Explaining attitudes towards demographic behaviour

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Abstract

Economic and Demographic developments are closely related. Although there is variation across countries, it is clear that the first demographic transition – characterized by fertility and mortality declines, was accompanied by dramatic economic and structural progress. Following the first demographic transition, new and more sophisticated demographic behaviour emerged, which, in the Demography literature, is often termed the *Second* Demographic Transition. Examples include postponement of childbearing, out-of-wedlock childbearing, increasing cohabitation (and decline of marriage) and partnership dissolution (including increased divorce rates). A precondition for these new types of behaviours to take place is that individuals' attitudes and value orientation towards demographic behaviour also change. Whereas the Demography literature makes a clear distinction between the First and Second Demographic transitions, others argue that today's attitudes and value orientation towards demographic behaviour follow a diachronic path predominantly driven by economic development, but which are related to the quality of institutions. Our paper provides a review of these explanations. Using unique individual level data from the European Social Survey, we develop a Modern Family Attitude (MFA) index and compare 25 countries. There are large differences across countries, and we find that economic development is indeed a strong predictor for modern attitudes towards demographic behaviour. However, attitudes correlate with many other country specific characteristics, some which challenges popular wisdom in the Demograhy literature.

1. Introduction

Societies continuously change and evolve over time, and with them the attitudes, norms and value orientations individuals assume. Going through civil wars, foreign dominations, scientific progress, industrialization and religious revolutions, societies enrich their cultural and social baggage. They mature and accumulate cultural heritage that is at the basis of demographic and social progress. The path towards modernity is thus diachronic where development of values and attitudes is a long and slow process that extends over time. However, looking at the extent to which societies in Europe have adopted modern or, to put it in Inglehart's words, "post materialist" (Inglehart, 1997) value orientations and behaviours, we observe significant cross-country variation. While some countries, such as the Scandinavian ones, are well ahead in embracing post-material values and attitudes, others, such as the Mediterranean ones, appear to be having a hard time in leaving them behind. Isolating important changes in values and attitudes over time, and understanding why societies today occupy different positions on the path to post-materialism is a complex puzzle that sociologists have spent considerable effort in solving.

Individuals' attitudes and value orientations play an important role in any society. It is naturally a key precursor for individuals' decision-making and subsequent behaviour. As attitudes and value orientation change – behaviour will also change (Ajzen 1988; Barber 2000). Naturally, attitudes and value orientations play a key role in theories of Demographic behaviour. During the First Demographic Transition (FDT), characterised by a decline in mortality and fertility rates – predominantly driven by scientific improvements emerging in the late eighteenth and of the nineteenth centuries, couples adjusted to the new environmental setting, lowering their desired and effective fertility (Lesthaeghe and Van de Kaa 1986). Under the new circumstances, it was no longer necessary to generate a large off-spring as a means to guarantee old age support. Moreover, due to new production technology the demand for cheap labour by children was no longer there. The key argument however, is that the FDT was not a consequence of a change in the attitudes towards the family; rather it was the result of an adaption of traditional values to a new environmental setting. This is in contrast to the arguments behind the Second Demographic Transition (SDT), which is characterised by new forms of living arrangements and postponement of fertility. Here the key argument is that new demographic behaviour has come about because of fundamental changes in individuals' attitudes and value orientations. This is in discord with other disciplines, such as evolutionary biology, which argues that new value orientations are driven by economic development, and that modern attitudes follow a continuous diachronic path. In their

view, differences in today's modern attitudes are a natural consequence and continuation of the societal transformation set in motion by the Industrial Revolution. There is also a large literature emphasising that country specific structural differences are important for both attitudes and observed demographic behaviour. As the Industrial Revolution did before it, the introduction of the modern welfare state further weakened the role of the family in our societies. As traditional care activities such as care for children and the elderly – traditionally undertaken by close family members – were out-sourced to public services, family ties are weakened further, and with it, a weakening of traditional attitudes. As the welfare state is becoming more generous and comprehensive, it also facilitates new demographic behaviour, and with it new and modern attitudes.

The aim of this paper is to provide a comparative analysis of attitudes towards demographic behaviour. Using the third round of the European Social Survey (ESS), which contains a special module on individuals' approval (or disapproval) of demographic behaviours, we are able to compare individuals from 24 countries. From these questions, we construct a Modern Family Attitude (MFA) index, to which we apply a Multi-Level regression model, decomposing variation in the MFA index to individual, regional and country levels. Our study is based on a cross-sectional survey, which means that we are in no position to test the various explanations on offer for why countries progress differently on the path of gaining modern attitudes. However, our analysis does bring about insight which in some cases challenges popular wisdom in the Demography literature. For instance, we find liberal attitudes to be strongest in those countries that also have strong attitudes towards collectivism. Not surprisingly, these countries consist of the Scandinavian ones, where public support and welfare provision is highly generous, casting doubt on the notion that the Second Demographic Transition follows a path of individualisation. Moreover, structural differences in the countries matters for the observed differences in attitudes. In particular, trust towards institutions, which is an indication of their quality, is associated with modern attitudes.

2. Background

Until the rise of the Industrial Revolution in the eighteenth century, European societies were characterized by a common set of "traditional attitudes" (Inkeles and Smith 1974) and of demographic behaviours typical of pre-industrial societies, the most important being high fertility coupled with close family ties. Due mainly to the absence of scientific medical treatment and poor diffusion of sewerage systems, epidemics were frequent, mortality rates high, especially among children, and life expectancy low. In addition, population dynamics were constrained by the rate of pre-industrial economic growth, which was on average lower than the rate of population growth. In periods of good harvest and favourable weather, agricultural production would increase, thus boosting the rate of population growth. But since populations would grow faster than the economy, population growth would eventually be halted by the upsurge of food shortages and of subsequent epidemics. To put it in Malthus' words*, the power of population* [was] *indefinitely greater than the power in the earth to produce subsistence for man* (Malthus 1798).

Demographic behaviour in such traditional societies was characterized by substantial support for large families and by the social and economic centrality of the family. Due to the very limited welfare provision and the absence of anything similar to modern pension systems, parents were forced to find in their children the care and the security they needed. By giving birth to a large offspring, parents would increase the probability that at least some of their children would survive to adulthood, thus securing the economic and social support needed for old age. Seen under this light, the high fertility rates and the close family networks prevalent within traditional societies is seen as the response of individuals to the lack of state-provided insurance and support. Moreover, given that primitive farming provided the main livelihoods, having a large offspring increased the number of arms used to cultivate the land, thus securing the food necessary for the survival of the family.

Economic and utilitaristic calculations were not the only drivers behind the high fertility rates and the close family networks of traditional societies. The British evolutionary biologist Bill Hamilton was one of the first scientists to stress the importance of blood kinship and genetic proximity in explaining social behaviour and, in particular, altruism (Hamilton 1964). That is, individuals show a genetic tendency to favour and foster the reproductive success of their sons and daughters. To put it in Hamilton's words, they have an "inclusive fitness" interest in their offsprings' biological success. This mechanism works both for animal species and for the human kind, and it serves as an explanation for why parents tend to generate a large offspring and to

sacrifice themselves for the well-being of their children. The development and the transmission of "inclusive fitness" is tightly related to the amount of kin-based interactions an individual has: recent research (Newson et al. 2007) shows that people tend to promote and to transmit fitness-enhancing behaviours and values mostly when talking to relatives, rather than to non-relatives. Thus, the larger the ratio of kin to non-kin around an individual, the higher is the transmission and the consolidation of "inclusive fitness". Prior to the Industrial Revolution, social interactions occurred primarily at the family level: people worked surrounded by family members on the family land or in the family shop. Also recreational activities and leisure were mostly family-based. Consequently, the formation and the diffusion of "inclusive fitness" were particularly high in traditional societies. Newson and Richerson (2008) claim with their "Kin Influence Hypothesis" that the large ratio of kin to non-kin interactions was at the basis of the widespread support for high fertility rates documented within pre-industrial societies. Since mortality rates were relatively high, parents expressed their "inclusive fitness" interest by generating a large offspring, thus increasing the probability of survival of the species and the transmission of their genes to future generations. In other words, cultural success was identified with genetic success. According to evolutionary biologists, *in summa,* a "genetic altruism" was at the basis of the high fertility rates and the close family interactions registered in pre-industrial societies.

The Industrial Revolution represented a major turning point in the process towards modernity. The eighteenth and the nineteenth centuries witnessed a series of groundbreaking technical improvements and scientific inventions that created fundamental economic and social changes. As stressed by Landes (1998), the most important innovation was the shift to a new mode of production whereby machines substituted human skills and effort. The economic and scientific changes brought about by the Industrial Revolution did indeed leave a deep mark also in the social and in the demographic grounds of European societies. In particular, the eighteenth and the nineteenth centuries saw a shift from a high-mortality and high-fertility demographic equilibrium, to a low-mortality low-fertility one, commonly known as the First Demographic Transitions (FDT). The key factors behind the FDT was medical and scientific improvements emerging in the late eighteenth and of the nineteenth centuries. Since mortality rates started declining markedly, couples "automatically" adjusted to the new environmental situation by lowering their desired and effective fertility rates (Lesthaeghe and Van de Kaa 1986). In other words, it was no longer necessary to generate a large off-spring to have guaranteed economic support in old age: security could now be achieved with only 1 or 2 children, because the probability of their survival had increased significantly. Thus, the lower fertility rates characterizing the FDT were not a consequence of a change in the attitudes towards the family, which remained a focal point and whose importance was

not at all undermined. The decision to have fewer children was instead the result of an "altruistic" decision: the child still received a great deal of attention by the parents, whose realization and personal success was still identified with the one of their family and their offspring. In the end, the FDT was the result of a "simple" adaptation of traditional values to a new environmental setting, and the fundamental role of strong family ties was not compromised - at least not for the moment.

Evolutionary biologists advocate that economic development is the main driver of the change towards modern values and attitudes (Newson and Richerson 2008). As a consequence, they view the economic dynamics set in motion by the Industrial Revolution as the single most important turning point in the road towards modernity. The economic and scientific improvements achieved during the eighteenth and nineteenth centuries determined an irreversible shift in the attitudes and values of European populations, which were set on a totally new and different path. The creation of the factory was the most important event with this respect. For the first time in history unrelated groups of people coming from different families started to gather and to work together in a single place – the factory. Whilst prior to the Industrial Revolution individuals interacted mainly with family members, now they were forced for the first time to spend time, to talk and to exchange information with totally unrelated people. The potential for social change embedded in the creation and the spreading out of the factory system turned out to be immense. In particular, Newson and Richerson argue that the factory system brought about a total disruption of the ratio of kin to non-kin around an individual, which caused the progressive weakening of the "inclusive fitness" interest of parents in the genetic and reproductive success of their children. The growing amount of non-family based interactions relative to family based ones favoured the diffusion of values and ideas unrelated to the maximization of genetic and reproductive fitness. As an effect, the definition and the identification of personal success started to change: the family lost importance, and there was a decoupling of cultural and genetic success. Thus, behind the lower fertility rates documented after the Industrial Revolution there lies a fundamental change in the value system of European societies. People started to desire fewer children because their definition of personal success and self-realization had changed. That is, the change in demographic behaviour was not the response to a different environmental setting, rather, it was the product of a complete change in what people wanted out of their lives. In their view, the Industrial Revolution was the starting point of a long process of social and cultural change, that is still continuing today. Hence, in the view of evolutionary biologists, there is no "First" or "Second" or "Third" demographic transition; rather, there is only one continuous process of change, one long and articulated path of social and demographic evolution.

The spread of the Industrial Revolution across European countries in the nineteenth century was indeed mirrored by a parallel decrease in mortality rates and in fertility rates (Van de Kaa 2002). Over the first half of the twentieth century, European societies reached this new demographic equilibrium, characterized by a low rate of net population growth, with fertility rates settling just above replacement levels (i.e. just above 2 pupils per couple on average). Of course, the shift to such a new demographic paradigm did not occur over night; rather, it was the result of a long process of cultural and social change. Moreover, European societies did not move to the new demographic equilibrium all at the same time: the shift occurred first in the central and northern European regions, and only much later in the southern and eastern European populations (Newson and Richerson 2009). There is a clear negative relationship between the year fertility began to decline and the level of industrialization at the beginning of the twentieth century, with a correlation coefficient between the two variables of -0.8379. Thus, countries where the Industrial Revolution spread sooner were the first to experience a reduction in fertility rates.

2.1. New demographic behaviour

After the Second World War, a new set of demographic attitudes and behavioural norms emerged within European societies. During the 1960s and the 1970s fertility began to decline below replacement, reaching rather low and hitherto unprecedented values. An important element was the development of the modern welfare state, much the way we know it today. A key aspect was the increasing support for gender equality through welfare state provision. Whether a cause or not, these societies, spearheaded by the Scandinavian countries, witnessed a huge rise in new and modern demographic behaviour, clearly manifested by increased divorce rates, cohabitation replacing marriage and out-of-wedlock childbearing (Van de Kaa 2002). In other words, the family started losing the sacrality and the centrality that had characterized it until then. The French historian Philippe Ariès (1980) was one of the first to identify and describe the change in demographic attitudes and value orientation taking place during the 1960s and 1970s. He emphasized the importance of culture in determining such a shift, rather than being driven by structural factors. Another key contributor was Maslow, with the theory of changing needs (1954) and the formulation of the "higher order needs" that, according to him, arouse in postmodern societies. The idea of the Second Demographic Transition was launched by Van de Kaa and Lesthaeghe in 1986 and identifies demographic behaviour characterized by sub-replacement fertility levels, low mortality rates, small family nuclei, high rates of cohabitation – replacing marriage, high

divorce rates, and high out-of-wedlock childbearing, high women's empowerment and emancipation and early departure of the young from the family of origin (Van de Kaa 2002). In terms of attitudes the SDT was characterized by the progressive independence of the members of a society who started giving increasing importance to their own realization (rather than to their family's or to their children's); to their psychological (rather than to their material) well-being and to their personal freedom of expression. The differences with respect to the FDT in the attitudinal components and the value system are striking. Whilst the FDT was the product of a "simple" adaptation of traditional values to a new environmental setting, the SDT instead was the result of a fundamental change in the values and in the cultural orientation of the people (Van de Kaa 2002). Even though during the STD there continued to be low fertility, the motivations behind such behaviour had indeed changed significantly. During the FDT the main driver of the low fertility rates were the reduced mortality rates; instead in the SDT fertility kept declining below replacement level primarily because of the spreading of post modern or post industrial values (Inglehart 2000). In post industrial societies, the SDT brought about the affirmation of the "Bourgeois post modern" individual, who now believed that self-realization and happiness lied in the autonomy of the individual from constraining institutions, family included, and who set his or her own wellbeing as prior to the one of his or her children. Consequently, low fertility rates arising during the SDT are not a response to an external environmental change (i.e. scientific progress); rather, they were the expression of a new set of values and attitudes resulting from a deep cultural and social change. As explained above, children during the SDT lost centrality, in the sense that they were no longer perceived as essential for their parents' achievement of personal satisfaction and realization. At the same time, also the family, as an institution, lost the sacrality that had characterized it before: marriage became less and less popular, and the number of divorces, cohabitations, working mothers and lone parents started to rise. These types of behaviour were in sharp contrast with the ones of the FDT and constituted the main novelty brought about by the SDT.

In the view of evolutionary biologists, the social changes of the 1960s and the 1970s should not be thought of as a distinct demographic transition, separated from the previous behavioral patterns; rather, the social and cultural phenomena characterizing the second half of the twentieth century should be considered as the natural evolutionary consequence of the process of cultural and social change set in motion by the Industrial Revolution. Economic development is the fundamental and original driver of any changes in the behavioural and value system: its effects persist over time, and they continue to affect societies through lags and through the formation of a cultural and social heritage.

The evolutionary biology approach prescribes that differences among societies will eventually become smaller over time until populations will converge to the same demographic and cultural equilibrium (Richerson and Newson 2008). Inglehart and Baker (2000) question that economic development brings about changes in the value and cultural system which push all societies towards a common direction. Whereas economic development has a strong impact on shaping values and beliefs, it is also the case that cultural change is path dependent. That is, the historical heritage of a society (religious, political, social, economic) is persistent over time and is responsible for the cultural differences that still characterize economically developed countries. A society's culture and behavioural norms and beliefs are thus shaped not only by the level of economic development, but also by the historical heritage peculiar of that society. Consequently, they argue that societies are not necessarily converging towards a common set of values and beliefs. Rather, they are moving in a common direction, but on parallel lines: some differences still remain, and they are bound to remain so for a long time. For example, even though some Catholic and Protestant countries exhibit the same level of GNP per capita, the Protestant ones present a set of values that are remarkably more modern (Inglehart and Baker 2000).

2.2. The drivers behind new demographic behaviour

To say that there is no single "recipe" for becoming modern is of course a truism. Indeed, it is certainly not possible to single out a precise set of factors that, if implemented, will eventually lead a country towards the acceptance of post-modern values and attitudes. In other words, abandoning traditional values and moving towards post modernism is a complex phenomenon, which does not allow for an *a priori* theoretical discussion on the topic. Nevertheless, it is still possible to perform an *a posteriori* analysis of the factors that characterize and distinguish countries on the frontier of modernization from those that lag quite behind. By looking at the main structural and cultural differences between countries at different stages of the modernization process, it is indeed possible to grasp precious insights on why people's acceptance of post-modern behavioural traits varies remarkably across European countries, thus giving at least a partial explanation of what it takes to be modern. There is strong evidence that economic development is positively correlated with higher acceptance of postmodern and post-industrial attitudes and behavioural norms (Inglehart and Baker 2000, Newson and Richerson 2008). However, as depicted in Table 1, which shows correlations between key aggregate indicators, we see that economic development is accompanied by changes in many other dimensions of society. Income per capita is for instance a

powerful predictor of both the level and the quality of educational attainment. In other words, in wealthier countries people are, on average, more and better educated. The importance of education for the acceptance and the diffusion of post materialist values is of course well documented in Sociology and Demography. Essentially, education favours the spread of non-conformism, lowers the importance of religion, increases the tolerance of unconventional sexual behavior, and fosters the relevance of personal self-realization (Lesthaeghe and Surkyn 1998). In addition, education is found to be associated with more liberal attitudes with respect to the sphere of family ties (De Feijter 1991). Gender equality and women's empowerment are other two important social consequences of the diffusion of education. Wealthier and more educated societies tend to show a higher level of equality between the genders and higher female labour force participation. Sobotka (2008) stresses the importance of women empowerment for the move of societies towards postmodernism. In particular, he argues that countries where the gender revolution spread sooner adopted a series of norms and institutional features that allowed a faster acceptance of post modernism. Gender equality, women's empowerment, extended female labour force participation are all important drivers of the modernization process, because they enable women to break with the traditional social position they had occupied in the past. Empowered women decide to have or not to have children, they decide whether to keep on working while they have a young child, they decide whether to marry or to cohabitate. In other words, they are, to a much larger extent, free from the social and institutional constraints that had limited their possibility of following a behaviour in line with the ones characterizing the SDT.

Table 1: Correlation matrix of key aggregate measures

	Female Labor Force Particip. Rate (2006)	Gender Global Gap (2006)	GDP per capita (2006)	Corruption Perception Index (2006)	Gender Empowerment Ratio (2005), **FR missing**	Women in Parliament (2006)	State Antiquity Index	Enrolment Rate of children < 2 **CH missing**	Place availability for children 0-2 **CH, LV, RU, SI, UA missing**	Spending on childcare services (2005), % GDP **RU, UA missing**	Trust in Institutions, country mean	Social Capital, country mean	V A c
Female Labor Force Participation Rate (2006)	1												
Gender Global Gap (2006)	0.5022	1											
GDP per capita (2006)	0.4887	0.6176	1										
Corruption Perception Index (2006)	0.5129	0.6661	0.9289	1									
Gender Empowerment Ratio (2005)	0.4496	0.7867	0.9162	0.9163	1								
Women in Parliament (2006)	0.3127	0.7817	0.6495	0.7389	0.9011	1							
State Antiquity Index	0.0919	0.0996	0.5360	0.5276	0.5617	0.4354	1						
Enrolment Rate of children < 2	0.5765	0.3754	0.449	0.4987	0.4544	0.3792	0.2167	1					
Place availability for children 0-2	0.3792	0.3523	0.3224	0.4457	0.5042	0.4267	0.0515	0.8158	1				
Spending on childcare services (2005), % GDP	0.2427	0.4175	0.2869	0.3811	0.4292	0.3955	0.2449	0.5814	0.7325	1			
Trust in Institutions, country mean	0.6019	0.6183	0.8445	0.8866	0.8638	0.7358	0.3537	0.5687	0.5904	0.4566	1		
Social Capital, country mean	0.4341	0.4787	0.633	0.6765	0.6935	0.6182	0.6061	0.5124	0.3585	0.3003	0.4967	1	
Voluntary Activity, country mean	0.4373	0.4547	0.8001	0.7261	0.7217	0.4793	0.3952	0.3203	0.2482	0.1566	0.6953	0.2961	

The political and institutional framework is of course important, the argument being that the system of social and economic policies implemented by the government will determine the easiness with which individuals can adopt post modern values and attitudes. In particular, by providing generous and universal social support, individuals may feel less constrained by norms that in traditional societies were maintained through close family ties and intergenerational transmission. The second half of the twentieth century has indeed witnessed a progressive increase in the level of state-provided social and economic support, thanks to the upsurge and the diffusion of the welfare state across the majority of European countries, and as argued by Sobotka (2008), it has enabled European citizens to embrace postmodern attitudes. The creation and diffusion of a broad and, historically speaking, generous safety net are key for individuals' opportunity set, especially for women. Given generous state provided support, it has become easier for couples to divorce, to cohabitate or to have children outside marriage (Sobotka 2008). The importance of state intervention for the diffusion of postmodern attitudes and values is likely to be greatest in the area of childcare. Provision of extensive and high-quality public childcare, makes it much easier for women and couples to combine childbearing and work. Interestingly, these features of welfare provision tend to follow economic development. Table 1 shows a clear positive correlation between economic development and provision of public childcare. Moreover, the social and economic costs associated with divorce or having children outside marriage become lower as welfare is becoming more generous and universal. It does not come as a surprise, then, that the Scandinavian countries are the ones characterized by the highest economic and social support for couples having children (Aassve 2008). Thus, public and economic policies do have a strong effect in pushing a society towards the frontier of modern values and attitudes, by providing individuals the social and economic insurance they need to shift to a new value and normative system.

Should one conclude that the present economic and institutional conditions of a country are enough to explain the differences in attitudes documented today across European countries? In other words, would a country like Italy move quickly to postmodern values if it were given the institutional and political framework of Denmark? Even though structural factors are important drivers of demographic attitudes, the answer to these questions is likely to be a sound "No". The reason is that culture and value systems change slowly over time – responding to economic and political shocks with significant temporal lags. Both the economic and sociology literature stress the importance of persistency of attitudes and of institutional outcomes over time (Inglehart and Baker 2000, Tabellini 2008), thus pointing out the fundamental relevance of past historical experiences in explaining today's worldviews and demographic behaviour. The political and institutional history of a society affects the prevalent present-day value system through a variety of channels and

mechanisms that extend over time and act through lags. One factor would be how "old" a country is and how politically independent it has been during the course of its "life". Why should this matter? The key is that countries that have been existing as independent entities for a longer time have had more opportunities to build up civic values and interpersonal trust. Older countries have had a longer history of political confrontation and debate. The mere fact of being united in one single independent country creates a strong incentive for people to worry about the *res publica* and to get together in the political arena. By discussing and interacting with one another, individuals get closer and share ideas, causing social capital and trust to increase. In addition, countries that have existed for a longer time have gone through a larger number of social and economic shocks: social conflicts, civil wars, invasions, economic booms and depressions are events that contribute significantly to the formation and the accumulation of civic responsibility and trust within a unified society. Going through such hard shocks a country matures, and social capital is formed. The sociological and economic literature has acknowledged the importance of political independence and self-determination over time for the formation of good culture and interpersonal trust within a society. During the 1950s the American sociologist Edmund Banfield conducted a study in a small village of southern Italy. By examining closely the social interactions of the inhabitants of Chiaromonte (the name of the village), he finds that people seek to maximize the short-term interests of the family members, totally disregarding the communitarian interests of the village. In his book *The moral basis of a backward society* (1958) this phenomenon is termed "amoral familism". According to Banfield, the lack of civic sense in Chiaromonte is due to the absence of self-determination and of political autonomy. Centuries of feudalism and servile relationship with the local landowners have created a total detachment of the inhabitants from any form of enlarged cooperation or association outside the family, and a pervasive sense of distrust for each other. The southern society has fallen into a low social capital equilibrium, which may be self-reinforcing, and bound to produce even more distrust and loss of hope in among future generations. Taking a close look at the Italian society over two decades, David Putnam (1993) makes the argument that differences between the good institutions of the northern cities and the poor institutions of the southern have origins that trace back to the Middle Ages. The key lies in the divergent political experiences that characterized Italian cities more than 500 years ago. The northern cities were (for the most part) independent city-states. This has created a sense of trust in the institutions and in the community as a whole, which has been transmitted from generation to generation, and which is partly responsible for the presence of civic sense and good institutions today. The southern regions instead were doomed by a series of foreign dominations and were never able to experience self-government. This has generated the feeling of detachment and loss of hope which was documented by Banfield and

which is, according to Putnam, the main driver of today's institutional backwardness in the southern Italian regions. Recent economic and sociological research confirms these findings. Inglehart and Baker (2000) argue that the contrast between local control and domination by a remote hierarchy has important long-term consequences for interpersonal trust. In addition, drawing from the results of Banfield and Putnam, Tabellini (2008) shows that past negative political experiences create a latent and pervasive sense of distrust towards the community at large.

The above discussion stresses the role of historical experiences in the building up of civic sense, interpersonal trust and social capital. But what does history have to do with the acceptance of postmodern attitudes and values? Two main channels are likely to explain why a higher level of trust in the institutions and in the community at large may cause individuals to show a higher acceptance for patterns of demographic behaviour typical of the Second Demographic Transition. Even though different, these channels are related and mutually reinforcing. Starting from the assumption that people do need a source of safety and insurance to rely on, the first channel argues that individuals with a higher trust to other people feel confident in substituting the safety net provided by strong family ties with the web of support they find in the community. The trust they have in the state and the community allows them to go beyond the family as seen in a traditional sense. Since they feel that the social and economic support they need in their life is provided by the state and the community, the family loses its shell of social and economic support and insurance, while still maintaining its nucleus of sentiments and emotional bonds. In a certain sense, the community becomes part of the family of each individual. As a consequence, individuals in such societies are comfortable in accepting behaviours expressing lower reliance on the family, like never having children, cohabitating, having children outside the marriage or getting divorced if young children are involved. The second channel draws instead from recent research findings concerning demand for regulation (Aghion, Algan, Cahuc, Shleifer 2008). They show that individuals that have a lower trust in institutions and in the community exhibit a higher demand for regulation. At a community level, this translates into more bureaucracy, more state intervention and more governmental interference in the productive side of the economy. The reasoning of Aghion et al. (2008) can be applied at the individual level to explain variations in beliefs about demographic behaviour. That is, a society trapped in a low-trust equilibrium tends to show a higher support for regulated types of social behaviour, which would include marriage over deregulated demographic behaviour such as cohabitation. On the contrary, low demand for regulation typically seen in a highly trusting society may translate, at the individual level, in higher support for the less regulated patterns of demographic behaviour, such as cohabitation, out-of-wedlock childbearing and divorce, typical of the Second Demographic Transition.

3. EMPIRICAL APPROACH

We use the European Social Survey (ESS), which is a comparative survey where the same questionnaire is administered to individuals in 24 countries. Thus, differences in family attitudes are comparable between individuals and across countries. The use of a cross sectional sample, means however, that one have to assume that current differences are resulting from a dynamic process, whereby some societies may have progressed further than others. From a statistical point of view, it also means that it is impossible to establish causality between attitudes on one hand and the emergence of structural constructs of societies. That is, one may argue that the structure of the society drive individuals' attitudes and values. However, structural changes may take place as a result of changes in individuals' attitudes. Thus, a cross sectional analysis is not going to inform as about the nature of such feedback mechanisms, and it is important to bear this in mind as we discuss the results of the analysis in sections 4 and 5.

3.1. Defining family attitudes

The process of modernization is inherently dynamic in nature. As we have argued, the drivers behind them evolve over time, some very slowly (diachronic elements) and other more rapidly (structural elements). Ideally, one would use information on how attitudes evolve over a relatively long time span for a wide range of societies, and thereby assess its evolution alongside change in both the diachronic and structural factors. Needless to say, such data are non-existent. In fact, even comparative information on attitudes at one point in time is rare. The ESS is an exception. The third round of the ESS contains a 'core' and a rotating module. Whereas the core remains the same, the rotating module changes, and in the third round specific questions related to the approval (or disapproval) of various dimensions of demographic behaviour, including marriage, divorce, childbearing and women's employment decisions were included. Related measures include the one developed by Sobotka (2008) using eight questions recorded for 29 countries drawn from European Values Study in 1999-2000 and tabulated in Halman (2001). These items cover a broad range of values and attitudes linked to the SDT, including family attitudes, measures of non-conformism and secularisation (Sobotka, 2008). Our Modern Family Attitude index (MFA) is derived from the following questions:

- Approve if person chooses never to have children? (anvcld)
- Approve if person lives with partner not married? (alvgptn)
- Approve if person have child with partner not married to? (acldnmr)

- Approve if person has full-time job while children aged under 3? (aftjbyc)
- Approve if person gets divorced while children aged under 12? (advcyc)

All these items are evaluated on a scale from 1 (strongly disapprove) to 5 (strongly approve) and the resulting index is derived from using the factor scores from a standard factor analysis (see details below). It is important to reflect on what our MFA index is measuring and how it relates to the existing literature. First, the way the questions are formulated in the ESS (in particular, individuals are asked about their approval or disapproval) alludes to individuals' subjective norms. The concept and the meaning of social norms vary by discipline. Economics typically assumes away the possible role of attitudes, norms and value orientation, and in empirical analysis, its' effect is lumped together and typically labelled unobserved heterogeneity. Whereas econometricians put great efforts into controlling for such unobserved heterogeneity, especially when it is suspected to bias parameter estimates of interest, little effort is put into actually measuring what these sources of unobserved heterogeneity are. Recent efforts in Economics are paying more attention to these issues, but there is no clear distinction between attitudes, norms and value orientations. The concept of attitudes has a central role in cultural evolution and anthropology. Here the focus is on the process of modernization, and explaining how cultures evolve over time, and attitudes are taken as a measure of this process. However, the literature is not precise about how attitudes should be measured, and how it differs from social norms and value orientations. This is in contrast to sociology where the terms have rather specific meanings. Perhaps the most precise formulation of these terms is found in the Social Psychology literature. In particular, the Theory of Planned Behaviour (TPB) offers a precise and schematic suggestion of how norms, attitudes and value orientations differ (as well as perceived behavioural control), but also how they are linked together and drive intentions and consequently behaviour. With background in the TPB, Ajzen (1988) defines an attitude as a "disposition to respond favourably or unfavourably to an object, person, institution or event". Value orientations, in contrast, is a measure of a more general concept and certainly more broadly defined. A norm is defined over the extent in which key reference individuals approve or disapprove of certain behaviours. Consequently, it depends directly on the prevalent opinion of certain groups and will vary across educational groups, work status and occupation, cohorts and religion. Developing direct measures of such norms is hence difficult as it depends on a range of factors operating at different levels of aggregation. The *subjective* norm is a measure of normative beliefs an individual acquire from the approval or disapproval by key individuals or their peer group. Thus, a precise measure of a subjective norm would first require information about which individuals are considered most important, and then to ask about their approval or disapproval of certain behaviours. Large-scale surveys designed to measure norms in such a precise way are rare, though

Billari et al (2009) using Bulgarian data provides an exception. The questions in the ESS also ask about approval or disapproval of certain behaviours, but there is no reference to the peers who typically would generate the norm. Instead, the question is directed to the respondents' own approval or disapproval. As such, the questions in ESS reflect subjective norms in a much broader way.

Our dependent variable is constructed as an index over the five questions listed above. Thus, it does not relate to one specific behaviour, rather it is a general measure about approval of related family behaviours. Attitudes and subjective norms are of course highly correlated, and given that the questions do not measure subjective norms in a precise way, we think of our dependent variable as a general attitude towards demographic behaviour, where a high value reflects a liberal predisposition, hence reflecting more modern attitude. A low value in contrast, reflects a conservative predisposition, and hence less modern attitude. Table 3 shows the mean values of these questions used for the MFA index. There is large heterogeneity across European countries and not unexpected we find high level of approval in Scandinavian countries, lower levels in Mediterranean countries, and the lowest levels of acceptance in the East European countries.

Table 3 - Attitudes towards family behaviour

		Approve if person…									
Country	**Num Obs**	**..chooses never to have children**		**..lives with partner not married to**		**..has full-time job while children aged under 3**		**..has child with partner not married to**		**..gets divorced while children aged under 12**	
	#	Value	St. Dev.	Value	St. Dev.	Value	St. Dev.	Value	St. Dev.	Value	St. Dev.
Austria	1127	3.00	0.95	3.52	0.92	3.41	0.94	2.95	1.17	2.85	0.94
Belgium	1126	3.61	1.10	4.00	0.96	3.90	1.02	3.91	1.02	3.31	1.09
Bulgaria	550	1.63	0.92	3.32	1.33	3.31	1.32	3.41	1.48	2.54	1.23
Switzerland	1001	3.24	0.87	3.50	0.88	3.31	0.92	3.00	1.08	2.90	0.84
Germany	1677	2.94	0.74	3.32	0.72	3.23	0.73	3.13	0.97	2.81	0.74
Denmark	869	4.48	0.70	4.64	0.63	4.51	0.80	4.35	0.87	4.10	0.94
Estonia	663	2.15	0.82	3.00	0.71	3.02	0.77	3.13	1.06	2.48	0.72
Spain	1100	3.29	0.99	3.79	0.91	3.74	0.93	3.63	0.96	3.21	1.01
Finland	1139	3.73	1.01	4.14	0.87	4.01	0.93	4.02	0.82	3.45	1.04
France	1294	2.99	1.09	3.66	1.05	3.65	1.09	3.64	1.14	3.05	1.10
UK	1377	3.25	0.73	3.26	0.79	3.12	0.82	3.35	0.93	2.96	0.74
Hungary	690	2.46	0.91	3.38	0.80	3.35	0.84	3.34	1.16	2.87	0.84
Ireland	915	3.10	0.70	3.20	0.76	3.11	0.78	3.47	0.87	2.84	0.79
Latvia	742	2.33	0.97	3.15	0.91	3.08	0.92	3.27	1.10	2.73	0.89
Netherlands	1175	3.92	1.00	4.07	1.02	3.99	1.04	3.40	1.17	3.44	0.98
Norway	1177	4.05	0.92	4.38	0.87	4.37	0.86	4.24	0.87	3.73	1.10
Poland	956	2.67	1.03	3.20	1.03	3.25	1.00	3.70	0.93	2.72	1.02
Portugal	1035	3.19	0.84	3.55	0.78	3.53	0.81	3.48	0.86	3.16	0.85

Romania	1024	2.24	0.86	2.78	0.94	2.71	0.96	3.26	1.06	2.45	0.94
Russia	893	1.90	0.81	2.91	0.92	2.88	0.95	3.24	1.16	2.53	0.89
Sweden	1162	3.59	0.86	3.88	0.91	3.88	0.93	3.57	0.93	3.35	0.90
Slovenia	804	2.99	1.04	3.61	0.86	3.66	0.86	3.50	0.88	3.11	1.00
Slovakia	974	2.46	0.86	2.94	0.91	2.83	0.89	3.33	1.08	2.55	0.89
Ukraine	829	1.64	0.83	2.63	1.14	2.58	1.14	3.15	1.39	2.36	1.06

The MFA index is created by applying a factor analysis to the questions listed above. The analysis yields a one-factor solution and the index itself is derived from the factor scores. Table 4 shows the factor loadings, Table 5 simple descriptive statistics, whereas Table 6 reports the Cronbach Alpha.

Table 4: Factors loadings

Variable	Loading
Approve if person chooses never to have children? (anvcld)	0.7314
Approve if person lives with partner not married? (alvgptn)	0.8756
Approve if person have child with partner not married to? (acldnmr)	0.8655
Approve if person has full-time job while children aged under 3? (aftjbyc)	0.4544
Approve if person gets divorced while children aged under 12? (advcyc)	0.7270

Table 5: Descriptive statistics of the MFA index

Variable	Mean	Std. Dev.	Min	Max
MFA index	0.167	0.996	-2.588	2.255

Table 6: Cronbach Alpha for dependent variable

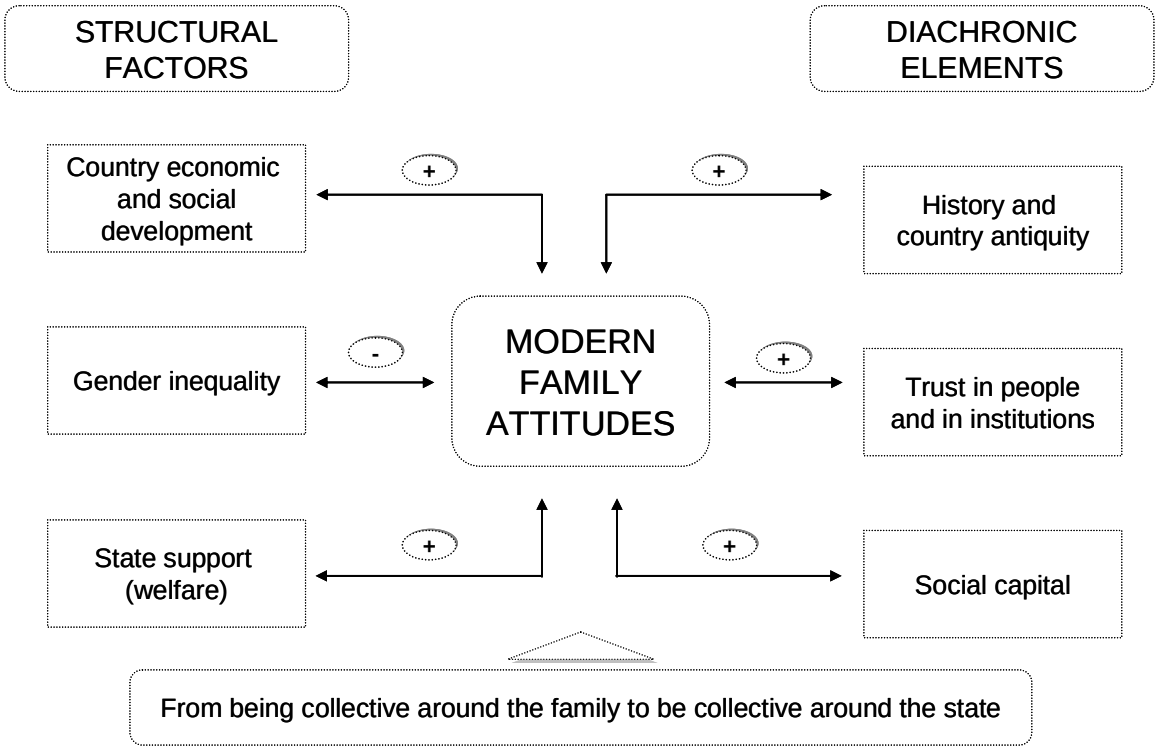
Average inter-item covariance	0.499
Number of items in the scale	5
Scale reliability coefficient	0.784

3.2. Explanatory variables

Individuals' attitudes are formed through their educational experience, their occupation, age and cohort, as well as their family background. These features can of course be measured and controlled for directly by the information provided in the survey. Of key importance for the comparative analysis is that individual attitudes also depend on the characteristics of the regions and

countries where they reside. As a result, it is useful to summarize the channels in which attitudes diffuse. As we have already argued, structural factors (e.g. economic development, educational infra-structure and gender inequality) are relevant in shaping attitudes toward family, marriage, divorce and childbearing, but the historical, cultural and institutional context in which individuals build up their ethical code and their way of thinking, will also matter. It is therefore useful to make a distinction between structural and diachronic factors. Its functioning is depicted in Figure 1. The first determines the environment whereby individuals take decisions about their own life. Individual constraints and possibilities within a country depend strongly on the economic development, on the policies adopted by the government and on the readiness to change. Rich and developed countries, those characterized by a high level and quality of education, where women have the same opportunities as men, are more prone to accept non-conformist attitudes and to tolerate behaviours away from the traditional ones. Hence, the level of GDP per capita, corruption, quality of education, equality between men and women in work and life opportunities and the presence of the state in supporting women emancipation through childcare services are here classified as structural factors.

Figure 1 – Relevant macro factors in shaping modern family values



The second channel refers to the more persistent factors underlying family attitudes and behaviours. As outlined in the previous section, countries with a "dense" past went through many cultural, social and economic shocks, bringing about debates, sharing of ideas and values, all of which contributing to the process of modernization. Interaction among individuals

enhanced the opportunities to accumulate civic values, to understand the importance of social capital and of trust in other people belonging to public institutions. Hence, culture and social norms are changing with a slower pace – hence we classify them as diachronic elements.

We start by listing the structural variables. The first is the level of economic development which is proxied by GDP per capita in 2006 (source – reference), which is the year of the interview. The Corruption Perception Index (CPI), a measure of government effectiveness and hence a proxy for the quality of institutions, is derived from (source – reference). We then consider different proxies for gender equality. They are the Gender Empowerment Measure (GEM) of 2005, female labour force participation in 2006, the Global Gender Gap (GGG) again in 2006 and the last is the percentage of women in the national parliament measured in 1995 and 2006. Considering government support and welfare provision, we consider three different proxies. The first is the kindergarten enrolment rate of children under two years of age in 2006. The second is the availability of childcare places, again for children under the age of two years, whereas the third is the level of government spending on childcare services measured in 2005. As the reader may have observed, we are not making any strong distinction between factors reflecting supply from demand. For instance, enrolment of children in kindergartens is of course predominantly driven by demand, whereas the availability of childcare is a clear indicator of supply, and in some sense, this would be a better indicator for structural features of the society of interest. However, these factors follow each other closely within countries, and differences persist between countries independent of whether we consider demand or supply driven indicators. Moreover, we are not able to measure dynamics (i.e. changes of time), in which case one could argue that differences between demand and supply becomes more relevant.

The diachronic elements are harder to find. One exception however, is the so-called State Antiquity index (Putterman 2007). This index gives a score for each country that reflects (a) existence of a government, and (b) the proportion of the territory covered, and (c) whether it was indigenous or externally imposed[1] (Bockstette et al 2002). The score of the index depends directly on the antiquity of institutions and government. We have argued that development of social capital and the level of trust in people and institutions are also diachronic elements. However, to our knowledge, such information is not available from any readily available sources. Instead we construct aggregate measures of social capital and trust from the ESS. Bearing in mind that our

[1] The index is derived by dividing the period from 1 to 1950 C.E. into 39 half centuries. For each period of fifty years, the scores for the following were assigned: 1) Is there a government above the tribal level? (1 point if yes, 0 points if no); 2) Is this government foreign or locally based? (1 point if locally based, 0.5 points if foreign (i.e. a colony), 0.75 if in between (meaning a local government but with substantial foreign oversight); and 3) How much of the territory of the modern country was ruled by this government? (1 point if over 50%, 0.75 points if between 25% and 50%, 0.5 points if between 10% and 25%, 0.3 points if less than 10%)

respondents for the analysis are taken from the third round of the ESS, we construct these aggregate measures from the *first* and *second* rounds. This will certainly reduce any endogeneity bias, given that these measures now derive from a different set of respondents than those being respondents in the third round. These indicators are also based on a battery of questions and the respective indices are constructed from factor analysis (see appendix for details). We perform a factor analysis on the questions regarding trust, which yields a one-factor solution. The factor analysis of the six first questions listed in Table 6 yields however a two-factor solution. The two factors are interpreted as 1) Social capital and 2) Voluntary activity respectively. The technical details and descriptive statistics from these factor analyses are reported in the Appendix.

Table 6: Items underling Social capital, voluntary activity and trust

Social Capital Variable based on:
How often socially meet with friends, relatives or colleagues
Anyone to discuss intimate and personal matters with
Take part in social activities compared to others of same age
Voluntary activity variables based on:
Involved in work for voluntary or charitable organisations, how often past 12 m.
Help others not counting family/work/voluntary organisations, how often past 12 m.
Help or attend activities organised in local area, how often past 12 months
Trust variable based on:
Most people can be trusted or you can't be too careful
Trust in country's parliament
Trust in the legal system
Trust in the police
Trust in politicians
Trust in political parties

As we have mentioned, attitudes are also driven by the individual experiences. At the individual level we control for education (in three groups), church attendance, which reflects the individuals' level of religiosity, number of children, whether they are in paid work and whether they are in a partnership or not. Attitudes vary of course over the cohorts. We divide the sample into

eight cohorts, starting from the cohort born between 1945 and 1950 (the reference group in the regressions) up to the youngest which are those born between 1961 and 9165.

3.3. Statistical model

Given the hierarchical structure of the data, where respondents are nested within regions, which again are nested within countries, we implement a multi-level regression model in order to accommodate the macro variables outlined in section 3.2. The key rationale of the multi-level analysis is that respondents within regions and countries, do not act independently of each other. In particular, citizens of the same country share country specific attitudes, which in turn are driven, at least in part, by the characteristics of that country. The multi-level statistical model facilitates such hierarchical structure through a decomposition of the error term, one being individual specific, the second region specific, and third being country specific (Goldstein, 2003; Hox, 1995). Our model can be written as follows:

$$MFA_{irc} = \alpha_0 + \beta X_{irc} + \mu S_c + \gamma D_c + u_{0c} + \eta_{0rc} + \varepsilon_{irc}$$

where MFA_{irc} represents family attitudes of individual *i* in region *r* of country *c*, X_{irc} is a vector of individual characteristics, S_c and D_c are structural and diachronic factors, respectively, both measured at the country level. u_{0c} is the country specific error terms, η_{0rc} is region specific, and ε_{irc} is the individual specific error term. There are several benefits of this modelling scheme. First, the decomposition of the error term ensures that the standard errors for the parameters associated with variables measured at the regional and country levels are correctly estimated, hence ensuring that hypothesis tests are reliable. However, a more substantive benefit is that we easily observe to what extent variation in the outcome can be decomposed into the three levels. In our application this accounts to observing how much of the overall variation in attitudes is attributed to the individual level, the region level and the country level. Thus, the typical strategy with these kind of models is to start with a *null* model, where no explanatory variables are included. As we add explanatory variables we observe the extent they (the explanatory variables) explain the decomposed variation. Thus, the role of country characteristics on explaining the outcome is not only observed through its estimated coefficient, but also through its ability to reduce variation in the outcome when compared to the null model. The latter effect is commonly expressed through the intra-class correlation coefficient ρ which is defined as:

$$\rho = \frac{Var(u_{0c})}{Var(u_{0c}) + Var(\eta_{0rc}) + Var(\varepsilon_{irc})}$$

where $Var(u_{0c})$ is the variance across countries, $Var(\eta_{0rc})$ across regions in country *c* and $Var(\varepsilon_{irc})$ among individuals in region *r* and country *c*.

One important limitation of the analytical framework is that we have at most 24 countries. Whereas this is sufficient for estimating the effects of country level variables, the degrees of freedom become small as we add several country variables. Moreover, from Table 1, we know that the country level characteristics are indeed correlated. It is consequently difficult to avoid collinearity. Our strategy is therefore to introduce the country level variables one by one, and assess their relative importance through considering the intra-class correlation.

4. Results

In this section, we present the results from the multi-level specification. Section 5 discusses the results in light of the arguments put forward in section 2 and the measurements we have defined in section 3. We start by considering the effect of the individual level characteristics on the MFA index. Table 7 presents the results of two specifications, the first controlling for cohort differences only, whereas the second also include several other individual level characteristics. The cohort of individuals born between 1945 and 1950 serves as the reference group. The estimates shows clear differences between cohorts, and as expected, the younger cohorts are more modern in terms of attitudes towards family life. The cohort effects weaken, though they remain persistent and statistically significant when other individual characteristics are included. Due to expansion in education, the younger cohorts more likely to obtain higher education than the older cohorts, means that the gradient of the cohorts do not persist with the other explanatory variables included. Curiously, the very youngest cohort have less modern attitudes. There is a clear effect of education in that higher levels are associated with higher scores on the MFA index. Church attendance, having children and being in a partnership are all negatively associated with the MFA index, church attendance having a particularly strong effect. In contrast, being in paid work is associated with higher levels of the MFA index. The effects of the individual level characteristics are of course all in the expected direction, and importantly they remain robust for the different multilevel specifications, including the case when we include country level variables.

Next, we consider the effects of the country level characteristics, and we start by considering the structural elements, meaning those variables that may change substantially in the short term. The results are presented in Table 8. As previously mentioned, given that we have 24 countries, it is not possible to include all country level variables in the same regression, simply because the degrees of freedom become small. Moreover, many of the country levels are correlated as shown in Table 1, meaning that we cannot easily identify the country specific effects if they are included at the same time. Later we discuss the explanatory power of the various country level characteristics in terms of variance reduction in the country level residual.

Table 7: Individual level control variables

Y: MFA index	Coef (S.E.)	Coef (S.E.)
Cohort 1951-55	0.070 ***	0.037 *
	(0.021)	(0.021)
Cohort 1956-60	0.157 ***	0.110 ***
	(0.021)	(0.021)
Cohort 1961-65	0.204 ***	0.148 ***
	(0.021)	(0.020)
Cohort 1966-70	0.229 ***	0.159 ***
	(0.021)	(0.021)
Cohort 1971-75	0.325 ***	0.225 ***
	(0.021)	(0.021)
Cohort 1976-80	0.333 ***	0.191 ***
	(0.022)	(0.022)
Cohort 1981-85	0.270 ***	0.102 ***
	(0.022)	(0.023)
Secondary Education		0.144 ***
		(0.021)
Tertiary Education		0.242 ***
		(0.022)
Church attendance (at least once a week)		-0.419 ***
		(0.013)
Number of children		-0.033 ***
		(0.004)
In paid work		0.057 ***
		(0.012)
In a partnership		-0.093 ***
		(0.012)
Observations	24299	24299

Note: standard errors in parenthesis. P-values: +p<=0.10:*+p<=0.05:**+p<=0.01***.

Table 8 shows that economic development, measured by GDP per capita, is positively associated with post-modern family values. Note here that GDP per capita is measured in 10,000. The effect is strong by any standard and highly significant. The positive association between GDP per capita and the MFA index, and bearing in mind the strong correlations reported in Table 1, gives a clear

suggestion about what to expect from the other country level variables. The corruption index, where high values reflect a low level of perceived corruption, was positively associated with GDP per capita, and is here positively associated with the MFA index, and importantly, its effect is

Table 8: Economic Development, Corruption, Gender Inequality and Childcare

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
GDP per capita (2006)	0.038 ***									
	(0.007)									
Corruption Perception Index (2006)		0.002 ***								
		(0.0004)								
Global Gender Gap (2006)			0.079 ***							
			(0.023)							
Female Labour Force Participation Rate (2006)				0.046 ***						
				(0.018)						
Gender Empowerment Measure (2005)					0.034 ***					
					(0.005)					
% of Women in Parliament (2006)						0.036 ***				
						(0.008)				
% of Women in Parliament (1995)							0.038 ***			
							(0.007)			
Enrolment Rate of children < 2 year (2006)								0.024 ***		
								(0.007)		
Place availability for children 0-2, per 100 children (2003)									0.019 ***	
									(0.007)	
Spending on childcare services, % of GDP (2005)										0.650 ***
										(0.166)
Observations	24299	24299	24299	24299	23005	23298	20030	22577	24299	24299
Notes: Missing Countries					FR	CH	CH, LV, RU, SI, UA	RU, UA		

Note: standard errors in parenthesis. *P-values:* +p<=0.10:*+p<=0.05:**+p<=0.01***.

significant. Thus, low levels of corruption, is associated with stronger post-modern values. We find a similar pattern for those variables reflecting gender equality.

Not surprisingly, the Global Gender Gap, the Gender Empowerment index, the number of women in Parliament and the female labour force participation rate are all positively associated with the MFA index. Again importantly – they are all statistically significant at the one percent level. As for the number of women in parliament, there is hardly any difference in the effects in terms of when it is measured. The measure from 1995 gives the same effect as the one measured in 2005. The last set of country characteristics concerns childcare facilities. Again, they prove statistically significant with respect to the MFA index.

The effects of the diachronic elements are presented in Table 9. Of interest here is the significant effect of the State antiquity index. The coefficient is small [what is the unit of this index? Between 0 and 1?] but positive, indicating that the age and the history of a country affects citizens' attitudes and value orientation favouring less conservative family forms.

Table 9: History, trust in people and in institutions

	State Antiquity Index	Trust People and Institutions	Trust People	Trust Institutions	Trust People and Institutions, country mean	Trust Institutions, country mean
State Antiquity Index	0.015**					
	(0.006)					
Trust People and Institutions		*-0.008*			-0.009	
		(0.006)			(0.006)	
Trust People			*0.148***			
			(0.023)			
Trust Institutions				*-0.015***		-0.015**
				(0.006)		(0.006)
Trust People and Institutions, country mean					0.835***	
					(0.134)	
Trust Institutions, country mean						0.869***
						(0.138)
Observations	24299	24299	24299	24299	24299	24299

Note: standard errors in parenthesis. P-values: +p<=0.10:*+p<=0.05:**+p<=0.01***.

We next consider the effects of trust. Note that the estimates in italics refer to *individual level* effects. That is, they measure the effect of individuals' trust on their reported level of the MFA index. Estimates in non-italics, in contrast, refer to the effects when using the country mean of the trust variables. The results are highly interesting. "Trust people and institutions" is a composite

variable that includes a battery of questions on trust – many of them concerning trust towards various institutions (see Table 6 and appendix for details). The other element of trust is a measure of how individuals trust other people. In particular, the question asks to what extent the respondent trusts other people *unrelated* to themselves, nor belonging to their circle of friends. It is thus a measure of the extent individuals trust other citizens of the society that they do not know. Considering the individual level variables first, we see that when all trust variables are lumped together into one index, it does not explain the variation in the MFA index. However, when the trust index is split into 1) trust towards institutions and 2) trust in people, the estimates become significant, but the effects are of the opposite sign. Thus, individuals reporting higher trust to other people have more liberal family attitudes whereas those reporting lower trust towards institutions, have more conservative family attitudes. The effects of the country means are strong and highly significant, implying that countries where trust is on average high – individuals have more liberal family attitudes. Moreover, the effect is strong even if trust to other people is excluded from the composite trust index. In sum, countries which individuals have a general high level of trust to both institutions and other individuals of society, do have on average, more liberal family attitudes. Within countries, however, individuals with high trust to other people have more liberal family attitudes, the opposite is true for those who have a low trust in institutions.

Table 10 presents results for Social Capital and Voluntary activity. Again, individual level estimates are reported in italics. Individuals reporting a higher level of social capital, are associated with liberal family attitudes, whereas for voluntary activity the estimates are not significant. The country effects, however, are strong and positive for both variables. That is, high average levels of social Capital and Voluntary Activity, are associated with liberal family attitudes.

Table 10: Social Capital and Voluntary Activity

	Social Capital and Voluntary Activity	Social Capital	Social Capital, country mean	Voluntary Activity	Voluntary Activity, country mean
Social Capital	*0.049* ***	*0.049* ***	0.049 ***		
	(0.006)	*(0.006)*	(0.006)		
Voluntary Activity	*-0.004*			*-0.006*	*-0.007*
	(0.006)			*(0.006)*	*(0.006)*
Social Capital, country mean			1.331 ***		
			(0.371)		
Voluntary Activity, country mean					0.871 ***
					(0.278)
Observations	24299	24299	24299	24299	24299

Note: standard errors in parenthesis. P-values: +p<=0.10:*+p<=0.05:**+p<=0.01***.

Whereas we have seen that the aggregate country level variables are in most cases significant in explaining the variation in the MFA index (we will be discussing their implications in the next section), we have not yet demonstrated the relative importance of these variables in explaining the outcome of interest. However, by comparing the specifications with that of the null model (where no covariates are included) we can assess how much of the variance the explanatory variables are able to explain. Starting from the null model, we report the contributions of the different levels in explaining the overall variation of the MFA index. The results are presented in Table 11. The country variation contributes 34.9 percent, the regional level 2.6 percent and the individual level 63.8 percent. The low regional variance, at least compared to the country and individual level variances, is of course relevant here, as it suggests that in terms of the MFA index, within countries – there is very little variation across regions. This is in some sense fortunate in that it is difficult to establish explanatory variables at the regional level. But of course, the fact that the regional variation is small compared to individual and country levels is an interesting finding in itself. It suggests that family attitudes certainly differ across individuals and between countries, but not between regions within countries. The result is not surprising in the sense that structural constraints (and opportunities) are by and large governed by laws and regulations at the country level.

Without commenting each single regression, we want to emphasize that the inclusion of country-level variables, such as trust, social capital, GDP per capita, Gender Empowerment, reduces the country level variation considerably (and the ICC together with it). To make a practical example, if we consider the country average of "trust in people and institutions", the variance of the country specific error term decreases by 65%, which is a reduction in variation from 0.349 to 0.167. The variance of the individual error component is also reduced when the individual level trust variables are included, but the reduction is modest, and there is no further reduction in the variance of the country specific error component. The second panel of Table 11 is labelled "Collectivism" and demonstrates the extent to which social capital and voluntary activity, both at the individual and aggregated levels, reduces the variance relative to the null model. Again, the variables measured at the country level reduce the country level variances significantly. It goes from 0.349 (for the null model) to 0.209 when including country level social capital and to 0.235 when including country levels of voluntary activity. These are significant reductions, though they are smaller compared to the previous case when we considered the level of trust. The third panel considers the effect of country development and the State Antiquity Index. The country level variance is reduced from 0.349 to 0.15 and to 0.115 when we include the Gender Empowerment Index. Not unexpectedly,

the reduction is much more modest when we include the State Antiquity Index, though the reduction is still significant, reaching 0.264. The next panel is labelled Gender inequality, and shows that all the proxies for gender equality reduces the between country variances significantly. The one which has the poorest explanatory power, is the female gross enrolment ratio. Thus, the ratio describing the enrolment of women into tertiary education is not really able to explain well country differences in family attitudes. The last panel of Table 11 shows the effect of country levels characteristics in terms of childcare. As is clear, these variables are not available for all countries. In particular, we do not have measures of place availability in kindergartens for children aged 0 to 2 for Switzerland, Latvia, Russia, Slovenia and Ukraine. Similarly, we do not have measures of spending on childcare services for Russia and Ukraine. For these two cases, we re-estimate the models without these countries. Obviously, the variance decompositions are in these cases somewhat different from the original case. Whereas all three variables reduce the between country variation in family attitudes significantly, the spending on childcare services is the most effective. Here the between country variance is reduced from 0.303 (with the null model excluding Russia and Ukraine) to 0.159.

Table 11: Variance Partition and ICC (country means computed from 1st and 2nd rounds of ESS)

TRUST	Null	Trust People and Institutions (ind.)	Trust People (ind.)	Trust Institutions (ind.)	Trust People and Institutions (country mean)	Trust Institutions, (country mean)
Observations	24299	24299	24299	24299	24299	24299
Variance (countries)	0.349 ***	0.330 ***	0.313 ***	0.333 ***	0.122 ***	0.123 ***
	(0.104)	(0.098)	(0.093)	(0.099)	(0.038)	(0.038)
Variance (regions)	0.026 ***	0.019 ***	0.019 ***	0.019 ***	0.019 ***	0.019 ***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Variance (indiv)	0.638 ***	0.593 ***	0.592 ***	0.593 ***	0.593 ***	0.592 ***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
ICC Country	0.344	0.350	0.339	0.352	0.167	0.167

COLLECTIVISM	Null	Social K and Voluntary Activity (ind.)	Social Capital (ind.)	Social Capital (country mean)	Voluntary Activity (ind.)	Voluntary Activity (country mean)
Observations	24299	24299	24299	24299	24299	24299
Variance (countries)	0.349 ***	0.318 ***	0.317 ***	0.208 ***	0.327 ***	0.235 ***
	(0.104)	(0.095)	(0.094)	(0.064)	(0.097)	(0.072)
Variance (regions)	0.026 ***	0.019 ***	0.019 ***	0.019 ***	0.019 ***	0.019 ***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Variance (indiv)	0.638 ***	0.591 ***	0.591 ***	0.591 ***	0.593 ***	0.593 ***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
ICC Country	0.344	0.343	0.342	0.254	0.348	0.278

ECONOMIC DEVELOPMENT	Null	GDP per capita 2006	Corruption Perception Index 2006	Gender Empowerment Measure 2005	State Antiquity Index
Observations	24299	24299	24299	23005	24299
Variance (countries)	0.349 ***	0.150 ***	0.147 ***	0.115 ***	0.264 ***
	(0.104)	(0.046)	(0.045)	(0.036)	(0.081)
Variance (regions)	0.026 ***	0.019 ***	0.019 ***	0.020 ***	0.019 ***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)
Variance (indiv)	0.638 ***	0.593 ***	0.593 ***	0.577 ***	0.593 ***
	(0.006)	(0.005)	(0.005)	(0.005)	(0.005)
ICC Country	0.344	0.196	0.194	0.161	0.301

Table 11 continued: Variance Partition and ICC

GENDER INEQUALITY	Null	Global Gender Gap 2006	Female Labour Force Participation Rate 2006	Female Gross Enrollment Ratio (Tertiary) 2006	Women in Parliament (1995)	Women in Parliament (2006)
Observations	24299	24299	24299	22622	24299	24299
Variance (countries)	0.349 ***	0.216 ***	0.263 ***	0.297 ***	0.153 ***	0.162 ***
	(0.104)	(0.066)	(0.080)	(0.093)	(0.047)	(0.050)
Variance (regions)	0.026 ***	0.019 ***	0.019 ***	0.020 ***	0.019 ***	0.019 ***
	(0.004)	(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
Variance (indiv)	0.638 ***	0.593 ***	0.593 ***	0.610 ***	0.593 ***	0.593 ***
	(0.006)	(0.005)	(0.005)	(0.006)	(0.005)	(0.005)
ICC Country	0.344	0.261	0.300	0.321	0.200	0.210

CHILD CARE	Null - CH missing	Enrolment Rate of children < 2 year	Null - CH, LV, RU, SI, UA missing	Place availability for children 0-2, per 100 children	Null - RU, UA missing	Spending on childcare services (% of GDP)
Observations	23298	23298	20030	20030	22577	22577
Variance (countries)	0.365 ***	0.223 ***	0.339 ***	0.214 ***	0.303 ***	0.159 ***
	(0.111)	(0.070)	(0.115)	(0.075)	(0.095)	(0.051)
Variance (regions)	0.026 ***	0.019 ***	0.027 ***	0.020 ***	0.025 ***	0.019 ***
	(0.004)	(0.003)	(0.004)	(0.004)	(0.004)	(0.003)
Variance (indiv)	0.640 ***	0.595 ***	0.646 ***	0.598 ***	0.640 ***	0.593 ***
	(0.006)	(0.006)	(0.007)	(0.006)	(0.006)	(0.006)
ICC Country	0.354	0.266	0.335	0.257	0.313	0.207

5. Conclusions

Our analysis provides several important insights. In general, we find that individuals' attitudes towards demographic behaviour vary significantly between individuals and between countries, but not a lot between regions within countries. That said, with our measures of individual characteristics we are not able to explain very much of the individual variation in attitudes. We have seen that education, religion, work and certainly cohorts are highly significant in explaining individuals' attitudes. But as we also saw from Table 11, the reduction in the individual level variation is only modest from the inclusion of individual level variables. Obviously, this variation will be further reduced if we add further variables. But even with the richness of the ESS, it is unlikely one would be able to bring down the individual level variation dramatically. The reason, and the implication, is that individuals' attitudes are formed at peer levels, through friends and work colleagues as well as family members, for whom we do not have sufficient information. The country level variation is a different story in the sense that country level characteristics explain in a powerful way the observed differences in family attitudes across countries. As we have seen, the regional variation is rather small in comparison to both the individual and country level variation. In sum, this means that there are important drivers behind family attitudes operating at the micro level, as well important structural differences between the countries that drive these attitudes. This is of course not unexpected in the sense that laws and regulations relevant for individuals' attitudes are defined at country levels, and much less so at the regional levels.

As for the specific country level variables, our analysis brings out important findings that go somewhat contrary to the key arguments underlying the Second Demographic Transition. For instance, it is argued that SDT occurs in tandem with the disengagement from civic, professional or community-oriented associations. Moreover, at the individual level, the choice for new types of households (premarital single living, cohabitation and parenthood within cohabitation) are all linked to individualistic and non conformist value orientations in a great variety of spheres (Lesthaeghe 1995). Also Van de Kaa consider the notion of individualization as a fundamental component of the SDT when he argues that the two keywords which best characterized the norms and attitudes behind the first and second demographic transitions were "altruistic" and "individualistic", respectively (Van de Kaa 2002). Thus, both Lesthaeghe and Van de Kaa stress that the SDT is about the progressive isolation of the individual from the members of a society and from its institutions. However, our analysis does not give much support for these views. Whereas it is very possible that SDT is associated with a higher importance of self-realization and non-conformist attitudes, this does *not lead* to a disengagement of civic and community oriented engagement. In fact, our analysis

suggest that those countries which have progressed furthest in terms of adopting post-modern attitudes, are those where social capital is highest and where voluntary activity is frequent. In short, this would suggest that collectivism is on the rise in those countries where individuals are adopting post-modern attitudes, at least as far as demographic behaviour is concerned. This gives rise to a paradox since collectivism and individualization are typically considered as opposite ideals. One likely explanation is that the term individualisation, at least in terms of the SDT literature, is used in rather loose and in an imprecise way. In particular, for the proponents of the SDT thesis, the collapse of the family is considered as a tangible sign of the process of individualization that is characterizing modern societies. But of course, the collapse of the family as an institutional unit in society is not the same as increased individualisation. Our analysis would suggest that in modern societies, the family as a support unit and welfare provider is simply substituted by the state. It means that people feel confident in shifting away their attention from the family as a provider of welfare and support onto the community at large. Since they trust the other individuals and the surrounding institutional framework, they are able to find in the community the social and economic support they need. Thus, the transition to the postmodern value system is not a shift from collectivism to individualism, but a rather shift from being collective around the family to be collective around the state, and in the process of doing so, civic values and responsibilities appear, if anything, to improve. Seen in this light, it would be more appropriate to argue that the emergence of the SDT goes in tandem with stronger collective attitudes. The implication of these arguments is that the emergence of postmodern societies, does not necessarily mean a decline in emotional support between family relatives and generations. This is consistent with several studies suggesting that emotional family support and relationships are maintained in those countries characterized by SDT behaviour [references- Albertini and Wollf].

Another important finding of our analysis, and related to the arguments put forward above, is the critical role of trust. Together with social capital, trust is key to understand why the degree of acceptance of post-modern values and attitudes varies so remarkably across European countries. Where the level of social capital is higher, people experience a greater number of social interactions outside the family sphere. That is, since they have a stronger civic sense and a stronger feeling of belonging to the society they live in, they are more prone to participating to social events and to take part in social gatherings. As a consequence, the higher number of non-family based social interactions in societies with a high level of social capital, the family is to a lesser extent the focal point of the social and recreational life of individuals. Rather, community gatherings and social events occupy a large portion of the individuals' time. This has the effect of increasing the extension and the importance of the inter-familiar social web that links individuals belonging to the

same society, thus weakening the role of the family as a social institution. Whilst increasing the support for community-centered activities and behaviours, this mechanism contributes to lowering the acceptance of traditional demographic behaviours. Indeed, there seems to be a trade-off between approval of traditional demographic behaviours and participation to extra-familiar events and gatherings. It does not come as a surprise, then, that the countries where the support for post-modern values and attitudes is largest are the ones showing higher involvement of individuals in voluntary and charitable activities. As the social institution of the family loses importance, individuals start shifting their social attention to the community at large: caring about the other members of society becomes at least as important as caring about the members of the family.

Our analysis also gives support to the cultural evolution idea. Economic development is certainly a key driver behind modernity and post-modern attitudes. But as we have seen, with economic development, a range of other factors evolve. Wealthy societies have a higher level of gender equality, greater spending on child-care services and well functioning institutions with little corruption. As we have mentioned, wealthy societies are those where there is less reliance of the family as a welfare provider. Whereas we find these societies to have more modern attitudes, it is probably the case that well functioning institutions is a precondition for modern attitudes to emerge. This is consistent with the idea that the structure of the society matters for family attitudes. Thus, individuals adopt modern attitudes towards demographic behaviour because well functioning institutions allow them to do so. In contrast, a society with heavy reliance of the family as welfare provider, the younger generations have a stronger incentive to keep in line with the attitudes and expectations of the older generation of their family. As Newson and Richerson argue, in a modern society where welfare is provided centrally by the state, young individuals are less exposed to the attitudes of their parents and close relatives, instead their attitudes and presumably behaviour is to a stronger degree influenced by sources outside the family sphere.

We also find that the State Antiquity Index has a significant impact on modern family attitudes. The original motivation for its construction, was to test to test the proposition that present-day countries that had been the site of nation-states, kingdoms or empires over longer spans of history have achieved more rapid economic development in recent decades, for which there is support [reference]. The fact that it also has a significant effect on modern family attitudes may not be so surprising given that economic development has such a strong effect. The finding is consistent with Reher (1998) who argues that the role of the family and current observations across Europe concerning family ties, is persistent and stems from differences observed before modern times. Here of course, the argument is that these differences originate from differences in the level of development, also before modern times.

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APPENDIX

A1: One factor solution for trust

Factor Loadings	
Variable	Loading
ppltrst	0.5091
trstprl	0.8606
trstlgl	0.8211
trstplc	0.7527
trstplt	0.8780
trstprt	0.8589

Cronbach's Alpha	
Average interitem covariance	3.394
Number of items in the scale	6
Scale reliability coefficient	0.869

A2: A two factor solution for Social Capital and Voluntary Activity

Factor Loadings		
Variable	Factor 1	Factor 2
sclmeet	0.0673	0.7688
inmdisc	-0.0227	0.633
sclact	0.2425	0.6796
wkvlorg	0.7862	0.0912
hlpoth	0.7312	0.1323
atnoact	0.7863	0.0436

Cronbach's Alpha	
Average interitem covariance	0.4064
Number of items in the scale	6
Scale reliability coefficient	0.6073

A3: % of individuals in each birth cohort

		Birth Cohort							
Country	**Num Obs**	**1946-50**	**1951-55**	**1956-60**	**1961-65**	**1966-70**	**1971-75**	**1976-80**	**1981-85**
Code	#	%	%	%	%	%	%	%	%
Austria	1127	6.8	12.9	18.5	19.3	15.1	8.4	7.7	11.4
Belgium	1126	10.7	12.2	14.4	16.4	13.6	11.6	9.2	11.9
Bulgaria	550	13.6	14.9	16.4	12.9	13.1	10.4	10.0	8.7
Switzerland	1001	10.2	13.1	15.3	16.4	15.4	13.4	9.4	6.9
Germany	1677	10.6	13.6	14.5	18.3	14.1	10.1	10.1	8.8
Denmark	869	10.9	15.4	13.6	15.8	13.5	15.1	8.9	6.9
Estonia	663	8.0	13.7	13.3	16.0	11.0	13.6	10.7	13.7
Spain	1100	7.1	9.9	13.5	14.1	14.7	14.8	15.5	10.4
Finland	1139	13.8	14.0	12.0	12.6	12.6	10.9	12.7	11.3
France	1294	13.1	11.7	13.4	15.4	13.1	15.5	10.9	6.9
UK	1377	12.8	10.9	12.2	15.5	15.6	13.1	11.0	8.9
Hungary	690	12.8	15.5	14.1	9.6	12.6	14.5	12.9	8.1
Ireland	915	8.7	10.7	12.0	14.2	16.0	16.0	12.6	9.8
Latvia	742	8.0	11.9	13.9	15.4	13.6	13.3	10.1	13.9
Netherlands	1175	11.2	11.1	13.6	14.8	16.7	13.9	10.3	8.3
Norway	1177	9.6	12.1	15.0	15.4	13.3	12.7	11.3	10.6
Poland	956	9.5	13.0	14.7	11.0	11.2	12.3	12.7	15.6
Portugal	1035	10.4	13.8	11.2	12.3	14.4	14.1	12.1	11.7
Romania	1024	11.4	14.5	11.6	10.4	15.2	15.9	10.4	10.5

Russia	893	9.9	13.3	14.0	11.9	12.1	12.5	13.2	13.1
Sweden	1162	13.8	13.2	10.9	13.4	13.6	13.3	11.2	10.7
Slovenia	804	12.2	13.7	13.9	14.9	10.1	10.4	12.8	11.9
Slovakia	974	9.0	13.2	11.5	12.2	14.3	12.1	14.9	12.7
Ukraine	829	9.5	14.2	15.1	10.4	11.7	13.3	12.8	13.0

A4: Descriptive statistics for individual level control variables

Country	**Num Obs**	**I Edu**	**II Edu**	**III Edu**	**Church Attendance**	**# of children**	**Working**	**With a partner**
Code	#	%	%	%	%	Mean	%	%
Austria	1127	11.3	78.5	10.2	27.8	1.4	82.2	54.4
Belgium	1126	16.2	46.5	37.3	12.0	1.5	75.0	74.2
Bulgaria	550	2.0	77.3	20.7	16.2	1.5	68.4	71.8
Switzerland	1001	2.6	64.9	32.5	19.1	1.3	84.1	66.9
Germany	1677	0.8	68.4	30.8	15.4	1.3	72.8	69.4
Denmark	869	0.3	61.6	38.1	7.9	1.5	86.5	76.8
Estonia	663	0.3	71.9	27.8	7.5	1.4	83.7	67.4
Spain	1100	20.4	54.8	24.8	20.9	1.2	76.5	67.9
Finland	1139	6.1	53.9	40.0	8.3	1.5	78.7	73.7
France	1294	13.6	52.5	33.9	10.1	1.6	78.3	71.5
UK	1377	0.1	60.5	39.4	15.0	1.4	77.1	63.5
Hungary	690	20.6	65.1	14.3	13.0	1.5	67.8	65.2
Ireland	915	9.0	65.1	25.9	53.7	1.7	73.7	65.6
Latvia	742	1.6	67.9	30.5	13.9	1.3	79.0	62.9
Netherlands	1175	4.8	65.1	30.1	16.2	1.3	79.9	65.8
Norway	1177	0.3	54.5	45.3	10.5	1.6	87.3	73.2
Poland	956	12.7	70.6	16.7	70.6	1.6	70.7	69.9
Portugal	1035	45.4	38.8	15.7	38.5	1.3	74.1	68.0
Romania	1024	4.4	79.9	15.7	47.9	1.5	58.2	77.5
Russia	893	0.2	68.4	31.4	10.1	1.3	78.6	60.7
Sweden	1162	2.2	54.6	43.3	7.7	1.5	87.3	74.9
Slovenia	804	14.7	66.7	18.7	25.5	1.4	70.8	73.3
Slovakia	974	1.1	83.9	15.0	40.1	1.6	74.4	71.9
Ukraine	829	0.4	69.0	30.6	25.8	1.3	66.5	70.1

A5: Descriptive statistics for country-level variables

	Labour force participation rate (2006), female	Global Gender Gap (2006)	GDP pc - ppp (2006)	CPI (2006)	GEM (2005)	Women in Nat. Parliam. (2006)	Women in Nat. Parliam. (1995)	State Antiquity Index	Enrolment Rate of children < 2 (2006)	Place availability for children 0-2 (2003)	Spending on childcare services (2005)
Country	**Value %**	**Value**	**Value/100**	**Score**	**Score*100**	**%**	**%**	**Score*100**	**Per 100 children**	**Per 100 children**	**% of GDP**
Austria	50.4	69.86	35.56	8.60	77.90	33.90	21.90	90.63	10.80	10.00	0.60
Belgium	44.3	70.78	34.71	7.30	82.80	34.70	12.70	78.75	33.60**	30.00	0.90
Bulgaria	40.2	68.70	10.13	4.00	60.40	22.10	10.80	71.14	10.80	11.00^{+}	0.80^{++}
Switzerland	61.2	69.97	37.92	9.10	79.50	25.00	21.50	87.63	-	-	0.40
Germany	51.2	75.24	31.74	8.00	81.30	31.80	30.80	80.50	10.00***	9.00	0.77
Denmark	59	74.62	36.35	9.50	86.00	36.90	33.00	89.39	61.70***	58.00	2.30
Estonia	52.3	69.44	18.38	6.70	59.50	18.80	10.90	38.20	33.40	32.75^{+}	0.40^{++}
Spain	45.1	73.19	28.55	6.80	74.50	36.00	24.70	82.11	16.60***	5.00	0.70
Finland	56.7	79.58	35.20	9.60	83.30	37.50	33.50	45.66	13.80	23.00	1.40
France	48.4	65.2	33.41	7.40	-	12.20	5.90	89.27	28.00°°°	39.00	1.60
UK	55.2	73.65	34.98	8.60	71.60	19.70	9.20	83.88	27.00	2.00	0.80
Hungary	42.2	66.98	19.59	5.20	52.80	10.40	11.10	63.30	8.10	6.00^{+}	1.50
Ireland	54	73.35	41.93	7.40	72.40	13.30	13.30	55.70	15.00°°	2.00	0.30
Latvia	49.4	70.91	15.88	4.70	60.60	21.00	9.00	42.01	15.80	-	0.60^{++}
Netherlands	56.7	72.5	36.22	8.70	81.40	36.70	32.70	80.17	29.50**	2.00	0.90
Norway	63.7	79.94	43.58	8.80	92.80	37.90	39.40	64.44	41.90	35.40^{+}	1.50
Poland	47.2	68.02	15.44	3.70	61.20	20.40	13.00	68.13	1.90	2.40^{+}	0.50
Portugal	56.4	69.22	21.94	6.60	65.60	21.30	13.00	86.74	23.50**	12.00	0.90
Romania	49.6	67.97	10.09	3.10	48.80	11.20	7.30	50.67	2.40	2.23^{+}	0.80^{++}
Russia	54.6	67.70	11.97	2.50	47.70	9.80	10.20	61.71	21.50	-	-
Sweden	58.5	81.33	35.16	9.20	85.20	45.30	40.40	75.51	48.00	37.00	1.90
Slovenia	53.8	67.45	24.17	6.40	60.30	12.20	13.30	50.53	41.00	-	0.50^{++}
Slovakia	51.8	67.57	17.83	4.70	59.70	16.00	14.70	46.53	17.70*	12.00°	0.60
Ukraine	49.6	67.97	7.64	2.80	41.70	7.10	3.80	44.19	16.00	-	-
Source	UN Stats Division	GGG Report	UN Stats Division	Transparency International	Human Develop. Report '05	UN Stats Division		L. Putterman – Brown University	UN Stats Division & OECD Family Database	UN Stats Division & Del Boca-Wetzels '07	O. Thévenon computation on OECD Family Database

Note: GDP pc calculated as the aggregate of production divided by the population size; LFPR: age 15+; °1990, °°2000, °°°2002, *2003, **2004, ***2005, $^{+}$average 2003-2006, $^{++}$ pre-primary spending