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Factors affecting the GPG in the European Union 27 Countries

Estimating a Gender Kuznets Curve from 2007 to 2022

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Católica Porto Business School

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Abstract

The aim of this study was to investigate the factors affecting the Gender Pay Gap (GPG) in the European Union (EU-27) countries from 2007 to 2022 and to test the Gender Kuznets Hypothesis. To achieve this, we estimated a Gender Kuznets Curve. The results indicate a positive relationship between the GPG and Gross National Income (GNI) per capita. Additionally, variables such as the Fertility Rate are positively correlated with the GPG, supporting the Motherhood Penalty Theory. Conversely, variables such as Education and Life Expectancy are negatively correlated with the GPG. The permanent effects of the economic crises considered on the GPG are also negative.

Keywords: GPG, Gender Kuznets Curve, Motherhood Penalty, Education, Life Expectancy, 2008 Global Financial Crisis, COVID-19

Resumo

O objetivo deste estudo foi investigar os fatores que afetam a diferença salarial de género nos países da União Europeia (UE-27) de 2007 a 2022 e testar a Hipótese de Kuznets de Género. Para o efeito, estimamos uma Curva de Kuznets de Género. Os resultados indicam uma relação positiva entre a diferença salarial de género e o Rendimento Nacional Bruto (RNB) per capita. Além disso, variáveis como a Taxa de Fertilidade estão positivamente correlacionadas com a diferença salarial de género, suportando a Teoria da Penalização da Maternidade. Por outro lado, variáveis como a Educação e a Esperança de Vida estão negativamente correlacionadas com a diferença salarial de género. Os efeitos permanentes das crises económicas consideradas sobre a diferença salarial de género são também negativos.

Palavras-chave: Desigualdade Salarial de Género, Curva de Kuznets de Género, Penalidade da Maternidade, Educação, Esperança de Vida, Crise Financeira Global de 2008, COVID-19

Contents

Table of Figures

Table of Tables

1.Introduction

The objectives of this dissertation are to derive a Gender Kuznets Curve (GKC) and to explore other factors, besides Gross National Income (GNI) per capita, that explain the Gender Pay Gap (GPG) in the 27 European Union countries (EU-27) during the period 2007-2022. The method used is econometric regression.

The GPG represents an issue regarding gender inequality that has been the subject of many media outlets and discussions in recent times. Since the 1960s, gender differences have been a significant focus of study among scholars and feminists. The second wave of feminism, which followed the first wave, acted as a catalyst by expanding women's issues beyond the right to vote to include civil rights, cultural norms, and the challenge of systemic social inequalities. Consequently, the study of the GPG has been widely investigated in the context of gender differences, particularly since the second half of the 20th century. One of the earliest mentions is Bergmann (1974), a paper that discusses the intersectionality of race and gender in relation to wages.

Since then, the trend has shown that more women have joined the labor market, leading to a rapid decrease in the GPG. This trend somewhat stabilized in the 1990s, indicating that while the GPG continued to decrease, it did so at a slower pace.

This has not come as a coincidence: as more women started joining the labor market and enrolling in higher education, it stopped being regarded as an unconventional idea within society and became increasingly normalized over time. In the United States, there were several events that marked the decrease in gender discrimination, not only in terms of pay, but in a general perspective. The Equal Pay Act of 1963, which served as an amendment to the Fair Labor Workforce, represents a landmark in women rights movement at the time that

was regarded as a crucial step towards earnings equality. This amendment stated that women and men who worked under similar conditions that required the same efforts and had similar skills, could not be discriminated on their wages. The Title IX of the Education Amendments of 1972 prohibited gender-based discrimination in any education program receiving federal assistance, and supreme court cases *Eisenstadt v. Baird* and *Roe v. Wade*, were also important events that are worth mentioning. The last two events are of indirect significance, but nonetheless important to the GPG and even though they occurred in the United States, they soon reached Europe. The availability of birth control and voluntary interruption of pregnancies has contributed to the decline in fertility rates. This topic, which will be discussed later in this dissertation, is extensively covered in GPG literature. Numerous studies have concluded that the more children a woman has, the greater the difference in earnings compared to their male counterparts or other women without children.

The difference in earnings has been recognized to be of importance for the sake of an egalitarian society to be possible, to provide insight into the causes and consequences of it, such as economic growth, which has been an established fact as early as 1974 with the publication of the paper mentioned above (Bergmann, 1974). It is also important for social justice, as is it rooted in the principals of equity and fairness, as well as combating social biases towards women that are interconnected with other forms of discrimination, such as race, ethnicity and socioeconomic status.

The GPG represents the difference in earnings between men and women and serves as a crucial measure of gender inequality. It is one of the most reliable quantitative indicators available, as it is more readily quantifiable than other, more subjective measures. Consequently, it is mentioned frequently in news outlets, government and company reports, and policy discussions.

The GPG is measured by calculating the difference between the average male salary and the average female salary, and then dividing this difference by the average male salary. This measure does not adjust for factors such as professional experience, educational attainment, or the number of children per woman. However, scholars often incorporate these factors into regression models, which will be the objective of this paper.

This dissertation is organized into four chapters, including this introductory one. In Chapter 2, a literature review is presented, discussing papers by authors who have studied the GPG, including their methods and key findings. Important reports relevant to the study of the GPG are also analyzed. Chapter 3 presents the estimated regression equation, details the data used and its treatment, and presents and discusses the results obtained. A GKC was estimated for the EU-27 countries from 2007 to 2022, incorporating factors beyond GNI per capita that influence the GPG. The data was transformed using the Hodrick-Prescott (HP) filter. Finally, Chapter 4 summarizes the main findings of the dissertation, its limitations and suggestions for future research.

2. Literature Review

2.1. Gender Pay Gap

Gender inequality has been a subject that has increasingly been studied since the 1960s. Underlying its dynamics has been an important subject across many authors for the purpose of addressing societal well-being and development. The European Union has introduced several policies to mitigate the effects on gender inequality, not only when it comes to income parity, but also in matters of violence against women, sexual trafficking, health, etc. These policies have developed over time, as well as the EU's focus, as it started on economic well-being and developed to other matters. Gender mainstreaming was one subject that has been used during policy making in the EU since the 1990s, which consists of taking a gendered perspective during policy making, as well as a need for intersectionality, that is, considering race, ethnicity, disability and other status as well as gender in policy making (Hubert, 2022). The study of the GPG has contributed to the making of these policies, underlying the importance of the subject.

In 2014, Janet Gornick presented some causes and consequences for income inequality to the 69th General Assembly of the United Nations, and in her presentation, it was mentioned that the increasing number of women in the labor market in the past three decades had an equalizing effect on income inequality, meaning that "women's increased contributions have pulled up the bottom more than they have pushed up the top" (Gornick, 2014, p. 11). This only means that studying gender inequalities on income can have a positive impact on studying income inequalities in general.

Moreover, according to the Gender Equality Index (2023) provided by the European Institute for Gender Equality (EIGE), there has been an advance in gender equality,

compared to the previous year's report. However, only 2% of the population is close to achieving gender equality. The report is divided by domains, for example the domain of work and money, health, education, gender-based violence, among others. Regarding income, the report concluded that the largest gender gaps are among the highly educated, those aged 50-64 and couples with children. This report also provides an insight on the impact of the green transition in transport and energy, on the fact that is a sector that will offer opportunities in job growth but can disproportionally benefit men if there is no gender perspective taken into consideration, as it there will be an overrepresentation of men in the sector.

The 17 Sustainable Development Goals (SDGs), adopted by the United Nations' 2030 Agenda for Sustainable Development in 2015, focus on addressing the social, economic, and environmental challenges through a series of goals, such as eradicating poverty (SDG 1), quality education for all (SDG 4), achieving gender equality and empowering all women and girls (SDG 5), climate action (SDG 13), among others. The GPG is addressed within SDG 5. This is a multidimensional goal, as it is a goal for eliminating discrimination based on gender in all forms, particularly on issues such as ending child marriage, achieving gender quotas in politics and ending discriminatory laws. Equality in the workplace in the matters of wages is just one of the indicators of the goal.

Research has shown that the GPG has decreased substantially over time (Weichselbaumer & Winter-Ebmer, 2005), mostly due to better labor market involvement by women. Women have also improved their human capital which was a major factor in the decrease of this difference (Blau & Kahn, 2007). However, the authors also show that this convergence slowed down in the 1990s. While the GPG is unlikely to widen, it is also unlikely to disappear anytime soon, with the gender division of labor continuing to be one of the reasons why. Blau & Kahn (2017) have also reached the same conclusion, noting that human capital now accounts for little of the wage difference. Instead, the division of labor and shorter work hours are

significant factors, along with gender differences in occupation and industry. Moreover, the wage gap is closing more significantly at the top. Could this be because women hold fewer managerial positions? The authors do not eliminate the possibility of discrimination as well. A study in Germany over the course of 24 years has found that even controlling for education, work experience, occupational status or unemployment episodes, the GPG persists. Therefore, the authors conclude that further studies controlling for additional factors are necessary to address the GPG (Toczek et al., 2021). This dissertation will attempt to address other factors as well.

Besides using the GPG as an indicator of gender inequality in studies, authors have also used female relative wages within large firms (Jessen et al., 2019) as an alternative measure. This study examines the effectiveness of a German policy reform regarding the length of maternity leave. Other relevant studies include a paper by Arntz et al. (2022) on how hourly wage increases from working from home affect fathers and mothers differently. Their findings suggest that wage increases are limited to fathers unless mothers change employers, offering an interesting perspective on the GPG, as it only compares individuals with children. Employment rates are also used to compare inequalities, particularly in relation to the number of children each woman has. It is noteworthy how women's employment rates are affected influenced by parental leave policies and the "daddy quota" (Frodermann et al., 2023, p.1), which help explain how women's earnings are impacted by their exit from the labor market.

However, the GPG is the most popular method for estimating gender differences, as it is the most readily available indicator and the easiest to compare between men and women. It also serves as an indicator of policy effectiveness. Therefore, it will be used for estimating the model in this dissertation. Studies that use wages as a measure of inequality typically retrieved their data from country-specific databases. Since this dissertation focuses on several countries, the data for the GPG was sourced from Eurostat.

2.2. Factors affecting the GPG

The number of children a woman has can be an important reason to consider when talking about the GPG. This is often referred to as the motherhood penalty and it states that there is a negative correlation between the number of children a woman has and her wage. A study in Italy (Casarico & Lattanzio, 2023) has compared the wages of mothers to non-mothers and concluded the existence of the motherhood penalty, stating that it was higher for young, low wage mothers and for those who took longer leaves. Similar evidence has also been found in Denmark (Kleven et al., 2019), a difference of about 20% in long term earnings and showing also that child penalties are transmitted across generations in the environment around daughters. A study (Budig & England, 2001) claims that the motherhood penalty exists for a series of reasons: (1) mothers loose job experience, (2) there is a decrease in productivity at work, (3) there is a trade-off between higher wages and mother-friendly jobs and (4) discrimination. When controlling for experience they still found a difference of 5% in wages that the authors affirm that it might come from reasons (2) and (4). A laboratory experiment (Correll et al., 2007) was conducted with employers to find out if there is indeed a motherhood penalty. They found that mothers were indeed penalized in regard to perceived competency and starting salary, while the same wasn't found for fathers, as they actually benefited from having children. The Fertility Rate is contemplated in this model with the objective of corroborating the Motherhood Penalty. Several more papers in the literature show the existence of a motherhood penalty and as such, what is expected is a positive coefficient to be able to verify that there is in fact a 'Motherhood Penalty'.

A lot of countries have also introduced the paid parental leave and in Germany a bigger benefit during a shorter amount of time for women was set to increase their long-term earnings (Frodermann et al., 2023). The implementation of a paternity leave was also beneficial for mothers' re-entry into the labor market, therefore increasing

their earnings. A study (Del Rey et al., 2021) about parental leaves in France, Italy, Norway and Portugal found that the wage gap is reduced when maternity and paternity leave duration is similar. The length of the parental leave is also an important topic. In France, short full-time paid parental leave has almost no effect in wages for first time mothers, while for part-time leave takers there is a wage decrease (Joseph et al., 2013).

Another possible reason for the GPG is the representation of women in managerial positions. A study has found that the increase of women in managerial positions has a positive relation with the share of women in midlevel management positions (Kurtulus & Tomaskovic-Devey, 2012). Looking from another perspective, Holbrow states that the overrepresentation of women in subordinate jobs leads to a GPG that is 3 times greater (Holbrow, 2022). According to Kurtulus & Tomaskovic-Devey (2012), there is a positive influence in the presence of female leadership in companies within the U.S. as it also increases the share of females in lower-management positions. Also, Holbrow (2022) introduces a variable for this that measures the share of female board members and executives in the largest publicly listed companies with comparison to the total number of board members and executives. Board members can be non-executive directors, senior executives and employee representatives in each company. This variable is designed to assess whether the higher number of women in positions of power contributes to a reduction or increase in the GPG. However, a study conducted in Norway following their reform to introduce quotas on the boards of publicly limited liability companies found that it produced no trickle-down effect for the women that were not in the boards and no overall effect in the GPG (Bertrand et al., 2014).

Education has always been a spoken subject in the past for statistical discrimination. It is anticipated that there will be a negative correlation between Education and the GPG. As it was already shown by Kimmel & Amuedo-Dorantes (2005), the more studies women possess, the less of a difference there is in earnings.

Countries with longer life expectancies are usually related to being more developed and have better access to healthcare. However, as the more developed countries tend to have higher returns on earnings, because they have more specialized industries, the wage gap tends to decline slower at the top of wage distribution (Blau & Kahn, 2017). Therefore, it remains to be observed what kind of result the model will show.

This dissertation will also include a variable for income inequality based on the study findings from Fortin et al. (2017, p.13) that found that countries "with increasing inequality in top incomes and the under-representation of women among top earners contributes to slower progress in the gender pay ratio". This dissertation expects to find a positive relation between the GPG and income inequality.

Regarding the variable for Wealth Inequality, this was taken into consideration to observe whether wealth inequality can have an impact on the GPG. However, given that the model estimated in the following chapter will already contain a variable for income inequality, this is not an indicator that will be used. Nonetheless, it would be noteworthy to observe this result. If a country has more/less wealth inequality does this mean that said country has a higher/lower GPG? A study on Gender Wealth Inequality in Estonia by Meriküll et al. (2021) shows that income distribution favors men more than wealth distribution. "Women seem to accumulate wealth better than men do, given their level of income." The propensities to consume are very similar for men and women, implying that the saving patterns are not systematically different between genders." (Meriküll et al., 2021, p. 533). Also, a study in the United States by Angela Wang Lee (2022), has shown that the Gender Wealth Gap existence is perpetrated by gender differences in income, which makes sense as the stock variable (wealth) results from cumulative effects of the flow variable (income) in time.

Also, socioeconomic crises can have an impact in the GPG, as crises generally have a disproportionate negative effect on women, not only financially but in other dimensions as well. There is a decline in women's involvement in politics, education, economic resources, access to health, etc., which can also explain women's earnings in

the labor force (Blanton et al., 2018). We can find evidence of the relationship between the 2010 European Sovereign Debt Crisis, which followed the 2008 Global Financial Crisis, and the GPG supported by Anastasiou et al. (2015), where the authors found in Greece and the Balkan Countries that the austerity, which was part of the European Union policy to deal with the 2010 Sovereign Debt Crisis, negatively contributed for the closing of the GPG, where women faced higher levels of unemployment and when employed, worked for less money. The COVID-19 pandemic also had a negative effect on the GPG, with "women's employment rate falls proportionately more than men's" (Bluedorn et al., 2023, p.7). Additionally, after the pandemic, working from home became more popular within firms, and as work became more flexible, mothers taking advantage of it. In the United States, this was found to be associated with substantial wage penalty that is more likely attributed to women's choices or assignments of less promotable job tasks when working from home (Kouki, 2023). These were years where working from home (WFH) was widely adopted. However, previous studies have shown that differences in monthly earnings tend to be lower after WFH was adopted (Arntz et al., 2022).

A new set of evidence suggests that psychological characteristics may have a part to play in the GPG, namely in attitudes towards risks and competition. The authors imply that this may be a reason why women choose lower paying occupations (Bertrand, 2011). However, this is a variable that would be hard to measure and obtain data for. Another study by Hillary Lips, in 2013, criticizes the human capital theory, arguing that it often blames investments in human capital for the disparity. Lips (2013) contends that these justifications, meanwhile, ignore structural discrimination and cultural norms that have an impact on women's career decisions that often are not present in studies that reference causes and justifications for the GPG.

2.3. Method

When studying the GPG, several methods have been conducted, from meta-analysis to determine a better understanding of the evolution (Weichselbaumer & Winter-Ebmer, 2005), experiments (Oesch et al., 2017), surveys and regression models (England et al., 2016). We will focus more on the papers that estimated regression models as it is the method preferred in this dissertation.

The data the Eurostat provides for the GPG is in unadjusted form. This means it does not account for educational levels, the number of children a woman has, nor other factors that can be related with discrimination in the workplace that affect wages. For this, this dissertation will create a regression model that accounts for factors such as these. Many other papers have provided similar adjustments to the GPG by performing regression models, such as England et al. (2016) that found through unconditional quantile regression models with person-fixed effects, that highly skill, highly paid women experienced the highest motherhood penalties, due to the fact that as they are the highest paid among women, even the slightest hiatus from their professional careers accounts for big penalties. Another study conducted in the United States by Kurtulus & Tomaskovic-Devey (2012), that was mentioned above, regarding if having women on managerial positions helped to reduce barriers to women's advancement in the workplace, was also conducted through a regression controlling for firm size, workforce composition, and firm and year fixed effects.

Overall, a regression model is the most direct method of conducting a study regarding the causes of the GPG, more direct than conducting surveys, as individuals can provide more biased replies. Also, regression models allow for an analysis of a broader range of data, when compared to surveys and experiments.

This dissertation will also perform a filter on the data to separate the long term tends from short-term fluctuations. As the GPG is more relevant to be analyzed from a long-term perspective, including short term fluctuations on the model from cyclical variations can hinder the results from the model. Hodrick and Prescott (1997) proposed a method for separating these two components: the slowly varying trend

component and the volatile cyclical component. This method will be further discussed in chapter 3 of this dissertation.

This dissertation will also include an estimation of the GKC. Simon Kuznets (1955) was one of the pioneering economists to explore income inequality in the US, introducing the concept of an inverted U-shaped curve that links economic growth and income inequality. Kuznets (1955) argued that in the early stages of development, a country experiences both economic growth and increasing income inequality. This is because industrialization drives migration from rural to urban areas, as farmers seek higher wages. However, once a country reaches a certain average income level, income inequality begins to decrease. This reduction is attributed to the emergence of democratization and the establishment of a welfare state.

This hypothesis did not come without its critics. Piketty (2014) criticized Kuznet's study on the US, noting that it was based on data from 1913 to 1948. These years were marked by significant economic shocks, including both world wars and the great depression, which could have influenced the results. Additionally, Piketty (2014) demonstrates that income inequality has been increasing in the US and other wealthy countries since the late 1970s. This trend suggests that the inverted U-shaped curve might not accurately reflect the reality or complexity of income inequality. Instead, Piketty (2014) presents an S-shaped curve for the US, based on data from 1910 to 2010.

As an extension of the Kuznets Curve, the Environmental Kuznets Curve (EKC) emerged to illustrate the relationship between environmental degradation and economic growth (Grossman & Krueger, 1991; Panayotou, 1993). Like the original Kuznets Curve, the EKC describes that as the economy growths, so does environmental degradation, which is a direct result of industrialization. After an average income is reached, much like the normal Curve, environmental degradation begins decreasing, as governments introduce policies to mitigate the environmental damage. Grossman and Krueger (1995) found evidence of this Curve and the turning point is a per capita income of 8.000 US dollars.

Given the adaptation of the EKC, is there also a connection between economic growth and gender inequality? We propose to adapt the Kuznets Curve to estimate a GKC and derive conclusions from there.

A study by Eastin and Prakash (2013) showed that it is in fact possible to construct a GKC. The authors show a contrast between feminist scholars that argue that development strategies benefit patriarchal institutions, thus exacerbating gender inequality and neoliberals that suggest that economic growth does the opposite, that is, lowers gender inequality, by claiming that the relationship between economic development and gender equality is non-linear. In fact, Eastin & Prakash (2013) defend that this relationship is represented by an S-shaped curve.

In the first stage of economic development, women's opportunities in the labor market might be limited, increasing gender inequality as the economy develops. After a certain level of income per capita is reached, outside employment should increase women's opportunities, thus turning the curve into a U-shaped one. After the gains for gender equality slow down due to societal norms that seek to perpetuate the status quo, inequality starts rising again, calling for political intervention. The authors found that female parliamentary participation, female labor force participation and the Gender Development Index (GDI) and the Gender Equality Measure (GEM) all exhibits am S-shaped Curve.

Despite our efforts, we were unable to find any papers specifically addressing the relationship between the GPG and economic growth to determine the shape of a potential GKC. Nevertheless, this dissertation will attempt to address this additional question.

3. Empirical Model

3.1 Regression Model

To estimate the impact of external factors in the *GPG*, we considered a simple linear regression model.

Given that this research focuses on the long-term causes and impacts of the GPG, we applied the Hodrick & Prescott (HP) filter (Hodrick & Prescott, 1997) to decompose the data into additive trend and cyclical components. The HP filter minimizes the following equation:

$$\min_{\{\tau_t\}}_{t=-1} \left\{ \sum_{t=1}^{T} (y_t - \tau_t)^2 + \lambda \sum_{t=1}^{T} [(\tau_t - \tau_{t-1}) - (\tau_{t-1} - \tau_{t-2})]^2 \right\} \quad (1)$$

- y_t is the observed data in year t, which represents each variable that will be employed in the model.
- τ_t is the trend component in year t, which the HP filter aims to extract from the observed data.
- The smoothing parameter, λ , was set at 100, which is a common practice when working with annual data.

Since the trend variables obtained were stationary in levels, as seen in Appendix 3, they were used in the regression model without requiring any additional data transformation strategies.

The model used to estimate the results was a simple linear regression model. The regression equation estimated in Stata is as follows:

$$GPG_{it} = \beta_0 + \beta_1 GNIpc_{it} + \beta_2 GNIpc\_sq_{it} + \beta_3 Inequality_{it} + \beta_4 FertR_{it} + \beta_5 Edu_{it} + \beta_6 LE_{it} + \beta_7 Crisis2012_t + \beta_8 COVID\_19_t + \sum_{i=1} \mu_i \mathrm{D}_i + \varepsilon_{it} \quad (2)$$

- GPG_{it}, is the Gender Pay Gap in a given country in a given year;
- $GNIpc_{it}$ is the gross national income per capita at constant prices in a given country in a given year;
- $GNIpc\_sq_{it}$ is the square number of the gross national income at constant prices in a given country in a given year;
- $Inequality_{it}$ refers to the top 10% income inequality percentile within a given country in a given year;
- $FertR_{it}$ is average number of live births a woman is expected to have during her reproductive years, i.e., the annual fertility rate, in a given country i in a given year t;
- Edu_{it} is the percentage of women aged 25-34 who have completed post-secondary studies as a comparison to total population in a given country in a given year;
- LE_{it} represents the average number of years a person of a specific age and sex is expected to live, based on current mortality rates, in a given country i in a given year t;
- $Crisis2012_t$ is a dummy variable that captures the permanent effects of the 2010 Sovereign Debt Crisis within Europe, following the 2008 Global Financial Crisis. It takes the value of 1 for observation years from 2012 and onwards, and 0 otherwise;
- $COVID\_19_t$ is a dummy variable that captures the permanent effects of the COVID-19 Crisis within Europe. It takes the value 1 for observation years from 2020 and onwards, and 0 otherwise;
- $\sum_{i=1}\mu_i \mathrm{D}_i$ represents the dummy variables by country.
- ε_{it} is the error term of the regression.

3.2 Data

The data contemplates observations for the 27 countries in the European Union (EU-27), from 2007 to 2022. Most of the data was sourced from Eurostat, with a few exceptions that will be presented below.

The GPG was calculated by the Eurostat and it is the difference between average gross hourly earnings of male paid employees and of female paid employees as a percentage of average gross hourly earnings of male paid employees. It is said to be in its "unadjusted form", as it is not adjusted for differences that consider education, professional experience, etc. It is given by equation (3):

$$GPG_{it} = \frac{Average\ Gross\ Earnings\ Males_{it} - Average\ Gross\ Earnings\ Females_{it}}{Average\ Gross\ Earnings\ Males_{it}} \qquad (3)$$

The Fertility Rate is also from Eurostat and is contemplated in this model with the objective of corroborating the Motherhood Penalty. This is a variable of interest as the Motherhood Penalty is a prominent issue, according to academic papers in the current landscape.

Regarding the variable for Income Inequality, the data is from the World Inequality database. Even though gender-based income inequality is already under examination under the model explained in this paper, the inclusion of income inequality introduces a new explanatory factor being taken into consideration. This measures the share of income the top 10% of the richest population holds in comparison with total population. A 0,5 income inequality score indicates that the top 10% of the wealthiest population hold 50% of the total income generated in a given country in a given year. It is expected that this variable will show a positive correlation with the GPG. This variable was multiplied by 100 in order to uniformize the observation to be a number between 0 and 100, similar to the GPG.

Table 1 provides the observations number, the mean values, and the standard deviation for the variables, which are the GPG, the Fertility Rate and the Gross National Income (GNI) per capita, the Education, the Life Expectancy and the Income Inequality, by country and total, keeping in mind that the GPG and GNI per capita are

essential for constructing the GKC, and the fertility rate is highly relevant in the literature.

Country	Obs	GPG		GNIpc		FertR	
		Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Austria	16	21,8438	2,2567	44504,3700	413,6735	1,4500	0,0256
Belgium	16	7,3438	1,9628	41513,9600	1025,3390	1,7131	0,1087
Bulgaria	16	13,6000	0,5190	7042,5260	899,6884	1,5538	0,0219
Croatia	16	11,7088	0,4921	12852,1700	1327,2030	1,4900	0,0234
Cyprus	16	14,0375	3,6236	25302,2000	835,6507	1,3725	0,0396
Czechia	16	21,3063	2,7086	16791,7700	1440,0050	1,5856	0,1062
Denmark	16	15,6250	1,2760	55414,0200	3787,1820	1,7444	0,0669
Estonia	16	25,6688	3,0590	17248,8300	2674,2230	1,6100	0,0476
Finland	16	18,2250	1,6222	44710,2500	1003,0580	1,6325	0,1958
France	16	15,7625	0,4181	37370,7200	901,7440	1,9369	0,0735
Germany	16	21,0125	1,7906	41476,6700	2421,7450	1,4713	0,0700
Greece	16	14,6713	1,9921	19132,4400	1421,1940	1,3819	0,0385
Hungary	16	16,7750	0,4238	12400,9500	1475,4340	1,4363	0,1154
Ireland	16	12,7000	1,3516	47227,9900	10229,5400	1,8656	0,1536
Italy	16	5,3500	0,4168	31560,7500	580,0858	1,3556	0,0690
Latvia	16	16,8125	2,3159	14004,7900	1870,3330	1,5506	0,0481
Lithuania	16	14,2750	1,9774	13836,4900	2166,4510	1,5344	0,0667
Luxembourg	16	4,8750	3,6929	73677,3400	1084,9300	1,4763	0,1048
Malta	16	10,0125	1,3195	22451,0400	2805,6490	1,3050	0,1119
Netherlands	16	16,3938	2,0302	45405,8200	1707,8440	1,6681	0,0839
Poland	16	7,5250	1,3645	12258,0600	2040,4790	1,3675	0,0102
Portugal	16	12,0500	0,8963	19321,6200	955,2039	1,3519	0,0310
Romania	16	5,7750	2,5673	9189,5230	1438,9060	1,6406	0,0980
Slovakia	16	19,5438	1,5890	15869,0400	1175,5030	1,4550	0,0928
Slovenia	16	5,4500	1,6500	21530,5400	1320,0650	1,5650	0,0415
Spain	16	14,1313	3,2823	26063,2400	523,8843	1,3025	0,0733
Sweden	16	13,9063	2,0990	52117,1800	2541,5340	1,8194	0,1122
Total	432	13,9400	5,7570	18899,0481	17009,4700	1,5421	0,1874

Table 1: Observations number, the mean values and the standard deviation for all variables, by country and total.
Source: Eurostat, World Bank, WID

Country	Obs	Edu		IncomeIne		Life	
		Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
Austria	16	34,9	10,90726	33,89125	0,442298	81,21875	0,391629
Belgium	16	51,60625	3,36954	31,64437	0,357273	81	0,658882
Bulgaria	16	37,58125	2,640931	39,555	4,010161	74,1	0,382983

Croatia	16	36,2875	7,741577	33,57937	0,23719	77,35625	0,642103
Cyprus	16	61,53125	5,534823	35,14687	1,211374	81,70625	0,616661
Czechia	16	33,7375	8,268823	28,60125	0,454716	78,28125	0,535301
Denmark	16	50,25	5,628454	32,82437	2,436801	80,4	0,998796
Estonia	16	49,8625	3,206245	37,53937	0,508201	77,08125	1,476558
Finland	16	48,66875	0,245696	32,04625	0,324229	81,08125	0,738684
France	16	49,175	2,75764	33,56625	0,474652	82,26875	0,420502
Germany	16	31,29375	4,384883	37,4425	0,501468	80,74375	0,285735
Greece	16	43,4125	7,538913	33,89687	0,190334	80,95	0,41143
Hungary	16	34,88125	3,310447	33,27812	0,549421	75,36875	0,645101
Ireland	16	58,85625	3,771248	35,6425	2,029311	81,24117	0,654902
Italy	16	29,825	4,302219	36,22	1,404869	82,65	0,482281
Latvia	16	49,79375	6,745178	35,24562	1,190377	74,025	1,065774
Lithuania	16	60,29375	7,106227	38,60937	1,625767	74,26875	1,386896
Luxembourg	16	54,39375	7,889339	35,81312	2,335551	81,79375	0,891823
Malta	16	36,65625	8,504736	32,26375	1,679705	81,7	0,946479
Netherlands	16	49,075	6,697504	31,25562	0,466782	81,3875	0,412896
Poland	16	49,18125	5,084322	37,20875	0,283623	76,89375	0,567575
Portugal	16	39,36875	7,873733	36,8525	0,978597	80,875	0,757954
Romania	16	25,6875	3,112258	39,76375	3,30744	74,4625	0,494384
Slovakia	16	37,36875	10,28144	28,895	1,546854	76,35625	0,706961
Slovenia	16	49,6375	7,369462	29,17187	0,949999	80,4875	0,808888
Spain	16	48,61875	3,448629	34,3025	0,695141	82,8	0,646277
Sweden	16	53,05625	4,376228	30,85937	0,757554	82,1875	0,611054
Total	**432**	**44,6296**	**11,3116**	**34,2635**	**3,3769**	**79,3587**	**3,0060**

Table 1 (continuation): Observations number, the mean values and the standard deviation for all variables, by country and total.
Source: Eurostat, World Bank, WID

Table 2 provides the observations number, the mean values and the standard deviations by year (2007 to 2022) and total.

Year	Obs	PayGap		GNIpc		FertR	
		Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
2007	27	15,9855	6,4571	27139,5700	17232,2400	1,5734	0,2346
2008	27	15,6894	6,2737	27183,5900	17091,5000	1,5707	0,2258
2009	27	15,4002	6,1201	27239,7800	16969,6800	1,5676	0,2177
2010	27	15,1263	5,9922	27330,2300	16884,4600	1,5640	0,2099
2011	27	14,8697	5,8856	27468,0900	16836,7200	1,5601	0,2021
2012	27	14,6240	5,7956	27662,6000	16823,4600	1,5560	0,1945
2013	27	14,3804	5,7166	27919,7300	16839,8600	1,5521	0,1869
2014	27	14,1333	5,6449	28240,9900	16885,8700	1,5483	0,1797
2015	27	13,8771	5,5800	28620,8500	16961,5300	1,5444	0,1733

2016	27	13,6067	5,5226	29049,0900	17068,7600	1,5400	0,1682
2017	27	13,3210	5,4726	29512,3900	17204,7400	1,5347	0,1648
2018	27	13,0219	5,4285	29996,6600	17365,3200	1,5283	0,1636
2019	27	12,7148	5,3907	30492,2400	17549,3400	1,5210	0,1645
2020	27	12,4042	5,3593	30995,4500	17757,1300	1,5129	0,1676
2021	27	12,0956	5,3359	31508,7400	17986,2400	1,5043	0,1728
2022	27	11,7900	5,3256	32024,7700	18229,8800	1,4952	0,1801
Total	432	13,9400	5,7570	18899,0481	17009,4700	1,5421	0,1874

Table 2: Observations number, the mean values and the standard deviation for all variables, by year and total.
Source: Eurostat, World Bank, WID

Year	Obs	Edu		IncomeIne		Life	
		Mean	Std. dev.	Mean	Std. dev.	Mean	Std. dev.
2007	27	35,11621	11,3168	34,12338	3,831597	77,98022	3,219383
2008	27	36,53459	10,98519	34,08991	3,635201	78,23857	3,153048
2009	27	37,94788	10,68878	34,06408	3,469439	78,4939	3,090272
2010	27	39,34617	10,42779	34,05428	3,339008	78,74179	3,033107
2011	27	40,71873	10,20248	34,06322	3,249346	78,97708	2,983063
2012	27	42,05503	10,01159	34,09034	3,195075	79,19464	2,941917
2013	27	43,34263	9,855675	34,13142	3,166462	79,39033	2,910862
2014	27	44,57097	9,738414	34,17984	3,158046	79,55948	2,890049
2015	27	45,73414	9,660875	34,23067	3,16922	79,69894	2,879276
2016	27	46,8346	9,621871	34,28259	3,204426	79,80827	2,878806
2017	27	47,88142	9,620384	34,33684	3,263853	79,8869	2,888592
2018	27	48,88663	9,65771	34,39342	3,346109	79,9365	2,908483
2019	27	49,86086	9,735084	34,45258	3,452659	79,96024	2,937448
2020	27	50,81274	9,849722	34,51345	3,58606	79,96373	2,973403
2021	27	51,75054	9,996688	34,57468	3,750015	79,95778	3,012516
2022	27	52,68093	10,17205	34,63597	3,94628	79,95086	3,050294
Total	**432**	**44,6296**	**11,3116**	**34,2635**	**3,3769**	**79,3587**	**3,0060**

Table 2 (continuation): Observations number, the mean values and the standard deviation for all variables, by year and total.

Source: Eurostat, World Bank, WID

A few observations were missing from the databases used. In these cases, the missing observations were replaced by the average of all available observations for the given variable to avoid losing any data in the regression estimation.

3.3 Results and Discussion

Table 3 displays the coefficients of the estimated regression with robust standard errors[1]:

GPG_{it}	Coefficient
GNIpc	0,0003556***
GNIpc2	-0,00000000416***
Inequality	0,4011943***
FertR	3,977555***
Edu	-0,060279***
Life	-0,51621***
Crisis_2012	-0,7483252***
Covid19	-1,256143***
$D_{Austria}$	8,374887***
$D_{Belgium}$	-5,379739***
$D_{Bulgaria}$	-0,7792643
D_{Cyprus}	3,482374***
$D_{Czechia}$	10,62684***
$D_{Denmark}$	2,627728*
$D_{Estonia}$	11,58104***
$D_{Finland}$	5,535902***
D_{France}	1,998706*
$D_{Germany}$	5,58737***
D_{Greece}	4,155938***
$D_{Hungary}$	4,407142***
$D_{Ireland}$	-1,190337
D_{Italy}	-7,738532***
D_{Latvia}	3,01672***
$D_{Luxembourg}$	-4,021045***
$D_{Netherlands}$	4,083667***
D_{Poland}	-4,453244***
$D_{Romania}$	-10,17684***
$D_{Slovakia}$	8,691228***
$D_{Slovenia}$	-4,209577***
D_{Spain}	3,869967***
D_{Sweden}	2,157308
_cons	31,30193**

[1] The variable CEO was not considered in the model as it demonstrated a high p-value when it was included, therefore as it was detrimental to the model it was excluded, as well as other dummy variables for countries, as their p-value were too high.

R-Squared	0,9380
Number of observations	432

***p<0,01 **p<0,05 *p<0,1

Table 3: Results of the estimated regression

Source: Own Work

We discuss the coefficients for GNI per capita and GNI per capita squared at the end, as these are the coefficients that will be used to derive the GKC.

Taking a closer look at the results in Table 3, starting with the variable for Income Inequality. As was explained in the literature review, a country with a higher income inequality tends to have higher discrepancies between genders, as they are connected to one another. This is consistent with the results from the linear regression, as an increase of one unit in the top 10% share of income results in an increase in the GPG of 0,4011943 units. Therefore, higher income inequality leads to a higher GPG.

Continuing with the variable for the fertility rate, this one is significant and has a positive relation with the GPG, as expected. The results mean that an increase in the Fertility Rate by 1 unit, will mean an increase in the GPG by 3,977555 units. This is consistent with the literature mentioned in the second chapter, as well as other papers regarding the motherhood penalty, as the higher the number of children, the bigger the wage penalty. In Figure 1, it is possible to see that the observations for the Fertility Rate between 2007 and 2022 in the European Union, varied between slightly above 1 child and slightly above 2 children, which is not a high variation. Given this, since we are only observing the component for long-term trends with the HP filter and there is a clear decline in the fertility rate over the years, which contributes to decrease the GPG due to the nature of the coefficient.

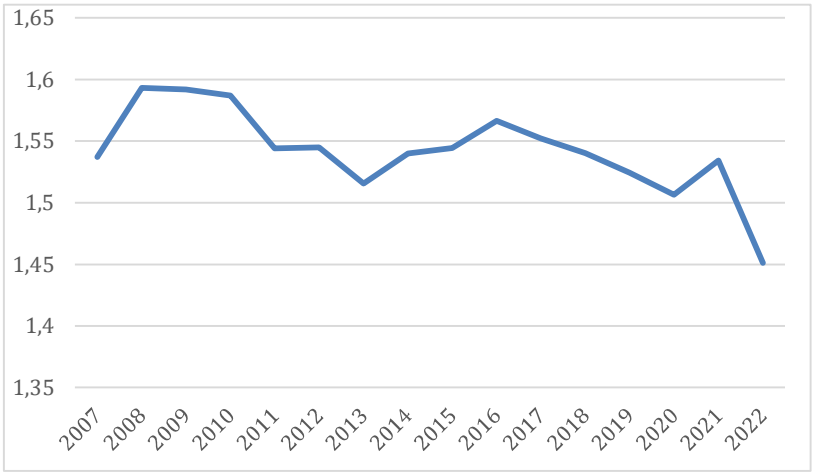

Figure 1: Fertility Rate within the EU from 2007 until 2022

Source: Eurostat

The education variable has a negative relationship with the GPG and is significant. This means that the higher the Education among women, the lower the GPG. In Figure 2, it can be observed that women are more highly educated than men and pursue higher education more often. This fact has a negative impact on the GPG, as an increase in education by one unit will result in a decrease of the GPG by 0,060279 units.

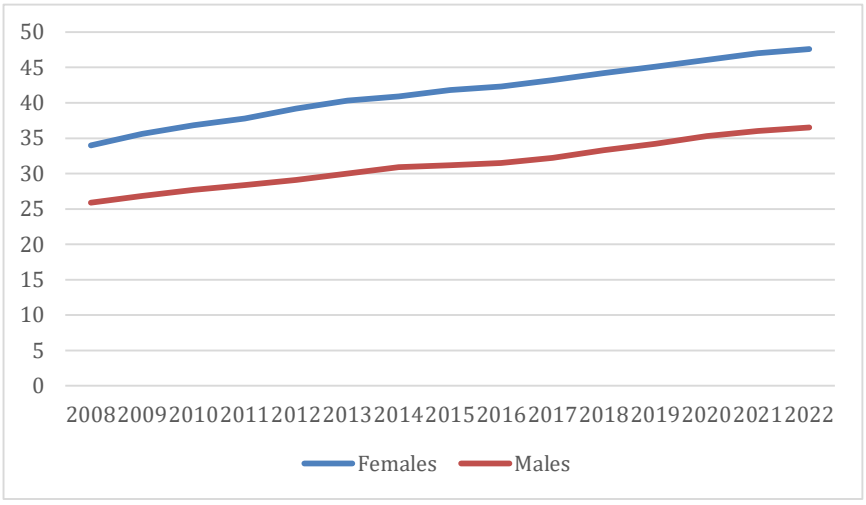

Figure 2: Tertiary Education levels between Females and Males in the EU (27 countries) between 2008 and 2022

Source: Eurostat

Now, continuing with the variable for the life expectancy indicator, the coefficient for the variation in the life expectancy has a negative relation with the variation of the GPG, as seen in Table 3 above. There seems to be an indirect relationship between life expectancy and the GPG. Here, if the life expectancy can be analyzed has an indicator for the development of a country or access to healthcare, the result in the model is reasonably aligned with the expectations that better access to healthcare indicates a lower GPG. This can be attributed to the fact that healthcare is an important part of any society, but especially to women as it can lead to fewer time off work in case of sickness or just in case of preventive health, not to mention they need more access to reproductive health than men.

Additionally, from Figure 3, it can be observed that if the life expectancy is broken down between sexes in an average of the 27 countries within the EU, the female population within the European Union has consistently a higher life expectancy than the male population, which in turn means that healthcare is especially important to women, given that the last years of life are when people most need it.

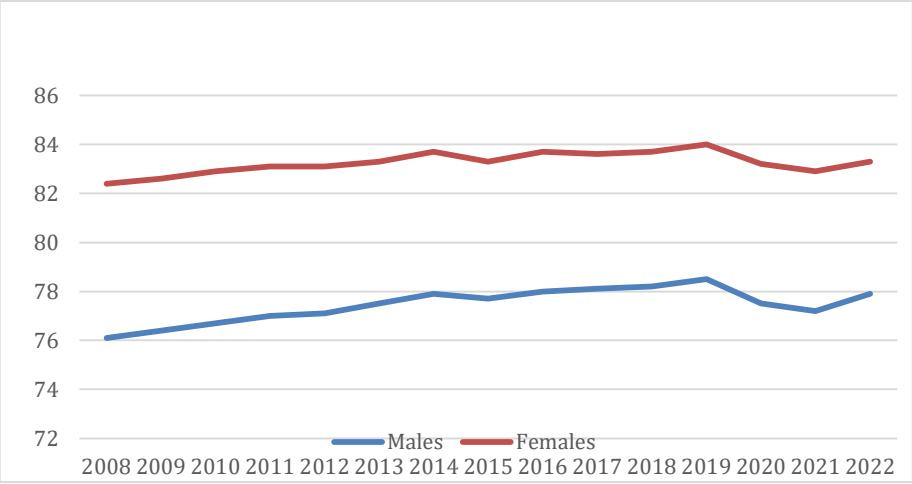

Figure 3: Life Expectancy by sex as an average of the EU 27 countries over the years of 2008 until 2022.

Source: Eurostat

In regard to the temporal dummy variables, the coefficient for the 2012 Sovereign Debt Crisis is significant to a level of 10% with a negative relationship, meaning that the years following the 2010 European Sovereign Debt Crisis had a positive permanent impact on gender parity pay. This is contrary to what the literature on crisis say, for example, Anastasiou et al. (2015), found that in Greece and the Balkan Countries that the austerity, which was part of the European Union policy to deal with the Sovereign Debt Crisis, negatively contributed for the closing of the GPG, where women faced higher levels of unemployment and when employed, worked for less money. However, with this dummy variable, we are capturing the permanent effects of this crisis, not the cyclical effects.

The COVID-19 pandemic had a negative effect on the GPG, and holds a 1% significance level, meaning that the year of 2020, 2021 and 2022 decrease the GPG by 1,256143 units, keeping all the other variables constant. After the pandemic, working from home became more popular within firms, and as work became more flexible, mothers took advantage of it. As explained in the chapter above, this flexibility can be one of the reasons why COVID-19 contributed to a diminishing effect of the GPG.

Pertaining the country dummy variables, the intersection considered was Portugal and Croatia, Lithuania and Malta, as their coefficients held no significance within the model and. The countries of Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Netherlands, Slovakia and Spain all have significance within the model, and all seem to exhibit a higher GPG compared to the countries not represented in the model. On the contrary, Belgium, Italy, Luxembourg, Poland, Romania and Slovenia all exhibit a lower GPG compared to the countries not represented in the model. The dummy variables for Bulgaria, Denmark, France, Ireland, Sweden are not significant within the model, meaning these countries cannot be distinguished from Portugal, Croatia, Lithuania and Malta.

Lastly, the variable GNI per capita has a coefficient of 0,0003556, which means that an increase in GNI per capita by one unit, will mean an increase in the GPG by 0,0003556 units.

The relationship between the estimated GPG and GNI per capita is non-linear. By considering only the coefficients for GNI per capita and its square, it is possible to illustrate the shape of the GKC. This can be done relating the resulting estimated GPG for the average EU 27 countries with the average EU 27 GNI per capita for each year, using the following equation:

$$\widehat{GPG_{2t}} = 0{,}0003556 GNIpc_t - 0{,}00000000416 GNIpc\_sq_t \quad (4)$$

This GKC is represented in Figure 4 below:

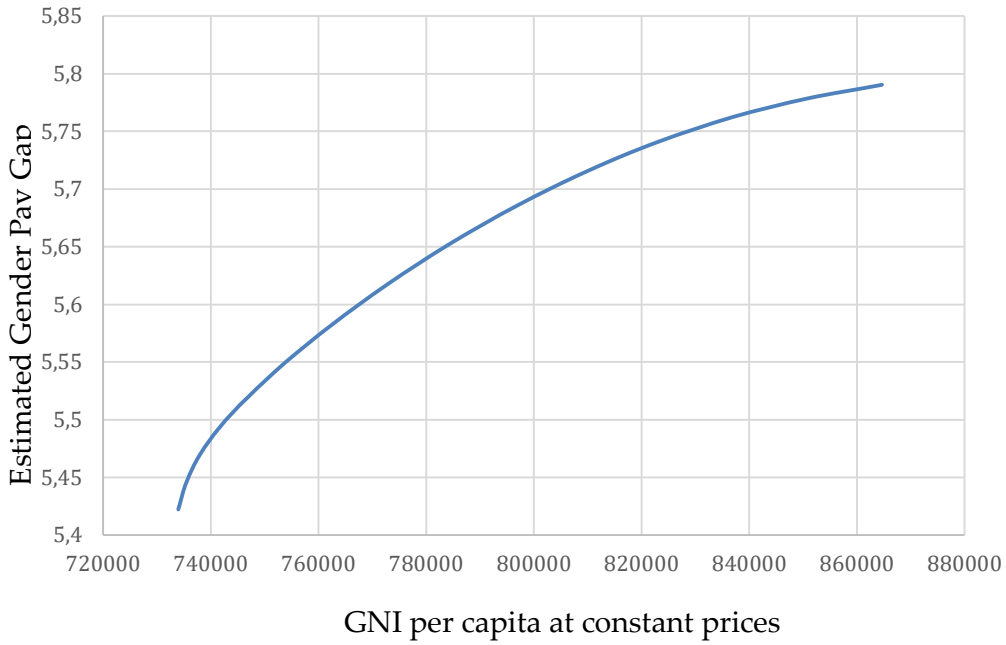

Figure 4: GKC for the average of the 27 EU countries (2007-2022)

Source: Own Work

The GKC is increasing and has not yet attained its peak but is approaching it. It should be in its first phase, after which it will start to decrease, forming an inverted U-shape. However, given what is known about the traditional Kuznets Curve, it is also possible that the curve has already attained its U-shaped peak and is now in the third phase, forming an S-shaped curve. Since GPG and Income Inequality are connected, their behaviors are similar, making it plausible that the curve is indeed in its third

phase. Nonetheless, the consulted literature does not reveal any inflexion point for the traditional Kuznets Curve in the EU, making it difficult to assert with certainty the phase of the EU GKC derived.

4. Conclusion

The objective of this dissertation was twofold: first, to explore the factors influencing the GPG in the 27 European Union countries (EU-27) over the period 2007-2022; second, to derive a GKC for the average of the 27 European Union countries over the same period. The factors influencing the GPG include Gross National Income per capita at constant prices, fertility rate, education, life expectancy, and income inequality, among others. The methodology employed was econometric regression, specifically linear regression with robust error terms. To run the regression, the trend of the data was previously extracted using the Hodrick-Prescott (HP) filter.

The results show a coefficient of 0.0003556 for GNI per capita and -4.16e-09 for the square of this variable. Ceteris paribus, the interaction between GNI per capita and the GPG indicates a GKC in either the first or third phase. These phases are characterized by an increasing GPG as GNI per capita rises, for the average EU-27 countries during the period studied.

Regarding other factors affecting the GPG, which served as control variables in the estimated regression, the results show a positive coefficient for the fertility rate, corroborating the Motherhood Penalty Theory. Income Inequality also has a positive relation to the GPG. Conversely, higher levels of Education and Life Expectancy are associated with a lower GPG. This is understandable, as more educated women tend to have better access to healthcare and higher wages.

The coefficients on the time dummy variables, Crisis2012 and COVID-19, indicate that the long-term effects of theses crises worked to decrease the GPG. The country dummy variables show varied results. Using Portugal as the reference country in the regression intercept, Austria, Cyprus, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Latvia, Netherlands, Slovakia and Spain have positive and significant coefficients. Conversely, Belgium, Italy, Luxembourg, Poland, Romania, and Slovenia have negative and significant coefficients. The coefficients on dummies for the other countries were not significant.

This research does not take into consideration specifically cultural and societal factors that play a role in the gender gap, such as misogyny and gender roles. These factors are not limited to wage difference, but to an intersectionality of aspects in the everyday lives of men and women that are difficult to quantify but crucial to the understanding of gender differences. Country dummy variables captured the different effects between countries and should capture this, but it was not possible to find a relevant variable for this purpose. Moreover, the limitation of data complicated the analysis of the model, as no data from the twentieth century on the GPG was available on the Eurostat, thus it would be difficult to understand the behavior of the GPG in years prior, especially in the years of rapid decline. Other databases may offer more availability of years, but since the Eurostat is such a credible source, it was preferable to employ. Another limitation is the fact that the model does not take into consideration different industries of work. For example, the GPG may be different between people who work in the financial sector than people who work in the agricultural sector and it might be appealing to analyze industries where the GPG is at its highest.

This study has shown that government intervention is key to decreasing the GPG. Women will continue to bear children; therefore better maternity leaves policies are necessary to avoid a penalty when taking a leave from work. Also, as is shown with the Kuznets Curve, the GPG is increasing as the GNI per capita is increasing, keeping everything else constant. This is consistent with Piketty (2014), where he also found that inequality was rising along with the income per capita. This is an intersectional obstacle that will only improve with government intervention, otherwise evidence points to it worsening over time.

Future research also should focus on the effectiveness of current active policies, such as governments maternity leave policies and government grants, to tackle the GPG for the purpose of calculating its influence in the GPG and obtain evidence on its impact.

Statement: During the preparation of this work the author(s) used ChatGPT in order to search for references and assistance in Stata commands. After using this tool/service, the author(s) reviewed and edited the content as needed and take(s) full responsibility for the content of the publication.

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Appendix

Table of table Appendix:

1. Data in Levels

Table 1A: Database in Levels[2]

Country	Year	PayGap	GNIpc	Inequality	FertR	Edu	Life
Austria	2007	25,5	44408	0,353	1,38	18,9	80,3
Austria	2008	25,1	45070,3	0,3553	1,42	20	80,6
Austria	2009	24,3	43184	0,3424	1,39	22,5	80,5
Austria	2010	24	43834,2	0,3472	1,44	22,6	80,7
Austria	2011	23,5	44322,8	0,3386	1,43	22,4	81,1
Austria	2012	22,9	44125,2	0,3189	1,44	24,3	81,1
Austria	2013	22,3	43907,2	0,3212	1,44	26,6	81,3
Austria	2014	22,2	43986	0,3408	1,46	41,1	81,6
Austria	2015	21,8	43760,7	0,3331	1,49	41,5	81,3
Austria	2016	20,8	44772,1	0,3417	1,53	43,2	81,8
Austria	2017	20,7	44774,2	0,3338	1,52	44,4	81,7
Austria	2018	20,4	45535,7	0,333	1,47	44,9	81,8
Austria	2019	19,9	46119,5	0,3288	1,46	45,9	82
Austria	2020	18,9	43640,1	0,3514	1,44	45,7	81,3
Austria	2021	18,8	45326,9	0,3415	1,48	46,8	81,3

[2] GNIpc_sq was not added here, since first the HP filter was applied and only then did we apply the square of the data

Austria	2022	18,4	45302,9	0,3419	1,41	47,6	81,1
Belgium	2007	10,1	41324,8	0,3312	1,82	47	79,9
Belgium	2008	10,2	40749,8	0,321	1,85	48,5	79,8
Belgium	2009	10,1	40184,9	0,3113	1,84	48,7	80,2
Belgium	2010	10,2	40329,3	0,3136	1,86	49,4	80,3
Belgium	2013	7,5	40553,9	0,3161	1,76	49,4	80,7
Belgium	2014	6,6	40967,9	0,318	1,74	51,4	81,4
Belgium	2015	6,4	41588,7	0,3181	1,7	49,2	81,1
Belgium	2016	6	41988,7	0,3211	1,68	50,8	81,5
Belgium	2017	5,8	42317,5	0,3177	1,65	51,4	81,6
Belgium	2018	5,8	42593,1	0,3274	1,62	54,2	81,7
Belgium	2019	5,8	43609,5	0,3332	1,6	54,6	82,1
Belgium	2020	5,3	41346,4	0,3194	1,55	56,2	80,8
Belgium	2021	5	43585,5	0,2961	1,6	57,8	81,9
Belgium	2022	5	43210,4	0,2954	1,53	58,6	81,8
Bulgaria	2007	12,1	5632,17	0,3431	1,49	32	73
Bulgaria	2008	12,3	6176,9	0,3353	1,56	33	73,3
Bulgaria	2009	13,3	6097,51	0,3546	1,66	35,2	73,7
Bulgaria	2010	13	6302,54	0,353	1,57	35,9	73,8
Bulgaria	2011	13,2	6404,09	0,3555	1,51	34,8	74,2
Bulgaria	2012	15,1	6611,84	0,3753	1,5	34	74,4
Bulgaria	2013	14,1	6554,68	0,3605	1,48	37,7	74,9
Bulgaria	2014	14,2	6744,86	0,3795	1,53	39,3	74,5
Bulgaria	2015	15,5	6860,72	0,3908	1,53	39,6	74,7
Bulgaria	2016	14,6	7114,83	0,4323	1,54	39,8	74,9
Bulgaria	2017	14,3	7430,93	0,4495	1,56	40,4	74,8

Bulgaria	2018	13,9	7600,66	0,4494	1,56	41,1	75
Bulgaria	2019	14,1	7994,8	0,4267	1,58	39,4	75,1
Bulgaria	2020	12,7	7665,98	0,4394	1,56	39,1	73,6
Bulgaria	2021	12,2	8271,6	0,4421	1,58	39,5	71,4
Bulgaria	2022	13	9216,31	0,4418	1,65	40,5	74,3
Croatia	2007	13,94[3]	12430,5	0,3375	1,48	22,7	75,8
Croatia	2008	13,94*	12554,1	0,3353	1,55	25,3	76
Croatia	2009	13,94*	11606,3	0,3199	1,58	26,4	76,3
Croatia	2010	5,7	11524,6	0,329	1,55	30,8	76,7
Croatia	2011	13,94*	11582,5	0,3368	1,48	30,2	77,2
Croatia	2012	13,94*	11341,3	0,3348	1,51	29,4	77,3
Croatia	2013	7,7	11508,3	0,3361	1,46	34,2	77,8
Croatia	2014	8,7	11567	0,3415	1,46	37,7	77,9
Croatia	2015	13,94*	12200,7	0,3424	1,4	38,3	77,5
Croatia	2016	11,6	12443,2	0,3299	1,42	41	78,2
Croatia	2017	12,3	13206,9	0,3298	1,42	40,1	78
Croatia	2018	11,4	13689,4	0,3424	1,47	42,8	78,2
Croatia	2019	11,5	14281,2	0,3587	1,47	46,2	78,6
Croatia	2020	11,2	13422	0,3572	1,48	45,8	77,8
Croatia	2021	11,1	15523,9	0,321	1,58	44,1	76,7
Croatia	2022	12,5	16752,7	0,3204	1,53	45,6	77,7
Cyprus	2007	22	25408,7	0,2963	1,44	52,3	79,8
Cyprus	2008	19,5	27000,7	0,3386	1,48	54,7	80,6
Cyprus	2009	17,8	26111,8	0,3417	1,47	53,4	81

* Missing observations were replaced by the average of all available observations for the given variable

Cyprus	2010	16,8	25718,6	0,3325	1,44	53,7	81,5
Cyprus	2011	16,1	26206,7	0,3704	1,35	57,8	81,2
Cyprus	2012	15,6	24118,1	0,3734	1,39	59,8	81,1
Cyprus	2013	14,9	22442,8	0,4163	1,3	58	82,5
Cyprus	2014	14,2	21968,8	0,3705	1,31	62,9	82,3
Cyprus	2015	13,2	23328,7	0,3711	1,32	63,9	81,8
Cyprus	2016	12,3	23910,6	0,357	1,37	65,3	82,7
Cyprus	2017	11,2	25294,7	0,3492	1,32	65,5	82,2
Cyprus	2018	10,4	26231,4	0,3689	1,32	66,5	82,9
Cyprus	2019	10,1	26805,2	0,3348	1,33	69,6	82,3
Cyprus	2020	10,1	25183,5	0,3337	1,36	67,8	82,4
Cyprus	2021	10,2	26867,1	0,3346	1,39	66,2	81,3
Cyprus	2022	10,2	28237,9	0,3345	1,37	67,1	81,7
Czechia	2007	23,6	15707,4	0,3175	1,45	17	77
Czechia	2008	26,2	15901,4	0,2843	1,51	19,7	77,3
Czechia	2009	25,9	15108,2	0,2887	1,51	22,5	77,4
Czechia	2010	21,6	15141,3	0,2922	1,51	25,4	77,7
Czechia	2011	22,6	15120,1	0,2681	1,43	28,5	78
Czechia	2012	22,5	15196,2	0,2731	1,45	32,8	78,1
Czechia	2013	22,3	15321,9	0,2693	1,46	34,2	78,3
Czechia	2014	22,5	15761,8	0,2694	1,53	35,1	78,9
Czechia	2015	22,5	16606,9	0,2996	1,57	38,1	78,7
Czechia	2016	21,5	17104,5	0,2887	1,63	39	79,1
Czechia	2017	21,1	17973,4	0,2864	1,69	40,5	79,1
Czechia	2018	20,1	18488,5	0,2799	1,71	40,7	79,1
Czechia	2019	19,2	18899,7	0,2814	1,71	39,5	79,3

Czechia	2020	16,4	18171,8	0,2836	1,74	40,4	78,2
Czechia	2021	15	19327,6	0,2974	1,83	43,3	77,2
Czechia	2022	17,9	18837,8	0,2966	1,64	43,1	79,1
Denmark	2007	17,7	52643,1	0,3006	1,84	40,4	78,4
Denmark	2008	17,1	52893,3	0,2961	1,89	39,9	78,8
Denmark	2009	16,8	49806,9	0,285	1,84	44,5	79
Denmark	2010	17,1	51596,3	0,3143	1,87	44,9	79,3
Denmark	2011	16,4	51840,7	0,3151	1,75	46,5	79,9
Denmark	2012	16,8	52003	0,316	1,73	49,7	80,2
Denmark	2013	16,5	53004,9	0,3267	1,67	50	80,4
Denmark	2014	16	54194,9	0,334	1,69	49,2	80,7
Denmark	2015	15,1	54889,6	0,3292	1,71	52	80,8
Denmark	2016	15,1	55673,4	0,3322	1,79	51,5	80,9
Denmark	2017	14,8	56774,4	0,3323	1,75	53,8	81,1
Denmark	2018	14,6	57758,7	0,3322	1,73	54,3	81
Denmark	2019	14	58477,9	0,3225	1,7	55,7	81,5
Denmark	2020	13,9	57995,1	0,3306	1,68	55,5	81,6
Denmark	2021	14,2	62534,2	0,3794	1,72	57,8	81,5
Denmark	2022	13,9	64538,1	0,4057	1,55	58,3	81,3
Estonia	2007	30,9	15292,9	0,3952	1,69	43,2	73,2
Estonia	2008	27,6	15056	0,376	1,72	42	74,4
Estonia	2009	26,6	13332,1	0,3451	1,7	46,4	75,3
Estonia	2010	27,7	13318,4	0,36	1,72	48,3	76
Estonia	2011	27,3	14500,1	0,3725	1,61	48,6	76,6
Estonia	2012	29,9	15205,2	0,3917	1,56	51,2	76,7
Estonia	2013	29,8	15920,3	0,3879	1,52	52	77,5

Estonia	2014	28,1	16564,6	0,3838	1,54	50	77,4
Estonia	2015	26,7	17019,6	0,3573	1,58	49,2	78
Estonia	2016	24,8	17692,8	0,3527	1,6	49,5	78
Estonia	2017	24,9	18630,3	0,3527	1,59	51,3	78,4
Estonia	2018	21,8	19494,5	0,3527	1,67	51,7	78,5
Estonia	2019	21,7	20329,6	0,4059	1,66	53,8	79
Estonia	2020	21,1	20187,4	0,4084	1,58	51,5	78,9
Estonia	2021	20,5	21946,1	0,3828	1,61	54,3	77,2
Estonia	2022	21,3	21491,4	0,3816	1,41	54,8	78,2
Finland	2007	20,2	46556	0,3193	1,83	47,9	79,6
Finland	2008	20,5	46146,5	0,3292	1,85	48,2	79,9
Finland	2009	20,8	42749,4	0,308	1,86	49	80,1
Finland	2010	20,3	43706,3	0,3193	1,87	47,8	80,2
Finland	2011	19,1	43895,7	0,3164	1,83	48,4	80,6
Finland	2012	19,2	42950,2	0,3106	1,8	49,2	80,7
Finland	2013	18,8	42506,1	0,3088	1,75	48,9	81,1
Finland	2014	18,4	42643,5	0,3134	1,71	48,6	81,3
Finland	2015	17,5	43222,9	0,3223	1,65	48,7	81,6
Finland	2016	17,5	44051,1	0,3218	1,57	48,8	81,5
Finland	2017	17,1	45085	0,331	1,49	48,6	81,7
Finland	2018	16,9	45818,5	0,3286	1,41	48,5	81,8
Finland	2019	16,6	46281,8	0,3273	1,35	50	82,1
Finland	2020	16,7	45894	0,3355	1,37	52,2	82
Finland	2021	16,5	47040,9	0,3195	1,46	47	81,9
Finland	2022	15,5	46816,2	0,3164	1,32	46,9	81,2
France	2007	17,3	36800,4	0,3418	1,98	46	81,3

France	2008	16,9	36685,7	0,3415	2,01	44,9	81,4
France	2009	15,2	35750,7	0,3246	2	47,2	81,5
France	2010	15,6	36131,3	0,3283	2,03	47	81,8
France	2011	15,7	36598,4	0,335	2,01	47	82,3
France	2012	15,6	36332,4	0,3248	2,01	47	82,1
France	2013	15,5	36504,2	0,3273	1,99	48,3	82,4
France	2014	15,5	36800,9	0,3285	2	48,4	82,9
France	2015	15,6	37444,5	0,3334	1,96	48,8	82,4
France	2016	15,9	37858,8	0,3338	1,92	48,7	82,7
France	2017	16,3	38509,4	0,336	1,89	49,2	82,7
France	2018	16,7	38965	0,3426	1,87	51	82,8
France	2019	16,2	39592,2	0,3398	1,86	52,3	83
France	2020	15,6	36140,3	0,3374	1,83	52,8	82,3
France	2021	14,7	38853,6	0,3479	1,84	54,2	82,4
France	2022	13,9	38963,8	0,3479	1,79	54	82,3
Germany	2007	22,8	38193,3	0,3693	1,37	23,4	80,1
Germany	2008	22,8	38184,9	0,3675	1,38	24,8	80,2
Germany	2009	22,6	37078,8	0,3701	1,36	26,9	80,3
Germany	2010	22,3	38298	0,3718	1,39	27,2	80,5
Germany	2011	22,4	40354,7	0,3682	1,39	29,5	80,6
Germany	2012	22,7	40367,2	0,3674	1,41	31	80,7
Germany	2013	22,1	40521	0,3802	1,42	31,9	80,6
Germany	2014	22,3	41289,6	0,3849	1,47	28,9	81,2
Germany	2015	21,8	42040	0,3839	1,5	30,6	80,7
Germany	2016	21,1	42965,5	0,3834	1,6	31,5	81
Germany	2017	20,4	43759,7	0,3806	1,57	32,5	81,1

Germany	2018	20,1	44303	0,3762	1,57	33,6	81
Germany	2019	19,2	44936,4	0,4023	1,54	34,4	81,3
Germany	2020	18,3	43091,3	0,4002	1,53	36,6	81,1
Germany	2021	17,6	44365,7	0,3444	1,58	38,8	80,8
Germany	2022	17,7	43878	0,3404	1,46	39,1	80,7
Greece	2007	21,5	22985	0,3576	1,41	30	79,7
Greece	2008	22	22675,9	0,3309	1,5	31,4	80,2
Greece	2009	13,94*[4]	21858,9	0,326	1,5	33,6	80,4
Greece	2010	15	20771	0,3408	1,48	35,8	80,6
Greece	2011	13,94*	18479,7	0,3169	1,4	37,5	80,8
Greece	2012	13,94*	17804,2	0,3203	1,34	39,7	80,7
Greece	2013	13,94*	17423,1	0,3374	1,29	42,6	81,4
Greece	2014	12,5	17839,6	0,3611	1,3	44,5	81,5
Greece	2015	13,94*	18069,2	0,3583	1,33	46,3	81,1
Greece	2016	13,94*	18060,1	0,346	1,38	48,2	81,5
Greece	2017	13,94*	18231	0,3429	1,35	50,1	81,4
Greece	2018	10,4	18298,2	0,3329	1,35	51	81,9
Greece	2019	13,94*	18658	0,3275	1,34	50	81,7
Greece	2020	13,94*	17082,9	0,3236	1,39	51	81,4
Greece	2021	13,94*	18451,6	0,3513	1,43	51,1	80,2
Greece	2022	13,94*	19430,7	0,35	1,32	51,8	80,7
Hungary	2007	16,3	11019,6	0,3556	1,32	26,4	73,6
Hungary	2008	17,5	11188,7	0,3487	1,35	28,4	74,2
Hungary	2009	17,1	10769,3	0,3335	1,32	29,7	74,4

* Missing observations were replaced by the average of all available observations for the given variable

Hungary	2010	17,6	10869,1	0,337	1,25	30,9	74,7
Hungary	2011	18	10969,6	0,3287	1,23	33,6	75,1
Hungary	2012	20,1	10870,1	0,3196	1,34	36,5	75,3
Hungary	2013	18,4	11278,6	0,3337	1,35	37,3	75,8
Hungary	2014	15,1	11637	0,3291	1,44	38,3	76
Hungary	2015	14	12108,3	0,3288	1,45	38,4	75,7
Hungary	2016	14	12724,1	0,3306	1,53	36,6	76,2
Hungary	2017	15,9	13043,4	0,3299	1,54	35,8	76
Hungary	2018	14,2	13656,9	0,3248	1,55	36,6	76,2
Hungary	2019	18,2	14539,5	0,3289	1,55	36,6	76,5
Hungary	2020	17,2	14175,2	0,325	1,59	36,4	75,7
Hungary	2021	17,3	14747,3	0,3356	1,61	39,2	74,3
Hungary	2022	17,5	14818,5	0,335	1,56	37,4	76,2
Ireland	2007	17,3	41719,5	0,3689	2,01	52,4	79,7
Ireland	2008	12,6	39067,8	0,3296	2,06	54	80,2
Ireland	2009	12,6	35693,1	0,3301	2,06	55,2	80,2
Ireland	2010	13,9	36067,2	0,3327	2,05	55,8	80,8
Ireland	2011	12,7	35475	0,3436	2,03	55	80,9
Ireland	2012	12,2	35325,6	0,3215	1,98	56,3	80,9
Ireland	2013	12,9	37335,9	0,3355	1,93	57,9	81
Ireland	2014	13,9	40032,1	0,3406	1,89	60,2	81,4
Ireland	2015	13,9	47894,5	0,3635	1,85	60,3	81,5
Ireland	2016	14,2	50825,8	0,3681	1,81	60,7	81,7
Ireland	2017	14,4	53279,9	0,3566	1,77	59,7	82,2
Ireland	2018	11,3	55157,7	0,3665	1,75	60	82,2
Ireland	2019	10,8	57562,6	0,3644	1,71	59,3	82,8

Ireland	2020	9,9	58942,9	0,3615	1,63	62,2	82,6
Ireland	2021	11,3	64606,2	0,4111	1,78	66,6	82,4
Ireland	2022	9,3	66662,1	0,4086	1,54	66,1	79,3587006960557*
Italy	2007	5,1	34032,2	0,3541	1,39	22,9	81,6
Italy	2008	4,9	32928,7	0,3379	1,44	24,4	81,7
Italy	2009	5,5	31755,3	0,3373	1,44	24,6	81,8
Italy	2010	5,3	31809,8	0,3458	1,44	25,2	82,2
Italy	2011	5,7	31728,8	0,3525	1,42	25,7	82,4
Italy	2012	6,5	30621,7	0,3608	1,42	27,4	82,4
Italy	2013	7	29822,7	0,3615	1,39	28	82,9
Italy	2014	6,1	29802	0,3575	1,38	29,8	83,2
Italy	2015	5,5	30033,3	0,3493	1,36	31	82,7
Italy	2016	5,3	31028,6	0,3682	1,36	31,7	83,4
Italy	2017	5	31555	0,3763	1,34	33,5	[5]83,1
Italy	2018	5,5	32036,5	0,3759	1,31	34,2	83,4
Italy	2019	4,7	32546	0,3743	1,27	34,1	83,6
Italy	2020	4,2	30180,7	0,3715	1,24	34,8	82,3
Italy	2021	5	32429,4	0,3818	1,25	34,4	82,7
Italy	2022	4,3	32661,2	0,3905	1,24	35,5	83
Latvia	2007	13,6	12832,1	0,3864	1,54	32	70,8
Latvia	2008	11,8	12711,1	0,3795	1,58	36,8	72,1
Latvia	2009	13,1	12000,4	0,3818	1,46	41,1	72,8
Latvia	2010	15,5	11051,5	0,3502	1,36	45,6	73,1
Latvia	2011	14,1	11616,9	0,3464	1,33	46,4	73,9

* Missing observations were replaced by the average of all available observations for the given variable.

Latvia	2012	14,9	12291,6	0,3413	1,44	51,2	74,1
Latvia	2013	16	12781,5	0,3566	1,52	53,1	74,3
Latvia	2014	17,3	13130,9	0,3445	1,65	51,4	74,5
Latvia	2015	18,4	13722	0,3468	1,7	54,4	74,8
Latvia	2016	19,7	14485,1	0,3287	1,74	54,6	74,9
Latvia	2017	19,8	15122,8	0,35	1,69	53,9	74,9
Latvia	2018	19,6	15812,5	0,346	1,6	53,8	75,1
Latvia	2019	21,2	16129,8	0,3457	1,61	54,6	75,7
Latvia	2020	22,3	16077,5	0,3428	1,55	55,3	75,5
Latvia	2021	14,6	16799,8	0,3465	1,57	55,4	73,1
Latvia	2022	17,1	17511	0,3461	1,47	57,1	74,8
Lithuania	2007	22,6	11421,9	0,374	1,36	44,3	70,7
Lithuania	2008	21,6	12164	0,3777	1,45	49,3	71,7
Lithuania	2009	15,3	10824,7	0,3777	1,5	50,9	72,9
Lithuania	2010	11,9	10942,5	0,3497	1,5	54,8	73,3
Lithuania	2011	11,5	11514,5	0,3506	1,55	56,8	73,7
Lithuania	2012	11,9	12013,5	0,3773	1,6	57,6	74,1
Lithuania	2013	12,2	12650,3	0,3837	1,59	58,9	74,1
Lithuania	2014	13,3	13425,4	0,4171	1,63	61,1	74,7
Lithuania	2015	14,2	13749,4	0,3766	1,7	64,9	74,6
Lithuania	2016	14,4	14446,3	0,375	1,69	66,1	74,9
Lithuania	2017	15,2	15269,8	0,388	1,63	65,6	75,8
Lithuania	2018	14	15937	0,3623	1,63	65,2	76
Lithuania	2019	13,3	16757	0,4164	1,61	66,1	76,5
Lithuania	2020	13	16978,1	0,4142	1,48	68,1	75,1
Lithuania	2021	12	17088	0,4188	1,36	67,9	74,2

Lithuania	2022	12	16201,6	0,4184	1,27	67,1	76
Luxembourg	2007	10,2	85160,5	0,4188	1,61	39,8	79,5
Luxembourg	2008	9,7	79651,3	0,4041	1,61	42,7	80,7
Luxembourg	2009	9,2	61955,5	0,3686	1,59	46,7	80,8
Luxembourg	2010	8,7	69239,2	0,3615	1,63	46	80,8
Luxembourg	2011	7,9	70315,9	0,3541	1,52	48,7	81,1
Luxembourg	2012	7	77963,1	0,3842	1,57	52	81,5
Luxembourg	2013	6,2	74002,4	0,3603	1,55	54	81,9
Luxembourg	2014	5,4	76314,1	0,3617	1,5	57,8	82,3
Luxembourg	2015	4,7	67868,2	0,3334	1,47	55,5	82,4
Luxembourg	2016	3,9	70447,1	0,3464	1,41	54,4	82,7
Luxembourg	2017	2,6	75219	0,3682	1,39	55,4	82,1
Luxembourg	2018	1,4	74904,2	0,3575	1,38	57,9	82,3
Luxembourg	2019	1,3	71597,4	0,3347	1,34	60,9	82,7
Luxembourg	2020	0,7	72983,8	0,3458	1,36	66,3	82,2
Luxembourg	2021	-0,2	76975,7	0,316	1,38	67,4	82,7
Luxembourg	2022	-0,7	74240	0,3148	1,31	64,8	83
Malta	2007	7,8	18415,5	0,2875	1,35	24,9	79,9
Malta	2008	9,2	19652,5	0,2929	1,43	24,3	79,7
Malta	2009	7,7	18583,2	0,3065	1,42	26,1	80,4
Malta	2010	7,2	19532,4	0,2973	1,36	28,1	81,5
Malta	2011	7,7	20103	0,3126	1,45	29,2	80,9
Malta	2012	9,5	20264,7	0,3221	1,42	32,1	80,9
Malta	2013	9,7	21013,3	0,325	1,36	36,7	81,9
Malta	2014	10,6	22100,2	0,3263	1,38	36,1	82,1
Malta	2015	10,7	23544,3	0,3367	1,37	36,9	82

Malta	2016	11,6	22695,8	0,3326	1,37	38,3	82,6
Malta	2017	13,2	24408,1	0,3348	1,26	37,7	82,4
Malta	2018	13	25511,7	0,3287	1,23	44,8	82,5
Malta	2019	11,6	26322,4	0,3412	1,14	48	82,9
Malta	2020	10	23309,8	0,3363	1,13	44,8	82,3
Malta	2021	10,5	26128,7	0,3404	1,13	50,5	82,5
Malta	2022	10,2	27631,1	0,3413	1,08	48	82,7
Netherlands	2007	19,3	45022,7	0,3348	1,72	38,3	80,4
Netherlands	2008	18,9	44133,9	0,3004	1,77	41	80,5
Netherlands	2009	18,5	42778	0,2979	1,79	41,6	80,9
Netherlands	2010	17,8	44053,2	0,3125	1,79	43,5	81
Netherlands	2011	18,8	44472,4	0,3131	1,76	43,9	81,3
Netherlands	2012	18	43561	0,3089	1,72	45	81,2
Netherlands	2013	17,2	43575,4	0,2987	1,68	47,2	81,4
Netherlands	2014	17	43756	0,309	1,71	48,7	81,8
Netherlands	2015	16,1	44733	0,3101	1,66	49,6	81,6
Netherlands	2016	15,6	44857,8	0,308	1,66	50,2	81,7
Netherlands	2017	15,1	46481,2	0,3166	1,62	51,5	81,8
Netherlands	2018	14,7	47596,7	0,3152	1,59	52,5	81,9
Netherlands	2019	14,6	47497,9	0,3086	1,57	54	82,2
Netherlands	2020	14,2	44821,8	0,3038	1,54	57,1	81,4
Netherlands	2021	13,5	49651,6	0,3319	1,62	60,5	81,4
Netherlands	2022	13	49500,6	0,3314	1,49	60,6	81,7
Poland	2007	14,9	9403,77	0,3735	1,31	35,9	75,4
Poland	2008	11,4	9931,22	0,3799	1,39	38,7	75,6
Poland	2009	8	10098,1	0,3675	1,4	42,7	75,9

Poland	2010	4,5	10403,1	0,3676	1,41	44,7	76,4
Poland	2011	5,5	10899,4	0,3727	1,33	47,3	76,8
Poland	2012	6,4	11042	0,3698	1,33	49,9	76,9
Poland	2013	7,1	11160	0,3682	1,29	51,1	77,1
Poland	2014	7,7	11571,6	0,3735	1,32	51,7	77,8
Poland	2015	7,3	12090	0,3805	1,32	52,8	77,5
Poland	2016	7,1	12433,6	0,3754	1,39	53,6	78
Poland	2017	7	13021,5	0,372	1,48	53,8	77,8
Poland	2018	8,5	13801,8	0,376	1,46	53,7	77,7
Poland	2019	6,5	14421,4	0,3736	1,44	54,5	78
Poland	2020	4,5	14203,7	0,4108	1,39	53,8	76,5
Poland	2021	6,2	15138,1	0,3465	1,33	51,4	75,5
Poland	2022	7,8	16509,7	0,3459	1,29	51,3	77,4
Portugal	2007	8,5	18951,4	0,3925	1,35	27,6	79,3
Portugal	2008	9,2	18709,6	0,3786	1,39	29,6	79,5
Portugal	2009	10	18483,5	0,3726	1,34	29	79,7
Portugal	2010	12,8	18704,5	0,3777	1,39	32,1	80,1
Portugal	2011	12,9	18546,2	0,3798	1,35	33,1	80,7
Portugal	2012	15	17764,8	0,3646	1,28	34,2	80,6
Portugal	2013	13,3	18007,4	0,3697	1,21	37,4	80,9
Portugal	2014	14,9	18208	0,3705	1,23	39	81,3
Portugal	2015	16	18733,7	0,3688	1,31	40,6	81,3
Portugal	2016	13,9	19344,4	0,37	1,36	42,9	81,3
Portugal	2017	10,8	20026,1	0,373	1,38	42,3	81,6
Portugal	2018	8,9	20563	0,3643	1,42	44,3	81,5
Portugal	2019	10,9	21149,1	0,3557	1,43	45,1	81,9

Portugal	2020	11,4	19718,7	0,3487	1,41	48,4	81,1
Portugal	2021	11,8	20720,3	0,3539	1,35	54,3	81,5
Portugal	2022	12,5	21515,1	0,356	1,43	50	81,7
Romania	2007	12,5	7226,88	0,4526	1,45	17,7	73,1
Romania	2008	8,5	8124,8	0,4511	1,6	20,4	73,5
Romania	2009	7,4	7821,07	0,4513	1,66	21,7	73,7
Romania	2010	8,8	7569,83	0,4017	1,59	22	73,7
Romania	2011	9,6	7945,52	0,4025	1,47	23,9	74,4
Romania	2012	6,9	8095,03	0,4214	1,52	25,6	74,4
Romania	2013	4,9	8163,56	0,4206	1,46	26,8	75,1
Romania	2014	4,5	8627,38	0,4279	1,56	28,1	75
Romania	2015	5,6	8882,65	0,4129	1,62	28,3	74,9
Romania	2016	4,8	9157,82	0,3512	1,69	27,4	75,2
Romania	2017	2,9	9956,24	0,358	1,78	28,8	75,2
Romania	2018	2,2	10569,3	0,368	1,76	28,2	75,3
Romania	2019	3,3	11085,1	0,3607	1,77	29,2	75,6
Romania	2020	2,4	10723	0,3669	1,8	28,3	74,2
Romania	2021	3,6	11353,8	0,3577	1,81	26,2	72,8
Romania	2022	4,5	11730,5	0,3577	1,71	28,4	75,3
Slovakia	2007	23,6	14171,5	0,3081	1,27	19,9	74,6
Slovakia	2008	20,9	14913,6	0,2939	1,34	21,1	74,9
Slovakia	2009	21,9	14136	0,2837	1,44	23,8	75,3
Slovakia	2010	19,6	14743,9	0,3169	1,43	29,8	75,6
Slovakia	2011	20,1	14745,1	0,3	1,45	30,7	76,1
Slovakia	2012	20,8	15019,1	0,2936	1,34	32,8	76,3
Slovakia	2013	18,8	15153,9	0,3231	1,34	35,4	76,6

Slovakia	2014	19,7	15468,8	0,2975	1,37	36,5	77
Slovakia	2015	19,7	15991,2	0,3139	1,4	39,6	76,7
Slovakia	2016	19,2	16184,4	0,2915	1,48	41,4	77,3
Slovakia	2017	20,1	16693,6	0,2718	1,52	43,3	77,3
Slovakia	2018	19,8	17283,7	0,2724	1,54	44,8	77,4
Slovakia	2019	18,4	17503,7	0,2626	1,57	47,7	77,8
Slovakia	2020	15,8	17103,9	0,2658	1,59	49,2	77
Slovakia	2021	16,6	17451,8	0,2686	1,63	51,2	74,6
Slovakia	2022	17,7	17340,5	0,2598	1,57	50,7	77,2
Slovenia	2007	5	21266,8	0,2746	1,38	40,3	78,4
Slovenia	2008	4,1	21728,7	0,2736	1,53	38,4	79,1
Slovenia	2009	-0,9	20502,7	0,2631	1,53	39,5	79,4
Slovenia	2010	0,9	20251,3	0,2968	1,57	40,3	79,8
Slovenia	2011	3,3	20195,1	0,2895	1,56	44,4	80,1
Slovenia	2012	4,5	19435,8	0,2936	1,58	45,6	80,3
Slovenia	2013	6,3	19347,7	0,2924	1,55	47	80,5
Slovenia	2014	7	20092,8	0,299	1,58	49,1	81,2
Slovenia	2015	8,2	20245,9	0,2918	1,57	52,7	80,9
Slovenia	2016	8,1	21084,9	0,2947	1,58	54,9	81,2
Slovenia	2017	8,4	22169,9	0,295	1,62	56,3	81,2
Slovenia	2018	9,3	23142,9	0,2964	1,6	53,1	81,5
Slovenia	2019	7,9	23836,2	0,2944	1,61	55	81,6
Slovenia	2020	3,1	22973	0,2996	1,59	56,6	80,6
Slovenia	2021	3,8	24232	0,3065	1,64	60,8	80,7
Slovenia	2022	8,2	23982,8	0,3065	1,55	60,2	81,3
Spain	2007	18,1	26853,6	0,3508	1,38	45,4	81,1

Spain	2008	16,1	26445,9	0,3505	1,45	45,4	81,5
Spain	2009	16,7	25742,7	0,3529	1,38	45,1	81,9
Spain	2010	16,2	25591,7	0,3427	1,37	46,4	82,4
Spain	2011	17,6	24964,3	0,3405	1,34	45,7	82,6
Spain	2012	18,7	24381,8	0,3457	1,32	46	82,5
Spain	2013	17,8	24244,3	0,3466	1,27	46,5	83,2
Spain	2014	14,9	24654,5	0,3486	1,32	47,5	83,3
Spain	2015	14,1	25748,7	0,3525	1,33	47	83
Spain	2016	14,8	26599,3	0,3509	1,34	47	83,5
Spain	2017	13,5	27238,7	0,3475	1,31	48,8	83,4
Spain	2018	11,9	27713,5	0,3421	1,26	50,1	83,5
Spain	2019	9,4	28048,5	0,3382	1,23	52,4	84
Spain	2020	8,9	24967,7	0,3159	1,19	53,5	82,4
Spain	2021	8,7	26627,3	0,3317	1,19	54,3	83,3
Spain	2022	8,7	27189,4	0,3313	1,16	56,8	83,2
Sweden	2007	17,8	50738,9	0,3251	1,88	45,8	81,1
Sweden	2008	16,9	50292,7	0,3149	1,91	46,5	81,3
Sweden	2009	15,7	47366,6	0,3023	1,94	48,4	81,5
Sweden	2010	15,4	49820	0,314	1,98	48,9	81,6
Sweden	2011	15,6	50481,1	0,3074	1,9	50,2	81,9
Sweden	2012	15,5	49880,7	0,297	1,91	50,2	81,8
Sweden	2013	14,6	49990,5	0,2965	1,89	51,7	82
Sweden	2014	13,8	50767,8	0,2983	1,88	53,6	82,3
Sweden	2015	14	51981,7	0,3067	1,85	54,5	82,2
Sweden	2016	13,3	52306	0,2899	1,85	55,4	82,4
Sweden	2017	12,5	53348	0,2994	1,78	54,8	82,5

Sweden	2018	12,1	53588,4	0,2925	1,76	55,1	82,6
Sweden	2019	11,8	54772,7	0,3016	1,71	56,3	83,2
Sweden	2020	11,2	53603	0,3179	1,67	58,3	82,4
Sweden	2021	11,2	57011	0,3365	1,67	58,2	83,1
Sweden	2022	11,1	57925,9	0,3375	1,53	61	83,1

Table 2A: Database in Levels with the Hodrick-Prescott Filter

Country	Year	PayGap	GNIpc	GNIpc^2	Ineq.	FertR	Edu	Life
Austria	2007	25,443	44129,252	1947390872,664	34,928	1,395	16,961	80,411
Austria	2008	24,951	44113,802	1946027490,951	34,642	1,406	19,342	80,562
Austria	2009	24,460	44101,139	1944910482,096	34,359	1,417	21,742	80,712
Austria	2010	23,971	44103,618	1945129077,221	34,093	1,428	24,188	80,860
Austria	2011	23,486	44124,418	1946964242,822	33,855	1,439	26,712	81,004
Austria	2012	23,005	44164,028	1950461325,530	33,662	1,448	29,334	81,138
Austria	2013	22,528	44224,918	1955843404,634	33,532	1,457	32,026	81,260
Austria	2014	22,056	44309,174	1963302893,925	33,466	1,465	34,714	81,365
Austria	2015	21,586	44415,700	1972754424,692	33,448	1,471	37,267	81,450
Austria	2016	21,117	44540,171	1983826855,404	33,471	1,474	39,619	81,514
Austria	2017	20,650	44671,711	1995561737,329	33,527	1,475	41,747	81,555
Austria	2018	20,184	44801,762	2007197869,574	33,611	1,474	43,662	81,572
Austria	2019	19,716	44922,793	2018057328,810	33,721	1,470	45,403	81,567
Austria	2020	19,248	45034,612	2028116233,308	33,850	1,466	47,020	81,544
Austria	2021	18,782	45148,992	2038431493,987	33,981	1,460	48,569	81,511
Austria	2022	18,317	45263,764	2048808374,566	34,114	1,455	50,094	81,475
Belgium	2007	10,663	40340,657	1627368643,446	32,068	1,869	47,296	79,838
Belgium	2008	10,202	40379,827	1630530443,502	31,972	1,853	47,721	80,015
Belgium	2009	9,735	40428,838	1634490960,459	31,886	1,836	48,144	80,192

Belgium	2010	9,257	40501,231	1640349731,351	31,822	1,818	48,569	80,369
Belgium	2011	8,766	40608,107	1649018377,862	31,785	1,799	49,006	80,543
Belgium	2012	8,269	40758,848	1661283700,897	31,775	1,778	49,474	80,713
Belgium	2013	7,780	40951,606	1677034016,363	31,782	1,756	49,986	80,877
Belgium	2014	7,313	41180,822	1695860106,022	31,796	1,732	50,560	81,034
Belgium	2015	6,880	41436,962	1717021815,410	31,802	1,708	51,209	81,179
Belgium	2016	6,483	41708,362	1739587428,239	31,785	1,683	51,956	81,311
Belgium	2017	6,124	41984,874	1762729671,483	31,732	1,658	52,801	81,428
Belgium	2018	5,795	42259,156	1785836290,921	31,631	1,633	53,733	81,530
Belgium	2019	5,489	42527,190	1808561871,495	31,473	1,608	54,730	81,621
Belgium	2020	5,197	42788,297	1830838326,060	31,258	1,584	55,771	81,702
Belgium	2021	4,913	43052,622	1853528270,657	31,005	1,559	56,836	81,784
Belgium	2022	4,633	43315,893	1876266569,836	30,739	1,535	57,908	81,865
Bulgaria	2007	12,566	5772,674	33323764,128	33,255	1,546	32,694	73,362
Bulgaria	2008	12,865	5921,138	35059873,246	34,037	1,545	33,493	73,574
Bulgaria	2009	13,159	6068,197	36823011,073	34,829	1,543	34,286	73,782
Bulgaria	2010	13,438	6215,003	38626262,727	35,638	1,540	35,060	73,980
Bulgaria	2011	13,694	6363,003	40487802,040	36,474	1,537	35,813	74,161
Bulgaria	2012	13,912	6514,516	42438924,786	37,347	1,535	36,550	74,316
Bulgaria	2013	14,075	6672,277	44519275,451	38,255	1,534	37,266	74,436
Bulgaria	2014	14,176	6839,988	46785440,145	39,199	1,536	37,932	74,514
Bulgaria	2015	14,209	7020,181	49282938,505	40,159	1,539	38,522	74,546
Bulgaria	2016	14,169	7214,432	52048029,925	41,100	1,545	39,024	74,529

Bulgaria	2017	14,063	7422,725	55096852,175	41,980	1,552	39,437	74,462
Bulgaria	2018	13,901	7644,048	58431470,374	42,773	1,561	39,768	74,347
Bulgaria	2019	13,697	7877,469	62054522,409	43,488	1,570	40,032	74,188
Bulgaria	2020	13,466	8121,625	65960785,393	44,152	1,581	40,260	73,999
Bulgaria	2021	13,225	8376,323	70162779,401	44,786	1,592	40,474	73,799
Bulgaria	2022	12,985	8636,815	74594581,864	45,408	1,604	40,687	73,606
Croatia	2007	12,956	11762,767	138362698,666	33,155	1,533	23,310	75,997
Croatia	2008	12,596	11729,365	137577998,161	33,215	1,524	25,178	76,264
Croatia	2009	12,247	11702,640	136951778,475	33,280	1,515	27,039	76,529
Croatia	2010	11,931	11697,518	136831915,857	33,361	1,505	28,890	76,787
Croatia	2011	11,688	11727,959	137545033,366	33,453	1,494	30,719	77,032
Croatia	2012	11,496	11806,198	139386316,539	33,548	1,483	32,533	77,255
Croatia	2013	11,356	11943,012	142635536,830	33,639	1,474	34,336	77,452
Croatia	2014	11,292	12144,530	147489616,766	33,721	1,467	36,098	77,615
Croatia	2015	11,294	12412,535	154071031,385	33,785	1,462	37,789	77,742
Croatia	2016	11,322	12743,034	162384907,856	33,829	1,461	39,396	77,836
Croatia	2017	11,367	13129,914	172394649,294	33,855	1,464	40,910	77,893
Croatia	2018	11,419	13564,067	183983914,823	33,856	1,470	42,337	77,915
Croatia	2019	11,479	14037,152	197041632,940	33,816	1,479	43,677	77,907
Croatia	2020	11,549	14542,082	211472140,130	33,725	1,490	44,934	77,872
Croatia	2021	11,630	15074,210	227231795,895	33,591	1,502	46,135	77,825
Croatia	2022	11,718	15617,688	243912182,099	33,442	1,514	47,320	77,778
Cyprus	2007	20,465	25928,096	672266164,395	32,802	1,459	52,072	80,380

Cyprus	2008	19,434	25634,830	657144517,838	33,609	1,441	53,427	80,652
Cyprus	2009	18,419	25336,370	641931640,658	34,384	1,424	54,784	80,918
Cyprus	2010	17,434	25041,180	627060686,582	35,098	1,406	56,159	81,172
Cyprus	2011	16,491	24765,478	613328918,675	35,719	1,389	57,552	81,409
Cyprus	2012	15,593	24532,259	601831719,713	36,199	1,374	58,940	81,626
Cyprus	2013	14,739	24378,927	594332071,841	36,500	1,361	60,302	81,818
Cyprus	2014	13,928	24338,747	592374602,683	36,597	1,351	61,626	81,977
Cyprus	2015	13,163	24425,622	596611005,624	36,516	1,344	62,877	82,100
Cyprus	2016	12,447	24629,755	606624813,063	36,288	1,340	64,031	82,187
Cyprus	2017	11,784	24930,379	621523783,372	35,949	1,338	65,077	82,235
Cyprus	2018	11,178	25299,536	640066537,532	35,530	1,339	66,014	82,247
Cyprus	2019	10,625	25712,913	661153881,678	35,052	1,342	66,848	82,226
Cyprus	2020	10,114	26155,512	684110784,330	34,548	1,346	67,588	82,180
Cyprus	2021	9,630	26623,259	708797937,696	34,037	1,351	68,270	82,119
Cyprus	2022	9,156	27102,363	734538058,535	33,525	1,356	68,934	82,054
Czechia	2007	25,073	15047,717	226433796,535	29,537	1,446	18,509	77,159
Czechia	2008	24,657	15153,783	229637132,214	29,191	1,458	21,024	77,374
Czechia	2009	24,227	15266,445	233064357,622	28,867	1,470	23,524	77,589
Czechia	2010	23,783	15399,778	237153176,488	28,579	1,483	25,981	77,799
Czechia	2011	23,342	15566,273	242308843,638	28,343	1,497	28,355	78,001
Czechia	2012	22,901	15775,834	248876947,127	28,180	1,514	30,603	78,190
Czechia	2013	22,446	16033,908	257086189,787	28,094	1,534	32,682	78,360
Czechia	2014	21,963	16340,140	267000169,107	28,082	1,558	34,570	78,506

Czechia	2015	21,434	16687,058	278457913,264	28,131	1,584	36,262	78,620
Czechia	2016	20,847	17061,407	291091594,360	28,214	1,612	37,758	78,700
Czechia	2017	20,201	17449,127	304472016,124	28,322	1,640	39,075	78,744
Czechia	2018	19,501	17836,591	318143985,033	28,456	1,667	40,244	78,754
Czechia	2019	18,762	18215,416	331801393,618	28,616	1,692	41,309	78,736
Czechia	2020	18,003	18583,737	345355279,992	28,801	1,716	42,319	78,697
Czechia	2021	17,250	18946,530	358971011,853	29,001	1,739	43,305	78,654
Czechia	2022	16,510	19304,655	372669698,557	29,207	1,760	44,280	78,616
Denmark	2007	17,600	50908,745	2591700293,619	29,380	1,862	40,645	78,580
Denmark	2008	17,349	51207,828	2622241651,225	29,788	1,843	42,102	78,876
Denmark	2009	17,099	51524,255	2654748858,961	30,204	1,824	43,557	79,170
Denmark	2010	16,849	51892,224	2692802927,145	30,631	1,805	44,984	79,460
Denmark	2011	16,594	52328,760	2738299102,753	31,057	1,787	46,370	79,742
Denmark	2012	16,331	52847,927	2792903420,368	31,480	1,770	47,698	80,009
Denmark	2013	16,058	53458,912	2857855240,077	31,899	1,755	48,953	80,257
Denmark	2014	15,775	54162,449	2933570861,683	32,315	1,742	50,142	80,484
Denmark	2015	15,487	54954,734	3020022796,472	32,739	1,732	51,279	80,689
Denmark	2016	15,201	55832,287	3117244308,530	33,191	1,722	52,372	80,874
Denmark	2017	14,921	56790,977	3225215100,141	33,693	1,711	53,433	81,039
Denmark	2018	14,650	57825,084	3343740285,837	34,266	1,700	54,469	81,189
Denmark	2019	14,390	58928,720	3472594009,984	34,930	1,687	55,488	81,326
Denmark	2020	14,140	60095,335	3611449346,345	35,690	1,672	56,496	81,452
Denmark	2021	13,898	61313,872	3759390861,654	36,528	1,657	57,503	81,569

Denmark	2022	13,658	62552,266	3912786039,610	37,398	1,640	58,509	81,683
Estonia	2007	29,546	13749,944	189060949,471	37,519	1,702	43,921	74,129
Estonia	2008	29,182	14030,934	196867113,727	37,386	1,686	44,966	74,679
Estonia	2009	28,830	14327,355	205273088,757	37,274	1,669	46,004	75,220
Estonia	2010	28,490	14664,885	215058857,981	37,203	1,652	46,998	75,739
Estonia	2011	28,137	15059,254	226781136,352	37,169	1,635	47,914	76,225
Estonia	2012	27,738	15512,724	240644619,854	37,154	1,621	48,734	76,670
Estonia	2013	27,252	16021,967	256703425,482	37,142	1,610	49,444	77,069
Estonia	2014	26,660	16580,578	274915550,635	37,135	1,601	50,056	77,417
Estonia	2015	25,969	17181,135	295191410,959	37,155	1,595	50,607	77,714
Estonia	2016	25,198	17816,060	317411987,241	37,232	1,591	51,133	77,959
Estonia	2017	24,377	18476,155	341368319,338	37,386	1,587	51,658	78,155
Estonia	2018	23,528	19150,994	366760555,346	37,615	1,582	52,187	78,304
Estonia	2019	22,682	19831,687	393295805,069	37,896	1,574	52,722	78,411
Estonia	2020	21,849	20512,783	420774286,299	38,183	1,564	53,263	78,485
Estonia	2021	21,033	21193,811	449177605,811	38,457	1,552	53,817	78,537
Estonia	2022	20,227	21871,041	478342446,777	38,725	1,539	54,375	78,586
Finland	2007	20,800	44866,407	2012994476,897	31,766	1,908	48,163	79,704
Finland	2008	20,472	44544,204	1984186137,179	31,737	1,881	48,276	79,930
Finland	2009	20,137	44238,897	1957080045,010	31,710	1,853	48,387	80,154
Finland	2010	19,791	43983,405	1934539952,918	31,699	1,823	48,492	80,376
Finland	2011	19,434	43795,752	1918067914,697	31,706	1,790	48,594	80,594
Finland	2012	19,073	43691,191	1908920165,281	31,740	1,754	48,689	80,805

Finland	2013	18,709	43685,974	1908464287,763	31,806	1,714	48,769	81,003
Finland	2014	18,346	43788,942	1917471461,121	31,903	1,671	48,835	81,186
Finland	2015	17,991	43997,141	1935748373,383	32,021	1,625	48,887	81,349
Finland	2016	17,647	44296,157	1962149560,649	32,146	1,578	48,922	81,489
Finland	2017	17,316	44663,839	1994858527,240	32,262	1,531	48,937	81,607
Finland	2018	16,996	45075,582	2031808062,777	32,357	1,484	48,927	81,704
Finland	2019	16,684	45510,993	2071250449,105	32,426	1,440	48,882	81,778
Finland	2020	16,377	45957,109	2112055859,793	32,469	1,397	48,791	81,834
Finland	2021	16,069	46408,675	2153765123,398	32,490	1,356	48,651	81,876
Finland	2022	15,758	46859,805	2195841319,941	32,502	1,315	48,496	81,911
France	2007	16,485	36147,817	1306664641,968	33,466	2,023	45,397	81,386
France	2008	16,331	36244,488	1313662879,828	33,358	2,018	45,803	81,556
France	2009	16,185	36347,684	1321154148,221	33,257	2,013	46,216	81,726
France	2010	16,061	36468,344	1329940120,483	33,178	2,006	46,632	81,893
France	2011	15,963	36611,435	1340397180,630	33,129	1,999	47,058	82,051
France	2012	15,891	36778,555	1352662096,508	33,112	1,989	47,504	82,196
France	2013	15,841	36971,171	1366867477,508	33,136	1,977	47,980	82,325
France	2014	15,807	37186,289	1382820075,798	33,201	1,962	48,492	82,432
France	2015	15,779	37416,244	1399975341,613	33,304	1,946	49,047	82,516
France	2016	15,745	37649,520	1417486344,615	33,439	1,927	49,652	82,576
France	2017	15,690	37874,880	1434506527,731	33,599	1,907	50,313	82,615
France	2018	15,602	38083,182	1450328741,934	33,778	1,887	51,024	82,632
France	2019	15,473	38271,628	1464717543,879	33,969	1,866	51,769	82,630

France	2020	15,309	38446,241	1478113416,994	34,169	1,845	52,533	82,614
France	2021	15,119	38626,245	1491986796,317	34,378	1,824	53,305	82,590
France	2022	14,920	38807,809	1506046019,503	34,589	1,803	54,075	82,564
Germany	2007	23,171	37418,375	1400134760,614	36,790	1,349	24,379	80,169
Germany	2008	23,002	37973,020	1441950231,288	36,967	1,366	25,367	80,274
Germany	2009	22,829	38535,414	1484978160,733	37,146	1,383	26,345	80,378
Germany	2010	22,647	39115,426	1530016587,038	37,325	1,401	27,298	80,480
Germany	2011	22,447	39708,358	1576753705,599	37,503	1,419	28,216	80,577
Germany	2012	22,219	40301,337	1624197745,762	37,676	1,439	29,087	80,668
Germany	2013	21,949	40887,953	1671824702,422	37,833	1,458	29,915	80,751
Germany	2014	21,632	41462,456	1719135231,757	37,955	1,477	30,719	80,825
Germany	2015	21,261	42015,424	1765295845,415	38,024	1,495	31,541	80,886
Germany	2016	20,837	42535,708	1809286439,414	38,028	1,511	32,404	80,935
Germany	2017	20,367	43012,403	1850066800,270	37,957	1,524	33,321	80,972
Germany	2018	19,860	43438,902	1886938206,190	37,806	1,534	34,296	80,995
Germany	2019	19,325	43816,071	1919848043,941	37,569	1,540	35,325	81,005
Germany	2020	18,774	44153,415	1949524036,903	37,241	1,545	36,398	81,005
Germany	2021	18,218	44471,643	1977727066,103	36,842	1,548	37,493	80,996
Germany	2022	17,662	44780,844	2005323989,269	36,419	1,550	38,594	80,985
Greece	2007	19,194	22310,231	497746398,474	33,781	1,465	30,154	80,045
Greece	2008	18,163	21625,664	467669327,969	33,709	1,449	32,175	80,240
Greece	2009	17,155	20947,844	438812160,957	33,656	1,433	34,194	80,431
Greece	2010	16,232	20294,021	411847296,343	33,636	1,416	36,202	80,615

Greece	2011	15,422	19690,556	387717995,545	33,653	1,399	38,185	80,787
Greece	2012	14,742	19168,579	367434404,718	33,714	1,383	40,122	80,944
Greece	2013	14,196	18747,111	351454153,823	33,806	1,370	41,988	81,080
Greece	2014	13,777	18431,530	339721289,711	33,902	1,361	43,752	81,190
Greece	2015	13,476	18213,974	331748859,509	33,970	1,355	45,390	81,271
Greece	2016	13,272	18080,663	326910385,295	34,004	1,352	46,885	81,321
Greece	2017	13,150	18016,368	324589509,061	34,014	1,351	48,231	81,338
Greece	2018	13,098	18005,653	324203534,765	34,019	1,351	49,431	81,323
Greece	2019	13,115	18035,230	325269530,684	34,036	1,353	50,512	81,276
Greece	2020	13,171	18094,737	327419502,084	34,079	1,356	51,511	81,203
Greece	2021	13,247	18180,037	330513736,600	34,147	1,358	52,465	81,114
Greece	2022	13,329	18276,875	334044170,682	34,224	1,360	53,403	81,022
Hungary	2007	17,432	10533,899	110963025,564	34,580	1,274	27,997	73,995
Hungary	2008	17,374	10680,504	114073168,479	34,260	1,288	29,340	74,269
Hungary	2009	17,304	10831,967	117331498,312	33,950	1,304	30,666	74,539
Hungary	2010	17,213	10998,225	120960948,274	33,665	1,321	31,952	74,801
Hungary	2011	17,088	11188,591	125184570,108	33,417	1,341	33,161	75,048
Hungary	2012	16,921	11411,086	130212883,700	33,214	1,364	34,248	75,274
Hungary	2013	16,714	11671,540	136224848,628	33,062	1,389	35,171	75,471
Hungary	2014	16,499	11970,374	143289848,066	32,952	1,417	35,914	75,634
Hungary	2015	16,325	12304,078	151390336,540	32,881	1,446	36,477	75,759
Hungary	2016	16,228	12665,810	160422738,897	32,844	1,474	36,887	75,848
Hungary	2017	16,220	13046,768	170218166,985	32,834	1,501	37,191	75,900

Hungary	2018	16,292	13438,736	180599636,374	32,849	1,527	37,431	75,920
Hungary	2019	16,430	13833,463	191364684,830	32,888	1,551	37,636	75,910
Hungary	2020	16,600	14224,877	202347118,658	32,946	1,573	37,826	75,880
Hungary	2021	16,785	14613,970	213568117,798	33,017	1,595	38,013	75,843
Hungary	2022	16,976	15001,236	225037079,530	33,092	1,617	38,192	75,809
Ireland	2007	14,605	35390,565	1252492097,610	33,818	2,085	52,976	79,933
Ireland	2008	14,308	35993,542	1295535050,027	33,767	2,062	53,772	80,169
Ireland	2009	14,039	36659,808	1343941500,648	33,747	2,039	54,562	80,402
Ireland	2010	13,806	37483,395	1405004891,792	33,781	2,014	55,344	80,630
Ireland	2011	13,606	38548,668	1485999837,118	33,883	1,987	56,119	80,851
Ireland	2012	13,434	39925,831	1594072008,375	34,064	1,958	56,895	81,060
Ireland	2013	13,278	41654,350	1735084867,845	34,338	1,926	57,668	81,257
Ireland	2014	13,114	43727,688	1912110726,180	34,702	1,893	58,430	81,438
Ireland	2015	12,912	46096,126	2124852844,430	35,144	1,859	59,171	81,597
Ireland	2016	12,652	48672,987	2369059661,951	35,644	1,824	59,904	81,727
Ireland	2017	12,322	51389,578	2640888741,642	36,197	1,789	60,648	81,822
Ireland	2018	11,927	54198,735	2937502891,526	36,807	1,754	61,435	81,873
Ireland	2019	11,492	57072,197	3257235638,919	37,475	1,718	62,284	81,876
Ireland	2020	11,036	59991,291	3598954992,895	38,199	1,683	63,201	81,832
Ireland	2021	10,572	62942,250	3961726796,909	38,967	1,648	64,161	81,749
Ireland	2022	10,100	65900,821	4342918226,023	39,746	1,612	65,131	81,643
Italy	2007	5,354	32837,438	1078297357,413	34,187	1,442	22,830	81,660
Italy	2008	5,460	32450,107	1053009416,349	34,403	1,436	23,775	81,844

Italy	2009	5,564	32074,723	1028787829,359	34,632	1,429	24,721	82,027
Italy	2010	5,657	31728,020	1006667272,181	34,878	1,421	25,675	82,208
Italy	2011	5,731	31423,539	987438809,233	35,141	1,412	26,642	82,382
Italy	2012	5,773	31175,636	971920284,965	35,412	1,402	27,623	82,544
Italy	2013	5,771	31001,721	961106688,312	35,689	1,390	28,610	82,691
Italy	2014	5,718	30913,663	955654566,739	35,972	1,376	29,593	82,816
Italy	2015	5,623	30911,543	955523492,082	36,268	1,361	30,554	82,917
Italy	2016	5,496	30984,324	960028343,679	36,581	1,344	31,479	82,993
Italy	2017	5,345	31112,188	967968234,643	36,903	1,327	32,357	83,043
Italy	2018	5,180	31275,758	978173040,192	37,226	1,308	33,181	83,068
Italy	2019	5,003	31460,086	989737041,090	37,552	1,289	33,955	83,072
Italy	2020	4,822	31657,832	1002218354,733	37,883	1,270	34,691	83,061
Italy	2021	4,642	31872,515	1015857195,224	38,224	1,251	35,404	83,045
Italy	2022	4,460	32092,881	1029952980,974	38,569	1,232	36,112	83,030
Latvia	2007	12,487	11744,464	137932436,701	37,850	1,471	36,268	71,778
Latvia	2008	13,163	11879,087	141112703,774	37,300	1,478	38,827	72,229
Latvia	2009	13,851	12024,586	144590670,712	36,758	1,486	41,343	72,669
Latvia	2010	14,547	12200,159	148843879,936	36,238	1,497	43,754	73,089
Latvia	2011	15,242	12424,761	154374685,481	35,769	1,511	45,993	73,479
Latvia	2012	15,934	12705,861	161438893,266	35,367	1,529	48,015	73,828
Latvia	2013	16,613	13042,848	170115891,216	35,038	1,550	49,776	74,131
Latvia	2014	17,256	13430,972	180391005,373	34,774	1,570	51,264	74,386
Latvia	2015	17,835	13862,865	192179035,297	34,574	1,587	52,504	74,592

Latvia	2016	18,321	14328,162	205296237,404	34,435	1,598	53,517	74,748
Latvia	2017	18,693	14815,089	219486849,658	34,352	1,603	54,347	74,857
Latvia	2018	18,941	15313,439	234501422,891	34,307	1,603	55,047	74,922
Latvia	2019	19,069	15816,087	250148596,019	34,288	1,597	55,665	74,949
Latvia	2020	19,086	16320,893	266371549,185	34,286	1,588	56,239	74,942
Latvia	2021	19,021	16828,858	283210467,459	34,293	1,577	56,794	74,915
Latvia	2022	18,938	17338,548	300625248,381	34,303	1,565	57,347	74,887
Lithuania	2007	18,913	10766,099	115908881,758	36,696	1,438	47,146	71,563
Lithuania	2008	17,766	11071,514	122578416,918	36,812	1,470	49,353	72,054
Lithuania	2009	16,657	11383,487	129583769,670	36,935	1,502	51,531	72,537
Lithuania	2010	15,660	11719,500	137346677,221	37,081	1,532	53,652	72,999
Lithuania	2011	14,836	12091,448	146203116,441	37,277	1,559	55,680	73,432
Lithuania	2012	14,210	12503,456	156336405,294	37,525	1,582	57,592	73,830
Lithuania	2013	13,773	12953,878	167802953,266	37,807	1,599	59,374	74,190
Lithuania	2014	13,491	13436,170	180530654,772	38,107	1,610	61,014	74,512
Lithuania	2015	13,318	13940,751	194344527,637	38,415	1,612	62,496	74,795
Lithuania	2016	13,202	14457,933	209031827,791	38,755	1,606	63,801	75,041
Lithuania	2017	13,103	14976,115	224284031,406	39,146	1,590	64,939	75,247
Lithuania	2018	12,991	15483,579	239741229,623	39,593	1,565	65,940	75,411
Lithuania	2019	12,858	15971,543	255090191,407	40,097	1,533	66,841	75,537
Lithuania	2020	12,707	16435,759	270134165,411	40,628	1,494	67,671	75,633
Lithuania	2021	12,542	16879,833	284928747,648	41,168	1,452	68,454	75,717
Lithuania	2022	12,374	17312,795	299732853,759	41,710	1,408	69,215	75,804

Luxembourg	2007	10,573	76419,908	5840002414,268	39,945	1,635	41,366	80,111
Luxembourg	2008	9,853	75399,027	5685013251,089	39,226	1,617	43,285	80,403
Luxembourg	2009	9,129	74465,551	5545118331,270	38,526	1,597	45,188	80,688
Luxembourg	2010	8,395	73749,410	5438975528,829	37,877	1,578	47,054	80,965
Luxembourg	2011	7,648	73255,432	5366358292,576	37,293	1,557	48,877	81,230
Luxembourg	2012	6,886	72943,342	5320731125,884	36,772	1,536	50,639	81,480
Luxembourg	2013	6,110	72743,472	5291612667,966	36,291	1,513	52,321	81,710
Luxembourg	2014	5,323	72636,350	5276039341,888	35,846	1,490	53,920	81,916
Luxembourg	2015	4,526	72615,095	5272952089,313	35,428	1,466	55,445	82,093
Luxembourg	2016	3,724	72709,604	5286686530,137	35,034	1,442	56,949	82,245
Luxembourg	2017	2,923	72902,303	5314745748,965	34,639	1,418	58,481	82,373
Luxembourg	2018	2,130	73152,993	5351360378,549	34,212	1,396	60,068	82,488
Luxembourg	2019	1,349	73444,643	5394115605,404	33,746	1,375	61,704	82,595
Luxembourg	2020	0,576	73777,733	5443153939,765	33,249	1,354	63,362	82,697
Luxembourg	2021	-0,191	74134,271	5495890199,213	32,727	1,334	65,007	82,801
Luxembourg	2022	-0,956	74488,326	5548510735,899	32,198	1,314	66,634	82,905
Malta	2007	7,597	18195,451	331074454,659	29,134	1,425	23,372	79,939
Malta	2008	7,950	18709,871	350059275,019	29,659	1,420	25,089	80,232
Malta	2009	8,304	19226,491	369657941,851	30,180	1,414	26,821	80,524
Malta	2010	8,676	19756,936	390336525,095	30,689	1,407	28,575	80,811
Malta	2011	9,072	20306,401	412349903,375	31,184	1,398	30,352	81,085
Malta	2012	9,487	20877,831	435883834,972	31,653	1,386	32,148	81,345
Malta	2013	9,901	21472,142	461052863,270	32,083	1,370	33,946	81,591

Malta	2014	10,294	22084,114	487708079,749	32,469	1,351	35,729	81,815
Malta	2015	10,644	22703,941	515468943,143	32,809	1,327	37,509	82,015
Malta	2016	10,932	23321,978	543914679,702	33,102	1,300	39,300	82,189
Malta	2017	11,140	23936,984	572979203,130	33,356	1,268	41,111	82,338
Malta	2018	11,257	24541,454	602282966,575	33,583	1,234	42,941	82,465
Malta	2019	11,291	25132,596	631647406,067	33,792	1,199	44,753	82,574
Malta	2020	11,270	25717,322	661380647,142	33,987	1,163	46,531	82,670
Malta	2021	11,221	26314,439	692449684,836	34,177	1,127	48,291	82,760
Malta	2022	11,164	26918,680	724615322,387	34,364	1,090	50,031	82,848
Netherlands	2007	19,418	43693,792	1909147485,473	31,325	1,783	38,918	80,547
Netherlands	2008	19,056	43727,611	1912103985,330	31,169	1,772	40,227	80,704
Netherlands	2009	18,693	43774,719	1916226039,863	31,036	1,762	41,529	80,860
Netherlands	2010	18,326	43852,468	1923038921,933	30,934	1,750	42,827	81,012
Netherlands	2011	17,951	43968,241	1933206206,412	30,862	1,736	44,122	81,155
Netherlands	2012	17,556	44131,430	1947583151,890	30,820	1,720	45,424	81,287
Netherlands	2013	17,142	44356,470	1967496430,479	30,814	1,704	46,739	81,405
Netherlands	2014	16,711	44652,089	1993809077,253	30,851	1,686	48,071	81,508
Netherlands	2015	16,267	45019,207	2026729009,954	30,926	1,667	49,425	81,593
Netherlands	2016	15,816	45449,782	2065682672,628	31,038	1,648	50,815	81,659
Netherlands	2017	15,362	45932,909	2109832168,693	31,183	1,628	52,258	81,708
Netherlands	2018	14,909	46451,765	2157766505,649	31,359	1,607	53,761	81,739
Netherlands	2019	14,456	46995,008	2208530779,092	31,564	1,587	55,326	81,755
Netherlands	2020	14,002	47562,745	2262214700,492	31,802	1,567	56,942	81,758

Netherlands	2021	13,546	48160,112	2319396417,282	32,067	1,547	58,585	81,757
Netherlands	2022	13,088	48764,837	2378009365,936	32,340	1,526	60,231	81,755
Poland	2007	10,805	9356,939	87552308,631	37,280	1,354	38,644	75,632
Poland	2008	9,956	9689,583	93888009,073	37,282	1,356	40,686	75,907
Poland	2009	9,148	10022,694	100454399,613	37,285	1,357	42,701	76,179
Poland	2010	8,437	10359,159	107312174,067	37,297	1,358	44,641	76,443
Poland	2011	7,865	10702,616	114545986,957	37,319	1,359	46,458	76,692
Poland	2012	7,439	11057,144	122260427,274	37,350	1,361	48,107	76,916
Poland	2013	7,137	11428,789	130617227,434	37,384	1,363	49,549	77,108
Poland	2014	6,932	11823,448	139793925,888	37,417	1,368	50,764	77,261
Poland	2015	6,794	12244,328	149923556,503	37,434	1,373	51,746	77,366
Poland	2016	6,699	12692,117	161089829,969	37,422	1,378	52,500	77,421
Poland	2017	6,631	13165,962	173342551,691	37,374	1,382	53,041	77,425
Poland	2018	6,577	13662,423	186661809,541	37,283	1,383	53,396	77,384
Poland	2019	6,527	14176,617	200976470,281	37,143	1,381	53,598	77,304
Poland	2020	6,491	14705,053	216238582,328	36,948	1,376	53,683	77,199
Poland	2021	6,479	15246,688	232461503,845	36,696	1,369	53,698	77,086
Poland	2022	6,480	15795,466	249496760,634	36,426	1,362	53,688	76,977
Portugal	2007	9,963	18411,716	338991268,826	38,428	1,351	27,160	79,426
Portugal	2008	10,610	18414,646	339099180,047	38,189	1,344	28,733	79,676
Portugal	2009	11,242	18422,973	339405915,899	37,957	1,337	30,311	79,924
Portugal	2010	11,831	18445,042	340219568,591	37,739	1,330	31,906	80,168
Portugal	2011	12,336	18489,805	341872899,962	37,532	1,324	33,518	80,402

Portugal	2012	12,724	18568,809	344800669,679	37,334	1,320	35,150	80,621
Portugal	2013	12,971	18694,163	349471721,836	37,149	1,319	36,799	80,822
Portugal	2014	13,073	18869,936	356074492,277	36,969	1,323	38,453	81,001
Portugal	2015	13,031	19093,331	364555290,169	36,788	1,330	40,107	81,155
Portugal	2016	12,862	19354,930	374613309,768	36,598	1,341	41,759	81,287
Portugal	2017	12,616	19641,719	385797136,464	36,393	1,353	43,416	81,397
Portugal	2018	12,350	19940,581	397626753,073	36,171	1,366	45,092	81,487
Portugal	2019	12,106	20242,239	409748242,667	35,940	1,379	46,793	81,563
Portugal	2020	11,889	20543,645	422041338,814	35,709	1,392	48,516	81,628
Portugal	2021	11,692	20850,816	434756544,742	35,483	1,404	50,240	81,690
Portugal	2022	11,506	21161,524	447810077,591	35,261	1,416	51,945	81,752
Romania	2007	10,530	7252,181	52594133,943	45,209	1,513	19,386	73,369
Romania	2008	9,736	7444,071	55414189,380	44,433	1,524	20,563	73,602
Romania	2009	8,961	7635,707	58304024,021	43,657	1,536	21,724	73,833
Romania	2010	8,214	7833,645	61365991,477	42,889	1,547	22,849	74,057
Romania	2011	7,485	8046,292	64742809,636	42,151	1,558	23,921	74,270
Romania	2012	6,773	8279,417	68548752,307	41,438	1,573	24,911	74,463
Romania	2013	6,095	8537,784	72893755,781	40,725	1,591	25,792	74,629
Romania	2014	5,473	8824,310	77868440,309	39,995	1,613	26,544	74,759
Romania	2015	4,914	9138,170	83506152,011	39,245	1,638	27,156	74,850
Romania	2016	4,416	9476,572	89805414,528	38,498	1,664	27,633	74,902
Romania	2017	3,985	9834,166	96710829,535	37,799	1,691	27,993	74,915
Romania	2018	3,629	10202,418	104089323,722	37,159	1,717	28,248	74,890

Romania	2019	3,348	10574,010	111809681,628	36,569	1,740	28,422	74,834
Romania	2020	3,124	10945,296	119799506,139	36,016	1,762	28,536	74,756
Romania	2021	2,941	11317,741	128091254,157	35,482	1,782	28,620	74,673
Romania	2022	2,775	11690,584	136669759,673	34,956	1,802	28,701	74,597
Slovakia	2007	22,176	14110,871	199116687,450	30,472	1,325	20,189	74,855
Slovakia	2008	21,756	14314,980	204918646,802	30,412	1,341	22,693	75,152
Slovakia	2009	21,350	14519,695	210821535,661	30,355	1,357	25,194	75,445
Slovakia	2010	20,963	14731,609	217020290,289	30,294	1,371	27,673	75,731
Slovakia	2011	20,608	14953,477	223606473,893	30,204	1,384	30,098	76,003
Slovakia	2012	20,282	15188,179	230680778,269	30,070	1,398	32,456	76,253
Slovakia	2013	19,976	15436,510	238285828,748	29,879	1,413	34,744	76,474
Slovakia	2014	19,690	15697,573	246413811,019	29,609	1,430	36,958	76,660
Slovakia	2015	19,408	15967,649	254965801,281	29,261	1,450	39,103	76,806
Slovakia	2016	19,117	16240,725	263761157,285	28,841	1,473	41,179	76,909
Slovakia	2017	18,805	16511,029	272614093,899	28,372	1,496	43,191	76,968
Slovakia	2018	18,463	16772,224	281307493,945	27,883	1,521	45,147	76,982
Slovakia	2019	18,093	17019,797	289673474,613	27,392	1,545	47,054	76,958
Slovakia	2020	17,711	17254,350	297712594,939	26,906	1,569	48,917	76,902
Slovakia	2021	17,336	17481,325	305596739,701	26,426	1,592	50,747	76,833
Slovakia	2022	16,968	17704,659	313454965,566	25,946	1,615	52,559	76,768
Slovenia	2007	2,409	20600,861	424395481,197	27,406	1,476	37,795	78,858
Slovenia	2008	2,812	20508,992	420618747,448	27,710	1,495	39,341	79,162
Slovenia	2009	3,241	20423,782	417130886,718	28,014	1,514	40,913	79,460

Slovenia	2010	3,734	20364,090	414696152,576	28,316	1,530	42,525	79,749
Slovenia	2011	4,289	20349,560	414104604,386	28,595	1,545	44,179	80,022
Slovenia	2012	4,876	20398,712	416107442,036	28,845	1,557	45,855	80,274
Slovenia	2013	5,453	20528,518	421420040,756	29,064	1,568	47,534	80,501
Slovenia	2014	5,975	20746,323	430409898,471	29,253	1,577	49,194	80,698
Slovenia	2015	6,407	21047,662	443004073,766	29,418	1,584	50,810	80,862
Slovenia	2016	6,722	21421,537	458882239,640	29,567	1,590	52,354	80,992
Slovenia	2017	6,914	21848,930	477375739,018	29,711	1,595	53,818	81,090
Slovenia	2018	6,986	22307,458	497622666,851	29,855	1,599	55,219	81,160
Slovenia	2019	6,961	22777,946	518834822,856	30,005	1,601	56,597	81,204
Slovenia	2020	6,882	23249,576	540542771,141	30,165	1,602	57,975	81,233
Slovenia	2021	6,802	23722,110	562738523,370	30,330	1,603	59,357	81,255
Slovenia	2022	6,737	24192,548	585279376,382	30,497	1,603	60,734	81,279
Spain	2007	18,078	25961,256	673986815,570	35,069	1,410	44,610	81,461
Spain	2008	17,785	25818,183	666578586,530	35,004	1,397	44,905	81,720
Spain	2009	17,492	25684,034	659669589,989	34,939	1,383	45,207	81,976
Spain	2010	17,182	25574,008	654029908,191	34,875	1,369	45,531	82,222
Spain	2011	16,832	25503,895	650448641,636	34,816	1,356	45,886	82,453
Spain	2012	16,406	25489,657	649722607,978	34,759	1,342	46,295	82,662
Spain	2013	15,878	25541,864	652386815,166	34,696	1,329	46,776	82,848
Spain	2014	15,245	25660,006	658435922,759	34,615	1,316	47,343	83,004
Spain	2015	14,521	25830,598	667219809,086	34,503	1,303	48,011	83,130
Spain	2016	13,719	26030,099	677566066,466	34,351	1,289	48,794	83,228

Spain	2017	12,846	26234,149	688230589,126	34,158	1,272	49,695	83,296
Spain	2018	11,922	26424,081	698232049,965	33,929	1,254	50,702	83,339
Spain	2019	10,971	26591,272	707095724,990	33,675	1,235	51,792	83,361
Spain	2020	10,018	26739,994	715027264,745	33,410	1,215	52,936	83,366
Spain	2021	9,073	26889,092	723023251,426	33,150	1,195	54,112	83,367
Spain	2022	8,134	27039,686	731144642,571	32,892	1,174	55,303	83,367
Sweden	2007	17,306	49110,228	2411814521,480	31,486	1,944	45,980	81,180
Sweden	2008	16,825	49296,401	2430135171,910	31,192	1,938	46,969	81,325
Sweden	2009	16,349	49498,860	2450137184,794	30,908	1,931	47,957	81,469
Sweden	2010	15,884	49743,855	2474451098,538	30,648	1,922	48,936	81,612
Sweden	2011	15,429	50036,311	2503632395,345	30,418	1,912	49,905	81,752
Sweden	2012	14,978	50381,916	2538337461,325	30,232	1,898	50,862	81,888
Sweden	2013	14,527	50790,807	2579706030,545	30,106	1,882	51,806	82,022
Sweden	2014	14,078	51268,106	2628418693,940	30,054	1,862	52,732	82,153
Sweden	2015	13,632	51810,935	2684372992,332	30,082	1,839	53,632	82,280
Sweden	2016	13,189	52411,412	2746956069,003	30,195	1,812	54,508	82,404
Sweden	2017	12,752	53063,361	2815720279,393	30,404	1,783	55,371	82,526
Sweden	2018	12,324	53759,554	2890089632,785	30,709	1,750	56,239	82,646
Sweden	2019	11,908	54495,608	2969771243,685	31,102	1,715	57,126	82,763
Sweden	2020	11,502	55265,427	3054267458,302	31,565	1,679	58,033	82,878
Sweden	2021	11,105	56065,690	3143361552,711	32,067	1,641	58,956	82,993
Sweden	2022	10,712	56876,447	3234930169,036	32,581	1,603	59,889	83,109

2. Stationary Tests of data in levels

Table 3A: Stata Output of Stationary Test of PayGap

Levin–Lin–Chu unit-root test for t_PayGap

H0: Panels contain unit roots	Number of panels = 27
Ha: Panels are stationary	Number of periods = 16
AR parameter: Common	Asymptotics: N/T -> 0
Panel means: Included	
Time trend: Not included	

ADF regressions: 1 lag
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-6.7303	
Adjusted t*	-6.3309	0.0000

Table 4A: Stata Output of Stationary Test of GNI_pc

Levin–Lin–Chu unit-root test for t_GNIpc

H0: Panels contain unit roots	Number of panels = 27
Ha: Panels are stationary	Number of periods = 16
AR parameter: Common	Asymptotics: N/T -> 0
Panel means: Included	
Time trend: Not included	

ADF regressions: 1 lag
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-13.3993	
Adjusted t*	-11.4098	0.0000

Table 5A: Stata Output of Stationary Test of GNIpc_sq

Levin–Lin–Chu unit-root test for t_GNIpc2

H0: Panels contain unit roots	Number of panels = 27
Ha: Panels are stationary	Number of periods = 16
	Asymptotics: N/T ->
AR parameter: Common	0
Panel means: Included	
Time trend: Not included	

ADF regressions: 1 lag
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-17.1558	
Adjusted t*	-13.2487	0.0000

Table 6A: Stata Output of Stationary Test of Inequality

Levin–Lin–Chu unit-root test for t_IncomeIne

H0: Panels contain unit roots	Number of panels = 27
Ha: Panels are stationary	Number of periods = 16
	Asymptotics: N/T ->
AR parameter: Common	0
Panel means: Included	
Time trend: Not included	

ADF regressions: 1 lag
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-13.9266	
Adjusted t*	-11.4785	0.0000

Table 7A: Stata Output of Stationary Test of FertR

Kevin–Lin–Chu unit-root test for t_FertR

H0: Panels contain unit roots		Number of panels =	27
Ha: Panels are stationary		Number of periods =	16
		Asymptotics: N/T ->	
AR parameter: Common	0		
Panel means: Included			
Time trend: Not included			
ADF regressions: 1 lag			
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)			

	Statistic	p-value
Unadjusted t	-14.1366	
Adjusted t*	-12.6754	0.0000

Table 8A: Stata Output of Stationary Test of Edu

Levin–Lin–Chu unit-root test for t_Edu

H0: Panels contain unit roots		Number of panels =	27
Ha: Panels are stationary		Number of periods =	16
		Asymptotics: N/T ->	
AR parameter: Common	0		
Panel means: Included			
Time trend: Not included			
ADF regressions: 1 lag			
LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)			

	Statistic	p-value
Unadjusted t	-5.0424	
Adjusted t*	-4.1760	0.0000

Table 9A: Stata Output of Stationary Test of Life

Levin–Lin–Chu unit-root test for t_Life

H0: Panels contain unit roots	Number of panels = 27
Ha: Panels are stationary	Number of periods = 16
AR parameter: Common	Asymptotics: N/T -> 0
Panel means: Included	
Time trend: Not included	

ADF regressions: 1 lag

LR variance: Bartlett kernel, 8.00 lags average (chosen by LLC)

	Statistic	p-value
Unadjusted t	-36.1956	
Adjusted t*	-31.5268	0.0000

3. Stata Regression Model Outputs

Table 10A: Output of Stata Regression Model in Levels with Robust Standard Errors

Linear regression

Number of obs = 432
F(30, 400) = .
Prob > F = .
R-squared = 0.9380
Root MSE = 1.4886

PayGap	Coefficient	Robust std. err.	t	P>|t|	[95% conf.	interval]
Life	-.51621	.1628561	-3.17	0.002	-.8363709	-.1960491
FertR	3.977555	1.27583	3.12	0.002	1.469385	6.485726
Edu	-.060279	.0187633	-3.21	0.001	-.0971659	-.0233921
GNIpc	.0003556	.0001096	3.24	0.001	.00014	.0005711
GNIpc2	-4.16e-09	1.07e-09	-3.87	0.000	-6.27e-09	-2.05e-09
IncomeIne	40.11943	6.226815	6.44	0.000	27.87806	52.3608
Dcountry1	8.374887	1.210203	6.92	0.000	5.995733	10.75404
Dcountry2	-5.379739	1.099962	-4.89	0.000	-7.542169	-3.21731
Dcountry3	-.7792643	.6221397	-1.25	0.211	-2.002336	.4438078
Dcountry5	3.482374	.8291828	4.20	0.000	1.852274	5.112475
Dcountry6	10.62684	.6938205	15.32	0.000	9.262845	11.99083

Dcountry7	2.627728	1.376176	1.91	0.057	-.0777141	5.333169
Dcountry8	11.58104	.6041407	19.17	0.000	10.39335	12.76873
Dcountry9	5.535902	1.162622	4.76	0.000	3.250289	7.821515
Dcountry10	1.998706	1.051547	1.90	0.058	-.0685432	4.065956
Dcountry11	5.58737	1.179549	4.74	0.000	3.268479	7.906261
Dcountry12	4.155938	.4015299	10.35	0.000	3.366565	4.94531
Dcountry13	4.407142	.4676567	9.42	0.000	3.48777	5.326514
Dcountry14	-1.190337	1.138503	-1.05	0.296	-3.428534	1.04786
Dcountry15	-7.738532	.7554574	-10.24	0.000	-9.223695	-6.253369
Dcountry16	3.01672	.9821056	3.07	0.002	1.085986	4.947453
Dcountry18	-4.021045	1.417758	-2.84	0.005	-6.808234	-1.233856
Dcountry20	4.083667	1.184702	3.45	0.001	1.754646	6.412688
Dcountry21	-4.453244	.3474265	-12.82	0.000	-5.136254	-3.770234
Dcountry23	-10.17684	.6948979	-14.65	0.000	-11.54295	-8.810729
Dcountry24	8.691228	.6067211	14.32	0.000	7.498467	9.883988
Dcountry25	-4.209577	.8115526	-5.19	0.000	-5.805019	-2.614136
Dcountry26	3.869967	.6916665	5.60	0.000	2.510211	5.229722
Dcountry27	2.157308	1.321453	1.63	0.103	-.4405517	4.755168
Covid19	-1.256143	.2404878	-5.22	0.000	-1.728921	-.7833651
Crisis_2012	-.7483252	.2002806	-3.74	0.000	-1.142059	-.3545912
_cons	31.30193	13.96019	2.24	0.025	3.85741	58.74644

4. Observed and Estimated Data

Table 11A: Observed GNI per Capita and Estimated GPG

Year	GNIpc	Estimated Gender Pay Gap
2007	732768,4	5,397197178
2008	733957	5,422254361
2009	735474,2	5,446135904
2010	737916,2	5,469323651
2011	741638,4	5,493369453
2012	746890,3	5,519715958
2013	753832,6	5,549484849
2014	762506,8	5,582453318
2015	772763	5,617418272
2016	784325,5	5,652346075
2017	796834,6	5,685557829
2018	809909,8	5,715641486
2019	823290,4	5,741426882
2020	836877,3	5,762265337
2021	850735,9	5,778520433
2022	864668,9	5,790288288