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Working Women Redefine Prosperity:

Europe's demographic future in times of – environmental – crisis

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Contents

Abstract

This dissertation examines the intersection of gender-sensitive policies, female labor force participation (FLFP), and climate change awareness in shaping reproductive choices in Europe. It explores how supportive family policies – such as affordable childcare, flexible work arrangements, and parental leave – interact with growing environmental concerns influencing fertility decisions. Through a comparative analysis of Sweden and Italy, the study reveals how robust progressive policies in high-trust environments, like the former, mitigate eco-reproductive anxiety and support both career ambitions and family formation. Sweden's model, characterized by gender equality, higher institutional and social trust, and a comprehensive welfare system which integrates environmental sustainability into its policies, demonstrates how supportive policy frameworks can maintain relatively stable fertility rates despite climate concerns. In contrast, Italy's more traditional family structures, limited policy support, and economic instability exacerbate uncertainties surrounding both fertility and women's employment. The resulting low FLFP and fertility rates – among the lowest in Europe – reflect a broader pattern of heightened uncertainty, where climate change concerns, though increasingly significant, act as additional stressors rather than primary drivers of fertility decline. In this context, the findings suggest that while environmental anxieties add complexity to the already challenging reproductive decisions in Italy, they are outweighed by immediate socio-economic concerns and insufficient institutional support. Therefore, this research argues for integrated gender, family, and environmental policies to promote higher fertility outcomes overall and mitigate the adverse effects of climate change on reproductive decisions. The study ultimately provides a valuable foundation for future research aimed at addressing the dual crises of fertility decline and environmental degradation through holistic policy frameworks.

Keywords: fertility, climate change, female labor force participation (FLFP), eco-reproductive anxiety, gender equality, Sweden, Italy, family policies.

Chapter 1: Introduction

In the context of Europe's demographic future, the intersection of gender equality and environmental sustainability has become a focal point for both scholars and policymakers. The twin crises of declining fertility rates and environmental degradation have increasingly underlined the need for integrated approaches that address these interconnected challenges. This dissertation explores how gender-sensitive policies, female labor market participation, and climate change awareness shape reproductive choices, focusing on working women as key actors in redefining prosperity for Europe.

The driving motivation behind this research is indeed to investigate how supportive, gender-conscious policies – such as affordable childcare, flexible working arrangements, and parental leave – interact with growing climate change concerns to influence fertility decisions. The comparative analysis of Sweden and Italy serves as the primary methodological approach, offering a framework to understand how both progressive and traditional policy environments and cultural norms influence these dynamics. Sweden's model, characterized by higher levels of gender equality, institutional and social trust, and robust environmental policies, stands in contrast to Italy's traditional family structures, higher uncertainty, and weaker institutional support. These divergent approaches provide critical insights into how national policy frameworks can either alleviate or risk exacerbating eco-reproductive anxiety, consequently influencing fertility intentions.

The structure of this study is designed to thoroughly unfold these themes. Chapter one introduces Europe's demographic challenges of low fertility rates and aging population, emphasizing the role of gender equality, supportive policies, and climate anxiety in shaping fertility intentions, ultimately presenting the research focus of this study. It also features a methodological section to provide a comprehensive overview and explanation of the data and variables analyzed, as well as the rationale behind the selection of Sweden and Italy as the subjects of the comparative case study. The following chapter then outlines and engages with the existing literature: it delves into the interplay of FLFP, public policies, and fertility, examining the impact of climate change on reproductive choices through the concept of eco-reproductive anxiety and its varying effects across different socioeconomic contexts. Additionally, this section investigates how social and institutional trust mitigate the negative effects of uncertainty on fertility preferences.

Hereof, it is also explored how working women, through full inclusion and participation in the green economy, would be pivotal drivers of climate action. The third segment is then devoted to the comparative case studies of Sweden and Italy. This chapter illustrates why these two countries serve as contrasting exemplifications of how policy environments shape reproductive choices and climate consciousness. In the Swedish case, comprehensive policies support women in balancing work and family life and lead to more favorable fertility outcomes. In contrast, Italy, lagging behind in both family and environmental policies, underscores the risks correlated with failing to address these challenges in a comprehensive framework. Finally, the last chapter builds on the insights gained from the case studies and literature review. While also proposing future directions for further research – thereby acknowledging the limitations of the one at hand –, this study emphasizes how FLFP and comprehensive policies would represent critical breakthroughs for Europe's demographic future in the face of climate change.

Ultimately, this dissertation argues that for Europe to secure a sustainable demographic future, countries must adopt holistic policy approaches integrating gender equity, family support, and environmental consciousness.

1.1 Background

1.1.1 Overview of Europe's demographic challenges

Europe is currently facing significant demographic challenges characterized by persistently low fertility rates and an aging population. According to the United Nations Department of Economic and Social Affairs (UN DESA) the 2023 Total Fertility Rate (TFR) – hereof defined as an estimate of the average number of live births per woman over the entirety of her childbearing years, typically 15-49 years old (UN DESA, 2024b) – across Europe stands at 1.5 live births per woman, substantially below the replacement level of 2.1 births per woman (UN DESA, 2024a) as Figure 1 displays. This means that births are below the threshold that guarantees that a population replaces itself completely from generation to generation (Sobotka et al., 2019) without immigration. With "very low" (with a TFR below 1.5) to "lowest-low" or "ultra-low" (with a TFR below 1.3) fertility rates, Europe – the region this research focuses on – is among the most affected areas (Eurostat, 2023a). This demographic shift is most pronounced in Southern and Eastern European countries, where TFRs range from 1.2 to 1.5 (*Ibid*.).

The implications of these trends are far-reaching, affecting labor markets, economic output and productivity, and the sustainability of social welfare systems. The decline in fertility rates can be attributed to a complex interplay of factors, including economic instability, cultural norms, and policy environments. Italy, which systematically has one of the lowest fertility rates in Europe at 1.3 births per woman in 2023 (*Ibid.*) (*see* Figure 1), is an exemplary case facing challenges such as economic instability, the high cost of childcare, and entrenched cultural expectations around motherhood (Migliaccio, 2024). Indeed, countries with inadequate work-life balance policies struggle to encourage higher fertility rates, while states like Sweden, with more supportive frameworks, experience better outcomes (Impicciatore & Tomatis, 2020). For example, Sweden's integration of generous parental leave policies and gender-equal employment opportunities has positively influenced fertility, with the 2023 TFR at 1.67 births per woman (UN DESA, 2024a), as evidenced in Figure 1, even amidst broader European declines (Sundström & Stafford, 1992).

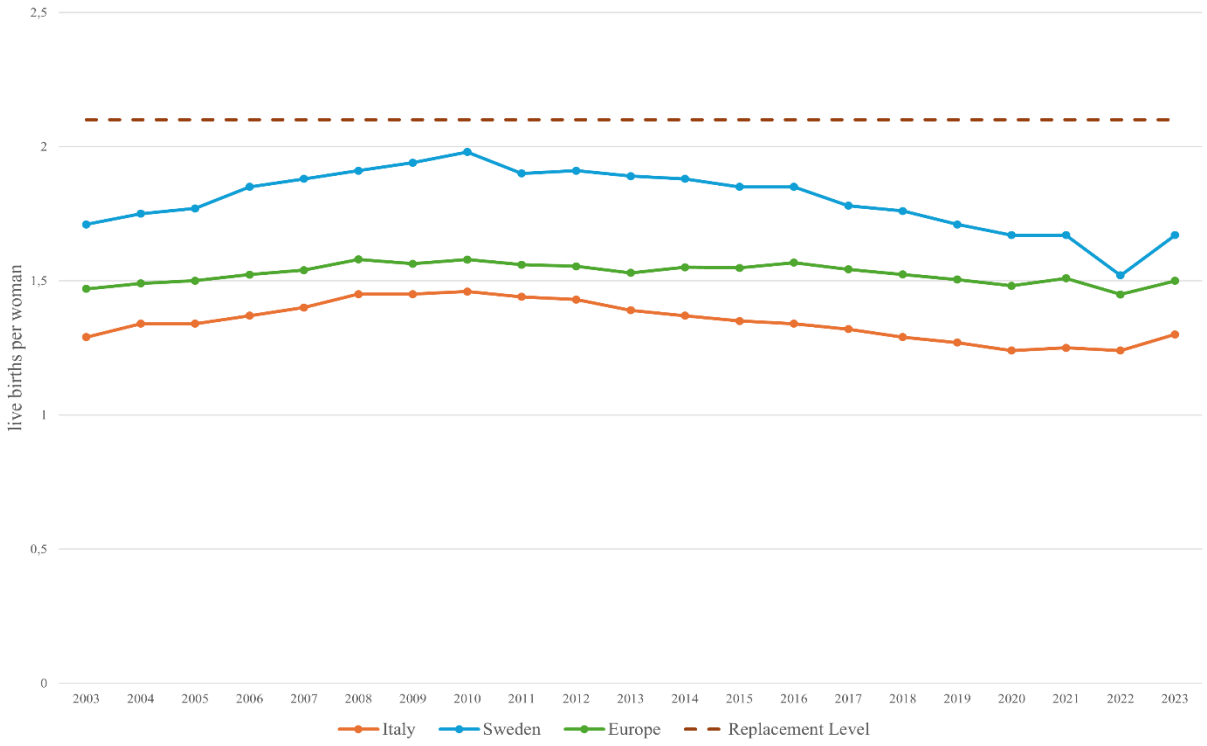

Figure 1. Total Fertility Rate (live births per woman), Italy, Sweden and Europe, 2003-2023.[1]

[1] Personal elaboration from the data from UN DESA [World Population Prospects]. (2024a). Total fertility rate in Europe in 2023, by country [Dataset]. In *Statista*. Statista Research Department. https://www.statista.com/statistics/612074/fertility-rates-in-european-countries/

The aging population also poses severe challenges for European labor markets and the economy. As it can be observed from Figure 2, this demographic imbalance has been exacerbated over the last few decades with the share of persons aged 65 and over in the European Union (EU) growing from 16% in 2003 to 21% in 2023 (Eurostat, 2024a) – which, for a matter of coherence and data availability, is also employed as the timeframe of reference for the analysis of other demographic variables this study features – i.e., TFR and FLFP. The shrinking workforce leads to labor shortages, reduced economic output, and diminished productivity and innovation (Mason et al., 2022).

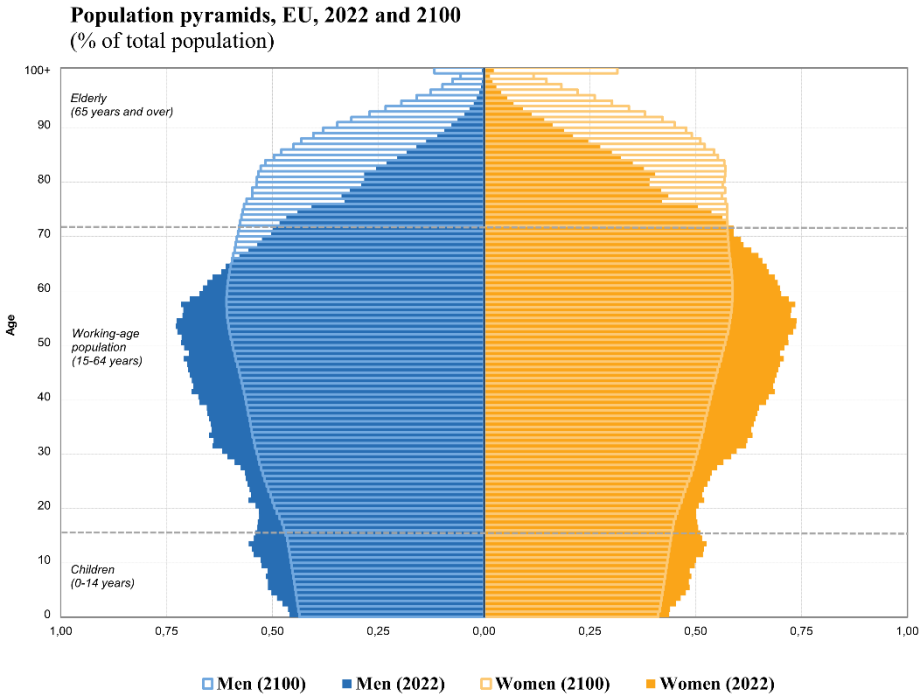

Figure 2. Population Pyramids, EU, 2022 and 2100 (% of total population) (Eurostat, 2023c).

Moreover, as Figure 3 illustrates, the rising projected old-age dependency ratio – measuring the proportion of people of working age relative to those aged 65 and older – places additional pressure on social welfare systems (Mason et al., 2022). According to Eurostat projections, the share of working-age population is expected to decline across all EU Member States between 2022 and 2100, further exacerbating this demographic imbalance (Eurostat, 2023b). By 2050, projections indicate that there will be fewer than two people of working age for every elderly person in the EU, underscoring the challenges faced by labor markets and social support systems (*Ibid.*).

At the same time, the young-age dependency ratio, which refers to the ratio of people aged 0-14 to those of working age, remains relatively constant over time, highlighting the growing burden placed on the working population as the elderly population continues to expand (*Ibid.*). As Mason and his colleagues explain, this demographic imbalance strains public resources, complicating the funding of healthcare and pensions, and increasing the per-capita burden of public debt (2022).

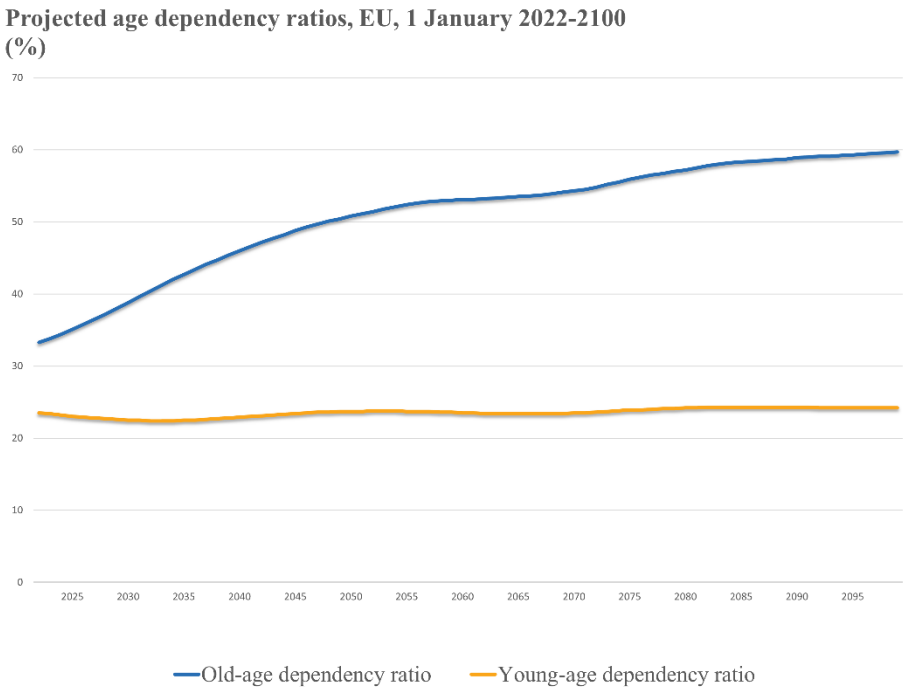

Figure 3. Projected Age Dependency Ratios[2], EU, 1 January 2022-2100 (Eurostat, 2024b).

As Europe grapples with these challenges, the broader context of demographic change is further complicated by emerging factors such as environmental crises, which also impact reproductive choices (Bongaarts, 2014; Bastianelli, 2024). These issues, explored in subsequent sections, highlight the urgency for integrated policy approaches that address both gender equity – henceforth understood as fairness of treatment for women and men according to their respective needs, often achieved through equal access to resources, opportunities, and rights (Kabeer & Natali, 2013) – and environmental sustainability in order to foster a more balanced demographic future.

[2] Both dependency ratios are indicated as percentages expressing the ratio between, respectively, the number of persons aged 65 and older for old-age dependency ratio, and persons aged 0-14 for young-age dependency ratio, relative to the persons of working age, namely 15–64-year-olds (Eurostat, 2024b).

1.1.2 The evolving relationship between FLFP, education, and fertility rates

Historically, higher levels of female education and increased FLFP – defined as the proportion of the female population, expressed as a percentage, aged 15-64 years old that is economically active, which implies they are either employed or actively seeking employment (Ortiz-Ospina et al., 2024) – have been associated with lower TFR in several parts of the world. This trend can be attributed to various factors, including the postponement of childbearing due to extended periods of education, career-building, and higher opportunity costs of motherhood for women engaged in the workforce (Becker, 1992; Impicciatore & Tomatis, 2020). As women's access to education and employment increased, many scholars argued that these advancements came at the expense of fertility rates, with educated and working women having fewer children largely due to the trade-off between professional aspirations and family life (Lappegård & Rønsen, 2005; McDonald, 2000).

Until the 1980s, the negative correlation between FLFP and fertility was largely accepted as a universal phenomenon, particularly in developed nations. The rationale was straightforward: women who entered the labor market would tend to have fewer children due to the demands of employment and the difficulties associated with balancing work and family-life (Engelhardt et al., 2004; Berrington & Pattaro, 2014). Moreover, as mentioned the opportunity costs of childbearing rose as women attained higher education and professional status, further reinforcing this pattern. The idea that larger families were incompatible with career success became embedded in economic models and social theory (Becker & Lewis, 1973).

However, recent scholarships have started to debunk this conventional association, demonstrating that the relationship between FLFP and fertility is more complex than previously thought. In particular, scholars have found that, under certain conditions – i.e., in countries with supportive policy environments – the relationship between FLFP and fertility can be positive (Sobotka et al., 2019). This shift was first observed in the Nordic countries, where robust family policies, including parental leave, affordable childcare, and gender equality initiatives, enabled women to balance work and family responsibilities without forgoing childbearing (Sundström & Stafford, 1992).

These findings suggest that it is not FLFP per se that drives lower fertility rates, but rather the lack of institutional support that forces women to choose between employment and motherhood. In countries like Sweden, where extensive parental leave and childcare subsidies are provided,

women are more likely to have children despite high levels of labor force participation (Impicciatore & Tomatis, 2020), as demonstrated by its 2023 TFR at 1.67 against the European average at 1.5 (UN DESA, 2024a) (*see* Figure 1) and FLFP of 82.2% against the 70.2% European average (OECD, 2024) (*see* Figure 4). As these policies reduce the opportunity costs associated with childbearing, more women are able to combine work and motherhood, leading to higher fertility intentions and, in some cases, even higher TFRs (Testa, 2024). Conversely, countries lacking such policies, exasperate women's choice between pursuing their career and childbearing, even where both TFR and FLFP are low. Italy is an exemplary case with ultra-low fertility rates, at 1.3 live birth per woman in 2023 (UN DESA, 2024a) (*see* Figure 1), and low FLFP, 57.6% that same year (OECD, 2024), compared to the European and Swedish equivalent; this stark contrast is depicted in Figure 4.

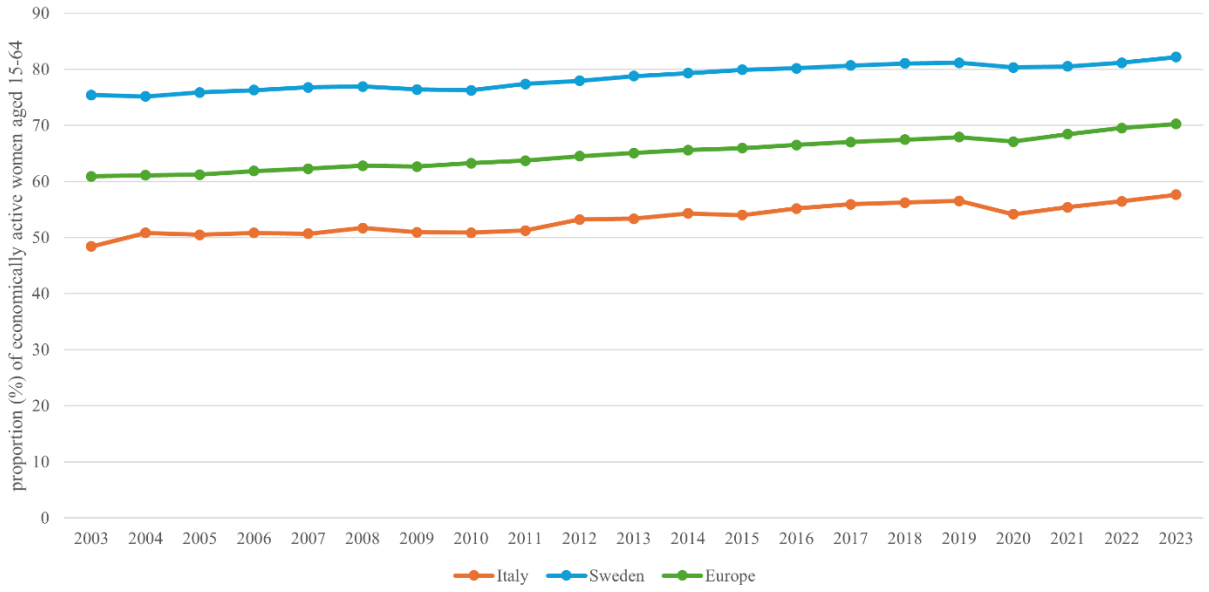

Figure 4. Female Labor Force Participation rate (% of economically active female population aged 15-64), Italy, Sweden, and Europe, 2003-2023.[3]

[3] Personal elaboration from the data from OECD. (2024). Labour force participation rate [Dataset]. In *OECD Data Explorer*. https://data-explorer.oecd.org/vis?df[ds]=dsDisseminateFinalDMZ&df[id]=DSD_LFS%40DF_IALFS_LF_WAP_Q&df[ag]=OECD.SDD.TPS&df[vs]=1.0&pd=2003%2C2023&dq=EU27_2020%2BEA20%2BSWE%2BITA.LF_WAP.._Z.Y.F.Y15T64..A&ly[cl]=TIME_PERIOD&ly[rw]=REF_AREA&to[TIME_PERIOD]=false&vw=tb

A growing body of research also challenges the historical understanding that higher levels of female education inevitably led to lower fertility. While education is still associated with delayed childbearing, studies now demonstrate that women with higher education levels tend to have similar or even higher fertility intentions compared to their less educated counterparts (Testa, 2014; Berrington & Pattaro, 2014).

Therefore, although the historically negative correlation between higher FLFP, female education, and lower TFR has been a persistent narrative in demographic studies, recent evidence suggests that this relationship is not necessarily inversely related. On the contrary, these factors may actually be positively associated as supportive policy frameworks can mitigate the trade-offs between career and family-building, allowing women to pursue both. Whilst Europe continues to grapple with demographic challenges, understanding these dynamics is crucial for designing policies that promote gender equity, support female labor force participation, and address declining fertility rates.

1.1.3 Climate change: a new determinant of reproductive choices

Latterly, climate change has emerged as a significant factor influencing reproductive choices across the world. As individuals become more aware of the environmental crisis, many are reconsidering their family planning decisions. Increasingly, concerns about the future state of the planet, its resources, and the wellbeing of future generations are shaping fertility intentions, adding a new layer of complexity to Europe's already intricate and multifaceted demographic future (Brusselmans, 2023).

Research indicates that heightened awareness of climate change is leading to a growing phenomenon of eco-reproductive anxiety (Hickman et al., 2021). While eco-anxiety (or climate anxiety) refers to the general fear and distress caused by climate change and environmental degradation, eco-reproductive anxiety specifically denotes the emotional conflict surrounding the decision to have children (*Ibid.*) as a reaction not only to the physical impacts of climate change but also to the broader ethical and moral considerations associated with bringing children into a world facing long-term environmental crises (Brusselmans, 2023).

Both terms highlight the psychological impact of climate change, with the latter particularly focusing on its implications on reproductive choices. Studies have documented that some people

are opting for smaller families or, in some cases, forgoing parenthood altogether due to fears about the long-term sustainability of life on Earth (Marks et al., 2021). This reluctance stems not only from concerns about the availability of natural resources but also from a sense of moral responsibility to limit the environmental burden of future generations (Haq et al., 2010).

This shift in reproductive decision-making can be attributed to several key factors. Firstly, the direct impacts of climate change, such as extreme weather events, environmental degradation, and rising temperatures, have altered the way people perceive their ability to provide a safe and stable environment for their children (De Rose & Testa, 2015). Worsening environmental conditions pose health risks, reduce the availability of clean water and arable land, and threaten food security, leading individuals to question the viability of raising children in such an uncertain and unpredictable world (Rothschild & Haase, 2022).

Second, these psychological impacts, namely climate anxiety and eco-reproductive anxiety, are becoming more prevalent especially among younger generations. These mental health conditions, characterized by fear, sadness, and feelings of helplessness about the future, are influencing individuals' life choices, including decisions related to family size (Marks et al., 2021). For many, the emotional toll of facing an uncertain future, compounded by the perceived inaction of governments to address climate change adequately, has resulted in a reevaluation of traditional life milestones, such as starting a family (*Ibid*.).

However, the relationship between climate change and reproductive decisions varies across cultural and socioeconomic contexts (Brusselmans, 2023). In wealthier nations with stronger environmental policies, individuals may feel more confident in their ability to raise children in an environmentally sustainable manner (*Ibid*.). For example, in countries where robust social policies and environmental protections exist, like Sweden, individuals are less likely to feel trapped by eco-reproductive anxiety, as the governmental proactive approach to climate change helps mitigate some of the uncertainty associated with raising children (Aassve et al., 2020b). Conversely, in countries with weaker environmental policies, or more immediate exposure to climate risks, individuals are more likely to experience heightened anxiety and hesitation about having children (De Rose & Testa, 2015).

Additionally, research highlights the critical role of gender in how climate change influences reproductive choices. Women, in particular, are disproportionately affected by the environmental

crisis due to their roles in caregiving, household management, and agriculture, especially in developing countries (UN Women, 2018). Consequently, they are more likely to experience the direct impacts of environmental degradation and are often at the forefront of the eco-reproductive decision-making process (Haq et al., 2010). Ultimately, due to an environmentally uncertain future, reproductive decisions are increasingly being influenced by concerns over climate change.

1.1.4 Research focus

This dissertation therefore examines how climate change awareness is shaping reproductive choices within Europe's already complex demographic landscape. Building upon the challenges discussed in the previous sections – including declining fertility rates, aging population, and evolving gender dynamics – this study focuses on how environmental concerns, supportive policies, and social and institutional trust converge to influence fertility intentions. As climate change becomes an increasingly pressing issue, its direct and indirect effects warrant an in-depth analysis aimed at assessing whether comprehensive gender-sensitive, supportive policy environments can mitigate its impact on reproductive choices, particularly as Europe experiences bleak demographic instability.

1.2 Methodology

1.2.1 Variables and data

Before delving into how the presented variables and data are employed in this study, this segment will briefly recap their definitions, sources, and selection grounds. The data used in this dissertation primarily derives from (a) World Population Prospects, (b) Eurostat, and (c) OECD. Each database was selected based on the relevance of its variables to the objectives of the study, providing critical demographic insights for comparative analysis.

(a) The former, published by the United Nations Department of Economic and Social Affairs (UN DESA), provides comprehensive demographic data for fertility expressed through total fertility rates (TFR). Hereby TFR is defined as the average number of live births a woman would have during her lifetime, assuming age-specific fertility rates remain constant and accounting for 15-49 years old as women's fertile age bracket (UN DESA, 2024b) (*see* Figure 1).
(b) Eurostat, instead, is mainly employed to visualize long-term demographic trends through

population pyramids and old- and young-age dependency ratios (*see* Figures 2 and 3), which display the implications of future population projections for labor markets and social systems. Hereof, both dependency ratios express the ratio between the number of 65-year-olds and older for old-age dependency ratio, and 0-14-year-olds for young-age dependency ratio, relative to the persons of working age (namely, 15-64-year-olds), expressed as percentages (Eurostat, 2024b). (c) Then, OECD's female labor force participation (FLFP) reflects the percentage of women aged 15-64 who are actively engaged in the workforce, meaning either employed or seeking employment (Ortiz-Ospina et al., 2024) (*see* Figure 4). Additionally, OECD datasets on Unpaid Care and Domestic Work (UCDW) are integrated to contextualizes how household responsibilities – disproportionately – fall on women compared to men in Sweden, Italy, and across Europe (*see* Figure 5), impacting both their fertility decisions and labor force participation.

UN DESA (2024) and OECD (2024) datasets were used to extract TFR and FLFP data for the years 2003-2023 – a timeframe chosen to align with trends over the last two decades, offering a broader understanding of demographic shifts, as well as for coherence and data availability – while UCDW only contains data form the 2023 OECD dataset, revealing the most current and comprehensive picture of unpaid labor dynamics. The first two datasets were re-elaborated to reflect year-on-year trends, enabling a comparative analysis between the two countries and the overarching European trend. The variables were selected based on their relevance to the core research question, which seeks to explore the intersection of gender-sensitive policies, and climate change awareness in shaping fertility choices. In fact, they demonstrate crucial demographic and labor force differences between Sweden and Italy.

Then, in exploring climate change concerns and their impact on fertility, this research integrates several significant evidence, such as the 2021 Gender and Generation Survey (GGS) for Sweden (Bastianelli, 2024) and the 2022 Save the Children report for Italy. These observations are complemented with various studies, including Aassve et al. (2020b) and Hickman et al. (2021), which focus, respectively, on the phenomena of social and institutional trust, and eco-reproductive anxiety. These concerns, intersected with country-specific socioeconomic conditions and policy frameworks, are analyzed in relation to TFRs and fertility intentions to investigate whether climate anxieties deter individuals from having children. This combination of variables underscores the importance of institutional and policy support in shaping labor force outcomes and fertility decisions in the face of environmental concerns.

Moving to the methodology of this dissertation, it adopts a comparative case study analysis focusing on Sweden and Italy. These two countries offer contrasting examples of how national policy frameworks can impact women's reproductive choices, labor force participation, and attitudes toward climate change. By comparing these distinct national contexts, this research aims to explore the role of supportive policies in mitigating the adverse effects of environmental uncertainty on fertility decisions.

1.2.2 Sweden and Italy: rationale for selection

Sweden is a leading example of how robust welfare policies can support working women, encourage fertility, and address environmental concerns simultaneously. Sweden's selection as a case study is primarily motivated by its exemplary role within European countries as a model for increasing FLFP. Among the Nordic countries – overall renowned for their progressive gender policies – Sweden stands out as the most prominent prototype of gender equality in the workforce, with policies that consistently enable women to balance professional and family life (Duvander & Andersson, 2005). The EU, in its most optimistic projections, has frequently identified Sweden as the benchmark for other European states to emulate in order to improve FLFP (European Commission, 2022). Sweden's leadership in this area demonstrates how progressive policies can contribute to fostering a strong workforce while supporting families.

Moreover, Swedish policies are characterized by extensive provisions for parental leave, heavily subsidized childcare, and a gender-equal approach to labor market participation (Duvander & Andersson, 2005). These policies have been instrumental in promoting high FLFP while maintaining relatively stable fertility rates, which stood at 1.67 children per woman in 2023, even as European averages have declined at 1.5 that same year (UN DESA, 2024a) and reached the "very low" bracket with 1.46 TFR the previous one (Eurostat, 2023a).

Sweden's approach to gender equality, particularly in the realm of family policies, fosters an environment where women can balance work and family life without having to sacrifice either (Sundström & Stafford, 1992). Research has suggested that when women feel supported through institutional mechanisms, such as flexible parental leave and affordable childcare, the negative correlation between FLFP and fertility can be mitigated, and even reversed (Aassve et al., 2020b). Furthermore, Sweden's comprehensive environmental policies, including the Green Deal and its

sustainable development agenda, have helped to integrate environmental awareness into everyday decision-making, including family planning (Swedish Climate Policy Council, 2024). This promotes a culture of confidence in the future, which, as previously discussed, is essential for reducing eco-reproductive anxiety and promoting fertility intentions.

Sweden's progressive stance on climate change is also important in this context. The country's policies actively encourage women's active participation in green jobs and sectors related to climate action (Brusselmans, 2023). This integration of gender equity and environmental sustainability allows Sweden to serve as an exemplary case study of how supportive public policies can promote both fertility and environmental consciousness, reducing the negative effects of uncertainty on reproductive choices.

Italy, by contrast, presents the opposite scenario where unsupportive policy frameworks exacerbate the challenges faced by working women in balancing family and career, with the growing effects of climate anxiety adding further insecurities on already complex fertility intentions. Italy's family policies are limited in scope, with inadequate parental leave, lack of affordable childcare, and cultural expectations placing a disproportionate burden on women in terms of caregiving and household responsibilities (Migliaccio, 2024; Tanturri & Mencarini, 2008). These barriers contribute to Italy's persistently low fertility rates at 1.3 births per woman in 2023 (UN DESA, 2024a) (*see* Figure 1), among the lowest in Europe, and, as Figure 4 displays, low FLFP at 57.6% that same year (OECD, 2024), creating a vicious cycle that makes it difficult for women to reconcile professional aspirations with family life.

Moreover, Italy's fragmented approach to environmental sustainability further complicates reproductive decisions. Unlike Sweden, where environmental sustainability is closely integrated with family policies, Italy's climate change policies remain largely separate from considerations of family planning. This detachment between environmental policy and family support structures heightens the anxiety many women feel about bringing children into a world facing environmental uncertainty (Schiavato, 2022). Recent studies have documented the growing phenomenon of eco-reproductive anxiety in Italy (Beresford, 2022), where individuals express heightened concerns about the future state of the environment and its impact on their ability to raise children (Hickman et al., 2021).

Therefore, the selection of Sweden and Italy as comparative case studies aims to highlight how greatly different policy frameworks influence women's reproductive choices in the face of climate change. Sweden's supportive policies offer insights into how national governments can create an enabling environment for women to balance work, family, and environmental concerns, while Italy's policy gaps underscore the challenges of doing so in a less supportive environment. This comparative analysis will demonstrate how crucial public policies and social and institutional trust are in shaping reproductive decisions, even in times of environmental crisis.

1.2.3 Comparative approach

The selection of Sweden and Italy as case studies is *de facto* motivated by their contrasting approaches to gender equality, FLFP, and climate policies. Sweden, with its comprehensive welfare state and commitment to environmental sustainability, offers a model of how supportive policies can mitigate the trade-offs between work, family, and environmental concerns. Italy, on the other hand, represents the antithetical case where the lack of institutional support and the persistence of traditional gender roles create significant barriers to fertility and female labor force participation, particularly in the context of rising climate anxiety.

The comparative approach also allows for the examination of how social trust, which has been deemed a key factor in moderating the effects of uncertainty on fertility intentions, operates within different cultural frameworks, and how institutional trust varies according to contrasting policy environments. Sweden's high levels of trust, bolstered by transparent governance and robust welfare policies, contrast sharply with Italy's lower levels of institutional trust, where economic instability and political fragmentation contribute to a greater sense of insecurity about the future (Hoem, 2008). This comparison will shed light on the extent to which both social and institutional trust, in conjunction with public policy, can promote positive fertility outcomes and alleviate the anxieties associated with climate change.

The analysis of these two divergent cases enables this study to provide insights into how national policies can either mitigate or might aggravate the effects of environmental uncertainty on fertility intentions, ultimately contributing to a more nuanced understanding of the relationship between FLFP, fertility, and climate change concerns in Europe.

Chapter 2: Literature Review

2.1 Fertility, labor, and public policy

2.1.1 Perspectives on female labor force participation and fertility

The relationship between fertility rates and FLFP has long been a subject of debate which has evolved substantially over the last few decades. In the mid-20th century, rising levels of FLFP were consistently correlated with declining fertility rates across many Western countries. Scholars in the 1960s and 1970s understood this as evidence that women who entered the workforce often delayed or opted out of childbearing due to the high opportunity cost associated with balancing work and family (Becker, 1992). This relationship is consistently framed through economic theories that emphasized the "value of children" and the perceived trade-off between investing in human capital and childbearing (Friedman et al., 1994).

In the early years of this research, the prevailing belief was that the demands of a professional career, particularly for highly educated women, were incompatible with motherhood. Indeed, during the post-war economic boom in Western Europe, many women entered the labor market due to both necessity and opportunity. Women's access to education expanded, and new career prospects unveiled, giving them more control over reproductive choices (Sundström, 1999). This shift, combined with economic necessity and a growing awareness of the importance of gaining access to social rights through paid work, contributed to growing female labor participation. Despite these advancements, women still face disproportionate challenges in balancing work and family compared to men. This perspective was reinforced by empirical evidence from countries like Italy and Germany, where traditional gender roles remain strong (*Ibid*.). Hence, the assumption that women's rising labor participation would inherently result in lower fertility became a dominant narrative.

Sundström highlights that the younger generation in countries like Germany, Italy, and Sweden is increasingly dependent on political and social changes that reflect modern family dynamics (1999). There is a prevalent conflict between traditional and more modern understandings of male and female roles within the family. Moreover, rising economic pressures, alongside a political

tendency to individualize social security systems, are compelling more women to enter the labor market (Sundström, 1999).

2.1.2 Education, fertility, and FLFP

The relationship between female education, FLFP, and fertility is multifaceted. Historically, higher education among women was seen as a driver of declining fertility rates due to the opportunity costs associated with professional careers. Yet, in contrast to these earlier findings, recent research has challenged the traditional view that women's pursuit of academic or professional careers and fertility rates are inevitably inversely related. Newer studies reveal that the relationship between female education and fertility is far more complex and nuanced than previously believed. Testa has highlighted that higher education can lead to higher fertility intentions, with educated women often expressing a desire for more children than their less educated peers (2014). In fact, highly educated women often express a desire for larger families, though their fertility outcomes are often influenced by external factors such as societal support and work-family reconciliation policies (Testa, 2014). Thus, despite these intentions, fertility outcomes frequently fall short in the absence of supportive social policies (Berrington & Pattaro, 2014). Nevertheless, investigating this aspect is extremely relevant as, according to the Theory of Planned Behavior (TPB), intentions are the most immediate determinant of the resulting outcomes (Ajzen, 1991).

The classical perspective on female education was that it created more career opportunities, which led women to postpone childbearing (Becker & Lewis, 1973). However, contemporary evidence suggests that the impact of education on fertility is highly context dependent. Sundström observes that the rise in educational attainment among women, coupled with economic necessity and a growing awareness of the importance of paid work for gaining access to social rights, has contributed to the overall increase in FLFP across Europe (1999). However, the challenges women face in combining paid work and family life remain vastly different from those of men. This disparity underscores the need for political and social changes that reflect the reality of modern family life, particularly for the younger generation.

Nowadays, the rise of educational opportunities has changed the narrative surrounding women's labor participation. Women's education has shifted the way they approach both career and family, providing them with the means to plan their lives more strategically. However, women still face disproportionate burdens when it comes to combining paid work and family responsibilities (Sundström, 1999). Therefore, while educated women may have higher fertility intentions, the fulfillment of these intentions is indeed often contingent on external factors such as the availability of affordable childcare, parental leave, and flexible working conditions (Impicciatore & Tomatis, 2020). In countries where these policies are absent, the negative correlation between education and fertility persists, reflecting the continued struggle for women to balance work and family responsibilities.

2.1.3 The opportunity cost of motherhood for working women

The concept of opportunity cost posits that as women's participation in the labor force increases, the costs associated with childbearing – both in terms of time and lost earnings – also rise (Becker, 1992). This model suggests that women who pursue professional careers, particularly those with higher education and earnings potential, face steep opportunity costs, as time spent on childrearing can result in lost career progression and earnings (Amidei et al., 2023).

This negative correlation is also reinforced by the theory of the "quantity-quality" trade-off, which suggests that wealthier and more educated families may opt to have fewer children while investing more in their upbringing. According to Becker and Lewis, wealthier parents often prioritize the quality of their offspring – investing more heavily in their education, health, extracurricular activities, and overall well-being – over the quantity of children (1973). This phenomenon can be observed in high-income households where child-rearing costs are significant. This implies a negative association between FLFP and fertility, as families with higher incomes tend to have fewer children due to the increased cost of raising "high-quality" offspring (Becker & Lewis, 1973).

Nevertheless, this trade-off is not universally applicable. Cross-national studies and time-series data challenge the notion that higher FLFP inevitably leads to lower fertility. Countries with comprehensive family policies – such as parental leave and subsidized childcare – demonstrate that work-family reconciliation is possible, allowing women to pursue both careers and

motherhood without significant sacrifices (Thévenon, 2011). This is evident in countries like Sweden, where high levels of FLFP coexist with relatively high fertility rates, due to policies that reduce the opportunity cost of childbearing (Sundström & Stafford, 1992).

2.1.4 Unpaid care and domestic work

One of the central barriers to reconciling FLFP and fertility remains the disproportionate burden of Unpaid Care and Domestic Work (UCDW) women continue to bear. Despite increased labor force participation, women still perform the majority of unpaid domestic and caregiving work, which significantly impacts their ability to balance work and family life. Women in the EU spend nearly twice as much time on unpaid care and domestic work as men, creating additional barriers to labor force participation and contributing to lower fertility rates. The 2023 share of UCDW is illustrated in Figure 5, where it is evident that in Sweden – where both TFR and FLFP are higher (*see* Figures 1 and 4) men and women's division is almost a 1:1 ratio, contrasting to the European average whereof women spend almost double the amount of men – or more than double in the Italian case – performing UCDW (OECD, 2023).

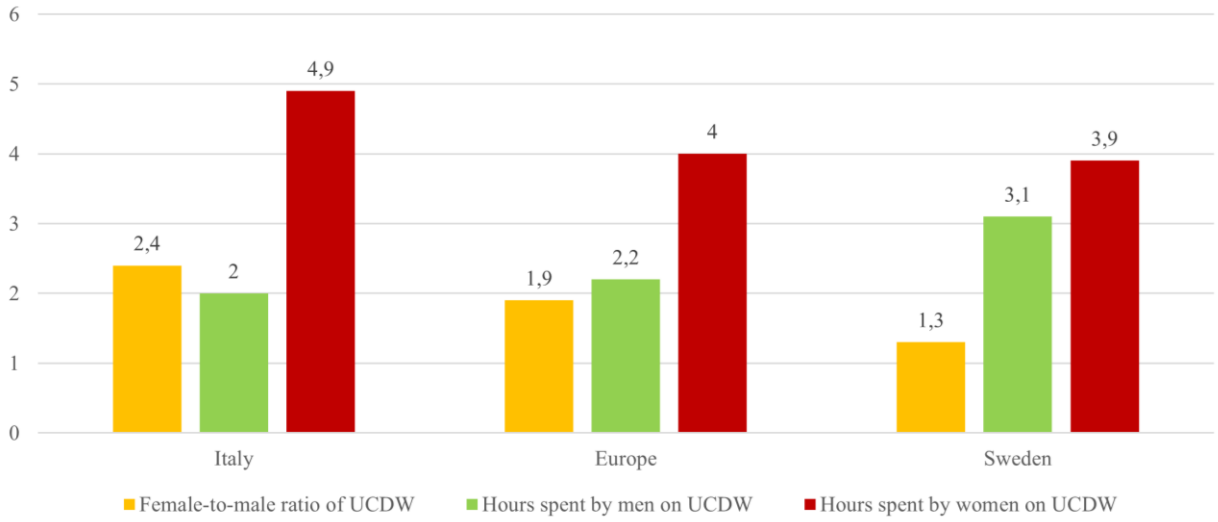

Figure 5. Unpaid Care and Domestic Work (UCDW), hours spent on UCDW by man and women and female-to-male ratio in Italy, Sweden and Europe, in 2023.[4]

[4] Personal elaboration from the data from OECD. (2023). Gender, Institutions and Development (Edition 2023) [Dataset]. In OECD International Development Statistics. https://doi.org/10.1787/7b0af638-en

This imbalance is particularly pronounced in Southern European countries, like Italy, where traditional gender roles remain strong, and the lack of supportive social policies forces many women to choose between career advancement and childbearing (Migliaccio, 2024). The failure of many European welfare systems to adequately address the division of labor not only outside but also within households perpetuates this gender inequality, resulting in lower fertility rates as working women opt to delay or forgo having children also due to the overwhelming demands of UCDW (Goldscheider et al., 2015). In this regard, the theory of "gender equity within households", as proposed by McDonald, supports the claim that when men take on a more equitable share of domestic responsibilities, women are better prepared to balance paid employment with family life (2000). In countries with policies that promote such equity, women's participation in the labor force does not necessarily result in lower fertility. Instead, women can achieve both career success and family aspirations (Duvander et al., 2010).

2.1.5 The role of policy in shaping FLFP and fertility

The historical notion that rising FLFP leads to lower fertility has been increasingly challenged by studies that emphasize the critical role of policy in shaping these outcomes. Countries that implement gender-sensitive policies demonstrate that it is possible for women to engage in the workforce without sacrificing family life (Goldscheider et al., 2015).

Sundström and Stafford argue that Sweden's progressive family policies during the late 20th century succeeded in maintaining high levels of FLFP while also supporting fertility rates (1992). These policies – including separate taxation for spouses, subsidized daycare, and generous parental leave – significantly reduced the opportunity cost of childbearing, making it easier for women to remain in the workforce while raising children (Duvander et al., 2010). Despite these positive examples, much of Europe still lags behind in terms of implementing comprehensive work-family reconciliation measures, perpetuating the negative relationship between FLFP and fertility in many countries.

Ultimately, the literature relating female labor force participation and fertility has been profoundly shaped by economic theories, gender roles, and institutional policies. While earlier research emphasized the trade-offs between work and family life, more recent studies have shown that these trade-offs are not inevitable. Evidently, the impact of FLFP on fertility is highly contingent on the

presence of supportive family policies that enable women to balance their career and family aspirations. Countries that invest in gender-equitable labor markets and family policies, such as Sweden, demonstrate that rising FLFP can coexist with higher fertility rates. However, without such policies, the negative correlation between FLFP and fertility is likely to persist, particularly in countries with traditional gender norms and limited social support for working mothers.

2.2 Climate change and fertility

2.2.1 Climate change concerns linked to lower fertility intentions

A growing body of research has increasingly recognized a correlation between climate change concerns and reproductive decisions, particularly with declining fertility intentions, especially in high-income countries. The scientific consensus defines climate change as significant and lasting deviations from expected climate conditions caused by both natural factors (e.g., solar cycles, volcanic eruptions) and anthropogenic activities (e.g., changes in land use and atmospheric composition) (IPCC, 2014). Its most apparent effects include global temperature rises, melting glaciers, and sea-level increases, all of which directly contribute to environmental and social instability (De Rose & Testa, 2015).

Individuals, particularly in younger generations, express anxiety over the future state of the planet, with many feeling that bringing children into a world threatened by climate crises is irresponsible. Additionally, in high-income countries, many young people express concerns about overpopulation and the additional strain that having children might place on the Earth's resources exacerbating ecological harm (Schneider-Mayerson & Leong, 2020). In in a study by Schneider-Mayerson and Leong on 607 American respondents it was found that 59.8% of participants were "very" or "extremely concerned" about the carbon footprint of procreation, while 96.5% of respondents were "very" or "extremely concerned" about the well-being of their future children in a world affected by climate change (2020). These considerations, although implying different priorities and perceptions with regard to environmental degradation, both contribute to the escalating phenomenon of "eco-reproductive anxiety" which has also been reported by 59% of young people as a significant concern, with 84% at least moderately worried about the impacts of climate change (Marks et al., 2021). Many of the 10,000 respondents aged 16-25 years old, experience distress and negative emotions that affect their daily life and functioning, driven in part

by dissatisfaction with government responses to the climate crisis (*Ibid*.). It reflects a growing trend where fertility intentions are influenced by perceptions of environmental degradation, particularly concerning well-educated, from higher income brackets – as education and socioeconomic status are consistent predictors of environmental concern (Saha, 2023) – young-people in high-income countries (Schneider-Mayerson & Leong, 2020). Research shows that many individuals are reducing their fertility preferences, with some choosing to remain childfree as a form of climate action.

In particular, members of the BirthStrike movement, founded in 2018 by Blythe Pepino, highlight two main concerns that influence their decision: the environmental impact of adding to the population and the moral responsibility of not subjecting future children to the adverse effects of climate change. Many BirthStrike participants consider childfreedom as a proactive way to reduce their ecological footprint and alleviate the strain on Earth's resources. Additionally, some see parenthood as irresponsible under current climate conditions, where new generations would face significant climate-induced hardships (Mo, 2021). In both contexts, a significant gap between fertility intentions and outcomes persists. Factors such as lack of access to contraception, poverty, and unstable social systems mean that even when individuals express a preference for fewer children, they may be unable to realize these preferences (Brusselmans, 2023).

In lower-income countries, instead, climate change's impact on fertility is more complex. While environmental degradation such as droughts and floods leads to economic hardship, it may also increase fertility preferences as families rely on children for labor and support in agriculture-based economies (Thiede et al., 2016). Studies show that in poorer, low-latitude countries, the fertility rate often rises in response to economic need. In several regions of sub-Saharan Africa, for example, fertility preferences remain high, despite rising climate-related stress, with some populations adjusting their fertility goals in response to economic and environmental challenges rather than reducing their number of children altogether (*Ibid*.).

Overall, these studies demonstrate that direct experiences of climate disasters can lead individuals to adjust their fertility preferences. Economic impacts – as loss of income from agriculture – can drive people to have fewer children due to the costs of raising them. Yet, in some contexts, it can also prompt the desire for more children to meet labor demands (Haq et al., 2010). Thus, there is significant variation in how different populations respond to climate change in their reproductive

choices, with richer high-latitude countries generally seeing a reduction in fertility preferences, while poorer low-latitude countries might experience the opposite.

Additionally, media discourses which frame having children as harmful to the environment, also influence fertility decisions, reinforcing eco-anxiety, further fueling the decision to remain childfree (Schneider-Mayerson, 2021).

2.2.2 Social and institutional trust against uncertainty

Climate change introduces substantial uncertainty, particularly regarding economic stability and future environmental conditions. Uncertainty, whether economic or environmental, has been extensively linked to declining fertility rates. In periods of economic crises or environmental instability, individuals and couples may postpone long-term decisions, including childbearing, due to concerns about their ability to provide a stable future for their children (Comolli, 2017). This phenomenon has been observed in multiple studies, where rising uncertainty negatively correlates with fertility, as individuals are less inclined to take on the long-term responsibility of parenthood (Sobotka et al., 2011). Unpredictability, in fact, generates concerns about the sustainability of ensuring long-term stability and well-being for future generations (Haq et al., 2010). These concerns are compounded by political inaction, which further deepens eco-reproductive anxiety, as individuals who perceive government failures in addressing climate change are more likely to feel betrayed and reluctant to have children (Marks et al., 2021). The combined effects of institutional (dis)trust and environmental degradation can exacerbate this reluctance, particularly in countries where government action on climate change is often perceived as inadequate (Marks et al., 2021), like Italy.

However, both social trust and institutional trust can mitigate these negative effects. Social trust refers to confidence in the honesty, integrity, and reliability of people within their community, while institutional trust pertains to confidence in the ability of governments and institutions to provide a stable and secure environment (Aassve et al., 2020b; Fukuyama, 1995). High levels of institutional trust are particularly crucial in moderating the impact of uncertainty on fertility. For instance, in countries with strong social trust and well-developed policy frameworks, such as Sweden, individuals are less likely to let climate anxiety deter their fertility decisions, as the government's ability to manage crises provides a sense of security (Hoem, 2008). This research

thus underscores how trust can serve as a protective factor against the destabilizing effects of uncertainty, including that caused by climate change (Bjørnskov, 2007). Social trust, in fact, being a key ingredient in social capital, affects how people perceive risks and uncertainties in their daily lives, including decisions about fertility (Aassve et al., 2020b). Hence, in environments where social trust is higher experience less dramatic declines in fertility during times of uncertainty, as individuals feel more secure in their social networks and support systems (*Ibid*.).

Conversely, in countries with low institutional trust and weaker social welfare systems – such as parts of Southern Europe and the Global South – the stress caused by climate-related uncertainty is exacerbated, often leading to reduced fertility intentions (Marks et al., 2021). Research shows that where political trust is low, individuals are more likely to feel disillusioned and hesitant to make long-term commitments such as having children, particularly when governmental responses to climate change are perceived as insufficient (Schneider-Mayerson & Leong, 2020). For example, in regions where governmental actions are seen as lacking, over 60% of respondents expressed feelings of betrayal, and 39% reported hesitance to have children due to the climate crisis (Marks et al., 2021). These findings corroborate the profound impact political trust – or the lack thereof –exerts on both emotional responses and decisions about the future, including childbearing.

Moreover, experts also emphasize the concept of reproductive autonomy, arguing that the adjustment of fertility preferences due to climate change could be regarded as a loss of such autonomy (Brusselmans, 2023). As Brusselmans asserts, the decision to alter reproductive plans because of climate fears reflects the unequal distribution of resources and security, where only more privileged individuals can make choices free from such constraints (2023).

2.2.3 Climate change impacts on fertility preferences

The impact of climate change on reproductive choices is multifold and manifests in several way:

(1) Direct experience of climate disasters:

Climate change's direct effects, such as droughts, floods, and extreme weather events, can profoundly impact fertility decisions. These disasters often lead to economic distress, which in turn directly influences reproductive choices. Severe drought, for instance, can destroy crops, and floods can damage homes and infrastructure, leading to significant income losses. In these situations, individuals may choose to delay childbearing due to the rising costs associated with child-rearing. On the other hand, in some agricultural regions, fertility preferences may increase as families seek additional labor to cope with the economic fallout of climate disasters by compensating for lost resources (Brusselmans, 2023). In Bangladesh, for example, families in agrarian regions most affected by climate change-induced disasters opted for larger households, as families relied on more children for labor in agricultural fields (*Ibid*.).

Child mortality due to climate change also adds a layer of complexity to reproductive decisions. In areas with high infant mortality rates due to climate-induced disasters, families may have more children to replace those lost, despite their economic hardship (Haq & Ahmed, 2019). These conflicting pressures highlight the complicated relationship between direct climate experiences and fertility decisions.

(2) Climate anxiety and media influence:

Climate or eco-anxiety, driven by constant media reports about environmental degradation, has become a significant factor in fertility decisions, especially in wealthier nations (Beresford, 2022). Most of the respondents in Bodin and Björklund's study in developed countries had "heard that having children is bad for the environment," and declared to have internalized this message, leading to reduced fertility preferences (2022). The influence of media and popular discourse should not be underestimated, as it shapes public perception of the relationship between childbearing and environmental impact (Schneider-Mayerson, 2021).

However, concerns related to personal and familial health and well-being due to climate change often outweigh generalized concerns about the environment in shaping reproductive choices. Bielawska-Batorowicz and colleagues found that participants were more concerned about the

health effects of climate change on themselves rather than the potential impact their future offspring might have on the planet (2022). This suggests that while environmental discourse influences fertility preferences, concerns about personal well-being remain a primary factor in reproductive decision-making (*Ibid*.).

(3) Political and socio-economic factors:

Reproductive decisions are increasingly shaped by political and socio-economic considerations as well. In this context, Mo argues that individuals' fertility choices reflect broader political efforts to mitigate climate change by reducing one's carbon footprint (2021). Childfreedom, or the choice to remain childfree as a response to climate change, has gained traction among environmental activists, who view it as a form of climate action (Mo, 2021). Her research highlights that this sentiment is especially prevalent among environmental activists who view childfreedom as a direct contribution to climate action (2021).

At the same time, reproductive choices may also be interpreted as a form of adaptation to climate change. The concept of climate adaptation refers to behaviors that make individuals more resilient to climate impacts, such as having larger families to provide economic stability in the face of environmental uncertainty (Brusselmans, 2023). Overall, Schneider-Mayerson identifies four dimensions connecting reproductive choices to environmental politics: (1) parental investment in environmental activism, (2) children as future environmentalists, (3) the opportunity cost of parenting, and (4) fertility as a socio-political tool (2021). These factors demonstrate how deeply intertwined reproductive decisions have become with environmental politics in the age of climate change (2021).

2.3 Gender disparities in green jobs and STEM fields

The environmental crisis has profound implications for gender roles in the workforce, influencing both the opportunities available to women and the challenges they face. Climate change and environmental degradation disproportionately affect women, particularly in sectors such as agriculture and informal labor, where they are often underrepresented in decision-making positions but overrepresented in lower-paid, informal roles (UN Women, 2018). Globally, women account for around 43% of the agricultural workforce, but they face significant barriers in accessing land, capital, and technology (FAO, 2011). In Europe, despite their critical contributions, women are

underrepresented in higher-paid or managerial positions in formal agricultural sectors and less likely to own land or hold leadership roles (EIGE, 2024). Conversely, they are overrepresented in informal sectors, which often lack job security and benefits, exacerbating their vulnerability, particularly in the face of environmental degradation (UN Women, 2018).

The gender disparities in the labor market extend into the emerging green economy. Women are poised to drive substantial climate action, particularly through their participation in green jobs and STEM (science, technology, engineering, and mathematics) fields, yet they remain underrepresented in these sectors. The green economy is expected to generate 67 million new jobs by 2030, but only 25% of these roles are projected to be filled by women, due to existing gender disparities in the industries affected, such as renewable energy and waste management (Sqalli et al., 2021). The gap is even more pronounced in reskilling efforts, with women representing only 23% of workers in the energy sector and 31% in the building materials industry, further limiting their ability to benefit from the transition to a sustainable economy (*Ibid*.).

This divide underscores the urgent need for gender-focused policies that promote equality in STEM fields and ensure women have access to education, training, and opportunities in sustainable industries. Addressing these disparities would not only promote gender equity but could also significantly boost global GDP. For instance, if women were given equal access to green jobs and entrepreneurship opportunities, global GDP could increase by $1.5 trillion annually by 2030 (Sqalli et al., 2021).

Moreover, women's involvement in regenerative agriculture presents another significant opportunity for climate action. Empowering female farmers with resources and training in sustainable agricultural practices could lead to a reduction of 27.5 gigatons of CO2 emissions from 2020 to 2050, equivalent to the annual emissions from the global aviation industry (*Ibid*.). These figures demonstrate the critical role women can play in combating climate change and advancing sustainable development, but only if gender equality in green industries is actively pursued through policy interventions, particularly in education, reskilling, and access to entrepreneurship opportunities in sustainable industries (OECD, 2017).

2.4 Gender equity, fertility, and climate action

Gender equality is essential in driving both climate action and positive fertility outcomes. Allwood provides an extensive overview of gender equality in the context of EU development policy, acknowledging that while significant progress has been made – e.g., the European Commission's "Gender Equality Strategy 2020-2025" which highlights the EU's commitment to providing equal opportunities for men and women across education, employment, and beyond (European Commission, 2020) –, gender equality efforts are often deprioritized during economic or environmental crises (Allwood, 2020). However, maintaining a consistent focus on gender equity is essential for sustainable development. Gender-responsive policies, such as equitable access to education, job opportunities, and leadership positions, have been associated with higher female labor force participation (Cuberes & Teignier, 2016), which directly supports economic growth and societal resilience, especially during crises, including demographic ones (Camussi et al., 2023).

Policies that address gender disparities, which are deemed to have both direct and indirect effects on economic performance, thus also improve labor productivity and foster long-term economic benefits through better education outcomes for future generations (Kabeer & Natali, 2013). Additionally, according to McDonald (2000) and Goldscheider and colleagues (2015), gender equality, at both the macro and micro levels, is positively correlated with higher fertility rates. Macro-level gender equality pertains to overall equality between men and women in broader social, political, and economic structures and institutions. Micro-level gender equality instead focuses on the distribution of rights, responsibilities, and resources between men and women within specific social institutions and relationships. While many European countries have made strides toward achieving gender equality in education and employment (macro level), significant disparities remain within households (micro level), particularly in the division of care and domestic work. The "Gender Revolution" theory posits that as societies achieve greater gender equality, particularly in household roles, fertility rates are likely to stabilize or increase (Goldscheider et al., 2015). Therefore, policies such as subsidized childcare and equitable parental leave can address these inequalities, increasing both fertility intentions and labor market participation among women (OECD, 2023).

Moreover, gender equality also enhances women's subjective well-being, including life satisfaction and emotional health, which is strongly tied to overall societal gender equity (Tesch-Römer et al., 2008). Tesch-Römer and colleagues' work indicates that women in more gender-equal societies report higher levels of well-being, illustrating the broader societal benefits of advancing gender equality (*Ibid*.).

Finally, empowering women is not only essential for achieving gender equity but also for accelerating climate action. Women are paramount for the success of sustainability initiatives, particularly in managing natural resources and promoting environmental conservation. The integration of a gender lens into climate policies and investments is a fundamental step for governments to ensure that women are active participants in shaping sustainable futures. Female entrepreneurs in the green tech sector *de facto* have been shown to outperform their male counterparts, generating more revenue and driving more sustainable innovations (Sqalli et al., 2021). Moreover, women's political empowerment has been linked to more robust environmental policies. Countries with higher female parliamentary representation are more likely to ratify international environmental treaties (*Ibid*.) suggesting that promoting gender equality in governance can enhance climate action globally (Allwood, 2020).

Chapter 3: Case Studies

3.1 Sweden: a supportive policy framework

Sweden is widely regarded as one of the most "women-friendly" countries, offering an environment where women enjoy economic independence and individual autonomy (Sundström, 1999). Indeed, Sweden presents a unique opportunity to examine the intersection of FLFP, fertility rates, and climate change awareness within a supportive policy framework. Known for its progressive gender equality measures and a robust welfare system, Sweden offers a model that fosters both high FLFP and comparatively stable fertility rates, while promoting environmental sustainability. Hence, this case study explores how Sweden's policy context and cultural factors shape women's reproductive choices and career decisions, offering insights into how supportive policies can mitigate the trade-offs between work, family planning, and environmental concerns.

Sundström highlights that Sweden's policy model successfully conceals the underlying gender conflict, with part-time work acting as a compromise for women balancing careers and family life (1999). This balance is supported by an extensive public daycare system for children and elderly care, allowing women to remain active in the labor force without sacrificing their caregiving roles, including motherhood. At the heart of Sweden's social security system is an income-related benefits structure, making it the most preferred option for families (Sundström, 1999). The combination of these policies provides a foundation for Sweden's progressive approach to gender equality and family life, which not only facilitates high FLFP but also encourages stable fertility rates in a context of environmental sustainability.

3.1.1 Fertility and FLFP trends

Sweden consistently demonstrates one of the highest FLFP rates in Europe, as Figure 4 illustrates, driven by comprehensive family policies and a robust welfare state. Sweden's 2023 FLFP rate of 82.2%, significantly higher than the EU average of 70.2% (OECD, 2024). This achievement is largely attributable to a combination of comprehensive, gender-inclusive policies, fundamental in facilitating the balance between work and family life.

Central to Sweden's successful policies is its parental leave system, which allows parents to share up to 480 days of paid leave per child (Duvander et al., 2010). This policy is notable for its

flexibility and inclusiveness: all parents permanently residing in Sweden are entitled to parental leave benefits, which are earnings-related for those who were employed in the eight months prior to childbirth (*Ibid*.). This inclusivity ensures that even unemployed parents who can demonstrate previous employment are eligible for benefits. Moreover, Sweden's policy includes a "speed premium," which allows parents to retain the income-replacement level from a previous birth interval if the next child is born within 30 months, thus supporting families in having more children without significant financial strain (Duvander et al., 2010, p. 47). This scheme has resulted in high levels of participation, with over 80% of fathers in Sweden uptaking parental leave, a testament to the country's commitment to gender equality in both the workplace and at home (Duvander et al., 2010). This policy not only encourages women to remain in the workforce after childbirth but also promotes the equitable sharing of childcare responsibilities between men and women.

The redistribution of UCDW, unfolded in Figure 5, is also crucial in enabling women to invest in their careers without sacrificing their roles as mothers (Sundström, 1999). Furthermore, the flexibility granted by the social security system and public services allows women to manage these responsibilities without having to leave the labor force (*Ibid*.). This has led to higher levels of FLFP across all stages of life (Goldscheider et al., 2015).

Moreover, Sweden's commitment to gender equality extends beyond family policies to encompass initiatives aimed at boosting women's participation in traditionally male-dominated fields such as STEM and entrepreneurship (EIGE, 2024). These policies ensure that women are not only able to enter the workforce but are also supported in progressing to higher levels of employment. Such policies exemplify how a comprehensive approach to gender equality can help mitigate the trade-offs between career and family planning, ultimately contributing to both higher FLFP and relatively stable fertility rates (OECD, 2023).

3.1.2 Supportive public policies

Sweden's policy framework is built on principles of gender equality and social welfare, which empower women to make informed decisions regarding their careers and family lives (Duvander & Andersson, 2005). The education system, in particular, serves as a foundation for gender equality. Education holds the transformative potential of empowering women to make informed decisions about their careers, family life, and environmental impact (Impicciatore & Tomatis, 2020). Research demonstrates that in specific frameworks such as that of Sweden, where robust family policies and gender equality measures are in place, women with higher levels of education are not only more likely to participate in the labor force but also to have more children than their counterparts in countries with less support (Duvander et al., 2010). This is a trend particularly notable in the Scandinavian region (Neyer & Hoem, 2008).

Sweden's comprehensive family policies alleviate the pressures typically associated with advanced education and career ambitions, by promoting conditions whereby higher educational attainment for both parents is associated with an increased likelihood of having a second or third child (*Ibid*.). For instance, highly educated women in Sweden often benefit from generous maternity leave and access to high-quality childcare, allowing them to balance their professional aspirations with motherhood (Duvander et al., 2010). Additionally, Sweden's income-related social security benefits help maintain a stable financial foundation for families, making the Swedish model particularly attractive (Sundström, 1999).

Moreover, Sweden's innovative policy approach to environmental sustainability intersects with its gender policies. The Swedish government's commitment to gender-responsive climate policies ensures that women's voices are included in the development of environmental strategies, further reinforcing the alignment of gender equality and sustainability goals (Gaard, 2011). This alignment between gender and environmental policy is reflected in Sweden's "Feminist Foreign Policy," which integrates gender equality into all areas of foreign policy, including environmental diplomacy and sustainable development strategies (Potenza, 2020). This policy innovation underscores Sweden's global leadership in promoting gender equality and sustainability, setting a precedent for other countries to follow. This intersection gender equality, family policies, and environmental consciousness has enabled Sweden to empower women to balance reproductive and professional aspirations while contributing to broader sustainability goals.

3.1.3 Fertility implications of climate change awareness

Sweden's progressive gender policies have had a significant impact on family planning decisions, cultivating the conditions wherein women are encouraged to align their reproductive choices with both gender equality and environmental sustainability. Nevertheless, recent research indicates that climate change awareness is influencing reproductive decisions in complex ways. Bastianelli reports that, according to data from the 2021 "Gender and Generation Survey" (GGS), individuals who are highly concerned about climate change are more likely to reconsider having children due to worries about the planet's future (2024). In Sweden, approximately 32% of respondents in the European Social Survey (ESS) of 2020 reported being very worried about climate change (Bastianelli, 2024).

Data from the GGS corroborates the previously discussed claim that climate worries negatively influence fertility intentions among younger adults. In Sweden, individuals aged 25-34 – the age bracket more affected by climate change concerns about future fertility – who were "very worried" about climate change showed a 5 percentage points lower probability of definitely intending to have children compared to those less worried (*Ibid*.). As Bastianelli underscores, such reduced fertility intentions and a heightened desire for remaining childless in younger cohorts are of particular concern, as they may correspond to prolonged low fertility patterns in the next decades (2024).

However, while climate worries are prominent, in Sweden they have not dramatically affected the average intended family size. The GGS data show that those who expressed positive fertility intentions in Sweden still aim to have around 2.03 children (*Ibid*.). This suggests that climate concern is more closely linked to decisions about whether to have children rather than the number of children people intend to have.

Sweden's policy framework, which integrates gender equality with environmental consciousness, mitigates some of the negative effects of climate anxiety on fertility. Moreover, the government's push for eco-friendly urban planning and development ensures that families have access to sustainable housing, transport, and childcare options that reduce their carbon footprint, thus integrating environmental consciousness into daily life (World Economic Forum, 2024).

Overall, women's increasing eco-consciousness and consequent concerns about the environmental footprint of having larger families are actively shaping family planning trends (Brusselmans, 2023). Nonetheless, Sweden's robust support for families mitigates the potential negative impact of environmental concerns on fertility rates (Gaard, 2011). Access to affordable, eco-friendly, childcare services, for instance, enables women to feel more confident in their ability to raise children sustainably, alleviating concerns about the environmental costs of larger families (*Ibid*.). Swedish "eco-preschools" and green infrastructure exemplify the integration of environmental awareness into early education, ensuring that children grow up with a strong sense of environmental responsibility (European Commission, 2020).

The Swedish government's approach to gender equality, also in climate policy, serves as a model of how gender and environmental issues can be addressed simultaneously. Through the integrations of gender perspectives into climate policy, Sweden offers a model in which environmental sustainability and family planning co-exist (Gaard, 2011).

3.1.4 Socioeconomic and cultural influences

Sweden's socioeconomic model and cultural norms also exert a pivotal influence on shaping reproductive choices. The country's welfare state provides extensive social safety nets and a high standard of living, reduces the economic pressures often associated with family planning (OECD, 2023). This framework thus enables women to make decisions about reproduction based on personal and environmental values rather than economic necessity (Neyer & Hoem, 2008).

Culturally, Sweden has embraced progressive gender norms that encourage shared parenting responsibilities and a more equitable distribution of labor within households (Duvander & Andersson, 2005). As mentioned earlier, fathers in Sweden are encouraged to take parental leave, with over 80% of fathers using some leave, although mostly for short periods (*Ibid*.). This normalization of shared parenting has redefined traditional gender roles and it has contributed to a cultural environment women may decide to maintain full-time employment without feeling pressured to shoulder the bulk of childcare responsibilities (Aassve et al., 2024).

Ultimately, the country's policy framework, integrating gender equality with environmental consciousness, demonstrates how supportive policies can mitigate the trade-offs between FLFP, fertility rates, and climate change awareness. Therefore, this case study underscores the importance

of policy context in shaping reproductive and career decisions. While Sweden offers a model for how gender equality and environmental sustainability can coexist and reinforce one another, this is not the case in many other European countries, where unsupportive policies and traditional gender norms continue to constrain women's choices.

3.2 Italy: a less supportive environment

Italy presents a relevant case – in stark contrast to Sweden – to explore the intersection of gender equality, FLFP, and fertility in the context of persistent economic instability and entrenched cultural norms. Despite minimally encouraging progress, Italy maintains one of the lowest fertility rates in Europe, at 1.3 children per woman in 2023, due to motherhood being delayed or forgone entirely because of significant disparities in both gender equality and policy support for balancing family and work life (Migliaccio, 2024). This makes Italy a compelling comparison to Sweden, allowing for an examination of how cultural and economic factors influence reproductive choices and FLFP.

3.2.1 Fertility and FLFP trends

Italy's FLFP remains among the lowest in Europe, as Figure 4 shows, at 57.6% in 2023, substantially below the European average of 70.2% (OECD, 2024). This figure even worsened with Italian FLFP reaching 52.7% in the first quarter of 2024 according to the Italian National Statistics Institute (ISTAT) – which however displays a slight increase from 51.9% in the first quarter of 2023 (Testa, 2024). Yet, this remains well below the male labor force participation (MLFP) rate, which stood at 70.4% in the first quarter of 2024 (*Ibid.*). The 18.5-percentage-point gap between men's and women's participation rates is among the largest in the European Union, where the average gender gap is only 10% (ILOSTAT, 2024).

This divide highlights the structural barriers that women face in the Italian labor market (Testa, 2024). Numerous factors contribute to this disparity, including high unemployment, limited part-time work options, gender wage gaps, and lack of affordable childcare (Novelli et al., 2020). In Italy, three out of four women without children are employed, compared to just over half of mothers, a disparity exacerbated by the prevalence of part-time work among women (49%) compared to men (26%) (Testa, 2024). While part-time work can provide a means to balance

motherhood and employment, it often comes at a cost. Italian women frequently face limited career growth opportunities and reduced access to social rights due to part-time or informal work arrangements, which are often the only viable option due to inadequate childcare provisions and rigid labor policies (Testa, 2024). As a result, many women are forced to turn to the black or grey market for employment, further compromising their professional security and long-term career prospects (Sundström, 1999). Therefore, despite improvements in recent years, women in Italy do continue to earn less than men, often due to career interruptions related to motherhood which have a long-term impact on women's economic security (*Ibid*.).

These challenges disproportionately affect women, particularly in Southern Italy, where fewer than one in six children under the age of three have access to state-funded preschools, significantly burdening women with childcare responsibilities (Bertolini et al., 2015). Indeed, despite some convergence in fertility rates across regions, significant disparities persist in economic and social structures. In Southern Italy, where traditional family roles are more prevalent, cultural resistance to neo-Malthusian perspectives on family size – which refer to the idea that families should consciously limit the number of children they have, often due to economic or environmental concerns – contributed to slower demographic transitions – i.e., reductions in birth rates – and heightened gender inequality (Livi-Bacci, 1977).

Nevertheless, notwithstanding this historical preference for larger families in Southern Italy contemporary challenges such as economic insecurity and inadequate childcare provisions have *de facto* slowed demographic transitions. As Testa observes, we are witnessing a trend – although limited to the age bracket of 25-34 years old – where in areas with lower FLFP, women are also having fewer children (2024). Her article illustrates that the largest increase in female employment rate affects 25–34-year-olds, who record a percentage change of 3.4%, compared to 1.7% for the whole working-age population (15-64 years old) (2024). The examples of the autonomous provinces of Bolzano and Trento, as well as Emilia-Romagna, illustrate this correlation, boasting higher TFRs (at 1.56, 1.28, and 1.22 children per woman respectively, compared to the national average of 1.20), also exhibit significantly higher female employment rates (69.3%, 64.5%, and 64.4% in 2023) (Testa, 2024). Conversely, southern regions such as Sardinia, Basilicata, and Molise, where female participation is significantly lower (49.1%, 42.3%, and 46.4%, respectively), also exhibit lower fertility rates (0.91, 1.08, and 1.1 children per woman, respectively) (*Ibid.*). These data suggest that robust female employment and supportive work-family policies actually

contribute to higher fertility, even in areas traditionally characterized by lower birth rates. These regional differences thus highlight the positive correlation between female employment and fertility intentions.

However, Testa rightly underlines that this relationship is not deterministic, as it depends on the availability of supportive welfare policies that incentivize women's participation in the labor market and reduce their caregiving burden (2024). In this regard, the persistent economic and cultural barriers that affect Italian women's participation in the labor market also play a significant role in limiting fertility rates. Cultural norms, such as the expectation that women should be primary caregivers, combined with a lack of affordable childcare services, especially for children under the age of three, continue to drive many women out of the workforce after childbirth (Bertolini et al., 2015). Only 26.9% of Italian children under the age of three in 2019 was enrolled in formal early childcare education and care (Mussino & Ortensi, 2023), extremely lower than the 86% of their Swedish counterparts (European Commission, 2023; Garvis, 2018).

This disparity reflects broader differences in public investment and childcare policies between Southern European countries like Italy and Northern European countries such as Sweden, as well as the impact of supportive childcare provisions. In Sweden, from age 1, children are entitled to publicly subsidized Early Childhood Education and Care (ECEC), with free provision for at least 15 hours per week starting from age 3 (European Commission, 2023). Additionally, children of parents who work or study are also eligible for subsidized after-school care (*Ibid*.). This serious gap in childcare access between Italy and Sweden illustrates how crucial comprehensive childcare policies are in enabling higher female labor participation and fostering more equitable opportunities for parents to balance work and family life.

3.2.2 Policy gaps

In Italy, the gap between policy efforts and outcomes in terms of gender equality and fertility is significant. While some measures have been introduced to address the low fertility rates, the policies lack the depth and structure needed to create an environment where women feel supported in both work and family life. The Italian family model remains highly traditional, with women bearing the majority of the domestic and caregiving responsibilities, limiting their labor force participation and affecting their reproductive choices (Migliaccio, 2024).

Despite government efforts to introduce financial incentives like the "Bonus Bebè" (Baby Bonus) and the "Assegno Unico Universale" (Universal Child Allowance), these initiatives have proven insufficient in addressing the deep-rooted challenges faced by Italian women. For example, the "Assegno Unico Universale" offers up to €175 per month per child, but the benefits provided do not effectively counterbalance the high costs of childcare or the lack of institutional support for working parents (MEF, 2022). Research indicates that while financial incentives are beneficial, they are not sufficient to overcome the cultural and economic obstacles that hinder women from having more children (Luci-Greulich & Thévenon, 2013).

Italy's gender regime shows significant inequalities in policy outcomes. In the Italian context, the family continues to rely heavily on a working husband and a homemaking wife. As a result, younger women often feel caught in what has been termed the "family trap," where cultural expectations and the lack of institutional support prevent them from fully participating in the workforce (Sundström, 1999). Due to inadequate childcare provisions and labor policies that do not encourage flexible working arrangements, Italian women often face constraints in the labor market which limit them to part-time or informal work, namely relying on black or grey markets (*Ibid.*). This type of labor does not offer access to social rights, further constraining women's long-term security and professional growth (*Ibid.*).

Moreover, immigration policies, which have historically been restrictive in Italy, further limit potential demographic growth (WeirdItaly, 2023). Even when immigrants do settle in Italy, they often adopt the country's conservative views on family planning as Testa reported in Migliaccio's article, further entrenching traditional gender roles and perpetuating low fertility rates (2024). This dynamic highlights the critical influence of cultural and policy contexts on reproductive choices.

In her analysis, Testa emphasizes that effective welfare and labor policies are necessary to consolidate any gains (2024). For instance, the recent "Decreto Coesione" aims to incentivize permanent employment for young women, but its impact must be closely monitored to ensure that it leads to meaningful changes in employment and fertility trends (Testa, 2024). Moreover, it must be backed by joint reforms that allow for greater flexibility in parental leave, strengthened childcare services, and the promotion of work, part-time as well, that does not limit women's access to social rights or career advancement (*Ibid*.).

Hence, Italian scarce FLFP and ultra-low fertility rates (*see* Figures 4 and 1) are symptomatic of deep-rooted economic, cultural, and policy challenges. Italy continues to struggle with the traditional family models and economic instability that hinder women's ability to balance work and family life (Migliaccio, 2024). As Italy looks toward a more sustainable future, the implementation of more robust gender and family policies will be non-negotiable to address its demographic and economic challenges.

3.2.3 Climate change concerns

Italy's demographic and fertility challenges are increasingly intertwined with growing concerns over climate change, particularly among younger generations. As environmental awareness intensifies, many individuals express hesitation about having children in a world facing ecological degradation and uncertainties.

In recent years, the concept of eco-reproductive anxiety has gained attention in Italy as well, with research showing that concerns about the future environmental conditions are a concurring deterrent from having children. According to a study conducted by Save the Children, nearly 70% of young Italians express anxiety over the future of the planet, with over 30% stating that climate change plays a significant role in their decision not to have children (2022). This anxiety is driven by fears of what kind of world their children would inherit, especially given the increasing severity of natural disasters, rising temperatures, and environmental degradation.

However, Italy falls 12 points below the European average regarding the percentage of women who feel individually responsible for addressing environmental challenges, with only 50% of Italian women feeling this way compared to 62% across Europe (Di Nella, 2023). Indeed, new studies have demonstrated that individuals with heightened awareness of climate change are more

likely to feel distant from issues they perceive as geographically and temporally far away (Spence et al., 2011). Yet, the transition to parenthood may reduce this psychological distance, as new parents begin to worry about the world they will leave to their children (Spence et al., 2011). Nonetheless, studies conducted in Italy show that the majority of new parents' priority is the immediate well-being of their children; concerns about climate change, thus, while present, are often not primary (Schiavato, 2022).

In terms of birth rates, as mentioned, Italy continues to record one of the lowest fertility rates in Europe with 2023 TFR at 1.3 live births per woman (UN DESA, 2024a). This is compounded by economic uncertainty and high unemployment among youth, but environmental concerns are increasingly recognized as a contributing factor. Schiavato's analysis, involving mothers aged 24 to 39, revealed that while only one mother reported direct experience with environmental crises, all were aware of climate change and its long-term risks (2022). However, their immediate focus was on their children's day-to-day well-being, rather than on broader environmental threats (Schiavato, 2022). This finding aligns with international research indicating that while eco-reproductive anxiety exists, its influence on decision-making varies depending on the individual's level of environmental concern prior to parenthood (Thomas et al., 2017).

Moreover, Italy's economic and social conditions further complicate fertility choices. In 2022 42.6% of mothers between the ages of 25 and 54 are not employed, and 77.2% of voluntary resignations come from working mothers, reflecting a society where economic instability, coupled with inadequate family support systems, often takes precedence over long-term environmental concerns (Save the Children, 2022). This situation creates additional pressure on Italian families, who may already feel overwhelmed by economic and caregiving burdens, making the idea of raising children in a climate-compromised future seem even more daunting.

While environmental concerns are increasingly part of public discourse in Italy (Beresford, 2022), policy interventions remain relatively weak compared to other European nations. The Italian government has yet to introduce comprehensive family policies that explicitly address the intersection of climate change and reproductive choices. Such policies could include incentives for green living, support for sustainable family practices, or even educational campaigns to reduce eco-reproductive anxiety. Sweden, for example, integrates environmental education and sustainability into its national educational curricula from early childhood education onwards.

Preschools curriculum, referred to as "Lpfö2018", explicitly mentions sustainability and incorporates UN global goals for sustainable development, which include environmental, social, and economic dimensions (Borg & Samuelsson, 2022). This focus on sustainability, starting from an early age, fosters crucial awareness and responsibility among children (*Ibid.*).

3.2.4 Socioeconomic and cultural influences

Research indicates that economic insecurity, combined with traditional family expectations, leads many women to forgo childbearing altogether (Aassve et al., 2020a). In Southern Italy, where this intersection is most acute, the lack of affordable childcare options heavily restricts women's ability to combine work and family life (Bertolini et al., 2015). These socio-economic factors and lack of supportive measures reinforce women's economic dependence on their spouses and contribute to Italian persistently ultra-low fertility rates, thus reinforcing the urgency of policy reforms that support both women's participation in the workforce and family planning.

In this context, cultural norms in Italy exert significant influence over both labor force participation and fertility decisions. The deeply ingrained "myth of the mamma" continues to idealize motherhood as a woman's primary role, discouraging women from remaining in or re-entering the workforce after childbirth (Migliaccio, 2024). Additionally, women face social pressures to prioritize family over career, and insufficient support policies further deter women from balancing work and motherhood. These challenges lead to reduced fertility rates, despite efforts to incentivize childbirth through financial incentives and tax breaks (MEF, 2022).

Moreover, Italy's cultural narratives around motherhood are deeply influenced by Catholic traditions. The Catholic Church's influence is pervasive, shaping societal norms which glorify motherhood and often stigmatize women who prioritize career goals over family life (Migliaccio, 2024). The Church's teachings *de facto* emphasize the sanctity of motherhood and the traditional family structure, where the role of women is primarily seen as caretakers and nurturers within the home (Dalla Zuanna, 2001). This religious doctrine glorifies motherhood as a woman's highest calling, often framing it as a sacred duty, and promotes the ideal of large, closely-knit families. As a result, Italian society has long valorized the image of the "angel of the hearth," a concept that positions women as the moral and emotional center of the family (Ginsborg, 1990).

The Church's influence also extends into public discourse, where it advocates for policies that align with its teachings on family and reproduction. The Catholic Church, for instance, has historically opposed legislation that promotes divorce, contraception, and abortion, arguing that such measures undermine the traditional family structure (Ferrera, 1996). This stance has reinforced the societal expectation that women should prioritize their roles as mothers and homemakers, often to the detriment of their professional aspirations (Donati, 2012).

This cultural framework has had profound implications for women's participation in the labor force and their reproductive choices. Women who seek to balance career and family life often face societal stigma, as pursuing a career is sometimes deemed conflicting with the ideal of devoted motherhood (Migliaccio, 2024). This stigmatization is particularly pronounced in more conservative regions of Italy, such as the South, where the Church's influence is strongest and traditional gender roles are more deeply entrenched (Tanturri & Mencarini, 2008).

Furthermore, the Catholic doctrine contributes to the persistence of gender inequality in Italy by reinforcing traditional gender roles within the family. This has tangible effects on and is reflected in policymaking as proven by the biblical times of the Italian government to adopt measures that support working mothers, i.e., comprehensive childcare services and generous parental leave. The Church's influence has often been recognized as a factor in the resistance to such policies, which are sometimes perceived as undermining the traditional family model (Guetto et al., 2015). Therefore, even as the government introduces financial incentives to encourage higher birth rates, these efforts are often insufficient to counteract the deep-rooted cultural expectations which the Church's teachings contribute to promote (Sobotka, 2017).

Chapter 4: Analysis and Discussion

4.1 Comparative insights

The impact of climate change on fertility intentions offers a unique lens through which the intersection of gender, environment, and demographics can be analyzed. The comparative analysis between Sweden and Italy illustrates stark differences in how policy environments and cultural norms shape reproductive decisions in the context of climate change. By analyzing both countries, this study sought to answer whether strong welfare policies and gender equality could mitigate the negative impact of eco-reproductive anxiety on fertility choices.

In Sweden, a robust welfare state coupled with progressive gender policies creates an environment that alleviates eco-reproductive anxiety. Swedish policies – such as comprehensive parental leave, affordable childcare, and gender equality measures – enable women to balance career and family life, reducing uncertainty around fertility decisions. This insight supports the claim that in high-trust environments, individuals feel secure enough to pursue childbearing even amidst growing climate concerns. As a result, fertility rates in Sweden remain relatively stable despite the global trend of fertility decline (Sundström, 1999). The 2023 TFR in Sweden stood at 1.67 children per woman, much higher than Italy's 1.3, reflecting the success of these policies (UN DESA, 2024a).

On the other hand, Italy's traditional family structures and weaker policy frameworks exacerbate both economic instability and climate anxiety, further deterring individuals from having children. Italian women face significant barriers towards labor force participation, primarily due to the lack of affordable childcare and gender-sensitive labor regulations (Sundström, 1999). The absence of institutional support fosters heightened eco-reproductive anxiety, as observed in regions where political trust is low and government action on climate change is perceived as inadequate (Marks et al., 2021). This situation reveals a fundamental contrast: where trust in institutions is lacking, like in Italy, climate concerns further compound existing economic pressures, resulting in a lower likelihood of family formation.

Therefore, in addressing the research question about the impact of climate change concerns on fertility decisions, the case studies reaffirm that institutional support plays a crucial moderating role. The Swedish model demonstrates how robust welfare policies, when intertwined with climate consciousness, can alleviate eco-reproductive anxiety. Policies that integrate environmental

sustainability with gender-sensitive measures, such as Sweden's eco-preschools, provide families with the security needed to make confident reproductive choices despite environmental uncertainties.

Conversely, the Italian case illustrates that in absence of such comprehensive support systems, individuals are less inclined to undertake the long-term responsibility of parenthood. The findings suggest that here the decision to forgo or delay parenthood is driven primarily by inadequate family support systems and ingrained traditional social roles, with climate change concerns adding an additional layer of complexity. Although eco-reproductive anxiety has gained prominence in Italy as a reason for hesitating to have children, especially among younger Italians (Save the Children, 2022), this anxiety is compounded by more immediate challenges, such as insufficient institutional support for working mothers, high unemployment, and economic instability (Schiavato, 2022). Thus, while environmental concerns do factor into the decision-making process, they are outweighed by the structural deficiencies of Italy's labor and family policies, further exacerbated by low social and institutional trust. Tackling these challenges would require a comprehensive approach that prioritizes gender equity in both the workforce and the household, as well as environmental sustainability, whose correlation has yet to be addressed by Italian polices.

4.1.1 Institutional frameworks and gender regimes

A critical factor in understanding the differences between Sweden and Italy is the institutional framework within which women make reproductive decisions. Sundström's comparative analysis of gender regimes reveals that Sweden's welfare state model offers greater flexibility for women to combine work and family life, while Italy's "familialism" places a heavier caregiving burden on families rather than the state, reinforces traditional gender roles and limits women's opportunities to navigate between paid labor and caregiving responsibilities (1999). Familialism, in the Italian context, in fact, refers to the cultural and institutional reliance on the family as the primary provider of care and social security, in contrast to Sweden's state-supported welfare model (Sundström, 1999). Coherently with the observations of this study, Sundström's work – although it should be noted that its data dates back to 1993 – reported that in Sweden 85% of women with children under school age were employed, compared to only 43% in Italy (1999).

Italian familialism is deeply ingrained in social and political life, where the family is seen as the primary unit of social and economic security. This contrasts with Sweden's approach: more individualistic and universalistic in its social policies, with the state playing a greater role in providing comprehensive social support, including extensive childcare services, thereby reducing the burden on families (*Ibid*.). Italy, instead, has minimal public provision, hindering women's ability to balance paid work and caregiving. Although Italy favors dual-income households in its tax system, the absence of comprehensive family policies and the reliance on informal care networks, such as extended family, force many women into part-time or informal employment (*Ibid*.), thus limiting their access to social protections and career opportunities (Trifiletti, 1999). Consequently, women's labor participation in Italy remains lower than in countries with more robust welfare systems, contributing to economic inequality and diminished professional growth opportunities for women.

Ultimately, the comparison between Sweden and Italy highlights the critical role of welfare policies in shaping both labor force participation and fertility intentions. In Sweden, where gender equality is more institutionalized and climate concerns are integrated into public policies, women have greater freedom to make reproductive choices without being disproportionately influenced by environmental concerns. Italy, on the other hand, must address both the structural and cultural barriers which limit women's participation in the workforce and worsen the impact of climate anxiety on fertility decision.

4.2 FLFP and comprehensive policies for Europe's demographic future

As bleak demographic trends – i.e., aging populations and declining fertility rates – strain European societies, the integration of gender equality and environmental sustainability into policy frameworks becomes increasingly urgent. Sweden's experience offers a model of how these issues can be addressed holistically, with policies which support both gender equality and environmental consciousness fostering more sustainable demographic trends.

As discussed in previous sections, rising climate anxiety, especially among younger generations, has been linked to declining fertility intentions across Europe. Aassve and colleagues advocate for the role that social and institutional trust can play in mitigating this negative correlation between uncertainty and fertility (2020b). Their analysis suggests that public policies, such as those

providing extensive affordable childcare services – through the expansion of public ones for instance – can significantly contribute to counterbalance low trust and reduce the uncertainty associated with balancing work and family life in times of – environmental – crisis (*Ibid.*), improving women's participation in the labor force and encouraging higher fertility rates despite eco-reproductive anxiety.

However, the disparities between countries such as Sweden and Italy also exemplify the contingencies of failing to assimilate these considerations. Without comprehensive policies that address the intersections of gender, demographics, and climate change, countries may face exacerbated demographic challenges, including further declines in fertility rates and increased pressures on social welfare systems. Therefore, the implications of the case studies explored suggest that a successful approach to these challenges requires not only policy innovations but also cultural shifts that support gender equality and environmental sustainability. Thus, future European demographic strategies must acknowledge these interrelationships in order to foster a more resilient and sustainable demographic future.

4.3 Conclusions and future research directions

The relationship between gender equality, climate change, and demographic trends presents both challenges and opportunities for European countries. This dissertation has explored their intricate correlation through the comparative analysis of Sweden and Italy, which ultimately indicates that policy frameworks are paramount in molding these dynamics. While Sweden's comprehensive family policies and commitment to sustainability are exemplary of successful schemes, Italy's struggles with traditional gender roles and economic instability underscoring the need for significant policy reforms.

4.3.1 Conclusion and final remarks

The findings of this research support the initial hypothesis that robust welfare policies, such as those implemented in Sweden, are critical for mitigating the impact of eco-reproductive anxiety on fertility decisions. In countries where these policies provide women with the ability to balance professional and family life, the negative effects of climate change concerns are significantly reduced. By contrast, in countries that lack such comprehensive frameworks – particularly those

which do not address gender disparities nor support work-life balance – these barriers present a greater obstacle than climate anxiety per se. In Italy, for example, the absence of gender-sensitive policies that reconcile women's career and reproductive choices results in climate change concerns exacerbating existing socioeconomic pressures, although they are not the principal deterrent to childbearing. The decision to postpone or forgo motherhood is more heavily influenced by insufficient family support systems and economic instability. Italy's ultra-low fertility rates reflect these compounded pressures as families, particularly women, face a policy environment that fails to address both immediate socioeconomic challenges and long-term concerns such as climate change. Hence, while environmental anxieties do add complexity, they are often secondary to more pressing issues related to both gendered and economic inequalities.

In contrast, Sweden's policy landscape, which integrates gender equality and environmental sustainability, offers a model that demonstrates how comprehensive support systems can foster both high levels of FLFP and stable fertility rates, alleviating eco-reproductive anxiety. The country's emphasis on affordable childcare, parental leave, and sustainability-driven education systems has proven effective in reducing the uncertainty associated with climate change in family planning decisions.

This comparative analysis provides important insights into how policy environments shape reproductive decisions in the context of climate change, offering a valuable foundation for future research. Indeed, this dissertation focuses on qualitative data from the two case studies of Sweden and Italy, demonstrating the critical role of comprehensive policies in mitigating eco-reproductive anxiety and supporting family planning. The narrow scope of this study, thence, highlights the potential for future research to broaden its reach by potentially incorporating more countries and employing more advanced statistical methods such as regression analysis, which were beyond the breadth of this dissertation. These expansions would provide further understanding of how trust, policy frameworks, and climate concerns systematically intersect to influence fertility outcomes, building on the groundwork laid herewith. Hence, the following segment outlines key directions for advancing this critical area of study.

4.3.2 Future research directions

As the EU grapples with the twin crises of declining fertility and environmental degradation, these issues must be addressed holistically. This dissertation has outlined the importance of further research, especially in understanding how climate change influences fertility preferences across different geographical locations and social groups. The lack of a unified definition for both climate change and fertility preferences, combined with the limited amount of existing studies, as observed by Brusselmans, complicates the research process (2023). Future analyses should also explore different geographical locations, providing cross-country comparisons, examining diverse populations and social groups and accounting for additional factors affecting reproductive choices, such as relationship status.

Furthermore, younger generations navigating the tensions between traditional and modern gender roles call for further investigation of how political and social changes can support the balance between family life and labor market participation (Sundström, 1999). This is particularly relevant in light of increasing economic pressures on families, as evolving social security systems create new demands for women to enter the workforce (*Ibid*.). In this context, research should explore how policies that foster gender equality and environmental sustainability can empower young European women to work and raise children in eco-conscious settings.

The impact of climate change-related migrations on fertility and FLFP is yet another premise for future research in this field (Thiede et al., 2016). As environmental degradation drives migration patterns, understanding how migrant populations integrate into European societies in terms of fertility and workforce participation is paramount.

Finally, future studies should also delve deeper into the role of cultural norms in shaping reproductive decisions in the face of climate change. As demonstrated in Sweden, cultural shifts toward shared domestic responsibilities and eco-conscious living enhance the effectiveness of gender-sensitive policies (Goldscheider et al., 2015). In contrast, Italy's traditional family structures concur to hinder the success of such policies (Migliaccio, 2024), underscoring the need for further investigation into how cultural attitudes can progress to support both gender equality and environmental sustainability. Further research should thus examine how societal attitudes and behaviors can be influenced not just through policy, but through broader cultural transformations fostering sustainable living and gender equality.

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