

**A Dangerous Duo:  
How Falling Birth Rates and an Aging Population Will Affect the  
European Union**

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### **Abstract**

The European Union is in the midst of a population phenomenon. It has been examined by demographers for the past decades now. For the first time in human history the European Union is experiencing a population decline as a developed region of the world. This is because of an ageing population that are living longer coupled with a dangerously low birth rate consistently under the 2.1 replacement level. This paper explores just how drastic these figures are and explains the impact that the European Union will see as these figures continue to increase and decrease. It also goes farther as to asking why the phenomenon of not having children is happening and digs on the sociological level in order to implement precise and effective policies to raise the birth rate. The paper concludes these problems based on the averages of the entire European Union. However it goes further as it will examine the two countries that create the spectrum for this crisis, France, on the less urgent side, and Italy who will experience the worst of its effects first in the European Union. It will then explain the solutions that are in discussion and at some levels already implemented in order to fight the negative effects that will become prevalent in the coming years. These include immigration, birth policies, working longer, and new European Union membership. Overall concluding that it is extremely vigilant of the European Union to set a motion to make changes now in order to lessen the effects that a declining population can create.

### **Introduction**

Europe is crucial to the human history of the world. It has brought innovation, art, and culture that we still expand on today. Of course behind all of this are the people. It has been a mecca for humankind to grow, explore, and expand. At the start of the 19th century Europe made up 15% of the global population, yet by 2050 it is projected that the figure will decrease to around 5% (“As Europe Ages”, 2008). As Europe is a highly developed area of the world and provides some of the strongest social structures for people, it is quite fascinating that their end may be brought about by the very people that make them up. Europe is currently experiencing a population crisis that is dealing with an extreme ageing population coupled with low birth rates that continue to fall. These two paired together are forcing Europe to recognize the impacts that it could have on their economy, and society as a whole. This paper will cover how extreme the population crisis is becoming and describe the possible reasoning of why it is happening. It will continue to look further and examine case studies of Italy and France, who are on opposite sides of the crisis, but will both experience the effects. After debriefing the current crisis, then the possible solutions that the European Union is working towards implementing in order to fix this issue will be examined. This development is pressing and must be dealt with as it is being seen on all levels of first world countries, however it will be Europe to be forced to deal with it's effects first. They will soon become the spearheading global leader in dealing with just how to stabilize and create a sustaining population.

A quick understanding of the human population is that it's population growth is exponential. Therefore when it is increasing it does so double fold, and when it is decreasing it does the same. This can be seen when the world population began expanding in the 1800's, and hastily grew to a rate of nearly doubling during the highly known baby boom. This makes it a fragile figure to maintain within society as it fluctuates with personal choice, which can be unpredictable. Although some could argue that overpopulation is a catalyst to mankind's problems, if we depopulate too quickly we will be left with a new array of problems as well. Population stability is something that all nations need to be working on, and unfortunately for all of the countries in the European Union they will be facing the first wave of population decline. Therefore stability in their population needs to be a prioritized effort. This discussion from demographers themselves has been going on for as early as two decades now. The European Union has been

made aware of this from social scientists studying population trends, and have greatly depended on their input in order to help each EU country manage the crises since.

### Population Overview

To start it is important to understand the current demographics of the European Union. As of 2020 the European Union population was 447.3 million people. Of these millions of Europeans 0-14 year olds make up 15.1% of the population, 15-64 make up 64.3%, and 65 and over make up 20.6%. (Population Structure, 2021). When demographers split up the population into these common age sectors it becomes clear that older people are outweighing younger people. These percentages are continuing to increase for 65 and over where in the past year it has increased by .4% and decreased for 15 and under by .3%. (Population Structure, 2021). The range of these bottom and top tiers of population are continuing to expand further and further away from each other and grow a concern for the day that a younger population cannot sustain the older population. To give a visual representation of how extreme Europe's population crisis is predicted to be with no intervention, below are two population pyramids. **Figure 1** represents a perfect population. This is the model many demographers use to compare unique and problematic populations. **Figure 2** is the model for the European Union with both current and

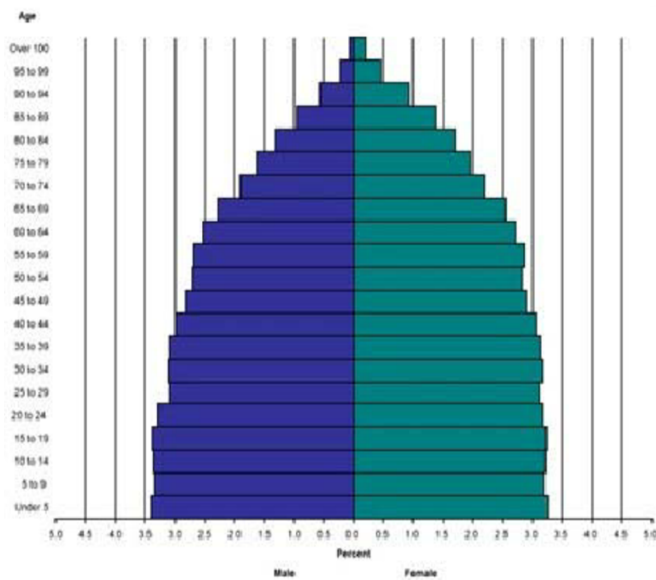


FIGURE 1

Source: Researchgate.net

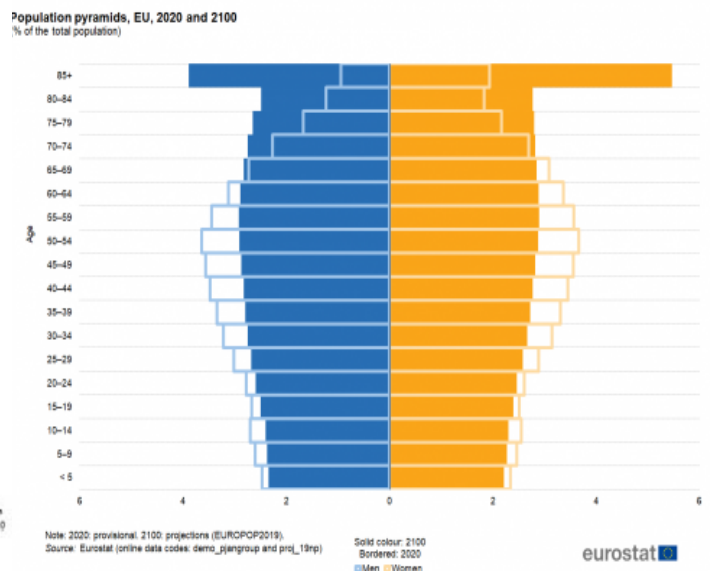


FIGURE 2

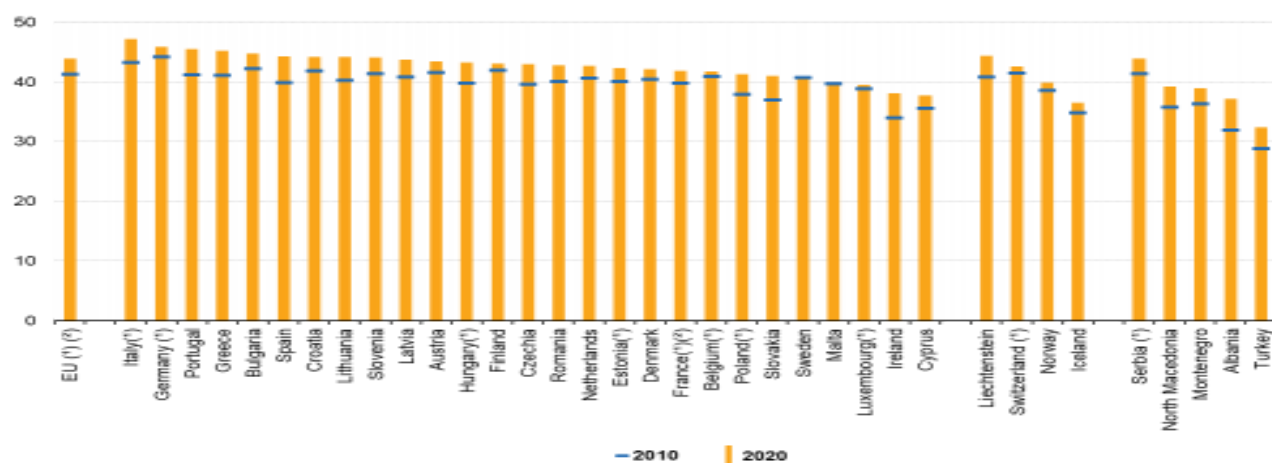
Source: Eurostat

predicted populations on it. The weight of the European Union's population is currently in its 15-64 year old range with the majority of those people closest to 40-50 year olds. The predictions for 2100 become drastic as the largest age demographic group will be 80 and above. This greatly differs to an ideal population where demographers promote the highest share of individuals should be around the ages of 20-30 due to starting to join the economic workforce and the opportunity for the longevity they hold in it at that age. This heavy-sided population of older age can lead to lots of problems for a society and their economy.

### Ageing Population

What exactly does an ageing population mean? It means people are living longer! Since the start of the last century the world population has seen a steady increase of life expectancy. This can be attributed to the steady decline of infant mortality, and food shortages, as well as improvement in healthcare, education, and lifestyles (Mortality and life, 2021). The European Union has done all of these exceptionally well showing signs of being a highly developed region of the world. In just 2 decades life expectancy has increased by 4.2 years for males and 3.1 years for females bringing the life expectancy to 78.5 and 84 years old for those living in the European Union (Mortality and life, 2021). This should be great news and the goal of a society: lengthening people's lives with quality living standards. Shown in **Figure 3**, the current average age of people in the European Union is 43.9 years old. Every country, except Sweden who remained

**Median age of population, 2010 and 2020**  
(years)



(\*) Break in time series in various years between 2010 and 2020.

(\*\*) 2020: Provisional.

Source: Eurostat (online data code: demo\_pjanind)

**FIGURE 3****Source:****Eurostat**

stable, has seen an increase in the last decade. The predictions of demographers are that it will rise to an average of 49 by 2050 (As Europe Ages, 2008). The European Union's uneven distribution of older people, compared to the rate of replacement in births is going to actually become more of a hindrance than a blessing. This is because it is unideal for a population's workforce. The old-age dependency ratio for the European Union to 32% as of 2020, which means there are an average of three working persons for every person 65 and over (Population Structure, 2020). Old-age dependency can be defined as the ratio of elderly people who generally at a certain age generally become economically inactive compared to the number of working age people. This is projected to rise to an European Union average of 57.1% by 2100, and in the EU commissioner for Employment Affairs, Vliadmir Spidla states "by 2050 this ratio will have dropped to two workers paying for one pensioner." (As Europe Ages, 2008). When this is looked at from the total age dependency ratio, or the ratio of those dependent on others for their daily living (young and elderly) compared to the working age population, the outlook becomes even more dismal. As of 2020 the total age dependency in the European Union was calculated to be at 55.5%, stretching those eligible workforce to be working a 1:1 ratio of support. It will become likely unbearable for society as 2100 projects the total age dependency ratio to reach 82.6% (Population Structure, 2021). Although in the total age dependency those on the younger side will eventually join the workforce, it still creates strain on an economic system already struggling as the baby booming generation, who will no longer contribute to the workforce in their lifetime, will continue to hold the majority and grow severely old.

The major effects this could bring to the European Union's economic systems are in multitude. One is that there will be fewer recipients to collect taxes from employment, which go to funding pensioners and the healthcare system. This will be because there are simply fewer working age people to employ. On the other side of that there will be an increase in those collecting their pensions, and strain on health costs in the universal healthcare systems as older aged people require much more medical attention than working age and younger. With all of these pressing issues that the European Union will be forced to face soon it is expected that the European Union Gross Domestic Product will fall up to 1.2% between 2031 and 2050, and continue to as

population issues worsen (As Europea Ages 2008). An ageing population shows signs of development, however the strain that this mass amount of elderly aged persons will have on societal responsibility and the economic system, will place a large amount of pressure on the 15-64 age range of those in the European Union in order to even attempt to make up for.

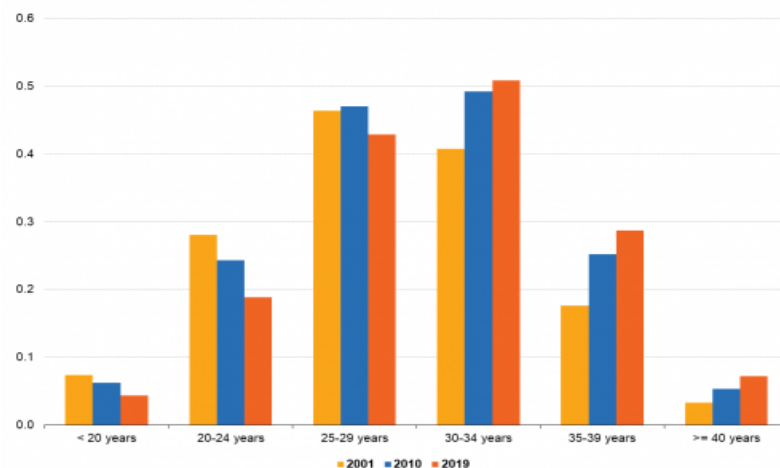
### **Falling Birth Rates**

When reading the above evidence of the European Union's ageing population, the strains that they will have on society are large, and many would think that the solution can be easily explained. Simply replace those ageing at the same rate with babies. However, just as the phenomenon of a heavily ageing population is happening for the first time in history due to development, an even more fascinating aspect is happening on the other side of the spectrum. Within these developed countries, women are not having children. That is of course an exaggeration as there are still women becoming mothers and creating families, however the rate of which is happening and the amount have decreased significantly. This is strange as the European Union offers some of the most generous family and social care for their people, so many would assume this would encourage and make having families easier for people living here. Except the acceptable replacement birth rate of 2.1, that demographers have determined stabilizes a population from declining and with the absence of immigration, is not being met in a single European Union country. Instead the figure stands around 1.59 as the average rate European Union women are having children at. (How do countries fight falling birth rates?, 2020). To give an idea of how fast a population can decline without a replacement level birth rate, it is estimated that "if fertility rates fall to 1.3 children per couple, in 100 years the population could fall to less than a quarter of its current size." (As Europe Ages, 2008). That is a rapid decline that severely affects the population on a long term basis. It is extremely difficult to build back a population once it has declined drastically, and the European Union is nearing closer to it each year. To reiterate the population pyramid once again in terms of the structure that is being created, if the top becomes too heavy without a sustainable base, it will topple over. With a lack of young people to support the growing population of the elderly, life will become extremely difficult to sustain. Therefore it is imperative that the European Union figure out a way to not only control their population size, but do so with long term changes. The easiest of those would be to make having children a more desired action of its citizens.



There are no clear answers as to why the birth rate is falling, but many social scientists are hard at work trying to conclude reasons, so solutions can be properly met to create change. Some basic consensus has stated that fewer marriages, changing family patterns, growing prosperity for women, and contraception have all played a part. In reality there is most likely not one answer, but more of an array of reasons that influence both women and men in European society, to not reproduce. Research funded by the European Union on falling birth rates started as early as 2004 with a study done by the Robert-Bosch Foundation. Evidence from his research showed that a fear of costs for child bearing and fear for the future that they may grow up in (As Europe Ages, 2008). With the normalization of birth control this ability for women to choose when they feel comfortable becoming mothers is possible. This is most often when they and their partner feel financially stable, and of course that is common later into a career. It is no surprise then that statistically the age of women reproducing moved towards a trend of older age. This greatly reduces the chance of women having multiple children, because the time frame for a woman to have children at all is roughly 25-30 years. As of 2019 the European Union's average age women were having children was between 30-34 years of age, with age 35 and over rising (Fertility Statistics, 2021). This is reiterated in the **Figure 4** down below, where one can clearly see a trend from 3 different decades. This trend continues to show the commonality of women having children at later ages. This can account for a lower birth rate because women having children at older ages are only having one child or two children, which is enough to replace them and their partner's accounted for figures, but does nothing more to add to the furthering of a population.

**Fertility rate by mother's age group, EU, 2001, 2010 and 2019**



Note: The fertility rate by mother's age group is the sum of the single age fertility rates.  
Source: Eurostat (online data code: demo\_frate)

**FIGURE 4****Source: Eurostat**

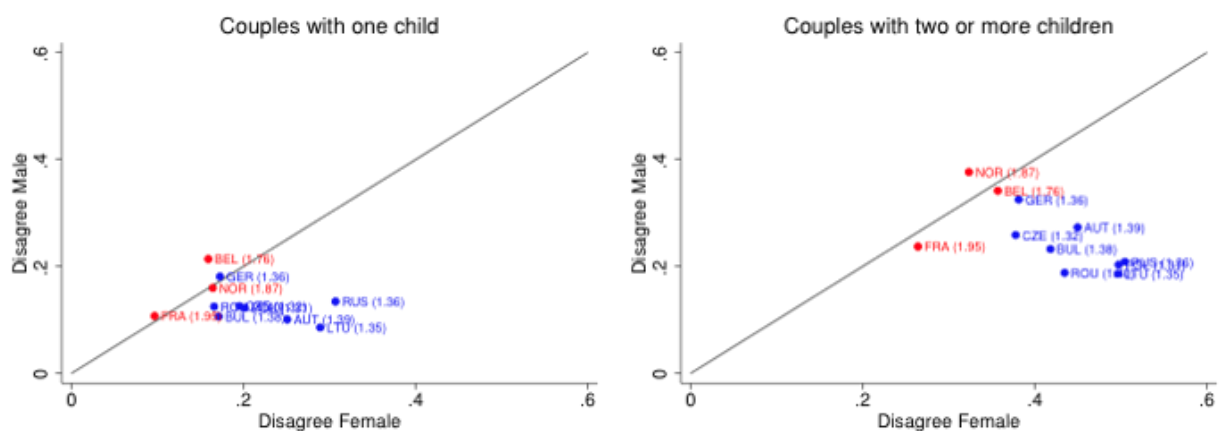
A possible thought that may arise from this evidence for some is to place blame on women for entering the workforce. If women continued their common societal roles from the start of the 20th century fertility rates would be higher. However, research from sociologist Francoise Castex finds otherwise. In his 2008 report on “the demographic future of Europe” he found that unemployed women are actually the greatest group to be impediments to new births. This is because a decline in fear of costs and fear of the future are directly linked to having steady employment, and when those two fears are heightened it leads to the biggest factor of not having children at that time. (As Europe Ages, 2008). It is also important to note the changing economic landscape where two income households are almost prioritized, as the cost of living in Europe has increased as well. Instead he continues on with promoting rather the social climate to help women reconcile work and family, through ideas such as public spending on childcare, and paid parental leave. He also notions at a very interesting angle of child rates by examining the relationship between higher study and family life. The European Union average of student parents varies around 10% or so. Safe to say it is uncommon for a young student to also be a parent. However in an outlier country, Sweden has 41% of student parents. (As Europe Ages, 2008). This can be amounted to the array of social support Sweden gives to those studying with children, easily increasing the ability and willingness of having children at an earlier age for many women and families within their country. Castex believes similar implementations in other countries would also see a similar increase in student parents, leading to an increase in the overall birth rate of European Union countries.

### **Social Attitudes of Having Children**

Much of what Francoise Castex stated above in 2008 has been implemented in some social policies throughout the European Union. This saw some upticks in countries such as France, Belgium, and some Scandinavian countries, but did not budge in others, and did not make any countries reach a desired 2.1 birth rate (Doepke & Kindermann, 2016). This calls for deeper social research on the understanding of the social attitudes of having children within the European Union. As much as public policies can help, understanding why a culture is changing is imperative to further influencing society to change in the desired direction. Queue the sociologists! A 2016 study by the Generations and Gender Programme attempts to research a

question lacking in the discussion of low fertility rates that digs at the personal level: the disagreements between men and women and to what extent it is responsible for low fertility. They surveyed a wide variety of European couples, some having no prior children and some with the possibility of having a second. The research found that in countries with a fertility rate closer to 2.1 the disagreement between men and women wanting a child were close to even with one another, and slightly upticked towards a female disagreeing when it was a discussion to have a second or more. However, in lower fertility countries it was found that women were much higher to disagree with having one or more children. This can be visualized in the graph below as

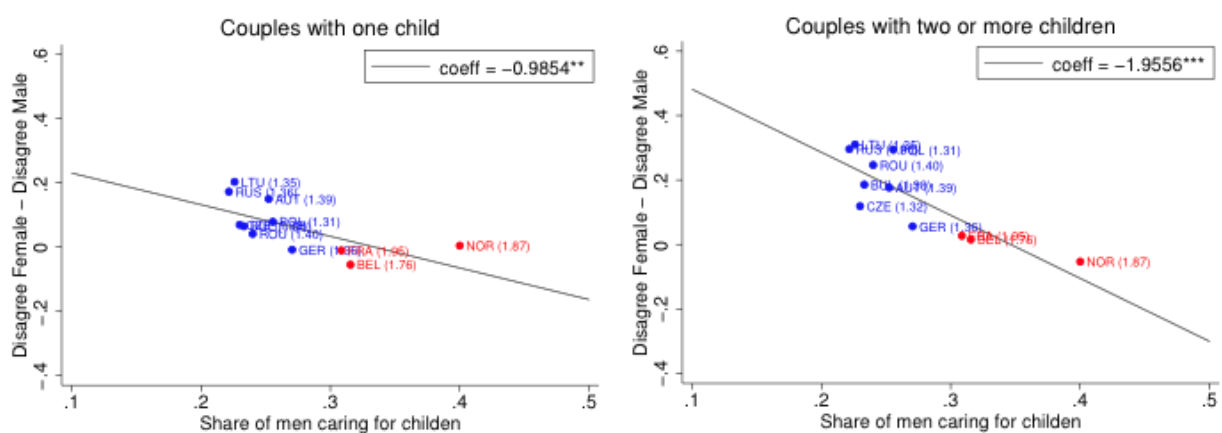
**Figure 5.**



**FIGURE 5**

The study is fascinating because it goes further, reinterviewing the same couples three years later to see the effects it had on a real outcome of fertility. They found that disagreement in couples is indeed a major factor in low fertility in the European Union. Their results concluded that the only high probability chance of a couple resulting with a child is if they both agree. This chance is about  $\frac{1}{3}$  if a woman wants, but a man disagrees, and if a man wants but a woman disagrees or they both disagree the results are indistinguishable from zero (Doepke & Kindermann, 2016). This helps to implicate low fertility into societal placement, where there must be large disagreement between the sexes or agreement on no children between the sexes happening in the European Union. This helps expand the knowledge as to why the phenomenon is happening in the first place.

The true innovation behind this study is that the disagreement between couples and how that results in fertility or not is just a foundational base as to why there is such disagreement. The programme continues to dig deeper at the important notion that lower fertility countries had a higher rate of disagreeing females than higher fertility countries. They do this by arguing a thesis that the disagreement is coming from an uneven distribution of childcare. By collecting further data on the couples in the above study's disagreements towards having a child, they also collected data on the burden of childcare each parent takes on. They constructed this data by conjoining results from the previous study on disagreement and adding in the additional data to be represented in the graph below labeled as **Figure 6**.



**FIGURE 6**

The data revealed that in low fertility countries in the European Union men contribute much less to the physical burden of childcare, as opposed to the cost. The lowest contribution being 22%, and the highest contribution, naturally being in a higher fertility rate country, was still under half with data around 30-40% (Doepke & Kindermann, 2016). When men contribute little to the burden of childcare it raises the likelihood of a woman to disagree with having a child or furthermore. In higher fertility rate countries men contribute more to the burden of childcare and the disagreement or agreement is more balanced between the sexes. The study concluded this model as the bargaining model of fertility where disagreement is a direct consequence of uneven distribution to childcare involvement (Doepke & Kindermann, 2016). When a woman has more responsibility for childcare she then loses her ability to pursue an independent career and further options forcing her to lose bargaining power within the marriage/couple, and more likely to then disagree on having future children. Overall these falling birth rates are a phenomenon that are

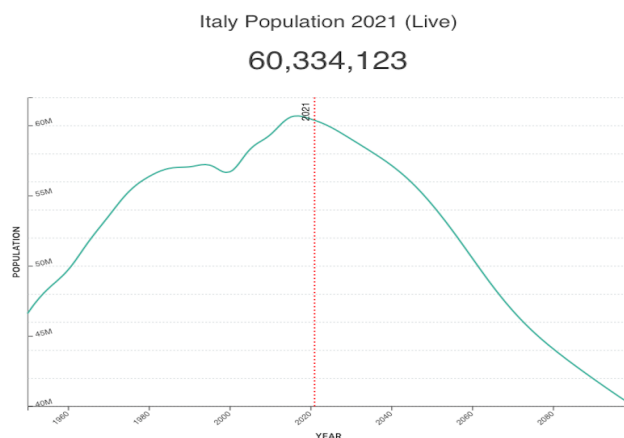
occurring at some of the lowest statistics ever recorded, and are coupled with the largest ageing population seen in the Europe Union's history. It is therefore studies like the Generations and Gender Programme that lead the way into researching social ideology so that effective public policies can be determined to help prevent this impending catastrophic population crisis.

An example of these effective policies would be in Sweden. A monthly allowance to families that increase from the ages of 11 to 15 of a child has been established. They subsidize child care to help the financial burden of working and raising a child. They also offer some of the most generous parental leave in all of Europe, and the world for that matter, with 480 paid days off to share between parents. Their fertility is one of the higher rates in the European Union at 1.71 (Fertility Statistics, 2021). It is also important to note that Sweden has some of the highest maternal employment and lowest child poverty rates according to the European Commission, showing that policies that aim to support women in the workforce being mothers is much more effective than single time payments, or expecting women to leave the workforce (How do countries fight falling birth rates?, 2020). These are policies similar to what Doepke and Kesserman, 2016 conclude in their study. They state, "policies that specifically address the burden of childcare borne by mothers are vastly more effective than those that provide subsidies to fathers", as well as targeting the ease of having a higher number of children is crucial to growth. Because their conclusions were that men, even in high fertility rate countries do not share an even burden of childcare even in the highest fertility rate countries, directing policies at women are the most effective way to see improvement.

### **Country Specific Outliers**

To better understand where the extremity of the population crisis that lies within the European Union, the identification of its two countries' outliers and those near it are imperative. When discussing the population crisis in the European Union there is one country that comes to mind that will experience the brute of its effects most likely first, Italy. This country currently has the highest median age of 47.2, compared to the European Union average of 43.9 and its predictions that it will increase to 49 by 2050, it is clear that Italy is already ahead of the average curve demographers are witnessing in the population (Population Structure, 2021). The age percentages also create a clear picture of how heavy their ageing population is becoming within

their demographic makeup. Currently young people, 14 and under make up only 13% of Italy's population, where 65 and over are taking up 23.2% and rising. (Population Structure, 2021). This is matched with one of the lowest fertility rates in the European Union of 1.3. (How do countries fight falling birth rates?, 2020). When a fertility rate stays below 1.5 for more than two decades it implies a country will go through rapid population loss. **Figure 7** down below represents the extremity to which population can decline rapidly when the ageing population is not being replaced, in the example of Italy's current population projections. As stated before this is a crisis as population decline is exponential, the decline is quick. Without intervention to combat this,



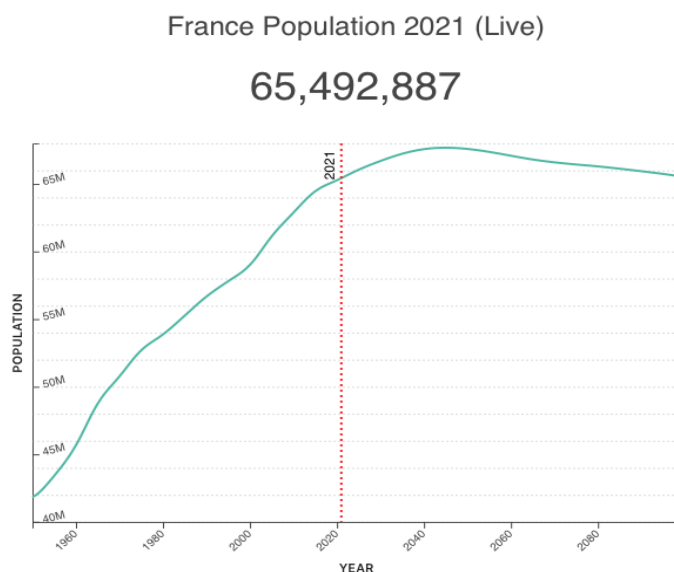
Italy will see the most severe effects first out of the other European Union states and suffer greatly in their economy and society. Little improvement has been seen as well in their fight to encourage more women to have children. A policy rolled out in 2015 that would give a 800 euro payment to each couple per birth has seen little improvement to their countries fertility rate (How do countries fight falling birth rates?, 2020).

**FIGURE 7**

**Source: World Population Review**

Many other European Union countries have adopted such incentives, but all lead to a similar pattern with only small increases in births in a short term period. This is not a long term soluble incentive, as in the case for Italy as the article “How do countries fight falling birth rates?” (2020) states “one-off payments fail to address underlying issues such as social attitudes - an important factor in a country with less than 50% of women in work - or large levels of emigration.” It shows that Italy and countries with similar lack of improvement are not addressing the root of their fertility problems in order to address their ageing population, and one time payments for births are not the effective way to increase fertility.

A country on the opposite side of Italy is France. Here the average age of the population is 40, even lower than the European Union average. They have some of the highest share of young people with 17.9%, and keep a close range to their ageing population with 65 and over making up 20.8% of the population (Population Structure, 2021). This is a much closer range than many other countries and gives France the chance to have less of an hard time handling any economic strain that may be placed on to their economy due to a larger population of ineligible workers. The good news continues as the birth rate in 2019 was recorded as the highest in the European Union at 1.86 (Fertility Statistics, 2021). **Figure 8** shows the much less decline that France could face in coming decades, which is in stark contrast to Italy's. It shows they are in a much better



position to not have to alarm their population of possible dissemination. France has been doing their part in combating this by placing effective social policies that have seen not only stabilization, but also upticks. Some of these are monthly benefits for larger families on top of a grant for the birth of each child a woman has.

**FIGURE 8****Source: World Population Review**

They also provide subsidized child care which greatly unburdens family financial costs of raising children while allowing both parents to be involved in the workforce (How do countries fight falling birth rates?, 2020). Overall France shows a very different picture into what population problems their country may face, and continues to promote effective public policies to not be placed in such drastic circumstances as Italy. These two countries are on opposite sides of the spectrum of population in the European Union, and give a better idea of where the rest of the countries land.

### **Solutions**

As dismal as some of this information may be to read, the European Commission has long been informed of this projected population decline and are hard at work trying to form effective solutions. The first of these solutions would be to encourage immigration. A surplus of population that has seen weak economies lie at the South and East of Europe. An idea of an American “green card”, termed “blue card” would also open more borders to have skilled workers immigrate to the European Union. By accepting skilled workers, not only would the population grow, but it has the possibility to actually strengthen economic power and growth within a country. Migration carries the potential to help supplement the lack of workforce a country has until their ageing population dies out. However, it is estimated that 56 million immigrant workers would be needed to supplement the decline by 2050 (As Europe Ages, 2008). As the highest recorded immigration into the European Union was recorded in 2005 at 2 million people, it is highly unlikely that migration alone will help the population crisis in the European Union.

A second solution is simple but highly unpopular to run a political platform on. It is to require workers to work longer in their lives, and receive a pension at a later age. This would decrease the old age dependency cost on the system. As of now, the employment rate starts to decrease at around 52 years old. This will be quite detrimental for a population who is set to have an average age of 49 by 2050. As of now companies prefer to employ young people because salaries can be much lower to employees with less experience. However, Françoise Castex states that “They [companies] will soon realize that there is a shortage of labour, which cannot be resolved solely through immigration.” (As Europe Ages, 2008). Extending employment for each person may help limit the strain on resources for the extreme elderly, 80 years and old, as it is set to have a two and half fold increase from 5.9% to 14.6% from 2020 to 2100 in the European Union (Population Structure, 2021). However, it can also have adverse reactions such as limiting the age young people have access to the workforce, and placing strain on businesses to continue to pay out inflated salaries.

A third solution is focusing on replacing the ageing population at a faster rate than they are ageing. This is by focusing on new birth policies that will raise the European Union’s fertility



rate to be over 2.1. This will be done through the tax system. It will be best to implement ways to help women reconcile work and family life. As thoroughly discussed previously the best policies that reach this sector are subsidized daycare, generous paid parental leave, and monthly benefits for larger families as these encourage more than one child to each family. The countries that have implemented these have seen greater improvements than one time cash policies other countries have tried. Ultimately to raise fertility, families are looking for long term social support. These countries who have the long term support policies have seen an increase in their rates, but still not at the rise needed to supplement the loss of workforce. Tax incentives and birth policies are absolutely needed, but must be coupled with other solutions as well to make a larger difference.

The last solution that is quite controversial is by expanding the European Union. There are countries to the East of Europe who have applied for European Union membership who are experiencing a population surplus, such as Turkey. These countries are experiencing population growth, instead of decline. Turkey has a fertility rate of 1.99 and an average growth of 1.09% each year. They are not expected to see a decline until around 2060 (World Population Review, 2021). By allowing them into the European Union, and countries with similar statistics to them who have applied, the European Union might easily reconcile their workforce and add more young people to their population. Ultimately all of these solutions carry the ability to aid the population crisis from becoming extreme, but they also all carry their own implications of new problems that can arise by their implementations. The solution may have not exactly been solved yet, or is rather a combination of all these stated above.

### **Conclusion**

The European Union is facing an array of challenges at the moment, from climate change, a pandemic, Brexit, and more. However, this population crisis is what prevails over them all as all of these problems become miniscule if we, the human population, are not here at all. Although this is a problem that will affect us in the future, and something many of us may not see at all, it is important to be proactive about it now. Population is fragile and cannot move rapidly without seeing major outcomes. What we are seeing now is that the European Union will be the first to face these challenges, though surely not the last of other developed nations. It is now that they can take leadership to help show the world how to deal with this phenomena, not just become the

first to fail. This is a two fold problem. An ageing population brings along its own amount of issues, but when coupled with extremely low fertility rates creates a totally new reality for society. With the realization that the population could greatly decline in the next coming century, effective solutions need to be put into place in order to prevent this crisis from becoming irremediable. Just as this is a two fold problem, it will require a two fold solution. Although the statistics may look dismal at a glance, it is only projections and there is a bright side, time. There may not be plenty of it before we start to notice the effects, but there is time on the side to reverse population decline, and at worst stabilize it. It is something humanity needs to be aware about, but it is not uncommon to see changing trends in the population of humans. We do not have the same death and birth rates as centuries ago, and this is yet another phase it will have to go through. The importance for the European Union is to take action to prevent these changes from hurting society and the economy, and there is already promise of this within each of their solutions.

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