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The Long-Standing Demographic East-West-Divide in Germany

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Abstract

Over the last 20 years, a large number of studies have looked at the demographic differences between the previously divided eastern and western parts of Germany. The two regions have converged with respect to mortality and overall fertility levels. But in family formation behaviour differences remain. Non-marital births are the norm in eastern Germany, while they are still the exception in western Germany. Various explanations for these differences have been offered, with the most persuasive linking policy and socio-economic conditions in eastern and western Germany after 1945 with the persistence of local patterns. Here we show that the non-marital fertility divide predates the 1945-division of Germany. Indeed, already in the late 19th century, the areas of eastern Germany that made up the German Democratic Republic had, on average, roughly twice the non-marital fertility level of western Germany. In the first part of our paper we document the history of this longstanding pattern and provide a set of explanations for its emergence. These include longstanding differences in agricultural structures, levels of secularisation and legislation. In the second part, multi-level models on birth register data demonstrate that East-West differences in non-marital fertility would remain even under scenarios such as convergence in secularisation levels and economic conditions. The persistence of the past suggests that explanations for family formation differences between eastern and western Germany based solely on most recent and current conditions are incomplete, and that convergence, if it occurs at all, will take longer than anticipated, perhaps lasting many decades or more.

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1. Introduction

Since the fall of the Berlin Wall in 1989, many aspects of everyday life in western and eastern Germany have been converging. These changes encompass socio-economic conditions, the political situation and demographic behaviour. In recent years, East-West differences in fertility (Goldstein and Kreyenfeld, 2011) and mortality levels (Kibele and Scholz, 2009) have almost disappeared. But one demographic difference has persisted beyond German unification: namely, the level of non-marital births. In eastern Germany, non-marital births are the norm. In western Germany, by contrast, they are still the exception. In 2009, 58.1% of all births in eastern Germany¹ were to unmarried mothers, while the ratio was 26.5% in western Germany.

Most modern scholars attribute these differences to the recent communist history of the former East Germany and to contemporary economic problems (see, e.g., Trappe, 1995; Huinink and Wagner, 1995; Konietzka and Kreyenfeld, 2002; Salles, 2006). The link between politics and socio-economic conditions after 1945 has also been cited as a reason why these local patterns have continued. However, we will show in this paper that the differences in non-marital fertility go back much further than the era of the German Democratic Republic (GDR) (1949-1990); indeed, this gap existed long before two German states were created after World War II. In fact, in those areas that later became the GDR, non-marital fertility was, on average, already roughly twice as high as in western Germany by the end of the 19th century.

Our paper is divided into two parts. In the first part we document the long history of East-West differences in non-marital fertility, and provide a set of explanations for the emergence of this longstanding pattern. This includes differences in modes of economic organisation and agricultural structures which might have contributed to make eastern German societies more receptive to the deviant behaviour of non-marital childbearing in early modern times. Among the other factors which might have played a role in the emergence of this pattern are historical differences in the level of secularisation, civil legislation related to non-marital childbearing and population policies based on Malthusian concepts. In the second part of the paper, we consider the prospects for a convergence of non-marital fertility levels in eastern and western

¹ Due to data constraints the numbers for eastern Germany include the former West Berlin.

Germany. In this part of our analysis, we test our assumption that East-West differences in non-marital childbearing are so deeply rooted that they cannot be solely explained by disparities in individual- and contextual-level socio-economic characteristics. Using German birth register data and district-level contextual data for the year 2009, we run multi-level models to test whether East-West differences in non-marital fertility would persist under scenarios such as convergence in secularisation levels or economic conditions.

2. Literature Review: Recent vs. Pre-war Accounts

The levels of and trends in non-marital fertility both depend on processes at the individual level, and on contextual conditions (Cutright, 1971; Shorter et al., 1971; Knodel, 1967; Lesthaeghe and Neels, 2002; Billy and Moore, 1992). At the individual level, the process that potentially leads to a non-marital birth starts before conception; it depends on whether individuals have sexual intercourse prior to marriage (see Cutright, 1971, for a detailed discussion). If an unmarried woman gets pregnant, she has several options: she can have the child despite not being married, she can “prevent” a non-marital birth by marrying before the child is born or she can seek an abortion. This implies that most individuals have a considerable degree of control over the process that leads to a marital or a non-marital birth. Thus, the emerging spatial patterns of non-marital fertility are far from random.

Non-marital fertility levels were increasing throughout the 18th century and in the first half of the 19th century in many regions of Europe. But from the mid-19th century until the mid-20th century, non-marital fertility rates declined almost everywhere in Europe (Shorter et al. 1971). The trend shifted again in the second half of the 20th century towards higher levels, and continues today (Klüsener et al., 2012a). The rise in non-marital fertility has been linked to increased individualisation and secularisation (Lesthaeghe and Neels, 2002), and to legislative changes that have lessened discrimination against non-married mothers and children born outside of marriage (Perelli-Harris and Sánchez Gassen, 2012). On the other hand, there also seems to be a pattern of disadvantage associated with this trend, as surges in non-marital fertility are often linked to crisis situations (Abrahamson, 2000). In addition, in most European

regions, individuals of lower social status are more likely than those of higher social status to have children outside of marriage (Perelli-Harris et al., 2010).

As was noted above, the demographic divide in family formation behaviour between eastern and western Germany has been the subject of a large number of scientific studies over the past two decades. Most of the authors of these studies have assumed that the origins of this divide lie in the differences between East and West Germany that developed in the period from 1945 to 1990. According to Konietzka and Kreyenfeld (2002), the unification of the country in 1990 provided conditions comparable to those of a “laboratory experiment”. However, there were some surprising results:

“Since the 1970s, non-marital birth rates have risen steadily [in the GDR]: Most researchers attribute this development to the GDR family policies [...]. [... With] the replacement of East Germany’s institutions by those of West Germany it was expected that [...] non-marital birth rates would soon fall to west German levels (Höhn and Dorbritz, 1995; Witte and Wagner, 1995, p. 395). Contrary to this expectation, however, non-marital birth rates skyrocketed after unification [...]” (Konietzka and Kreyenfeld, 2002, p. 332).

In a paper on divorce, Engelhardt et al. (2002, p. 296) also noted that their study was embedded in a quasi-experimental context. Their assumption was that, during the period between 1945 and 1990, East and West Germany “resembled each other culturally more than any other European societies in dual comparison”, but differed in family policy and ideology. However, they also pointed out that disparities between western and eastern Germany in divorce levels existed before 1945 (Engelhardt et al., 2002, p. 297). These observations raise questions about whether western and eastern Germany were culturally similar prior to 1945 in terms of family formation and dissolution strategies.

In a similar direction hints a study by Salles (2006) on the role of GDR family policies on disassociating marriage and childbirth. She found that the introduction in the mid-1970s of a paid year of parental leave solely for single mothers (*Babyjahr*) led to a postponement of marriage and an increase in non-marital births in East Germany. But, as her empirical evidence also showed that non-marital fertility levels in East Germany

had already been higher than in West Germany prior to the introduction of the parental leave scheme, she concluded that this was indicative of a trend that was already well established in East German society. “In other words, East German social policy dissociated marriage and childbearing primarily because the conditions for such a change were already in place” (Salles, 2006, p. 139). However, this argument was based solely on data from the 1950s and 1960s. Salles did not investigate whether the conditions for change were already present in eastern Germany² prior to 1945.

If, however, we look at pre-war studies on the issue, which have not been considered in the recent literature on the divide, we find that there are a number of historical publications that investigated regional differences in non-marital fertility levels in Germany. Already Süßmilch (1776, p. 98) stated that in the German cities for which he was able to collect information on the non-marital birth ratio for the middle of the 18th century, the eastern German cities of Leipzig and Dresden in Saxony had the highest non-marital fertility ratios. Prinzing (1902, p. 41), who presented statistics on the non-marital fertility rate³ at the end of the 19th century, also concluded that the highest numbers could be found in Saxony (for location see upper map in Fig. 1). Other areas with high rates included Mecklenburg-Schwerin and the central part of Prussia, which covered large parts of today’s eastern Germany (Berlin, Brandenburg, Prussian Saxony and (Western) Pomerania). In most of the western part of the German Empire, on the other hand, the rates were substantially lower, although there were some exceptional regions with high levels, such as the central and eastern part of Bavaria. Another important study was published by Hanauer (1928, pp. 660), who provided a collection of time-series data for several western and eastern German cities and areas, with some of the information going back to the year 1600. These data, which reveal some East-West differences, will be discussed in more detail below.

² In our paper, eastern Germany refers to the territories that made up the German Democratic Republic. We also call these territories eastern Germany when we discuss the period prior to 1945, although at that time these regions were situated in the central part of the German Empire.

³ Defined as number of non-marital births per 1,000 single women aged 15-50.

3. History of the Divide

3.1 Historical Origins

The demarcation line between East and West Germany was an outcome of World War II. However, it is important to note that the border between the two German states did not emerge as an incidental freeze-frame of Allied combat positions at the moment of German defeat in the spring of 1945. Indeed, it was a preconceived demarcation line that had been drawn in advance by the Allied victors. The border was based on pre-existing administrative entities, such as former federal states and historic territories of principalities (see also Kettenacker, 1989). Thus, while the inner German border became a formal state border in 1949, its roots go much further back in time. Most of the border followed lines that predate the Weimar Republic and the German Empire of 1871, and can be traced back to the emergence of German territorial states in early modern times. In Fig. 1, we contrast the current administrative division of Germany with the situation in 1866 to show the high degree of continuity over time.

[Fig. 1 about here]

In this section, we discuss the results of our analysis of demographic trend data, which cover a time span of almost four centuries. In order to achieve comparability over long periods of time and across small spatial units, we use the simplest measure of non-marital fertility. This is the non-marital birth ratio, which is defined as the share of non-marital live births among all live births⁴. An interpretive difficulty of this measure is that it is influenced by the share of married women of reproductive age and differences in the age distribution of married and non-married women. Another problem is that this measure does not take into account whether the children born outside of marriage were born to single mothers or to cohabiting couples. It also does not tell us to what extent children born outside of marriage were subsequently made legitimate through the marriage of their parents or the recognition of paternity by fathers. These limitations must be considered in the interpretation of our results.

We will first look at the earliest available data, which are from the 17th and 18th centuries. The data presented by Hanauer (1928) for the western German city of

⁴ Before 1872: Non-marital births among all births

Frankfurt and the eastern German cities of Leipzig, Freiberg/Saxony, Lychen and the area around Halle suggest that non-marital fertility levels were very low in the German Empire during the 17th century. The available data for the period before 1700 showed that none of these locations had a non-marital birth ratio of more than 3%. However, it is important to note that registration was imperfect at that time.

Around 1700 a number of German cities and regions experienced surges in non-marital births, with levels exceeding 10%. These elevated levels were sustained over the following decades. For example, in the eastern German city of Leipzig the share of non-marital births increased from 3% in the period 1696-1700 to 14% in 1731-1735. The share remained at around this level over the next 100 years, with five-year means fluctuating between 12% and 23% (Hanauer, 1928, p. 663). In the period 1700-1800, particularly high numbers were recorded in Saxony and Bavaria (Hanauer, 1928, p. 663 ff.). The numbers suggest that an East-West gradient in non-marital fertility levels was starting to emerge in the 18th century. But at that time, the differences between western and eastern Germany were much less distinct than they are today. There were, for example, territories in the eastern part of western Germany (e.g., Brunswick and Bavaria, but also Frankfurt am Main) that followed the eastern German pattern.

The year 1841 is an important landmark in the availability of data. From this year onwards it is possible to estimate non-marital fertility ratios for western and eastern Germany on a yearly basis⁵ (see notes on Fig. 2 for more details). However, the mid-19th century was a very unusual period, as at that time the average non-marital fertility levels were very similar in western and eastern Germany. We believe this was mainly the result of marriage restrictions, which had been introduced in most parts of western Germany in the post-Napoleonic period to address development challenges (Knodel, 1967; details are presented below). Yet in most of eastern Germany there were no such restrictions. When a ban on marriage restrictions was introduced throughout Germany in 1866, the regions with the tightest regimes also saw the largest decreases in non-marital fertility (Knodel, 1967, p. 291). As can be seen in Fig. 2, western Germany experienced a decline in non-marital birth ratios after 1866. But in eastern Germany, the levels

⁵ For this we use official statistical data published by the statistical offices of the German states, the German Empire, the German Democratic Republic and the Federal Republic of Germany. For the period before 1872 we also refer back to a secondary collection of data of this kind (Kraus, 1980).

remained constant, most likely because there had not been restrictions on marriage in place in most of this part of Germany. This suggests that, without the marriage restrictions, western Germany would have had lower levels of non-marital fertility than eastern Germany also in the first half of the 19th century.

[Fig. 2 about here]

We will now turn to Fig. 3, which displays district-level spatial variation in non-marital fertility in 1878, 1937 and 2009. The year 1878 is the first year for which we could gather these data for almost all German states at the district level⁶. For the color-scheme of the maps we have decided to use the same categorisation for 1878 and 1937, as the distributions did not differ substantially. The categories from 0%-15% are based on equal distances of 1.5%, while we use bigger distances for the categories above 15% (2.5% from 15%-20% and 5% from 20%-40%). These distances were chosen because most of the regions reported levels below 15%, and we did not want to give the upper outliers too much weight in the categorisation scheme. For the 2009 map our categorisation is based on equal distances of 5%.

[Fig. 3 about here]

As we noted above, in the 18th century the German-German border followed the divide in non-marital birth levels only in part. In the eastern part of western Germany there were also some regions with high non-marital birth ratios, such as Lübeck, Brunswick and the central and eastern part of Bavaria (see Fig. 3a). As a result, the spatial pattern can be more accurately characterised as an East-West gradient, rather than as a clear-cut East-West divide. Among the isolated “hot spots” of non-marital fertility in western Germany were university towns such as Bonn, Marburg and Heidelberg.

Within Prussia, a clear dividing line is visible along what later became the German-German border (see Klüsener et al., 2012b). This was a state border prior to 1866, when Prussia annexed the territories of Hanover and Hessen-Kassel, which were

⁶ For the following states we only have access to state- or province-level data: Mecklenburg-Schwerin, Mecklenburg-Strelitz, Saxony, Thuringian states, Hanseatic Cities.

situated west of this line (see Fig. 1). Parts of this border can be traced back to medieval times. Indeed, this internal border within Prussia was not only a clear spatial divide in non-marital fertility, but also a dividing line with regard to indicators such as the share of divorced persons and of infant mortality (see Klüsener et al., 2012b). For both of these indicators, substantially higher values were recorded in the East.

In the decades following the unification of Germany in 1871, large parts of the body of civil law were harmonised within the German Empire (see below). These legal changes did not, however, lead to a convergence of non-marital birth levels in the various parts of Germany (see Fig. 2). Instead, the differences in the shares of non-marital births between today's western and eastern Germany actually increased. In the late 1920s, the share of non-marital births recorded for the territories that later formed the German Democratic Republic was 18%, with little regional variation. The share for western Germany was around 9%, with quite a substantial degree of regional variation. In the 1930s, non-marital childbearing decreased, possibly as a result of Nazi family policies, which linked family support primarily to married couples (Population and Policy Database, 2012). Even so, the 1937 map showed a clear East-West gradient in non-marital fertility, although the differences were not as extreme or as clear-cut as those seen on the map of 2009. The developments after 1945 will be explored in more detail below, following a discussion of possible explanations for the emergence of the divide prior to 1945.

3.2 Explanations for the Emergence of the Divide

In this section, we will seek to pinpoint specific historic developments that we believe contributed to the creation of a cultural, economic, legal, and political divide between western and eastern Germany prior to 1945. We focus on three aspects: modes of economic organisation and agricultural structures, levels of secularisation and legislation including population policies.

Historically, there have been pronounced differences in the agricultural structures of western and eastern Germany. While small landholdings were dominant in the western part of Germany, eastern Germany was characterised by large estates with many serfs and later on landless workers. The latter structure was found over a large part of the territory that became the GDR. The German economist Georg Friedrich

Knapp and the sociologist Max Weber published classical works on the social conditions in the areas east of the river Elbe in the late 19th century (Knapp, 1887, 64 f.; Weber), which contributed to establish “East Elbia” as a general term in the economic and sociological discussion. East Elbia comprised the area east of the rivers Elbe and Saale, which had constituted the eastern fringes of the Holy Roman Empire from the late 10th century until the beginning of the “East colonisation”, which started in this area in the 12th century (Kuhn, 1955/57). In Fig. 4 we attempt to display the spatial extension of East Elbia by mapping the share of agricultural land owned by farms larger than 100 ha in 1907. The map suggests that the western border of East Elbia largely followed the German-German border. The only regions in western Germany where large farms covered substantial parts of the land were situated along the border to eastern Germany. These areas include eastern Holstein in the north as well as an area in the centre comprising northern Hessen and the south-eastern part of Lower Saxony (e.g., Brunswick region). In eastern Germany, smaller farms prevailed only in the densely populated southern regions (parts of Saxony and Thuringia).

[Fig. 4 about here]

In general, East Elbia differed from other regions of Germany in its early adoption of the capital-oriented, large-scale production of agrarian crops, and the accompanying disenfranchisement of the rural population. A substantial share of the rural population was not living in villages, as was typical in the western regions, but were instead dispersed on estates, which constituted own administrative units. On these estates, there was a general lack of communal structures outside of the employer/employee relationship. The production mode in East Elbia was export-oriented, with a focus on wheat, rye and sugar beets. Sugar beet production, which started to boom around 1850, was especially labour-intensive and required a large number of manual workers. This work was usually done by seasonal workers (Hochstadt, 1981, pp. 457) who had itinerant employment and lived far from home in mass dormitories. As these workers were likely subject to a lower degree of social control in these seasonal communities than in their home villages, this pattern of employment might have supported the spread of deviant behaviour.

In our investigation of the potential effect of varying modes of economic organisation on non-marital childbearing, we are interested in two aspects: regional variation in urban/rural differences in non-marital fertility and spatial differences in the seasonality pattern of non-marital childbearing. If the East Elbian economic pattern had a strong impact on non-marital childbearing, then non-marital childbearing should have been particularly widespread among rural women in eastern Germany in the 19th and early 20th centuries. In addition, we would expect to find in eastern Germany that peaks in non-marital conceptions occurred within the agricultural season, which lasts from approximately March until September. Thus, we would expect to see elevated levels of non-marital fertility in the months of December to June.

Regional data on urban-rural variation in non-marital fertility rates in 1900 were provided in a publication by Shorter et al. (1971). One challenge we face when using such statistics is that rural non-married women might have preferred to give birth in a more anonymous city, rather than in their home village. This may have increased the number of urban non-marital births. Nevertheless, based on the data presented by Shorter et al. (1971), all of the regions in eastern Germany had higher non-marital fertility rates among rural inhabitants, while in western German this was only the case for a very limited number of regions (Shorter, 1971, p. 391). This finding, which is also supported by data presented by Prinzing (1902, 43 f.), is in line with our expectations.

The seasonality pattern also supports the view that non-marital fertility is linked to the agricultural/summer season. When we look, for example, at the period of 1872 until 1900, in which the annual non-marital birth ratio for the German Empire was rather stable at around 9%, we can see that there was a regular seasonal fluctuation, with values reaching about 9%-10% in the months of December to June, while the level was only 7.5%-8.5% in the months of August to October (Besser, 2008). There is also evidence that the seasonal variation in the pattern increased towards the east. This is shown in the upper graph of Fig. 5, which presents averaged data for the period 1895-1899. However, the differences between eastern and western Germany were less strong than those observed in comparison with the provinces east of the Oder-Neisse line. This might partly result from the highly urbanised territories being included in the trend lines, which did not show high seasonal fluctuation (e.g. Saxony, Berlin, parts of the Rhineland). Thus, we decided to single out predominantly rural regions in eastern and

western Germany, which had in common that they had high levels of non-marital fertility: Mecklenburg-Schwerin, the Prussian province of Saxony and Bavaria east of the Rhine (see lower graph of Fig. 5). If we contrast these regions, we see that the seasonal fluctuation in the eastern German territories of Mecklenburg-Schwerin and Prussian Saxony was much higher and more closely linked to the agricultural season compared to Bavaria, where the East Elbian production pattern was absent. Overall, we can conclude that our observations on rural-urban differences and seasonal variation in non-marital fertility confirm our expectations and lend support to the view that differences in economic production modes might have had an effect on non-marital fertility levels.

[Fig. 5 about here]

We will now turn to the differences in secularisation trends. Historically, there has been a strong link between religion, marriage and childbearing in Europe, as the Christian churches had been seeking at least since the late medieval period to make the Christian marriage sacrament the sole basis of intimate relationships and human reproduction (Coester, 1993, p. 547). Recent spatial variation in non-marital fertility had been associated with variation in secularisation levels, as more secularised regions tended to have higher levels of non-marital fertility (Lesthaghe and Neels, 2002). Germany has already for a long time a high degree of heterogeneity in religious beliefs across regions. In the Peace of Augsburg in 1555, it was agreed that in each German state the head of state had the right to determine the religious denomination of his subjects. As a result, most of the internal variation in religious denominations within Germany was between-state variation, while most of the German states exhibited a high degree of homogeneity internally, with their populations being almost entirely Catholic or Protestant. This only changed in the 18th and 19th century, when e.g. Protestant Prussia acquired Catholic territories in western Germany and Poland, or Catholic Bavaria Protestant territories in Franconia. Western Germany consisted of Catholic as well as Lutheran and Calvinist Protestant regions, while eastern Germany was with few exceptions much more uniformly Lutheran Protestant.

But our explanation would fall short if we focused exclusively on the issue of religious denomination. In Bavaria, for example, the Catholic areas in the southern part

of the state traditionally had very high levels of non-marital fertility, while some predominantly Protestant areas to the north had rather low levels. In Prussia, on the other hand, Catholic territories in both the western (e.g., Rhineland) and the eastern parts (Ermland, Poznan province, Eichsfeld) of the state had low non-marital fertility levels, while there were Protestant territories with both high (Prussia in the pre-1806 borders) and low non-marital fertility rates (e.g., the former Kingdom of Hanover and the former Prince Electorate of Hessen-Kassel in western Germany). It might be feasible to look beyond denomination and consider the degree of religious participation as a measure of church control over the population.

Research by Froese and Pfaff (2005) has shown that eastern Germany experienced a very early secularisation process, and is today one of the most secularised societies in the world. They pointed out that the Protestant state churches in eastern Germany (Prussia, Saxony) have a centuries-long history of delivering low levels of religious services to their population, which may in return have led to lower levels of demand for these services from the people. The low supply of religious services may also be linked to historical differences in economic organisation. The local rural population who lived on estates had limited access to and control of the church, unlike in most of western Germany, where most of the rural population lived in larger villages.

The border between eastern and western Germany was not a divide in religious denomination, as the population was predominantly Protestant on both sides of the border. But there are long-standing differences between the two parts of Germany in rates of religious participation, which are apparent in the time-series statistics that we have available for the Protestant German population covering the period 1860-1945. These data were collected by Protestant church officials and made available in a compilation published by Hölscher (2001). The statistics include, among other indicators, information on the number of communions per 100 Protestant inhabitants. The data suggests that a Protestant “Bible Belt” was running through the central part of Germany, which covered almost all territories west of the border line which became the German-German state border after 1945. This included the eastern part of Hanover, former Hessen-Kassel and Bavarian Franconia (Hölscher, 2001, Vol. 1, p. 22 f.). In these territories the churches registered annually more than 70 communions per 100

Protestants (including children) in the early 20th century, while the numbers were only at about 15 to 40 in most of eastern Germany.

We can therefore conclude that eastern Germany had indeed been more secularised than the rest of Germany well before 1945. In 1936, the share of individuals with no religious affiliation in the regions of today's eastern Germany was 7.1%, compared to 2.5% in western Germany (Statistisches Reichsamt, 1936, own calculations); thus, a clear disparity emerged well before the arrival of a communist government in East Germany.

Legislation and policies can also play an important role in changing or reinforcing social norms related to marriage and non-marital childbearing (Perelli-Harris and Sánchez Gassen, 2012). Civil laws were quite diverse in Germany prior to the introduction of a unified German civil code in 1903. There were quite distinct East-West differences in the legal conditions for non-married mothers and children born outside of marriage, as well as in population policies designed to limit population increase.

Historically, an important feature of German civil legislation was the “subsidiarity principle”. This means that civil legislation was derived mainly from local regulations. The rules of a general code were applied only when local laws were absent or did not address specific cases. In the 19th century there were several different code books in use: in large parts of Prussia, the Prussian Civil Code (*Preußische Allgemeine Landrecht*) from 1794 was the main legal source. However, in the Prussian Rhineland province civil legislation was based on the French *Code Civil*, which had been introduced in this area under Napoleonic rule (see Fig. 1 for location). In some of the southern German territories, including in Baden and the part of Bavaria to the west of the Rhine, civil legislation was also based on the French *Code Civil*. For the main part of Bavaria east of the Rhine, however, civil legislation was based on the *Codex Maximilianeus Bavaricus Civilis* from 1756.

In terms of the legal right of a mother of a child born outside of marriage to claim financial support from the father of the child, there were distinct differences between the western and eastern parts of the German Empire, especially those areas with civil legislation based on the French *Code Civil* and those with legislation based on the Prussian Civil Code. The French *Code Civil* granted the mother of a child born outside

marriage only a weak legal status. Under the French code, searching for the father of a child was not permitted, while searching for the mother was (Hull, 1996, pp. 377). This norm was in line with the old Roman civil legislation norm *pater est quem nuptiae demonstrant* (Heinrich, 1993, pp. 2).

In the Prussian Civil Code, by contrast, the father of a non-marital child potentially had a much greater degree of liability. Under this code, if a man impregnated a woman, he was required to compensate the woman and to support the child. This regulation was motivated more by a concern for the child than by a concern for the mother, and its goal was to limit infanticide and the number of undernourished children (see also Heinrich, 1993, p. 3). While this legal norm was in line with older German legal regulations (Schubart-Finkentscher, 1967, p. 90), Prussian courts were, in a break with the past, also allowed to grant non-married mothers the civil status of being “divorced” from the man who had impregnated her, with all the accompanying rights and obligations (Heinrich, 1993, p. 5). However, these progressive regulations were partly revoked in the 1854 reform of the civil code.

Bavaria, a region with high rates of unmarried births in the south of western Germany, also laid down rather strong legal protections for children born outside marriage. The Bavarian Civil Code provided non-marital children with the same inheritance rights as children born within marriage and the right to receive alimony from the father (Gett, 1836, p. 171). This might have been related to long-standing traditions in Bavaria, according to which a man could not get married until he inherited his father’s farm at age 34 (Shorter, 1978). As many couples did not want to postpone childbearing until the man turned 34, non-marital childbearing was widely accepted in Bavaria even among the upper class. These circumstances might have provided favourable conditions for the spread of the deviant behaviour of non-marital childbearing.

In addition to these variations in civil legislation, we can also identify general differences in population policies between western and eastern German territories in the 19th century. If we take migration balances as an indicator of livelihood opportunities, we can see that most of the western German territories experienced large out-migration waves in the 19th century (Kraus, 1980, p. 34 pp.). The territories in the eastern part of Germany (with the exception of Mecklenburg), on the other hand, experienced in-

migration (see Kraus, 1980). These migration statistics indicate that there was also an East-West gradient in terms of population development. This view is supported by regional differences in population policies prior to the German unification of 1871. Especially in areas in the south-western part of the German Empire (e.g., Württemberg), where partible inheritance patterns predominated and the small farms that resulted often were not large enough to support a family, Malthusian ideas had a strong impact on public debates (see Knodel, 1967 for details). As part of the so-called “pauperism debate”, academics and politicians argued that births among the poor should be limited by, for example, marriage bans for landless people, which were intended to prevent the birth of children likely to require state care. This resulted in the introduction of marriage bans in large parts of western Germany in the 18th century and the early decades of the 19th century. Prussia and Danish-controlled Schleswig-Holstein, on the other hand, did not implement such policies (Knodel, 1967). The marriage bans might have contributed to the stigmatisation of non-marital fertility as an asocial deviant behaviour in the areas where these regulations were in place.

In sum, we believe that differences in economic structures, secularisation levels, civil legislation and population policies likely played important roles in the emergence of the East-West divide in non-marital fertility prior to 1945. They may also have contributed to create East-West differences in conditions for change, which might have been very relevant for the further widening of the gap between East and West after 1945.

4. Prospects for the Disappearance of the Divide

Although an East-West gradient in non-marital levels existed before 1945, there is little doubt that the developments after 1945 had a large impact on non-marital differences between eastern and western Germany. We will provide a brief overview of these developments, and then consider the likelihood that this divide will eventually disappear. Different views on non-marital births were already discernible in the first constitutions of the two German states. The constitution of the GDR of 1950 took a strong normative stance by stating that being born outside of marriage is no stain. In the Federal Republic of Germany, the constitution simply copied the relevant passage from the constitution of the German Empire of 1919, which stated that there should be no

discrimination against children born outside of marriage. However, in the 1950s and 1960s, West German politicians did not abide by this constitutional norm. The situation did not improve until 1968, when the West German constitutional court forced the government to change the existing legislation on the rights of children born outside of marriage to comply with the legal norms established in the West German constitution.

In the GDR, a parental leave scheme was introduced in 1976 which provided unmarried mothers, but not married mothers, with the option of taking a paid leave of one year upon the birth of the first child. This regulation provided a substantial incentive for couples to have at least their first child outside of marriage. After the leave was introduced, the number of non-marital births increased sharply (see Fig. 2). This regulation was not extended to married mothers until 1986.

The economic challenges eastern Germans faced during the transition period after the unification of the country in 1990 may have also contributed to the further widening of the differences in non-marital fertility between eastern and western Germany, as crises of this kind are often linked to surges in non-marital fertility (Abrahamson, 2000). In addition, Germany's income-splitting tax system, which makes marriage particularly appealing to couples with large income differences, might have had less of an impact in eastern Germany, where the income differences between men and women are generally lower (Konietzka, and Kreyenfeld, 2002). The lower income differences might also be attributable in part to the better child care infrastructure in eastern Germany, which allows mothers to return to work earlier (Konietzka, and Kreyenfeld, 2002).

As we have already noted, after the unification of Germany in 1871, the East-West differences in non-marital fertility did not converge, but rather diverged. This gap continued to grow despite the convergence in contextual conditions, such as regulations related to marriage and childbearing. These trends suggest that the current demographic divide, which was reinforced by the political and economic developments after 1945, will not disappear soon.

If the rise in non-marital fertility is indeed part of a secularisation trend, and is related to economic disadvantages, then the differences will remain as long as the eastern part of Germany continues to be more secularised and have higher levels of unemployment than western Germany. In analysing the prospects for convergence, we ran multi-level logistic regression models to test our assumption that the East-West

differences in non-marital fertility are so deeply rooted that they cannot be explained by disparities in individual-level and contextual-level socio-economic characteristics alone. The models allow us to look at different scenarios, such as a convergence in secularisation levels and labour market situations. We used individual-level German birth register data for the year 2009, covering all 667,464 births that have been registered in Germany in that year. This dataset contains information on age, marital status, nationality and religion of the mother⁷. In addition, the natural parity order is recorded. At the level of the 412 German districts, we add contextual information on socio-economic conditions. Our dependent variable is coded one when the birth occurred to a non-married woman, and zero otherwise. In our base Model 1, we only introduce a dummy for residence in eastern Germany⁸ as covariate. It shows that the odds ratios for a birth to be non-marital are, at 4.49, more than four times higher in eastern Germany than in western Germany. In Model 2 we control for demographic characteristics, such as age of the mother and natural parity order of birth, because non-marital birth risks differ by age and parity (Billy and Moore, 1992). After doing so, the odds ratio for the dummy East actually increases to a value of 4.97. These results indicate that the East-West divide in non-marital fertility cannot be related to differences in these demographic characteristics.

In Model 3 we control for social aspects by introducing variables on the religion and nationality of the mother, as well as district-level variables on the participation in federal elections, support for the conservative Christian Democratic Party (CDU) in federal elections and population density. Religious denomination is not necessarily an indicator of the religiosity of a person. However, data on religious denomination are more indicative in Germany than in other countries, as the tax system creates large financial incentives for non-religious people to avoid church membership in order to be exempt from paying quite significant church taxes.

There are also substantial East-West differences in the share of births by non-Germans, as there has been much less in-migration to eastern Germany than to western

⁷ Information on the fathers could not be included in the model, as for children born outside of marriage it is not obligatory to collect information on the father for the birth register.

⁸ As the birth register data do not allow us to differentiate between the former West and East Berlin, we decided to include all of Berlin in East Germany.

Germany since 1945. Foreigners might differ in their family formation behaviour from Germans for different reasons. In mixed couples, foreign citizens might prefer to be married to a German partner in order to improve their residence status or gain enhanced access to German welfare state provisions. In addition, foreigners might adhere more closely to the family formation norms prevalent in their home countries than to those in Germany.

Participation in national elections is indicative of the degree of general support for the state and its institutions. Because in Germany marriage is an institution controlled by state authorities, we would expect the number of non-marital births to be higher in regions with low levels of election participation. We also assume that in areas in which the conservative CDU party has high levels of support, non-marital fertility will be lower. Based on the assumption that urbanised regions are more tolerant of deviant behaviour than rural areas, we introduce a population density variable.

The introduction of these variables allows us to explain a portion of the East-West differences, as the odds ratio of the dummy East decreases from 4.97 to 2.75. The results show that mothers who are not members of a religious denomination are more likely to give birth outside of marriage than those who are members. This lends support to the view that the level of secularisation plays a role in the decision of whether to have a child within or outside of marriage⁹. For the grouped nationalities, the resulting odds ratios also differ quite substantially. Most groups exhibit lower odds ratios than the reference nationality German. The district-level variables on election behaviour and population density have the expected sign.

In Model 4 we also introduce information on unemployment, which is, as expected, found to be positively related to non-marital childbearing. But the introduction of this variable does not decrease the odds ratio for residence in eastern Germany to levels below significance. At 2.46, the odds ratio is still more than two times higher than in western Germany. From these findings we conclude that, even if all of the socio-economic individual-level and contextual characteristics for which we

⁹ We repeated this model for western and eastern Germany separately in order to find out whether this result is mostly driven by the East being more secularised. The model results indicate that this does not seem to be the case.

controlled were to converge, we would not necessarily expect to see a convergence in non-marital birth levels in eastern and western Germany.

5. Conclusion

In this paper we have shown that, in the territory of present-day Germany, an East-West-gradient in non-marital childbearing levels existed prior to 1945. This suggests that the role of West and East German policies between 1945 and 1990 was not to create a new difference, but rather to amplify an already existing one. The long history of the divide, in conjunction with East-West disparities in political and economic developments in the second half of the 20th century, suggests that a convergence of eastern and western German non-marital fertility rates to similar levels is unlikely in the near future. This is also underlined by our multivariate analyses, which allowed us to study the role of East-West disparities in socio-economic characteristics and to pose the counterfactual of how large the non-marital fertility divide would be if these characteristics were to converge. The persistence of the past suggests that convergence in non-marital fertility levels, if it happens at all, will be a process that lasts a long time.

With regard to future developments it remains unclear whether the West will become more like the East, or the East more like the West. However, when we look at current levels of non-marital fertility across Western Europe, we can see that the relatively low levels of western Germany—not the elevated levels of eastern Germany—are increasingly becoming the exception (Klüsener et al., 2012a). There are indications that the non-marital birth ratio will not increase much more in eastern Germany, provided there are no major changes in legislation related to non-marital fertility. This assumption is based in part on the prediction that the share of second and higher order births will increase over the coming years (Goldstein and Kreyenfeld, 2011). Our models show that higher order births are less likely to occur outside marriage compared to first births. Another factor that might contribute to a lower non-marital fertility ratio in eastern Germany is the recent improvement in the economy, despite the global financial crisis. In western Germany, the current trend direction in Fig 2 indicates that non-marital fertility is likely to increase further, but it is unclear at what point it will level off. However, as long as the German tax system continues to provide

strong incentives for couples with children to marry, it is likely that western Germany will remain behind trends observed in neighbouring European countries.

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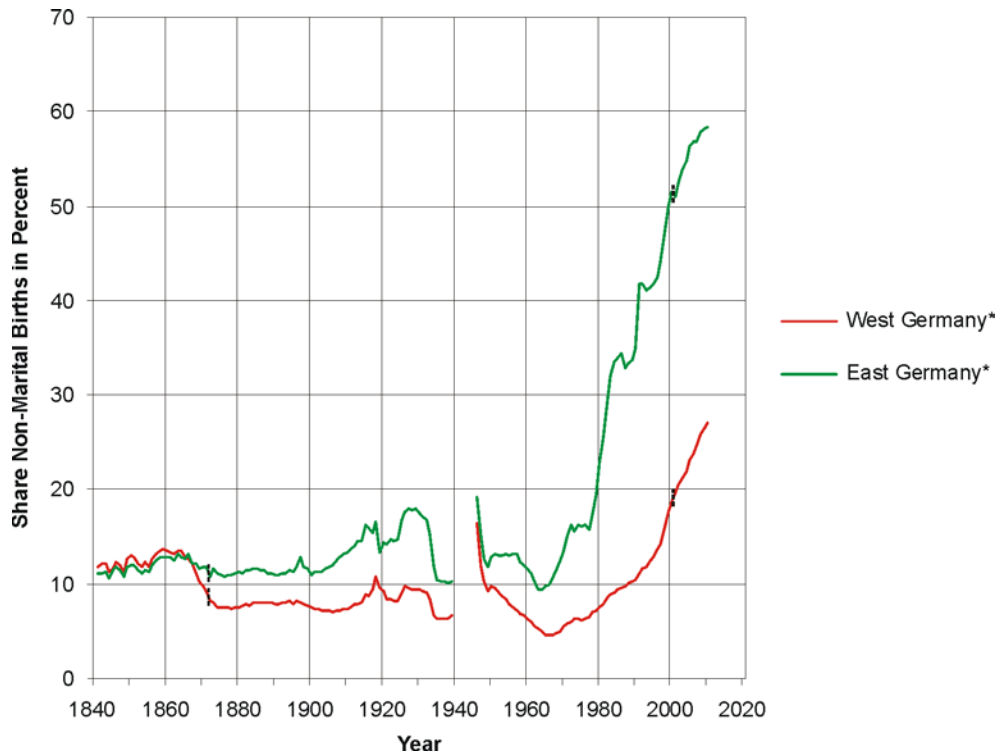
Fig. 1: Administrative Division: German Union 1866¹⁰ and Germany 2009



Base Maps: MPIDR Population History GIS-Collection (2012); BKG (2010)

¹⁰ Not shown are territories of the German Union, which did not become part of the German Empire (Austria, Limburg, Luxembourg).

Fig. 2: Development of Non-Marital Birth Ratio in Germany



* Before 1872 all births are considered, since 1872 only live births

Before 1946: Estimates¹¹

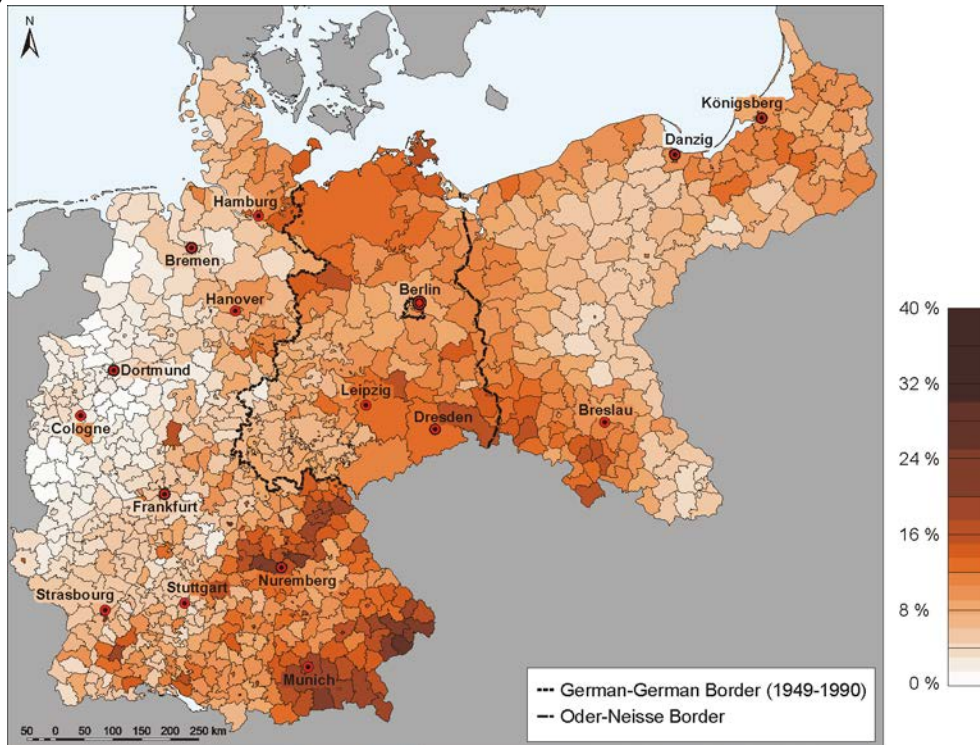
1946-2001: West Berlin counted as part of West Germany

Since 2001: West Berlin counted as part of East Germany

Sources: Kraus, 1980, German Empire Statistical Office,
German Federal Statistical Office, own calculations

¹¹ Before 1945 we derive the number based on the division of the German Empire at the level of the German states, Prussian provinces and *Regierungsbezirke* (see Fig. 1). These are just approximations, as prior to 1945 a number of western German states had small exclaves in eastern Germany, and vice versa. Another challenge is that the Oder-Neisse border in the east of Germany only loosely corresponds to provincial borders prior to 1945. Therefore, we considered using spatial interpolation techniques to derive the estimates for eastern Germany. But, as the areas east and west of the Oder-Neisse border do not show substantial variation in non-marital fertility, we decided to refrain from doing so (see Fig. 3a, b). In our estimations, we consider the numbers for Brandenburg as a whole, including the part that today belongs to Poland (see Fig.1). The province of Pomerania is not considered in the estimations until 1871, while from 1872 on we are able to differentiate at the lower *Regierungsbezirk*-level, which allows us to include for the period 1872-1939 the numbers of the *Regierungsbezirke* of Stralsund and Stettin, with the latter partly extending across the Oder-Neisse border, while we do not include data for the *Regierungsbezirk* Köslin. We also disregard the small part of Silesia west of the Oder-Neisse border in our estimations. For western Germany, Elsass-Lothringen is not included in the trend line.

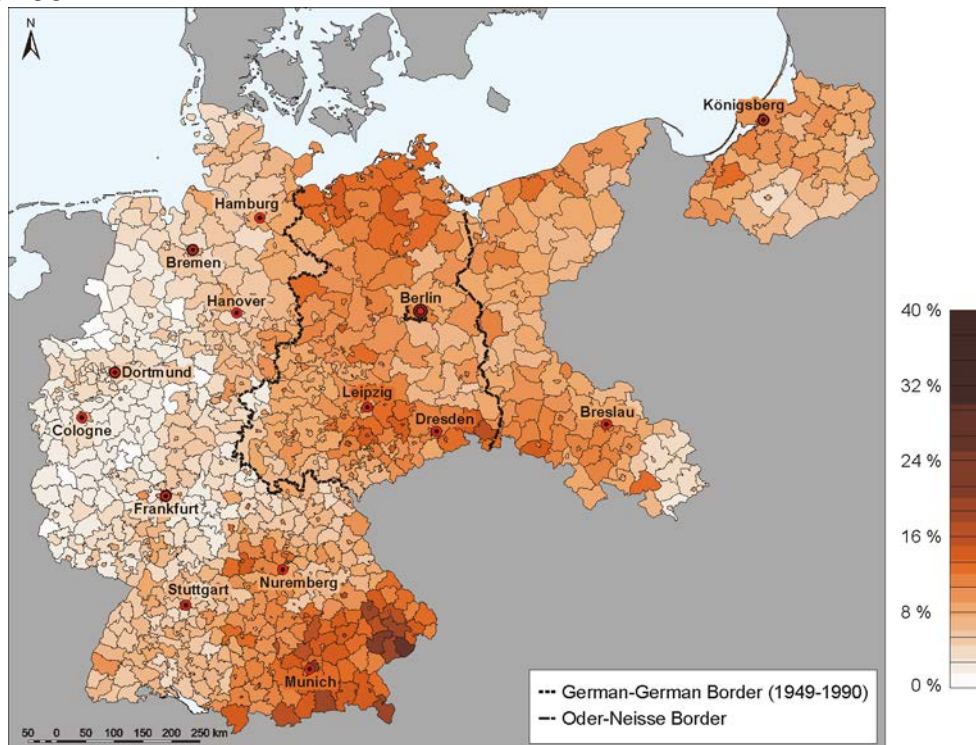
Fig. 3 Non-marital Fertility in German Regions
a) 1878



Source: State Statistical Offices of the German Empire, own calculations

Base Map: MPIDR Population History GIS-Collection (2012)

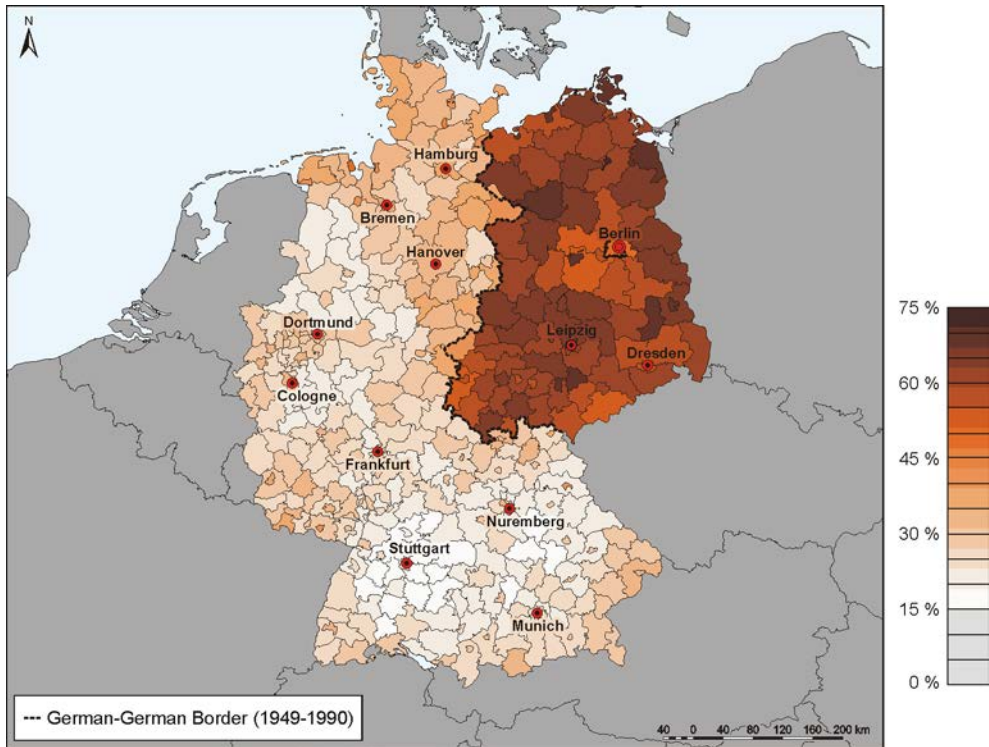
b) 1937



Source: German Empire Statistical Office

Base Map: MPIDR Population History GIS-Collection (2012)

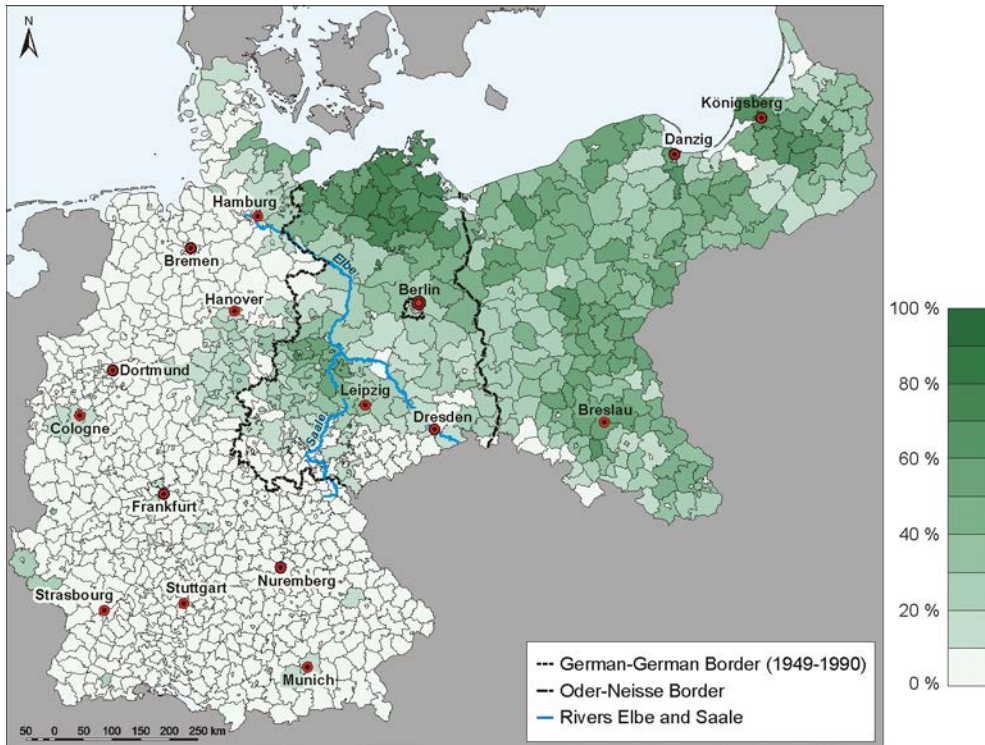
c) 2009



Source: Federal Statistical Office of Germany

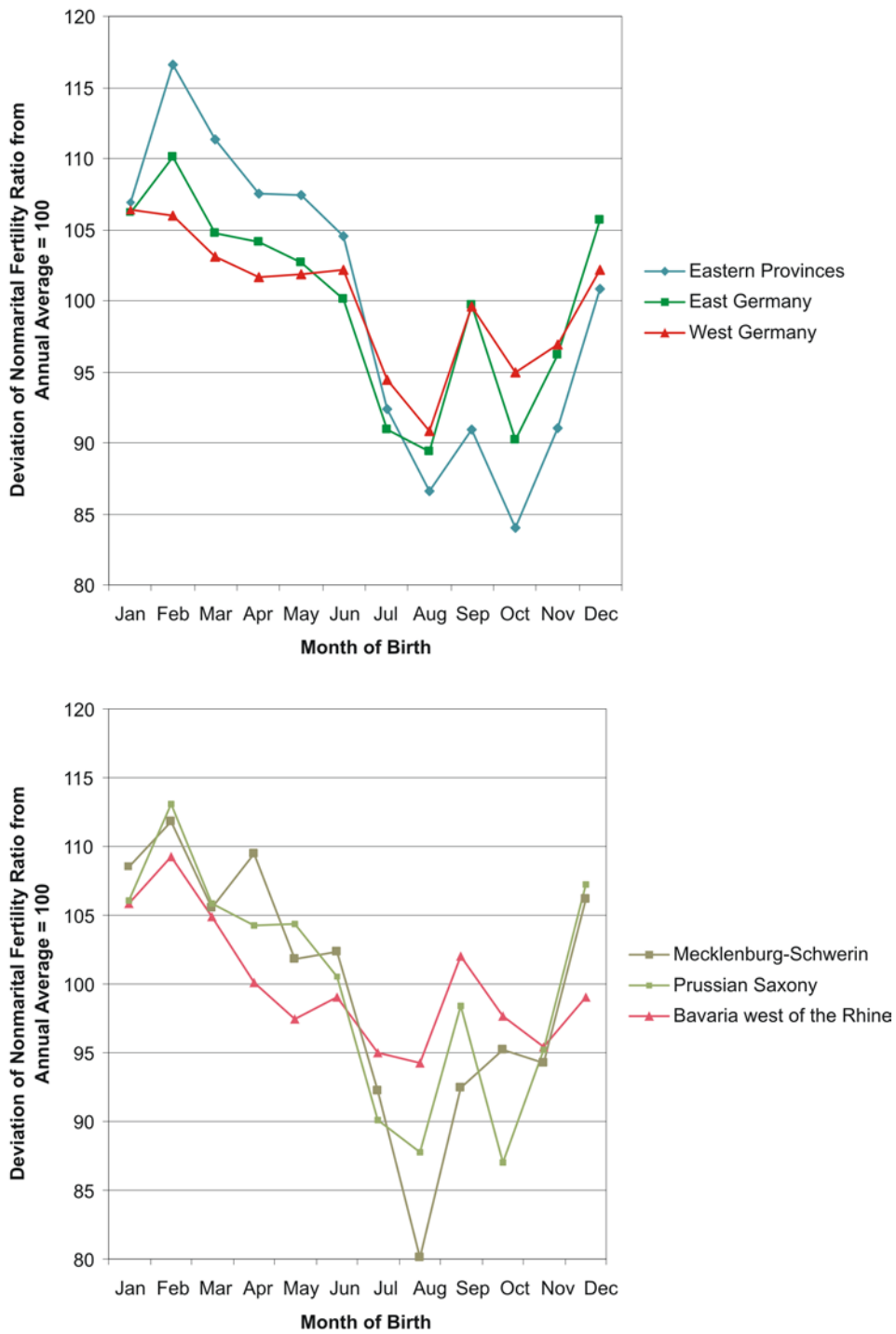
Base Map: BKG (2010)

Fig. 4: East-Elbia – Share Agricultural Land owned by Farms > 100 ha



Source: German Empire Statistical Office; own calculations
Base Map: MPIDR Population History GIS-Collection (2012)

Fig. 5: Deviation of Monthly Non-Marital Birth Ratio from Regional Annual Average (Mean=100) 1895-1899



Source: German Reich Statistical Office, own calculations

Tab. 1: Multi-level Model Results (Odds Ratios of Birth being Non-marital)

	Model 1 Base	Model 2 Demography	Model 3 Demography, Social	Model 4 Demography, Social, Economics
Individual-level				
Dummy East (incl. West Berlin)	4.49***	4.97***	2.75***	2.46***
Age of Mother				
15-19		11.10***	12.90***	12.89***
20-24		2.42***	2.72***	2.72***
25-29		1.00	1.00	1.00
30-34		0.73***	0.69***	0.69***
34-39		0.79***	0.72***	0.72***
40-44		1.06***	0.94***	0.94***
Parity of Mother				
1		1.00	1.00	1.00
2		0.45***	0.47***	0.47***
3		0.42***	0.48***	0.48***
4		0.49***	0.58***	0.59***
5+		0.52***	0.67***	0.67***
Religion of Mother				
No Religion			1.00	1.00
Protestant			0.71***	0.71***
Free Prot.			0.09***	0.09***
Catholic			0.69***	0.69***
Orthodox			0.51***	0.51***
Other Chr.			0.29***	0.30***
Jewish			0.37***	0.37***
Muslim			0.25***	0.25***
Other			0.67***	0.67***
NA			0.81***	0.81***
Nationality of Mother				
German			1.00	1.00
Northwest. Europe			0.67***	0.67***
Southern Europe			0.81***	0.81***
Eastern Europe			0.58***	0.58***
Islamic Europe			0.29***	0.29***
Caucasus			0.93	0.94
Sub-Saharan Africa & Caribbean			2.71***	2.71***
Islamic			0.35***	0.35***
Asia			0.40***	0.40***
America wt. Carr.			0.35***	0.35***
Oceania			0.29***	0.29***
No Nationality			1.44**	1.44**
NA			1.68***	1.69***
District-level				
Participation in National Elections			0.98***	0.99**
% Votes CDU/CSU			0.98***	0.99***
LN Pop Density			1.02*	1.01
Unemployment Rate				1.04***
Number of Births	667464	667464	667464	667464
Number of Districts	412	412	412	412
Log Likelihood	-395361	-359956	-346801	-346774

Significance codes: 0 *** 0.001 ** 0.01 * 0.05

Source: FDZ (2012): German Birth Register 2009, own calculations