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Fertility and Female Labour Force Participation in Post-Crisis Italy: A Demographic Paradox

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List of Abbreviations

AGID	Agency for Digital Italy
ANVUR	National Agency for the Evaluation of Universities and Research Systems
CeDAP	Certificate of Attendance at Birth
CEDEFOP	European Centre for the Development of Vocational Training
CNEL	National Council for the Economy and Labour
CPI	Italian Public Accounts Observatory
ECEC	Early Childhood Education and Care
EIGE	European Institute for Gender Equality
EPL	Employment Protection Legislation
EPL-gap	Employment Protection Legislation gap
EPL-r	Employment Protection Legislation for regular contracts
FLFP	Female Labour Force Participation
GDP	Gross Domestic Product
HR	Human Resource
ILO	International Labour Organization
i.e.	<i>Id est</i>
INAPP	National Institute for Public Policy Analysis
INPS	National Social Security Institute
ISTAT	National Institute of Statistics
IPT	Involuntary Part-time
KPI	Key Performance Indicators
MEF	Ministry of Economy and Finance
MUR	Ministry of University and Research
NASpL	New Social Insurance for Employment
OECD	Organisation for Economic Co-Operation and Development
OSHA	Occupational Safety and Health Administration
PA	Public Administration
PhD	<i>Philosophiæ Doctor</i>
PNRR	National Recovery and Resilience Plan
SDT	Second Demographic Transition
STEM	Science, Technology, Engineering and Mathematics
SWLB	Satisfaction with Work-Life Balance
UNFPA	United Nations Population Fund

INTRODUCTION

The Western world is currently facing significant demographic change, with persistently low fertility rates and an ageing population. These dynamics underpin social and economic challenges for the welfare sustainability. On the one hand, the growing demand for services from the elderly population; on the other hand, the need to rethink and strengthen welfare oriented towards children and families. Consequently, the issue of birth rates has taken a central role in the European and Italian demographic debate. The Nordic countries and part of Western Europe have shown a certain ability to maintain relatively stable fertility rates. This can be attributed to well-established and strong family policies and greater male participation in care work. However, fertility rates remain below the replacement level of 2.1 births per woman across Europe, with particularly low figures in Southern European countries. Italy stands among those with the lowest fertility rates, showing a downward trend that has become structural since the 2008 economic crisis. This trend not only aggravates the demographic imbalance between generations but also reinforces the gap with other European countries, where the correlation between female participation in the labour market and fertility is positive (OECD, 2023). This correlation is direct, since having children requires a certain degree of economic security, which today is often achieved when women also have an occupation (Tripodina, 2021). Nonetheless, Italy represents a notable exception in the European context. According to ISTAT data (2025), female employment has gradually increased over the years, rising from 57.6% in 2008 to 62.6% in 2024 in the North, from 52.9% to 59.3% in the Centre, and from 31.2% to 37.2% in the Southern regions. However, this trend has not been accompanied by a recovery in the birth rate. On the contrary, the TFR has continued to fall, reaching 1.20 in 2023 (ISTAT, 2023). At the heart of this paradox lies the central research question of this dissertation: “*Why has the total fertility rate in Italy continued to decline despite the increase in female employment?*”. Answering this issue requires an examination of the cultural, economic, labour market, and institutional factors, all of which will be analysed across the different chapters. To address the research, the thesis adopts a multi-source approach, including academic literature, policy papers, and international, European, and national documents. National and European statistical data (especially from ISTAT and Eurostat) have also been used to outline trends in fertility, female participation in the labour market, and the dynamics of living and housing costs. The research design is deductive, starting from a consolidated theoretical framework represented by the main theories on the relationship between female employment and fertility. Indeed, *Chapter*

I, after a brief historical introduction concerning the employment changes among women, introduces three classical theories that offer different interpretations of the relationship between female employment and fertility. Firstly, the New Home Economics Theory interprets reproductive choices as the result of a rational cost-benefit calculation, while the Second Demographic Transition highlights the cultural and value shifts of demographic change. Both perspectives adopt a macro-level approach. Differently, the Preference Theory focuses on women's individual intentions, thus representing a micro-level perspective. However, recent empirical evidence has gradually called into question the validity of these theories. In many advanced countries, particularly those in the North and in some Western European countries, the relationship between work and family has not been associated with a decline in birth rates (Matysiak and Vignoli, 2025), with Oshio (2019) describing an association that takes the form of a “*U-shaped curve*”. In countries with low levels of female labour force participation, fertility rates likewise tend to be low. Nevertheless, when female involvement in the labour force exceeds a specific threshold, the correlation is reversed and becomes positive. This is followed by an analysis of the Italian case, which examines female employment growth and TFR up to the 2008 crisis, a year that marked a significant turning point. Although both figures had previously been increasing (albeit with regional differences), economic stagnation contributed to consolidating the decline in births, giving rise to the “*Italian paradox*”. In 2023, nearly all aggregate labour market indicators showed signs of improvement in the North, the Centre and the South. Yet the birth rate remains low. For this reason, *Chapter 2* examines the condition of the female labour market and its specific characteristics in order to gain a deeper understanding of the reasons behind this trend. Educational attainment becomes a crucial factor in understanding the link between female labour market participation and fertility dynamics. The connection lies in the fact that women's level of education has a decisive impact on future employment prospects, in terms of labour market access, job quality, stability, security, and earning potential. While education is a protective factor against female joblessness, it does not guarantee stable and secure employment, as demonstrated by highly educated women in academia, who often face precarious contracts and slow career progression. Among young female workers of childbearing age (15-34), the prevalence of fixed-term contracts has grown significantly over the last twenty years (Fondazione Di Vittorio, 2025). All this affects reproductive choices, particularly the transition to the first child, leading to the postponement or foregoing of motherhood (Pieroni et al., 2023; Guetto et al., 2023). Moreover, when analysing the rise in employment, another factor to take into account is the part-time arrangement. On the one hand, it can facilitate mothers' work-life balance; on the other hand,

when this condition is involuntary, it only has negative consequences. IPT affects many women under the age of 29, and, unlike in many European countries, in Italy, it is increasing (Randstad Research Paper, 2024). In addition, the second thematic insight reveals the heterogeneity between public and private part-time. Thereby, the section focuses on part-time ambivalence in order to understand the extent to which it affects the quality of female employment and the reproductive intentions. Subsequently, the chapter analyses horizontal and vertical segregation. Employment may increase, but if it does in typically precarious sectors (CNEL-ISTAT, 2025), the birth rate is not positively affected. Similarly, the difficulties women encounter in reaching “desirable” positions compared to men lead them to delay or forego motherhood. The third sectoral analysis investigates STEM professions, where women face persistent obstacles, particularly concerning their work-life balance. Indeed, in Italy, the child penalty is pronounced, with mothers earning up to 57% less than women without children with the same qualifications (Save the Children, 2025). Young mothers experience greater losses in terms of career progression, while older mothers lose out in terms of salary levels (Melentyeva et al., 2025). Finally, “voluntary” resignations have a negative effect on both career and fertility intentions, aggravating the demographic consequences. After analysing Italian female occupation and how it influences reproductive behaviour, *Chapter 3* focuses on the living and welfare costs. First, in a context of household economic constraints, motherhood is associated with a higher risk of falling into relative poverty. Namely, having a child results in a shift in expenditure towards non-discretionary items, thus increasing the financial vulnerability of families. This vulnerability is also evident in housing independence in Italy, since it generally occurs at a relatively advanced age between 30 and 39 (Salmieri and Bonanni, 2025). Together with precarious contracts and high costs, it contributes to falling birth rates (Salmieri and Bonanni, 2025; Minello, 2022). In contrast, women who feel secure about their housing conditions are significantly more likely to plan to have their first child in the near future (Vignoli, Rinesi, and Mussino, 2011). Furthermore, literature has underlined how the availability and affordability of early childhood services affect fertility rates. Consequently, the “overall cost of a child” has a negative impact on the likelihood of becoming mothers (Del Boca and Vuri, 2007). The compensation for the inadequacies of welfare (“familism”) is insufficient. When women are forced into part-time or precarious forms of employment due to limited support services, TFR is unlikely to increase. What is needed is an egalitarian couple model with concrete policies and accessible childcare services (Arpino et al., 2015). Therefore, 2.4 billion euro has been allocated from the PNRR funds for new nurseries in an attempt to balance work and family life. Additionally, with regard to implicit policies, the Gender Equality Certification (*UNI/PdR*

125:2022) has been established at the national level. It was designed with the aim of reducing gender gaps in the workplace and promoting a better balance. Although this is a recent national instrument, with no direct evidence yet of an increase in fertility, it represents an important step towards a more inclusive welfare model. Finally, the fourth insight, which concerns Trentino-South Tyrol and its certifications, shows positive and effective results. Here, the dissemination of the “Family Audit” and the “Family in Trentino” label, alongside concrete forms of support such as childcare services, has contributed not only to supporting female occupation but also to reducing the opportunity cost of motherhood, promoting an increase in the number of children in large families and the overall regional fertility rate.

CHAPTER 1: Women’s Employment and Fertility Trends: Historical, Theoretical and Empirical Perspectives

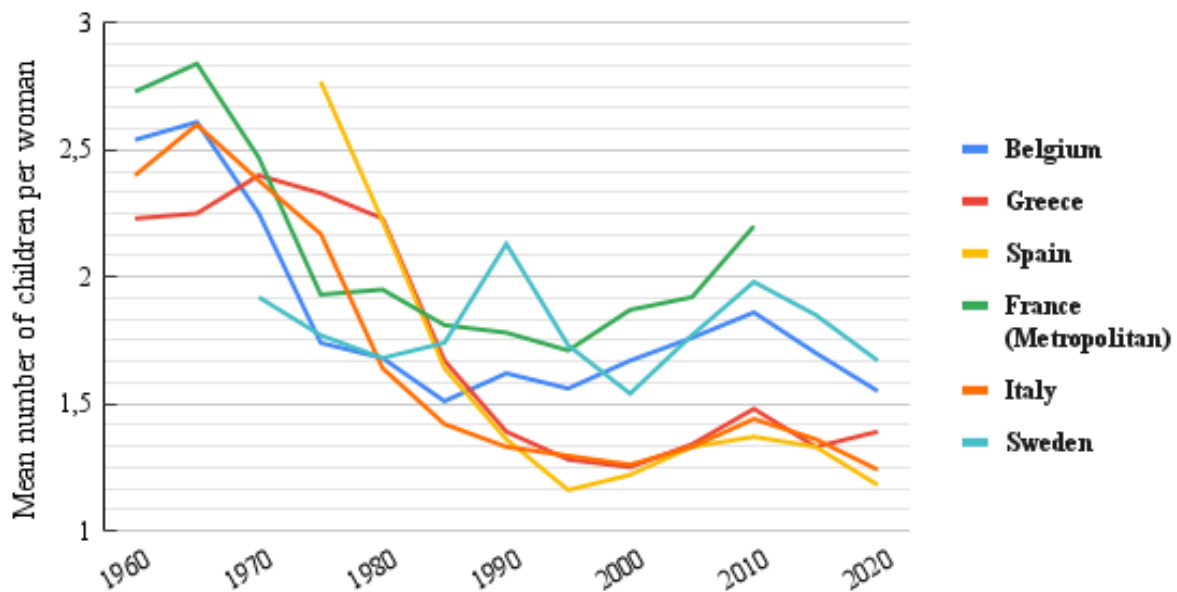
1.1.1 Women, Work, and Fertility: A Historical Perspective

The theory of demographic transition is a model that examines how populations evolve over time. It describes a progression from a traditional demographic regime, determined by high birth and death rates, to a modern one. According to this model, the initial phase is followed by a second one characterised by a marked decline in mortality; then comes the advanced transitional period, in which a significant decrease in birth rate is observed; and finally, the post-transitional stage, in which both indicators stabilise at markedly low levels (Polli and Casacchia, 2025). This transition from high to low fertility rates has brought increasing attention to the underlying socioeconomic factors that influence reproductive behaviour. Among these, the relationship between female labour market participation and fertility has emerged as a pivotal issue and a central focus of demographic research. Historically, with the advent of sedentary agriculture, the division of labour between men and women became progressively defined, assigning men to land work and relegating women to household and childcare responsibilities, thereby reinforcing their social and economic subordination. Subsequently, the Industrial Revolution transformed agricultural economies into manufacturing-based systems, resulting in a gradual intensification of women's access to the labour market. However, the long working hours and the considerable physical distance between factories and homes, as well as persistent social expectations, led to a strengthening of the sexual division of labour, consolidating women in specific industries and simultaneously anchoring them to the domestic domain. From the second half of the 20th century onwards, when the tertiary sector advanced, women found more job opportunities, as economic development increasingly required their integration into the workforce (Dinale, 2023).

Alongside the increase in female employment, the first *Figure 1.1, “The Total Fertility Rate (TFR) in Six European Countries (1960-2020)”*, presents a ten-year analysis of TFR trends from 1960 to 2020. The figure illustrates how, between the mid-1960s and the 1990s, the TFR declined in six different European countries, selected because they represent heterogeneous socio-demographic contexts: from Nordic countries such as Sweden, to countries with a

Southern European tradition such as Spain, to in-between realities such as Metropolitan France (excluding overseas departments and territories).

Figure 1.1, “The Total Fertility Rate (TFR) in Six European Countries (1960-2020)”



Own elaboration based on Eurostat (2025). Fertility indicators, Total fertility rate.
https://ec.europa.eu/eurostat/databrowser/view/demo_find_custom_17321522/default/table?lang=en

1.1.2 Three Theories on the Fertility Decline: Female Employment in Post-Industrial Europe

The decline in fertility rates can be analysed through the lens of the New Home Economics Theory, which, in the early 1980s, sought to explain this sudden and rapid drop in fertility. Becker (1981) applies the principles of rational and economic decision-making to more intimate personal life choices, thus considering structural and personal aspects, such as the decision to form a couple or to have children. His approach implies the typical classical economics assumptions, such as utility maximisation, in order to analyse how individuals allocate time and resources between paid work and unpaid childcare. According to the model

of the “*male breadwinner*”¹, namely the male who provides economic support through paid work, the woman is relegated to the domestic role, devoting herself to the household and family care. As long as the net role division subsists and the male wage is adequate to cover the household expenses, then fertility also remains high. Conversely, when this division within the couple diminishes and the spendable skills within the labour market between men and women begin to converge, fertility drops. This dynamic has been observed in the post-industrialisation process, with an increasing demand for labour in the service sector. In addition, the rising level of female education led to a gradual convergence of women's skills with those of men. Consequently, according to Becker, the increase in the opportunity cost associated with motherhood, such as the loss of income and fewer professional advancement opportunities, contributes to reducing the fertility rate in countries with increasing female labour market participation (Dinale, 2023).

Moving beyond this economic-based approach, the Second Demographic Transition (SDT) offers a broader theoretical framework recognising the central role of cultural and value changes in shaping behaviour. Indeed, by analysing demographic change in 30 European countries, van de Kaa (1987) argued that a central demographic feature of the SDT is the decline in fertility (from the replacement level of 2.1 births per woman to levels well below substitution). This sub-replacement level is not a mere response to economic factors but rather a structural outcome of cultural shift. These include the multitude of lifestyle arrangements beyond marriage, resulting from high divorce rates and the increase in cohabitation, a diversification of reproductive behaviours, individual autonomy, and the pursuit of personal self-realisation over traditional family obligations (Lesthaeghe and van de Kaa, 1986). In particular, Lesthaeghe (1995) identifies three phases within the SDT. Firstly, Phase I (1955-1970) is characterised by a decline in fertility due to a reduction in marriages, along with an increase in divorce rates and the widespread use of contraception. Phase II (1970-1985) is a consequence and evolution of the first phase, and it is characterised by a significant increase in premarital cohabitation and births outside marriage. Finally, Phase III (1985 onwards) includes what has already been mentioned, along with a partial recovery of fertility after age 30, which contributes to a moderate increase in fertility rates, although without necessarily restoring them to replacement

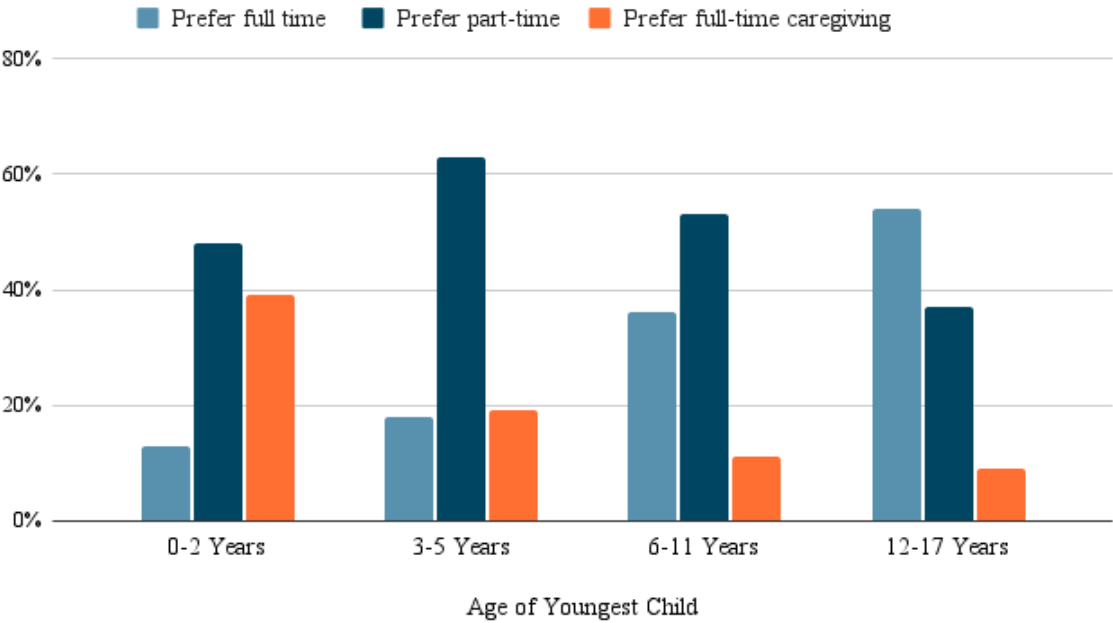
¹ The *male breadwinner* model is a part of the broader traditional norms related to masculinity, according to which men are the main economic supporters of the household. This prevailing view of the male role as the main source of income, besides having a significant impact on the conception of the family, can also affect men's self-esteem, especially in contexts where this social expectation is not fulfilled (EIGE Gender Equality Index, 2021).

level. These reconfigurations outline a structural evolution of family and reproductive patterns, representing not a mere cyclical fluctuation but rather a deep and irreversible shift driven by changes in values, culture, and individual preferences. Moreover, Aries (1980) describes the recent evolution of the children's role and significance within couple dynamics, referring to the end of the "*child king*" era. Unlike in previous centuries, when offspring were not only central but also necessary to family life, within the SDT, children are not seen as essential to the fulfilment of the couple's project. Rather, having a child is perceived as one of the possible components that can enable individuals to achieve personal growth and realise their life projects. Under this new interpretative perspective, the couple and the partner assume a primary role, and children no longer constitute the foundational core of family formation.

These two theories have prompted extensive investigations of macro-level correlates of fertility, but little qualitative research has focused on micro-level processes. Therefore, Hakim (2003) introduced the Preference Theory, which reallocates the priority to the women's preferences and aspirations as key variables for explaining fertility and vocational pursuits behaviour. According to the author's view, the theory is applicable in all rich modern societies, and what is central are women's intentions and value orientations. As a result of these differentiated preferences, women can be grouped into three categories. The first one includes the "*Adaptive women*" who prefer to combine work and family without giving a fixed priority to one or the other. This is the largest group, and the professions they pursue make it possible to balance work and family responsibilities, such as school teaching. Moreover, the vast majority of women who move to part-time work after childbirth can be classified as adaptive, as they seek to balance paid work and unpaid family duties equally. The second category is identified as "*Work-centered*", a minority despite the growing *influx* of women into higher education and professional occupations in recent decades. Work-centered women focus on activities in the public sphere, with family life organised around work. Many of these women remain childless, even when married. Finally, the third group is "*Home or Family-centered women*", who avoid paid employment since they prefer to devote their time to their typically larger family, which remains the main priority throughout life. Each of the three groups is characterised by a distinctive value system and substantially different life goals. This results in divergent behavioural patterns and preferences concerning the role of women in the family and work spheres. As a consequence, different approaches can provoke tension, as demonstrated by ongoing debates over the necessity and scope of public childcare services, as well as differences in employment and work-life reconciliation policies. Following Hakim's research, different

individual preferences play a crucial role in shaping women's reproductive decisions and labour market participation patterns, and this is also confirmed in the 2024 Make Mothers Matter Report, which includes comprehensive and policy-relevant nationwide surveys. Mothers were asked the reasons behind changes in their working status, with nearly 30 percent saying that the change was motivated by a desire to spend more time with their children, confirming how central the value and relationship dimension is in post-maternity employment decisions. Moreover, the report demonstrates that the “Adaptive women” represent the majority, namely those who try to balance work and family. In fact, before becoming mothers, 74% of women worked full time (either as employees or self-employed), while after the first childbirth, this figure dropped to 49%. As for part-time work, while it accounts for 13% among childless women, it rose by 10 percentage points after childbirth, though it varies depending on the child’s age. Figure 1.2 “The Influence of Children’s Age on Mothers’ Employment Preferences (2024),” represents 9,400 mothers’ employment orientations in a selection of 11 Countries².

Figure 1.2 “The Influence of Children’s Age on Mothers’ Employment Preferences (2024)”



Make Mothers Matter (2024). <https://makemothersmatter.org/wp-content/uploads/2025/03/MMM-State-of-Motherhood-in-Europe-2024.pdf>

Mothers were asked to answer the following question: “How would you prefer to balance work and family life for these periods of your child/children's lives?”.

² Belgium, Czechia, France, Germany, Ireland, Italy, Poland, Portugal, Slovakia, Spain, Sweden, as well as the UK.

In this cross-sectional analysis, it emerges that in the early years of the youngest child's life, the highest preference is for part-time work (48%), followed by full-time caregiving over paid employment (39%), and only 13% of mothers would continue to work. From ages 3 to 5 years of the youngest child's age, the willingness to work part-time increases to 63%, compared to 19% of those who prefer to stay at home and 18% of those who wish to continue working full-time. As the child gets older, part-time preference decreases to 53% for children aged 6 to 11 and 37% for children aged 12 to 17. Meanwhile, the intent to stay outside the labour force also decreases, indicating that mothers' professional trajectories tend to adapt to the family's evolving needs.

1.1.3 Women, Work, and Fertility: From Conflict to Compatibility

As *Figure 1.1* illustrates, since the mid-1990s, many European countries, including Italy, have seen a reversal of the negative correlation between female labour force participation and fertility rates. This development required a revision of previous theories, which emphasised the conflict between work and family, thus paving the way for new interpretations. As highlighted in OECD's *Paper No. 299* (2023), both male and female employment rates are positively associated with the fertility rate. Although cross-country comparative analyses do not capture individual or family employment conditions on reproductive decisions, they nevertheless suggest the significance of labour market performance in determining positive fertility trends. According to Battisti (2025), in all advanced economies, there is a positive correlation between the two variables mentioned above, and this perspective is further validated by Oshio's (2019) study. He analysed the positive correlation between female labour force participation (FLFP) and total fertility rate (TFR) using data from 24 OECD countries over the period 1970-2017. In the early years, the cross-sectional association between the two variables was negative, but after the mid-1980s, the trend reversed. Above a certain threshold, the correlation between FLFP and TFR tends to stabilize and, in some cases, becomes positive. Therefore, the correlation can no longer be considered spurious and cannot be attributed exclusively to stable cultural or institutional factors within individual countries, such as those that are more supportive of work-life balance. Conversely, this also emerges by analysing each country's internal and longitudinal variations over time. In this framework, Oshio describes an association that can be configured with a "*U-shaped curve*": in countries with low levels of female labour force participation, fertility rates likewise tend to be low. However, when female participation in the workforce

exceeds a threshold between 50% and 60%, the correlation reverses and becomes positive. This inflection point represents the threshold beyond which employment and fertility become compatible. As a result, through the gradual consolidation of women's employment, the conflict between career and motherhood tends to diminish, paving the way for a new balance between work and reproductive choices. In addition, once the FLFP crosses this turning point, public spending on in-kind benefits tends to increase. This signals a progressive institutional transformation towards supporting motherhood through childcare services and dedicated care provisions.

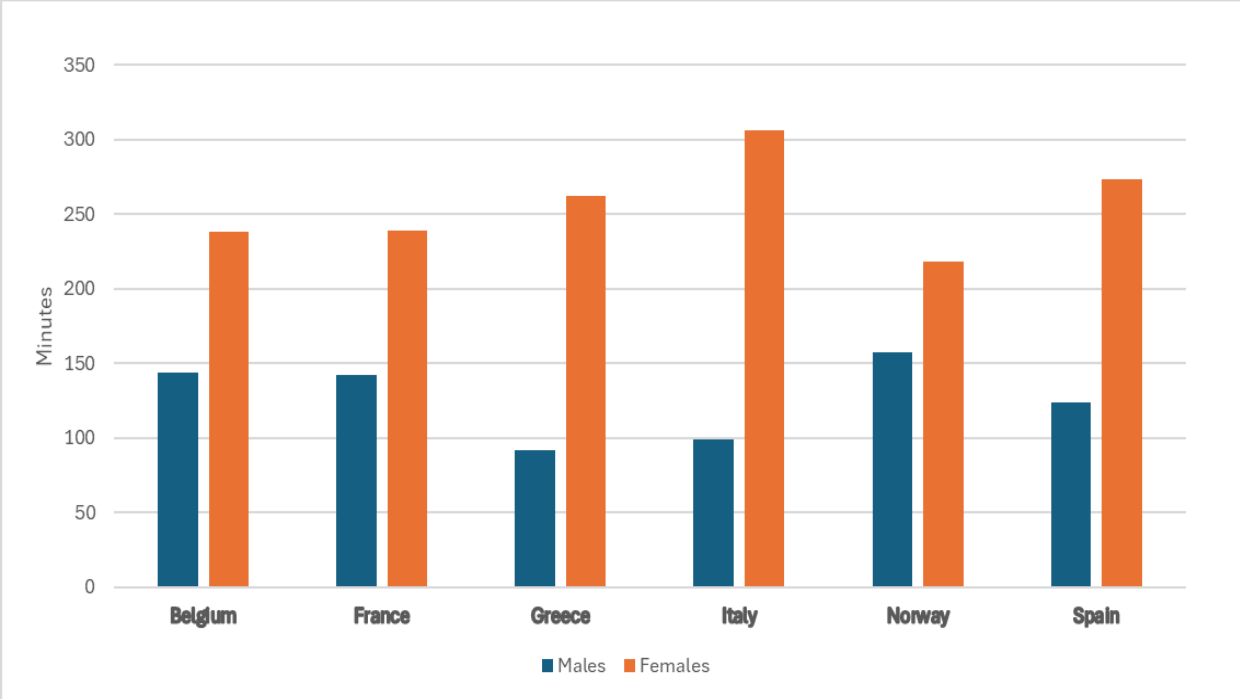
1.1.4 Three Theories Challenged: Rising Fertility and the Limits of Classical Explanations

This empirical evidence highlights the limitations of classical theories, starting with the New Home Economics Theory, which interprets reproductive decisions as the outcome of cost-benefit evaluation. With shifting gender roles and the decline of the male breadwinner and female caregiver, family creation has increasingly been postponed or avoided. More recently, Minello (2022) has offered an alternative perspective. While acknowledging his contribution, the researcher points out that the theory fails to capture the growing plurality of family forms and the evolution of gender roles. Following the same view, the data-driven study “*The End of an Era: The Vanishing Negative Effect of Women's Employment on Fertility*”, by Matysiak and Vignoli (2025), suggests a reconfiguration of the social and economic structures underlying contemporary upper-middle-income societies. The theoretical framework needs to account more effectively for changing dynamics such as family services, work-family reconciliation mechanisms, and evolving gender norms. Looking at 94 studies between 1990 and 2023, the working paper concludes that the link between the female workforce and childbearing has become positive in Nordic countries and some parts of Western Europe. In this context, family-friendly policies and increased paternal involvement have reinforced the role of female employment, making it more compatible with childbearing. This helps sustain fertility levels in post-industrial societies. A similar pattern emerges in Central and Eastern European countries, where women are essential secondary earners; consequently, their labour force participation is pivotal. This dynamic contributes to making employment a prerequisite for bearing a child, even though male participation in housework is more limited and they face a less robust state support for work-life balance compared to the Nordic countries.

Subsequently, the Second Demographic Transition (SDT) has been increasingly questioned, while valuable for interpreting the emergence of new family models linking them to cultural processes of individualisation and secularisation. The theoretical framework envisages a sustained period of fertility below the replacement rate but fails to account for the current divergence between countries. Namely, where fertility levels are low but close to the replacement level and those that remain well below it (Dinale, 2023); put differently, the “*lowest-low fertility*” countries in which the TFR has fallen to a value of 1.3 or less (Piotrowski, Schmitz, and Lu, 2021). In addition to this demographic critique, Coleman (2004) argues that the SDT cannot be conceived as a genuine “transition” in the conceptual sense of the term. Central demographic aspects such as mortality or population growth are not addressed, and the theory lacks the defining features of universality and irreversibility that a transition implies. Furthermore, Northern countries, more closely aligned with SDT models, exhibit higher TFRs, whereas traditional-family societies, such as Italy, demonstrate lower birth rates. Therefore, Lesthaeghe (2010) suggests the importance of taking into account country-specific variables, both of a historical and institutional nature. Moreover, what challenges the historical irreversibility and cultural determinism of SDT is the literature of Mills and Blossfeld (2013), which introduces an approach that includes the element of globalisation and, consequently, its economic and institutional shift. This approach identifies four major structural transformations: the increased permeability of national borders in trade flows, the acceleration of global interconnection due to technological advances, growing tax competition accompanied by deregulation and privatisation, and exposure to increasingly volatile global markets. All this has fuelled uncertainty in employment, widening divergences and inequalities. The result is a more limited view of individual action, as the ability to shape one's own life path depends largely on access to human capital, the institutional context, and the education system, all relevant factors that will also be analysed in the following chapters. This creates persistent inequality patterns, not only between countries but also within them. Demographic behaviour develops in a context of “converging divergences”, in which women's employment and reproductive choices are influenced by path-dependent institutional factors. Finally, the SDT suggests that low fertility is a consequence of modernisation and secularisation, but it does not consider the persistent asymmetry in gender roles and the failure to modernise family structures. Indeed, McDonald (2000), by distinguishing individual-orientated institutions (such as the school, the labour market, and the legal system) and family-oriented ones (namely social and cultural structures that govern family roles and relationships), asserts that the shift from high to low fertility is primarily due to the slow improvements in achieving gender equity within

family-oriented institutions. *Bar Chart 1.3, “Average Daily Minutes Spent on Household and Family Care by Gender (2018)”*, shows the average number of minutes spent per day on households and family care, disaggregated by gender across six selected European countries. In Belgium, men devote 2 hours and 24 minutes, and women 3 hours and 58 minutes. France shows similar results, with 2 hours and 22 minutes for men and 3 hours and 59 minutes for women. In Southern European Countries, the disparity is even more pronounced: in Greece and Italy, men spend around 1 hour and 35 minutes on home and family care compared to 4 hours and 22 minutes (Greece) and 5 hours and 6 minutes (Italy) for women. In Spain, too, the difference is roughly 2 and a half hours, and in Norway, although to a lesser extent, the disparity is approximately 1 hour to the disadvantage of women.

Figure 1.3, “Average Daily Minutes Spent on Household and Family Care by Gender (2018)”



Own elaboration based on Eurostat (2018). Time spent on household and family care by sex.
https://ec.europa.eu/eurostat/databrowser/view/TUS_00HHSTATUS_custom_5438801/bookmark/table?lang=en&bookmarkId=30953c88-7690-4156-a30e-b2904b96c761&c=1680984574287

Goldscheider et al. (2015) predict a return to replacement-level fertility, thus suggesting a possible fifth phase in the theory of demographic transition. They argue that fundamental structural changes have led to a first gender revolution in the public sphere, which in turn has resulted in a clear change in traditional relationships, thus producing negative trends in fertility and in the stability of unions. When the second change occurs, which involves an equal division of parental roles and unpaid care responsibilities, the fertility rate will increase and also lead to greater stability in the couple.

The last theory analyzed, known as Preference Theory, gives women an active and autonomous role in choosing their lifestyle. According to Hakim, in modern societies, all women would have a real choice between a work-centered existence, a family-centered one, or a combination of both. However, this theory has come under criticism, as it overlooks the fact that such choices are strongly conditioned by persistent social pressures (Minello, 2022). In fact, the theory does not take into account the phenomenon of adaptive preferences, whereby women exposed to structural inequality internalise limitations and obstacles as a natural part of reality and adapt their desires accordingly. In this light, choices that appear voluntary may, in fact, be the result of internalised forms of exclusion and marginalisation (Mary and James, 2006). This reductionist approach to preference formation has also been challenged by Nussbaum (2000), who argues that mere preferences are an unreliable indicator for public policy. The preferences expressed are not necessarily authentic or free, as they are often the result of a lack of real alternatives. Indeed, the Make Mothers Matter Report (2024) highlights that a significant percentage of mothers are dissatisfied with their working status: in Italy, the figure reaches 44%, demonstrating that the current labour market condition is not always the result of free and autonomous choice.

1.2 The Italian Case

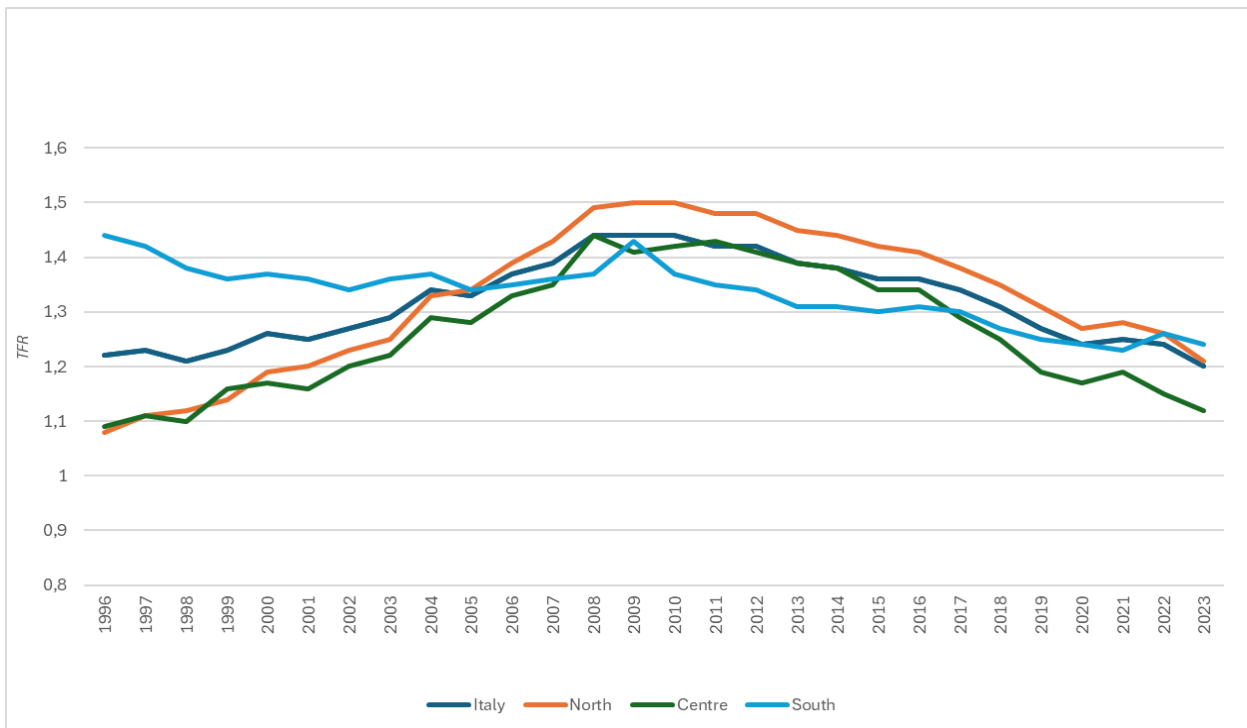
In some European countries where women's participation in the labour market is strong, the birth rate is also high. Tripodina (2021) explains that there is a direct correlation between female employment and fertility, since having children requires a certain degree of economic security, which is often achieved when there is more than one source of income. This condition is met when women also have an occupation. Since the 2008 crisis, female employment has gradually improved, but a large gap remains compared to other European Union countries. Indeed, a comparison across EU countries shows that the lower female participation in Mediterranean countries has not led to an increase in the birth rates. On the contrary, limiting the analysis to the Italian case, despite a progressive growth in female employment, the fertility rate has continued to decline. From 1996 to 2008, employment and births rose in parallel, but this increase was interrupted by the 2008 crisis, inaugurating a period in which, despite further improvements in employment, fertility embarked on a downward trajectory.

1.2.1 *Employment and Fertility from 1996 to 2008*

Drawing on quarterly historical data and on a reconstruction of the main labour market aggregates dating back to 1977, ISTAT (2013) reported an increase in both male and female employment rates between 1996 and 2008. As in other European countries, female employment mainly affected the middle age groups, between 29 and 45 years old, and was driven by the most educationally qualified cohorts. Conversely, women with low levels of educational attainment experienced only a marginal increase in their employment rates. This positive trend was observed throughout the country, albeit at different levels (Scherer and Reyneri, 2008). In parallel with improvements in the labour market between 1996 and 2008, *Figure 1.4, "TFR by Italian macro-regions (1996-2023)"* shows an upward trend, particularly in the Northern and Central regions of Italy. In the North, from the first 1996 TFR value (1.08) to the peak of 2008-2010 (1.50), a steady increase is observed. After 2008-2010, the TFR began to stagnate and then decline, reaching 1.21 in 2023. The trend is similar in the Centre: starting at 1.09 in 1996, the TFR rose to 1.44 in 2008. Thereafter, it gradually declined, reaching 1.12 in 2023. Conversely, in the South, the TFR was 1.44 in 1996, falling slightly before 2008-2010, reaching 1.24 in 2023. Despite these regional differences, at the national level Italy experienced an upward trend in the TFR (1.22 in 1996) until the 2008-2010 peak, in which the highest value

of 1.44 was reached. This was followed by a continuous decline, reaching 1.20 in 2023, well below the replacement-level fertility of 2.1, with no signs of reversal.

Figure 1.4, “TFR by Italian macro-regions (1996-2023)”



Own elaboration from ISTAT. Total fertility rate by geographical distribution, Historical series

https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1.POP.1.0/POP_BIRTHFERT/DCIS_ARCH_FEC/IT1.25_944_DF_DCIS_ARCH_FEC_6.1.0

Caltabiano, Castiglioni, and Rosina (2009) explain that, in the Northern regions, cohorts of women born between 1960 and 1970 exhibit a recovery in fertility, especially after the age of 30. This pattern suggests that family creation is postponed in order to invest in personal development and working careers, with a compensatory shift towards later childbearing. This trend is reflected in the ISTAT data on live births by mother's age group (1949-2014): although the number of live births increased from 528,103 in 1996 to 576,659 in 2008, an evident change occurred in the age distribution of mothers. Specifically, in 1996, 181,053 children were born to mothers aged 25-29, compared to 132,496 in 2008, a decrease of more than a quarter (-26.82%). The 35-39 age group has seen an increasing number of live births (+103.39%), rising from 68,888 in 1996 to 140,110 in 2008. The 40-44 age group has also seen significant growth: over the same period, the number increased from 12,129 to 30,989, representing a percentage

change of +155.5%. Such recovery is most evident in Northern regions and especially among women with higher levels of education. In contrast, Southern regions show no recovery of postponed fertility, and cohort fertility has continued to decline significantly (M. Caltabiano, M. Castiglioni, A. Rosina, 2009).

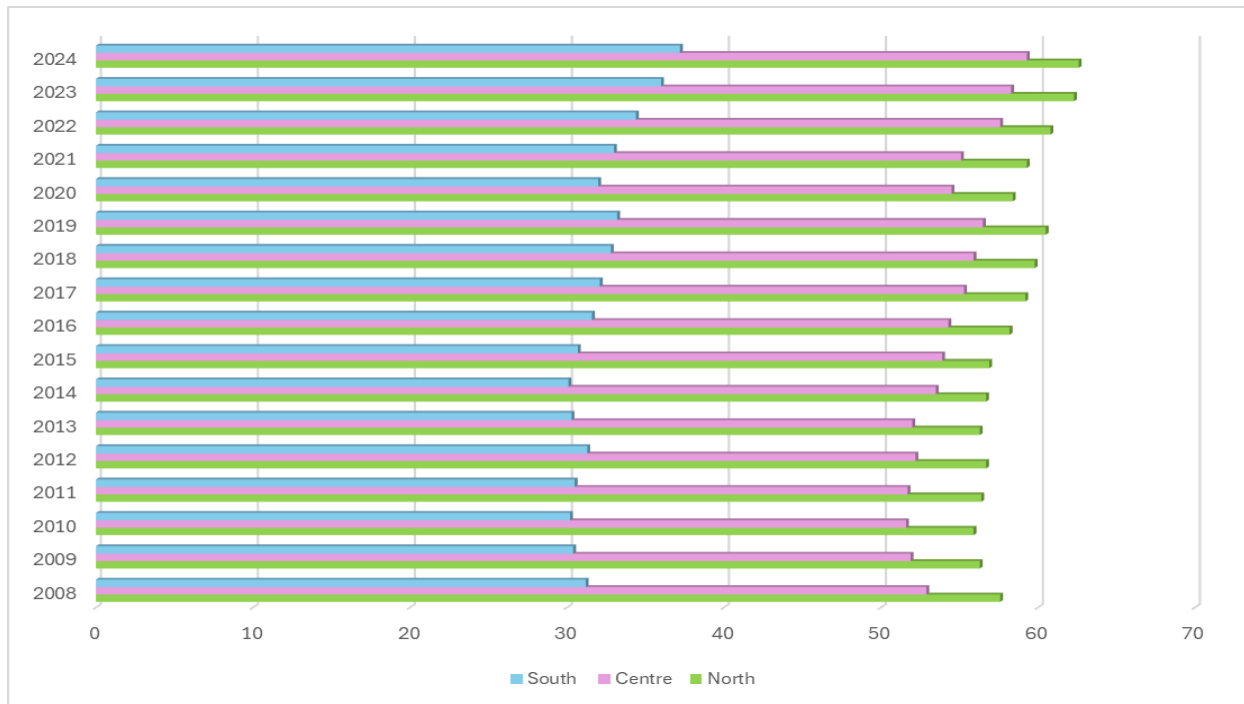
1.2.2 Employment and Fertility: the 2008 crisis

The 2007 Great Recession has affected all European countries, which have experienced a drop in gross domestic product (GDP), a rise in unemployment rates, a contraction in wages, and pressure on public budgets, with often correlated cuts in public spending on social and family support policies. One of the most affected groups is young people under the age of 25, whose unemployment has increased in almost all European countries, especially in Southern Europe. In addition, the deteriorating economic conditions affecting households fuel a general perception of uncertainty about future economic conditions. In an environment of instability and distrust, young adults may avoid making long-term commitments, such as buying a house or forming a family. Thus, fertility rates declined not only in Southern European countries, where the effects of the crisis were strongly felt, but also in the Nordic countries, which are generally economically and socially more resilient. In addition, the unemployment rate emerged as a key determinant across all age groups: even the older age cohorts were affected by the downward trend, as the recession had an impact on the timing of fertility, postponing parenthood, and the number of children born during one's lifetime (Matysiak, Sobotka, and Vignoli, 2020). This helps explain why, after the economic crisis, the proportion of women in their 30s, who contributed most to Italy's overall fertility rates between 2000 and 2008, was reversed (Graham et al. 2016). According to the ISTAT press release data (2017), over an eight-year period (from 2008 to 2016) births decreased by more than 100,000. The decline phase is characterised by a decrease in first children in particular, from 283,922 in 2008 to 227,412 in 2016. A large part of the fall in the absolute number of births is also due to structural factors, namely a reduction in the number of women in the childbearing age group, but another significant reason is attributable to the lower propensity of women to have children compared to previous years.

1.2.3 Employment: from 2008 onwards

According to the CNEL-ISTAT report (2025), the third quarter of 2024 has seen a structural increase in the female employment rate compared to the same period in 2008. In sixteen years, it has increased by 6.4 percentage points, with a particularly pronounced rise among women over 50, equal to 20 percentage points, while the increase among women aged between 25 and 34 has been lower, equal to 1.4 percentage points, but still positive. At the regional level, the increase in the female employment rate between 2008 and 2024 was most significant in Central Italy, while Northern and Southern Italy recorded a growth of approximately +5 percentage points over the same period. Much of this growth has been concentrated in the last four years. In fact, the Unioncamere report (2024) explains that the post COVID-19 period has been characterised by a significant economic recovery, which brought gross domestic product (GDP) back to pre-crisis 2019 levels as early as the first half of 2021. In 2023, nearly all aggregate labour market indicators showed signs of improvements: an increase in the employment rate, a decrease in the unemployment rate, and an increase in permanent contracts. Furthermore, the positive employment trend was maintained over the course of 2024. *Figure 1.5, “Female Employment Rate (15-64) in Northern, Central, and Southern Italy (2008-2024)”*, demonstrates that the female occupation rate has increased in all macro-areas of Italy. Although the regional gap remains marked, there has been a widespread improvement, with more significant growth in post-pandemic years (ISTAT, 2025).

Figure 1.5, “Female Employment Rate (15-64) in Northern, Central, and Southern Italy (2008-2024)”

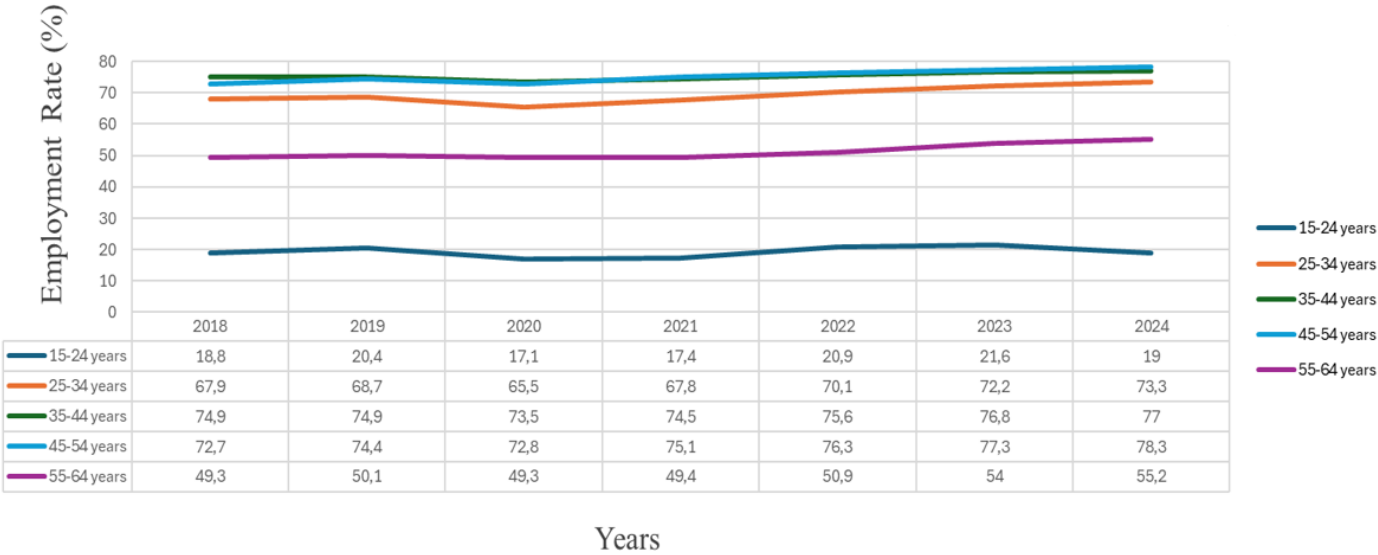


Own elaboration from ISTAT (2025). Employment rate by geographical distribution, gender, and age group. https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1,Z0500LAB,1.0/LAB_OFFER/LAB_OFF_EMPLOY/DCCV_TAXOCCUI/IT1,150_915_DF_DCCV_TAXOCCUI_1.1.0

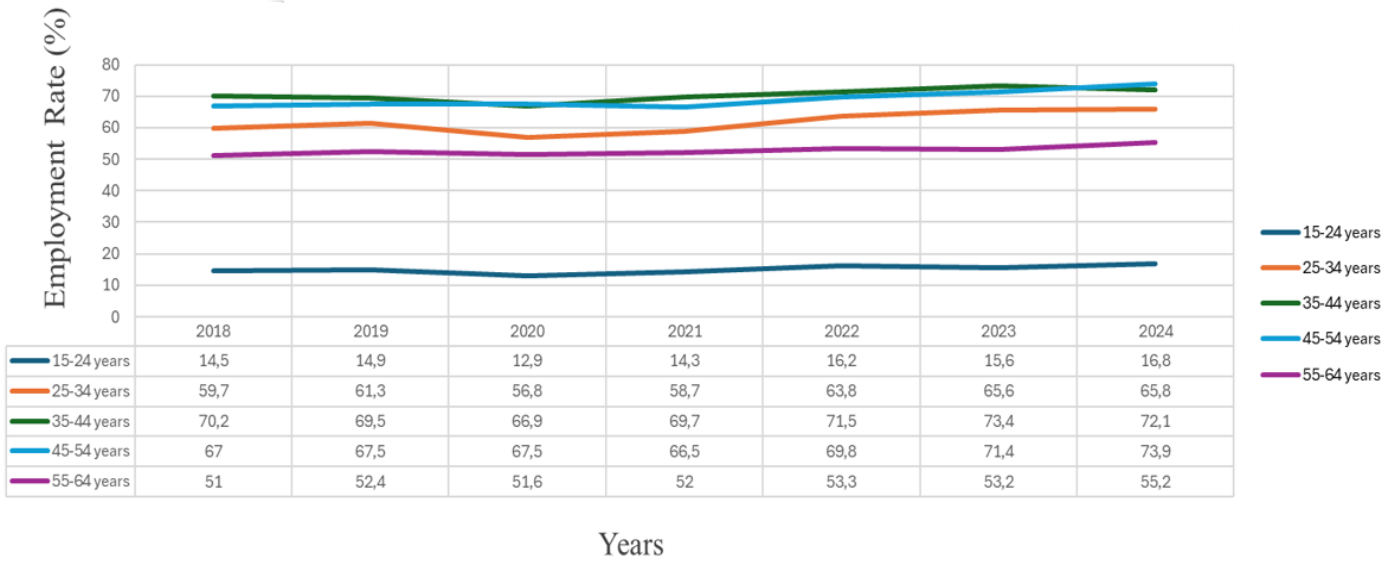
Overall, although to differing extents, female employment in Italy has grown across all regions over time. Consequently, this trend calls for a further examination of the factors that explain why, despite the overall increase in female employment rate, fertility in Italy has continued to decline (Figure 1.4). Figure 1.6 through Panels A, B, and C shows how the employment rate for five age groups in Northern, Central, and Southern Italy has changed from 2018 up to 2024. Panel A, “Female Employment Rate in Northern Italy” reveals that, among young women aged 25 to 34, the employment rate was 67.9% in 2018, falling to 65.5% in 2020 due to the pandemic, then rising again to 73.3% in 2024. In addition, employment among the 35-44 age group is also rising, from 74.9% in 2018 to 77% in 2024. The highest percentage of female employment in the North is found among women aged 45 to 54, with an employment rate of 72.7% in 2018, a modest increase during the COVID-19 pandemic (72.8% in 2020) and an employment rate of 78.3% in 2024. Panel B, “Female Employment Rate in Central Italy” illustrates the increase in female employment in the 25-34 age group, which was 59.7% in 2018 and rose to 65.8% in 2024. The 35-44 age group fell slightly, from 70.2% in 2018 to 69.7% during the pandemic (2020), before rising to 72.1% last year. The rate was even higher for women aged 45 to 54,

reaching almost 74% in 2024, while in 2018 and 2020 it was 67% and 67.5%, respectively. Finally, *Panel C, “Female Employment Rate in Southern Italy”* reveals overall lower rates compared to the other two areas. In 2018, only 34.1% of young women aged 25 to 34 were working, and 40.4% of those aged 45 to 54. The highest proportion of female workers in 2018 was in the 35-44 age group, with 42% participating in the labour market, meaning that in all three groups fewer than one in two women were employed. Not taking into account the decline due to COVID-19, in 2024 the female employment rate for the youngest age group was 42.1%, and for those aged 45-54 it was 46%, making an increase from the figures observed six years earlier. The employment rate among 35-44 year-olds was 47.4%, again the highest among the age cohorts.

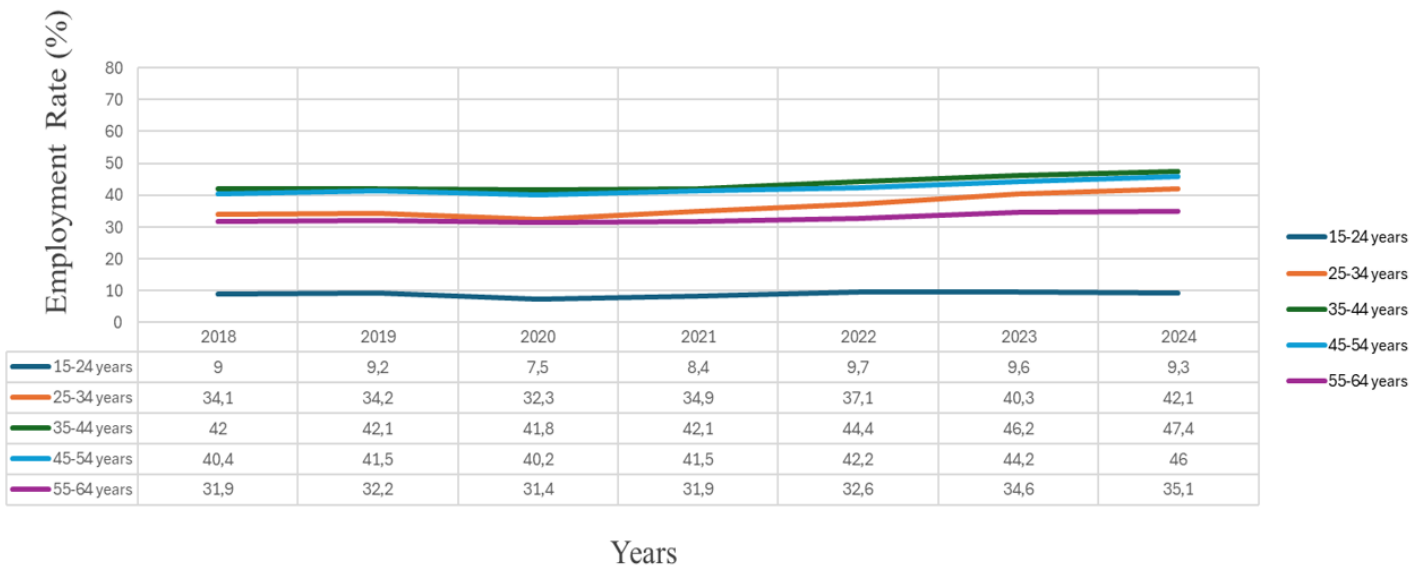
Panel A: Female Employment Rate in Northern Italy (2018-2024)



Panel B: Female Employment Rate in Central Italy (2018-2024)



Panel C: Female Employment Rate in Southern Italy, (2018-2024)



Own elaboration from ISTAT (2025). Employment rate by geographical distribution, gender, and age group.

https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1_Z0500LAB.1.0/LAB_OFFER/LAB_OFF_EMPLOY/DCCV_TAXOCCU/IT1.150_915_DF_DCCV_TAXOCCU1_1.1.0

As highlighted in the CNEL-ISTAT report (2025), in the third quarter of 2024, women over the age of 50 accounted for 71.3% of the overall increase in female employment. The inclusion of adult women in the labour market is a fundamental structural factor since they are in a life phase where reproductive choices have already been made or definitively postponed. Therefore, their entry into the labour market does not directly affect the fertility rate. By consequence, it is not sufficient to consider the overall inclusion of women in the workforce; rather, a specific analysis is needed, with particular attention to the age distribution, as previously illustrated.

Secondly, it is important to compare Italian female employment trends to the European context, where advancements have typically been more significant. According to Eurostat data, in 2019 the Italian female employment rate was 50.2%, meaning that only one in two women was employed. The trend is upward, with the percentage increasing to 52.5% in 2023. However, a significant disparity between Italy and other Member States is evident, as the average female employment rate across the EU-27 reaches around 66%. As highlighted in an article by De Romanis (2024), the female employment rate in Germany stands at 77%, which is approximately 25 percentage points higher than in Italy. The rate in Greece is 56%, and the growth in women's labour market entry over the last decade has been approximately double that observed in Italy. An acceleration in the convergence of Italian women's participation rate towards European averages is essential in light of current demographic trends. Between 2022 and 2040, there would be a drop of about 4 million people in the 15-74 age range due to population aging. In this context, boosting women's participation in the workforce is a keyway to counteract the shrinking workforce. Thus, these tendencies could be mitigated by policies targeted at reducing the Italian participation rate gap with Europe during the next 10 years (Banca d'Italia, 2023). However, in order to ensure that the increase in female employment also contributes to counteracting the fertility rate decline, it is essential to accompany these policies with measures that promote work-life balance, particularly for women of childbearing age. Namely, Dinale (2023) advocates the importance of the welfare state as the main active promoter of family policies, which in turn have a significant impact on fertility outcomes (*Chapter 3*). In fact, women's employment brings additional income to the family, which facilitates having children and guarantees financial stability (*income effect*), while a job increases the opportunity cost of parenthood (*price effect*). Specifically, children need to be looked after in childcare facilities, which may represent a significant cost for families (Banca d'Italia, 2023). Therefore, institutional activities must be oriented towards gender equality, allowing mothers to balance their professional careers and reproductive choices without being forced to sacrifice one for the other. As Di Franco (2025) points out, this objective can be

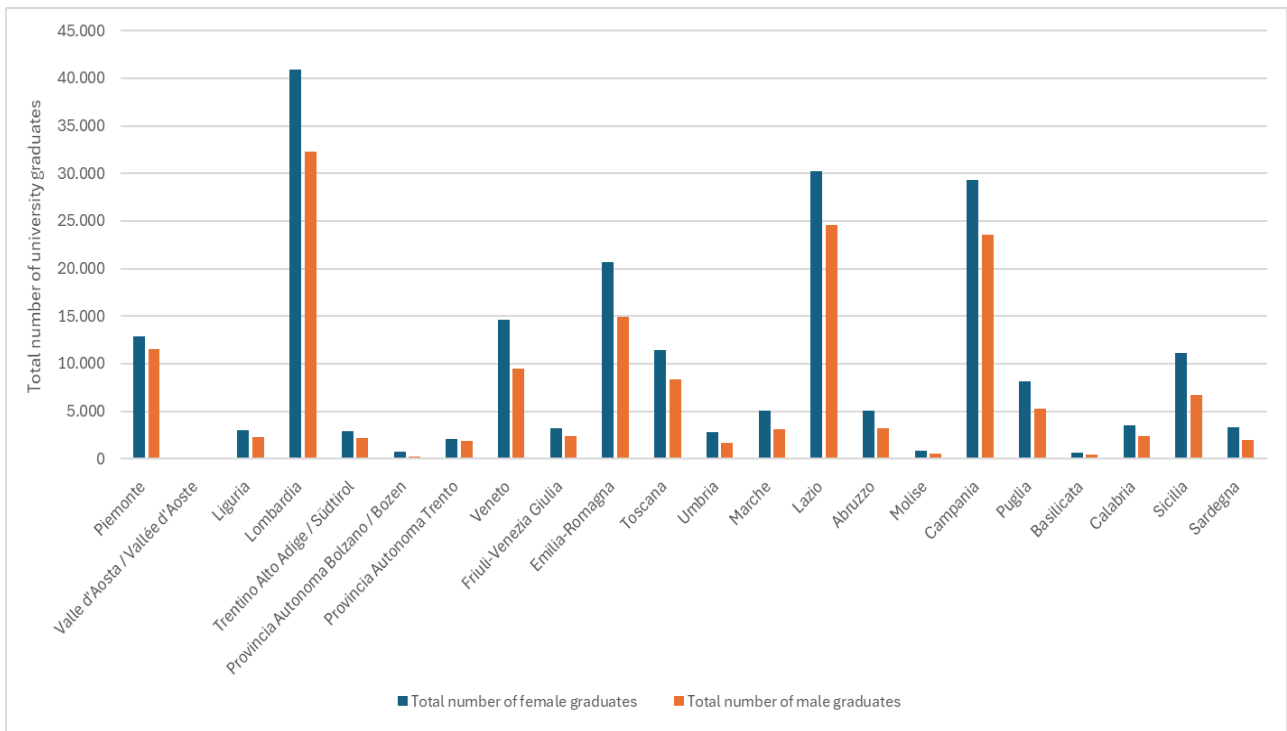
achieved by expanding the range of childcare services, encouraging greater involvement of fathers in childcare, and supporting women's participation in the labour market, especially through measures that facilitate professional reintegration after prolonged inactivity. Thirdly, it is fundamental to overcome the work-fertility dichotomy by adopting a more articulated approach. It is not only the presence of women in the labour market that matters, but also the quality, the stability, and the perceived value of their employment (*Chapter 2*).

CHAPTER 2: Labour Market Context and Fertility Dynamics in Italy

2.1 Educational Attainment and Postponement of Motherhood

The AlmaLaurea 2025 Report on the profile of Italian graduates in 2024 indicates that the share of graduates aged 25-34 is 31.6%. Italy ranks near the bottom in the European comparison, positioned just above Romania. Considering gender representation, since the early 1990s, women have accounted for more than half of university graduates in Italy, and last year they represented 59.9% of the total. The regional distribution of graduates by gender reveals a distinct female predominance across all Italian regions. In other words, this phenomenon reflects a marked divergence in higher education attainment in favour of women throughout all geographical areas, as shown in *Figure 2.1*.

Figure 2.1, “Total Number of Graduates by Geographical Area and Gender (2022)”



Own elaboration based on ISTAT (2022), Total number of graduates, including first-cycle (Bachelor's), second-cycle (Master's), and single-cycle Master's degrees, divided by geographical area and gender.

https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1.Z0820EDU.1.0/UNIVERSITY/IT1.56_190_DF_DCIS_LAURE_ATI_1.1.0

In 2022, in Lombardy, there were 40,871 female graduates compared to 32,311 male graduates, followed by Lazio (30,270 women compared to 24,568 men) and Campania (29,318 women and 23,545 men). The positive gap in favour of women persists even in regions characterised by lower youth population density. In Molise and Basilicata, for example, despite the low absolute numbers (839 women compared to 501 men in Molise), female presence remains the majority. This trend is further corroborated by additional ISTAT data (2024), including evidence on high school diplomas, which confirm that almost 68% of women between 25 and 64 years old hold at least a diploma or qualification (62.9% among men). The rise in women's educational attainment has significantly improved their employment opportunities compared to those with lower levels of education; thus, higher education is correlated with an increased likelihood of labour market participation. As education levels rise, the gender employment gap narrows, although this advantage does not entirely eliminate the divide. Indeed, the disparity in female and male employment rates reaches 32.3 percentage points for low qualifications (36.8% and 69.1% female and male employment rates), 21.6 percentage points for medium qualifications (62.4% and 84.0% respectively), and 6.9 percentage points for high qualifications (81.4% and 88.3%). This suggests that the Italian employment system does not adequately reward women's educational investment, whether at low, medium, or high levels of qualification. This prompts the question of how educational attainment levels are related to the subsequent labour market entry and fertility outcomes. The connection lies in the fact that a woman's level of education has a decisive impact not only on future employment prospects but also on the ease of entering the labour market, the quality of the working environment, the stability and security of the job, and earning potential. All these factors have a significant influence on a woman's reproductive behaviour (Hoem et al. 2006). From a cultural standpoint, many scholars refer to a change in attitudes and values (Lesthaeghe 1995; van de Kaa 1987) associated with rising educational attainment and individualisation. Surkyn and Lesthaeghe (2004) believe that these dynamics provide more lifestyle options and therefore reduce the desire to have children. Hoem et al. (2006) state that this broader range of options provides alternatives to motherhood, thereby contributing to fertility differences among women with varying levels of education. However, Testa (2014) explains that the ideal family model for most women remains that of two children, and contrary to what may be commonly believed, education is positively associated with women's fertility intentions. Yet, as education levels increase, the gap between reality and desire also becomes more pronounced, partly because educated women tend to postpone motherhood (Bortolamai and Ciotti, 2022). Postponing

childbirth can have significant implications for the total number of children a woman will ultimately have and the interval between subsequent births. Delaying motherhood reduces the window of biological fertility and may foster the perception of being “too old” to have additional children, also considering the stigma effects surrounding motherhood (Bratti, 2022). This dynamic is particularly evident in highly educated women, who generally show stronger career aspirations. In these cases, postponing motherhood is not a direct consequence of education itself, but rather of the career expectations and professional goals that often follow higher education. In light of the steady decline in births, which fell to 382,621 in 2023 compared to 393,997 in 2022, the CeDAP (2025) published the report “*Birth Assistance Certificate - Analysis of the Birth Event - Year 2023*”, edited by the Statistics Office of the Ministry of Health. The survey involved a total of 354 birth centres and recorded a clear change in the age distribution of the Italian mothers. *Table 2.2* provides visual guidance, illustrating the cross-tabulated “*Distribution of Childbirth by Mother’s Education and Age (2023)*”.

Table 2.2, “Distribution of Childbirth by Mother’s Education and Age (2023)”

Educational level	Age group				Total
	<20	20-29	30-39	40>	
Primary/Lower Secondary	77,2	34,2	17,2	17,3	22,0
Upper Secondary Diploma	21,3	50,2	40,7	35,5	42,4
University Degree	1,5	15,6	42,1	47,1	35,6
Total	100,0	100,0	100,0	100,0	100,0

Ministry of Health (2025), CeDAP. Analysis of the Birth Event, 2023, Statistics Office
<https://www.salute.gov.it/new/it/pubblicazione/certificato-di-assistenza-al-parto-cedap-analisi-dellevento-nascita-anno-2023/>

The data indicate that the majority of the mothers in Italy hold a high school diploma (42.4%), followed by those with a university degree (35.6%), while only 22% have attained primary or lower secondary education. This distribution confirms that motherhood today is characterised by medium-high levels of education, although a clear polarisation emerges when considering age at childbirth. In fact, analysing the data to determine how education level impacts the timing of motherhood, those with a basic education are more likely to have a child before the age of 30. Among high school graduates the distribution appears more balanced, while among graduates the percentage of mothers rises not only for those in their 30s, but the majority become mothers after the age of 40 (47.1%). This means that achieving stability, represented by a job that may offer economic security or career advancement opportunities, represents one of the priorities that ultimately lead to the realisation of a family project (Bortolamai and Ciotti, 2022; Minello, 2022).

2.2 Atypical Work and Employment Uncertainty: Fixed-Term and Part-Time Contracts

The term “Atypical work” refers to any employment relationship other than full-time, permanent employment. The INAPP report (2023) specifically recognises two categories of atypical work, namely temporary work and part-time work. These forms of employment are intertwined with the broader notion of employment uncertainty, which can be defined as individuals’ experience and perception of labour market insecurity and job instability. Specifically, it can be institutionalised (fixed-term contracts³, non-standard jobs⁴, or involuntary part-time work⁵) or perceived (Buh, 2021). The division stems from the fact that uncertainty does not arise solely from an objective contractual condition (such as being on a fixed-term contract), but also from how individuals experience and interpret their own work situation. In this context, the term “Precarious work” is often used at the European and international level, even though there is no universally accepted definition. The four characteristics that make a job precarious are the temporal factor, i.e., uncertainty about the continuity of employment, and the organisational factor, i.e., the lack of individual and

3 Fixed-term contracts fall within the category of atypical work, which may also include pseudo-self-employment, namely carrying out a job with a self-employed contract in a subordinate position (Buh, 2021).

4 Non-standard jobs are mainly seasonal or undeclared work (Buh, 2021).

5 People who are considered as involuntarily part-time workers are those who want to have a full-time job but could not find it (CEDEFOP, 2025).

collective control by workers over working conditions, hours, or safety. Then, the third economic factor is defined on the basis of insufficient remuneration, and finally, the social aspect includes legal protection (collective or customary protection against unfair dismissal, discrimination, and unacceptable working practices) and social protection (access to social security benefits covering health insurance, accidents, and unemployment) (EU-OSHA, 2014). Starting from 2016, there has been a significant increase in the number of fixed-term contracts and non-standard arrangements, such as apprenticeships, seasonal work, and casual work. The absolute figures are noteworthy: in 2024, there were 3.7 million fixed-term contracts and 3.1 million non-standard contracts (Fondazione Di Vittorio, 2025).

2.2.1 Fixed-Term Employment

Fixed-term contracts usually provide less worker protection than permanent contracts. This is because the employer is generally not required to provide a reason for terminating the employment relationship, as the contract specifies a fixed end date. Moreover, in most cases, no severance pay is provided (ILO, n.d.). Taking into account the proportion of employees with temporary contracts, women account for the majority. According to the INPS study “*Analysis of gender gaps in the labour market and social security system (2024)*”, after eight years in which the gap between women and men was almost null or limited, in 2021 it began to widen again. More specifically, for women, the percentage of fixed-term employment contracts in 2022 increased compared to the previous year (+5.0%), while for men it decreased (-1.3%). In the same year, the sectors with significantly higher percentages of women on such contractual arrangements were commerce (19% of women compared to 14% of men), hospitality and catering (31.4% for women compared to 29.4% for men), information and communication (6.3% for women compared to 4.6% for men), healthcare (19.8% for women, 17.8% for men) and finally art/sport/entertainment (24% for women compared to 21% for men). These figures also reflect a broader structural issue, which is that a significant number of women reported having accepted a fixed-term contract as the only employment option available, highlighting the forced and involuntary nature of this condition. Notably, in 2024, 26.3% of female fixed-term workers aged between 25 and 34 stated that they accepted this type of employment due to the lack of permanent alternatives, compared to 22.8% of men in the same age group. In the next cohort (35-44 years old), 35.1% of women report being employed on a fixed-term contract for the same reason, compared to 31.0% of male counterparts. Furthermore, the Italian average

exceeds the European one, confirming a structural issue in the national context. Stated differently, the Italian labour market is characterised by widespread contractual instability and markedly forced precarious female employment even in mature working age (Eurostat, 2025). When analysing the prevalence of fixed-term contracts, it is also possible to examine regional disparities, which reflect different employment patterns. ISTAT data (2024)⁶, which describe fixed-term and permanent employees in absolute terms, show that women with fixed-term contracts in the North outnumber men (619,000 compared to 561,000). In Central Italy, the figures are similar, with 308,000 women compared to 295,000 men, while in Southern Italy, the absolute number of fixed-term contracts for women is lower than that of men (450,000 compared to 536,000). However, when considering the incidence within the total number of employees of each gender, women are more exposed to contractual precariousness in all three geographical areas. Based on the same ISTAT data disaggregated by gender, the percentage incidence can be calculated using the following formula:

$$Incidence (\%) = \frac{Fixed - term\ contracts}{Total\ employees\ (fixed - term + permanent)} \times 100$$

The result is that in the North, 13.3% of employed women have a fixed-term contract, compared to 10.7% of men. In Central Italy, the incidence rises to 16.4% for women and 13.9% for men, and in Southern Italy, although the overall number is lower than for men, the proportion of women’s temporary employment is 22.5% (compared to 18.3% for men). This means that, in the South, in addition to a high unemployment rate, more than one in five women faces precarious working conditions. Furthermore, considering the evolution of employment typologies by age group, stable, permanent contracts are predominantly concentrated among older workers between the ages of 50 and 64, due to the extension of working life resulting from new retirement provisions. Conversely, the prospects for stable employment among younger cohorts remain less favourable. For workers aged 15 to 34, the proportion of fixed-term contracts out of the total number of employees in that age group rose from 19% in 2004 to over 30% in 2024. Over the past two decades, the incidence of precarious employment has remained stable only for those who have obtained a middle school diploma or a high school diploma, whereas university graduates are facing a discernible precariousness. This suggests

⁶ The data coverage includes all employees aged between 15 and 89, both Italian and foreign nationals.

that, as analysed in *Section 2.1*, education continues to protect against unemployment, especially for young women, but it does not guarantee secure and stable integration into the labour market (Fondazione Di Vittorio, 2025).

Fixed-Term Employment and Fertility Decisions

Socio-economic instability influences the predictability of forming a family, and, as demonstrated by Scherer and Brini (2023), temporary work negatively affects the likelihood of having the first (and second) child. Conversely, the transition to having more children is less influenced by employment status (Bazzani et al., 2025). The negative correlation has intensified in recent decades, especially for women. Such a dynamic is further confirmed by the fact that, nowadays, when a couple decides to enlarge the family, various factors must be considered. Hence, not only the male partner's economic stability and job prospects are taken into account, but also those of the woman. Since having a child is usually a joint decision made by the couple, the employment situation of both partners influences this choice (Nitsche et al., 2018). Having two household incomes represents a way to cope with the uncertainties of the labour market and current socio-economic conditions. On the one hand, it provides protection against the risk of family poverty, and on the other hand, it offers women greater security and economic autonomy, particularly in light of the growing instability of marital relationships. In other words, in order to guarantee an adequate standard of living, it is becoming increasingly common for both partners to work (Del Boca, 2009). Nevertheless, this protective effect of dual incomes is weakened when wages are low, social protection is minimal or non-existent, and the careers are discontinuous and insecure due to the limited duration of the contract. Under this condition the consequence is a deterioration in quality of life, reduced economic security, and the ability to plan future choices, which in turn contributes to delaying parenthood, especially with regard to the first child (Pieroni et al., 2023; Guetto et al., 2023). Two key studies are relevant to this analysis, the first concerns the European context, while the other focuses on the Italian case, both evaluating the relationship between employment uncertainty and women's childbearing behaviour.

In the first instance, Bastianelli, Guetto, and Vignoli (2023) indicate that an increasing gap between regular and temporary employment, defined as labour market dualism, negatively impacts fertility. According to the study, the effects are relatively homogeneous across the 19

European countries⁷ analysed, and they are notably pronounced among the lower-educated population. The scholars put forward two hypotheses: the first states that *increasing market protection for regular contracts (EPL-r) through severe employment protection legislation (EPL) fosters the TFR (hypothesis 1)*; the second regards *the increasing labour market dualism (EPL-gap) that, conversely, lowers TFR (hypothesis 2)*. Therefore, for both hypotheses, the dependent variable is the TFR, while the two main independent variables are the EPL-r and the EPL-gap. The main explanatory variables are drawn from the OECD employment protection indexes for regular and temporary workers, and different socio-demographic factors are taken into account, such as educational attainment or age groups. In fact, in relation to *hypotheses 1 and 2*, Bastianelli et al. predict a positive effect of an increase in employment protection for EPL-r on fertility, particularly for women with a high level of education (*hypothesis 1a*), while the negative effect of an enlargement of the EPL-gap is expected to be stronger for women with a lower level of schooling (*hypothesis 2a*). The results are in line with the hypotheses, except for *Hypothesis 1a*. The study showed that providing employment security through regular contracts (EPL-r) tends to increase the TFR, especially among the youngest ones (aged below 30). Furthermore, the greater the dualisation of the EPL-gap is, the lower the TFR, with a significant negative effect for women with a low level of education. However, contrary to *Hypothesis 1a*, the greater protection of regular contracts does not benefit educated women the most but is beneficial for people with all levels of education.

The second key contribution comes from De Paola, Nisticò, and Scoppa (2021), who examined the causal effect of different EPL reforms, analysing the Italian female sample over the period 2013-2018. The benchmark is the “Jobs Act” reform (2015), which reduced the employment protection enjoyed by new hires in large firms (abolishing the reinstatement clause for unfair dismissals) while leaving the protection for small firms’ employees (less than 15). The authors demonstrate that greater employment stability, following a strengthening of EPL, is associated with a positive increase in childbearing of Italian working women. Conversely, a reduction in employment stability lowered women’s propensity to become mothers. Overall, these results highlight the unintended consequences that labour market reforms, aimed at promoting flexibility, can have on fertility. Buh (2021) introduces another relevant factor: limited studies examine sectoral, cultural, or country-specific tolerance for uncertainty. Indeed, tolerance for uncertainty may be age- or education-specific. He suggests not having a *naïve* approach in

7 Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, and UK, covering the period between 1990 and 2019.

assuming employment uncertainty is inherently negative but instead finding ways to examine how individuals deal with it. Nevertheless, as Bruno et al. (2013) highlight, fixed-term contracts have a positive impact on the transition to permanent employment only for men. On the other hand, in Italy, graduates, workers in the South, and women are penalised. For women, longer periods of temporary work do not correspond to a greater likelihood of finding a permanent contract, despite the acquisition of specific human capital and broader networks. In fact, temporary work often becomes a low-paid trap, and the position tends to be permanent. That is why, according to data from the UNFPA State of World Population Report (2025), 30% of female Italian respondents reported experiencing unemployment, job instability, and contractual precariousness as the primary and main reason for deciding not to have children or to have fewer. This answer is followed by economic constraints, such as the inability to cover ordinary and extraordinary expenses (such as housing and healthcare) due to insufficient resources (29%). Conversely, in Hungary, approximately half compared to Italian women identify job insecurity and instability as the main obstacle to parenthood (16%). This perception is significantly less prevalent also among German (10%) and Swedish (5%) women. Without going into a specific analysis of other European Union countries and their level of job insecurity, what can be deduced is that the importance attributed to this factor can change dramatically. Vignoli et al. (2020) explain that perceived uncertainty is a determining factor in fertility decisions and that many studies have appropriately analysed objective incertitude, neglecting the socio-cultural and institutional contexts that shape it. The perception of economic uncertainty is therefore strongly anchored to public images produced by the media or opinion leaders, such as politicians. During the years of the Great Recession, media reports contributed to the emergence of a European public sphere with a pessimistic view of a stagnant and underperforming continent, even in countries that did not experience a severe economic recession. Buh (2021) analyses the relationship between objective and perceived precariousness, highlighting that in contexts characterised by less extensive welfare and greater occupational fragility, both factors have a significant impact on fertility intentions. This is particularly true in Southern European countries such as Italy. Therefore, in the Italian context, with limited social safety nets and economic instability, a media system that presents a negative and uncertain outlook for the future slows down and blocks the already limited propensity to have children (Minello, 2022).

In a climate of structural and perceived employment uncertainty, reproductive strategies adapt to labour market conditions. Indeed, for instance, highly educated women may accept a temporary contract in order to advance their careers and recover from the initial postponement

once their contract has become permanent (Guetto et al., 2023). Alderotti et al. (2024) note that most research on the link between labour market insecurity and fertility has focused on the transition to parenthood, overlooking the potential effects of “catch-up” and therefore lacking a broader view of cohort fertility. To address this gap, they investigate the implications of unstable employment on “quasi-completed⁸” fertility for both Italian men and women, adopting a cohort-based approach to investigate the weight of atypical employment on the transition to parenthood and overall fertility. While socio-demographic literature has often suggested a possible recovery from the postponement of childbirth induced by job instability, the study suggests instead that in Italy, the rising instability of the labour market not only delays pregnancy but also lowers overall fertility; in other words, the recovery is not occurring to a sufficient extent.

Thematic Insight I: Precarious Academic Labour and Fertility Decisions

Italian tertiary-educated women experience stronger postponement of first births since they are particularly exposed to higher opportunity costs compared to the less educated. Although fixed-term employment is generally more common among those with lower levels of education, job instability does not exclude highly qualified women (Brunetti et al., 2022). Once the bachelor’s degree has been obtained, two points are worth highlighting: one concerns the pursuit of further education, the other the decision to enter the workforce. Firstly, in the transition from first cycle to master's degrees, the proportion of female graduates declines, and the same trend is confirmed in the transition to third-cycle university studies, since the percentage of women among PhD graduates is 48.5% (AlmaLaurea, 2025). The study by Giancola et al. (2025) also suggests that, all other factors being equal, women are slightly less likely than men to progress to a higher level of education. This difference appears to be moderate, but it is nonetheless significant. This progressive decline in female involvement in higher education is especially important when considering the transition from PhD study to an academic career. In this case, several women, despite holding doctoral degrees, find themselves locked into career paths marked by precariousness and temporary contracts, resulting in limited opportunities for stability. The Gelmini reform (*No. 240/2010*) has restructured recruitment in

⁸ “Quasi”- completed fertility refers to at the threshold that was set at 41 years of age, so as to include people who had been affected by the deregulation of the labour market that began in the 1990s, but who were also close to the end of their reproductive period. Therefore, most of their reproductive life has already passed, but it is not yet completely over.

the Italian academia by adopting a performance-based funding system and reshaping the employment structure by introducing two new fixed-term positions: RDAa and RTDb. The first one is also known as a Type-A Researcher, which may last for up to 3 years and is temporary, and the RTDb, which can be considered a Type-B Researcher with a tenure-track position towards an associate professorship. Contrary to the widespread opinion that equal opportunities in accessing academic and research careers are no longer a problem, analysis of the data reveals significant differences between women and men (Gaiaschi and Musumeci, 2020). These dynamics occur in the early stages of their academic careers and highlight a strengthening of gender-based selection to the disadvantage of women, specifically after the implementation of the reform. In fact, the number of women already decreases at Grade D (RDAa), and in the subsequent phases the percentage drops further, reaching only 23% of female ordinary professors at Grade A. The number of women in the early stages of academic careers does not translate into equivalent access to permanent positions. Following the implementation of the reform, the number of precarious research staff has therefore been increased. It is within this context of research precariousness that the decline in the number of women entering stable academic careers should be analysed (Picardi, 2019). Therefore, Gaiaschi and Musumeci (2020)⁹ investigate the relationship between feminisation and gender equality to understand the extent to which the increasing feminisation of the academic profession is due to actual improvements in hiring or is caused by demographic dynamics such as, for example, the retirement of older cohorts, which are especially men-dominated. Secondly, they look over the gender implications of recent university transformations and, more specifically, the growing precariousness of the early stages of careers. They conclude that women's access to university tenure has been limited by the Gelmini reform. Furthermore, the recruitment of women as associate and full professors has remained largely unchanged over the past 20 years. This indicates that demographic factors, such as the retirement of men concentrated in older cohorts, are responsible for the feminisation of academic staff, rather than an actual improvement in gender equality recruitment. Moreover, according to data from the Ministry of Economy and Finance (MEF) on hiring trends by gender for university professors and researchers, in 2023, 1,652 men were hired, while the number of women was 1,012. These data signal a numerical under-representation of women, along with a longer career progression. Indeed, due to unbalanced household and family unpaid work, women tend to produce fewer academic

9 This study is based on data on the Italian academic population from 2000 to 2018, which were provided by the Ministry of Education, University, and Research (MIUR)'s statistical office.

publications, thereby reducing their chances of advancement and attaining permanent jobs (De Paola et al., 2021; Minello, 2022). Considering that the average age of Italian women at childbirth is 32.6 years and that female fertility decreases with advancing age (ISTAT 2024), the data discussed above highlight a difficulty in balancing research output with biological reproduction. In the 30-40 age group, many women working in universities find themselves having to make important choices in terms of their personal lives. In particular, the decision to become a mother in working conditions that offer no guarantee of stability translates into a further risk of remaining in precarious roles or abandoning the academic path (Picardi, 2019). The aforementioned article by De Paola et al. (2021) also contributes to existing research on economic uncertainty and fertility decisions, analysing how the transition from researcher to associate professor in Italian academia affects the propensity to have children. Data from the Italian Ministry of Education and the National Agency for the Evaluation of Universities and Research Systems (ANVUR) were used, considering the entire sample of women hired by Italian universities as researchers from 2001 to 2018. The results show that promotion to associate professor post Gelmini Reform increases the probability of having a child by almost 1 percentage point, which implies a relative increase of 20% in the average. In summary, job certainty among female academics affects decisions to have children.

2.2.2 Part-time and Involuntary Part-time (IPT)

In the labour market, employment can assume different forms, being either fixed-term or permanent, and can be arranged full-time or part-time. A part-time employment contract is characterised by fewer working hours than a full-time contract, which is normally 40 hours per week. With regard to the distribution of hours, there are three types of part-time work: horizontal part-time (characterised by a reduction in daily working hours), vertical part-time (work is carried out full-time but limited to certain working days), and mixed part-time (characterised by a combination of the two previous types). There are many reasons for choosing part-time employment, such as the presence of minor children or persons with disabilities in the family whom the worker must care for. In fact, one of the greatest advantages of part-time work is that it allows workers to achieve a better work-life balance. By itself, part-time does not represent a condition of employment vulnerability when it is chosen intentionally. On the contrary, it often allows for easier reconciliation of activities such as family caring and social activities compared to full-time work. However, the reduction in working hours also

results in lower remuneration and fewer opportunities to reach high-level positions (INPS, 2024). Moreover, a considerable segment of workers falls into the category of involuntary part-time employment (IPT). These workers, although aspiring to work full-time, are unable to find other types of employment or extend their working hours (Randstad Research, 2024; CEDEFOP, 2025). Out of total employment, 31.5% of women, approximately 3 million, work part-time, compared to 8.1% of men, approximately 1 million (CNEL-ISTAT, 2025). Among these 4,203,000 reduced-hours workers, around 2 million are in an IPT condition, and they do not benefit in terms of reconciliation of work-family life and remuneration. These figures reveal a strong female part-time connotation, and the same applies to IPT work, where the incidence of the total number of employees rises from 5.6% for men to 16.5% for women (Forum Disuguaglianze Diversità, 2024). Moreover, the share is higher in Southern Italy, among foreigners and those with low qualifications (Forum Disuguaglianze Diversità, 2024), and the most affected industries are the household services, accommodation and food services sectors (Randstad Research, 2024). With regard to the regional average of IPT, Sardinia (24%) and Sicily (22%) are at the top of the list, followed by Apulia, Basilicata and Molise, all three at 19%. At the bottom, with a lower percentage, are Trentino-South Tyrol (10%), Emilia Romagna, Lombardy and Aosta Valley, all three at 11%. Finally, considering the European context, the proportion of part-time workers in the EU-27 has increased from 15.3% in 2004 to 17.8% in 2023. This upward trend has been observed in all European countries except France. On the other hand, the involuntary proportion in the EU-27 has decreased from 22.7% to 19.4%. Contrary to the European average, Italy saw an IPT increase from 36.5% in 2004 to 54.8% in 2023 (Randstad Research, 2024). It disproportionately affects younger workers, particularly women under the age of 29, for whom short-time working is often a means of entering the labour market.

Part-time, IPT and the Fertility Decisions

Since the 1990s, part-time work has been considered a possible solution to counteract the rise in unemployment and allow for greater flexibility in the labour market. Its diffusion has been further facilitated by the expansion of the tertiary service sector, which is highly feminised. Indeed, part-time jobs continue to be strongly associated with caregiving responsibilities, especially childcare (Poggio and Burchi, 2024). Beham and colleagues (2018) conducted a comparative study on part-time work and workers' satisfaction with their work-life balance

(SWLB). The results show that these workers reveal a higher SWLB than full-time workers because they could devote more time to their families. In particular, part-time work, even if low-paid, plays a compensatory role for women who struggle to maintain full-time working conditions. Furthermore, part-time work is more positively associated in countries where gender balance is better established, as a favourable climate and adequate institutional support encourage companies to adjust working hours and invest in high-quality forms of work. From this perspective, part-time employment can be a sustainable option, but only to the extent that it is a voluntary choice and the working conditions are adequate in terms of remuneration, stability, and protection (Poggio and Burchi, 2024). Begall and Mills' (2011) data-based research of 23 European countries¹⁰ investigated the complex relationship between female part-time and fertility intentions. The results show that the effect of part-time work on fertility intentions for women without children is negative and that women who work more than 30 hours per week have higher fertility intentions than their part-time counterparts. In countries where part-time work is not widespread, it tends to be of lower quality in terms of aspects such as wages or poor outlook. In such contexts, women without children consider part-time work more as a constraint than an opportunity to balance family and work responsibilities. Conversely, in countries where a large percentage of women are employed on a reduced working schedule, part-time work is not necessarily associated with marginal jobs but can be configured as a more neutral and accessible way of working. However, part-time may translate into an obstacle for several reasons. First of all, it is part of what is known as the “*Mommy Track*”, an expression coined to identify a career path for women who, because of reduced or flexible hours, can achieve a better work-life balance but often at the expense of their career and visibility within the company. It is therefore more difficult to progress and advance in one's career, which is referred to as vertical segregation (*Section 2.3.2*). Furthermore, there are the “retention part-time workers” (i.e., the most qualified and highly paid part-time workers) and “secondary part-time workers” (i.e., the lowest paid and least remunerated ones). Both groups have chosen to work part-time and, as a result, tend to perceive the contradictions that arise in their career paths as inevitable. Indeed, highly qualified female workers tend to see career setbacks as a consequence of their choice, while low-skilled workers accept difficult salary conditions or the loss of certain protections and guarantees. Additionally, reducing working hours is not enough to provide a flexible and supportive working environment for mothers.

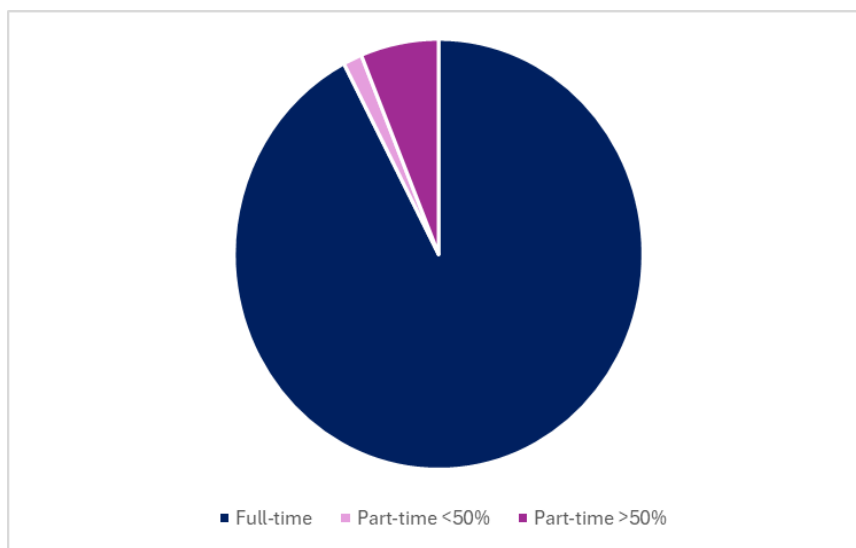
¹⁰ Austria, Belgium, Switzerland, the Czech Republic, Germany, Denmark, Estonia, Spain, Finland, France, Great Britain, Greece, Hungary, Ireland, Iceland, Luxembourg, the Netherlands, Norway, Poland, Portugal, Sweden, Slovenia and Slovakia. Data are drawn from the 2004-2005 wave of the European Social Survey (ESS).

Considering part-time work as the only possible solution for achieving work-life balance does not guarantee satisfactory results, either in terms of job quality or work-life balance. What is required are diversified measures that combine both time and space flexibility, such as personalised schedules and smart working, or services and measures to support work-life balance, including company nurseries or accessible childcare services. Finally, women who access part-time work tend not to leave it due to concerns about losing it; however, it would be beneficial to shift the perspective to a more strategic dimension, adapting it to specific stages of life with a life course orientation (Poggio and Burchi, 2024). This reveals that part-time work can contribute to supporting fertility only when it is “high quality”, that is, when it entails permanent and protected contracts with salaries and benefits comparable to full-time positions. Based on these scenarios, it enables motherhood and work to be combined without falling into precariousness (Del Boca et al., 2009). Yet, this is not the case, also considering the large quota of involuntary part-time employment among women in Italy. The IPT significantly compromises the economic security of families (Maestripieri, 2023), and, in line with the findings of Vignoli et al. (2020), economic uncertainty exerts a negative impact on fertility intentions.

Thematic Insight II: Public vs Private Sector Part-time Employment and Work-Family Balance

A comparison between the public and private sectors provides significant insights regarding the distribution and quality of part-time employment in Italy. The analysis of the “Conto Annuale” data provided by the MEF (2023) reveals a picture of the composition of the public administration (PA) workforce. In 2023, the total number of PA employees was 3.3 million, of whom 3.1 million were full-time and approximately 186,000 were part-time. Within this sector, there is a clear prevalence of women. In fact, among those who have a part-time job with less than 50% of the working hours, there are 30,000 women (compared to 12,000 men). Furthermore, the disproportion is even more evident when part-time work exceeds 50%, which is also the most common form of employment: out of 144,100 workers, 122,843 are women, approximately 85% compared to men. *Figure 2.3, “The Distribution of Women’s Employment in the Public Administration (2023)”*, reveals that the majority of women are employed full-time, despite the significant gender imbalance in part-time positions.

Figure 2.3, “The Distribution of Women’s Employment in the Public Administration (2023)”



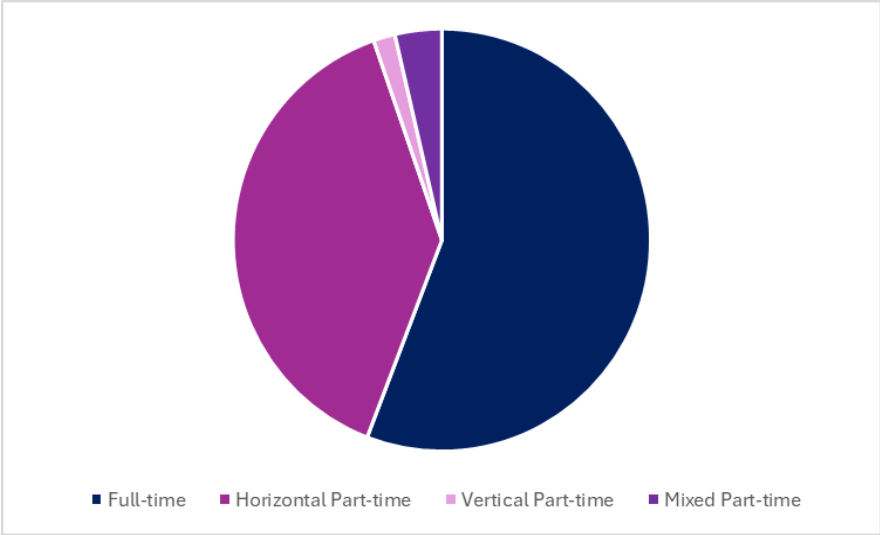
Own elaboration based on the Ministry of Economy and Finance (MEF, 2023), Conto annuale occupazione. <https://contoannuale.rgs.mef.gov.it/it/web/sicosito/occupazione>

Moreover, taking into account the sectoral distribution within the PA, most women are employed full-time in the Education and Research sector (961,600), followed by Healthcare (446,745). In addition, Central Functions employ 103,883 women full-time, while Local Functions 227,491. By contrast, the largest share of female part-time workers, exceeding 50% (the total of them are 122,843 women), is concentrated in Local Government (44,801), Education and Research (36,902), followed by Healthcare (33,457).

As regards the private sector, the INPS statistical observatory published data on "Employees in the non-agricultural private sector" during 2023. The number of employees in the private sector (excluding agricultural and domestic workers) is around 17.4 million, with an average salary of 23,662 euro per year. With regard to distribution by job category, in 2023, Blue-collar workers accounted for 55% of the total workforce, with 9,628,133 workers, while 37% were White-collar workers, 4% were Apprentices, 3% were Middle managers, and 0.8% were Executives. As already mentioned, the survey does not include the large number of women working in the domestic sphere; nevertheless, it shows a high percentage of them, equal to 7.4 million women employed in 2023, albeit less than the approximately 10 million men. The number of female workers who held at least one part-time job in 2023 was 3,650,436, compared

to 2,083,386 males. In percentage terms, while 21% of male employees experienced at least one period of part-time work, the figure for female workers was almost 50%, with the highest proportion among women aged 45-49. While over 3 million women had at least one part-time contract during 2023, *Figure 2.4, “The Distribution of Women’s Employment in the Private Sector (2023)”*, shows the average annual number of female workers by type of working hours.

Figure 2.4, “The Distribution of Women’s Employment in the Private Sector (2023)”



Own elaboration based on INPS (2024), Osservatorio dei Lavoratori Dipendenti del settore Privato non agricolo. [Portale Inps - Osservatorio lavoratori dipendenti del settore privato: i dati 2023](#)

The largest share is represented by full-time workers, followed by those who work through a reduction in daily working hours (horizontal part-time), with almost 2.4 million. The levels of vertical and mixed part-time are lower, but summed together with the horizontal one, they account for almost 45%. This implies that in the non-agricultural private sector, nearly one in two women works part-time.

There is a clear difference in the use of part-time work between the public and private sectors, yet mothers' care needs remain substantially similar. The possibility of using part-time as a flexible tool to balance family and work life shows, precisely through this different distribution, its distorting effects (Poggio and Burchi, 2024). In the public sphere part-time work is more significantly associated with voluntary choices, while in the private sphere it is largely involuntary, since it is linked more to corporate strategies than to individuals' needs to balance work and private life (Forum Disuguaglianze Diversità, 2024). As already discussed in the previous section, this phenomenon has a negative impact on fertility intentions, since economic

and job uncertainty reduces couples' propensity to have children (Vignoli et al., 2020). Moreover, in companies where there is a structural recourse to part-time work, there is also a low propensity to use flexible tools to support workers, as well as to introduce measures to promote smart working (Poggio and Burchi, 2024). This suggests that part-time work is not sufficient to address work-life balance and sustain family planning. Whereas a different institutional framework is needed, characterised by job stability, reliable social security contributions, and efficient childcare systems, enabling women to experience higher levels of security. This is further confirmed by Martín-García and Castro-Martín's research (2013), which examines the Spanish sample. It emerges that women working in long-term stability environments, which also favour the combination of work and family care, such as jobs in the public sector, become mothers earlier than employees in the private sector. In the same year, a study on Italian fertility intentions was published, and it shows that working in the public sector, with strong job protection, lower wage discrimination than in the private sector, and family-friendly policies, influences the desired and actual fertility of working mothers (Cavalli, 2012).

2.3 Gendered Labour Divides

Discrimination, stereotypes, and cultural traditions translate into horizontal (*Section 2.3.1*) and vertical segregation (*Section 2.3.2*), which fuel job insecurity and contribute to the gender wage gap. The latter, in turn, enhances the same discriminatory dynamics, creating a vicious circle in which women's access to equal opportunities does not translate into fair entry, retention, and career advancement in the labour market (Fili, 2021).

2.3.1 Horizontal Segregation and Fertility Decisions

Horizontal segregation refers to “*the concentration of one gender in certain fields of education or occupations, which narrows down life choices, education and employment options, leads to unequal pay, further reinforces gender stereotypes and limits access to certain jobs while also perpetuating unequal gender power relations in the public and private spheres*” (EIGE, 2018, p. 19). The CNEL-ISTAT (2025) report on women's employment highlights, between 2008 and 2023, a strengthening of the female presence in professions that were already predominantly feminised, with few exceptions (public administration officials and doctors).

This increase mainly involves unskilled workers in domestic and cultural activities and, among skilled ones, teachers and office workers. At the same time, male presence has expanded in occupational groups such as manual workers, farmers, entrepreneurs and business managers, fields in which they have traditionally maintained a dominant presence. Additionally, the highest concentration of vulnerable workers is found in the hospitality and food service industry (41.2%), followed by the household services sector (36.8%) and education (21.5%), all of which have a high incidence of female precarious employment. Certain educational pathways lead to occupations with a high percentage of female employees, while others channel workers into male-dominated sectors, such as Science, Technology, Engineering and Mathematics disciplines (STEM). On the other hand, teaching, nursing, or personal services are usually highly feminised. The type of contract and type of employment can influence fertility intentions, as high levels of job and financial uncertainty can have further negative effects on family planning (Modena et al., 2013). Therefore, the causal factors underlying gender segregation remain largely intact even when women's participation in the labour market increases (EIGE, 2018). Hoem et al. (2006) investigated the relationship between employment sectors and motherhood in Sweden. Female-dominated jobs offer higher job flexibility and more exit and re-entry options, making parenthood and work compatible. However, these employment typologies have a low-income profile with fewer upward career possibilities. Conversely, male-dominated ones typically offer relatively higher wages but may have longer working hours or less regard for employees' caregiving needs. Afterwards, Hoem et al. state that the educational orientation is at least as important as the level attained (*Section 2.1*), thus giving relevance to the field of study. Women who have completed primary school or lower secondary school have a similar level of childlessness as physicians, who have a higher tertiary education. Women who are trained in personal services in the hotel and restaurant business (that obtained a two-year secondary level education) have even higher childlessness than physicians and high school teachers. In general, the study reveals that women educated in the field of teaching and health care are in a class of their own, with much lower permanent childlessness than in any other major group at each educational level. The childlessness rate among women who have received education as librarians, artists, humanists, and theologians is significantly higher than that of all other groups. Humanists are women who have completed their university education but have not obtained the requisite qualifications to teach in the secondary school. To some extent, the expansion of women's participation in the labour market has occurred in sectors that do not necessarily provide the stability and work-family balance needed to support parenthood. Bagavos (2010), taking Greece as an example, a country much closer to Italy,

highlights that in addition to educational attainment, fertility is associated with subsequent institutional aspects of the labour market, mainly job insecurity and income prospects.

2.3.2 Vertical segregation and Fertility Decisions

The European Institute for Gender Equality (EIGE) defined Vertical segregation as: “*a result of women and men undertaking education at different levels or being under-represented in the jobs located at the top of a hierarchy of ‘desirable’ attributes such as income and prestige*” (EIGE, 2018, p.19). Therefore, as a manifestation of this segregation, the “*Glass Ceiling*¹¹” continues to be a female reality (CNEL-ISTAT, 2025). According to the International Labour Organization (ILO), in Italy, the share of women in managerial positions (both senior and middle management) is approximately 24%, and, in 2022, only 28.8% were female-owned businesses, less than a third. Considering the political field, 33.6% of national parliament seats were held by women in 2023, while the local sphere presents an even more alarming situation and a clear backward trend compared to the rest of Europe. Furthermore, the proportion of women elected to regional councils was 24.5% (2023), placing Italy more than 10 points below the European average (35.7%) (CNEL-ISTAT, 2025). Finally, as of 2025, only two women are serving as presidents of an Italian region. These disparities in political representation are also reflected in other areas, such as academia, where gender differences in career advancement are particularly evident. Indeed, the study by Falco et al. (2023) aims to investigate gender differences in career advancement intervals in Italy. The researchers observe variations, the time required to obtain a promotion and the academic specific sector. A cross-sectional analysis using data from the Ministry of University and Research (MUR) archive from 2001 to 2020 revealed that not only do a higher percentage of men reach top positions, but they also reach them more quickly. The historical event analysis revealed that women take on average, about a year and a half longer than men to advance. Furthermore, the highest gender difference in advancement rates is in the fields of economics, social-political sciences, and law, while the lowest is found in agriculture and veterinary science (Falco et al., 2023). According to the Global Government Forum (2023), women often perceive themselves as less prepared and less suited to leadership roles than men, partly because they lack visible female

¹¹ The “*Glass ceiling*” is an artificial impediment and invisible barrier that militates against women’s access to top decision-making and managerial positions in an organisation, whether public or private, operating in any sector (EIGE, Gender Equality Index, 2021).

role models who share their background. This means that the under-representation of women in senior positions becomes self-reinforcing due to women's perception that they lack the right skills to succeed. Therefore, they are less likely to progress and attain leadership roles. Alongside this belief, women face stereotypical prejudices in their career advancement, one of which is the assumption that they may not offer the same longevity and reliability in their roles as men, precisely because of motherhood. In fact, after the birth of a child, there is a downward shift in professional mobility, meaning that mothers are penalised compared to women without children in terms of career advancement and remuneration. Nevertheless, the data show that women tend to stay with the same company longer than men, thereby acquiring specific human capital working for that company, which could lead them to climb the career ladder and get promoted. However, this process is slowed down by vertical segregation: despite their longer service and the acquisition of company-specific professional skills, women experience lower and slower promotion rates than men (Filì, 2021; Falco et al., 2023). The consequence is that the time needed to consolidate a stable professional position overlaps with women's childbearing years, leading to the postponement or even the renunciation of motherhood. Impicciatore and Tomatis (2020) point out that, where the welfare state and social norms hinder the compatibility of work and family life, such as in Italy, the effect on the completed fertility rate is negative, as motherhood has been postponed for a long time for career reasons (or other barriers). The subsequent "recovery" is not sufficient to achieve the desired fertility levels (Alderotti et al., 2024).

Thematic Insight III: Segregation in STEM, Career Progression, and Fertility Intentions

Italy is in line with other European countries in terms of the choice of tertiary education courses in the STEM field. In particular, efforts to reduce horizontal segregation in these areas are reflected in a higher proportion of Italian women compared to the European average. Female enrolment stands at 21.6% for first-level courses and 19.1% for second-level courses, figures that exceed the European average by 5 and 2 percentage points, respectively. This difference is mainly due to the high female presence in natural sciences, mathematics, and statistics, compared to a lower presence in courses such as computer science and engineering. In terms of employment, the data are favourable, since in 2023, the proportion of women aged 25-39 employed in STEM fields was almost 10 points higher than in the 55-69 age cohort (22.3% compared to 13.2%). At the regional level, Central and Northern Italy record the highest

proportion of women employed in these fields, while Southern Italy lags behind, thus highlighting a significant regional gap (CNEL-ISTAT, 2025). Therefore, given the overall increase, a positive picture emerges with regard to employment in this predominantly male-dominated sector, yet the question remains as to how this trend relates to fertility intentions. The study by Solera and Martín-García (2017) finds that Italian women with a university education in STEM fields are just as likely to become mothers, and those with a degree in education sciences show a markedly higher propensity to enter motherhood. Although gender differences in education have been reduced, women's position in the labour market is still shaped by their preference for jobs and occupations that allow a balance between work and family life (Berra and Cavalletto, 2020). In contrast, STEM disciplines often represent great challenges for work-family reconciliation. Most initiatives aimed at addressing gender disparities in STEM fields focus on attracting more women to the sector, helping them to overcome the barriers that marginalise them. However, although fundamental, these solutions are not effective in the long term, as the gender gap in STEM fields is also found in a retention issue with systemic causes. From the point of view of self-esteem, work dynamics and promotion opportunities can strengthen women's self-perception, but at the same time, they can create an unfavourable context for considering reproductive choices. People often prioritise protecting existing resources, such as those related to income and career prospects, by investing in them. In these high-pressure environments, choosing not to have children or delaying plans for motherhood appears to be a strategy for protecting current resources (Yan et al., 2025). In addition, the child penalty (*Section 2.4.1*) is one of the major obstacles that prompts women to abandon their careers or reduce their work time (Di Bartolo and Torres, 2024). This gradual phenomenon of women leaving scientific careers is so evident that it has a name: “*Leaky pipeline*”. If the presence of women in academic and professional scientific careers is assessed, there is a progressive reduction that can be well summarised by the image of a pipe that is leaking more and more water. This phenomenon particularly affects STEM subjects, which therefore have a much lower number of women than men, especially in high-level positions (Falco et al., 2023).

2.4 Motherhood and Career Interruptions

2.4.1 Child Penalty

Although there are limited specific data on working mothers, in Italy the gender employment and earning gaps, known as “*Child penalty*” are well-documented and significant. Research conducted on INPS data related to private sector employees between 1985 and 2018 found that, 15 years after the birth of their first child, mothers' wage growths were 57% lower than those of women without children with comparable characteristics (Save the Children, 2025). The reasons why women with children tend to earn lower wages than women without offspring include varied factors, primarily that motherhood is associated with less time spent in the workplace. As a result, mothers or pregnant women are considered less competent, less committed, and penalised in decisions regarding salary and hiring. Mothers are also assigned fewer interesting tasks, are not considered suitable for management positions, and have to fight to preserve their credibility. In some cases, they have reported career interruptions in the form of returning to work later than expected, resorting to informal, flexible, or part-time work, postponing promotion opportunities, or even leaving the workforce indefinitely. Secondly, there are still several pervasive stereotypes that view workplaces as conflicting with social expectations of mothers, implying that they should be the primary caregivers within their families. The consequences are high turnover rates and poorly paid positions. This stigma leads them to face identity conflicts caused by unrealistic ideals of what a good mother and a successful worker should be (Torres et al., 2024). Melentyeva et al. (2025) propose an innovative time-differentiated approach to estimate the impact of each age at first childbirth on the German labour market. Recent research shows that conventional studies substantially underestimate the negative impact of motherhood on earnings after the first birth. In fact, the research rates a loss of income in the fourth year after childbirth of almost 30% higher. Furthermore, the scholars demonstrate that recognising heterogeneity based on the age at which mothers give birth allows for a more comprehensive understanding of the career costs. Younger mothers (<30) at first birth incur higher labour market costs, which mainly stem from missed progression at the crucial early stage of their careers, while losses in terms of levels play a more important role for older mothers (>30). In relative terms (considering the percentage of pre-birth salary), younger mothers suffer the greatest penalty because it is not only a loss of income but, above all, a loss of accumulation of human capital and professional progression. This

means that being at a different stage of life and career and choosing to give birth earlier or later are also likely to be related to differentiated responses to work-life balance policies.

2.4.2 “Voluntary” Resignations

Pursuant to Article 54 of Legislative Decree *No. 151/2001*, it is prohibited to dismiss female workers from the beginning of their pregnancy until their child reaches one year. This measure aims to protect women from being unfairly dismissed. However, female workers still have the option of resigning, the effectiveness of which is subject to a specific validation procedure by the Territorial Labour Inspectorate, aimed at ensuring the authenticity of the choice and preventing discriminatory or induced practices. The start date of maternity leave marks the beginning of the “protected period” during which dismissal is prohibited and has important repercussions even in the case of voluntary resignation by the worker. In fact, mothers who resign within the first year of their child's life must submit their resignation in a protected way and, as a result, receive the so-called “*NASpl unemployment benefit*” (CAF, 2020), established by Legislative Decree *No. 22/2015*. The benefit amount is equal to 75% of the average monthly taxable income for social security purposes over the last four years (INPS, 2025). Additionally, the reform increased the duration of unemployment insurance from 8 months to a maximum of 24 months, thereby altering the generosity of the benefits that women could receive after giving birth, but without safeguarding mothers’ long-term job positions (Zurla, 2021). In contrast, maternity leave normally begins two months before the expected date of birth and then continues for three months after (except for optional flexibility, which allows for the use of all five months after birth). During maternity leave, the worker is entitled to receive an allowance equal to 80% of the average daily wage calculated on the basis of the last pay period prior to the start of the leave (INPS, 2025). Using INPS data on working mothers, Zurla explained that providing longer benefits through the *NASpl* leads to utility gains for women by ensuring longer monetary coverage during a period of vulnerability, but it has negative effects on labour market attachment, which could exacerbate gender differences and increase the fiscal costs associated with the reform. Mothers who receive more generous benefits following job resignation (under the *NASpl* scheme) are less likely to work in the medium term, which subsequently has a significant effect on income, particularly within four years of giving birth. So, the WorkINPS Paper “*Mothers’ quits at childbirth and firm level responses*” (2023) points out that the reform, according to which mothers can access

unemployment benefits even in the case of voluntary resignation, may protect the income in the short term but overall reduces future job and employment opportunities. Using INPS data on employees in the non-agricultural private sector in Italy, and in particular on women who gave birth to their first child between January 2013 and June 2017, the conclusion is that the reform has increased resignation and non-employment rates around the birth of the first child (by 2.9% and 4.8%, respectively, for every 100 additional days of potential benefit duration). Furthermore, in light of this turnover in the female workforce, companies react by hiring male employees in the 20-45 age group (by 0.4% per 100 additional days of the mother's benefit duration). This has exacerbated statistical discrimination against women of childbearing age. Additionally, Manna et al.'s study (2021) explored the narratives of 30 women with an average age of 35.4 years, resident in Naples, who “voluntarily” left the workforce during pregnancy and immediately after giving birth. One of the main reasons for resignation, cited by all interviewees, is the lack of adequate support policies that hinder work-life balance. On the one hand, maternal responsibilities are considered a personal duty, while on the other, the private sector in particular is perceived as hostile to motherhood. In fact, resignations are not only due to practical constraints (working hours, lack of childcare facilities) but also to subtle or explicit forms of workplace harassment and gender stereotypes that view mothers as “traitors” to the company. Therefore, although the sample is limited, it is clear that the majority of women interviewed do not justify the system, which fails to support the balance between work and motherhood. Voluntary resignation therefore appears to be a constrained decision, particularly as many mothers report dissatisfaction and a deterioration in their quality of life. These dynamics help to explain why women leave work during the formally “protected” period, confirming that legal protection does not always translate into real job security. A safe environment should be guaranteed, one in which women would like to return, rather than a work structure that maintains the status quo and penalises them. One way to achieve equality is to create opportunities that allow them to continue working while raising their children, enabling an actual integration between work and family life (Torres et al., 2024). On the other hand, after resignation, women's inactivity remains an important predictor of pregnancy, and this, following the reasoning of Scherer and Brini (2020), contrasts with the idea that female employment is now a prerequisite for motherhood. However, it is worth noting that with the increasing participation of women in the labour market, those who declare themselves to be inactive seem to be family-orientated, whereas those experiencing employment instability or unemployment significantly reduce the likelihood of having (second) births. This means that when "voluntary" resignation is followed by unemployment and the search for a new job, the

resulting job instability reinforces the demographic consequences of women's precarious career paths.

CHAPTER 3: Living Costs and Social Spending in Italy

3.1 Household expenditure and Fertility Decisions

In 2023, average monthly household consumption expenditure in current values was 2,738 euro, an increase of 4.3% compared to the previous year (2,625 euro). However, in real terms, purchasing power fell by 1.5% due to inflation (+5.9%), which means that most households spent less than the average amount. If the median value is considered (the level of consumer spending that divides the number of households into two equal parts), 50% of households residing in Italy spent no more than 2,243 euro in 2023. Thereby, families have saved less and changed their consumption habits, especially with regard to the quality and quantity of food. Average monthly household expenditure rises as family size grows; however, due to economies of scale, the increase is less than proportional to the addition of members. As the number of family members increases, the share of non-discretionary expenses (such as food) tends to rise, while the share of divisible expenses (such as housing and utilities) declines. In terms of expenditure composition, outlay on food and non-alcoholic beverages mainly affects households composed of couples with three or more children, while it accounts for a more moderate share among couples (aged 18-34) without children. Conversely, childless couples or young and single individuals devote a larger proportion to transport, restaurants and accommodation, recreation, sports, culture, and information and communication services. Those with children, on the other hand, allocate more resources to personal care and social protection goods and services (ISTAT, 2024). This means that having a child radically alters the household spending pattern, shifting it from discretionary consumption to mandatory costs. In a context of inflation and low wages, childbearing is associated with a greater risk of falling into relative poverty. These economic constraints are intertwined with what Minello (2022) defines as “*Status anxiety*”: the awareness that raising children today requires not only ensuring their survival but also offering them educational, cultural, and social opportunities equal to or greater than those experienced by their parents. In the past, in rural societies, children worked with their families, contributing to household production and support. Nowadays, in contrast, in order to invest in the children's well-being, which has increasingly high standards and

requires diversified expenses, parents generally reduce the number of offspring. This is consistent with Becker and Lewis's (1973) quantity-quality trade-off theory, according to which the “*Shadow price*” of children increases as their quality rises: the more parents ensure high standards, the more costly it becomes to have an additional child. In other words, quantity and quality are interdependent, and in contemporary societies, families tend to reduce the number of children in order to concentrate resources and ensure higher living standards.

3.2 Housing Costs

In Italy, in 2023, 18.1% of households (approximately 4.8 million) rented the dwelling in which they live. This percentage varies from a minimum of 14.6% in the Islands to a maximum of 19.9% in the North-West. The national average rent expenditure for households was 421 euro per month, with the figure being higher in the North (450 euro in the North-West and 456 euro in the North-East) and in the Centre (436 euro) than in the South (350 euro) and the Islands (367 euro). The highest proportion of renting households was recorded in municipalities in the centre of metropolitan areas (24.7%), where the average rent was 454 euro per month.

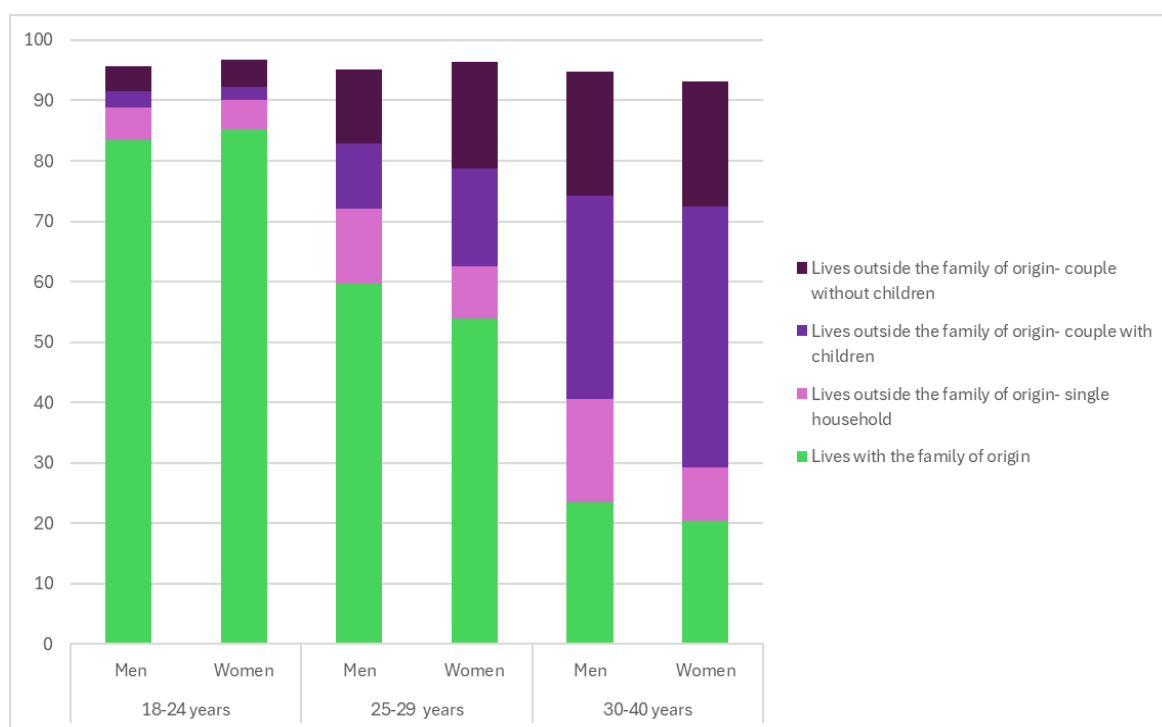
As for mortgages, 19.8% of households paid them (3.8 million). This percentage was higher in the North (25.9% in the North-West and 24.7% in the North-East) and in the Centre (21.6%) than in the South (10.0%) and the Islands (10.5%). Although mortgage payments are not classified as consumption expenditure, as they are medium- to long-term loans aimed at increasing real estate assets, they nonetheless represent a substantial outlay, averaging 567 euro per month, rising to 600 euro in central metropolitan areas (2023). The average monthly payment is rising compared to 539 euro in 2022, largely due to the increase in interest rates on variable-rate mortgages (ISTAT, 2024).

Housing Costs and Fertility Decisions

Entering the labour market is a crucial step in the transition to adulthood, profoundly influencing youths' life choices, including leaving their parents' household, forming a couple, and parenthood. A stable, well-paid job is a driver of economic independence, while job insecurity perpetuates the dependency on the original family and delays plans for the future. In Italy in particular, the combination of high unemployment, precarious contracts and low starting

salaries creates a context that has a negative impact on housing independence and the falling birth rate (Salmieri and Bonanni, 2025; Minello, 2022). As demonstrated by Bazzani et al. (2025), Italian respondents report job insecurity and low wages as determining factors in delaying parenthood. In particular, in the study involving a sample of 837 young adults (aged 20-45), all in stable relationships in Italy and Norway, the issue of housing and its relationship with fertility intentions emerged. In fact, in the “micro” analysis in Italy, which includes factors such as perceptions and expectations, 10.8% of women indicated housing as a hindering factor, compared to 14.5% of men. In Norway, the proportion is significantly lower, with 9.3% of women and 13.3% of men. Furthermore, unlike Norway, where the concepts of self-fulfilment and freedom are more prominent, in Italy the idea of having children is closely linked to the concepts of “choice, pleasure and social anchorage”. However, the combination of job insecurity and lack of stable housing delays young people's independence, resulting in postponed or, in some cases, abandoned childbearing plans. Salmieri and Bonanni (2025) highlight that the transition to independent housing in Italy, whether alone or as a couple, occurs at a relatively advanced age and generally takes place between the ages of 30 and 39. In 2021, 80% of those aged between 18 and 24 were living with their parents, partly because this period is aligned with university education. A more complex picture emerges in the following years (25-29), during which a significant proportion still live with their family of origin. The percentage is almost 60% for men and 54% for women. Between the ages of 30 and 39, 77% of men have left the original family home, compared to 80% of women. The analysis disaggregated by family typology reveals meaningful gender differences, and it is represented in *Figure 3.1, “Distribution of Household Typologies by Age and Gender (2021)”*.

Figure 3.1, “Distribution of Household Typologies by Age and Gender (2021)”



Own elaboration based on Bonanni and Giancola, “Diventare adulti in Italia. Una difficile transizione”, Di Franco, “Disuguaglianze intergenerazionali in Italia”, 2025.

In the 25-29 age group, younger men are more likely to live alone than women (12.4% compared to 8.7%), while women tend to form couples, with children (16.2% compared to 11% of men) or without (17.6% compared to 12.2%). Between the ages of 30 and 39, the differences widen: about 17% of men live alone compared to 9% of women, while 43.1% of women live in couples with children compared to 33.8% of men. Finally, one-fifth of individuals between the ages of 30 and 39 (men and women) live as a couple without children¹². From a birth rate perspective, this means that women who achieve housing independence tend to do it directly through a family project, often accompanied by parenthood, while men maintain more individual housing conditions. Such dynamics are consistent with further evidence: in 2022, the Italian Public Accounts Observatory (CPI) published a survey based on 1,308 Italian households, focusing in particular on women of childbearing age and dividing them into different age groups. The results show a negative relationship between home ownership and the likelihood of having a child, especially for younger women. This aspect seems to highlight the priority that young families give to economic security in terms of both work and housing, for

¹² The percentage missing to reach 100% corresponds to responses classified as ‘Other’, not shown in the graph.

which they often take on debt by taking out a mortgage. In these circumstances, it would therefore seem that the decision to have children is postponed. This interpretation is also confirmed by the sample results of women over 40, for whom there is a positive and statistically significant relationship between home ownership and the probability of having a child (Bortolamai and Ciotti, 2022). Moreover, Vignoli, Rinesi, and Mussino (2011) demonstrate that it is not so much the tenure status (ownership or rental) that matters, but rather the subjective perception of housing security. Indeed, homeowners do not differ from renters in their reproductive choices, as both mortgages and rents represent binding financial commitments that may postpone or limit childbearing. In contrast, women who feel secure about their housing conditions are significantly more likely to plan to have their first child in the near future. This housing security is also closely related to contractual arrangements. Those who leave their family home in smaller percentages are those with fixed-term employment contracts, the self-employed and those who work in an informal or undefined way. Bonanni and Giancola (2025) confirm that the delay in the housing transition depends on contractual stability, which allows access to credit and the purchase or rental of a dwelling. Finally, when examining young people's expectations regarding cohabitation with their partner, a diverse picture emerges across European countries. In Sweden, Germany and France, for example, the majority of people aged between 18 and 39 believe that the ideal age to start cohabiting is before the age of 29. In Italy, on the other hand, only 43.2% of young people consider cohabitation before the age of 30 to be ideal. Furthermore, in Italy, the highest percentage of responses compared to other Countries (36.8%) focuses on the option that “there is no ideal age” for cohabitation, while 17.9% consider an age above 30 to be appropriate. Conversely, in Nordic and Western countries these percentages are much lower: in Sweden, for example, only 8.3% indicate over 30, and 8.6% say that there is no ideal age. These data, therefore, signal a specific Italian connotation, in which uncertainty and the perception of an undefined age prevail, reflecting a more general delay in young people's paths to independent living and subsequent new family formation (Salmieri and Bonanni, 2025).

3.3 Social Spending and Household Costs for Childcare Services

The role of childcare services is crucial to understanding the link between female participation in the labour market and reproductive choices. The literature has extensively proven that the availability and affordability of early childhood education and care (ECEC)

services affect work-family balance and therefore influence fertility rates (Scherer et al., 2023). The Italian case fits into a family-based welfare model, typical of Southern Europe, in which childcare falls mainly on families and parental networks rather than on a structured provision of public services. This system is characterised by low de-familisation, which forces families to meet their own needs in the face of facilities that are too expensive or have limited capacity to respond to social demand. Furthermore, it indirectly hinders women's labour market participation, since the “choice” to remain at home to care for the family, given the persistent gender pay gap, results in women's burden. Therefore, the issue of providing ECEC services plays a crucial role in promoting women's access to and retention in the labour market, as it facilitates the reconciliation of work and family life (Di Censi, 2019). Bonifazi and Paparusso (2019) explicate that the provision of public childcare services has a positive effect on fertility. Nevertheless, the study of Bazzani et al. (2025) demonstrates that over a third of Italian participants cited the need for financial support for couples with children and the high cost (or total absence) of childcare services. This lack was reported by both individuals without children and parents, who also explicitly mentioned their dependence on family support. This structural weakness helps explain why, despite the growth in female employment in Italy, the birth rate continues to decline. Childcare services represent both a private cost, borne by families, and a public expenditure item, which varies considerably from region to region in terms of investment and supply capacity.

3.3.1 Public Investment, Household Burden, and Access to ECEC

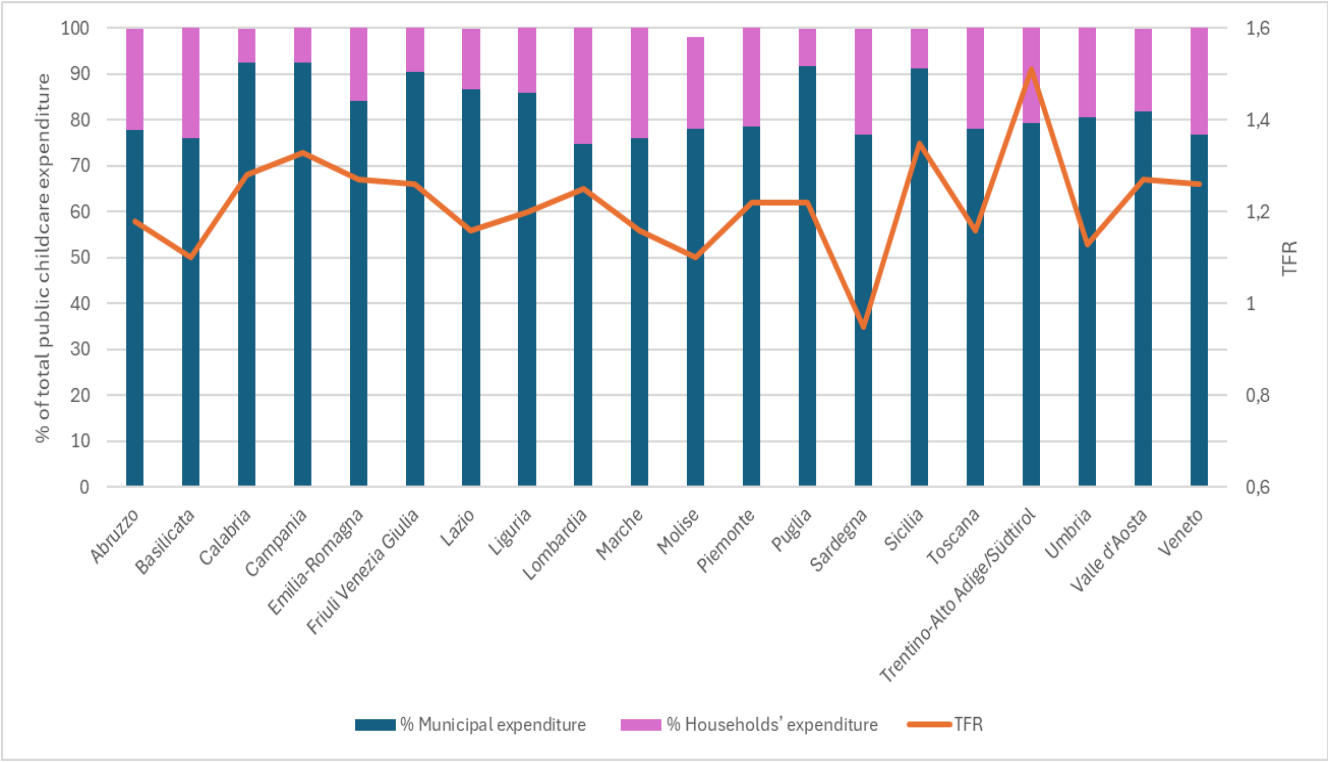
The high level of educational participation in ECEC required to meet the well-established European objectives¹³ is still far from being achieved. Children coming from families in the worst economic situations (at risk of poverty or social exclusion) and those with a single income or foreign citizenship are associated with much lower levels of attendance than those observed for the rest of the population (ISTAT, 2024). This is also confirmed by the “Il Sole 24 Ore” article (2025), which explains that family income is a determining factor in access to early childhood education services. Families who use nurseries have an average net annual income

13 The EU's Barcelona targets concern the provision of nurseries, childcare services, and preschools for at least 33% of children under the age of 3 and 90% of those between the ages of 3 and 5. After COVID-19 (2021), these targets were raised to 45% and 96% before 2030 (Openpolis, 2023).

of 23,000 euro, compared to 18,000 euro for families who do not use these facilities. The level of education of the parents also plays a significant role: if at least one of them has a university degree (or higher qualification), nursery attendance reaches 31.1%, while it remains at 26.3% in cases where both parents have at least a high school diploma. As a consequence, parents' employment status has a visible impact, since when only one parent works, nursery attendance is 14.2%, whereas it rises to 38.7% where both parents are employed. However, the higher the cost of childcare, the greater its impact on the mother's "*effective net salary*", thereby reducing her disposable income. According to Del Boca and Vuri's research (2007), childcare costs in Italy account for 30% to 50% of the working mothers' income when they have a child under the age of three. The unaffordability of access to adequate childcare, taking into account the current service prices, influences the use of such services. More specifically, the impact is twofold: on one hand, it limits female employment; on the other, it impacts reproductive choices, since the cost of childcare is a major factor in increasing the "overall cost of a child", discouraging childbirth. As mentioned in previous chapters, in Italy, there is a wide gap between desired and actual fertility rates, and economic reasons are one of the main causes for not wanting children. Therefore, family-friendly policies could have a major impact on Italian fertility trends. Dimai's article (2023) investigates household expenses and the related assistance they receive through childcare subsidies. The analysis focuses on the autonomous region with special statute "Friuli Venezia Giulia (FVG)", whose families already have a child and have applied for subsidies for childcare services in the 2017/2018 and 2018/2019 school years. The aim is to determine whether receiving childcare subsidies for one child increases the likelihood of having another, demonstrating how household spending on childcare shapes fertility behaviour and family planning decisions. The results were positively correlated, which means that reducing the cost of ECEC services has a positive effect on the likelihood of having an additional child. Notwithstanding, the observed effect on the probability of having another child is relatively modest and not highly noticeable. This is because, as Pronzato et al. (2024) explain, the costs of services only affect fertility if the mother wants or needs to work. Put differently, a stronger impact on fertility resulting from the availability of low-cost childcare is predictable in two (almost opposite) cases: for more career-orientated women and for those who need a higher income. If a mother remains in the labour market and childcare costs are high, having another child becomes less sustainable. Conversely, with moderate costs, the family budget is less affected, making the decision to expand the family easier. If, on the other hand, the mother leaves the workforce because she is discouraged or she has too low income, she tends to rely on informal forms of care, including from grandparents. Therefore, the cost of

childcare services is not a decisive factor. What the literature emphasises is that the mother's decision regarding the job offer makes the difference. In this context, Andreella et al. (2024) demonstrate that national averages conceal profound regional differences. Through a sub-regional cluster analysis, the authors highlight the existence of very different models of childcare welfare: on the one hand, areas in the North and Centre with medium-high coverage, medium-high public spending, and substantial female participation in the labour market, as well as large areas in the South characterised by low service provision. In line with this evidence, the public resources used to support the management and use of early childhood services, both by local authorities and at the national level, are not a sufficient contribution to balance out the regional disparities (ISTAT, 2024). These dynamics are clearly illustrated in *Figure 3.2*, which compares the distribution of expenditure on public childcare services between local authorities and households with the regional total fertility rate.

Figure 3.2, “Share of Municipal and Households’ Expenditure on Public Childcare Services and TFR by Region (2022)”.



Own elaboration based on ISTAT (2024), Servizi socio-educativi per la prima infanzia, Servizi Offerti dai Comuni https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1,Z0800SSW,1.0/SSW_SOCSE/DCIS_SERVSOCEDU1/IT1,47_850_DF_DCIS_SERVSOCEDU1_1,1,0

The graph shows that regional differences are still marked: in fact, in two Southern regions, Calabria and Campania, 92.4% of spending on nurseries, spring sections, and supplementary early childhood services is covered by the municipalities, while families contribute less than 8%. In other regions, such as Lombardy, families contribute more than a quarter of total expenditure (25.1%), as they do in Veneto (23.1%) and the Marches (24%). However, these different levels of economic participation do not translate directly into proportional changes in fertility rates. For example, Trentino-South Tyrol has the highest TFR nationally, at 1.51 in 2022, with a household share of around 20.6%, while Sardinia, with a similar share (23%), has the lowest TFR in the country (0.95). Consequently, Bigini and Sacchi (2024) explain the need for a policy mix optimal for achieving the goal of creating an increasingly favourable climate for families throughout the country. This clearly requires a shared commitment from all institutions and actors in society, with various measures that reflect the needs of the families and working mothers. In this light, public childcare services are only one component of a broader strategy that includes labour market stability (especially for women) and welfare support. However, as Dinale (2023) points out, spending on in-kind services such as public nurseries remains the most effective lever for promoting gender equality within families and, therefore, indirectly, for supporting fertility, thanks to their effect of defamiliarising care work.

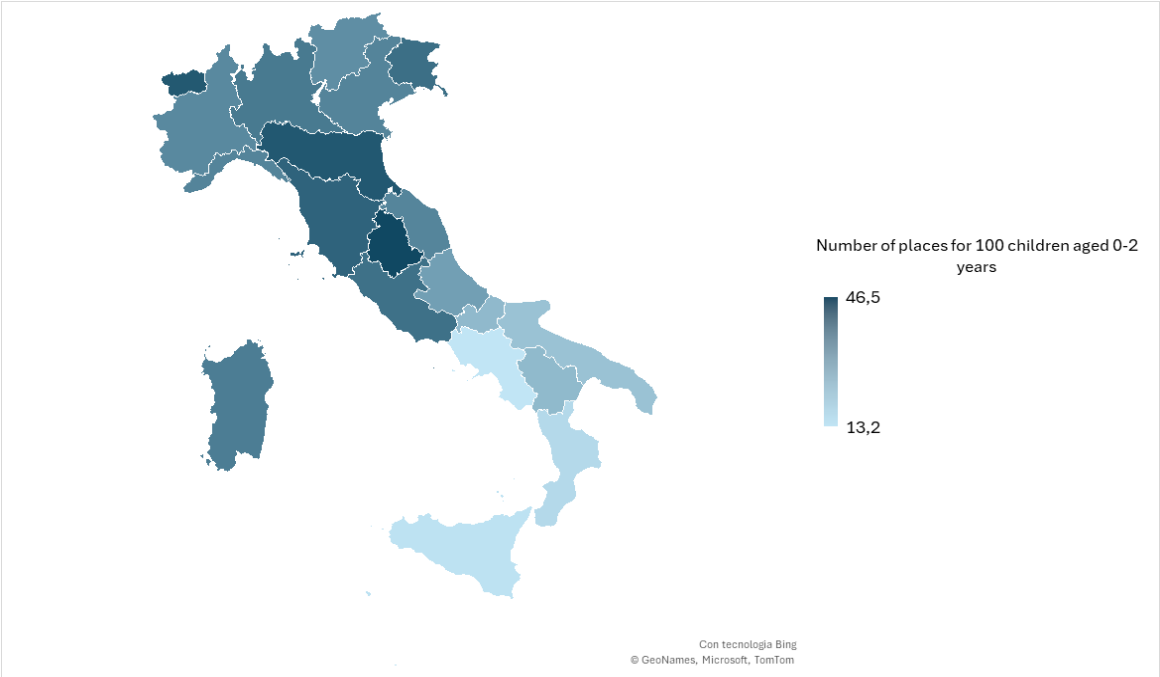
3.3.2 PNRR Funds and the Persistent Shortage of Childcare Facilities

Del Boca (2015) argues that childcare costs are a determining factor in shaping both the demand for such services and women's labour-market participation. Moreover, by studying various countries, including Italy, she explains that also the availability of childcare provisions has a positive effect on the likelihood of women finding employment. This occurs at all levels of education, but the effect seems to be stronger for less educated women: increasing the availability of such services by 10% boosts the probability of working from 53% to 67% for less educated women and from 79% to 86% for more educated ones. Such facilities can facilitate work-life balance, increase labour force participation, promote gender equality, and address declining fertility rates by making it more accessible for mothers to have children while maintaining their jobs. Nevertheless, the availability of accessible childcare services has become a significant concern in recent years. This is crucial, especially for countries facing extremely low fertility rates, such as Italy (Andreella et al., 2024). In the 2022/2023 academic year, early childhood education services in Italy exceeded 14,000, a little increase of 1.4%

compared to the last pre-pandemic year (2019/2020 academic year). At the same time, the coverage rate of places for residents under the age of three rose from 27.1% to 30%, but that was partly due to the decline in births and potential attendants. In terms of the type of service, the offer mainly consists of nurseries, which account for 80.6% of the total number of places, while 12.6% correspond to spring sections and 6.8% to supplementary services for early childhood, including play areas, children and parents' centres, and home-educational services. The gradual increase in places and coverage has been accompanied by a shift towards the private sector in terms of available supply. In fact, while places in the private sector have largely recovered from the decline seen in 2020, with a net increase of 6.1%, in the public sector the balance compared to pre-COVID-19 is still negative (-3.5%). Thus, 66.6% of the total provision is private, while around one-third is publicly owned by municipalities (33.4%), but more than half is managed by private entities (55.8%), while 44.2% is managed directly by municipalities. In other words, outsourcing and transfers to families are less expensive for the local authority than internal management, even if the institutional involvement can be defined as multi-level: municipalities are primarily responsible for planning and management, followed by regions and autonomous provinces, which co-finance and can coordinate. Finally, the state intervenes with specific transfers like bonuses or other extraordinary investments, including allocating the funds of the National Recovery and Resilience Plan (ISTAT, 2024). The National Recovery and Resilience Plan (PNRR) is a tool made available by the European Union in order to help Italy to grow in a sustainable and inclusive way. It made available 2.4 billion euro for new nurseries, of which 700 million was for new projects and 900 million for subsequent management. De Romanis (2024) explains that the goal was to create 264,000 additional places to achieve the 33% UE standard coverage. However, following a restructuring of the plan, the target was reduced to 150,000 places. Furthermore, local authorities have been notably hesitant to participate in public calls for the allocation of funds, with the result that their participation has been significantly below the available allocated budget ceiling. Among the possible causes, regulatory uncertainty regarding the management and financing of the offer emerges, particularly in the Southern municipalities, which were supposed to be the main beneficiaries (Ferretti et al., 2022). The ISTAT Report (2024) on educational services for children reveals that, in the 2023/2024 academic year, the demand for socio-educational provision intensified. Despite the demographic decline, surveys showed a continuous increase in pressure on existing facilities. The most significant data emerged from waiting lists, as more than half of educational services were unable to meet all requests. Furthermore, in the public sector, almost 70% of the facilities reported children waiting to find a place available, highlighting a significant and

persistent gap between demand and supply capacity. Consequently, with few childcare facilities, mothers either do not work or do so under precarious conditions or reduced hours (De Romanis, 2024), and fertility decisions are negatively affected (Scherer et al., 2023). Turcio (2008) points out that in Mediterranean countries, including Italy, the “strong family” view has historically compensated for the weakness of welfare. Today, however, familism is not a system capable of compensating: women are increasingly employed, and they need childcare facilities that allow them to effectively balance work and family life. When women are forced into part-time or precarious jobs due to insufficient support services, the transition to a more egalitarian couple model remains incomplete, with negative consequences for fertility. Conversely, once equitable values become pervasive and supported by concrete policies such as accessible childcare, TFR are likely to increase (Arpino et al., 2015). *Figure 3.3, “Coverage Rate of Childcare Facilities (0-2 years) by Region (2022)”*, depicts the general shortage in childcare in both public and private facilities, especially in the Southern Regions, highlighting the structural gap the PNRR aimed to address.

Figure 3.3, “Coverage Rate of Childcare Facilities (0-2 years) by Region (2022)”



Own elaboration based on ISTAT (2024), Servizi socio-educativi per la prima infanzia, Servizi sul territorio - reg. https://esploradati.istat.it/databrowser/#/it/dw/categories/IT1.Z0800SSW.1.0/SSW_SOCSE/DCIS_SERVSOCEDU1/IT1.47_850_DF_DCIS_SERVSOCEDU1_5.1.0

The range varies from a minimum of 13.2 places per 100 children in Campania to a maximum of 46.5 in Umbria. However, Umbria has one of the lowest fertility rates in Italy, at 1.13 (2022), compared to 1.33 in Campania. The latter, while maintaining relatively higher values, is also showing a gradual decline, highlighting how the decrease in the average number of children per woman is determined not only by the provision of services but also by broader economic, cultural, and institutional dynamics.

3.3.3 Gender Equality Certification (*UNI/PdR 125:2022*)

In the context of social spending, family policies can be divided into explicit and implicit policies. The former include childcare, assistance, early childhood education, maternity and parental leave, financial support, and tax benefits. The latter include policies aimed at increasing female employment, formative policies (Censi, 2019), as well as policies on pensions, housing, education, health, transport, etc. These measures can influence the living conditions of families, including by seeking to improve the well-being of the individuals. Following Turcio (2008), these indirect policies are the most effective in terms of supporting work-life balance and shaping demographic outcomes. As part of the PNRR, and in particular its Mission 5 “Inclusion and cohesion”, the Italian Department for Equal Opportunities is in charge of the investment aimed at developing the National Gender Equality Certification System. Introduced by Law *No. 162/2021* (Gribaudo Law), the system aims to support private and public entities in reducing gender gaps in all areas that are most critical for women's professional growth, such as equal pay, equal treatment and maternity protection. The parameters for obtaining certification are set by the *UNI/PdR 125:2022* reference standard, and the only assessment bodies authorised to grant certification are those recognised by Accredia, the Italian accreditation body. The *UNI/PdR 125:2022* defines a set of quantitative¹⁴ and qualitative¹⁵ parameters known as Key Performance Indicators (KPIs) that can guide policy change for gender equality, particularly in companies (Dipartimento per le Pari Opportunità, 2024). To ensure a comprehensive

14 Quantitative indicators are measured in terms of percentage variation with respect to the company's internal value, the average national reference value, or the sector of economic activity.

15 Qualitative indicators are measured in terms of presence or absence.

measurement of the maturity level of organisations, six strategic areas of assessment have been identified to foster inclusiveness and gender equality within organisations, namely:

1. Culture and Strategy;
2. Governance;
3. Human resource (HR) management processes;
4. Opportunities for growth and inclusion of women in the company;
5. Gender pay equity;
6. Protection of parenthood and Work-life balance.

Each area is distinguished by a percentage weighting (the total of the 6 different areas is set at 100), and it is expected that the KPIs will be applied according to a principle of proportionality consistent with the size of the organisation. This implies that facilitations are envisaged for organisations belonging to bracket 1 (micro-organisations) and bracket 2 (small organisations), while all indicators are applied to medium and large organisations. The *UNI/PdR 125:2022* Guideline specifies that organisations attribute greater involvement in family and household management to mothers on average than to fathers (as evidenced by data) and therefore prefer to hire and promote men whom they do not attribute such responsibilities to. Consequently, this creates a discriminatory imbalance that is difficult to overcome without specific measures designed for this purpose. Therefore, the “Protection of parenthood and Work-life balance” area envisages 5 different KPIs:

1. Presence of services dedicated to returning to work after maternity/paternity leave (e.g., coaching, temporary and reversible part-time work on request, smart working, ad hoc welfare plan, company nursery);
2. Presence of additional policies, beyond those already in place, dedicated to maternity/paternity protection and services to promote a better work-life balance;
3. Presence of policies for the maintenance of benefits and initiatives that enhance the experience of parenthood as an opportunity to acquire new skills for the benefit of the individual and the organisation, and that protect the relationship between the individual and the company before, during and after maternity/paternity leave;

4. Ratio of the number of actual male beneficiaries to the total number of potential beneficiaries of mandatory paternity leave during the first twelve years of the child's life;

5. Ratio between the average number of days of compulsory paternity leave taken and the total number of potential days provided for by law.

To obtain the Certification, indicators 2 and 3 must be achieved, even for micro and small enterprises (UNI/PdR 125:2022). As a result, both public entities and private companies in possession of the Gender Equality Certification can benefit from an exemption from paying a percentage of their total social security contributions, receive bonus points for the evaluation of project proposals by authorities responsible for national and regional European funds, and enjoy other forms of incentives, such as participation in tenders (Dipartimento per le Pari Opportunità, 2024). On the other hand, they build a supportive corporate culture that values work-life balance and fosters positive attitudes towards mothers, recognising the transferable skills acquired through parenting and caregiving (Torres et al., 2024). As Bigini and Sacchi (2024) note, from a perspective of improving well-being at work and at home, companies are called upon to find new ways to reconcile professional and personal life by filling the gaps of public welfare. Several are the best practices that could be implemented within organisations to support parenthood, and motherhood in particular. For example, forms of organisational flexibility, the establishment of company nurseries that employees' children can attend at a reduced fee, or even the provision of babysitting services. This involves placing the family, parenthood, and women at the centre of social and economic policies, ensuring a deeper recognition of their role, and consequently, balancing the distribution of family responsibilities in order to positively influence the birth rate. The potential of the Certification has been well captured in the private sector, where the tool has been successful beyond initial expectations. In fact, by 2024, more than two thousand companies (mainly medium and large) had applied for and obtained it, and this figure is rising rapidly. Conversely, as stated by Miracolini (2024), public administrations have progressed more slowly, with only three having been certified by 2024: the Agency for Digital Italy (Agid), Ca' Foscari University of Venice, and the National Social Security Institute (INPS). Despite this, although the literature highlights the success of women and family-centred policies and the potential of the Certification in achieving gender balance, there is still no empirical evidence directly linking *UNI/PdR 125:2022* to an increase in TFR, mainly due to its recent introduction. On the contrary, an impressive best practice is represented by the region Trentino-South Tyrol, where family-friendly certification systems, combined with other local welfare measures, have had a tangible demographic effect (Bigini and Sacchi, 2024).

Thematic Insight IV: Trentino-South Tyrol Certifications as a Best Practice

Certifications can be effective tools for guiding public and private organisations toward more inclusive practices, and for this reason, Trentino-South Tyrol has distinguished itself in establishing various “family-friendly” certifications (Bigini and Sacchi, 2024). Alongside various local welfare measures, the region is ranking first for birth rates in Italy. Indeed, the total average number of children per woman in 2023 was 1.43, thanks to the high contribution of both the first (0.66) and second child (0.52) (ISTAT, 2024). The first tool, launched in 2008, is called “*Family Audit*”, and it has been available to public and private organisations that voluntarily intend to certify their commitment to adopting measures aimed at promoting work-life balance, equal opportunities, and organisational well-being. The result is strong support and a guarantee of female employment, both before and after childbirth, which, accompanied by other measures such as the provision of ECEC services, is vital in reducing the opportunity cost associated with children, especially for more educated women (Bonifazi and Paparusso, 2019). On the other hand, there are also numerous advantages for the company, from reduced turnover to increased productivity, partly thanks to the competitive advantages that come with certification, for example, in tenders in the Trentino area (Provincia autonoma di Trento, 2025). Secondly, the “*Family in Trentino*” is a mark issued free of charge to all public and private operators who meet service and/or price standards in meeting the needs of families (Bonifazi and Paparusso, 2019). The label can be requested by eight different stakeholder categories, namely municipalities, cultural activities (museums, theatre companies, and cultural venue operators), accommodation facilities (such as hotels and farm stays), sports associations, educational and childcare services, pharmacies, flower shops, and information desks. In other words, Trentino-South Tyrol has succeeded in creating a model, above all a cultural one, in which the family is placed at the centre and is recognised as a resource for the development of society (Bigini and Sacchi, 2024). Therefore, since 2011, when various family policies were introduced and expanded, including the range of work-life balance services through various certifications, there has been a sharp increase in large families (with three or more children). In fact, their share rose from 10.7% in 2010 to 16.3% in 2022. It was the highest value in Italy, highlighting how integrated and certified policies can reduce the opportunity cost of motherhood, thereby contributing to sustaining fertility (Provincia autonoma di Trento, 2023).

CONCLUSIONS

This dissertation explored the multifaceted relationship between women's labour market participation and fertility, focusing specifically on the Italian context. The analysis sought to understand why the TFR continues to decline despite the increase in female employment levels after the financial crisis. Since the late 1990s, several European countries have experienced a moderate recovery in fertility alongside growing female participation in the labour market, thus contradicting the traditional assumption of a trade-off between work and family life. Italy followed this trajectory from 1996 to 2008, with both female occupation and TFR on the rise. After the 2008 crisis, however, fertility rates continued to decline without recovering, while employment continued to grow in all three Italian macro-areas. However, if the aggregate data is analysed by age group, a different framework emerges, which already partially explains the mismatch between rising female employment and declining fertility. What clearly emerges from this thesis is that the increase in female occupation is mainly concentrated among older cohorts. In the North and Centre, the most marked growth is recorded for women over 45, a life phase when reproductive choices have generally already been made. By contrast, in the South, there has been a visible increase in female employment at childbearing age, but overall participation rates remain low compared to the national level and the European average.

To further explain why fertility continues to decline, *Chapter 2* introduces the educational attainment, which shapes both women's access to the labour market and their reproductive choices. The rise in women's educational attainment has significantly improved their employment opportunities compared to those with lower levels of education, with a general delay in reproductive choices. Indeed, many women graduates become mothers only after the age of 30 or 40, and this delay reduces not only the biological window of fertility but also the total number of children a woman can have, thus widening the gap between desired fertility and actual fertility (Testa, 2014; Minello, 2022). Therefore, in line with previous literature concerning the role of job insecurity in fertility choices, this dissertation emphasises the qualitative dimension of female employment. Stated differently, the Italian paradox lies not only in the increase in female occupation itself but, above all, in its quality and stability. Precarious employment among women is on the rise, especially for those of childbearing age, who face insecurity in a context where the income stability of both partners is crucial. The analysis shows that the growing prevalence of fixed-term contracts has a negative impact on reproductive decisions, particularly on the transition to having a first child. Comparative

European studies confirm that in countries where the divide between stable and precarious employment is particularly pronounced, fertility declines, specifically among less educated women. In Italy as well, reduced employment protection reforms have further accentuated this dynamic (De Paola, Nisticò, and Scoppa, 2021). Additionally, women on a fixed-term contract are unlikely to transition to stable employment; instead, they remain trapped in low-wage precariousness. According to UNFPA data (2025), 30% of Italian women cite job instability as the main obstacle to parenthood, a significantly higher percentage compared to other European countries. In the Italian context, characterised by limited welfare networks and an often-pessimistic public narrative about the future, job insecurity not only delays the transition to motherhood but also reduces the possibility of catching up on postponed fertility. Precariousness is particularly evident in certain sectors, such as academia (Picardi, 2019). The average age of motherhood (32.6 years) collides with the long and uncertain timescales of those careers. Data show that promotion to associate professor increases the likelihood of having a child, indicating that job security is a decisive factor in reproductive choices (De Paola et al., 2021). Furthermore, what emerges from this thesis is that the typology of employment is also significant. Part-time work can only support fertility if it is voluntary and offers quality conditions, such as adequate protection and wages. The Italian reality is far different, with IPT growing, demonstrating that it is not enough to consider the number of working women. Conversely, it is necessary to take into consideration the more intrinsic conditions and dynamics. An aspect that has been relatively under-investigated, and to which this research contributes, is the difference between part-time employment in public and private domains and its relationship with fertility. Female public sector workers tend to become mothers earlier than self-employed or private sector employees (Cavalli, 2012). All this takes place within a context of protection and security that characterises the public sector, where part-time work is not as widespread as in the private domain. Furthermore, companies that offer part-time work tend not to include other flexible working arrangements (such as smart working), thus not completely helping women in balancing work and life. Concerning the gender labour divide, female employment growth does not translate into more childbirths, due to vertical segregation. Few women still reach top positions, and they achieve them later than men. Additionally, horizontal segregation proves to be implicated in the decline of TFR. Although female employment is growing, women tend to concentrate in sectors that are already strongly feminised, often characterised by low wages and precariousness. This produces a quantitatively high but qualitatively weak participation, which does not guarantee the economic security necessary to support a family project. Studies show that educational pathways and subsequent career choices

affect fertility: feminised professions offer greater flexibility but fewer economic prospects, while male-dominated professions offer higher wages but little attention to needs. As highlighted in this research, in Italy the expansion of female employment has not reduced these structural asymmetries. A case in point is that of women working in the STEM sector. Despite encouraging data showing an upward trend for women working in the sector, this does not automatically translate into more births. Working conditions must guarantee stability and work-life balance; otherwise, reproductive choices are sacrificed, contributing to Italy's low TFR. One issue occurring not only within the STEM sector is the so-called child penalty. In Italy, mothers earn on average 57% less than women without children with comparable characteristics. This figure stems from fewer opportunities for advancement, forced recourse to part-time work, stereotypes, and career interruptions. Recent reforms extending unemployment benefits have temporarily provided earnings protection but have increased female resignation rates and reduced re-employment prospects, fuelling statistical discrimination against women. In this measure, motherhood translates into forced exit from the labour force and long-term precariousness, further reducing the opportunities for economic stability. These aspects are closely linked to *Chapter 3*, which discusses what is now called “status anxiety”. This represents a general parental awareness that raising children today requires financial resources. They wish to provide their offspring with broader educational, cultural, and social opportunities than those they themselves experienced. However, living costs have increased, as well as housing prices. Approximately 10.8% of Italian women cite housing as a direct obstacle to parenthood. Delayed access to independent housing, often made difficult by low wages and unstable contracts, leads to postponing motherhood or reducing the number of children. The cost and accessibility of early childhood services are also significant factors. Research has shown that a wide range of accessible ECEC services encourages people to have children, especially a second child. However, the positive effect of low costs remains limited if not accompanied by other related measures, such as those promoting female employment stability. The PNRR has sought to address the lack of facilities by allocating substantial funds for new buildings, but the provision of childcare services remains insufficient and not homogeneous across the country. Meanwhile, to ease work-family reconciliation, the Gender Equality Certification (*UNI/PdR 125:2022*) has been introduced. Although there are still no studies assessing its direct effects on fertility, the recognition of work-life balance as a central element in corporate policies and institutional strategies may provide a useful basis for future research. The example of Trentino-South Tyrol shows that when family-friendly certifications and early

childhood education services are integrated, the opportunity cost of motherhood is reduced, and fertility increases.

To conclude, the reason why the TFR continues to decline in Italy despite the positive female employment rate lies in the fact that this growth has mainly taken place in precarious forms of employment, segregated or incompatible with family life, in a context of insufficient welfare and rising living costs. The so-called “Italian paradox” therefore shows that it is not enough to simply count more employed women. What is required are measures targeted at lowering work-family conflict and fostering gender equality in the labour market and at home, as well as establishing an economic environment that benefits young couples and families. Put differently, what affects reproductive choices is the quality of work, economic security and the presence of structural reconciliation policies, without which the increase in female employment does not translate into higher birth rate.

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