wiiw

MAY 2026

Working Paper 275

What drives child benefit size and design in Europe?

Macroeconomic, sociocultural, and political factors

Kristijan Fidanovski

The Vienna Institute for International Economic Studies
Wiener Institut für Internationale Wirtschaftsvergleiche

What drives child benefit size and design in Europe?

Macroeconomic, sociocultural, and political factors

KRISTIJAN FIDANOVSKI

Kristijan Fidanovski is Economist at The Vienna Institute for International Economic Studies (wiiw).

Abstract

Family policy spending has been linked to a wide range of macroeconomic, sociocultural, and political factors in the social policy, family policy, demography, and political science literatures. This paper examines the influence of these factors on child benefits in the context of population aging. More specifically, it explores the impact of five macroeconomic factors, three sociocultural factors related to immigration, and three political (f)actors on child benefit size and design in 26 European countries between 2002 and 2021. Child benefit size is operationalised in cumulative terms as well as in terms of variation by birth order (from first to fourth children) and household income (middle- and low-income). The analysis is conducted through pooled time series regressions with country-fixed effects and panel-corrected standard errors, using data from a wide range of international sources.

The paper finds that all three types of factors tested are linked to child benefit size, although whether and to what extent they matter varies by birth order and household income. The most consistently (negatively) associated factor is immigration stock. In some of the models, child benefit size is also associated with inflation (negatively), GDP (positively), pro-immigration attitudes (positively), and right-wing party strength (positively and negatively, depending on household income). Moreover, the difference in benefit size between middle- and low-income households is higher when unemployment is higher. These findings reinforce the scholarly consensus around child benefits as a multi-layered policy instrument whose size is facilitated and constrained by a complex interplay of macroeconomic, sociocultural, and political factors.

Keywords: child benefit size and design, macroeconomic factors, sociocultural factors, political (f)actors

JEL classification: J13, J11, J14, J10

CONTENTS

TABLES AND FIGURES

1. Introduction

Family policy has long been shaped by a complex interplay of macroeconomic, sociocultural, and political factors. This interplay involves various conditions, such as policy paradigms and public sentiments located in the background of the policy process, as well as more immediate drivers and articulations, such as political programmes and discursive frames standing in the foreground of the policy process (Campbell 2004; Streensland 2008; Skogstad 2011; Hogan & Howlett 2015).

Historically, family policies were introduced in response to – and have moved in congruence with – developments within and among families, states, markets, and societies more broadly. During its origins in the late 19th century and early 20th century in Western Europe, family policy began to emerge in the context of industrialisation and the increased capacity of states to meet the needs of their populations at a time when those needs were becoming more complex due to an unprecedented mass entry into formalised employment arrangements (Bahle 1994; Gauthier 1996). It is thus impossible to understand family policy independently from the structural considerations surrounding it, as these constitute the 'skeleton of society which shapes the fields of consensus and conflict and gives lasting support to some developments while simultaneously hindering others' (Kaufmann 2002: 458). However, sociocultural and political factors have tended to exert their influence in parallel with – and partly in response to – structural shifts, with the gradually expanding voting franchise in Europe around this time resulting in increasing demand for political articulation of family policy need(s) triggered by socioeconomic development and expressed by an expanded electorate and their political representatives (Gauthier 1996).

Scholarship is increasingly of the view that the role of ideas must be considered alongside structural factors. As Saraceno (2022: 6) has remarked, Kaufmann's aforementioned structural skeleton 'is not impermeable to social and cultural change'. This is evidenced by the plentiful cross-country variation in family policies in Europe – both over time as well as today – despite largely (albeit not exclusively) contemporaneous socioeconomic developments (Daly & Ferragina 2018). Thus, family policy has tended to operate in a sphere of complex normative contestation of the relationship between families, states, markets, and societies as well as the very understanding of each of these elements individually (Pfau-Effinger 2004). In fact, family policy may be more sensitive to ideational factors than many other policy fields. As Fleckenstein and Mohun Himmelweit (2023: 271) have put it, family policy is a 'domain in which the politics of ideas and ideational change are particularly pronounced, as they relate to competing values about the social order, in terms of public and private responsibilities, gender roles, and the appropriate way to raise children'. Other scholars have highlighted the strongly normative nature of family policy, with a more pronounced 'values tension' (Bode 2022) than many other policy fields.

Changes in family policy have occurred against the backdrop of – and largely in response to – both macroeconomic factors (e.g. increased female employment but also shifts towards service-based economies with typically slower productivity gains and larger associated social risks) and sociocultural factors (e.g. liberalising gender norms and growing recognition of the rights and needs of children) (Ferragina & Seeleib-Kaiser 2015; Daly 2019). Of course, the ways in which policy makers have responded to the aforementioned macroeconomic and sociocultural factors have undoubtedly also been

driven by political considerations. These three types of factors have determined the various institutional arrangements through which policy makers balance between states, markets, and families (Misra et al. 2007; Saraceno & Keck 2010; Korpi et al. 2013; Ferragina & Seeleib-Kaiser 2015).

'Child benefits' is an umbrella term for all forms of government-provided monetary support issued for childbearing and/or childrearing purposes, typically to parents or legal guardians (Wennemo 1994; Gauthier 1996). They account for a majority share of family policy spending in most developed countries (OECD Family Database 2021), having grown drastically and near continuously as a share of household income over the past several decades (Daly & Ferragina 2018). Trends around the differentiation of child benefits by benefit types and socioeconomic groups have been extensively captured by the family and social policy literature, but the variation in benefit size by birth order has received less attention. Some notable exceptions include the studies by Aerts et al. 2023 and Bornukova et al. 2024, both of which found that child benefits in Europe tend to be larger for higher birth orders (especially third children), albeit not without strong cross-country heterogeneity.

This paper seeks to assess some of the underlying factors shaping the size and distributive profile of child benefits across family types and socioeconomic groups over time. The decision to apply such a multi-layered treatment of child benefits is motivated by the well-established acknowledgment in the social policy literature of the 'dependent variable problem' (Clasen & Siegel 2007), or the tendency to (over)reduce the theoretical and analytical focus to aggregate indicators, thus risking the outcome of simplistic research findings. On the independent variable, as an analytical heuristic, the factors of interest are divided into macroeconomic, sociocultural, and political factors, while recognising that these do not always constitute fully distinct categories (as discussed in the next section).

The rest of the paper is divided into six sections. Section 2 provides some theoretical and empirical background for the paper by situating this work within the broader family policy, social policy, and political science literature on policy drivers and constraints, with special emphasis on the theoretical considerations unique to child benefits as a policy instrument. Section 3 sets out the analytical framework for the paper vis-à-vis its four research hypotheses. Section 4 details the data and methods used in the paper. The remaining three sections present and discuss the results of the analysis before concluding.

2. Motivation and Justification

This section provides a detailed overview of the family policy, social policy, and political science literature around these three sets of factors of interest (in three separate sub-sections), with special emphasis on child benefits as the policy instrument of focus, which also provide the basis for deriving the four research hypotheses in the paper.

2.1. MACROECONOMIC FACTORS

The relationship between macroeconomic factors and the size of child benefits (and, to a lesser extent, its variation by birth order and household income) is relatively well documented and seems to indicate that child benefits tend to be neither among the first policies to be downsized in an unfavourable macroeconomic environment nor completely shielded from such risks.

Streeck and Mertens (2013), for instance, categorise child benefits (and family policy more broadly) under discretionary spending, or policies whose size and sometimes survival is dependent on the macroeconomic conditions, as opposed to mandatory spending, which is less sensitive to economic downturns. In this dichotomy, child benefits (among other policies) are counterposed to, for instance, pensions, whose minimum value tends to be fixed and which tend to be indexed to inflation (ibid.). This discrepancy has been termed 'pro-elderly bias' (Gal et al. 2018), or the tendency of contemporary welfare states to spend (much) more on the elderly than they do on children, with the gap widening further over the last few decades (Birnbaum et al. 2017).

Taking a longer view, Kamerman and Kahn (2001) saw child benefits (and other family policies) as victims of the broader trend of welfare state retrenchment (Korpi & Palme 2003), or the slowdown in spending on a wide range of social policies amidst weak economic growth in the 1970s and 1980s. Writing in the aftermath of an even more acute economic crisis, Blum et al. (2014) also concluded that family policies had been affected particularly severely by the Great Recession, although they view this trend as inextricable from contemporaneous sociocultural and political shifts. Finally, Pierson (2002) describes child benefits as victims of 'politics in an age of austerity', but with reference to the long-term (and ever-growing) spending constraints posed by demographic change (see also Vlandas 2023) – meaning the increasing ratio of retirement-age individuals to working-age population – rather than any specific economic downturn.

However, there are also reasons to be less pessimistic about the vulnerability of child benefits to macroeconomic constraints on social spending. Some scholars have noted that spending trends have been much more resilient for family policies than they have been, for instance, for unemployment protection (Swank 2005; Ferragina 2022). Even the demographic aspect can be seen as more of an incentive than a disincentive for spending on child benefits from a pronatalist perspective, with the goal of encouraging the birth of more children as future workers who can alleviate spending pressures the long run. This aspect has been receiving growing attention in the family policy literature, which has been becoming increasingly interested in the 'productivist' function of families (e.g. Vanhuysse et al. 2023), as

they are mobilised by political economy configurations as agents of, among other things, human capital development and labour supply. A positive association between the old-age dependency ratio and aggregate child benefit spending has indeed been found by Ferragina and Seeleib-Kaiser (2015).

Needless to say, whether and to what extent macroeconomic considerations will be factored into the policy-making calculus also depends on sociocultural and political considerations. Yet, the point here is that the relationship between unfavourable macroeconomic conditions ought not to be viewed deterministically, as they may (or may not) be counterweighted by macroeconomic considerations pushing in the opposite direction and prompting policy makers to be reluctant to reduce spending on child benefits. Overall, however, despite the latter caveat, one can expect unfavourable macroeconomic conditions to (all else being equal) affect the size of child benefits negatively. As for their impact on their distributive profile by birth order, one can expect macroeconomic constraints to skew benefit size towards higher birth orders. Governments facing an economic downturn may prioritise minimising child poverty, which is disproportionately common in large families (Buchanan & Rotkirch 2013; Philipov et al. 2013), warranting the de-prioritisation of small families. Finally, for the same reason, under unfavourable macroeconomic circumstances, governments may be more reluctant to reduce benefit size for low-income households relative to middle-income households, as any benefit reduction would disproportionately impact the consumption patterns and quality of life of the former type of households, thus carrying potentially disproportionate political risks for policy makers (e.g. Stancheva 2024).

2.2. SOCIOCULTURAL FACTORS RELATED TO IMMIGRATION

When it comes to the overall sociocultural norms on the importance of child benefits, it is clear that they have been societally accepted as a well-established component of the family policy toolkit. The previously summarised notion of ‘social investment’, with its focus on the long-term cognitive and physical development of children, both in their own right and as contributors to their societies, has reflected a growing sociocultural recognition of the complexity of children’s needs (Daly 2019). At the societal level, it is worth highlighting the notion of ‘children as public goods’ (Folbre 1994; Engster 2008; Bou-Habib & Olsaretti 2021), which captures the increasing understanding of the positive externalities provided by children, thus strengthening the societal consensus for alleviating parents’ childrearing burden, including through child benefits.

However, while the underlying sociocultural conditions facilitating the existence and continuous aggregate growth of child benefits are present in contemporary European societies, the conclusion that the societal consensus around the importance of these policies is invulnerable may be unwarranted. Bremer and Buergisser (2023) have provided evidence that family policies (including child benefits) tend to find themselves far below pension and education among citizens’ spending priorities (although slightly above labour market policies). A similar conclusion has been reached by Vlandas (2023), who found that countries with a larger share of elderly population (*gerontonomias*) are particularly likely to prioritise policies benefitting the elderly over those benefitting working-age adults (including parents). His proposed mechanism for this trend relates to the superior influence on decision making exercised by (typically higher-turnout) elderly voters (Goerres & Vanhuysse 2021), who are less likely to favour child benefit spending over other types of expenditures.

Any examination of the sociocultural factors affecting child benefits in recent decades would be inadequate without considering the revival of nationalism, which has (re)assumed a major role in the politics of developed countries (Calhoun 2017; Fukuyama 2018; Whitehead et al. 2018). Despite the gradual convergence in economic prosperity, the widely expected 'convergence of values' (Inglehart 1999) and 'end of history' (Fukuyama 1991) have so far failed to materialise, with anxieties about the allegedly threatened survival of the nation losing none of their salience and often gaining additional potency. While this trend has manifested itself across Europe, the failure to achieve a convergence of values towards liberalism (at the level of citizen attitudes) during the three decades since the collapse of one-party rule has been most conspicuous in Eastern Europe (Kornai 2015; Krastev 2016; Grzymala-Busse 2017).

In social and family policy, this trend has mostly manifested itself (and been conceptualised accordingly) as 'welfare chauvinism': the reduction or even wholesale withholding of welfare provisions from specific social or societal groups due to selective understandings of national belonging and thus benefit 'deservingness' (Brady & Finnigan 2014; Eick 2024). This trend has become particularly relevant in the current context of all-time-highest foreign-born populations in many developed countries. While some scholars have shown that the fertility rate of immigrants (gradually) do converge with the average birth rate in their country of arrival (Tønnessen & Mussino 2020), immigrants (especially first-generation ones) are usually more likely to occupy a lower socioeconomic status and have larger families than the general population. There are also considerable differences in fertility behaviours between (domestic-born) ethnic and religious groups, often even within countries and at comparable levels of socioeconomic status (Rindfuss & Choe 2016). These objectively different socioeconomic trends between native and immigrant populations are often accompanied by beliefs that immigrants are more likely to be unemployed and take advantage of the welfare state, which is seen to have contributed to the previously discussed commodification of child benefits through increasingly stringent employment conditions (Ferrarini et al. 2012; Ferragina 2022).

Thus, sociocultural factors such as immigration stock and intolerant attitudes towards immigration can be expected to be negatively associated with aggregate child benefit size. This may, however, not hold true (or at least not to the same extent) for immigration stock as it may for anti-immigration attitudes, as long-standing traditions of diversity have been shown to lead to less intolerant citizen attitudes and policy outcomes than short-term and abrupt changes in the ethnic composition of a given population (Pettigrew 1998; Schlueter & Scheepers 2010). The thus-derived Intergroup Contact Theory posits that a high degree of ethnic heterogeneity may make the respective society more accustomed to diversity and therefore less likely to favour any form of discrimination based on immigration status (ibid). Moreover, given the aforementioned differentials in the fertility rate and socioeconomic status of native and immigrant populations, large benefits for higher birth orders and low-income households are often seen as disproportionately benefitting immigrant communities (Eick 2024), which may skew benefits towards lower birth orders and middle-income households in contexts of intolerant sociocultural norms.

2.3. POLITICAL (F)ACTORS

The revival of exclusionist sociocultural norms summarised in the previous sub-section has to a large extent been reflected in – and, in turn, driven by – similar trends at the political level. Across Europe, but most saliently in its Eastern parts, the last few decades have seen the proliferation of illiberal ideologies by policy makers and political parties, including – and perhaps especially – among those in government (Kornai 2015; Krastev 2016; Grzymala-Busse 2017).

The most obvious link between these broader political trends and child benefits relates to the pronatalist function of the latter, which has become increasingly salient. Armitage (2021) has proposed the notion of 'demographic imaginaries', where imagination and ideology, rather than purely technical considerations around demographic data, are central to the creation and construction of a 'population crisis'. In line with Haskova et al. (2022) and Szalma et al. (2022), she argues (2021) that pronatalism has 'couche[d] changes in the size, age structure, geographic distribution, or ethnic composition of populations within the realm of national security and national stability'.

As an element of the aforementioned family policy triad, child benefits have been embraced ever more strongly amidst the growing prevalence of pronatalism. This has been particularly true in Eastern Europe, where the twin trends of growing nationalism and pronatalism have been accompanied by another (related) socio-political tendency, namely 're-traditionalisation'. The renewed embrace of religion in societies with high (pre-socialist) historical rates of religious belief (Merdjanova 2000) has led to a widespread embrace of familialist policy models with a strong emphasis on child benefits and parental leave (Shiffman et al. 2002; Hantrais 2004; Javornik 2016; Ghodsee 2018).

Thus, the presence of right-wing parties in government and governments with a declared pronatalist orientation can be expected to be positively associated with child benefit size. However, while this expectation of a positive association follows neatly from the literature summarised above, it is worth mentioning that some scholarship is nonetheless sceptical. Right-wing party ideology, for instance, has been deemed more relevant to the breadth of benefit eligibility than to their aggregate size, with a tendency towards stricter eligibility (by various criteria) being observed particularly in the early stages of the governing mandate of the party (Bandau & Ahrens 2020; Ennser-Jedenastik 2022). Right-wing parties have been linked to lower spending on child benefits in the 1980s (Ferragina & Seeleib-Kaiser 2015) but have exhibited no statistically significant impact since the 1990s. On the other hand, there is a stronger scholarly consensus around the expected influence of left-wing party ideology (Therborn 1993; Childs & Krook 2009; Ferragina & Seeleib-Kaiser 2015), which has been consistently linked to more generous family policies, including larger child benefits. Overall, however, the impact of (any) party ideology on child benefit size has been as declining in more recent decades, possibly because of the aforementioned concomitant convergence in societal preferences around higher family policy (and child benefit) spending, prompting political parties to match this convergence in their own platforms and actions (Sjöberg 2012).

Moreover, it is difficult to formulate an expected relationship between political (f)actors and the distributive profile of child benefits by birth order. On the one hand, the literature on pronatalism abounds with evidence of an increasing focus on higher birth orders in contemporary pronatalist policy packages introduced by right-wing ruling parties (Speder 2016; Wilk 2020; Inglot et al. 2022). On the other hand, the expectations of welfare chauvinism articulated in the previous sub-section have often been reflected rather

clearly at the political and even policy level. Some notable country cases, such as the Netherlands and United Kingdom, of benefit caps after a certain number of children (Reader et al. 2022; Mari 2024) have been commonly interpreted as being at least partly driven by a desire to exclude (higher-fertility) immigrant or ethnic-minority households (and thus indirectly low-income households, who are typically larger as well). Similar discussions have been salient with regard to benefit reductions for higher birth orders in countries with high shares of (high-fertility) Roma populations, such as Hungary (Guy & Kovacz 2006). It is thus not possible to formulate an unambiguous expectation regarding this relationship, which can be expected to be pulled in any of the opposite directions by the factors listed here. Regarding the differentiation by household income, however, one may not expect pronatalist governments (at least not without possessing additional information about their ideological orientation or policy history) to differentiate considerably between income groups, as they presumably seek to incentivise fertility across the board.

3. Analytical Framework

This paper seeks to assess some of the underlying factors shaping the size and differentiation of child benefits across family types and socioeconomic groups over time. The decision to apply such a multi-layered treatment of child benefits is motivated by the well-established acknowledgment in the social policy literature of the 'dependent variable problem' (Clasen & Siegel 2007), or the tendency to (over)reduce the theoretical and analytical focus to aggregate indicators, thus risking the outcome of simplistic research findings. On the independent variable, as an analytical heuristic, the factors of interest are divided into macroeconomic, sociocultural, and political factors, while recognising that these do not always constitute fully distinct categories (as discussed above).

As previously anticipated, the core research question in this paper reads: *How do macroeconomic, sociocultural, and political (f)actors influence the size and design of child benefits in Europe?* This question is answered by testing the following three hypotheses (summarised also in the form of a matrix in Table 1 below):

H1. Total child benefit size is associated negatively with macroeconomic and sociocultural constraints but positively with the tested political factors.

H2. The size of child benefits for each birth order, and especially higher birth orders, is associated negatively with macroeconomic and sociocultural constraints but positively with left-wing party strength.

H3a. The size of child benefits is associated negatively with right-wing party strength and pronatalist government orientation for first and second children but positively for third and fourth children.

H3b. The size of child benefits is associated positively with right-wing party strength for first and second children but negatively for third and fourth children.

H4. The size of child benefits for middle-income households relative to low-income households is associated negatively with macroeconomic constraints but positively with sociocultural constraints and pronatalist government orientation.

Table 1 / Summary of the analytical framework and the expected relationships

	Independent variable		
Dependent variable	**A. Macroeconomic constraints**	**B. Sociocultural constraints**	**C. Political (f)actors**
1. Total benefit size	Negative	Negative	Positive
2. Benefit size for higher birth orders	Negative	Negative	Ambiguous
3. Ratio of middle- to low-income benefit size	Negative	Positive	Positive (for pronatalist government orientation)

4. Data and Methods

The data on the dependent variable encompass the size of child benefits at three child ages (2, 9, and 17 years) and four birth orders (from first to fourth) for middle-income[1] and low-income[2] households in the 26 European member countries[3] (17 for the low-income households[4]) of the Organisation for Economic Cooperation and Development (OECD) from 2002 to 2021. The size is expressed in aggregate terms (for all four children and at an average level across the three referent ages) as well as in terms of child-contingent payments (CCPs), that is, separately for the relevant birth order (in line with Corak et al. 2005; Figari et al. 2011; Pezer 2022; Fidanovski 2023; Bornukova et al. 2024) and at an average level across the three referent ages. All size values refer to the marginal increase in household income as a result of the relevant number of children, thus comparing the household to a household with an otherwise identical total income apart from the sum of any child-related government financial transfers made to the household.[5] The benefit data have been derived from the dedicated online platform version of the OECD Tax Benefit Model (TaxBen) simulator, which provides comprehensive and methodologically consistent information on child benefit size[6] in OECD member countries in the form of annual values applicable as of January of the relevant year. The data on the independent variable have been derived from a wide range of international sources (listed in Table 2 below).

The method used in the analysis is pooled time series regression with fixed-country effects and panel-corrected standard errors (Dielman 1983; Ward & Leigh 1993) conducted in the statistical software R (PCSE and PLM packages). This method captures differences within countries across time and aggregates them into cumulative estimates. It is well suited to this analysis, as child benefits can take a wide range of (tax-based or direct) forms, each of which is subject to change from one year to the next, even if only in the form of an inflation adjustment (or lack thereof), thus affecting benefit size on the dependent variable. The time series datasets are available upon request.[7] The independent variables were lagged by one year (in line with Ferragina & Seeleib-Kaiser 2015) to allow time for the factors of

1 Total gross household income: 150% of the median national wage (first adult = 100%; second adult = 50%).

2 Total gross household income: 60% of the median national wage (first adult = 30%; second adult = 30%). The assumptions for the two adults are meant to broadly correspond to de jure or de facto minimum-wage conditions at part-time (50%) working hours.

3 Austria, Belgium, Czechia, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland, and the United Kingdom.

4 Belgium, Czechia, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Portugal, Slovakia, Slovenia, Spain, and the United Kingdom

5 For instance, benefit size of 10% for the first child in a given country in a given year means that the total benefits received by a middle-income household (as defined in this paper) corresponded to a 10% boost to the income of the household in January of the relevant year. Benefit size of, for instance, 6% for a second child would mean that the benefits increased the household income by an additional 6% (i.e. compared to if the household only contained one child). The same logic applies for the third and fourth child, respectively.

6 The OECD TaxBen simulator includes all types (direct or tax-based) of income-supplementing (i.e. excluding parental leave) monetary support issued to parents and legal guardians.

7 The middle-income dataset consists of 10,420 observations (including 704 missing values), while the low-income dataset contains 7,843 observations (including 458 missing values). Missing values have been replaced with the mean values for the corresponding columns.

interest to have been able to feature into the policy-making calculus and affect benefit size. This means that each of the 19 pairs of values making up the regression estimates consists of values on the independent variable for a given year and values on the dependent variable for the previous year. The regression models also included a correction for autocorrelation and standardisation, bringing all observations into the same range and allowing for a meaningful comparison between the variables.

Table 2 / List of data sources on the independent variable

	Independent variable	Data source
Macroeconomic factors	Real GDP growth[1)]	OECD
	Unemployment	OECD
	Inflation	World Bank
	Debt-to-GDP ratio	OECD
	Share of elderly population[2)]	World Bank
Sociocultural factors	Immigration stock[3)]	United Nations
	Pro-immigration attitudes[4)]	European Social Survey
	Anti-immigration attitudes (for ethnicities different than own)[5)]	European Social Survey
Political (f)actors	Pronatalist government orientation[6)]	United Nations World Population Policies
	Left-wing party strength in government[7)]	Comparative Political Dataset (CPDS), University of Zurich
	Right-wing party strength in government[8)]	Comparative Political Dataset (CPDS), University of Zurich

Note:
1) Real GDP growth is the only favourable macroeconomic factor tested. For the sake of conciseness, the hypotheses stated in Table 1 jointly refers to macroeconomic constraints (i.e. low GDP growth). In the analysis itself, the expected relationships for this variable are, of course, the inverse of those for the remaining macroeconomic factors.
2) The share of people 65+ years old in the population relative to the share of working-age population (18-64 years old).
3) The combined share of foreign-born population.
4) Derived from responses to the survey statement: *Immigrants make country better or worse place to live*. Higher values denote more positive/pro-immigration attitudes. For the sake of conciseness, the hypotheses stated in Table 1 jointly refer to sociocultural constraints (i.e. low pro-immigration attitudes). In the analysis itself, the expected relationships for this variable are, of course, the inverse of those for the remaining two sociocultural factors.
5) Derived from responses to the survey statement: *Allow few/many immigrants of a different race/ethnic group from majority*. Higher values denote more anti-immigration attitudes.
6) Derived from survey responses by national governments denoting a declarative commitment to increasing the birth rate and the ongoing implementation of policy to achieve this goal.
7) The share of parliamentary seats occupied by a left-wing party while in government.
8) The share of parliamentary seats occupied by a right-wing party while in government.

Finally, a jackknife robustness test was performed to ensure that outlier countries on the dependent variable do not excessively influence the results.

In each model, only the countries whose values differed from the mean value in the sample by at least two standard deviations (SDs), either upwards or downwards, were excluded; in models where no such countries existed in the sample, the countries with a deviation of at least one standard deviation in either direction were treated as outliers, instead. This approach resulted in the following list of outliers:

› total: Middle-income (M) benefit size – Belgium, Hungary, Slovakia (> 1 SD); Iceland, Spain, UK (< 1 SD); Low-income (LI) benefit size – Luxembourg, Poland, Slovakia (> 1 SD); Spain (< 2 SD); MI + LI benefit size – Hungary, Luxembourg, Poland, Slovakia (> 1 SD); Spain (< 2 SD); MI/LI benefit size ratio – Hungary, Lithuania (> 1 SD); Czechia, Ireland, UK (< 1 SD)

› first children: MI benefit size – Hungary, Slovenia (> 1 SD); Greece, Iceland, Spain (< 1 SD); LI benefit size – Czechia, Poland, Slovakia (> 1 SD); Greece, Portugal (< 1 SD)

› second children: MI benefit size – Hungary (> 1 SD); Iceland, Spain (< 1 SD); LI benefit size – Hungary, Luxembourg, Poland, Slovakia (> 1 SD); Greece, Lithuania, Netherlands, Portugal (< 1 SD)

› third children: MI benefit size – Hungary (> 2 SD); Iceland, Netherlands, UK (< 1 SD); LI benefit size – Estonia, Hungary, Latvia, Poland, Slovakia (> 1 SD); Greece, Lithuania, Netherlands, Slovenia (< 1 SD)

› fourth children: MI benefit size – Italy (> 2 SD); Hungary, Netherlands, UK (< 1 SD); LI benefit size – Latvia, Poland (> 1 SD); Netherlands, Spain (< 1 SD)

5. Results

Table 3 below describes the dependent variable for the 20 years of interest,[8] showing a clear upward trend over time. In 2021, child benefits for the two income categories combined – middle-income (MI) plus low-income (LI) – were larger by more than a sixth than in 2002, in line with the trend of growth in benefit sizes discussed in the introduction (e.g. Daly & Ferragina 2018), which was interrupted only for several years in the aftermath of the Great Recession. They were also larger for low-income households, typically by close to two times, compared to middle-income households, mostly because of lower salaries (i.e. base values for the calculations) in the former household type, but often also because the size of the benefits themselves was larger in absolute terms. However, the low-income-household benefit size increased less dramatically over time, becoming only 7.5% higher in 2021 than in 2002, as opposed to an increase by 39.2% for middle-income households. In terms of birth order, for middle-income households, child benefits have been larger (in per-child terms) for third and fourth children than for first and second children in almost every year in the sample, with the gap widening even further in more recent years (mainly as a result of increased size for third children). For low-income households, however, the benefits tend to be smaller for higher birth orders (especially fourth children). Finally, the ratio of the middle- to low-income benefit size tends to increase over time, rising from 0.47 in 2002 to 0.61 in 2021. Unlike the aggregate growth in benefit size, which matches the short- and long-term trends documented in the literature, the growth in this ratio observed over these two decades reverses earlier trends towards larger means-testing (Ferrarini et al. 2012).

Table 4 below describes the dependent variable for the 26 countries of interest. For the middle-income households, the total benefit size is at least one standard deviation (SD) higher than the mean value of the sample in Belgium, Hungary, and Slovakia[9] and at least one SD lower than the mean in Iceland, Spain, and the United Kingdom. These findings correspond to the family policy literature consensus, with Hungary in particular ranking among the highest family policy spenders (e.g. Speder 2016). The observed list of outlier countries changes based on the birth order, with Hungary switching from being a positive outlier for the first three children to a negative one for the fourth child, in line with the much-problematised (Guy & Kovacz 2006) retrenchment for fourth children. In addition to total benefit size, the United Kingdom is also a negative outlier for benefit size for third and fourth children, but not for first and second children, which can be attributed to its two-child benefit cap (e.g. Andersen et al. 2022).

[8] Due to a lack of space, the values on the independent variable are not shown here, but they are available upon request.

[9] For the last six years of the sample, the countries in this group were joined (and overtaken) in terms of total benefit size by Poland as a result of its sizeable and explicitly pronatalist Family 500+ child benefit package launched in 2016.

Table 3 / Descriptive overview of the dependent variable (child benefit size and design) by year

					Middle-income household				Low-income household			
Year	MI total ben. size	LI total ben. size	MI + LI ben. size ratio	MI/LI ben. size ratio	Ben. size (1st ch.) %	Ben. size (2nd ch.) %	Ben. size (3rd ch.) %	Ben. size (4th ch.) %	Ben. size (1st ch.) %	Ben. size (2nd ch.) %	Ben. size (3rd ch.) %	Ben. size (4th ch.) %
2002	18.1	38.5	56.6	0.47	4.36	4.66	7.02	5.71	8.23	10	12.2	10.9
2003	17.8	37.7	55.5	0.47	4.57	4.52	6.74	5.61	8.19	9.27	12.2	10.9
2004	18.3	39.5	57.8	0.46	5.07	4.71	6.49	5.63	8.66	10.7	12.2	10.1
2005	22.4	39.1	61.5	0.57	5.2	4.91	6.49	5.85	9.15	10.4	12	9.5
2006	22	38.1	60.1	0.58	4.87	4.95	6.61	5.54	8.45	10.1	11.9	8.8
2007	22.7	38.9	61.6	0.58	5.01	4.66	7.16	5.85	8.67	10.3	11.7	9.5
2008	23.3	39.6	62.9	0.59	5.37	4.94	7.19	5.81	8.80	9.9	12.1	9.9
2009	23.1	41.6	64.7	0.56	5.1	5.02	6.83	6.12	9.48	11.2	12.2	9.8
2010	22.9	41.2	64.1	0.56	5	4.85	6.71	6.35	9.28	10.7	12.2	10.2
2011	23.2	39.6	62.8	0.59	5.38	5.61	6.07	6.18	8.97	10.3	11.5	9.9
2012	23.7	39.1	62.8	0.61	5.18	5.82	6.56	6.19	9.34	10.2	11.7	9.1
2013	23.3	39.5	62.8	0.59	5.07	5.61	6.45	6.15	9.3	10.7	11.9	8.8
2014	21.8	38.6	60.4	0.56	5.09	5.59	5.71	5.39	9.4	9.73	12	8.6
2015	23.2	40.4	63.6	0.57	4.99	5.35	6.88	5.96	9.29	10.5	12.8	9
2016	25.5	42.2	67.7	0.6	4.94	5.15	8.42	6.97	10.1	10.2	13.3	9.7
2017	25.7	41.1	66.8	0.63	4.87	5.25	9	6.57	10.1	11.1	12.4	9.8
2018	24.8	41.9	66.7	0.59	4.64	5.02	8.81	5.35	9.56	11.1	13.3	9.7
2019	25.6	43.1	68.7	0.59	4.85	5.58	8.92	6.26	10.3	10.4	13.9	10.2
2020	25.6	42.8	68.4	0.59	5.54	5.29	8.66	6.16	10.1	10.1	13.6	10.1
2021	25.2	41.4	66.6	0.61	5.05	6.02	8.02	6.12	9.75	10.4	13.4	10.2

For the low-income households, the total benefit size is at least one SD higher than the mean value of the sample in Luxembourg, Poland, and Slovakia and more than two SDs lower than the mean in Spain. The observed list of outliers changes based on the birth order, but there is a general regional pattern of mostly East European countries constituting positive outliers (with Poland featuring as one in all four birth orders) and Southern European countries constituting negative outliers (Greece for the first three children and Portugal for the first two). In terms of differences between household income categories, low-income households receive larger benefits than middle-income households in all countries except Hungary and Lithuania. However, the impression of an exclusion of (especially low-income) fourth children discussed with regards to Hungary is not observed for Lithuania, as its benefit size for (both middle-income and low-income) fourth children is, in fact, the second-largest among the four birth orders in the country.

Table 4 / Descriptive overview of the dependent variable (child benefit size + design) by country

				Middle-income household				Low-income household				
Country	MI total ben. size	LI total ben. size	MI + LI ben. size ratio	MI/LI ben. size ratio	Ben. size (1st ch.) %	Ben. size (2nd ch.) %	Ben. size (3rd ch.) %	Ben. size (4th ch.) %	Ben. size (1st ch.) %	Ben. size (2nd ch.) %	Ben. size (3rd ch.) %	Ben. size (4th ch.) %
Austria	28.4				9.1	5.9	6.5	6.4				
Belgium	36.3	42.5	78.8	0.85	5.2	8.1	12.2	10.8	6.9	10.4	13.7	11.5
Czechia	21.8	47.7	69.5	0.46	7.4	3.1	5.4	5.9	13.2	12.3	11.9	10.4
Denmark	16.2				3.9	3.9	3.7	4.7				
Estonia	33	41.3	74.3	0.8	4	6.1	14.6	8.3	6.6	9.6	16.9	8.5
Finland	15				5.2	2.9	3.3	3.5				
France	34.1	38.8	72.9	0.88	4.8	7.4	13.7	8.1	7	9.1	13.8	9
Germany	22.7				6.1	5.5	5.3	5.8				
Greece	17	25.9	42.9	0.66	1.4	1.6	7.2	6.8	3	3.2	7.7	11.9
Hungary	50.4	47.8	98.2	1.05	13.2	15.8	19	2.5	12.6	16	18.2	4.4
Iceland	9.1				0.9	1.8	2.4	3.9				
Ireland	14.8	42.4	57.2	0.35	3.7	3.5	3.8	3.8	8.1	10.9	11.6	11.8
Italy	31.2				4.1	3.6	7.4	16.2				
Latvia	26.9	47.6	74.5	0.57	6.2	6.6	7.5	6.6	6.8	11.7	16.8	13.1
Lithuania	29	28.6	57.6	1.01	3.4	4.8	12.9	7.8	8.5	5.9	7.2	7.4
Luxembourg	33	57.3	90.3	0.57	6.8	8.2	9.8	8.2	12.4	15.5	16.2	13.2
Netherlands	12	24.1	36.1	0.5	4.5	2.4	2.5	2.6	11.3	5.1	4	3.8
Norway	13				3.4	3.3	3.2	3.1				
Poland	32.1	62.6	94.7	0.51	2.9	8	10.8	10.4	13.1	15.8	17.8	15.8
Portugal	20.5	33.5	54	0.61	3.5	6.7	6.4	3.9	5.2	4.8	12	11.5
Slovakia	44.5	59.6	104.1	0.75	7.8	11.1	14.9	10.7	14	16.2	16.6	12.9
Slovenia	24.5	32.1	56.6	0.76	11.3	4.6	4.4	4.2	8.7	8.3	7.7	7.4
Spain	8.1	9.81	17.91	0.83	1.8	1	3.7	1.6			8.9	3.8
Sweden	16.1				3.2	3.4	4.1	5.4				
Switzerland	13				3.3	3.1	2.9	3.7				
United Kingdom	10.3	41.4	51.7	0.25	3.7	1.9	1.9	2.8	10.7	11.4	10.1	9.1
Mean	23.6	40.4	66	0.69	5.036	5.2	7.3	6.1	9.2	10.4	12.4	9.6
SD	11.5	14.2	22.8	0.23	2.876	3.3	4.7	3.3	3.4	4.38	4.6	4
Outlier cutoff (>)	45.9	54.5	88.8	0.92	10.788	11.8	6.7	12.7	12.7	14.8	17	13.6
Outlier cutoff (<)	12.4	12.1	20.3	0.46	2.161	1.9	2.6	2.7	5.8	6	7.8	5.6

Tables 5 and 6 below show the regression models for the middle-income household and low-income household, respectively, testing the associations between the three sets of factors of interest and child benefit size (in the aggregate as well as for each of the four birth orders).[10] Separate regressions were run cumulatively for all factors of interest as well as stepwise for each of the three sets of factors (marked in different colours). The results provide partial support for H1, as total benefit size is negatively associated with immigration stock in most of the models (especially for the middle-income households), although the strength of the association varies considerably depending on the type of model (stepwise as opposed to cumulative) and, to a lesser extent, on the exclusion of outliers in the jackknife robustness

[10] The results are reported in further detail in Appendix 1.

test. For every 10% increase in immigration stock, total benefit size decreases by between 2.2% and 5.9%. More support for an inverse relationship between immigration and benefit size can also be derived for the positive association between pro-immigration attitudes and total benefit size for the two income categories combined (Table 6), where benefits rise by between 1.2% and 1.9% with every 10% increase in pro-immigration attitudes. Moreover, the expected negative association for inflation is also observed, although only in the two models combining the two income categories together (Table 6), where benefit size declines by anywhere between 0.6% and 1.2% for every 10% increase in inflation.

Table 5 / Overview of the regression models – middle-income household

	MI agg. (stepwise[1])	MI agg.	MI 1st (stepwise)	MI 1st	MI 2nd (stepwise)	MI 2nd	MI 3rd (stepwise)	MI 3rd	MI 4th (stepwise)	MI 4th
GDP	0.57	0.64	-0.02	-0.07	0.27	0.31	0.32	0.35	0.21	0.27
Unemployment	-0.03	-0.02	-0.05	-0.05	0	0	-0.11	-0.10	-0.10	-0.10
Inflation	-0.04	0	-0.02	-0.01	**-0.05**** (-0.05 – -0.04)	**-0.05*** (-0.06 – -0.03)	**-0.09*** (-0.10 – -0.08)	-0.09	-0.03	-0.04
Debt	0.06	0.08	0.08	0.06	0.11	0.12	0.04	0.04	0.02	0.05
Share of elderly	0.07	0.17	-0.05	0.01	-0.05	-0.06	0.06	0.17	0.03	0.05
Immigration stock	**-0.22**** (-0.26 – -0.24)	**-0.52***** (-0.59 – -0.52)	**-0.22**** (-0.26 – -0.17)	**-0.22**** (-0.08 – -0.05)	-0.11	**-0.19***** (-0.21 – -0.19)	-0.15	**-0.37**** (-0.39 – -0.34)	-0.10	**-0.25**** (-0.26 – -0.25)
Pro-immigration attitudes	0.11	0	0.08	0.08	0.16	0.11	0.02	-0.08	0.13	0.08
Opposition to immigration from other ethnicities	0.08	-0.06	0.02	0.03	0.06	0.05	-0.02	-0.02	0.17	0.16
Pronatalist government orientation	0	-0.01	-0.04	-0.04	0.01	0.02	0.02	0.03	0.02	0.03
Left-wing party strength	0	-0.06	-0.04	-0.03	-0.04	0	0	0.02	0.02	0.05
Right-wing party strength	0.03	-0.08	-0.10	-0.09	0.04	0.08	-0.03	0	0.10	**0.12*** (0.11 – 0.15)

Note: 1) Separate models for each set of factors (i.e. macroeconomic, sociocultural, and political), as reported in further detail in Appendix 1.
Statistical significance is denoted in the bolded cells as follows:
'*' = weak statistical significance (p <0.05)
'**' = moderate statistical significance (p <0.01)
'***' = high statistical significance (p <0.001).

Table 6 / Overview of the regression models – low-income household and for both income categories

	LI agg. (stepwise)	LI agg.	LI 1st (stepwise)	LI 1st	LI 2nd (stepwise)	LI 2nd	LI 3rd (stepwise)	LI 3rd	LI 4th (stepwise)	LI 4th	MI + LI agg (stepwise)	MI + LI agg	MI/LI ratio (stepwise)	MI/LI ratio
GDP	-0.27	-0.13	**-0.67**** (-0.68 - -0.52)	-0.52	**-0.47**** (-0.45 - -0.29)	-0.36	-0.13	-0.18	0.14	0.27	-0.01	0.17	0.40	0.43
Unemployment	0.03	0.03	-0.02	-0.01	0.05	0.05	0.07	0.08	-0.14	-0.14	0	0	**-0.11*** (-0.14 – -0.13)	**-0.12*** (-0.15)
Inflation	-0.08	-0.08	-0.05	-0.05	-0.04	-0.04	**-0.14*** (-0.16 - -0.12)	-0.14	-0.06	-0.05	**-0.12**** (-0.12 - -0.09)	**-0.11*** (-0.11 - -0.06)	0.05	0.05
Debt	-0.18	-0.09	-0.09	-0.05	-0.09	0	-0.28	-0.29	-0.17	-0.05	-0.20	-0.10	0.20	0.24
Share of elderly	0.25	0.23	0.38	0.34	0.20	0.21	0.25	0.32	0.11	0.11	0.31	0.27	0.04	0.02
Immigration stock	-0.22	**-0.26*** (-0.47 – 0.27)	0	-0.06	-0.08	-0.14	-0.44	-0.38	-0.30	-0.33	-0.19	-0.30	0.15	-0.03
Pro-immigration attitudes	0.15	0.05	0.25	0.11	0.05	-0.06	0.13	0.03	-0.04	-0.06	**0.19*** (0.12 – 0.18)	0.06	-0.01	-0.07
Opposition to immigration from other ethnicities	0.17	0.17	0.26	0.23	0.15	0.12	0.04	0.06	0.06	0.05	0.15	0.15	-0.09	-0.10
Pronatalist government orientation	0	0.12	0.03	0.04	-0.03	-0.02	0	0	-0.02	0	0	0.02	0.04	0.05
Left-wing party strength	0.02	0	-0.01	-0.05	0.04	0	-0.10	-0.13	0.05	0.05	0.02	0.01	0.02	0.08
Right-wing party strength	0	-0.05	0.04	-0.04	0.03	-0.02	-0.14	**-0.17*** (-0.17 - -0.13)	0.02	0.02	0.03	0	0.06	0.12

Note: Statistical significance is denoted in the bolded cells as follows:
'*' = weak statistical significance (p <0.05)
'**' = moderate statistical significance (p <0.01)
'***' = very highly statistically significant (p <0,001).

In line with H2, immigration stock also exhibits a statistically significant negative association with benefit size in most of the birth order-specific models, although only for middle-income households. The birth order-specific analyses also produced several statistically significant associations for the macroeconomic factors (in the expected directions under H2). For every 10% increase in inflation, benefit size for second and third children decreases by between 0.3% and 1.6%, depending on the income category, the type of model, and the exclusion of outliers. The associations with GDP growth are stronger but limited to the low-income household, two specific birth orders, and the cumulative models, as benefit size for low-income second and third children falls by anywhere between 2.9% and 6.8% for every 10% increase in GDP growth, depending on the relevant specifications.

As for H3, where two conflicting hypotheses were proposed (H3a and H3b), some tension is indeed observed, although it is household income rather than birth order that proved to be the differentiating factor for the two statistically significant associations for right-wing party strength, both of which are observed for higher birth orders (third and fourth). For middle-income fourth children (Table 5), benefit size rises by between 1.1% and 1.5% for every 10% increase in right-wing party strength. Yet, for low-income third children (Table 6), benefit size falls by between 1.3% and 1.7% for every 10% increase in right-wing party strength. Finally, H4 is confirmed in only one model and for only one variable, as the middle- to low-income benefit size ratio falls by between 1.1% and 1.5% for every 10% increase in unemployment.

6. Discussion and Limitations

Child benefit size tends to be lower during periods of higher inflation, both in total as well as for second and third children specifically. No statistically significant associations were found between total benefit size and GDP, unemployment, public debt, or the share of elderly population. This mixed finding provides partial support to the view of child benefits as forms of discretionary spending (Streeck & Mertens 2013), as they appear to be sensitive to macroeconomic conditions. However, it does not allow for any stronger claims (Pierson 2002) about child benefit size being heavily determined by macroeconomic factors, thus cautioning against viewing them as the primary victims of budgetary constraints.

Zooming into the finding on inflation, one can observe considerable continuity with the existing literature on social policy design. Past research has shown that social spending is often inadequately indexed to inflation or does not take inflation into account at all, especially when it comes to cash-based support (Streeck & Mertens 2013). Past research has also found that reductions in public and social spending often manifest themselves in real terms (ibid.), even when featuring in national budget sheets as nominal increases in spending, as policy makers may prefer to cut costs by allowing the value of public expenditures to be eroded by inflation rather than by pursuing explicit retrenchment. Thus, the underlying explanation behind inflation as a macroeconomic driver of benefit size may, in fact, be political.

This finding resonates particularly strongly at the time of writing. Over the past several years, unusually high inflation has not only undermined public spending, but it has also been consistently identified as a leading issue of concern among voters and a strong predictor of anti-establishment, populist, and far-right voting patterns (e.g. Stancheva 2024). It thus seems worth investigating through further research whether the already-documented socioeconomic and socio-political ramifications of inflation may feature even more strongly in contexts where price hikes are accompanied or followed by reductions in the size of child (and other social or public) benefits.

In terms of the sociocultural factors, benefit size tends to be lower when the share of foreign-born population is higher for the two household income types together as well as when disaggregated by household income. It also tends to be higher (for the two income categories cumulatively) when pro-immigration attitudes are higher, suggesting that anti-immigration sentiment may be an obstacle to high benefit sizes. These findings contribute to a rich and continuously growing literature on the importance of immigration stock as a policy driver at a time of record-high immigration rates and well-documented increases in anti-immigration attitudes in many European countries (Kokkonen & Linde 2023; Neureiter & Schulte 2024). The observed negative association between immigration stock and benefit size matches the previously summarised consensus that child benefits are among the family and social policies from which immigrants are the most likely to be excluded or otherwise discriminated against (Brady & Finnigan 2014; Eick 2024). The association is, however, not consistent with the broader proposition in the sociological literature embedded into the previously summarised Intergroup Contact Theory (Pettigrew 1998; Schlueter & Scheepers 2010), which predicts that stronger exposure to immigration should induce a *more* inclusive environment for immigrants, suggesting that the applicability of the theory may be limited to specific types of policies.

When it comes to the findings regarding the drivers of benefit size by birth order, immigration stock emerged again as a negative predictor of benefit size for all four birth orders in middle-income households (especially for higher birth orders). This finding can be interpreted in a similar fashion to the aggregate finding above. It is particularly conceivable that high immigration may be constraining benefit size for large families, which are disproportionately likely to consist of foreign-born benefit recipients (Rindfuss & Choe 2016). The mechanism behind this relationship is beyond the scope of this paper. One possibility is that higher immigration rates make policy makers themselves more welfare-chauvinistic; another is that they make them more likely to adopt welfare-chauvinistic policies as a response to a (perceived) shift in voter preferences. It is worth highlighting, however, the apparent paradox of the associations not only not being higher for higher birth orders but actually being absent altogether for these birth orders in low-income households. While this aspect requires further research, one possible explanation would be that child benefits for low-income large families are somewhat cushioned from immigration-related considerations. In fact, the relevant debate in one of the most notable country cases of benefit limits for higher birth orders, namely the United Kingdom, has indeed primarily revolved – at least on the surface – around broader debates regarding the size of the welfare state and the '(un)deservingness' of (all) low-income parents with large families (e.g. Hobson 2002) rather than around ethnicity.

The remaining observed drivers of benefit size by birth order refer to (a more limited number of) specific children and specific (f)ctors of interest. The positive association between real GDP growth and benefit size for first and second low-income children matches the literature on the effects of macroeconomic factors referenced earlier. For second and third children in both middle- and low-income households, inflation again emerges as being negatively associated with benefit size, which, especially in the case of second children, may be attributable to the relatively high number of such children in any population (compared to fourth children), making benefits for these children particularly vulnerable to inflation spikes. As for right-wing party strength, the observed positive association with benefit size for middle-income fourth children matches existing evidence of the increasingly national-conservative character of child benefits. As has been extensively documented in the academic literature (Cook et al. 2022; Haskova et al. 2022; Szalma et al. 2022), right-wing governments have been disproportionately likely to introduce, maintain, and/or expand pronatalist policy packages. The rationale behind the stronger incentivisation of higher birth orders may be informed by the average fertility preferences in Europe, which stand between two and three children (Sobotka & Beaujouan 2014), as well as the assumption that most people will have a certain number of children regardless of policy, suggesting that benefit size for lower birth orders need not be prioritised. Moreover, the evidence of a positive association with right-wing governments in this paper suggests that the observed shift in the literature from *lower* benefit spending by right-wing parties in the past to no association in more recent decades (Ferragina & Seeleib-Kaiser 2015) may have now advanced further to higher spending altogether on the part of such parties. This finding also resonates with some country-level cases, such as Germany, where major family policy improvements over the past few decades have occurred under the main centre-right party (Fleckenstein 2011).

It is, however, important to highlight the opposite finding for low-income households, for which right-wing party strength is negatively associated with benefit size for third children. This finding echoes the well-documented trend for governments, especially those of a right-wing orientation, to engage in selective increases of child benefits, often excluding large low-income families, possibly also due to ethnonationalist considerations (e.g. Guy & Kovacz 2006; Mari 2024). Even explicitly pronatalist right-wing policy makers, as has been the case in Hungary (Speder 2016), have sometimes been shown to

selectively incentivise births only among more affluent beneficiaries, highlighting one of the biggest contradictions as well as limitations of contemporary pronatalism. Furthermore, the middle- to low-income ratio is negatively associated with unemployment, which matches some of the previously discussed findings regarding the negative effects of macroeconomic constraints on benefit size (e.g. Streeck & Mertens 2013). In an unfavourable macroeconomic climate, it appears unsurprising that policy makers tend to downsize child benefits more for middle-income households, which would be less likely than low-income households to be pushed into poverty as a result of such cuts.

Finally, it would be impertinent to solely discuss the observed results for the tested factors in isolation. The fact that for two of the factors returning statistically significant results, the associations are stronger in the cumulative than in the stepwise models (as is the case for immigration stock), or are statistically significant only in (some of) the cumulative models (as is the case for right-wing ruling party orientation), suggests that the tested factors may sometimes be mutually reinforcing. The spirit of this finding matches several prominent strands of literature, including both the scholarship on the frequently socioeconomic roots of intolerant public perceptions and responses to demographic trends (Margalit 2019; Vogt Isaksen 2019) as well as that on the role of policy makers in shaping (Slothuus & Bisgaard 2020) – but also responding to (Sevenans 2021) – public attitudes.

These findings should be considered in light of several important limitations. An obvious one relates to the operationalisation of immigration stock, which emerged as the factor most commonly associated with child benefit size. The broad timeframe and country coverage in this paper prevented an analysis comparing different time periods and/or levels of immigration stock. The latter modification would have been crucial for a more precise contribution to the Intergroup Contact Theory literature, whose postulates are strongly contingent upon the exact level of (and rate of change in) foreign-born population, whose nuances may not be fully captured by a 20-year timeframe. In fact, such an exercise in disaggregation may have also been beneficial for the remaining factors, which could in the future even be studied qualitatively (e.g. through qualitative comparative analysis) in an effort to identify the precise combination of drivers conducive to different levels and patterns of benefit size and design over time.

The lack of disaggregation is also a limitation in terms of the country sample, as a large-N study, while beneficial in terms of obtaining statistical significance and increased generalisability, conceals some of the considerable variation in Europe on both the independent and dependent variable in this paper. This limitation seems particularly noteworthy with regard to the strong variation in welfare regimes and other path dependencies across Europe, whose ability to absorb macroeconomic constraints and/or sensitivity to sociocultural and political factors may be heavily influenced by the type of institutional configurations in place. However, this limitation was partly overcome through the jackknife robustness tests, which showed that none of the statistically significant results in the paper were solely attributable to outlier countries with either the highest or lowest benefit sizes in the sample. Finally, child benefits, especially when operationalised as they have been here, are extremely broad policy instruments, whose future disaggregation – especially between tax-based and allowance-based benefit forms – may provide considerably different implications in terms of the associated factors of interest.

7. Conclusion

This paper explored the association between five macroeconomic factors, three sociocultural factors, and three political factors, on the one hand, and aggregate child benefit size and variation by birth order and household income in 26 European countries (17 for low-income households), on the other, between 2002 and 2021. It found that all three types of factors tested were sometimes linked to child benefit size, although the presence and size of specific factors varied by birth order and household income. The most consistently (negatively) associated factor across the regression models was immigration stock, but in some of the models, child benefit size was also associated with inflation (negatively), GDP (positively), pro-immigration attitudes (positively), and right-wing party strength (positively and negatively, depending on household income). Moreover, the difference in benefit size between middle- and low-income households was generally higher in instances of higher unemployment. These findings reinforce the scholarly consensus around child benefits as a multi-layered policy instrument whose size can be facilitated and constrained by a complex interplay of macroeconomic, sociocultural, and political factors. They also highlight the difficulties associated with evaluating the role of such factors given the relative scarcity of statistically significant results despite the large analytical sample.

In addition to the suggestions following from the limitations identified in the previous section, future work may also consider extending the empirical focus on both the independent and the dependent variable, which would (especially) in the latter case, however, also necessitate a different theoretical focus. The independent variable could also include (i) sociocultural factors unrelated to immigration, including some that can be expected to facilitate (rather than constrain) benefit size, such as societal trends or norms permissive of larger government spending in general and/or family policy spending in particular (along the lines of Ferragina & Seeleib-Kaiser 2015), as well as (ii) political (f)actors that can be expected to constrain (rather than facilitate) benefit size, such as the strength of fiscally conservative political factors. As for political *actors*, the relative power of female politicians has been found to be highly significant, sometimes even more so than the ideological orientation of ruling parties, although more so for parental leave and childcare than for child benefits (Carter 1998; Iversen & Stephens 2008). For this and other reasons, the dependent variable could indeed be extended to other family policies, such as parental leave and childcare, either in their own right or in comparison to child benefits, which would offer a more comprehensive contribution to the family policy literature, most notably by capturing welfare-regime and gender-related dimensions.

References

Aerts, E., Marx, I. & Parolin, Z. (2023). Minimum income support for families with children in Europe and the US: Where does it stand? Working Paper No. 22/03. University of Antwerp.

Andersen, K., Patrick, R. & Reeves, A. (2022). Needs matter: How the two-child limit and the benefit cap harm children. Benefit Changes & Larger Families project. https://cdn.sanity.io/files/66yos3po/production/17bea976b075f5ef6ba6fdf9b6018150a5ae4367.docx

Armitage, A. (2021). From demographic security to demographic resilience: Towards an anthropology of multilateral policymaking in eastern Europe. Doctoral dissertation. Geneva Graduate Institute.

Bahle, T. (1994). *Familienpolitik in Westeuropa: Ursprünge und Wandel im internationalen Vergleich*. Frankfurt: Campus.

Bandau, F. & Ahrens, L. (2020). The impact of partisanship in the era of retrenchment: Insights from quantitative welfare state research. *Journal of European Social Policy*, 30(1), 34–47.

Birnbaum, S., Ferrarini, T. Nelson, K. & Palme, J. (2017). *The generational welfare contract: Justice, institutions and outcomes.* Cheltenham, UK: Edward Elgar.

Blum, S., Formánková, L. & Dobrotić, I. (2014). Family policies in 'hybrid' welfare states after the crisis: Pathways between policy expansion and retrenchment. *Social Policy & Administration*, 48(4), 468–491.

Bode, I. (2022). The (de-)institutionalisation of empowerment. The complex remake of child and family welfare arrangements in Western Europe. *Social Work and Society*, 20(1), 1–16.

Bornukova, K., Hernández, A. & Picos, F. (2024). Investing in children: The impact of EU tax and benefit systems on child poverty and inequality. JRC Working Papers on Taxation and Structural Reforms No. 2/2024.

Bou-Habib, P. & Olsaretti, S. (2021). Children or migrants as public goods? Working Paper. Retrieved from http://hdl.handle.net/10230/47334

Brady, D. & Finnigan, R. (2014). Does immigration undermine public support for social policy? *American Sociological Review*, 79(1), 17–42.

Bremer, B. & Bürgisser, R. (2023). Public opinion on welfare state recalibration in times of austerity: Evidence from survey experiments. *Political Science Research and Methods*, 11(1), 34–52.

Bruno, D., Sorando, R. Álvarez-Farizo, B. Castellano, C. Céspedes, V. Gallardo, B. Jiménez, J. J. … Comín, F. A. (2021). Depopulation impacts on ecosystem services in Mediterranean rural areas. *Ecosystem Services*, 52, Art. 101367.

Buchanan, A. & Rotkirch, R. (eds.) (2013). *Fertility rates and population decline: No time for children?* London: Palgrave Macmillan Studies in Family and Intimate Life.

Calhoun, C. (2017). Populism, nationalism and Brexit, in: Outhwaite, W. (ed.). *Brexit: Sociological responses*. Anthem Press, 57–76.

Campbell, J. L. (2004). *Institutional change and globalization.* Princeton University Press.

Carter, J. (1998). *Postmodernity and the fragmentation of welfare.* New York: Routledge.

Childs, S. & Krook, M. L. (2009). Analysing women's substantive representation: From critical mass to critical actors. *Government and Opposition*, 44(2), 125–145.

Clasen, J. & Siegel, N. A. (2007). Comparative welfare state analysis and the 'dependent variable problem', in: Clasen, J. & Siegel, N. A. (eds.). *Investigating welfare state change: The 'dependent variable problem' in comparative analysis*. Edward Elgar, 3–12.

Cook, L., Iarskaia-Smirnova, E. & Kozlov, V. (2022). Trying to reverse demographic decline: Pro-natalist and family policies in Russia, Poland, and Hungary. *Social Policy & Society*, 22(2), 1–21.

Corak, M., Lietz, C. & Sutherland, H. (2005). The impact of tax and transfer systems on children in the European Union. Innocenti Working Paper No. 2005-04. Florence: UNICEF.

Daly, M. (2019). Children and their rights and entitlements in EU welfare states for liberty. *Journal of Social Policy*, 49(2), 1–18.

Daly, M. & Ferragina, E. (2018). Family policy in high-income countries: Five decades of development. *Journal of European Social Policy*, 28(3), 255–270.

Dielman, T. E. (1983). Pooled cross-sectional and time series data: A survey of current statistical methodology. *The American Statistician*, 37(2), 111–122.

Eick, G. M. (2024). Welfare chauvinism in Europe: How education, economy and culture shape public attitudes. Edward Elgar.

Engster, D. (2008). *The Heart of Justice*. Oxford: Oxford University Press.

Ennser-Jedenastik, L. (2022). The impact of radical right parties on family benefits. *West European Politics*, 45(1), 154–176.

Ferragina, E. (2022). Welfare state change as a double movement: Four decades of retrenchment and expansion in compensatory and employment-oriented policies across 21 high-income countries. *Journal of Social Policy and Administration*, 56(5), 705–725.

Ferragina, E. & Seeleib-Kaiser, M. (2015). Determinants of a Silent (R)evolution: Understanding the Expansion of Family Policy in Rich OECD Countries. *Social Politics: International Studies in Gender, State & Society*, 22(1), 1–37.

Ferrarini, T., Nelson, K. & Höög, H. (2012). The fiscalization of child benefits in OECD countries. GINI Discussion Paper No. 49. Amsterdam: AIOS.

Fidanovski, K. (2023). What policy functions are reflected in the distribution of financial support for parents by child age and birth order? An analysis of 28 European countries. *Social Policy & Administration*, 58(3), 458–473.

Figari, F., Paulus, A. & Sutherland, H. (2011). Measuring the size and impact of public cash support for children in cross-national perspective. *Social Science Computer Review*, 29(1), 85–102.

Fleckenstein, T. (2011). The politics of ideas in welfare state transformations: Christian democracy and the reform of family policy in Germany. *Social Politics*, 18(4), 543–571.

Fleckenstein, T. & Mohun Himmelweit, S. (2023). The politics of ideas in family policy: Parties, electoral competition, and shifting norms, in: Daly, M. Pfau-Effinger, B. Gilbert, N. & Besharov, D. J. (eds.). *Oxford handbook of family policy over the life course*. Oxford University Press, 270–289.

Folbre, N. (1994). Children as public goods. *American Economic Review*, 84(2), 86–90.

Fukuyama, F. (1991). *The End of History and the Last Man*. Free Press.

Fukuyama, F. (2018). Why national identity matters. *Journal of Democracy*, 29(4), 5–15.

Gal, R. I., Vanhuysse, P. & Vargha, L. (2018). Pro-elderly welfare states within child-oriented societies. *Journal of European Public Policy*, 25(6), 944–958.

Gauthier, A. (1996). The state and the family: A comparative analysis of family policies in industrialized countries. Clarendon Press.

Ghodsee, K. (2018). *Why women have better sex under socialism*. Vintage Books.

Goerres, A. & Vanhuysse, P. (2021). *Global political demography: The politics of population change*. Springer Nature.

Grzymala-Busse, A. (2017). Global populisms and their impact. *Slavic Review*, 76(S1), S3–S8.

Guy, W. & Kovacz, M. (2006). EU-funded Roma programmes: Lessons from Hungary, Slovakia, and the Czech Republic. Minority Rights Group International.

Hantrais, L. (2004). *Family policy matters: Responding to family change in Europe*. The Policy Press.

Haskova, H., Marikova, H. Sloboda, Z. & Popisilova, K. (2022). Childlessness and barriers to gay parenthood in Czechia. *Social Inclusion*, 10(3), Special issue.

Hobson, B. (2002). *Making men into fathers: Men, masculinities and the social politics of fatherhood*. Cambridge University Press.

Hogan, J. & Howlett, M. (Eds.). (2015). *Policy paradigms in theory and practice: Discourses, ideas and anomalies in public policy dynamics*. Palgrave Macmillan.

Inglehart, R. (1999). *Modernization and postmodernization: Cultural, economic, and political change in 43 societies*. Princeton University Press.

Inglot, T., Szikra, D. & Rat, C. (2022). *Mother, families, or children? Hungary, Poland, and Romania*. University of Pittsburgh Press.

Iversen, T. & Stephens, J. (2008). Partisan politics, the welfare state, and three worlds of human capital formation. *Comparative Political Studies*, 41(4–5), 600–637.

Javornik, J. (2016). Maternal employment in post-socialist countries: Understanding the implications of childcare policies, in: Roosalu, T. & Hofacker, D. (eds.). *Rethinking gender, work and care in a new Europe: Theorizing markets and societies in the post-postsocialist era*. Palgrave Macmillan, 189–214.

Kamerman, S. B. & Kahn, A. J. (2001). Child and family policies in an era of social policy retrenchment and restructuring, in: Vleminckx, K. & Smeeding, T. M. (eds.). *Child well-being, child poverty and child policy in modern nations*. Policy Press, 501–526.

Kaufmann, F. (2002). Politics and policies towards the family in Europe: A framework and an inquiry into their differences and convergences, in: Kaufmann, F.-X. Kuijsten, A. Schulze, H.-J. & Strohmeier, K. P. (eds.). *Family life and family policies in Europe, Vol. 2: Problems and issues in comparative perspective*. Oxford University Press, 419–490.

Kokkonen, A. & Linde, J. (2023). A nativist divide? Anti-immigration attitudes and diffuse support for democracy in Western Europe. *European Journal of Political Research*, 62(3), 977–988.

Korpi, W., Ferrarini, T. & Englund, S. (2013). Women's opportunities under different family policy constellations: gender, class, and inequality trade-offs in Western countries re-examined. *Social Politics*, 20(1), 1–40.

Korpi, W. & Palme, J. (2003). New politics and class politics in the context of austerity and globalization: Welfare state regress in 18 countries, 1975–95. *American Political Science Review*, 97(3), 425–446.

Kornai, J. (2015). Hungary's U-turn: Retreating from democracy. *Journal of Democracy*, 26(3), 34–48.

Krastev, I. (2016). What's wrong with East-Central Europe? Liberalism's failure to deliver. *Journal of Democracy*, 27(1), 35–38.

Mari, G. (2024). Less for more? Cuts to child benefits, family adjustments, and long-run child outcomes in larger families. *Journal of Population Economics*, 37(2), 1–27.

Margalit, Y. (2019). Economic insecurity and the causes of populism, reconsidered. *Journal of Economic Perspectives*, 33(4), 152–170.

Merdjanova, I. (2000). In search of identity: Nationalism and religion in Eastern Europe. *Religion, State and Society*, 28(3), 233–262. Doi:10.1080/713694765

Misra, J., Budig, M. & Moller, S. (2007). Reconciliation policies and the effects of motherhood on employment, earnings, and poverty. *Journal of Comparative Policy Analysis: Research and Practice*, 9, 135–155.

Neureiter, M. & Schulte, F. (2024). A tale of two logics: How solidarity and threat perceptions shape immigrant attitudes towards immigration in Western Europe. *West European Politics*, 47(2), 280–302.

OECD Family Database (2021). Retrieved from https://www.oecd.org/els/family/database.htm.

Pettigrew, T. F. (1998). Intergroup contact theory. *Annual Review of Psychology*, 49(1), 65–85.

Pezer, M. (2022). Public policies supporting families with children across welfare regimes: An empirical assessment of six European countries. *Journal of European Social Policy*, 32(3), 254–269.

Pfau-Effinger, B. (2004). Socio-historical paths of the male breadwinner model: An explanation of cross-national differences. *British Journal of Sociology*, 55(3), 377–399.

Philipov, D., Liefbroer, A. C. & Klobas, J. (eds.). (2013*). Reproductive decision-making in a macro-micro perspective*. Springer Nature.

Pierson, P. (2002). Coping with permanent austerity: Welfare state restructuring in affluent democracies. *Revue française de sociologie*, 43(2), 369–406.

Reader, M., Portes, J. & Patrick, R. (2022). Does cutting child benefits reduce fertility in larger families? Evidence from the UK's two-child limit. Discussion Paper No. 15203. Institute of Labor Economics (IZA).

Rindfuss, R. & Choe, M. (eds.) (2016). *Low fertility, institutions, and their policies*. Springer.

Saraceno, C. (2022). *Advanced introduction to family policy*. Elgar Advanced Introductions.

Saraceno, C. & Keck, W. (2010). Can we identify intergenerational policy regimes in Europe? *European Societies*, 12(5), 675–696.

Schlueter, E. & Scheepers, P. (2010). The relationship between outgroup size and anti-outgroup attitudes. *Social Science Research*, 39(2), 285–295.

Sevenans, J. (2021). How public opinion information changes politicians' opinions and behavior. *Political Behavior*, 43(4), 1801–1823.

Shiffman, J., Skrabalo, M. & Subotic, J. (2002). Reproductive rights and the state in Serbia and Croatia. *Social Science & Medicine*, 54(4), 625–642.

Sjöberg, L. (2012). Risk perception and societal response, in Roeser, S. Hillerbrand, R. Sandin, P. and Peterson, M. (eds.). *Handbook of Risk Theory: Epistemology, Decision Theory, Ethics, and Social Implications of Risk*. Springer Nature, 661–675.

Skogstad, G. (ed.) (2011). *Policy paradigms, transnationalism, and domestic politics*. University of Toronto Press.

Slothuus, R. & Bisgaard, M. (2021). How political parties shape public opinion in the real world. *American Journal of Political Science*, 65(4), 896–911.

Sobotka, T. & Beaujouan, É. (2014). Two is best? The persistence of a two-child family ideal in Europe. *Population and Development Review*, 40(3), 391–419.

Speder, Z. (2016). Fertility decline and the persistence of low fertility in a changing policy environment: A Hungarian case study, in: Rindfuss, R. & Choe, M. (eds.). *Low fertility, institutions, and their policies: Variations across industrialized countries*. Springer, 123–145.

Stanceva, S. (2024). Why do we dislike inflation? Working Paper No. 32300. National Bureau of Economic Research.

Steensland, B. (2008). *The failed welfare revolution: America's struggle over guaranteed income policy.* Princeton University Press.

Streeck, W. & Mertens, D. (2013). Public finance and the decline of state capacity in democratic capitalism, in: Schäfer, A. & Streeck, W. (eds.). *Politics in the age of austerity*. Polity Press. 25–58.

Swank, D. (2005). Globalisation, domestic politics, and welfare state retrenchment in capitalist democracies. *Social Policy and Society*, 4(2), 183–195.

Szalma, I., Haskova, H. Olah, L. & Takacs, J. (2022). Fragile pronatalism and reproductive futures in European post-socialist contexts. *Social Inclusion*, 10(3), 82–86.

Therborn, G. (1993). *European modernity and beyond: The trajectory of European societies 1945-2000*. Sage.

Tønnessen, M. & Mussino, E. (2020). Fertility patterns of migrants from low-fertility countries in Norway. *Demographic Research*, 42, 859–874.

Vanhuysse, P., Medgyesi, M. & Gál, R. I. (2023). Taxing reproduction: The full transfer cost of rearing children in Europe. *Royal Society Open Science*, 10, 230759.

Vlandas, T. (2023). From gerontocracy to gerontonomia: The politics of economic stagnation in ageing democracies. *The Political Quarterly*, 94(3), 452–461.

Vogt Isaksen, J. (2019). The impact of the financial crisis on European attitudes toward immigration. *Comparative Migration Studies*, 7(1), 1–20.

Ward, M. M. & Leigh, J. P. (1993). Pooled time series regression analysis in longitudinal studies. *Journal of Clinical Epidemiology*, 46(7), 645–659.

Wennemo, I. (1994). Sharing the costs of children: Studies on the development of family support in the OECD countries. Dissertation Series No. 25. Stockholm: Swedish Institute for Social Research.

Whitehead, A. L., Perry, S. L. & Baker, J. O. (2018). Make America Christian again: Christian nationalism and voting for Donald Trump in the 2016 presidential election. *Sociology of Religion*, 79(2), 147–171.

Wilk, S. (2020). The role of family policy in solving demographic problems: Study of the Polish Program Family 500+. *European Journal of Sustainable Development*, 9(4), 84–92.

Appendix

(Legend for the stepwise models: A – macroeconomic; B – sociocultural; C – political; JK [for all models with statistically significant results] = jackknife resampling test)

Table A 1 / Middle-income aggregate

Coefficients:				
lag(pdata$GDP, 1)	6.4278e-01	4.7221e-01	1.3612	0.174117
lag(pdata$Unemployment, 1)	-1.1978e-02	7.5466e-02	-0.1587	0.873960
lag(pdata$Inflation, 1)	-4.0090e-02	4.4037e-02	-0.9104	0.363116
lag(pdata$Debt, 1)	8.1931e-02	9.0336e-02	0.9070	0.364907
lag(pdata$PopulationOld, 1)	1.7310e-01	1.7329e-01	0.9989	0.318371
lag(pdata$Immigration, 1)	-5.1784e-01	1.5090e-01	-3.4318	0.000654***
lag(pdata$Immigration_att, 1)	-9.6142e-06	6.7474e-02	-0.0001	0.999886
lag(pdata$Anti.immigration_ethnic_att, 1)	6.2570e-02	1.1076e-01	0.5649	0.572405
lag(pdata$Pronatalism, 1)	1.2651e-02	1.9011e-02	0.6654	0.506105
lag(pdata$Gov_left, 1)	6.0880e-02	5.6440e-02	1.0787	0.281307
lag(pdata$Gov_right, 1)	8.2773e-02	7.7662e-02	1.0658	0.287072

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 140.35
Residual sum of squares: 115.16
R-squared: 0.17943
Adj. R-squared: 0.11479
F-statistic: 2.43684 on 11 and 25 DF, p-value: 0.031601

Table A 2 / Middle-income aggregate – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
1.006209e-03	2.309473e-04
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
8.062215e-05	6.990351e-04
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
4.607393e-04	1.310905e-03
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
2.150284e-05	3.873787e-04
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
7.041314e-06	1.049872e-05
lag(pdata_jk$Gov_right, 1)	
2.464597e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.5679793	-0.03637434	-0.03069706
2	0.6314209	-0.06676824	-0.04865503
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.07589145	0.1933453	-0.5156164
2	0.12876999	0.1504156	-0.5880292
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.006853946		0.09786798
2	-0.002420286		0.05850410
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.009122021	0.09128172	0.08221574
2	0.014429116	0.08480138	0.11361381

Dropped
1 Belgium, Hungary, Slovakia
2 Iceland, Spain, United Kingdom

Table A 3 / Middle-income aggregate – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.569192	0.580137	0.9811	0.3270
lag(pdata$Unemployment, 1)	-0.025371	0.080408	-0.3155	0.7525
lag(pdata$Inflation, 1)	-0.040382	0.041690	-0.9686	0.3332
lag(pdata$Debt, 1)	0.058818	0.105677	0.5566	0.5781
lag(pdata$PopulationOld, 1)	0.065247	0.181689	0.3591	0.7197

Total sum of squares: 140.35
Residual sum of squares: 125.4
R-squared: 0.1065
Adj. R-squared: 0.048609
F-statistic: 0.942443 on 5 and 25 DF, p-value: 0.47102

Table A 4 / Middle-income aggregate – B

Coefficients:	Estimate	td. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.219854	0.105098	-2.0919	0.03699 *
lag(pdata$Immigration_att, 1)	0.113697	0.099996	1.1370	0.25612
lag(pdata$Anti.immigration_ethnic_att, 1)	0.077780	0.139175	0.5589	0.57652

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 140.35
Residual sum of squares: 137.44
R-squared: 0.020689
Adj. R-squared: -0.03828
F-statistic: 2.5444 on 3 and 25 DF, p-value: 0.07892

Table A 5 / Middle-income aggregate – B – JK

Jackknife variances:

lag(pdata_jk$Immigration, 1)	lag(pdata_jk$Immigration_att, 1)
7.285035e-05	5.249798e-05
lag(pdata_jk$Anti.immigration_ethnic_att, 1)	
7.286883e-05	

Sample of jackknife results:

	lag(pdata_jk$Immigration, 1)	lag(pdata_jk$Immigration_att, 1)
1	-0.2402940	0.1084465
2	-0.2573645	0.1229376
	lag(pdata_jk$Anti.immigration_ethnic_att, 1)	
1	0.09641232	
2	0.07933967	

Dropped
1 Belgium, Hungary, Slovakia
2 Iceland, Spain, United Kingdom

Table A 6 / Middle-income aggregate – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.0017102	0.0212289	-0.0806	0.9358
lag(pdata$Gov_left, 1)	-0.0022160	0.0460856	-0.0481	0.9617
lag(pdata$Gov_right, 1)	0.0277924	0.0614210	0.4525	0.6511

Total sum of squares: 140.35
Residual sum of squares: 140.04
R-squared: 0.0022014
Adj. R-squared: -0.057881
F-statistic: 0.115405 on 3 and 25 DF, p-value: 0.95025

Table A 7 / Middle-income – 1st ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.074636	0.222167	-0.3359	0.73707
lag(pdata$Unemployment, 1)	-0.046250	0.056891	-0.8129	0.41667
lag(pdata$Inflation, 1)	-0.013797	0.037729	-0.3657	0.71477
lag(pdata$Debt, 1)	0.058550	0.104552	0.5600	0.57575
lag(pdata$PopulationOld, 1)	0.013122	0.110411	0.1189	0.90545
lag(pdata$Immigration, 1)	-0.219425	0.096703	-2.2691	0.02373*
lag(pdata$Immigration_att, 1)	0.075501	0.065579	1.1513	0.25021
lag(pdata$Anti.immigration_ethnic_att, 1)	0.030714	0.069528	0.4417	0.65888
lag(pdata$Pronatalism, 1)	-0.036903	0.029682	-1.2433	0.21440
lag(pdata$Gov_left, 1)	-0.025448	0.064882	-0.3922	0.69508
lag(pdata$Gov_right, 1)	-0.086089	0.081958	-1.0504	0.29409

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 117.02
Residual sum of squares: 112.33
R-squared: 0.040056
Adj. R-squared: -0.035563
F-statistic: 1.84779 on 11 and 25 DF, p-value: 0.098725

Table A 8 / Middle-income 1st ch. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
4.580787e-04	4.951429e-05
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
8.019300e-04	1.430239e-04
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
4.170834e-05	2.375507e-04
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
2.186566e-04	2.234394e-04
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
4.750992e-04	2.493604e-04
lag(pdata_jk$Gov_right, 1)	
1.684423e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.09255972	-0.03475066	0.008213488
2	-0.13536527	-0.02067738	-0.048423248
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	-0.04878784	0.003796695	-0.07593531
2	-0.02486932	-0.009119704	-0.5880292
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.07833166		0.07396096
2	0.10790574		0.04406518
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.001980129	-0.03015337	-0.09279247
2	-0.041613414	-0.06173567	-0.11874954

Dropped
1 Hungary, Slovenia
2 Greece, Iceland, Spain

Table A 9 / Middle-income 1st ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.021727	0.186272	-0.1166	0.9072
lag(pdata$Unemployment, 1)	-0.046064	0.060961	-0.7556	0.4503
lag(pdata$Inflation, 1)	-0.020129	0.038153	-0.5276	0.5980
lag(pdata$Debt, 1)	0.082766	0.114528	0.7227	0.4702
lag(pdata$PopulationOld, 1)	-0.048758	0.116965	-0.4169	0.6770

Total sum of squares: 117.02
Residual sum of squares: 116.38
R-squared: 0.0054123
Adj. R-squared: -0.059032
F-statistic: 0.221198 on 5 and 25 DF, p-value: 0.95

Table A 10 / Middle-income 1st ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.222403	0.090245	-2.4644	0.01408 *
lag(pdata$Immigration_att, 1)	0.083451	0.068774	1.2134	0.22559
lag(pdata$Anti.immigration_ethnic_att, 1)	0.022194	0.071819	0.3090	0.75743

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 117.02
Residual sum of squares: 114.93
R-squared: 0.017852
Adj. R-squared: -0.041288
F-statistic: 2.34764 on 3 and 25 DF, p-value: 0.096846

Table A 11 / Middle-income 1st ch. – B – JK

Sample of jackknife results:

	lag(pdata_jk$Immigration, 1)	lag(pdata_jk$Immigration_att, 1)
1	-0.1700958	0.09118045
2	-0.2596973	0.14063383
	lag(pdata_jk$Anti.immigration_ethnic_att, 1)	
1	0.06451191	
2	0.01930286	

Dropped
1 Hungary, Slovakia
2 Greece, Iceland, Spain

Table A 12 / Middle-income 1st ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.040052	0.031252	-1.2816	0.2006
lag(pdata$Gov_left, 1)	-0.044023	0.063374	-0.6947	0.4876
lag(pdata$Gov_right, 1)	-0.103147	0.078841	-1.3083	0.1914

Total sum of squares: 117.02
Residual sum of squares: 114.71
R-squared: 0.01975
Adj. R-squared: -0.039276
F-statistic: 0.834491 on 3 and 25 DF, p-value: 0.48762

Table A 13 / Middle-income 2st ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.30664589	0.24933990	1.2298	0.219393
lag(pdata$Unemployment, 1)	0.00855437	0.06715118	0.1274	0.898688
lag(pdata$Inflation, 1)	-0.04584411	0.02653806	-1.7275	0.084756.
lag(pdata$Debt, 1)	0.12404327	0.12462170	0.9954	0.320089
lag(pdata$PopulationOld, 1)	-0.06344312	0.11532472	-0.5501	0.582502
lag(pdata$Immigration, 1)	-0.18851559	0.07198411	-2.6189	0.009116**
lag(pdata$Immigration_att, 1)	0.11097535	0.09260679	1.1984	0.231402
lag(pdata$Anti.immigration_ethnic_att, 1)	0.05205959	0.12019412	0.4331	0.665125
lag(pdata$Pronatalism, 1)	0.01565599	0.01752525	0.8933	0.372146
lag(pdata$Gov_left, 1)	-0.00088766	0.03805371	-0.0233	0.981400
lag(pdata$Gov_right, 1)	0.07841098	0.08945829	0.8765	0.381214

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 191.06
Residual sum of squares: 182.93
R-squared: 0.042544
Adj. R-squared: -0.032879
F-statistic: 1.15837 on 11 and 25 DF, p-value: 0.36221

Table A 14 / Middle-income 2nd ch. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
8.198071e-04	2.271286e-04
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
2.043221e-04	1.510330e-03
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
7.883224e-04	1.037717e-04
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
2.014444e-03	6.401806e-04
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
9.200420e-06	5.863743e-04
lag(pdata_jk$Gov_right, 1)	
1.035740e-03	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.2242704	-0.020527348	-0.03085264
2	0.2815350	0.009614223	-0.05944090
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.04131593	-0.003001002	-0.1897658
2	0.11904185	-0.059155161	-0.2101395
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.0349479		0.004304439
2	0.1247130		0.054908020
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.02363979	0.02147141	-0.004034438
2	0.01757335	-0.02695893	0.060331397

Dropped
1 Hungary
2 Iceland, Spain

Table A 15 / Middle-income 2nd ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.2654659	0.2796369	0.9493	0.3430
lag(pdata$Unemployment, 1)	0.0081951	0.0646874	0.1267	0.8992
lag(pdata$Inflation, 1)	-0.0497428	0.0216770	-2.2947	0.0222 *
lag(pdata$Debt, 1)	0.1042821	0.1120398	0.9308	0.3525
lag(pdata$PopulationOld, 1)	-0.0463056	0.0980270	-0.4724	0.6369

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 191.06
Residual sum of squares: 187.32
R-squared: 0.01958
Adj. R-squared: -0.043946
F-statistic: 1.16627 on 5 and 25 DF, p-value: 0.3532

Table A 16 / Middle-income 2nd ch. – A – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
7.448304e-04	3.377380e-04	6.463885e-05
lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
1.820457e-03	1.212826e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.2156669	-0.02433515	-0.03734806
2	0.2702501	0.01242015	-0.05342772
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
1	0.04429444	-0.03669656	
2	0.12962807	-0.05872223	

Dropped
1 Hungary
2 Iceland, Spain

Table A 17 / Middle-income 2nd ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.113056	0.081056	-1.3948	0.1637
lag(pdata$Immigration_att, 1)	0.157336	0.110621	1.4223	0.1556
lag(pdata$Anti.immigration_ethnic_att, 1)	0.059913	0.123249	0.4861	0.6271

Total sum of squares: 191.06
Residual sum of squares: 188.21
R-squared: 0.014896
Adj. R-squared: -0.044422
F-statistic: 1.65668 on 3 and 25 DF, p-value: 0.20176

Table A 18 / Middle-income 2nd ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.012283	0.017124	0.7173	0.4736
lag(pdata$Gov_left, 1)	-0.040289	0.043683	-0.9223	0.3568
lag(pdata$Gov_right, 1)	0.036599	0.073967	0.4948	0.6210

Total sum of squares: 191.06
Residual sum of squares: 188.97
R-squared: 0.01094
Adj. R-squared: -0.048616
F-statistic: 0.747368 on 3 and 25 DF, p-value: 0.53409

Table A 19 / Middle-income 3rd ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.3519386	0.3862630	0.9111	0.36270
lag(pdata$Unemployment, 1)	-0.0951301	0.0692516	-1.3737	0.17021
lag(pdata$Inflation, 1)	-0.0867311	0.0528167	-1.6421	0.10125
lag(pdata$Debt, 1)	0.0358711	0.0939376	0.3819	0.70274
lag(pdata$PopulationOld, 1)	0.1719866	0.1651318	1.0415	0.29819
lag(pdata$Immigration, 1)	-0.3703117	0.1692090	-2.1885	0.02914*
lag(pdata$Immigration_att, 1)	-0.0781093	0.1074121	-0.7272	0.46748
lag(pdata$Anti.immigration_ethnic_att, 1)	-0.0232082	0.1308792	-0.1773	0.85933
lag(pdata$Pronatalism, 1)	0.0273750	0.0214523	1.2761	0.20257
lag(pdata$Gov_left, 1)	0.0228197	0.0603090	0.3784	0.70532
lag(pdata$Gov_right, 1)	-0.0076224	0.0711411	-0.1071	0.91472

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 198.79
Residual sum of squares: 179.49
R-squared: 0.09709
Adj. R-squared: 0.025963
F-statistic: 1.07448 on 11 and 25 DF, p-value: 0.41846

Table A 20 / Middle-income 3rd ch. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
4.167745e-04	2.005983e-04
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
1.384250e-04)	1.862098e-05
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
5.262168e-06	5.840806e-05
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1.548532e-03)	1.931478e-03
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
1.255277e-05	2.067105e-05
lag(pdata_jk$Gov_right, 1)	
1.037475e-05	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.2300017	-0.04211101	-0.07986462
2	0.2708319	-0.07043755	-0.10339545
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	-0.001093611	0.1261190	-0.3836687
2	0.007536795	0.1307069	-0.3289537
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.01510692		0.089125778
2	-0.06359585		0.001228606
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.02789349	0.005867106	-0.012857743
2	0.03497947	0.014960192	-0.006415772

Dropped
1 Hungary
2 Iceland, Netherlands, United Kingdom

Table A 21 / Middle-income 3rd ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.323304	0.440888	0.7333	0.46375
lag(pdata$Unemployment, 1)	-0.105812	0.068712	-1.5399	0.12426
lag(pdata$Inflation, 1)	-0.085914	0.048797	-1.7606	0.07896 .
lag(pdata$Debt, 1)	0.036916	0.099319	0.3717	0.71029
lag(pdata$PopulationOld, 1)	0.063346	0.140599	0.4505	0.65253

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 198.79
Residual sum of squares: 185.12
R-squared: 0.068756
Adj. R-squared: 0.0084159
F-statistic: 1.23201 on 5 and 25 DF, p-value: 0.32377

Table A 22 / Middle-income 3rd ch. – A – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
1.045474e-04	4.114824e-04
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
7.089208e-05	4.183893e-05
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1.292363e-04	7.421729e-04
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1.680500e-03	2.519444e-03
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
1.458723e-05	6.886232e-05
lag(pdata_jk$Gov_right, 1)	
2.696829e-05	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.3531209	-0.06496431	-0.07851650
2	0.3735706	-0.10553437	-0.09535598
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.03846085	0.1445659	-0.3386025
2	0.05139746	0.1673024	-0.3930882
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.01242212		0.07033347
2	-0.06956567		-0.03005465
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.02192183	0.02380352	-0.0007641235
2	0.02956047	0.04040018	0.0096220775

Dropped
1 Hungary
2 Iceland, Netherlands, United Kingdom

Table A 23 / Middle-income 3rd ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.145076	0.119921	-1.2098	0.2270
lag(pdata$Immigration_att, 1)	0.018448	0.111473	0.1655	0.8686
lag(pdata$Anti.immigration_ethnic_att, 1)	-0.023571	0.161436	-0.1460	0.8840

Total sum of squares: 198.79
Residual sum of squares: 198.07
R-squared: 0.0036045
Adj. R-squared: -0.056393
F-statistic: 0.682386 on 3 and 25 DF, p-value: 0.57114

Table A 24 / Middle-income 3rd ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.0177822	0.0203576	0.8735	0.3828
lag(pdata$Gov_left, 1)	-0.0063921	0.0606700	-0.1054	0.9161
lag(pdata$Gov_right, 1)	-0.0307447	0.0751607	-0.4091	0.6827

Total sum of squares: 198.79
Residual sum of squares: 198.45 R-squared: 0.0017304
Adj. R-squared: -0.05838
F-statistic: 0.922286 on 3 and 25 DF, p-value: 0.44443

Table A 25 / Middle-income 4th ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.272778	0.277055	0.9846	0.32536
lag(pdata$Unemployment, 1)	-0.096016	0.069872	-1.3742	0.17006
lag(pdata$Inflation, 1)	-0.036756	0.035501	-1.0354	0.30105
lag(pdata$Debt, 1)	0.052138	0.074709	0.6979	0.48560
lag(pdata$PopulationOld, 1)	0.054633	0.113660	0.4807	0.63098
lag(pdata$Immigration, 1)	-0.249431	0.111955	-2.2280	0.02637*
lag(pdata$Immigration_att, 1)	0.080766	0.080850	0.9990	0.31834
lag(pdata$Anti.immigration_ethnic_att, 1)	0.157141	0.115807	1.3569	0.17548
lag(pdata$Pronatalism, 1)	0.029165	0.018863	1.5461	0.12276
lag(pdata$Gov_left, 1)	0.046186	0.038789	1.1907	0.23439
lag(pdata$Gov_right, 1)	0.123266	0.066194	1.8622	0.06322.

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 172.68
Residual sum of squares: 158.56 R-squared: 0.081804
Adj. R-squared: 0.009473
F-statistic: 1.00373 on 11 and 25 DF, p-value: 0.47048

Table A 26 / Middle-income 4th ch. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
3.067174e-06	3.985744e-04
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
4.280735e-05	4.227961e-04
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1.860842e-07	7.505078e-06
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1.521866e-04	1.404415e-04
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
5.241650e-06	3.022311e-05
lag(pdata_jk$Gov_right, 1)	
3.005852e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	ag(pdata_jk$Inflation, 1)
1	0.2931613	-0.09975129	-0.03937662
2	0.2896586	-0.05982263	-0.02629115
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.05672658	0.04451422	-0.2517168
2	0.01560257	0.04537697	-0.2571959
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.07570705		0.1584319
2	0.10037984		0.1821335
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.03452642	0.05531075	0.1472690
2	0.02994749	0.06630585	0.1125942

Dropped
1 Italy
2 Hungary, Netherlands, United Kingdom

Table A 27 / Middle-income 4th ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.206827	0.344693	0.6000	0.5488
lag(pdata$Unemployment, 1)	-0.101189	0.071900	-1.4074	0.1600
lag(pdata$Inflation, 1)	-0.033227	0.034031	-0.9764	0.3294
lag(pdata$Debt, 1)	0.015831	0.072933	0.2171	0.8283
lag(pdata$PopulationOld, 1)	0.026889	0.126821	0.2120	0.8322

Total sum of squares: 172.68
Residual sum of squares: 166.79
R-squared: 0.034105
Adj. R-squared: -0.02848
F-statistic: 0.702268 on 5 and 25 DF, p-value: 0.62698

Table A 28 / Middle-income 4th ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.096112	0.069048	-1.3920	0.1646
lag(pdata$Immigration_att, 1)	0.132164	0.123490	1.0702	0.2851
lag(pdata$Anti.immigration_ethnic_att, 1)	0.170520	0.141955	1.2012	0.2303

Total sum of squares: 172.68
Residual sum of squares: 168.79
R-squared: 0.022521
Adj. R-squared: -0.036338
F-statistic: 1.54617 on 3 and 25 DF, p-value: 0.22725

Table A 29 / Middle-income 4th ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.018509	0.016830	1.0998	0.2720
lag(pdata$Gov_left, 1)	0.018504	0.045760	0.4044	0.6861
lag(pdata$Gov_right, 1)	0.103944	0.064143	1.6205	0.1058

Total sum of squares: 172.68
Residual sum of squares: 169.82
R-squared: 0.01657
Adj. R-squared: -0.042647
F-statistic: 0.906839 on 3 and 25 DF, p-value: 0.45177

Table A 30 / Low-income – aggregate

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.1314343	0.2718052	-0.4836	0.6291
lag(pdata$Unemployment, 1)	0.0342343	0.0604284	0.5665	0.5715
lag(pdata$Inflation, 1)	-0.0768698	0.0760015	-1.0114	0.3126
lag(pdata$Debt, 1)	-0.0881240	0.1423324	-0.6191	0.5363
lag(pdata$PopulationOld, 1)	0.2337246	0.2195924	1.0644	0.2880
lag(pdata$Immigration, 1)	-0.2579470	0.1547501	-1.6669	0.0966 .
lag(pdata$Immigration_att, 1)	0.0480462	0.0991187	0.4847	0.6282
lag(pdata$Anti.immigration_ethnic_att, 1)	0.1713170	0.1297059	1.3208	0.1976
lag(pdata$Pronatalism, 1)	0.0119257	0.0232357	0.5132	0.6082
lag(pdata$Gov_left, 1)	-0.0043067	0.0602670	-0.0715	0.9431
lag(pdata$Gov_right, 1)	-0.0525460	0.0629245	-0.8351	0.4044

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Total sum of squares: 87.648
Residual sum of squares: 78.893
R-squared: 0.09989
Adj. R-squared: 0.017507
F-statistic: 2.5197 on 11 and 16 DF, p-value: 0.045494

Table A 31 / Low-income – agg. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
5.903028e-06	2.135375e-05
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
1.509687e-04	2.012370e-03
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
4.736309e-03	1.049255e-02
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
9.349719e-05	2.504685e-03
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
2.174722e-05	1.307935e-04
lag(pdata_jk$Gov_right, 1)	
1.084503e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.1544647	0.04675680	-0.05520585
2	-0.1496054	0.03751478	-0.07977971
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	-0.01956252	0.1083729	-0.4780339
2	-0.10928141	0.2460146	-0.2731676
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.05691786		0.0696401
2	0.03757907		0.1697338
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.001520123	0.015344485	-0.03425754
2	0.010846906	-0.007528514	-0.05508544

Dropped
1 Luxembourg, Poland, Slovakia
2 Spain

Table A 32 / Low-income – aggregate – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.273094	0.255529	-1.0687	0.2860
lag(pdata$Unemployment, 1)	0.027221	0.065269	0.4171	0.6769
lag(pdata$Inflation, 1)	-0.083258	0.066198	-1.2577	0.2095
lag(pdata$Debt, 1)	-0.176191	0.153207	-1.1500	0.2510
lag(pdata$PopulationOld, 1)	0.249702	0.207412	1.2039	0.2296

Total sum of squares: 87.648
Residual sum of squares: 83.151
R-squared: 0.05131
Adj. R-squared: -0.014878
F-statistic: 1.95928 on 5 and 16 DF, p-value: 0.14013

Table A 33 / Low-income – aggregate – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.215092	0.156183	-1.3772	0.1695
lag(pdata$Immigration_att, 1)	0.145354	0.099621	1.4591	0.1456
lag(pdata$Anti.immigration_ethnic_att, 1)	0.169653	0.137982	1.2295	0.2198

Total sum of squares: 87.648
Residual sum of squares: 84.128
R-squared: 0.040154
Adj. R-squared: -0.020034
F-statistic: 2.68314 on 3 and 16 DF, p-value: 0.081664

Table A 34 / Low-income – aggregate – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.0030787	0.0166459	-0.1850	0.8534
lag(pdata$Gov_left, 1)	0.0156816	0.0582523	0.2692	0.7880
lag(pdata$Gov_right, 1)	-0.0067556	0.0649119	-0.1041	0.9172

Total sum of squares: 87.648
Residual sum of squares: 87.531
R-squared: 0.0013375
Adj. R-squared: -0.061285
F-statistic: 0.0439077 on 3 and 16 DF, p-value: 0.98731

Table A 35 / Low-income – 1st ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.523191	0.441380	-1.1854	0.2368
lag(pdata$Unemployment, 1)	-0.011076	0.108267	-0.1023	0.9186
lag(pdata$Inflation, 1)	-0.054787	0.051400	-1.0659	0.2873
lag(pdata$Debt, 1)	-0.048142	0.260874	-0.1845	0.8537
lag(pdata$PopulationOld, 1)	0.342091	0.378578	0.9036	0.3669
lag(pdata$Immigration, 1)	-0.062858	0.158086	-0.3976	0.6912
lag(pdata$Immigration_att, 1)	0.109692	0.157395	0.6969	0.4864
lag(pdata$Anti.immigration_ethnic_att, 1)	0.225579	0.220642	1.0224	0.3074
lag(pdata$Pronatalism, 1)	0.043292	0.040507	1.0687	0.2861
lag(pdata$Gov_left, 1)	-0.053016	0.099539	-0.5326	0.5947
lag(pdata$Gov_right, 1)	-0.040536	0.104880	-0.3865	0.6994

Total sum of squares: 165.68
Residual sum of squares: 152.52
R-squared: 0.079442
Adj. R-squared: -0.0048123
F-statistic: 0.999045 on 11 and 16 DF, p-value: 0.4869

Table A 36 / Low-income – 1st ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.673564	0.367449	-1.8331	0.06778 .
lag(pdata$Unemployment, 1)	-0.021058	0.108623	-0.1939	0.84641
lag(pdata$Inflation, 1)	-0.054304	0.043670	-1.2435	0.21466
lag(pdata$Debt, 1)	-0.088921	0.276344	-0.3218	0.74785
lag(pdata$PopulationOld, 1)	0.382705	0.360061	1.0629	0.28868

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 165.68
Residual sum of squares: 157.05 R-squared: 0.052094
Adj. R-squared: -0.014039
F-statistic: 2.04797 on 5 and 16 DF, p-value: 0.12604

Table A 37 / Low-income – 1st ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.0038986	0.1566895	-0.0249	0.9802
lag(pdata$Immigration_att, 1)	0.2475913	0.1853622	1.3357	0.1826
lag(pdata$Anti.immigration_ethnic_att, 1)	0.2643308	0.2366632	1.1169	0.2649

Total sum of squares: 165.68
Residual sum of squares: 159.37 R-squared: 0.0381
Adj. R-squared: -0.022217
F-statistic: 0.739816 on 3 and 16 DF, p-value: 0.54366

Table A 38 / Low-income – 1st ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.027371	0.028823	0.9496	0.3431
lag(pdata$Gov_left, 1)	-0.014211	0.073592	-0.1931	0.8470
lag(pdata$Gov_right, 1)	0.042461	0.081582	0.5205	0.6031

Total sum of squares: 165.68
Residual sum of squares: 164.77
R-squared: 0.0054938
Adj. R-squared: -0.056868
F-statistic: 0.321357 on 3 and 16 DF, p-value: 0.80984

Table A 39 / Low-income – 2nd ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.3647737	0.3330782	-1.0952	0.2743
lag(pdata$Unemployment, 1)	0.0542859	0.0724547	0.7492	0.4543
lag(pdata$Inflation, 1)	-0.0409601	0.0786638	-0.5207	0.6030
lag(pdata$Debt, 1)	-0.0019986	0.1632801	-0.0122	0.9902
lag(pdata$PopulationOld, 1)	0.2146473	0.2386309	0.8995	0.3691
lag(pdata$Immigration, 1)	-0.1358867	0.1459494	-0.9311	0.3526
lag(pdata$Immigration_att, 1)	-0.0619119	0.1151538	-0.5376	0.5912
lag(pdata$Anti.immigration_ethnic_att, 1)	0.1269783	0.1146870	1.1072	0.2691
lag(pdata$Pronatalism, 1)	-0.0217918	0.0247644	-0.8800	0.3796
lag(pdata$Gov_left, 1)	0.0073053	0.0783217	0.0933	0.9258
lag(pdata$Gov_right, 1)	-0.0231503	0.0915400	-0.2529	0.8005

Total sum of squares: 114.6
Residual sum of squares: 107.36
R-squared: 0.063238
Adj. R-squared: -0.0225
F-statistic: 8.41982 on 11 and 16 DF, p-value: 9.5768e-05

Table A 40 / Low-income – 2nd ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.471751	0.231158	-2.0408	0.04214 *
lag(pdata$Unemployment, 1)	0.046679	0.078209	0.5969	0.55106
lag(pdata$Inflation, 1)	-0.044156	0.074729	-0.5909	0.55504
lag(pdata$Debt, 1)	-0.094586	0.158148	-0.5981	0.55023
lag(pdata$PopulationOld, 1)	0.202243	0.199558	1.0135	0.31166

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 114.6
Residual sum of squares: 111.11
R-squared: 0.030454
Adj. R-squared: -0.037189
F-statistic: 4.32976 on 5 and 16 DF, p-value: 0.011061

Table A 41 / Low-income – 2nd ch. – A – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
6.514727e-03	4.440334e-04	2.961836e-06
lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
9.763304e-03	2.832590e-02	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.2856103	0.09397466	-0.01231708
2	-0.4470380	0.13611885	-0.01575907
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
1	0.02268979	-0.02333045	
2	-0.17492907	0.31327553	

Dropped
1 Hungary, Luxembourg, Poland, Slovakia
2 Greece, Lithuania, Netherlands, Portugal

Table A 42 / Low-income – 2nd ch. – B – JK

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.081715	0.126478	-0.6461	0.5187
lag(pdata$Immigration_att, 1)	0.045917	0.103853	0.4421	0.6587
lag(pdata$Anti.immigration_ethnic_att, 1)	0.146627	0.115944	1.2646	0.2070

Total sum of squares: 114.6
Residual sum of squares: 112.32
R-squared: 0.019898
Adj. R-squared: -0.04156
F-statistic: 1.5736 on 3 and 16 DF, p-value: 0.23472

Table A 43 / Low-income – 2nd ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.032884	0.022578	-1.4565	0.1463
lag(pdata$Gov_left, 1)	0.036042	0.073498	0.4904	0.6242
lag(pdata$Gov_right, 1)	0.034327	0.075324	0.4557	0.6489

Total sum of squares: 114.6
Residual sum of squares: 114.19
R-squared: 0.0035833
Adj. R-squared: -0.058898
F-statistic: 0.794507 on 3 and 16 DF, p-value: 0.51468

Table A 44 / Low-income – 3rd ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.1811535	0.3934375	-0.4604	0.64554
lag(pdata$Unemployment, 1)	0.0778464	0.1042794	0.7465	0.45595
lag(pdata$Inflation, 1)	-0.1424855	0.0878841	-1.6213	0.10602
lag(pdata$Debt, 1)	-0.2901221	0.1834433	-1.5815	0.11483
lag(pdata$PopulationOld, 1)	0.3157094	0.2547078	1.2395	0.21615
lag(pdata$Immigration, 1)	-0.3807304	0.2575918	-1.4780	0.14046
lag(pdata$Immigration_att, 1)	0.0316840	0.1428679	0.2218	0.82465
lag(pdata$Anti.immigration_ethnic_att, 1)	0.0624418	0.1578537	0.3956	0.69271
lag(pdata$Pronatalism, 1)	0.0028265	0.0245572	0.1151	0.90844
lag(pdata$Gov_left, 1)	-0.1310861	0.0838496	-1.5633	0.11904
lag(pdata$Gov_right, 1)	-0.1742422	0.1034690	-1.6840	0.09324.

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Total sum of squares: 137.67
Residual sum of squares: 122.66
R-squared: 0.109
Adj. R-squared: 0.027453
F-statistic: 8.44364 on 11 and 16 DF, p-value: 9.4092e-05

Table A 45 / Low-income – 3rd ch. – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
6.254852e-02	4.207952e-06
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
4.205541e-07	1.464489e-03
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1.777948e-02	2.332908e-02
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
4.052180e-02	8.459337e-03
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
7.403494e-05	1.954698e-03
lag(pdata_jk$Gov_right, 1)	
4.280877e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.180564	0.01073432	-0.1473625
2	0.319630	0.01483697	-0.1460655
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	-0.1490598	-0.03978288	-0.07067939
2	-0.2255971	0.22689659	-0.37615659
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.2358405		0.2733263
2	-0.1667600		0.0893770
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	-0.014895998	-0.0690972	-0.1679974
2	0.002312714	-0.1575211	-0.1266169

Dropped
1 Estonia, Hungary, Latvia, Poland, Slovakia
2 Greece, Lithuania, Netherlands, Slovenia

Table A 46 / Low-income – 3rd ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.130148	0.363629	-0.3579	0.7207
lag(pdata$Unemployment, 1)	0.069317	0.108731	0.6375	0.5243
lag(pdata$Inflation, 1)	-0.138092	0.080578	-1.7138	0.0876 .
lag(pdata$Debt, 1)	-0.283101	0.172626	-1.6400	0.1021
lag(pdata$PopulationOld, 1)	0.252943	0.220454	1.1474	0.2521

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 137.67
Residual sum of squares: 129.12 R-squared: 0.062053
Adj. R-squared: -0.003385
F-statistic: 2.20333 on 5 and 16 DF, p-value: 0.10486

Table A 47 / Low-income – 3rd ch. – A – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
0.0442635786	0.0001838795	0.0002724458
lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
0.0125419546	0.0154829776	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.2607270	0.01413917	-0.1550589
2	0.1600512	0.04125960	-0.1220470
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
1	-0.1420789	-0.02046339	
2	-0.3660606	0.22839784	

Dropped
1 Estonia, Hungary, Latvia, Poland, Slovakia
2 Greece, Lithuania, Netherlands, Slovenia

Table A 48 / Low-income – 3rd ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.437504	0.269720	-1.6221	0.1058
lag(pdata$Immigration_att, 1)	0.132186	0.146028	0.9052	0.3661
lag(pdata$Anti.immigration_ethnic_att, 1)	0.043203	0.155850	0.2772	0.7818

Total sum of squares: 137.67
Residual sum of squares: 133.36
R-squared: 0.031259
Adj. R-squared: -0.029487
F-statistic: 1.67294 on 3 and 16 DF, p-value: 0.21272

Table A 49 / Low-income – 3rd ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.0078864	0.0185486	-0.4252	0.6710
lag(pdata$Gov_left, 1)	-0.0989590	0.0842755	-1.1742	0.2412
lag(pdata$Gov_right, 1)	-0.1358378	0.1063839	-1.2769	0.2026

Total sum of squares: 137.67
Residual sum of squares: 135.88
R-squared:0.012955
Adj. R-squared: -0.048939
F-statistic: 0.650646 on 3 and 16 DF, p-value: 0.59399

Table A 50 / Low-income – 4th ch.

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.2676132	0.2963487	0.9030	0.3672
lag(pdata$Unemployment, 1)	-0.1396377	0.0877872	-1.5906	0.1128
lag(pdata$Inflation, 1)	-0.0514196	0.0483962	-1.0625	0.2889
lag(pdata$Debt, 1)	-0.0524290	0.1619914	-0.3237	0.7464
lag(pdata$PopulationOld, 1)	0.1074889	0.1720549	0.6247	0.5326
lag(pdata$Immigration, 1)	-0.3277025	0.2155537	-1.5203	0.1295
lag(pdata$Immigration_att, 1)	-0.0614373	0.0986165	-0.6230	0.5338
lag(pdata$Anti.immigration_ethnic_att, 1)	0.0537373	0.0860079	0.6248	0.5326
lag(pdata$Pronatalism, 1)	-0.0052681	0.0189169	-0.2785	0.7808
lag(pdata$Gov_left, 1)	0.0521349	0.0731278	0.7129	0.4765
lag(pdata$Gov_right, 1)	0.0200719	0.0704411	0.2849	0.7759

Total sum of squares: 100.09
Residual sum of squares: 88.256
R-squared:0.1182
Adj. R-squared: 0.037492
F-statistic: 8.81152 on 11 and 16 DF, p-value: 7.1975e-05

Table A 51 / Low-income – 4th ch. – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.139260	0.287272	0.4848	0.6282
lag(pdata$Unemployment, 1)	-0.140395	0.092902	-1.5112	0.1318
lag(pdata$Inflation, 1)	-0.059436	0.042085	-1.4123	0.1589
lag(pdata$Debt, 1)	-0.174739	0.122682	-1.4243	0.1554
lag(pdata$PopulationOld, 1)	0.114362	0.130135	0.8788	0.3802

Total sum of squares: 100.09
Residual sum of squares: 91.579
R-squared: 0.085002
Adj. R-squared: 0.021164
F-statistic: 0.753553 on 5 and 16 DF, p-value: 0.59568

Table A 52 / Low-income – 4th ch. – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.300661	0.189273	-1.5885	0.1132
lag(pdata$Immigration_att, 1)	-0.040612	0.084105	-0.4829	0.6295
lag(pdata$Anti.immigration_ethnic_att, 1)	0.055482	0.059403	0.9340	0.3511

Total sum of squares: 100.09
Residual sum of squares: 96.715
R-squared: 0.033684
Adj. R-squared: -0.02691
F-statistic: 2.07345 on 3 and 16 DF, p-value: 0.1441

Table A 53 / Low-income – 4th ch. – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	-0.019422	0.019114	-1.0161	0.3104
lag(pdata$Gov_left, 1)	0.050959	0.059212	0.8606	0.3901
lag(pdata$Gov_right, 1)	0.021520	0.059114	0.3640	0.7161

Total sum of squares: 100.09
Residual sum of squares: 99.633
R-squared: 0.0045348
Adj. R-squared: -0.057887
F-statistic: 0.819049 on 3 and 16 DF, p-value: 0.50214

Table A 54 / Middle-income + low-income – aggregate

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.16578589	0.37748613	0.4392	0.660850
lag(pdata$Unemployment, 1)	-0.00133940	0.05532338	-0.0242	0.980701
lag(pdata$Inflation, 1)	-0.11139799	0.06164612	-1.8071	0.071772.
lag(pdata$Debt, 1)	-0.09778051	0.14014739	-0.6977	0.485916
lag(pdata$PopulationOld, 1)	0.26742456	0.24750599	1.0805	0.280812
lag(pdata$Immigration, 1)	-0.29776703	0.10527642	-2.8284	0.004998**
lag(pdata$Immigration_att, 1)	0.06248502	0.08995399	0.6946	0.487832
lag(pdata$Anti.immigration_ethnic_att, 1)	0.15071847	0.14333993	1.0515	0.293901
lag(pdata$Pronatalism, 1)	0.02093884	0.02062256	1.0153	0.310777
lag(pdata$Gov_left, 1)	0.01179472	0.06100668	0.1933	0.846830
lag(pdata$Gov_right, 1)	0.00040054	0.05946472	0.0067	0.994630

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Total sum of squares: 96.655
Residual sum of squares: 81.804
R-squared: 0.15365
Adj. R-squared: 0.076184
F-statistic: 3.13249 on 11 and 16 DF, p-value: 0.018973

Table A 55 / Middle-income + low-income – aggregate – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
1.088527e-03	2.026470e-05
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
7.025992e-04	4.489538e-03
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
9.223506e-03	1.866250e-03
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1.458659e-05	2.120925e-03
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
1.132663e-04	1.012800e-03
lag(pdata_jk$Gov_right, 1)	
4.304248e-04	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.09409428	0.002992756	-0.06114088
2	0.16007994	-0.006010509	-0.11415406
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.01064088	0.08698868	-0.4234522
2	-0.12336715	0.27906685	-0.3370520
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	0.04551854		0.05512714
2	0.05315702		0.14723413
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.0008662736	0.08622595	-0.03112373
2	0.0221515986	0.02257691	0.01036963

Dropped
1 Hungary, Luxembourg, Poland, Slovakia
2 Spain

Table A 56 / Middle-income + low-income – aggregate – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	-0.0152020	0.4224268	-0.0360	0.97132
lag(pdata$Unemployment, 1)	-0.0056427	0.0550784	-0.1024	0.91847
lag(pdata$Inflation, 1)	-0.1173064	0.0545378	-2.1509	0.03228 *
lag(pdata$Debt, 1)	-0.1962846	0.1588786	-1.2354	0.21763
lag(pdata$PopulationOld, 1)	0.3146361	0.2493247	1.2620	0.20794

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 96.655
Residual sum of squares: 85.374
R-squared: 0.11671
Adj. R-squared: 0.055088
F-statistic: 1.82812 on 5 and 16 DF, p-value: 0.16412

Table A 57 / Middle-income + low-income – aggregate – A – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
6.514727e-03	4.440334e-04	2.961836e-06
lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
9.763304e-03	2.832590e-02	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	-0.0256103	-0.02397466	-0.1231708
2	-0.0470380	-0.08611885	-0.08575907
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	
1	-0.20268979	0.33233304	
2	-0.17492907	0.31327553	

Dropped:
1 Hungary, Luxembourg, Poland, Slovakia
2 Spain

Table A 58 / Middle-income + low-income – aggregate – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	-0.18981	0.13485	-1.4076	0.16028
lag(pdata$Immigration_att, 1)	0.18795	0.10290	1.8266	0.06875 .
lag(pdata$Anti.immigration_ethnic_att, 1)	0.15271	0.17037	0.8963	0.37078

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1
Total sum of squares: 96.655
Residual sum of squares: 93.147
R-squared: 0.036292
Adj. R-squared: -0.024139
F-statistic: 3.54473 on 3 and 16 DF, p-value: 0.03858

Table A 59 / Middle-income + low-income – aggregate – B – JK

Jackknife variances:

lag(pdata_jk$Immigration, 1)	lag(pdata_jk$Immigration_att, 1)
0.0140307949	0.0007738439
lag(pdata_jk$Anti.immigration_ethnic_att, 1)	
0.0036754500	

Sample of jackknife results:

	lag(pdata_jk$Immigration, 1)	lag(pdata_jk$Immigration_att, 1)
1	-0.4531728	0.1222808
2	-0.2162695	0.1779169
	lag(pdata_jk$Anti.immigration_ethnic_att, 1)	
1	0.03237161	
2	0.15362258	

Dropped:
1 Hungary, Luxembourg, Poland, Slovakia
2 Spain

Table A 60 / Middle-income + low-income – aggregate – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.0030483	0.0173747	0.1754	0.8608
lag(pdata$Gov_left, 1)	0.0155691	0.0729517	0.2134	0.8311
lag(pdata$Gov_right, 1)	0.0295849	0.0768841	0.3848	0.7007

Total sum of squares: 96.655
Residual sum of squares: 96.557
R-squared: 0.0010092
Adj. R-squared: -0.061634
F-statistic: 0.0552354 on 3 and 16 DF, p-value: 0.9823

Table A 61 / Middle-income/low-income ratio

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.433619	0.530029	0.8181	0.41396
lag(pdata$Unemployment, 1)	-0.121159	0.063618	-1.9045	0.05782 .
lag(pdata$Inflation, 1)	0.052700	0.065147	0.8089	0.41920
lag(pdata$Debt, 1)	0.244743	0.232812	1.0512	0.29401
lag(pdata$PopulationOld, 1)	0.022257	0.184244	0.1208	0.90393
lag(pdata$Immigration, 1)	-0.028844	0.229530	-0.1257	0.90008
lag(pdata$Immigration_att, 1)	-0.072761	0.099699	-0.7298	0.46609
lag(pdata$Anti.immigration_ethnic_att, 1)	-0.099222	0.103158	-0.9618	0.33692
lag(pdata$Pronatalism, 1)	0.046353	0.036753	1.2612	0.20824
lag(pdata$Gov_left, 1)	0.081822	0.104635	0.7820	0.43486
lag(pdata$Gov_right, 1)	0.115495	0.091534	1.2618	0.20803

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Total sum of squares: 116.59
Residual sum of squares: 106.49
R-squared: 0.086682
Adj. R-squared: 0.0030901
F-statistic: 1.14645 on 11 and 16 DF, p-value: 0.39066

Table A 62 / Middle-income/low-income ratio – JK

Jackknife variances:

lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)
5.944980e-01	5.632832e-07
lag(pdata_jk$Inflation, 1)	lag(pdata_jk$Debt, 1)
1.516684e-03	4.300571e-02
lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
3.426845e-02	3.625128e-04
lag(pdata_jk$Immigration_att, 1)	lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1.102607e-03	3.619953e-04
lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)
5.552553e-05	3.420533e-05
lag(pdata_jk$Gov_right, 1)	
1.276110e-03	

Sample of jackknife results:

	lag(pdata_jk$GDP, 1)	lag(pdata_jk$Unemployment, 1)	lag(pdata_jk$Inflation, 1)
1	0.06474429	-0.1460861	-0.02226250
2	1.60681820	-0.1475872	0.05562677
	lag(pdata_jk$Debt, 1)	lag(pdata_jk$PopulationOld, 1)	lag(pdata_jk$Immigration, 1)
1	0.1540786	0.01626948	0.09859248
2	0.5688350	-0.35396529	0.06051294
	lag(pdata_jk$Immigration_att, 1)		lag(pdata_jk$Anti.immigration_ethnic_att, 1)
1	-0.08687026		-0.1566486
2	-0.02045920		-0.1185962
	lag(pdata_jk$Pronatalism, 1)	lag(pdata_jk$Gov_left, 1)	lag(pdata_jk$Gov_right, 1)
1	0.03388922	-0.0114276642	0.09592019
2	0.04879231	0.0002694003	0.02447484

Dropped
1 Hungary, Lithuania
2 Czechia, Ireland, United Kingdom

Table A 63 / Middle-income/low-income ratio – A

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$GDP, 1)	0.401803	0.567944	0.7075	0.4798
lag(pdata$Unemployment, 1)	-0.111585	0.065789	-1.6961	0.0909 .
lag(pdata$Inflation, 1)	0.047894	0.056290	0.8508	0.3955
lag(pdata$Debt, 1)	0.200098	0.243337	0.8223	0.4116
lag(pdata$PopulationOld, 1)	0.043338	0.225315	0.1923	0.8476

Signif. codes: 0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1
Total sum of squares: 116.59
Residual sum of squares: 108.67
R-squared: 0.067985
Adj. R-squared: 0.0029602
F-statistic: 1.63338 on 5 and 16 DF, p-value: 0.20794

Table A 64 / Middle-income/low-income ratio – B

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Immigration, 1)	0.150503	0.226076	0.6657	0.5061
lag(pdata$Immigration_att, 1)	-0.012293	0.174372	-0.0705	0.9438
lag(pdata$Anti.immigration_ethnic_att, 1)	-0.090485	0.111539	-0.8112	0.4179

Total sum of squares: 116.59
Residual sum of squares: 114.97
R-squared: 0.013868
Adj. R-squared: -0.047969
F-statistic: 0.311814 on 3 and 16 DF, p-value: 0.81657

Table A 65 / Middle-income/low-income ratio – C

Coefficients:	Estimate	Std. Error	t-value	Pr(>|t|)
lag(pdata$Pronatalism, 1)	0.037681	0.040027	0.9414	0.3473
lag(pdata$Gov_left, 1)	0.017529	0.069264	0.2531	0.8004
lag(pdata$Gov_right, 1)	0.062442	0.057477	1.0864	0.2782

Total sum of squares: 116.59
Residual sum of squares: 115.64
R-squared: 0.0081234
Adj. R-squared: -0.054074
F-statistic: 0.520506 on 3 and 16 DF, p-value: 0.67422

IMPRESSUM

Herausgeber, Verleger, Eigentümer und Hersteller:
Verein „Wiener Institut für Internationale Wirtschaftsvergleiche' (wiiw),
Wien 6, Rahlgasse 3

ZVR-Zahl: 329995655

Postanschrift: A 1060 Wien, Rahlgasse 3, Tel: [+431] 533 66 10, Telefax: [+431] 533 66 10 50
Internet Homepage: www.wiiw.ac.at

Offenlegung nach § 25 Mediengesetz: Medieninhaber (Verleger): Verein "Wiener Institut für Internationale Wirtschaftsvergleiche", A 1060 Wien, Rahlgasse 3. Vereinszweck: Analyse der wirtschaftlichen Entwicklung der zentral- und osteuropäischen Länder sowie anderer Transformationswirtschaften sowohl mittels empirischer als auch theoretischer Studien und ihre Veröffentlichung; Erbringung von Beratungsleistungen für Regierungs- und Verwaltungsstellen, Firmen und Institutionen.

wiiw

wiiw.ac.at

https://wiiw.ac.at/p-7606.html