peak reached in the pre-period.

With the rising labour market participation in the pre-period, gross average annual employment income increases up to the start of PLP. After PLP, the average employment income drops and then increases again as women return to employment. However, annual post-PLP earnings are well below their previous levels.

If we compare women's income levels in the fifth calendar year after PLP, only 25% of all women earn more than they did the year before PLP started.

So, while the market patterns and especially the share of women in stable employment suggest a successful re-integration, women's employment intensity post-PLP (as measured by previous income level) is well below pre-PLP levels – a result that is consistent with the large share of women working part-time after having children. These results are surprisingly stable over cohorts, as neither the qualitative patterns nor the actual levels of different labour market rates differ much.

Types of pre- and post-PLP career paths

The women in the target population differ in many ways. They have different individual characteristics, and they also have individual career trajectories before and after parenting leave. To deal with the heterogeneity of possible labour market outcomes and to reduce this complexity, for the developed data framework women with similar career patterns in the pre- and the post-PLP observation periods were clustered. For the pre-PLP period, career paths were clustered based on properties of the transition from employment into parenting leave; for the post-PLP period, properties of the transition from parenting leave (back) to employment were used. In both cases the point of reference is stable employment. This gives rise to 4 pre- and 6 post-PLP career types.

For the **pre-PLP period**, there are women with:

- 1 - a direct transition from stable employment to PLP (*1-stable-direct*): 57%
- 2 - an indirect transition from stable employment to PLP (*2-stable-indirect*): 23%
- 3 - no stable employment (only non-stable employment) before PLP (*3-no-stable*): 15%
- 4 - no labour market activity before PLP (*4-no-lm-activity*): 6%.

For the **post-PLP period**, there are women with:

- 1 - a direct transition from PLP to stable employment (*1-direct-stable*): 32%
- 2 - a gap of non-employment between PLP and stable employment (*2-gap-stable*): 19%
- 3 - a gradual transition from PLP to stable employment (*3-gradual-stable*): 14%
- 4 - a fragmented transition from PLP to stable employment (*4-fragmented-stable*): 14%
- 5 - no stable employment (only non-stable employment) in the post-PLP period (*5-no-stable*): 12%
- 6 - no employment post-PLP (*6-no-employment*): 8%.

Both the pre-PLP and the post-PLP career types exhibit distinctly different dynamic patterns of labour market activity over the full range of the pre- and post-observation periods, respectively: Women with different career types differ with respect to their overall labour market integration, as well as their income trajectories. For both the pre-PLP and the post-PLP career types, the level of labour market integration decreases in their ordinal number. The career types as outcome variables are therefore ordered.

To illustrate this point: women of pre-PLP career type “1- stable-direct” have an average stable employment rate of 88% in the pre-period, while those of pre-type “2-stable-indirect” have a lower stable employment

rate of only 53% in the pre-period. Women who directly return to stable employment after PLP – post-PLP type “*1-direct-stable*” have a stable employment rate of 95% in the post-PLP period. In contrast, women who have e.g., a fragmented transition to stable employment after PLP – post-PLP type “*4-fragmented-stable*” exhibit a stable employment rate of only 54% in the post-observation period. Also, we observe that the better women's career type before their parenting leave phase (and the higher the associated labour market integration), the better also their post-PLP labour market integration, and vice versa.

Career profiles

If we describe women's careers in terms of the prevalence of stable employment in the pre- and post-PLP observation periods respectively, we see that:

- A total of 68% of all women had stable employment both before and after PLP.
- Around 12% of women had only non-stable jobs or no employment at all before PLP, but then eventually enter stable employment post-PLP.
- 11% were in stable employment before PLP but then have no stable employment or no employment at all post-PLP.
- 9% of all women were neither before nor after PLP in stable employment.

To refine this career description, we can use the pre- and post-PLP career types as a characterisation of the labour market integration in the respective observation periods. Crossing the 4 pre- and 6 post-PLP career types yields 24 different career profiles, which characterise women's labour market career paths both before *and* after their parenting leave phase. The two most common such “full” career profiles are:

- *1-stable-direct* → *1-direct-stable* – women directly entering PLP from and directly returning to stable employment after PLP (23%), and
- *1-stable-direct* → *2-gap-stable* – women directly entering PLP from stable employment and returning to stable employment after a gap of non-employment⁹⁴ (12%).

If we characterise the career profiles using the different labour market indicators that were used in chapter 4, we see that:

- The 24 career profiles are all different – each profile also is associated with different levels of pre- and post-PLP labour market integration.
- The overall qualitative labour market patterns and the shape of trajectories typical of women's respective pre- and post-PLP career types are preserved in the full career profiles.
- The combination of pre- and post- career types reveals a variation/heterogeneity within the specific pre- or post-PLP career types that women have.

⁹⁴ This gap does not generally last very long. 50% are back in a stable job within 6 months, and another 25% within one year.

Results & discussion in light of previous literature

Combining the 4 different pre-PLP and the 6 different post-PLP career paths resulted in 24 career profiles. These profiles compactly characterise women's labour market career paths before and after the parenting leave phase. In chapter 7, I applied this novel typology to characterise different subgroups of the population. The subgroups were chosen based on socio-demographic characteristics that are known to influence women's labour market outcomes. In this way, previous research was discussed in the context of this new approach. Rather than to address one specific aspect or test a specific hypothesis, the goal of the thesis was to provide a basic context for the integrated analysis of wide range of phenomena regarding women's career trajectories before and after having children. Confronting the main trends in the present data with previous literature we see that:

- First, the main labour market activity patterns of women before and after having children described in the international literature can be shown to exist in Austria as well: potentially repeated childbearing and parenting leave are associated with a reduction in labour market participation. The ensuing childrearing responsibilities are associated with **a long-lasting reduction of employment intensity**, resulting in lower incomes, even by the time the youngest child has roughly reached or exceeded school age.
- Second, the development of a compact summary/**typology of career trajectories** allows confronting: (i) results based on dynamic indicators of career paths with previous empirical research in Austria, and (ii) Austrian results with a wide range of phenomena described in the international literature. As discussed in chapter 7, the findings suggest that associations between women's employment and different factors exist, and that basic mechanisms apply, operating at the individual (micro) level, as well as the meso- and macro-levels.
- Third, the labour market patterns that emerged from this **descriptive and exploratory approach** highlight the value of exploratory data analysis, which makes it possible to discover new phenomena, and thereby generate new hypotheses for more targeted future investigations.

Therefore, while the results support the existence and relevance of various findings from the literature, they also reveal additional patterns and associations. With regard to **age at first parenting leave**/childbirth, results are in line with previous research in Austria (Berghammer 2014; Horvath et al. 2021; Lutz 2003), showing that women who become mothers later tend to have more stable previous employment histories, stronger labour market integration, and quicker, more favourable returns after their parenting leave phase. However, consistent with Fröhlich-Schnatter et al. (2016) who find a non-linear effect of age, favourable post-PLP outcomes first increase with age at PLP start but then decline for older first-time mothers. I find that this decline is driven mainly by older women with less favourable pre-PLP careers, suggesting that the link between age at first childbirth and later labour market outcomes is a mainly a function of women's earlier career trajectories. This supports an opportunity-costs argument (Becker 1991; Berghammer 2014), with higher opportunity costs encouraging earlier re-entry into (stable) employment. This finding is also

consistent with that of Horvath et al. (2021) who found negative impacts of weak labour market integration below the age of 30 on women's (as well as men's) later labour market outcomes in Austria.

Women with 3 or 4 children, as expected, more often have career profiles associated with a lower post-PLP labour market activity than women with one or two children. Furthermore, women with 3 or 4 children also have career paths associated with a lower pre-PLP labour market activity, pointing to phenomena of self-selection and the endogeneity of fertility decisions (as argued by e.g., Goldin 1990; 1994; Steiber and Haas 2012). This corresponds to cross-national findings linking a higher **number of children** with a lower probability of mothers' employment (Pettit and Hook 2005). However, when looking at women of less favourable pre-PLP careers, those with 2 or more children are more likely than 1-child mothers to enter stable employment directly after PLP. This might reflect increased financial household needs for a quicker re-entry with an (additional) stable income, even if opportunity costs of staying at home are lower. But for them, long-term employment intensity (relative to previous earnings) is more reduced, most likely due to an increased care workload. This finding echoes US findings of Kahn, García-Manglano, and Bianchi (2014), who find that long-term wage penalties persist mainly for women with multiple children.

Women differentiated by **nationality** also exhibit different career profiles, with Austrian women having the most favourable types of careers (this reflects previous findings, e.g. Berghammer 2014). While women of various nationalities exhibit different fertility patterns, differences persist even when comparing women of a similar age and number of children. For instance, Austrian and Turkish women differ not only in both their pre- and post-PLP careers, but also in that, even among those with favourable pre-PLP careers, a considerably lower share of Turkish women return to the labour market after PLP. These results point to the role of gender norms, which have been found to correlate with child penalties across countries (Kleven et al. 2019) and their mechanisms of maintenance through socialisation and the family environment (as Kleven, Landais, and Søgaaard 2019 find for Denmark). Furthermore, differences in career profiles between women of EU and ex-Yugoslavian vs. Turkish or other non-EU nationalities point to similar effects of (family) origin country cultures as found in the US by He and Gerber (2020). These are also supported by reported reasons for migration to Austria (that is, work vs. family/partnership) (Wiedenhofer-Galik and Baumgartner 2022).

We also see considerable **regional variabilities**: A comparison between e.g., Burgenland and Vorarlberg (filtering on Austrian women of a certain age group at first parenting leave) shows that even among previously well-integrated women, a lower share return to stable employment – especially directly – after PLP in Vorarlberg. At the same time, the share not returning to a stable job or leaving the labour market altogether is considerably higher there compared to Burgenland. While differences in childcare availability exist between the two regions, Vorarlberg displays the least favourable post-PLP return patterns among federal states, even though childcare provision is not among the lowest in Austria (Wall 2024). Large differences in regional post-PLP patterns despite similarly strong pre-motherhood career paths suggest deeper structural explanations, consistent with literature on the role of regional variation in institutional,

occupational, and industry structure, as well as related cultural norms in shaping female labour market outcomes (as argued by e.g., Thévenon 2013; England and Farkas 2017; Goldin 2006; Margolis 2000; Wyrwich 2019).

Under specific structural conditions, the income effect might predominate: where there are (or might have been, historically) push factors such as costs of living that increase faster than the wages of male breadwinners, women are more likely to contribute a second income due to economic necessity and to maintain a certain living standard (Steiber and Haas 2010; Kreyenfeld, Konietzka, and Böhm 2007; Harris 1981). Since wages and their development depend on the economic sector of employment (and collective bargaining agreements), households might be affected differentially by such factors due to varying industry structures. Men's earnings in Vorarlberg – which are the highest in Austria (Rechnungshof Österreich 2020; 2022; 2024) – might reduce the financial need for mothers to work compared to other regions and maintain certain parenting norms. As Thil, Lawson, and Lefebvre (2023) show in their study on 14 European countries, female labour supply can be considered a key driver of the demand for childcare services. However, in turn, the lack of childcare services and prevailing parenting norms (e.g., compatible with full-time work) can reinforce such employment patterns.

As can the regional industry composition have implications for mothers' labour supply and demand at the macro level, so can sector- and firm-specific working conditions affect return patterns and continuity after parenting leave at the meso- and micro levels. Different economic sectors are subject to distinct legal regulations (e.g., public vs. private sectors) and display divergent employment patterns. While some sectors can typically provide long-term career stability, others may be characterised by discontinuity and volatility. The gendered structure of occupations (in Austria and cross-nationally), further amplifies these dynamics, as women tend to be concentrated in sectors offering family-compatible, but often lower-paid jobs (Lutz 2003; Blau and Kahn 2003). When women either self-select such sectors and occupations, or transition into them after becoming mothers, the resulting opportunity costs can reduce incentives for rapid re-entry and constrain long-term earnings prospects. The importance of family-friendly working conditions for the successful return to the labour market after parenting leave, as well as opportunity-cost considerations, are corroborated by present findings regarding women's sector of employment and the characteristics of their last employer (before having children).

Concerning the **sector of employment**, the results show that career patterns of women who last worked in tourism before their first child (a sector known for working conditions that are less family-friendly due to seasonal fluctuations and irregular hours) strongly differ from those working in, for example, the financial or manufacturing sector. Women in tourism display more precarious career profiles overall, and even those who were in stable jobs previously are more likely to follow gradual or fragmented paths back into stable employment post-PLP, suggesting that women in some sectors may experience higher rates of re-orientations after having children. Present results are compatible with explanations along human capital and opportunity-cost rationales (e.g., Becker 1991; Berghammer 2014): Different educational levels and opportunity costs – both financial and intrinsic – in lower-wage sectors such as tourism compared to

higher-wage sectors like finance may contribute to divergent levels of labour market integration and re-entry paths after having children.

Comparing women's career profiles differentiated by the **size of their last employer** shows a clear relationship: the bigger the firm, the better women's careers as reflected by higher shares of women with more favourable career profiles. Larger firms are more likely to have the financial and organisational means to deal with women's career interruptions more effectively than smaller firms, and they may also offer more flexible, family-friendly working arrangements (or even firm childcare services) after PLP. The results support previous findings on the role of specific company family-friendly measures for job continuity after childbirth in Germany (Bächmann and Frodermann 2020; Bächmann, Frodermann, and Müller 2020). They also align with US evidence that women face lower career penalties for job interruptions in occupations and firms with more flexibility and where workers are more easily substitutable (i.e., with low transaction costs for transferring information) (Goldin 2014).

Sector- and firm-specific return paths reinforce the idea that job characteristics and reintegration opportunities drive women's re-entry outcomes after parenting leave. The results are partly compatible with a common argument from the literature, namely that women's earnings plummet after having children because many switch to jobs more compatible with childrearing but with lower remuneration due to reduced bargaining power or a qualification mismatch (Lutz 2003; Blau and Kahn 2003; Gangl and Ziefle 2009; Waldfogel 1998; Budig and England 2001). Indeed, re-entry career paths suggest post-parenting leave reorientations, presumably due to low compatibility with raising children, which might indeed entail sector-/firm-specific human capital loss and impact seniority accrual. Average employment income is also slightly lower for women who change their firm or employment sector post-PLP. However, reorientations after PLP tend to be more prevalent in certain sectors and with certain types of employers, and are not necessarily a phenomenon that applies across occupations and firms. In addition, results show that even among women who return to the same employer after their PLP, the large majority do not reach their previous earnings. This strongly suggests that reductions in working hours may play the predominant role in explaining women's earnings drop after parenting leave, rather than decreases in bargaining power or the loss of sector-/firm-specific human capital.

The role of **women's partners** can also be seen in the results. The share of favourable career profiles among women without a partner (who could be identified) differ from those of women with a partner: Women without a partner tend to return to stable employment more quickly, with economic necessity being a plausible explanation. Among women with a linked partner, we see that those whose partners also took some form of parenting leave were more likely to follow better career paths post-PLP than those whose partners did not. Furthermore, the former group were also more likely to exceed their previous earnings, whereas the latter were more likely to earn 50% or less of their previous income by the 5th year post-PLP. This is consistent with findings from Vienna Chamber of Labour's re-entry monitoring (Riesenfelder and Danzer 2021), which found that sharing parenting leave is associated with more successful labour market outcomes. In addition, there is evidence on the tendency to relegate care responsibilities to women being

related to men's higher incomes, lending support to exchange theory arguments (Berghammer and Verwiebe 2015; Bittman et al. 2003) and to viewing women's and partners decisions as being interrelated (Mincer 1962; Steiber and Haas 2010). For example, evidence shows that higher partner earnings are related to a reduction in the share of women with a direct re-entry into a stable job, and conversely, an increase in the share who (can afford) and additional gap after their PLP before (re-)entering stable employment. Moreover, while higher-earning partners are less likely to take parenting leave, women's higher earnings are associated with an increase in their partners doing so. Notably, when women outearn their partners, men's parenting leave take-up rises sharply.

All in all, the analysis in this thesis (as well as the creation of the data repository) was not based on the explicit choice of a single theoretical concept or to test one hypothesis. Rather, it represents the attempt to establish a context in which many strands of the literature and a variety of different theoretical rationales can be addressed and tested. Nevertheless, the choice of included variables and the constructed indicators are informed by different findings from the literature and imply certain underlying theoretical concepts. Furthermore, the results of the analysis support certain micro-economic rationales, as well as meso- and macro-level dynamics. They highlight the need to account for individual-level effects such as opportunity costs, couple-level dynamics like the income effect, as well as human, social, and cultural capital rationales—while situating these within underlying institutional and structural conditions. This means considering both supply- and demand-side explanations, i.e. integrating both push- and pull factors in the analysis of women's career paths before *and* after they have children and go on parenting leave.

Next steps, further research, limitations

The applications of the data framework, that is, the indicators developed, the pre- and post-PLP career types and the overall career profiles, lead to first results and the establishing of basic patterns and magnitudes in the population. These results are the basis for logical next steps in terms of data work, methods, and further areas of research. The immediate next steps at the data level are the integration of additional details relating to women's PLP and characteristics of their partners' careers. From a methods point of view, the next steps will be the application of statistical and econometric methods. The findings of this thesis provide the motivation and a context that help to choose and specify models more accurately.

In terms of further research areas, I plan to deal with two topics in more detail. The first topic addresses the question of how to interpret PLP in the context of a woman's career, considering whether the PLP represents a simple temporary interruption, or a disruption of the career. It will also explore possible determinants of these different outcomes, as well as long-term career consequences. The second topic will investigate the relationship between the family model (fertility decisions, (shared) parenting leave models chosen), the extent/intensity of women's labour market activity, and both partners' financial resources, which ultimately are all couple decisions.

Focusing on women's careers before their first child and after their last differs from many empirical studies, which usually focus on women's careers after the first childbirth, on particular childbirth cohorts, or in

absence of longitudinal data, at cross-sectional differences in women's employment at a specific point in time (e.g., Riesenfelder and Danzer 2021; 2019; Frühwirth-Schnatter et al. 2016; Berghammer 2014). However, we know from previous studies that mothers' re-entries into employment typically concentrate in the time after their youngest child reaches pre-school- to school age (Pettit and Hook 2009; Steiber and Haas 2010). Anchoring the observation window for women's labour market (re-)entry at the end of the parenting leave for the youngest child reflects the institutional framework of Austria's childcare allowance policies and captures mothers' planned timing of return. While this inevitably focuses away from earlier re-entries, the approach ensures that reintegration is observed at a comparable time across women and maximises the likelihood of capturing lasting trajectories rather than short-term adjustments. Furthermore, while intermittent labour market activity during women's parenting leave phase (e.g., in the time between child-births) was not examined here, it is present in the data and will be integrated in future research.

Certain limitations currently exist at the data level, but some can be addressed as part of a larger data strategy. The Austrian social insurance data covers relevant activity for every person on a daily basis; however, as it is administrative in nature, and does not contain certain types of information like individual values and norms, for example. Secondly, it is not specifically designed for research purposes, rather it conforms to legal regulations and requirements. As a result, certain types of information are not registered, one of the main drawbacks being the absence of information regarding actual working hours. However, an indication of working hours *reductions* was achieved by using women's employment income in the year before they had their first child as an individual benchmark for evaluating achieved earnings after they have children. This is especially telling if women return to the same firm, or if the reduction in income is very large. This indicator can further be refined by e.g., only considering annual earnings over a certain amount, and comparisons with minimum full-time remuneration as established in sector-specific collective bargaining agreements.

Furthermore, education levels are not registered for the whole population in Austrian social insurance data. However, women's employment income from the year before their first child can serve as a relatively good indicator, as it reflects the most recent level of human capital or productivity in the labour market, without the constraints imposed by childcare responsibilities. For a subset of the population – namely, individuals who were registered with the AMS as unemployed at some point in their careers – education levels are available, which could be used in further analyses for specific research questions.

Concluding remarks

This thesis is the first application of a newly created data framework and repository. This framework developed at the IHS serves as a basis for the analysis of women's labour market careers before and after the phase in their lives associated with childbirth and parenting leave. The framework integrates a considerable array of individual data from the social insurance system, and it can be continually updated and extended. Based on this data framework, I implemented different indicators to establish fundamental magnitudes and capture the phenomenon of women's labour market activity before and after their parenting leave

phase in its totality, as the full target population of all women with max. 4 children between 2002 and 2017 were analysed.

I also presented new indicators and summaries of labour market activity, which allowed the identification of labour market patterns and career paths that had not been described before. For example, including a long period of observation before women's first child and parenting leave allows a more detailed consideration of women's careers before having children in the analysis. This is one of the differences of this approach to other types of analyses, which might mostly concentrate on the return to the labour market after childbirth with minimal information about previous careers. In addition, embedding (repeated) periods of parenting leave in women's full careers, and focusing on the transitions into and out of this phase, allows finding patterns and phenomena that could not be identified before.

The indicators and summaries of labour market activity in this framework and this thesis are set up in a way that allow zooming in on any chosen subgroup or concentrating on special phenomena without losing the context or the bigger picture. The unified data source and the different indicators developed enables a discussion of results from different strands of the literature in an integrated and consistent way. One of the main challenges posed by the women's labour market activity was summarising the data and finding adequate ways of reducing of complexity while keeping relevant information. In terms of future research, the data framework and the results so far serve as a starting point for further exploration. These can not only be used to identify research ideas, generate new hypotheses, but also to quickly establish facts and magnitudes, and check the relevance of supposed phenomena.

Policy recommendations

Besides the usual recommendations regarding the expansion of childcare facilities and finding ways of motivating and enabling both partners to take up parenting leave, and promoting the sharing of care work, the results underscore aspects of the heterogeneity of the target population. This heterogeneity does not seem to be given sufficient consideration in current policymaking but acknowledging it could enable more effectively targeted and tailored policy interventions.

A crucial outcome of the work on developing the data framework and this thesis is that the *type of transition* into and out of parenting leave plays a major role and can predict subsequent (and previous) levels of labour market integration in the long term. Certain types of transition out of parenting leave and the associated subsequent career trajectories are more likely than others to lead to employment stability and higher incomes. Recognising this would allow policy to intervene more strategically at this critical interface, promoting more favourable transitions out of parenting leave. Such interventions could support mothers not only in rejoining the labour force, but in progressing on a successful career path. Targeted measures could be especially effective for specific groups. An example would be the case of highly educated, high-earning women who plan to continue their previously (stable) employment with the same employer after going on parenting leave, yet choose to take a gap of non-employment before returning. These women might be less in need of reorientation support such as educational leave ("Bildungskarenz"). On the other

hand, single mothers or women with fragmented employment histories or lower pre-parenting leave earnings could benefit substantially from such measures, as they offer an opportunity to invest in further education and improve long-term career chances.

After government cuts due to a high budget deficit in 2024, debates about part-time work have resurfaced again, drawing increased political and public attention. They are often framed around lower tax and social insurance contributions, even being moralised as “lifestyle part-time”, i.e. working fewer hours for leisure rather than due to family or care responsibilities (ORF 2025; *Der Standard* 2025a). Yet, as AMS-chairman Johannes Kopf and finance minister (and leading economist) Markus Marterbauer argue, the deeper issues may lie in childcare provision and the unequal division of unpaid work (Kopf 2025; *Der Standard* 2025b).

The variability we see in the data underline the importance of context when designing specific policies. For example, regional differences in women's career patterns after their parenting leave phase point to the role of regional economic and industry structure, as well as regional wage levels (for both women and men) in women's labour supply. A better assessment of such factors could lead to a more targeted regional expansion of childcare services. On the other hand, it is argued that employers profit from the flexibility and reduced overtime payments of part-time workers (Dworak 2025; Silberbauer 2021). However, part-time work might truly be necessary in certain areas, and the same policy may not be suitable for all sectors or firms due to factors such as seasonality or the type of service provided. Therefore, policy could consider the role that the economic sector of employment – or, for example, the size of the firm – plays in women's return patterns after childbirth and part-time work. Taking into account the different labour market patterns and career paths characteristic of a sector or type of firm could help to target active labour market policies more effectively.

While sociologists argue for a general reduction in the full-time working hours norm in order to distribute the costs of unpaid work collectively – instead of trying to solve this through individual “sacrifice” mostly taken upon by women – business and industry complain about the so-called “labour shortage” (Leitner and Wroblewski 2025; Flecker 2025; Dornmayr and Riepl 2024). What is missing from the debate, however, is reliable (and accessible) data on working hours – public figures like the chairpersons of the Public Employment Service Austria (AMS), as well as economists at the Austrian Institute of Economic Research (WIFO) – emphasise the value of recording data such as working hours in administrative statistics and of making such administrative and statistical data available for scientific purposes (Kopf 2025; Oberhofer, Schwarz, and Strassnig 2019). While earnings prior to childbirth could be used as a benchmark for the analysis of mothers’ subsequent earnings trajectories, an integration of exact working hours of all employees in the AMDB would be of immense value, providing the basis for more reliable analyses and targeted, evidence-based policy measures.

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Appendix

Chapter 4

Table 39: Missing values: Gross annual income & employment intensity

N				Share in target population		
Gross annual income						
Calendar year pre- and post-PLP	NIS	Income missing	Total	NIS	Income missing	Total
-5	66,460	11,237	77,697	20%	3%	23%
-4	54,176	10,701	64,877	16%	3%	19%
-3	43,425	9,948	53,373	13%	3%	16%
-2	33,191	9,495	42,686	10%	3%	13%
-1	24,260	9,431	33,691	7%	3%	10%
1	11,448	21,375	32,823	3%	6%	10%
2	11,450	16,601	28,051	3%	5%	8%
3	12,781	13,793	26,574	4%	4%	8%
4	15,648	11,883	27,531	5%	4%	8%
5	16,529	10,166	26,695	5%	3%	8%
Employment intensity						
No income in base year (calendar year -1 pre-PLP):			44,698			13%
NIS, income missing, OR not employed						

NIS: not in the social insurance system.

Income missing: employed but income information is missing (86 to 96% with missing income each year have one of the following employment statuses: marginal employment, public service, self-employment).

A note on the stability of general patterns over time

This thesis deals with cohorts that start in 2002 and leave PLP in 2017 the latest. Therefore, the question of the stability of patterns over time and cohorts also inevitably arises. To illustrate this, the following graphs compare the labour market integration patterns over time and various other indicators of the target population, as well as of the cohort that starts their parenting leave phase (PLP) in 2002 and the cohort whose last parenting leave ends in 2017. The overall patterns do not change much over time, whether we look at the earliest cohort of women (start 2002) or the latest cohort (end 2017). The average shares of women in different labour market states do not change too much, and the dynamic patterns also look similar.

Figure 37: Target population: Quarterly labour market status pre- & post-PLP (cohort comparison)

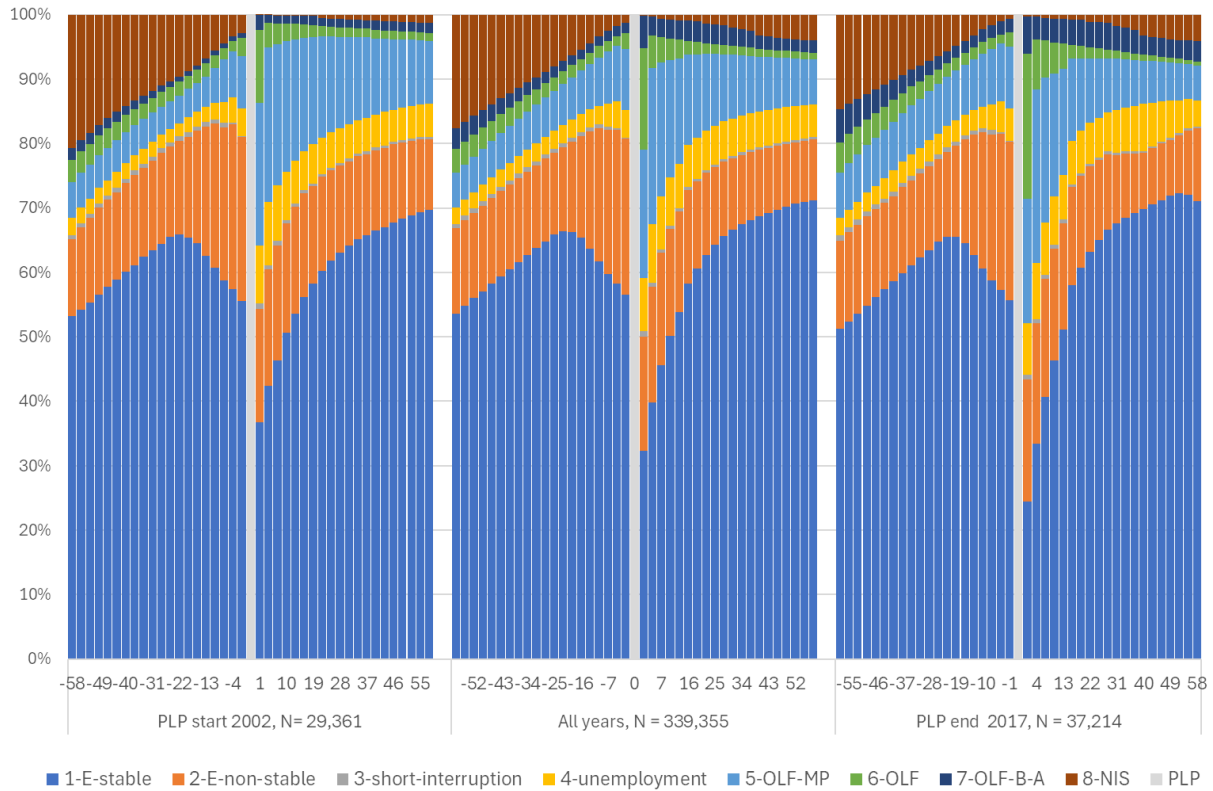


Figure 38: Population present in the system: Quarterly labour market status pre- & post-PLP (cohort comparison)

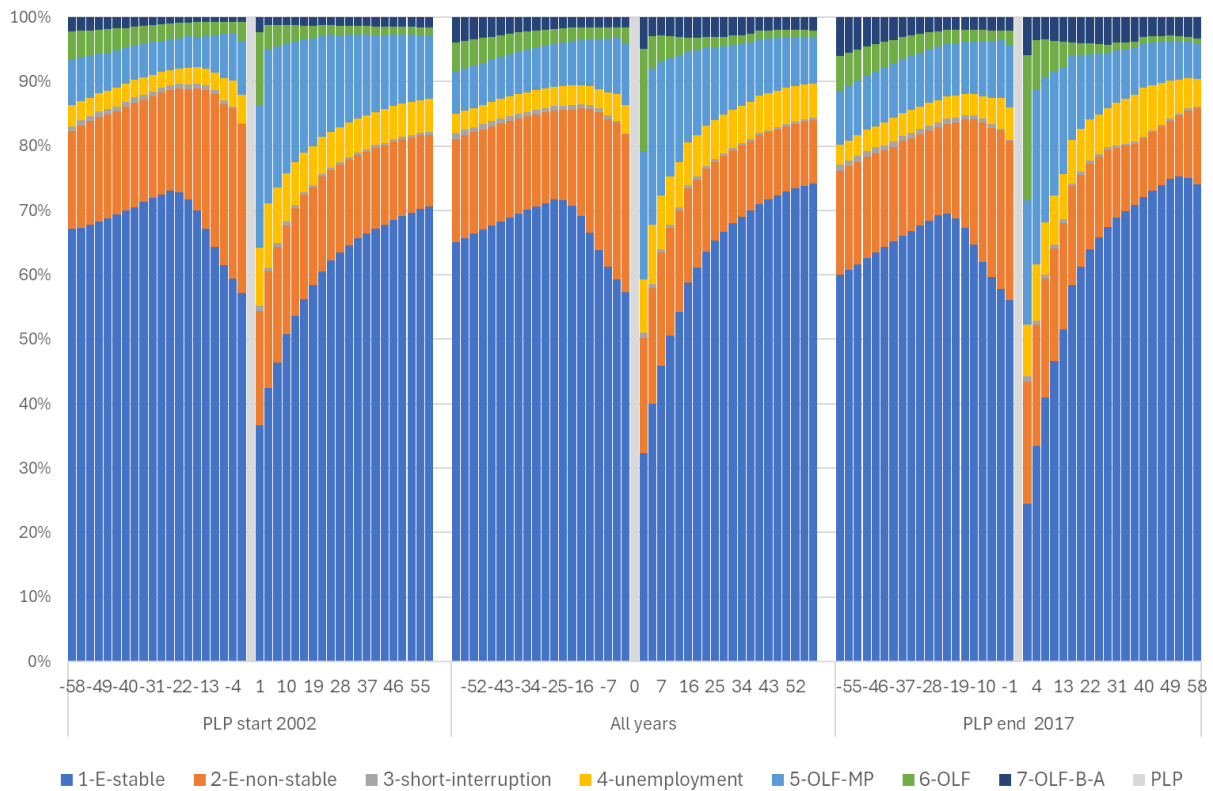


Figure 39: Average labour market integration pre- & post-PLP (cohort comparison)

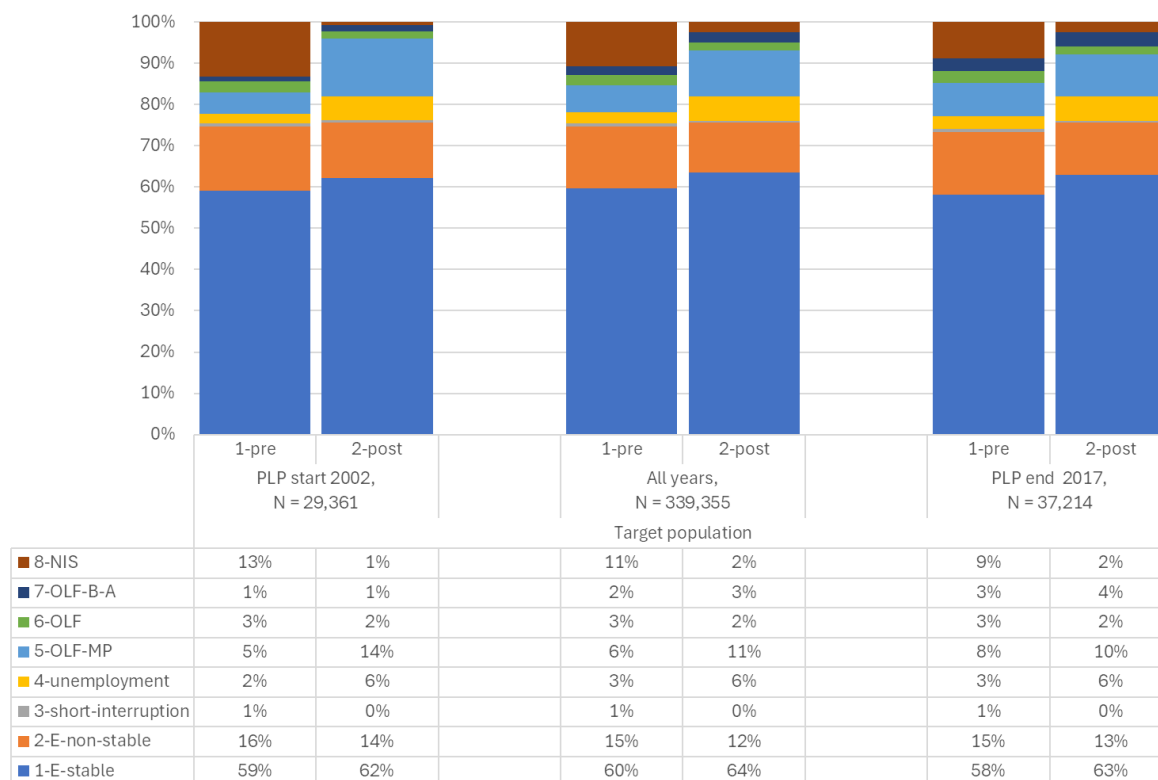
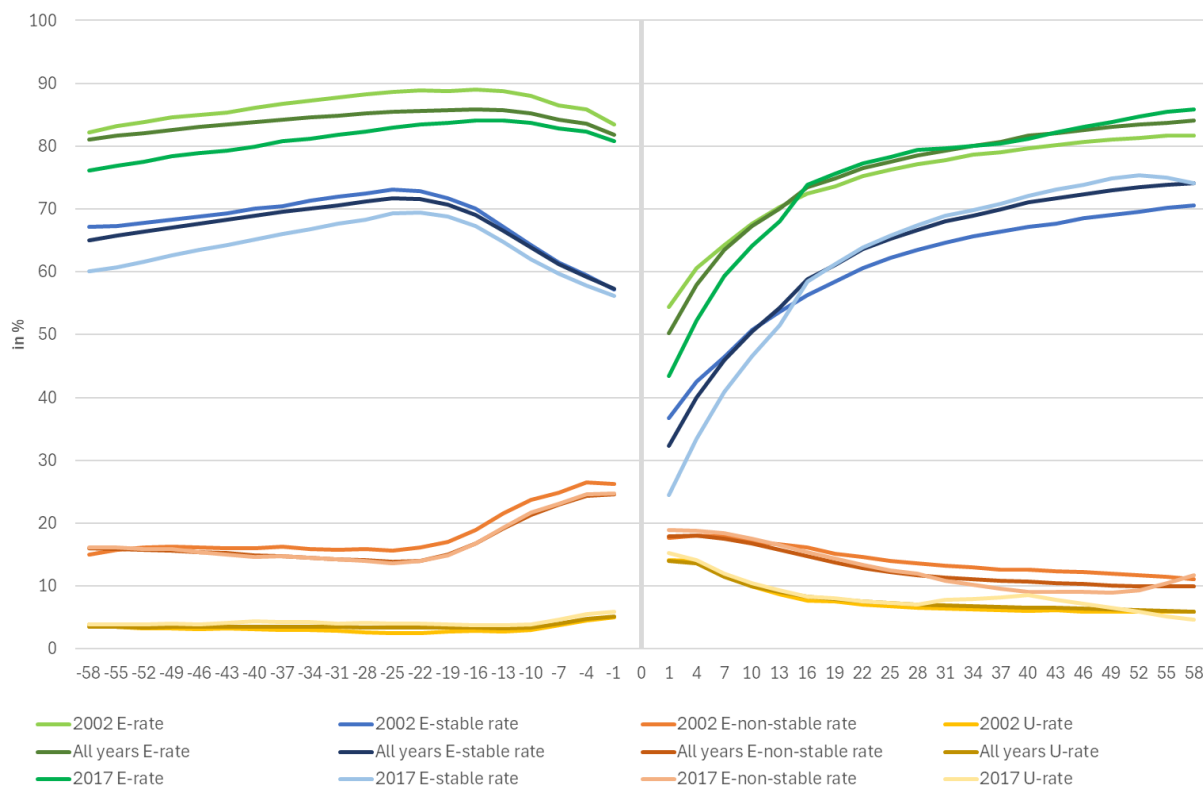


Figure 40: Quarterly labour market rates pre- & post-PLP (cohort comparison)



Values in %. PLP start 2002, PLP end 2017.

Table 40: Average labour market rates pre- & post-PLP (cohort comparison)

	PLP start 2002, N = 29,361		All, N = 339,355		PLP end 2017, N = 37,214	
	1-pre	2-post	1-pre	2-post	1-pre	2-post
LFPR	90	83	87	84	85	84
Employment rate	86	76	84	77	80	77
Stable employment rate	68	63	67	65	64	64
Non-stable employment rate	18	14	17	12	17	13
Unemployment rate	3	7	4	7	4	7
Co-insurance-rate	6	14	7	11	9	10

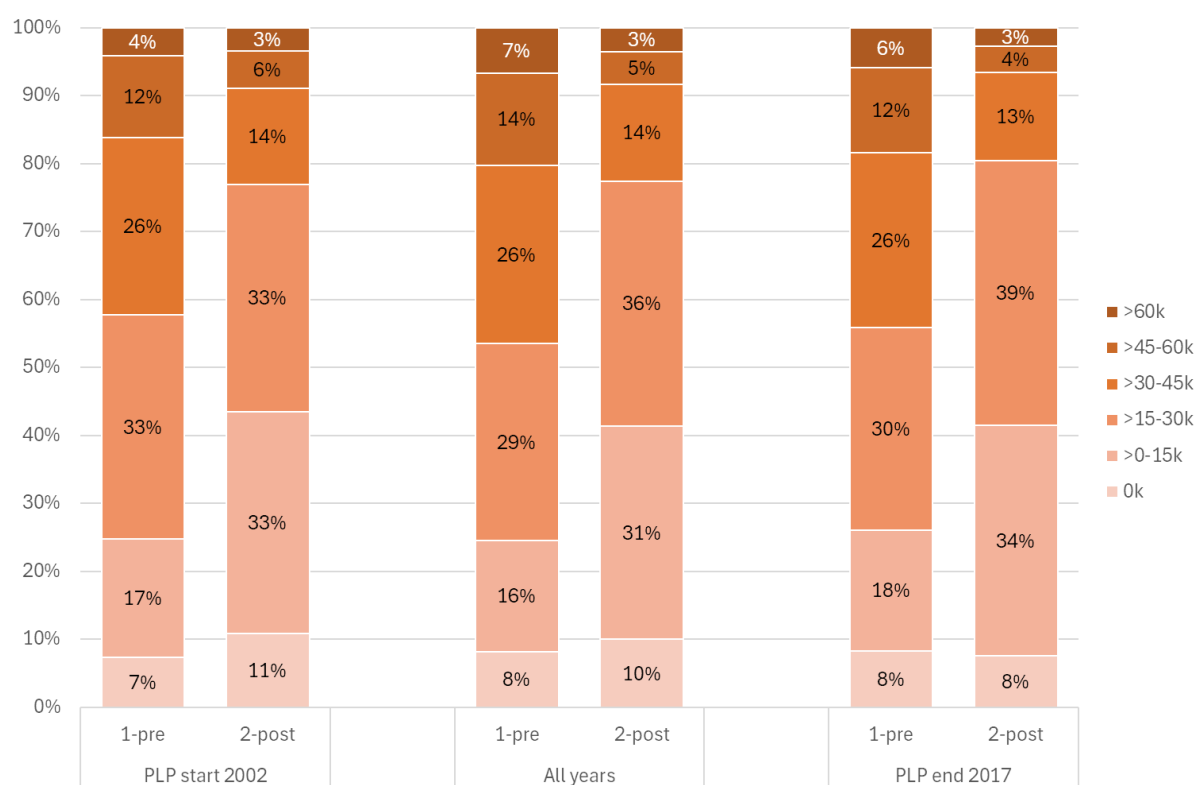
Values in %.

Figure 41: Average gross annual income pre- & post-PLP (cohort comparison)



Values are expressed in and rounded to 1,000€.
Adjusted for inflation and scaled to 2022 values.

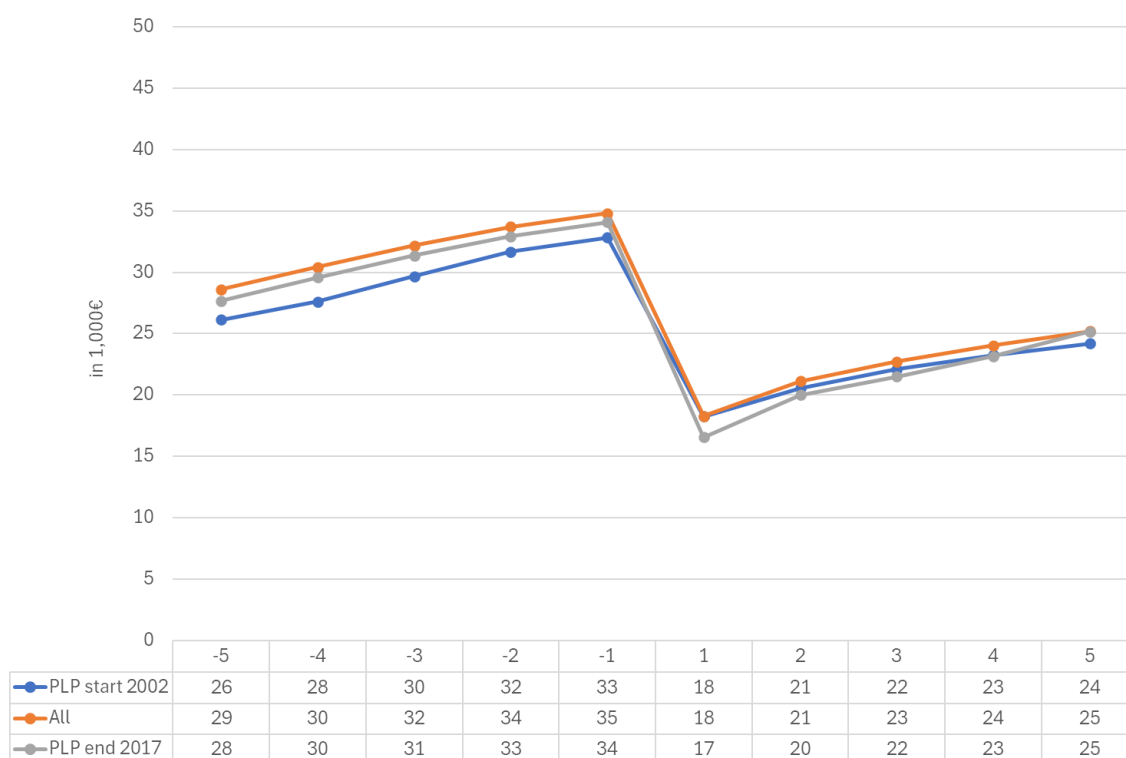
Figure 42: Share of women by average gross annual income categories pre- & post-PLP (cohort comparison)



k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Figure 43: Average gross income per calendar year pre- & post-PLP (cohort comparison)

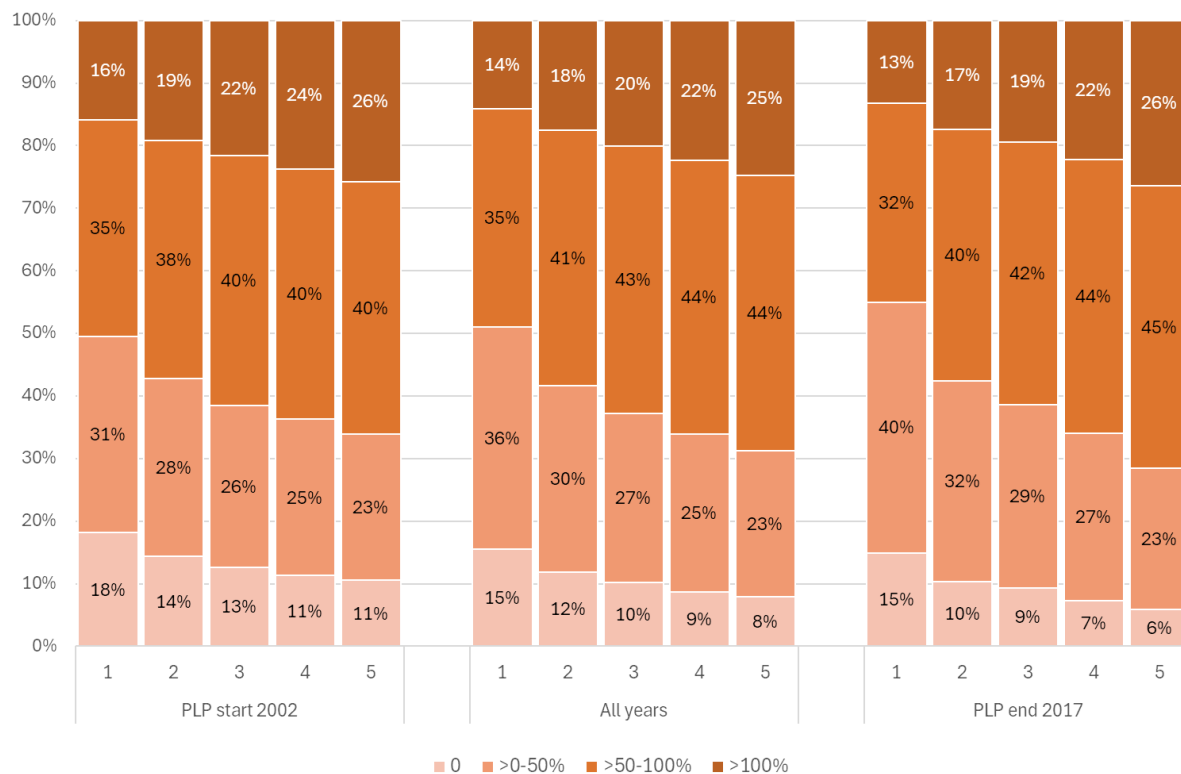


Values are expressed in and rounded to 1,000€. X-axis: calendar years before and after PLP.

Adjusted for inflation and scaled to 2022 values.

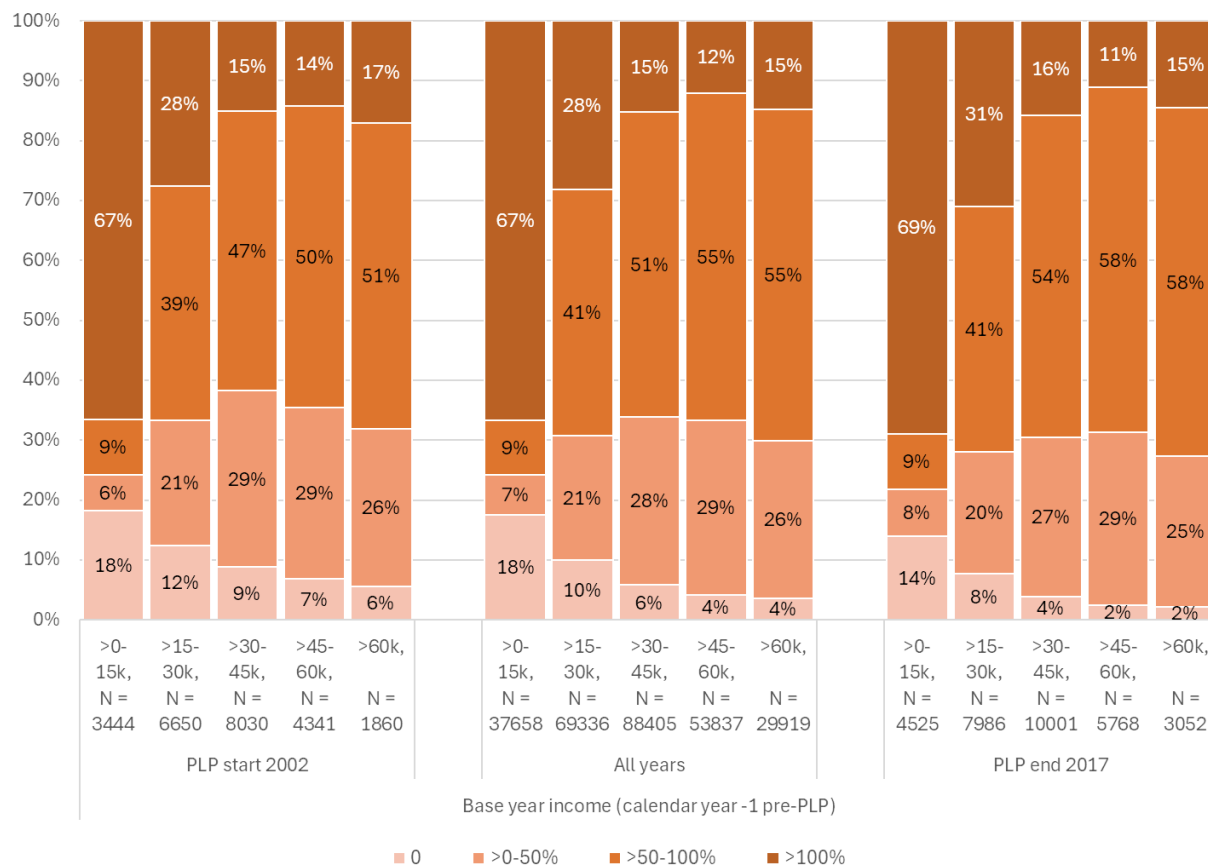
Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Figure 44: Employment intensity each calendar year post-PLP (cohort comparison)



X-axis: calendar years before and after PLP. Including those not employed, but excluding those with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

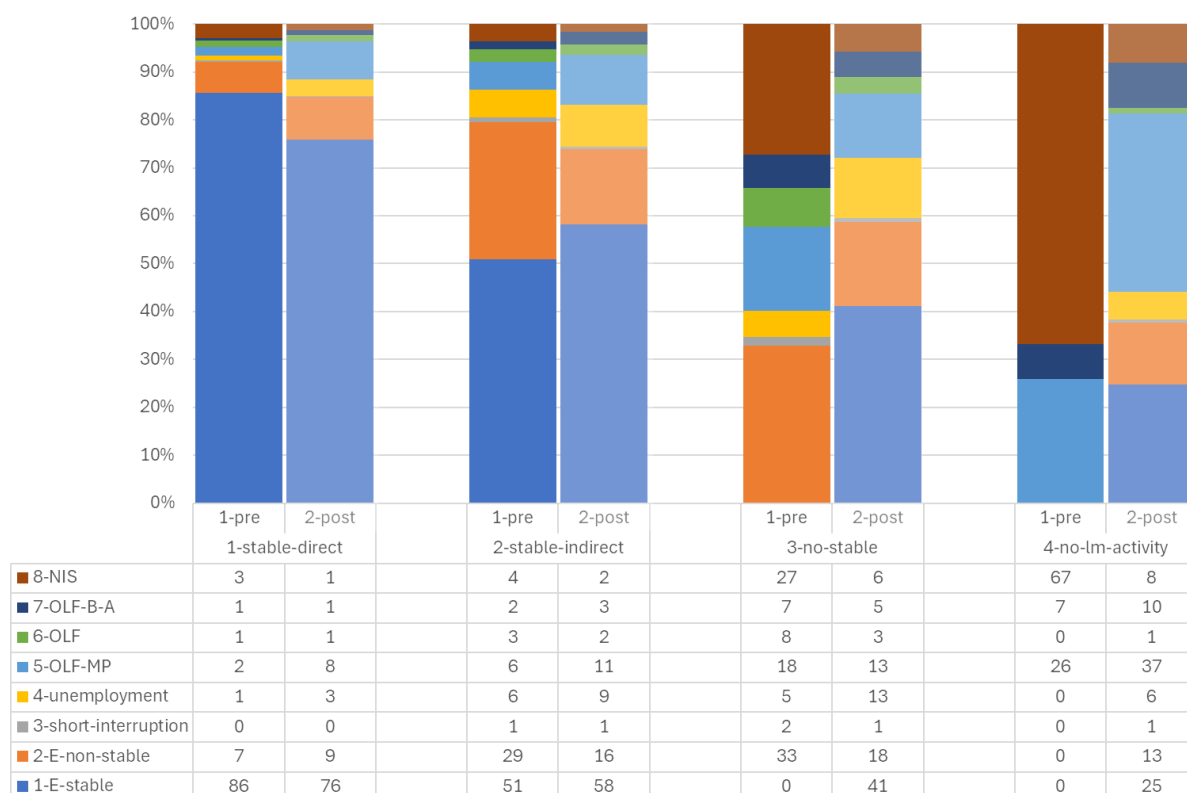
Figure 45: Employment intensity in calendar year 5 post-PLP, by base year gross income (cohort comparison)



k: 1,000€. Adjusted for inflation and scaled to 2022 values. Including those not employed, but excluding those with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

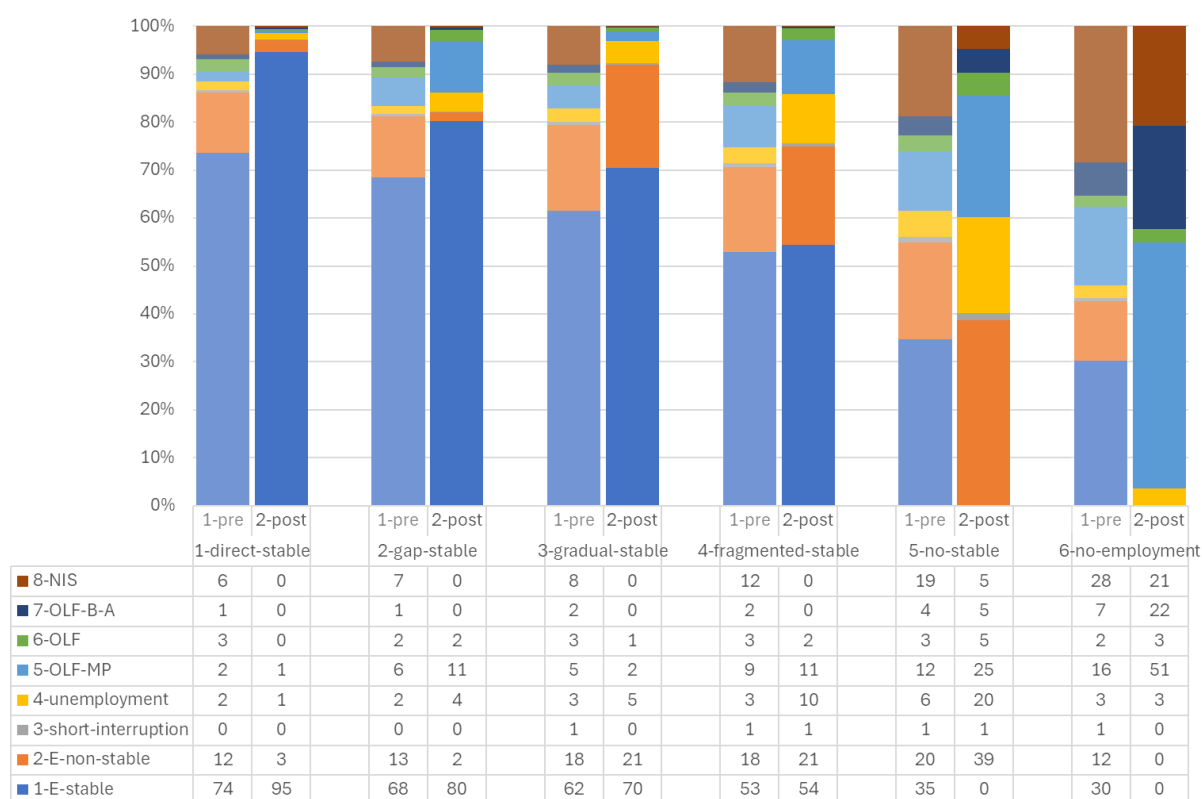
Chapter 5

Figure 46: Pre-types: Average labour market integration pre- & post-PLP



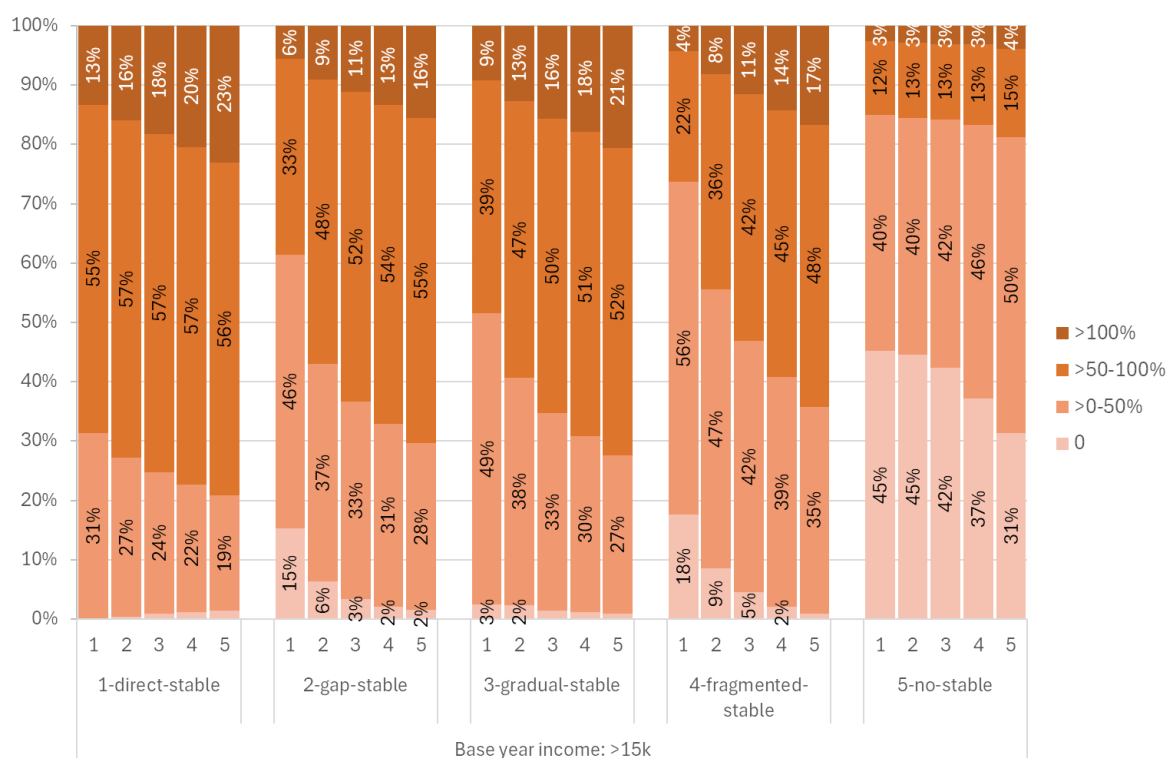
Values in %.

Figure 47: Post-types: Average labour market integration pre- & post-PLP



Values in %.

Figure 48: Post-types: Employment intensity each calendar year post-PLP (only women with gross income >15k in base year)

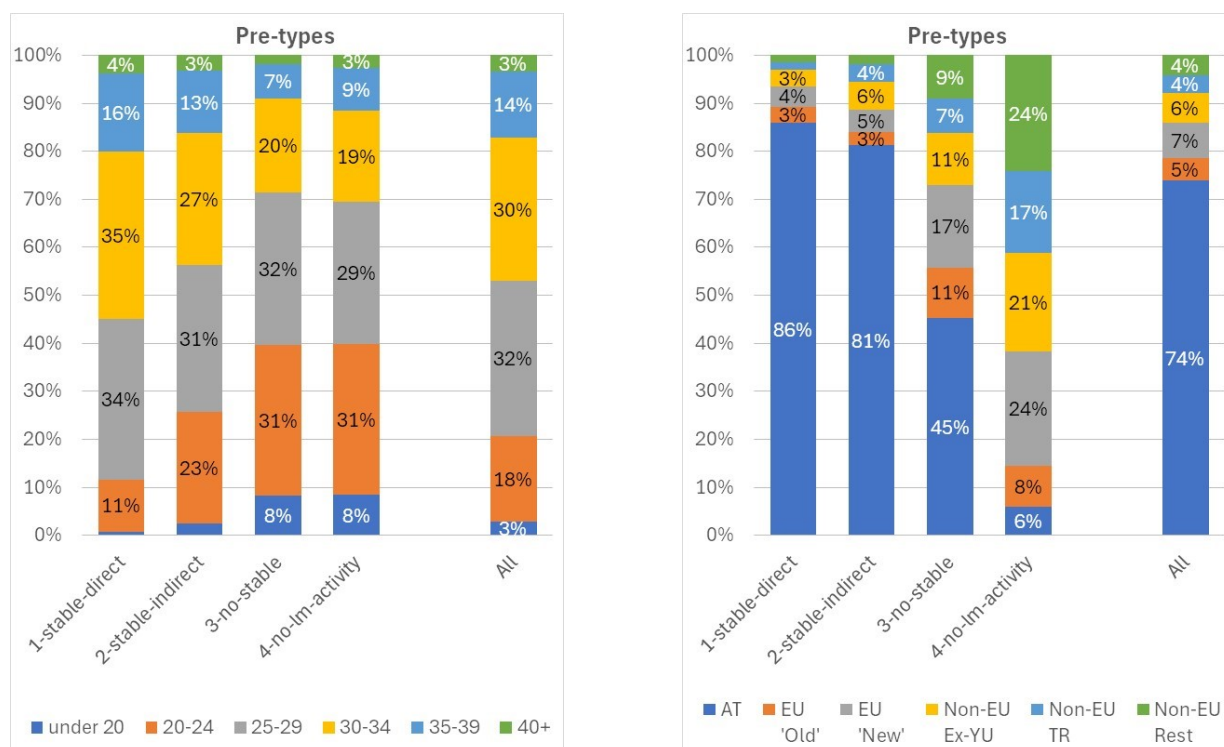


Only women with gross income >15,000€ in base year (calendar year -1 pre-PLP).

k: 1,000€. Adjusted for inflation and scaled to 2022 values.

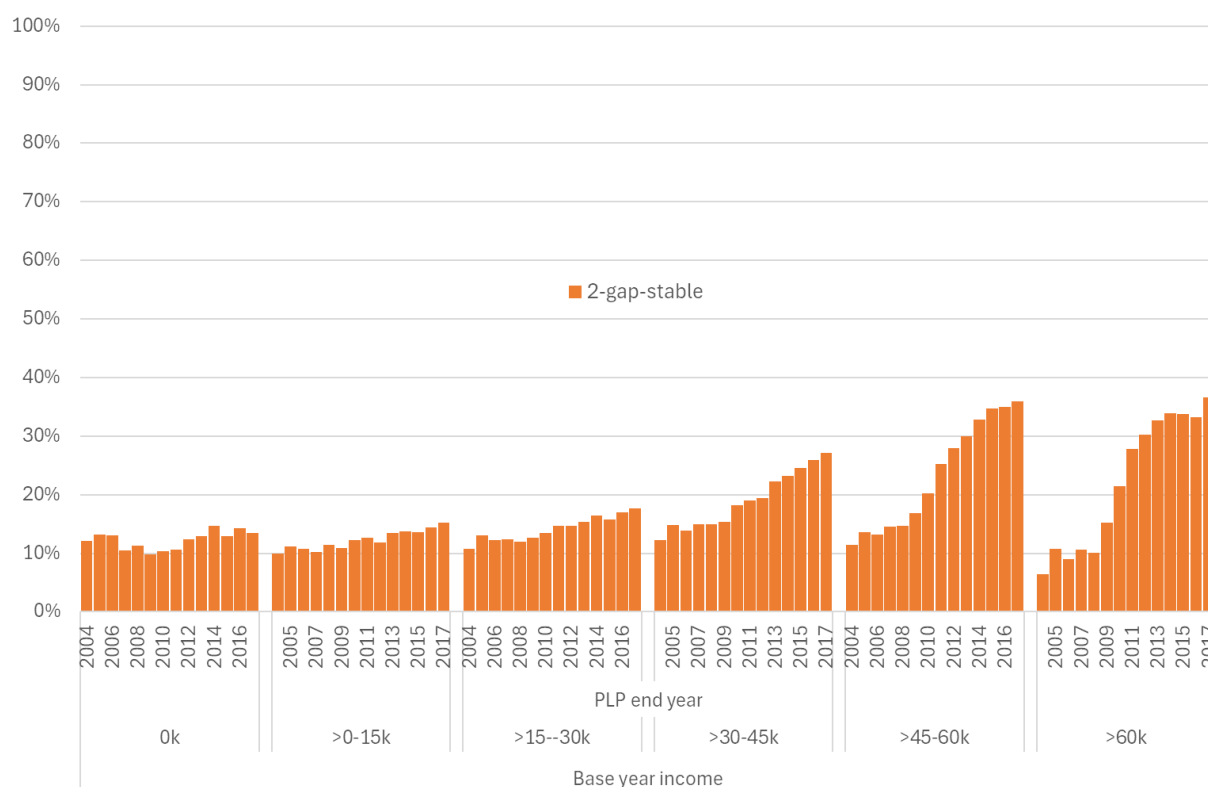
Excl. women with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

Figure 49: Composition of pre-types, by age at PLP start and nationality group



Nationality groups: AT: Austria. EU 'Old': Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland. EU 'New': Bulgaria, Croatia, Cyprus, Czech Republic, former Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia. Non-EU Ex-YU: Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Serbia and Montenegro, Yugoslavia. Non-EU TR: Turkey.

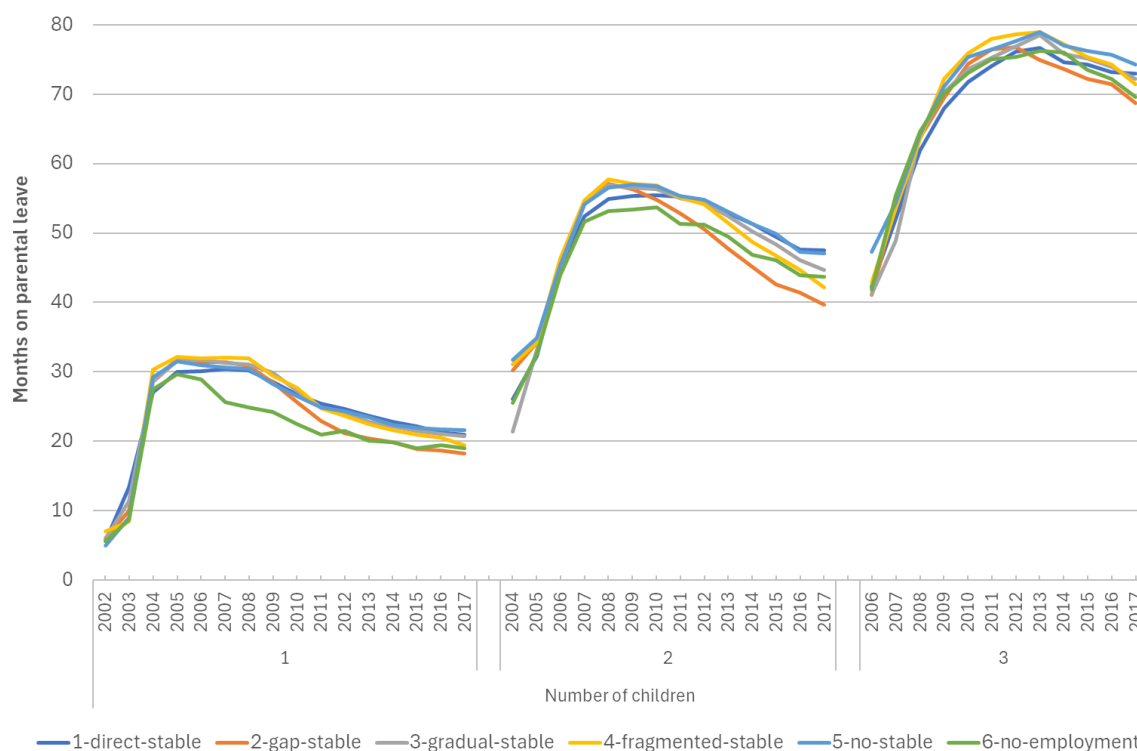
Figure 50: Shares of post-type 2 women by their gross income in base year (calendar year -1 pre-PLP), by PLP end year



k: 1,000€. Adjusted for inflation and scaled to 2022 values. Excl. PLP end year 2002, 2003.

Including those not employed, but excluding employed women whose income information is missing or who are not in the system (see Table 39 on missing values in the Appendix).

Figure 51: Post-types: Duration of parenting leave intervals, by PLP end year and number of children (in months)



Excl. women with 4 children.

Months on parenting leave are rounded up, so overestimation of 1-2 months per child can occur (if e.g., due to childcare allowance sharing between partners, women have two alternating parenting leave intervals associated with the same child).

Table 41: Post-types: Distance from PLP to first stable employment (in months)

Post-types	Distance from PLP to first stable employment (in months)									
	Share %					Ø months				
	>0-6m	>6-12m	>12-24m	24m+	Total	>0-6m	>6-12m	>12-24m	24m+	Total
2-gap-stable	49%	23%	16%	11%	100%	2.8	9.6	17.2	38.8	10.8
3-gradual-stable	31%	19%	24%	26%	100%	2.9	9.5	17.8	40.2	17.3
4-fragmented-stable	7%	14%	27%	52%	100%	4.3	9.7	18.3	41.9	28.3
Total	31%	19%	22%	28%	100%	2.9	9.6	17.8	40.9	18.0

Excl. post-types 1 with a direct transition and 5, 6 with no stable employment.

Table 42: Post-types: Employment status of first employment post-PLP

Post-types	Employment status: first employment post-PLP						
	AA	BE	G1	LE	LW	S1	Total
1-direct-stable	82%	3%	2%	0%	5%	8%	100%
2-gap-stable	91%	2%	0%	0%	2%	5%	100%
3-gradual-stable	45%	1%	52%	0%	0%	2%	100%
4-fragmented-stable	62%	0%	35%	0%	0%	2%	100%
5-no-stable	53%	0%	44%	0%	0%	3%	100%
All	71%	2%	20%	0%	2%	5%	100%

AA: waged and salaried employment.

G1: marginal employment.

S1: self-employment.

BE: public service.

LE: apprenticeship.

LW: farmers.

Excl. women with no employment post-PLP.

Table 43: Pre-types: Number of employment episodes pre-PLP

Pre-types	Number of employment episodes pre-PLP						
	0	1	2	3	4	5+	Total
1-stable-direct	-	39%	24%	14%	8%	14%	100%
2-stable-indirect	-	5%	18%	18%	16%	43%	100%
3-no-stable	-	21%	14%	11%	9%	45%	100%
All	-	28%	21%	15%	10%	26%	100%

Pre-types	Number of employment episodes pre-PLP (excl. marginal employment)						
	0	1	2	3	4	5+	Total
1-stable-direct	-	43%	26%	14%	8%	9%	100%
2-stable-indirect	-	6%	21%	21%	16%	36%	100%
3-no-stable	7%	23%	15%	12%	10%	33%	100%
All	1%	31%	23%	15%	10%	19%	100%

Excl. women with no LM activity pre-PLP.

Table 44: Post-types: Number of employment episodes post-PLP

Post-types	Number of employment episodes post-PLP						Total
	0	1	2	3	4	5+	
1-direct-stable	-	56%	22%	10%	5%	7%	100%
2-gap-stable	-	67%	19%	7%	3%	3%	100%
3-gradual-stable	-	0%	32%	23%	15%	30%	100%
4-fragmented-stable	-	0%	32%	23%	15%	30%	100%
5-no-stable	-	28%	16%	11%	8%	36%	100%
All	-	37%	24%	13%	8%	18%	100%
Post-types	Number of employment episodes post-PLP (excl. marginal employment)						Total
	0	1	2	3	4	5+	
1-direct-stable	-	60%	23%	9%	4%	4%	100%
2-gap-stable	-	70%	20%	6%	2%	2%	100%
3-gradual-stable	-	20%	32%	21%	11%	15%	100%
4-fragmented-stable	-	15%	35%	22%	12%	16%	100%
5-no-stable	22%	26%	14%	10%	7%	23%	100%
All	3%	45%	24%	12%	6%	10%	100%

Excl. women with no employment post-PLP.

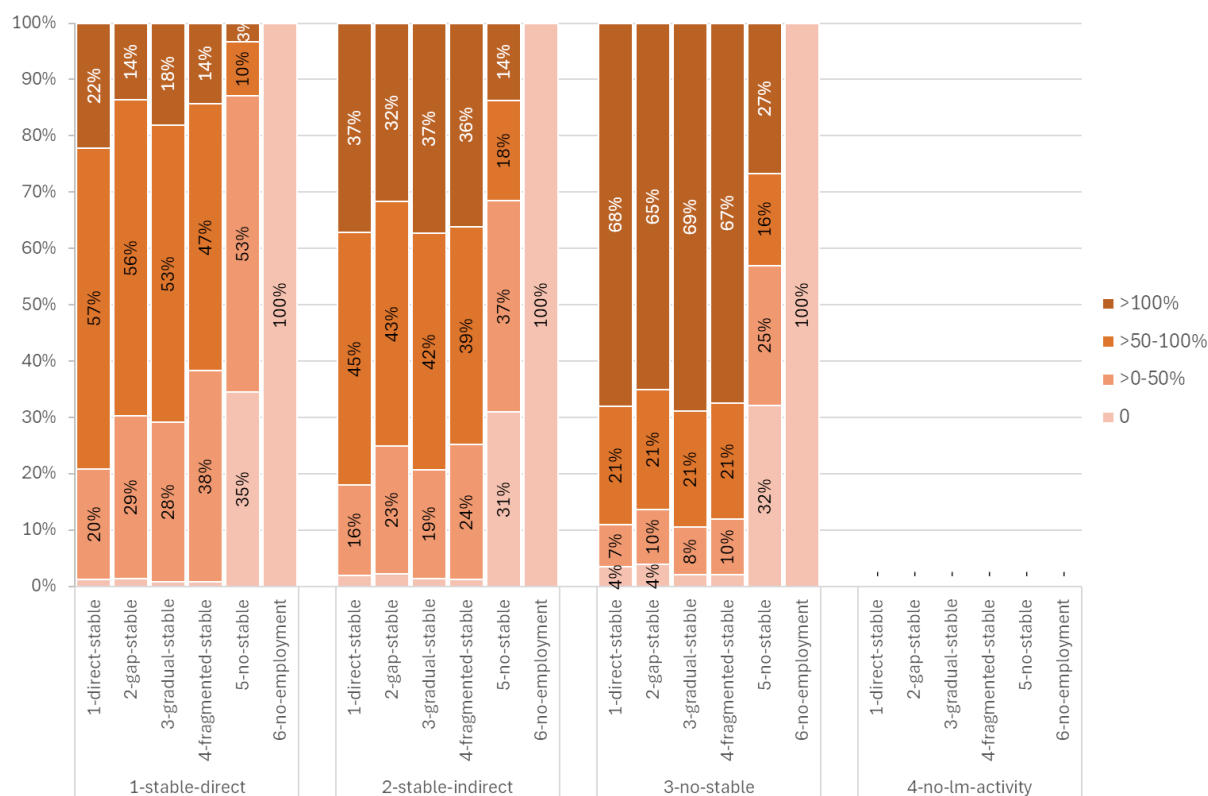
Chapter 6

Table 45: Full career profiles: Distance from PLP to first stable employment (in months)

Pre-types	Post-types														
	2-gap-stable					3-gradual-stable					4-fragmented-stable				
	>0-6m	>6-12m	>12-24m	24m+	Total	>0-6m	>6-12m	>12-24m	24m+	Total	>0-6m	>6-12m	>12-24m	24m+	Total
1-stable-direct	51%	25%	16%	9%	100%	34%	21%	24%	21%	100%	8%	17%	29%	45%	100%
2-stable-indirect	49%	21%	16%	13%	100%	28%	18%	24%	30%	100%	7%	14%	27%	53%	100%
3-no-stable	47%	18%	17%	18%	100%	24%	15%	24%	36%	100%	5%	10%	24%	61%	100%
4-no-lm-activity	26%	15%	24%	34%	100%	24%	15%	25%	36%	100%	3%	8%	20%	68%	100%
Total	49%	23%	16%	11%	100%	31%	19%	24%	26%	100%	7%	14%	27%	52%	100%

Excl. post-type 5 and 6 with no stable employment.

Figure 52: Employment intensity in calendar year 5 post-PLP by pre- and post-PLP career types



Adjusted for inflation and scaled to 2022 values.

Excluding women with no income in the base year (not employed, not in the system, and employed women whose income information is missing. N = 279,155.

Chapter 7

Table 46: Economic sector and employer change in the pre-PLP interval, by age at PLP start

Age at PLP start	Economic sector change pre-PLP			Employer change pre-PLP		
	Same sector	Different sectors	Total	Same employer	Different employers	Total
<20	61%	39%	100%	41%	59%	100%
20-24	49%	51%	100%	22%	78%	100%
25-29	58%	42%	100%	35%	65%	100%
30-34	64%	36%	100%	44%	56%	100%
35-39	68%	32%	100%	49%	51%	100%
40+	72%	28%	100%	55%	45%	100%
All	60%	40%	100%	38%	62%	100%

Excl. women with no employment pre-PLP.

Figure 53: Post-type by pre-type & age at PLP start (row %): target population

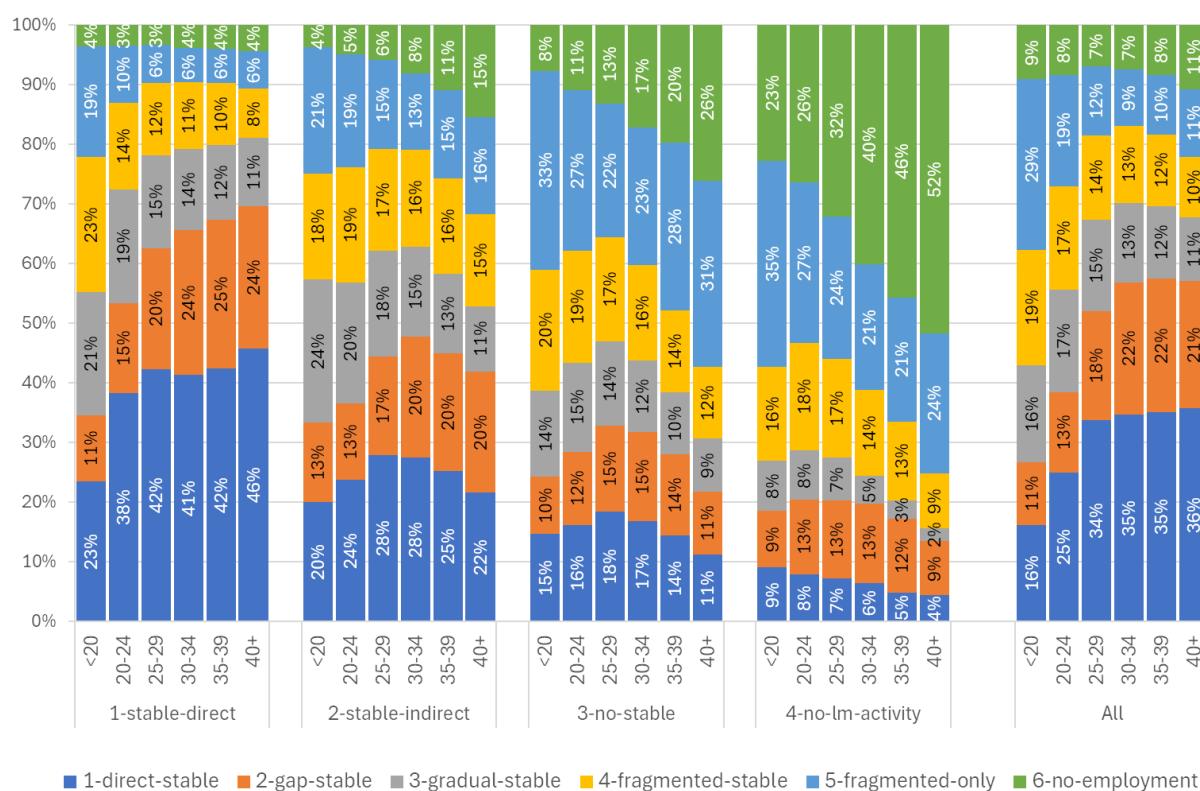
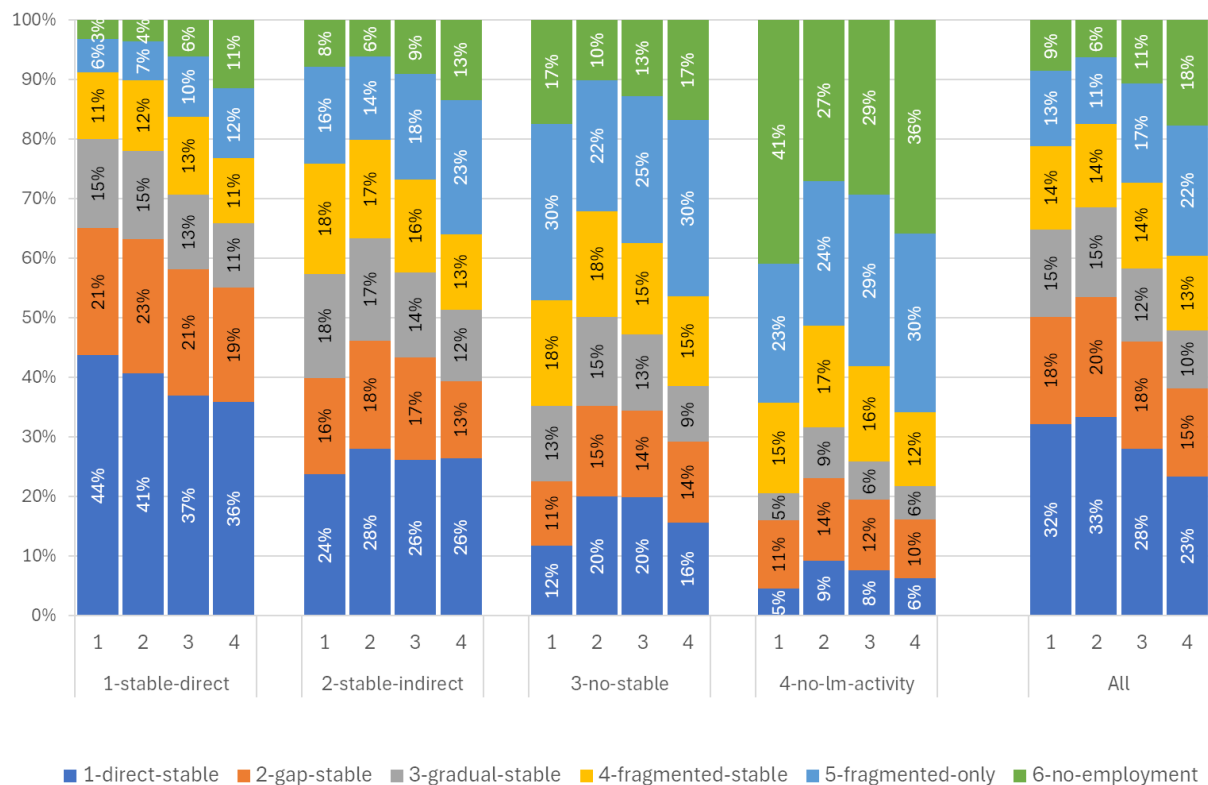


Table 47: Age at PLP start and Ø age at PLP start by nationality group (row %): target population

Nationality group	Age at PLP start						Total	Ø Age at PLP start
	<20	20-24	25-29	30-34	35-39	40+		
AT	3%	16%	33%	31%	14%	3%	100%	29.4
EU 'Old'	1%	11%	28%	35%	20%	5%	100%	31.0
EU 'New'	1%	15%	33%	32%	15%	4%	100%	29.8
Non-EU Ex-YU	6%	37%	31%	17%	7%	2%	100%	26.4
Non-EU TR	8%	47%	29%	11%	4%	1%	100%	25.0
Non-EU Rest	2%	16%	31%	30%	16%	4%	100%	29.8
All	3%	18%	32%	30%	14%	3%	100%	29.2

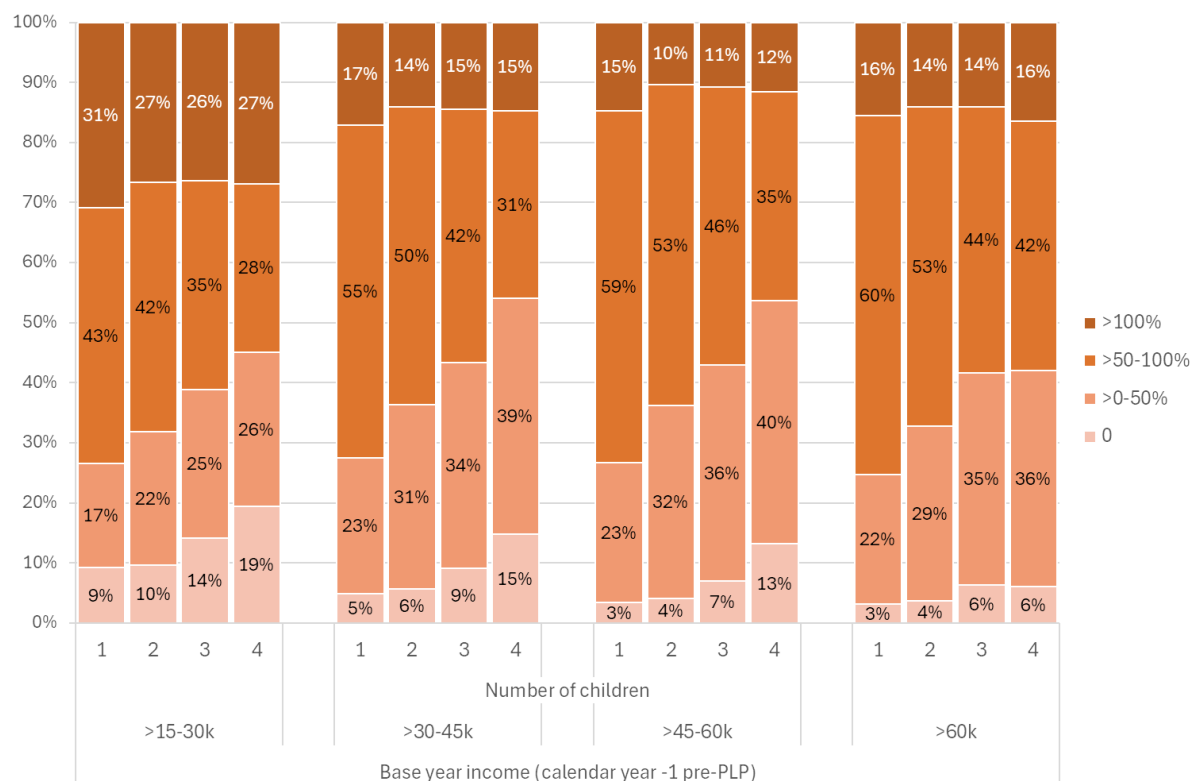
Figure 54: Post-type by pre-type and number of children (row %): target population

Table 48: Number of children and $\emptyset$ number of children by nationality group

Nationality group	Number of children				Total	$\emptyset$ Number of children
	1	2	3	4		
AT	39%	51%	9%	1%	100%	1.7
EU 'Old'	48%	43%	8%	1%	100%	1.6
EU 'New'	53%	40%	7%	1%	100%	1.6
Non-EU Ex-YU	31%	52%	15%	2%	100%	1.9
Non-EU TR	22%	49%	25%	4%	100%	2.1
Non-EU Rest	44%	41%	11%	3%	100%	1.7
All	39%	50%	10%	1%	100%	1.7

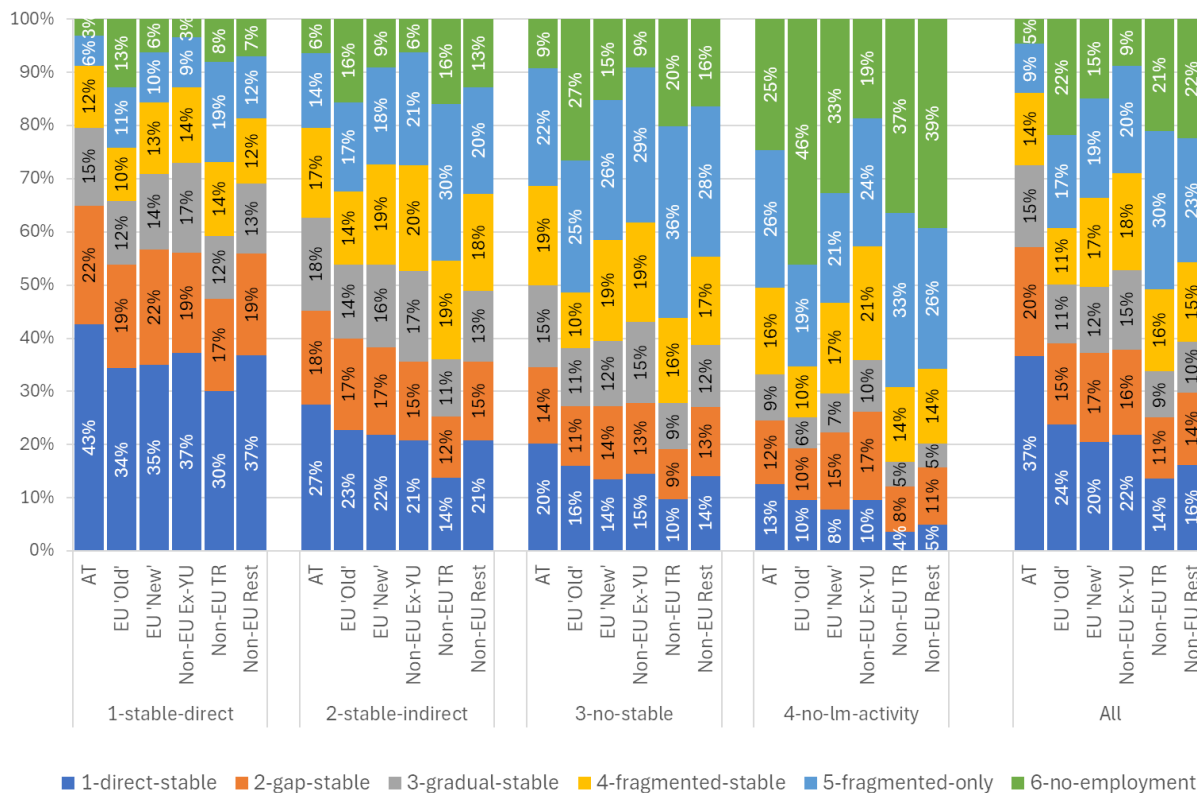
Nationality groups: AT: Austria. EU 'Old': Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland. EU 'New': Bulgaria, Croatia, Cyprus, Czech Republic, former Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia. Non-EU Ex-YU: Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Serbia and Montenegro, Yugoslavia. Non-EU TR: Turkey.

Figure 55: Employment intensity (in calendar year 5 post-PLP) by number of children & base year income



k: 1,000€. Adjusted for inflation and scaled to 2022 values.
Excl. women with base year income <15,000€. N = 241,497.

Figure 56: Post-type by pre-type and nationality group (row %): target population



Nationality groups: AT: Austria. EU 'Old': Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Liechtenstein, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland. EU 'New': Bulgaria, Croatia, Cyprus, Czech Republic, former Czechoslovakia, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia, Slovenia. Non-EU Ex-YU: Bosnia-Herzegovina, Kosovo, Macedonia, Montenegro, Serbia, Serbia and Montenegro, Yugoslavia. Non-EU TR: Turkey.

Table 49: Region: Full career profiles (total %, only Austrian women, aged 30-34 at PLP start)

All (AT, 30-34), N=78,606 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	18	10	8	4	2	74
2-stable-indirect	6	5	3	4	3	2	22
3-no-stable	0.9	0.7	0.6	0.7	0.8	0.6	4
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.1	0.1
All	39	23	14	12	7	5	100

Burgenland (AT, 30-34), N=1,358 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	15	8	7	2	2	73
2-stable-indirect	7	5	3	4	3	1	24
3-no-stable	0.8	0.4	0.8	0.3	0.4	0.5	3
4-no-lm-activity	0	0	0	0	0	0.1	0.1
All	46	20	13	12	6	4	100

Niederösterreich (AT, 30-34), N=8,612 (11%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	16	10	9	3	2	70
2-stable-indirect	8	5	4	4	3	2	26
3-no-stable	0.7	0.7	0.4	0.5	0.6	0.5	3
4-no-lm-activity	0	0.0	0.0	0	0.0	0.0	0.1
All	40	22	14	13	7	4	100

Salzburg (AT, 30-34), N=4,705 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	16	10	8	4	3	73
2-stable-indirect	6	4	4	4	3	2	23
3-no-stable	0.9	0.7	0.6	0.6	1	0.5	4
4-no-lm-activity	0	0.0	0	0	0.0	0.1	0.1
All	38	21	15	13	9	5	100

Kärnten (AT, 30-34), N=3,882 (5%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	15	11	8	4	2	71
2-stable-indirect	6	4	3	5	4	2	24
3-no-stable	0.8	1	0.7	0.9	1	0.5	5
4-no-lm-activity	0	0	0	0.0	0.1	0.0	0.1
All	37	20	15	14	9	4	100

Oberösterreich (AT, 30-34), N=12,246 (16%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	21	10	9	4	3	76
2-stable-indirect	6	5	3	4	2	2	21
3-no-stable	0.6	0.4	0.3	0.4	0.5	0.3	2
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.0	0.1
All	36	26	14	13	6	4	100

Steiermark (AT, 30-34), N=9,524 (12%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	33	16	11	8	3	2	73
2-stable-indirect	6	4	4	4	3	1	22
3-no-stable	1	0.7	0.6	0.8	0.8	0.5	4
4-no-lm-activity	0	0	0	0.0	0.0	0.0	0.0
All	41	21	15	13	7	4	100

Tirol (AT, 30-34), N=6,389 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	27	15	10	8	7	5	73
2-stable-indirect	5	3	3	3	5	2	22
3-no-stable	0.8	0.5	0.6	0.9	1	0.7	5
4-no-lm-activity	0	0.0	0	0.0	0.1	0.0	0.1
All	33	19	14	13	14	8	100
Wien (AT, 30-34), N=18,068 (23%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	19	10	8	3	2	72
2-stable-indirect	7	5	3	3	2	2	22
3-no-stable	1	1	0.7	1	1	0.9	6
4-no-lm-activity	0.0	0.0	0.0	0.0	0.0	0.1	0.2
All	38	25	14	12	6	4	100

Vorarlberg (AT, 30-34), N=3,127 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	16	11	8	9	6	72
2-stable-indirect	5	4	3	3	4	3	23
3-no-stable	0.7	0.8	0.5	0.5	0.8	1	4
4-no-lm-activity	0	0.0	0	0	0.1	0.1	0.2
All	29	21	15	12	14	10	100
Rest (AT, 30-34), N=10,695 (14%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	23	8	7	2	1	79
2-stable-indirect	7	4	2	2	0.8	0.9	17
3-no-stable	0.9	0.7	0.4	0.6	0.3	0.3	3
4-no-lm-activity	0.0	0.0	0	0.0	0.0	0.1	0.2
All	45	28	11	10	3	3	100

Region: federal state of first parenting leave episode. Rest: nationwide collective social insurance accounts (occurs mostly in public administration, self-employment, and education). Excl. NA (not assignable, N = 156).

Table 50: Region: Full career profiles (total %, target population)

All, N=338,652 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	12	8	7	4	2	57
2-stable-indirect	6	4	4	4	3	2	23
3-no-stable	2	2	2	3	4	2	15
4-no-lm-activity	0.5	0.8	0.4	1	2	2	6
All	32	19	14	14	12	8	100

Burgenland, N=6,351 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	27	11	8	6	3	2	56
2-stable-indirect	6	4	4	5	4	2	25
3-no-stable	3	2	2	3	3	2	14
4-no-lm-activity	0.4	0.7	0.4	0.7	1	1	5
All	37	17	15	14	11	6	100

Niederösterreich, N=41,589 (12%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	11	8	7	3	2	54
2-stable-indirect	7	4	4	4	4	2	25
3-no-stable	2	2	2	3	3	2	14
4-no-lm-activity	0.5	0.9	0.5	1	2	2	7
All	33	18	15	15	12	7	100

Salzburg, N=20,942 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	11	9	7	4	2	55
2-stable-indirect	6	3	5	4	4	2	24
3-no-stable	3	2	2	3	4	2	16
4-no-lm-activity	0.4	0.5	0.5	0.8	1	1	5
All	31	17	17	15	14	7	100

Kärnten, N=17,599 (5%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	10	8	6	4	2	53
2-stable-indirect	7	4	5	5	5	2	27
3-no-stable	3	2	2	3	5	2	16
4-no-lm-activity	0.3	0.3	0.3	0.6	1	1	4
All	32	16	16	15	15	6	100

Oberösterreich, N=52,061 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	14	9	8	4	2	60
2-stable-indirect	6	4	4	4	3	1	23
3-no-stable	2	2	2	2	3	1	12
4-no-lm-activity	0.5	0.7	0.4	0.9	1	2	5
All	32	21	15	15	10	6	100

Steiermark, N=39,775 (12%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	11	9	7	4	2	58
2-stable-indirect	6	4	5	4	4	1	24
3-no-stable	2	2	2	3	3	2	14
4-no-lm-activity	0.3	0.6	0.2	0.8	1	1	5
All	34	17	16	15	12	6	100

Tirol, N=27,008 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	20	11	8	7	6	4	55
2-stable-indirect	5	3	4	4	6	2	23
3-no-stable	2	2	2	3	6	3	18
4-no-lm-activity	0.3	0.3	0.4	0.6	1	1	4
All	27	16	15	14	19	10	100

Wien, N=84,973 (25%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	21	12	8	6	3	2	52
2-stable-indirect	5	4	3	4	3	2	21
3-no-stable	3	3	2	3	5	3	18
4-no-lm-activity	0.6	1	0.4	1	2	3	9
All	30	20	13	14	13	9	100

Vorarlberg, N=13,939 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	16	10	9	7	7	4	53
2-stable-indirect	5	4	4	4	5	3	24
3-no-stable	2	2	2	2	4	3	15
4-no-lm-activity	0.6	0.8	0.8	1	2	2	7
All	24	16	16	14	18	13	100

Rest, N=34,415 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	35	18	7	6	2	2	70
2-stable-indirect	6	4	2	2	1	0.8	16
3-no-stable	2	2	1	1	2	1	9
4-no-lm-activity	0.4	0.7	0.3	0.7	1	2	5
All	43	24	11	11	6	6	100

Region: federal state of first parenting leave episode. Rest: nationwide collective social insurance accounts (occurs mostly in public administration, self-employment, and education). Excl. NA (not assignable, N = 703).

Table 51: Share of women by economic sector: target population

Economic sector	Share %	N
A: Agriculture/forestry/fishing	0.4%	1,358
B: Mining	0.1%	168
C: Manufacturing	10%	31,982
D: Energy supply	0.2%	765
E: Water supply	0.1%	432
F: Construction	2%	5,383
G: Trade	19%	60,452
H: Transportation	2%	7,866
I: Tourism	9%	27,866
J: Information/communication	2%	6,825
K: Financial services	4%	13,745
L: Real estate	1%	3,503
M: Professional/scientific/technical activities	7%	20,597
N: Administration/support services	5%	16,437
O: Public administration	15%	46,619
P: Education	3%	9,217
Q: Health/social work	10%	32,112
R: Arts/entertainment	1%	3,143
S: Other service activities	4%	14,009
T: Household activities	0.2%	608
U: Extraterritorial organisations	0.1%	252
LW: Self-employed farmers	0.8%	2,386
S1: Self-employed (excl. farmers)	3%	10,651
All	100%	316,376

Economic sector of last employment pre-PLP. Women whose economic sector is not available not shown (N = 22,979). Classification: [ÖNACE 2008](#).

Table 52: Economic sector: Full career profiles (total %, only Austrian women, aged 30-34 at PLP start, incl. self-employed)

All (AT, 30-34), N=78,150 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	18	10	8	4	2	74
2-stable-indirect	6	5	3	4	3	2	22
3-no-stable	0.9	0.7	0.5	0.7	0.7	0.5	4
4-no-lm-activity	-	-	-	-	-	-	-
All	39	24	14	12	7	4	100
B: Mining (AT, 30-34), N=53 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	36	17	9	11	0	2	75
2-stable-indirect	9	2	4	2	2	0	19
3-no-stable	6	0	0	0	0	0	6
4-no-lm-activity	-	-	-	-	-	-	-
All	51	19	13	13	2	2	100
D: Energy supply (AT, 30-34), N=233 (0.3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	32	28	9	8	3	3	83
2-stable-indirect	5	6	0.9	2	2	0.9	15
3-no-stable	0.4	0.4	0	0.4	0	0.4	2
4-no-lm-activity	-	-	-	-	-	-	-
All	37	34	9	10	5	4	100
F: Construction (AT, 30-34), N=1,301 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	16	12	9	5	3	72
2-stable-indirect	8	5	4	5	3	1	26
3-no-stable	0.2	0.2	0.4	0.6	0.6	0.5	3
4-no-lm-activity	-	-	-	-	-	-	-
All	36	21	16	14	8	4	100

A: Agriculture/forestry/fishing (AT, 30-34), N=195 (0.2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	17	7	8	6	7	2	47
2-stable-indirect	11	6	9	2	9	4	41
3-no-stable	3	3	1	1	4	2	13
4-no-lm-activity	-	-	-	-	-	-	-
All	31	15	18	9	19	7	100
C: Manufacturing (AT, 30-34), N=7,607 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	19	10	10	6	4	78
2-stable-indirect	6	4	3	3	3	2	20
3-no-stable	0.3	0.3	0.2	0.3	0.3	0.2	2
4-no-lm-activity	-	-	-	-	-	-	-
All	36	23	13	14	8	6	100
E: Water supply (AT, 30-34), N=109 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	36	17	17	11	4	0.0	83
2-stable-indirect	4	3	0.9	2	0.9	2	12
3-no-stable	0.9	0	0	0	2	2	5
4-no-lm-activity	-	-	-	-	-	-	-
All	40	19	17	13	6	4	100
G: Trade (AT, 30-34), N=11,647 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	15	12	10	6	3	74
2-stable-indirect	6	4	4	4	3	2	24
3-no-stable	0.5	0.5	0.3	0.4	0.5	0.4	3
4-no-lm-activity	-	-	-	-	-	-	-
All	35	20	16	14	9	5	100

H: Transportation (AT, 30-34), N=1,929 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	17	11	10	4	3	74
2-stable-indirect	7	5	3	3	3	2	23
3-no-stable	0.4	0.6	0.3	0.5	0.6	0.2	3
4-no-Im-activity	-	-	-	-	-	-	-
All	37	23	14	14	7	5	100

J: Information/communication (AT, 30-34), N=2,215 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	16	11	9	3	1	68
2-stable-indirect	9	5	5	4	2	1	26
3-no-stable	1	0.9	0.9	0.9	1	0.7	6
4-no-Im-activity	-	-	-	-	-	-	-
All	38	22	16	14	6	3	100

L: Real estate (AT, 30-34), N=911 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	16	13	10	3	2	72
2-stable-indirect	7	4	4	4	3	2	24
3-no-stable	0.8	0.8	0.7	0.1	0.9	0.7	4
4-no-Im-activity	-	-	-	-	-	-	-
All	36	21	18	14	7	4	100

N: Administration/support services (AT, 30-34), N=2,455 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	20	13	10	9	4	2	59
2-stable-indirect	7	6	6	7	5	3	34
3-no-stable	1	1	0.7	0.8	2	2	7
4-no-Im-activity	-	-	-	-	-	-	-
All	29	20	17	16	12	6	100

P: Education (AT, 30-34), N=2,584 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	15	11	8	2	2	61
2-stable-indirect	9	6	5	6	3	2	30
3-no-stable	2	1	2	2	2	1	10
4-no-Im-activity	-	-	-	-	-	-	-
All	33	22	17	15	7	5	100

I: Tourism (AT, 30-34), N=2,952 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	14	6	9	6	4	2	41
2-stable-indirect	8	5	9	8	12	3	45
3-no-stable	2	2	2	2	4	2	14
4-no-Im-activity	-	-	-	-	-	-	-
All	24	13	19	17	20	7	100

K: Financial services (AT, 30-34), N=4,603 (6%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	40	26	8	8	3	2	87
2-stable-indirect	5	3	1	1	0.8	0.6	12
3-no-stable	0.5	0.2	0.1	0.2	0.1	0.1	1
4-no-Im-activity	-	-	-	-	-	-	-
All	45	29	10	9	4	3	100

M: Professional/scientific/technical activities (AT, 30-34), N=6,533 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	24	16	13	9	3	2	67
2-stable-indirect	8	6	5	5	2	2	27
3-no-stable	1	1	0.9	1	0.9	0.7	6
4-no-Im-activity	-	-	-	-	-	-	-
All	33	23	18	15	6	5	100

O: Public administration (AT, 30-34), N=16,404 (21%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	37	26	9	7	2	1	82
2-stable-indirect	6	4	2	2	0.7	0.5	15
3-no-stable	0.7	0.6	0.4	0.4	0.2	0.1	2
4-no-Im-activity	-	-	-	-	-	-	-
All	44	31	11	9	3	2	100

Q: Health/social work (AT, 30-34), N=8,823 (11%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	19	10	9	4	2	74
2-stable-indirect	7	5	3	3	2	1	21
3-no-stable	1	0.8	0.6	0.9	0.6	0.4	4
4-no-Im-activity	-	-	-	-	-	-	-
All	37	25	14	13	7	4	100

R: Arts/entertainment (AT, 30-34), N=735 (0.9%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	11	9	6	4	2	55
2-stable-indirect	8	6	6	5	6	2	33
3-no-stable	2	2	1	1	3	2	11
4-no-lm-activity	-	-	-	-	-	-	-
All	32	19	17	13	13	6	100
T: Household activities (AT, 30-34), N=80 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	4	5	3	3	6	3	23
2-stable-indirect	3	3	3	5	11	14	38
3-no-stable	5	4	6	3	13	10	40
4-no-lm-activity	-	-	-	-	-	-	-
All	11	11	11	10	30	26	100
X-LW: Self-employed farmers (AT, 30-34), N=748 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	87	4	2	2	2	0.7	97
2-stable-indirect	0.9	0.5	0.4	0.3	0.3	0.3	3
3-no-stable	0.1	0.3	0	0.1	0	0	0.5
4-no-lm-activity	-	-	-	-	-	-	-
All	88	5	2	2	2	0.9	100

S: Other service activities (AT, 30-34), N=2,992 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	29	15	13	9	6	3	74
2-stable-indirect	6	4	3	4	2	2	21
3-no-stable	1	0.8	0.6	1	1	0.6	5
4-no-lm-activity	-	-	-	-	-	-	-
All	36	20	16	14	9	5	100
U: Extraterritorial organisations (AT, 30-34), N<30	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
2-stable-indirect	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
3-no-stable	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
4-no-lm-activity	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
All	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
X-S1: Self-employed (excl. farmers) (AT, 30-34), N=3,012 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	59	8	5	4	3	3	82
2-stable-indirect	4	3	3	2	1	1	15
3-no-stable	0.9	0.5	0.6	0.6	0.5	0.4	4
4-no-lm-activity	-	-	-	-	-	-	-
All	64	12	8	7	5	4	100

Only Austrian women, aged 30-34 at PLP start. Economic sector of last employment pre-PLP. Classification: [ÖNACE 2008](#).
Excl. women whose economic sector is not available. Incl. self-employed. N = 78,150.

Table 53: Economic sector: Full career profiles (total %, target population, incl. self-employed)

All, N=316,376 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	13	9	7	4	2	61
2-stable-indirect	6	4	4	4	4	2	24
3-no-stable	3	2	2	3	4	2	15
4-no-lm-activity	-	-	-	-	-	-	-
All	34	19	15	14	12	6	100
B: Mining, N=168 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	28	13	10	14	2	4	70
2-stable-indirect	11	2	4	4	1	1	23
3-no-stable	4	0	0.6	2	0.6	0	7
4-no-lm-activity	-	-	-	-	-	-	-
All	43	15	14	19	4	5	100
D: Energy supply, N=765 (0.2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	33	24	9	8	2	3	79
2-stable-indirect	6	5	2	2	1	0.8	17
3-no-stable	1	0.4	0.7	0.9	0.5	0.5	4
4-no-lm-activity	-	-	-	-	-	-	-
All	40	30	12	11	4	4	100
F: Construction, N=5,383 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	12	10	7	4	2	57
2-stable-indirect	7	5	4	5	4	2	28
3-no-stable	2	2	2	3	4	2	15
4-no-lm-activity	-	-	-	-	-	-	-
All	32	18	17	15	12	6	100
A: Agriculture/forestry/fishing, N=1,358 (0.4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	12	6	6	5	4	2	35
2-stable-indirect	8	5	5	4	6	2	30
3-no-stable	6	5	4	6	9	5	35
4-no-lm-activity	-	-	-	-	-	-	-
All	26	15	15	15	20	9	100
C: Manufacturing, N=31,982 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	14	9	9	6	3	66
2-stable-indirect	7	4	4	4	4	2	24
3-no-stable	2	1	1	2	2	1	9
4-no-lm-activity	-	-	-	-	-	-	-
All	33	20	14	15	12	6	100
E: Water supply, N=432 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	26	14	11	9	4	0.2	64
2-stable-indirect	7	3	3	4	4	2	24
3-no-stable	2	1	1	1	4	2	12
4-no-lm-activity	-	-	-	-	-	-	-
All	35	19	16	14	13	4	100
G: Trade, N=60,452 (19%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	21	10	11	8	5	3	58
2-stable-indirect	7	4	5	5	5	2	28
3-no-stable	2	2	2	2	3	2	14
4-no-lm-activity	-	-	-	-	-	-	-
All	31	16	18	15	14	6	100

H: Transportation, N=7,866 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	23	14	9	8	4	3	61
2-stable-indirect	7	4	4	4	4	2	24
3-no-stable	2	2	2	3	3	2	14
4-no-Im-activity	-	-	-	-	-	-	-
All	32	20	15	15	11	6	100

J: Information/communication, N=6,825 (2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	26	15	9	7	3	2	61
2-stable-indirect	8	5	4	4	3	1	25
3-no-stable	3	2	2	2	3	2	13
4-no-Im-activity	-	-	-	-	-	-	-
All	36	22	15	14	9	5	100

L: Real estate, N=3,503 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	13	11	8	4	2	60
2-stable-indirect	6	4	5	4	4	2	24
3-no-stable	3	2	3	2	4	2	15
4-no-Im-activity	-	-	-	-	-	-	-
All	31	20	18	14	11	6	100

N: Administration/support services, N=16,437 (5%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	12	7	6	6	4	2	36
2-stable-indirect	5	4	5	6	6	3	29
3-no-stable	4	4	4	7	11	5	35
4-no-Im-activity	-	-	-	-	-	-	-
All	21	15	15	19	21	10	100

P: Education, N=9,217 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	20	12	9	6	3	3	53
2-stable-indirect	7	4	4	4	3	2	24
3-no-stable	5	4	3	4	5	3	23
4-no-Im-activity	-	-	-	-	-	-	-
All	32	20	16	14	11	8	100

I: Tourism, N=27,866 (9%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	8	4	5	4	3	1	26
2-stable-indirect	6	4	7	7	9	2	34
3-no-stable	5	4	6	7	13	5	40
4-no-Im-activity	-	-	-	-	-	-	-
All	18	12	18	19	25	9	100

K: Financial services, N=13,745 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	23	8	8	3	2	82
2-stable-indirect	5	3	2	2	1	0.7	13
3-no-stable	1	0.8	0.6	0.7	0.8	0.5	5
4-no-Im-activity	-	-	-	-	-	-	-
All	44	27	11	10	5	4	100

M: Professional/scientific/technical activities, N=20,597 (7%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	22	14	11	8	4	2	61
2-stable-indirect	7	5	4	4	3	2	25
3-no-stable	3	2	2	2	3	2	14
4-no-Im-activity	-	-	-	-	-	-	-
All	32	21	18	15	9	6	100

O: Public administration, N=46,619 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	36	23	9	7	2	1	78
2-stable-indirect	7	4	2	2	1	0.6	17
3-no-stable	2	1	0.8	0.8	0.6	0.4	5
4-no-Im-activity	-	-	-	-	-	-	-
All	44	28	12	10	3	3	100

Q: Health/social work, N=32,112 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	27	16	9	8	4	2	66
2-stable-indirect	7	4	3	3	2	2	21
3-no-stable	3	2	2	2	2	1	13
4-no-Im-activity	-	-	-	-	-	-	-
All	37	22	14	13	9	5	100

R: Arts/entertainment, N=3,143 (1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	17	9	7	5	4	2	45
2-stable-indirect	6	5	6	5	6	2	29
3-no-stable	4	4	3	4	7	4	27
4-no-lm-activity	-	-	-	-	-	-	-
All	27	17	16	15	17	7	100

T: Household activities, N=608 (0.2%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	3	3	1	2	3	3	16
2-stable-indirect	2	2	3	3	7	6	22
3-no-stable	7	9	6	10	19	11	62
4-no-lm-activity	-	-	-	-	-	-	-
All	12	14	10	15	29	20	100

X-LW: Self-employed farmers, N=2,386 (0.8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	86	3	2	2	2	1	95
2-stable-indirect	1	0.3	0.4	0.4	0.3	0.3	3
3-no-stable	0.6	0.2	0.3	0.4	0.3	0.0	2
4-no-lm-activity	-	-	-	-	-	-	-
All	87	3	3	3	2	1	100

S: Other service activities, N=14,009 (4%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	21	12	11	8	5	2	59
2-stable-indirect	6	4	5	5	4	2	26
3-no-stable	2	2	2	3	4	2	15
4-no-lm-activity	-	-	-	-	-	-	-
All	29	18	18	16	13	7	100

U: Extraterritorial organisations, N=252 (0.1%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	32	19	6	2	4	4	65
2-stable-indirect	5	4	1	2	1	4	17
3-no-stable	6	5	0.8	0.8	2	4	18
4-no-lm-activity	-	-	-	-	-	-	-
All	43	27	8	5	6	12	100

X-S1: Self-employed (excl. farmers), N=10,651 (3%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	54	7	5	4	4	3	77
2-stable-indirect	3	3	2	2	2	2	14
3-no-stable	1	1	0.9	1	2	2	9
4-no-lm-activity	-	-	-	-	-	-	-
All	59	11	8	8	8	6	100

Economic sector of last employment pre-PLP. Classification: [ÖNACE 2008](#).

Excl. women whose economic sector is not available. Incl. self-employed. N = 316,376.

Table 54: Employer size: Full career profiles (total %, only Austrian women, aged 30-34 at PLP start, incl. self-employed)

All (AT, 30-34), N=78,155 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	31	18	10	8	4	2	74
2-stable-indirect	6	5	3	4	3	2	22
3-no-stable	0.9	0.7	0.5	0.7	0.7	0.5	4
4-no-lm-activity	-	-	-	-	-	-	-
All	32	19	14	14	12	8	100

A: <10 (AT, 30-34), N=12,054 (15%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	20	10	12	9	5	2	58
2-stable-indirect	8	5	6	6	6	3	33
3-no-stable	2	1	1	1	2	1	9
4-no-lm-activity	-	-	-	-	-	-	-
All	29	17	19	16	13	6	100

C: 20-49 (AT, 30-34), N=8,189 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	26	16	11	9	5	3	70
2-stable-indirect	7	5	4	5	3	2	25
3-no-stable	0.9	0.8	0.7	0.6	0.8	0.6	4
4-no-lm-activity	-	-	-	-	-	-	-
All	34	22	16	15	9	5	100

E: 250+ (AT, 30-34), N=36,481 (47%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	38	22	9	7	3	2	81
2-stable-indirect	6	4	2	2	1	0.9	17
3-no-stable	0.6	0.5	0.3	0.4	0.3	0.2	2
4-no-lm-activity	-	-	-	-	-	-	-
All	44	27	12	10	4	3	100

B: 10-19 (AT, 30-34), N=6,587 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	14	13	9	5	3	69
2-stable-indirect	7	4	5	4	3	2	26
3-no-stable	1	0.8	0.6	1	1	0.6	5
4-no-lm-activity	-	-	-	-	-	-	-
All	33	20	18	15	9	5	100

D: 50-249 (AT, 30-34), N=14,844 (19%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	30	18	10	9	4	3	74
2-stable-indirect	7	5	3	4	2	2	22
3-no-stable	0.6	0.6	0.4	0.6	0.6	0.4	3
4-no-lm-activity	-	-	-	-	-	-	-
All	38	24	14	13	7	4	100

Employer size of last employment pre-PLP (number of employees). Only Austrian women, aged 30-34 at PLP start.
Excl. women whose employer size is not available. N =78,155.

Table 55: Employer size: Full career profiles (total %, target population, incl. self-employed)

All, N=316,410 (100%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	25	13	9	7	4	2	61
2-stable-indirect	6	4	4	4	4	2	24
3-no-stable	3	2	2	3	4	2	15
4-no-lm-activity	-	-	-	-	-	-	-
All	34	19	15	14	12	6	100

A: <10, N=60,454 (18%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	14	8	9	7	4	2	43
2-stable-indirect	7	4	6	6	6	2	31
3-no-stable	4	3	4	4	7	4	26
4-no-lm-activity	-	-	-	-	-	-	-
All	24	15	18	17	17	8	100

C: 20-49, N=35,632 (10%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	21	11	10	8	4	2	56
2-stable-indirect	6	4	5	5	4	2	26
3-no-stable	3	2	2	3	5	2	18
4-no-lm-activity	-	-	-	-	-	-	-
All	30	18	17	16	13	7	100

E: 250+, N=128,074 (38%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	34	17	8	7	3	2	71
2-stable-indirect	6	4	3	3	2	1	19
3-no-stable	2	1	1	2	2	1	10
4-no-lm-activity	-	-	-	-	-	-	-
All	42	23	12	11	8	4	100

B: 10-19, N=28,638 (8%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	19	10	10	8	4	2	54
2-stable-indirect	6	4	5	5	4	2	28
3-no-stable	3	2	3	3	5	2	18
4-no-lm-activity	-	-	-	-	-	-	-
All	28	16	18	17	14	7	100

D: 50-249, N=63,612 (19%)	1-direct-stable	2-gap-stable	3-gradual-stable	4-fragmented-stable	5-no-stable	6-no-employment	All
1-stable-direct	24	13	9	8	4	2	61
2-stable-indirect	6	4	4	4	4	2	24
3-no-stable	3	2	2	3	4	2	15
4-no-lm-activity	-	-	-	-	-	-	-
All	33	20	15	15	12	6	100

Employer size of last employment pre-PLP (number of employees).
Excl. women whose employer size is not available. N = 316,410.

Table 56: Share of women whose employment intensity in calendar year 5 post-PLP is exactly 100%

Calendar year post-PLP	Base year income category (calendar year -1 pre-PLP)	N	Employment intensity = 100% exactly	
			N	Share %
5	>0-15k	37,658	85	0.2%
	>15-30k	69,336	446	0.6%
	>30-45k	88,405	492	0.6%
	>45-60k	53,837	299	0.6%
	60k+	29,919	1,853	6.2%
	Total	279,155	3,175	1.1%

k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Excl. women with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix).

Table 57: Base year income categories (calendar year -1 pre-PLP) by employer size

Employer size	Base year income category (calendar year -1 pre-PLP)					Total
	>0-15k	>15-30k	>30-45k	>45-60k	60k+	
A: <10	25%	38%	25%	8%	4%	100%
B: 10-19	15%	31%	33%	13%	7%	100%
C: 20-49	14%	28%	34%	16%	8%	100%
D: 50-249	12%	24%	35%	18%	11%	100%
E: 250+	10%	18%	32%	26%	14%	100%
All	14%	25%	31%	19%	11%	100%

Employer size of last employment pre-PLP.

k: 1,000€. Adjusted for inflation and scaled to 2022 values.

Excl. women with no income in the base year (not employed, not in the system, and employed women whose income information is missing) (see Table 39 on missing values in the Appendix). N = 294,657.

Table 58: Partners' take-up of PL: in total, by number of children & region (only women with partners)

	Women with partners		N
	Partner <u>without</u> parenting leave	Partner <u>with</u> parenting leave	
All	80%	20%	302,914
Number of children			
1	83%	17%	109,478
2	80%	20%	158,008
3	72%	28%	31,514
4	62%	38%	3,914
Region			
Burgenland	87%	13%	4,752
Kärnten	86%	14%	15,525
Niederösterreich	82%	18%	37,900
Oberösterreich	84%	16%	49,210
Salzburg	85%	15%	18,291
Steiermark	84%	16%	37,277
Tirol	87%	13%	24,366
Vorarlberg	92%	8%	11,714
Wien	72%	28%	73,569
Rest ¹	71%	29%	29,773

Region: federal state of first parenting leave episode (excl. NA, N = 537).

¹ Rest: nationwide collective social insurance accounts (occurs mostly in public administration, self-employment, and education).

Excl. women with no partners or multiple linked partners.

Figure 57: Post-type by pre-type & partner's gross income



Gross income in base year (calendar year -1 pre-PLP). k: 1,000€. Adjusted for inflation and scaled to 2022 values. Excl. women with multiple linked partners.

Chapter 8

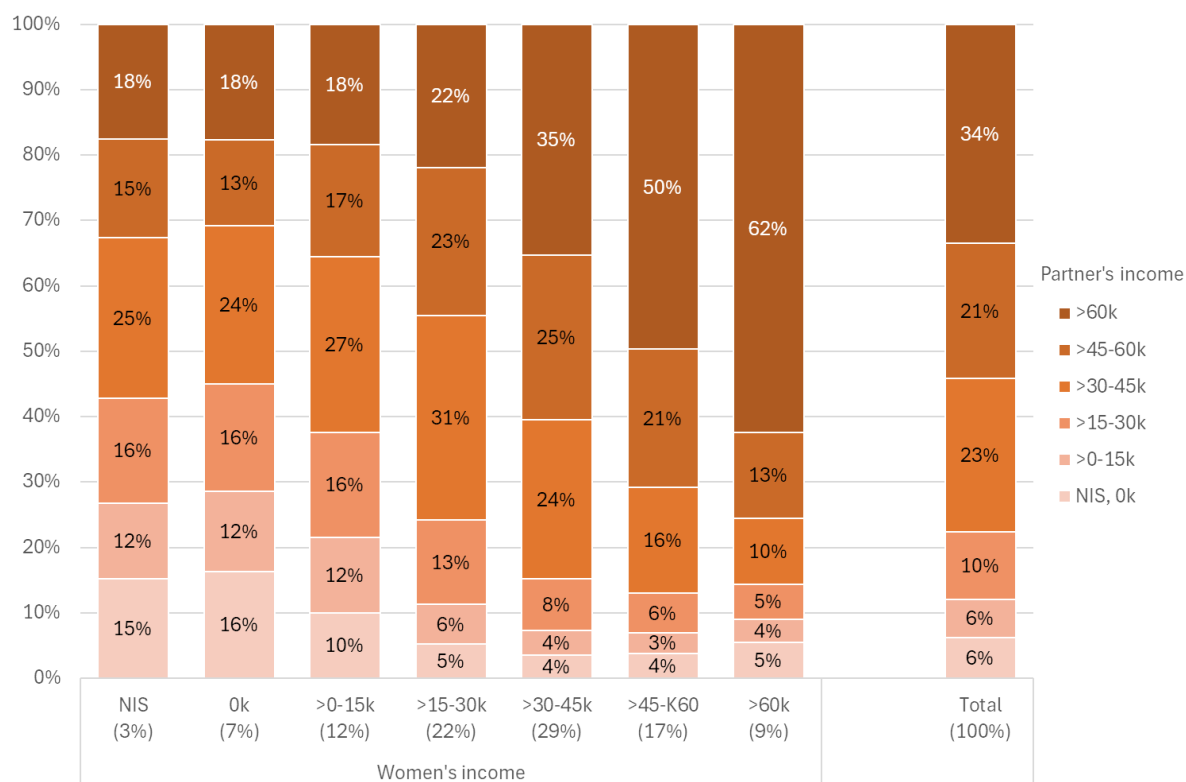
Table 59: Couple income composition, only Austrian women, aged 30-34 at PLP start.

		Partner's income		
Women's income		Low	High	Total
	Low	26%	28%	54%
	High	14%	32%	46%
	Total	40%	60%	100%

Values in %. Only Austrian women, aged 30-34 at PLP start. N = 70,128.

Gross income in base year (-1 pre-PLP). Low: 0-45,000€ . High: >45,000€.

Figure 58: Couple income composition by detailed gross income categories: target population



k: 1,000€. Adjusted for inflation and scaled to 2022 values. NIS: not in system.

Gross income in base year (calendar year -1 pre-PLP). Partner's income: calendar year 2 post-PLP.

Excl. women with missing income in year -1 pre-PLP, and women with multiple or no linked partners, and partners with missing income. N = 290,097.

Abstracts

English abstract

Women's labour market activity typically declines around their childbearing and childrearing years, as periods of parenting leave and the unequal distribution of childrearing responsibilities lead to (repeated) interruptions in their careers. This master thesis analyses women's labour market careers before and after having children and going on parenting leave in Austria. Drawing on a novel data framework and repository, which is based on administrative records from the Austrian social insurance system (the Austrian Labour Market Database, AMDB), it represents the first application of these data. Since each person's social insurance activity, such as the labour market status (employed, unemployed, out-of-labour-force), is recorded on a daily basis, it allows individuals to be tracked over time and their career trajectories to be traced out.

For the analysis in this thesis, the target population consists of all women who first entered paid parenting leave in 2002 or later (after a major "Kinderbetreuungsgeld" reform took place), and whose paid parenting leave associated with the last child ended in 2017 at the latest. This gives rise to a population of 339,355 different women whose labour market activity is analysed, focusing on a pre- and a post-parenting leave phase observation period of 5 calendar years respectively. The approach of this study is descriptive and exploratory, with a focus on the dynamic aspects of the underlying labour market trajectories. It consists of three parts: (1) establishing basic patterns and levels of labour market integration pre- and post-parenting leave, (2) identifying dynamic patterns of labour market activity, as well as transitions into and out of parenting leave, and presenting prototypical career trajectories, and (3) relating the results to findings of the national and international literature.

A central result is that on average, we see a successful return to the labour market. Five years after the end of parenting leave associated with the last child, 90% of women participate in the labour force, and three quarters are in stable employment lasting beyond a full calendar year. Women's post-parenting leave income trajectories, however, show a reduced employment *intensity*. In the fifth calendar year after their last parenting leave, only 25% of women earn more than they did in the calendar year before their first child. These results are generally in line with the findings in previous literature: Childbearing and parenting leave constitute an interruption of women's labour market careers, and the ensuing care work related to childrearing is accompanied by longer-lasting reductions in the intensity of women's employment and income.

Main findings and stylized facts in the literature concerning the influence of different factors on women's employment after childbirth are generally supported by associations between e.g., age at first childbirth/parenting leave, number of children, nationality, region, economic sector and firm size of last employment, as well as partners' earnings and their take-up of parenting leave. Additionally, new phenomena and interesting patterns that were previously unknown are revealed. These findings open up avenues of further research, for which this analysis can serve as well-informed starting point.

Deutsches Abstract

Die Erwerbstätigkeit von Frauen nimmt in der Regel in den Jahren der Geburt und frühen Erziehung ihrer Kinder ab, da Kinderbetreuungszeiten und die ungleiche Verteilung von Betreuungspflichten zu (wiederholten) Unterbrechungen ihrer beruflichen Laufbahn führen. Diese Masterarbeit analysiert die Erwerbsverläufe von Frauen in Österreich vor und nach der Geburt von Kindern und der Inanspruchnahme von Kinderbetreuungszeiten (Sammelbegriff für sozialversicherungsrelevante Leistungen im Zusammenhang mit Geburt und früher Kinderbetreuung). Sie stützt sich auf einen neuartigen Datenframework bzw. Datenarchiv, das auf Administrativdaten des österreichischen Sozialversicherungssystems (Arbeitsmarktdatenbank, AMDB) basiert, und stellt die erste Anwendung dieser Daten dar. Da die Sozialversicherungsaktivität jeder Person, wie z.B. der Arbeitsmarktstatus (beschäftigt, arbeitslos, außerhalb des Erwerbssystems), tagesgenau erfasst wird, können Einzelpersonen über einen längeren Zeitraum hinweg verfolgt und ihre Karriereverläufe nachgezeichnet werden.

Für die Analyse in dieser Arbeit umfasst die Zielpopulation alle Frauen, die ab 2002 (nach einer umfassenden Reform des Kinderbetreuungsgeldes) erstmals bezahlte Kinderbetreuungszeit in Anspruch genommen haben und deren bezahlte Kinderbetreuungszeit für das letzte Kind spätestens 2017 endete. Dies ergibt eine Population von 339.355 verschiedenen Frauen, deren Arbeitsmarktaktivität analysiert wird, wobei der Schwerpunkt auf einem Beobachtungszeitraum von jeweils fünf Kalenderjahren vor und nach Kinderbetreuungszeiten liegt. Der Ansatz dieser Studie ist deskriptiv und explorativ, wobei der Schwerpunkt auf den dynamischen Aspekten der zugrunde liegenden Arbeitsmarktverläufe liegt. Sie besteht aus drei Teilen: (1) Ermittlung grundlegender Muster und Niveaus der Arbeitsmarktintegration vor und nach Kinderbetreuungszeiten, (2) Identifizierung dynamischer Erwerbsmuster und Übergänge in bzw. aus der Kinderbetreuungszeit heraus sowie Darstellung prototypischer Karriereverläufe und (3) Einordnung der Ergebnisse in den Kontext der nationalen und internationalen Literatur.

Ein zentrales Ergebnis ist, dass wir im Durchschnitt eine erfolgreiche Rückkehr auf den Arbeitsmarkt beobachten. Fünf Jahre nach Ablauf der Kinderbetreuungszeit für das letzte Kind sind 90% der Frauen erwerbsaktiv, und drei Viertel haben eine stabile Beschäftigung, die länger als ein Kalenderjahr dauert. Die Einkommensentwicklung von Frauen nach der Kinderbetreuungszeit deutet jedoch auf eine geringere Beschäftigungsintensität hin. Im fünften Kalenderjahr nach ihrer letzten Kinderbetreuungszeit verdienen nur 25% der Frauen mehr als im Kalenderjahr vor der Geburt ihres ersten Kindes bzw. der ersten Kinderbetreuungszeit. Diese Ergebnisse stimmen im Allgemeinen mit bisherigen Forschungserkenntnissen überein: Schwangerschaft und Kinderbetreuungszeiten stellen eine Unterbrechung der beruflichen Laufbahn von Frauen dar, und nachfolgende Kinderbetreuungspflichten gehen mit einer länger anhaltenden Verringerung der Beschäftigungsintensität und des Einkommens von Frauen einher.

Die wichtigsten Erkenntnisse der Literatur zum Einfluss verschiedener Faktoren auf die Erwerbstätigkeit von Frauen nach der Geburt von Kindern werden weitgehend durch Zusammenhänge zwischen beispielsweise Alter bei Geburt des ersten Kindes, Anzahl der Kinder, Nationalität, Region, Wirtschaftssektor und Betriebsgröße der letzten Beschäftigung, sowie dem Einkommen des Partners und dessen Inanspruchnahme von Kinderbetreuungszeit gestützt. Darüber hinaus werden neue Phänomene und interessante Muster aufgezeigt, die bisher unbekannt waren. Diese Ergebnisse eröffnen neue Wege für die weitere Forschung, für die diese Analyse als fundierter Ausgangspunkt dienen kann.