

Decomposition of trends in nonmarital childbearing in rural and urban areas in Poland, 1985-2009.

Abstract

The aim of this paper is to decompose the increase in the share of out-of-wedlock births in Poland into a component attributed to the changing structure of conceptions according to the marital status before the birth and a component related to the dropping propensity for shotgun weddings. Shotgun weddings used to be quite common in Poland, so the proportion of out-of-wedlock births observed in this country would have been much higher than reported in the official statistics if it wasn't for legitimating pregnancies among unmarried women via marital contracts. The results of analysis of data from Birth Register 1985-2009 show that a decline in propensity to marry among single pregnant women played an important role for diffusion of nonmarital childbearing especially in the last decade. In urban areas the impact of declining propensity for shotgun weddings was relatively larger than in rural areas. This is consistent with the notion that rural areas constitute more traditional context for family formation. It seems that in villages, the social pressure still prevents diversification of family forms to larger extent than in towns.

Keywords: nonmarital childbearing, out-of-wedlock births, shotgun weddings, rural population

1. INTRODUCTION

The decoupling of marriage and parenthood has occurred in most European societies, albeit to a various extent. This concerns also Poland, where the proportion of out-of-wedlock births rose from about 5% up to 20% within last two decades. Nonmarital childbearing remains in Poland an “atypical” family formation pattern as compared to other countries in Europe, where the average proportion of out-of-wedlock births amounts to 37% (Eurostat 2010). Nevertheless, the rapidly increasing share of out-of-wedlock births in the Polish conservative society calls for explanation. The salient feature of the seemingly clear distinction between marital versus non-marital fertility in Poland is the relatively large number of marital births that are a consequence of premarital conceptions (Tymicki 2010).¹ In Poland in the eighties, over 70% of women, who became pregnant while unmarried, would marry before giving the birth to a child. Hence, if it were not for the so-called shotgun weddings, the number of nonmarital births observed in that period would have been much higher than revealed in the official statistics.² This paper shows the role of declining propensity for shotgun weddings for the increase in proportion of out-of-wedlock births in Poland in 1985-2009. The changes in proportion of out-of-wedlock births, referred to in the further part of this paper as the nonmarital fertility ratio (NFR), are decomposed in order to identify two sources of its increase. The first component is the changing structure of births with respect to the marital status of mothers at the time of conception. The second component is the change in propensity for shotgun weddings.

The decomposition of trends in nonmarital childbearing is carried out separately for rural and urban areas. There are two reasons for introducing the rural-urban dimension. First of all, the local community context determines the social control of individual-level behaviour. Among others, it shapes the conditions under which young women make choices regarding entry into marriage while pregnant. Shotgun weddings reflect behaviour that prevents ostracism of both pregnant unmarried women and their partners, especially in more tradition-oriented local communities. This pertains particularly to the rural areas, which are less open to a variety of lifestyles than urban areas.

The second reason for introducing the rural-urban dimension is that Poland stands out among European societies as a country with a non-negligible share of rural population. Given that the inhabitants of villages represent about 38% of Poles (Central Statistical Office 2009), ignoring differences between trends in rural and urban areas could lead to incorrect inferences about the dynamics of the social changes examined in this paper. In most European countries, the heterogeneity of social norms and behaviour is related to religion or ethnicity. As

¹ Throughout the article, the term “conceptions” is used for conceptions ending with birth (still or alive).

²A shotgun wedding is a marriage precipitated by pregnancy (Parnell et al. 1994). The literature uses also terms: legitimation or bridal pregnancy.

emphasized in (Warzywoda-Kruszyńska and Krzyszkowski 2000), in Poland it is the division between urban and rural areas that produces remarkable differences in social and economic trends.

The contribution to the literature in this paper is twofold. First of all, the paper discusses in detail the issue of shotgun weddings, which has so far attracted somewhat less attention than childbearing in cohabiting unions or single motherhood. This seems to be an important gap in the literature, because legitimation may conceal the genuine nature of relationship between marriage and fertility (Raymo and Iwasawa 2008). Second, this paper is the first to shed the light on the trends in nonmarital childbearing in rural and urban Poland, which constitute quite diverse environments. The social pressure preserving traditional family forms is stronger in rural areas, whereas socio-demographic changes may proceed at higher pace in towns. Although there are theory-driven reasons to expect divergence in fertility patterns between rural and urban areas, so far research has focused mainly on the heterogeneity across countries, while still relatively little is known about the differences across settlements within a country (Kulu et al. 2007).

This paper is structured as follows. Section 2 provides a brief summary of the existing studies on trends in nonmarital childbearing in Poland, which serves as a background for analyses presented in this paper. Section 3 presents the evidence on attitudes in rural and urban areas on behaviour related to nonmarital childbearing and describes the institutional factors that determine the value of a marital contract for pregnant women in these two contexts. Section 4 introduces research questions and in Section 5 the data and methods of decomposition of trends in nonmarital childbearing are described. Section 6 presents the empirical results of analysis and Section 7 provides a summary and conclusions.

2. WHAT DO WE KNOW ABOUT THE TRENDS IN NONMARITAL CHILDBEARING IN POLAND?

Although a rapid increase in the proportion of out-of-wedlock births in Poland has been noted in the demographic literature (Bolesławski 2001, Kotowska et al. 2008, Szukalski 2010), there are hardly any studies that provide an in-depth investigation of the underlying mechanisms of this change. Unlike in many countries of Western Europe, in Poland the rising NFR has not been accompanied by cohabitation becoming an alternative to marriage and a suitable environment for raising a child (Kotowska et al. 2008, Sobotka 2008, Hoem et al. 2010, Matysiak 2009). As long as nonmarital relationships are not necessarily condemned in Poland, still marriage is highly valued in this country (Chapple 2009). Admittedly, as Mynarska and Matysiak (2010) show, since early 1990s there has been some increase in the relative risk of

choosing cohabitation as the form of first union. However, cohabitation still seems to be a “probationary period” rather than “an alternative” to marriage (Matysiak 2009; Mynarska and Bernardi 2007; Mynarska 2010; Kwak 2005). The pregnancy still very strongly raises the intensity of marriage among cohabiting couples, and there has been no increase in the risk of converting cohabitation into marriage upon the occurrence of a pregnancy across the time (Matysiak 2009). Hence, contrary to Western Europe, in Poland the increase in proportion of out-of-wedlock births was not driven by a change in the living arrangements chosen by couples that wish to raise a child.

One of the few studies which sheds some light on the components of the trends in nonmarital childbearing is (Bolesławski 2001). This study presents the data on the risk of three categories of births across 1989-2000: (1) births by women who remained unmarried, (2) births resulting from conceptions among married women, as well as (3) births among women, who were unmarried at the time of conception, but married before the birth occurred. This third category concerns thus births resulting from pregnancies among unmarried women which were later on legitimated by means of marital contract (i.e. by shotgun weddings). Bolesławski (2001) demonstrates that across 1989-2000 the risk of births among unmarried women remained almost stable, whereas the intensity of marital births and “bridal pregnancies” decreased by one fourth and half, respectively. The results from this study imply that a growing NFR reported in the official statistics might have been raised due to a deep drop in the marital fertility. With the numbers of nonmarital births remaining more or less stable, rapidly dropping numbers of marital births might have raised the NFR by decreasing the denominator of this indicator. This would suggest that a growth of NFR might have been merely a statistical artefact related to such a “denominator effect”.

However, dropping probability of a shotgun wedding demonstrated by Bolesławski (2001) is also worth attention. An increasing proportion of women who decided not to marry the father of their child, could also contribute to the increase of NFR. And such decisions are not just a matter of statistical records, but an evidence that indicates a behavioural change. Shotgun weddings prevent ostracism of both pregnant unmarried women and their partners. In a way, the prevalence of shotgun weddings may therefore suggest to what extent the diversification of family formation is constrained by preexisting norms and customs (Parnell et al. 1994; Lundberg and Plotnick 1995). The decrease in propensity towards legitimation suggests in turn lowering social pressure towards marriage.

Unfortunately, the evidence provided by Bolesławski (2001) does not allow to assess which of these two factors: declining marital fertility or dropping probability of legitimation played a more important role. Besides, it's been a decade since that study was carried out and hence both nuptiality and fertility trends might have changed in the meantime. The only

available more up-to-date article on trends in nonmarital childbearing in Poland by Szukalski (2010) does not give much more insight into these specific issues. It provides a very interesting description of the socio-economic profile of women who prevail among mothers giving a birth while unmarried. Szukalski (2010) shows that mothers who give extramarital births belong usually to a group of young, jobless women. Still, an explanation of the mechanisms of growth in NFR is missing also in that study.

As already mentioned, the increasing proportion of out-of-wedlock births in Poland was not related to spreading cohabitation. However, a nonmarital pregnancy may occur in very different union contexts: it may be a result of intimate but casual relationships or to the courtship (Ermisch 2008; Raymo and Iwasawa 2008). The unmarried women who are not in any stable relationships and experience pregnancies may still decide to marry due to stigma and economic hardship associated with single motherhood. The stigma of single motherhood may be pronounced particularly in societies or social groups, where according to the dominating religion, tradition and customs, it is required that parents should be married. The economic hardship is in turn strongly associated with single motherhood especially in countries with welfare states that provide limited support for lone parents. Hence, both changes in the country's cultural and institutional setting constitute an important context of trends in nonmarital childbearing. The changes in the attitudes and norms may proceed at higher pace in urban areas and this is where the impact of these changes may be more remarkable. The institutional arrangements may produce parallel trends in nonmarital childbearing in rural and urban areas.

3. SOCIO-ECONOMIC CONTEXT

3.1 SOCIAL PRESSURE TO MARRY³

The rising diversity of family forms is argued to result from a broader socio-demographic change in Europe (Van De Kaa 2001; Surkyn and Lesthaeghe 2004). One of the dimension of this change is secularization, which seems very relevant especially for understanding the emergence of nonmarital childbearing (Kreyenfeld et al. 2010). Catholic religion considers non-marital sex as a sin and therefore unmarried mothers may meet with social condemnation. The shotgun weddings can be viewed from this perspective as a behaviour that reflects the readiness to subordinate the private life to the norms constituted by a dominating religion. In a way it allows to keep the evidence of having committed a "sin" unrevealed for the local community.

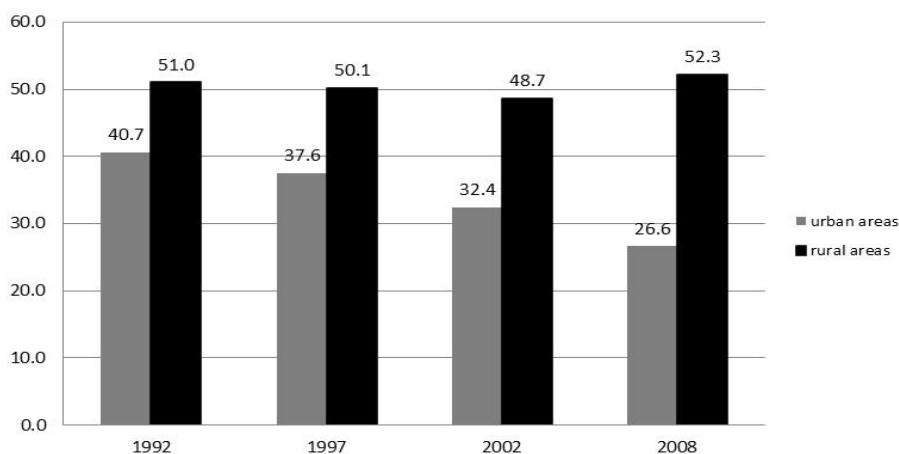
³ The indicators on social attitudes presented in this section come from ISSP (Cichomski et al. 2009).

Partly independently from secularization, in most European countries, decoupling childbearing and marriage was accompanied by changes in attitudes towards organization of family and private life (Perelli-Harris et al. 2010). Among others, these social developments may have decreased the stigma of single motherhood, and hence affected the propensity for pregnant women to remain unmarried. Some studies suggest that the growth in NFR in Poland could be interpreted as related to changing attitudes towards raising children outside marriage (Kotowska et al. 2008; Szukalski 2010).

An important dimension of the impact of social influences is the rural-urban distinction of local community environments. Rural areas are homogeneous, isolated communities with very direct social bonds. Social relations are organised by folkways and mores, commonwealth and religion (Christenson 1984). In such communities, high social integration creates a system of social control which prevents undesirable conduct and frequent deviations from the norm (Albrecht and Albrecht 1996; Albrecht and Albrecht 2004; Christenson 1984). The cultural traditionalisms and lower tolerance for atypical forms of family life in rural areas imply a high degree of inertia in adopting new practices (Weinert 2002). Furthermore, urban inhabitants have broader opportunities to observe and adopt the lifestyles of other social groups, including the urban educated elite, who often constitute a group of “leaders” of the social change (Thornton 2001; Rogers 1995).

Indeed, as indicated in the Figure 1, the rural population in Poland attaches higher importance to religion than urban population. Every second inhabitant of rural areas attends mass every week or even more often. In urban areas church attendance has been lower already in the beginning of the nineties. Figure 1 suggest also that urban areas are undergoing secularization, because the share of regular church attendants has decreased systematically over last two decades, whereas in rural areas religiousness reveals much higher persistence.

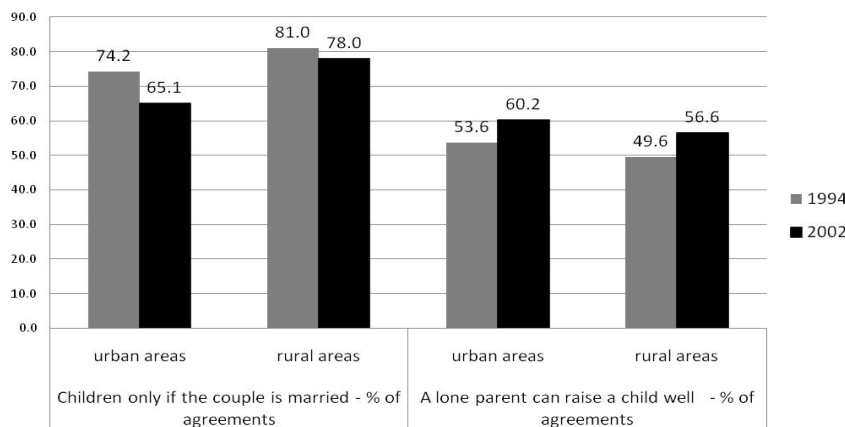
Figure 1. Attending church at least once a week.



Source: ISSP 1992-2008, own calculations.

The conservativeness of the Polish rural population as compared to the inhabitants in towns is reflected also in the attitudes towards raising a child outside marriage. These attitudes reveal to what extent unmarried women, who conceived children, may fear social disapproval, and hence may consider a shotgun wedding as a better choice than raising a child outside marriage. According to the data presented on Figure 2, both in rural and urban areas a large proportion of people do not support raising children outside marriage. Nevertheless there seems to be some change in these attitudes, especially in urban areas. While in 1994 about 74.2% of the inhabitants of towns would agree that children should be raised only by married couples, eight years later this proportion was 9 percentage points lower. In rural areas the corresponding share was higher in 1994 and amounted to 81%, and the decline in agreement with this statement was negligible (only 3 percentage points). But even after these changes the overall acceptance for raising children among unmarried couples is rather low.

Figure 2. Attitudes towards raising children outside marriage in rural and urban areas.



Source: ISSP 1992-2008, own calculations.

Regarding the attitudes towards lone parenthood, the data on Figure 2 clearly show that a family where a mother or a father raises their children alone is not widely accepted. A large fraction of both rural and urban inhabitants does not consider lone parents as able to raise well their children. However, these data suggest as well, that a stigma of single parenthood has diminished somewhat. In urban areas about 53.6% of population would agree that a lone parent can raise a child well in 1994, and this share rose up to 60.2% in 2002. In rural areas less than half of population would agree with this statement, but there the social approval for lone parenthood increased as well – by 7 percentage points. This suggests that a proportion of both rural and urban inhabitants who would not condemn a woman deciding not to marry the father of her child has been gradually increasing. Additional, more recent evidence for rising positive

attitudes for lone parenthood, albeit without rural-urban distinction, is provided by European Value Survey data. According to the results of this survey, the acceptance for single mothers raising a child without any stable relationship to a man increased between 2000 and 2008 by 7 percentage points.⁴

Summing up, Poland has indeed witnessed some changes in the level of religiousness as well as in attitudes regarding raising a child outside marriage. This might have decreased the pressure on shotgun weddings. Although in general marriage remains perceived as the most suitable family arrangement (Mynarska and Matysiak 2010), the stigma associated with single motherhood may have become somewhat weaker. These shifts in attitudes could be seen more clearly in towns, whereas in rural areas the attachment to religion and conservative values remains more persistent. As it will be argued in the further part of this paper, these differences may have had implications for the changes in nonmarital childbearing observed in Poland.

3.2 ECONOMIC PRESSURE TO MARRY

The economic literature on nonmarital childbearing emphasizes the role of financial resources available to single mothers, especially those provided by the welfare state (see Moffit 1992 for review). From this perspective, the policy changes that prevent single mothers from the risk of poverty, might contribute to the increase in the incidence of nonmarital childbearing. More recent theoretical models focus on the potential economic support that pregnant women may receive not from the state but from their partners (Wilson 1987; Willis 1999; Ermisch 2008). In the marriage markets where women in reproductive age outnumber men, and have access to income which is high both in absolute terms and relative to male income, children are more likely to be raised outside marriage. Hence, women's rising economic independence makes them less reliant on a marriage partner in order to bear and raise children (Espenshade 1985; Stockard et al. 2009). Both aforementioned strands of literature seem relevant for Poland, where family policy was subject to quite many reforms in the period 1985-2009⁵, and where the transformation from centrally planned to market economy changed substantially the relative economic chances of men and women, contributing to the increase in the women's economic independence.

⁴ Estimates were based on responses to a question „If a woman wants to have a child as a single parent, but she doesn't want to have a stable relationship with a man, do you approve or disapprove?“. Respondents could choose between „approve“ and „disapprove“ answers, or spontaneously mention that it „depends“. The proportion of approvals amounted in 2000 and 2008 to 41.8% and 48.6%, of valid responses, respectively.

⁵ In this section, for the sake of brevity, only reforms that might have affected lone parents are described, for a full description of all the reforms concerning family policy see (Piętka 2009).

Most important changes in the welfare state setting were introduced after 1990. First of all, the receipt of family benefits which used to be conditional on employment status till 1990⁶, was decoupled from employment. This might have been important especially for lone mothers, since they usually constitute one of the most vulnerable groups on the labour market. The level of these benefits was also substantially increased. Secondly, important changes concerned the Alimony Fund . The means-testing of benefits from this fund was withdrawn and their maximum level was raised (Butler 1995; Klos and Szymanczak 1997). Finally, in 1993 there was a reform introducing a change in the personal income tax, which assured a preferential treatment for lone parents. Overall, the whole set of reforms introduced in the early nineties made the financial consequences for pregnant women choosing not to marry the father of their child less severe than beforehand.

In the second half of nineties, the family policy support was gradually reduced. However, the most drastic reforms which concerned specifically lone parents were introduced in the 2000ies. The government implemented a reform restricting the availability of payments so that only low-income lone parents were eligible. The allowances from the Alimony Fund were replaced with the so-called 'supplements to the family benefits for lone parents'. The maximum level of these benefits was lower than the payments from the previously available Alimony Fund. Since then, the regulations were amended seven times (Kocur 2008), because the governments tried to balance between the pressure from advocates of the rights of lone parents and the claims that single mothers abuse the system of social assistance. In general it seems that these reforms were quite important for the single mothers' financial standing - or for the future financial situation of single mothers-to-be. Especially the reforms withdrawing the Alimony Fund might have mattered a lot, because in Poland the level of unmarried fathers who do not contribute to the children's maintenance is quite high (OECD 2011). Hence, it doesn't seem that the institutional changes might have contributed to the decline in propensity for shotgun weddings (and hence raised the proportion of out-of-wedlock births). As compared to the situation from the nineties, the welfare state support retreated rather than expanded. Therefore, if in that period pregnant single women decided not to marry, it seems that they there were doing so in spite of rather than due to the institutional changes which took place after 2000.

Regarding the changes of labour market opportunities across gender, despite early concerns that women would become more disadvantaged under the new economic conditions (Paci 2004), their economic opportunities did not worsen. Quite the contrary, female enrolment in tertiary education exceed male, and their employment chances turned out to be relatively less sensitive to the economic crises which hit Polish economy between 1985-2009 (Bukowski et al.

⁶ According to socialists ideology jobs were guaranteed for everyone, but in fact in the late eighties quite many people would face difficulties in finding a job.

2005, Matysiak et al. 2010). Moreover, as shown by Paci (2004), in 1985-1998 the numbers of women becoming the owners of their own enterprises in non-agricultural sector increasing fivefold (while among men it only doubled). Most probably this improvement in female economic independence varied across the settlement size. While women in towns had increasing chances to acquire and derive returns from tertiary education, their rural counterparts faced much more limited opportunities. But also for non-tertiary educated women, urban areas with emerging new services and industries, created better chances for paid work.

Summing up, in the early nineties the welfare state support maybe if not favoured, then still made it easier to escape poverty for pregnant women who decided to raise their children on their own. However, the years 2000-2008 were a period of welfare state retrenchment from the support for lone parents. There were some signs of growing opportunities for female economic independence, such as increasing female enrolment in tertiary education (higher than male), increasing attachment to the labour market or increasing numbers of women becoming the owners of their own enterprises (Paci 2004). But it is by no means evident that this specific group of women who were facing choices whether to legitimate a pregnancy or not, were able to take advantage of such economic opportunities the same way as other women. All in all, while there is some evidence that the social pressure on pregnant women to marry the father of their child decreased across the time, the evidence about the financial “pros and cons” is more mixed.

4. RESEARCH QUESTIONS

The growth in NFR in Poland may have corresponded to shift in attitudes towards raising children outside marriage or reflected a response to the amendments in the country's institutional arrangements. The socio-economic developments in Poland might have increased the proportion of women who became pregnant while unmarried and decided not to marry the father of their child. However, as suggested by Bolesławski (2001), a growth of NFR observed in Poland might have been merely a statistical artefact. If the numbers of nonmarital births remained more or less stable across the whole period 1985-2009, the rapidly dropping numbers of marital births might have artificially raised the NFR by decreasing the denominator. Hence, the first research question posed in this paper concerns the driving force of the growth in the proportion of out-of-wedlock births. The aim is to quantify the impact of the change in propensity for shotgun marriages on the growth in the proportion of out-of-wedlock births net of the “denominator effect” related to declining marital fertility.

The second research question pertains to the way that the growth of NFR proceeded in rural and urban areas of Poland across 1985-2009. The theory-driven arguments outlined in Section 3 give reasons to expect that a decline in legitimation proceeded at diverse pace in the contexts of rural and urban areas, and hence contributed to the overall trend in nonmarital

childbearing differently. Specifically, the rural areas create a local community context where the resistance against social pressure is lower. First of all, in smaller and more homogenous settlements there might be fewer ‘pioneers’ who dare to take decisions that are not consistent with the local norms and customs. Second, in rural areas the prevailing norms may have more negative impact on the type of consequences that these ‘pioneers’ face. In contrast to that, in towns, due to the larger anonymity of urban life, personal interests may be more important than concerns regarding social norms and expectations, and thus such deliberate decisions to remain an unmarried parent may be less penalised. Thus, in rural areas the diffusion of atypical forms of behavior, such as decision not to marry in the event of pregnancy, might spread more slowly. Therefore, one can expect that in rural areas the declines in legitimation may have lower impact on the trends in nonmarital childbearing. In order to confirm if this was the case in Poland, this paper pursues the comparison of the impact of declining propensity to shotgun weddings on trends in NFR in rural and urban areas.

5. DATA AND METHODS

5.1 DATA

In order to provide evidence on trends in nonmarital childbearing, this paper uses data from the Polish Birth Register 1985-2009 created by the Central Statistical Office. The information provided in this dataset includes the characteristics of the mother (date and place of birth, place of residence, date of marriage if the parents of the child were married⁷) and detailed dates of birth of their children. The Central Statistical Office uses these data to produce vital statistics on fertility in Poland. From 1985 these data have been recorded in electronic form and made available to the Institute of Statistics and Demography at the Warsaw School of Economics.

The Central Statistical Office classifies births into “legitimate” and “illegitimate” based on the definition specified in Polish Law. A birth is considered to be legitimate if it occurred in the period when the mother was married or within 300 days following her divorce. Additionally, if the parents of the child married after the birth but before it was registered, the birth is classified as legitimate (CSO 2009). This paper adopts a different approach with respect to classification of births, because attention is paid not just to the non-marital births themselves but also to the events that affect the overall incidence rate of non-marital births, i.e. to the shotgun weddings. Hence, three categories of births are distinguished. The first group are births by women who

⁷ It would be very desirable to distinguish not just between the married and unmarried women, but also to divide the latter group into categories of single and cohabiting. In many European countries the increase in nonmarital childbearing has been mainly due to births within cohabitation, not to single mothers (Perelli-Harris et al 2010, Perelli-Harris and Gerber 2010). Unfortunately, the information on cohabitation is not available in the Birth Register data.

were unmarried at the time of birth. The second group are births resulting from conceptions that occurred after union formation by the child's mother. Lastly, a third category of birth concerns women, who were married at the time of birth, but their marriage took place within seven months preceding the birth.⁸ The analysis is based on time series of these three categories of births.

5.2 METHODS

Following Akerlof et al. (1996), the decomposition of the increase in the percentage of out-of-wedlock births identifies two sources of growth of the nonmarital childbearing rate⁹. The first component is the changing structure of conceptions (with respect to the marital status of mothers). The second component is the change in propensity for shotgun weddings, i.e. legitimation of conceptions among unmarried women. The contribution of the changing balance between marital and nonmarital conceptions is compared to the impact of the changing incidence of shotgun weddings separately for rural and urban areas.

The contribution of changes in the structure of conceptions to the total change in the proportion of out-of-wedlock births c_B can be expressed as:

$$C_B = ((1-\lambda_t)(1-\mu_{t+1}) - (1-\lambda_t)(1-\mu_t)) / (\omega_{t+1} - \omega_t) \quad (1)$$

and the contribution of changes in the propensity for legitimation to the total change in the proportion of out-of-wedlock births c_S as:

$$C_S = ((1-\lambda_{t+1})(1-\mu_{t+1}) - (1-\lambda_t)(1-\mu_{t+1})) / (\omega_{t+1} - \omega_t) \quad (2)$$

where:

$\omega_{t+1} - \omega_t$ is the change in the fraction of out-of-wedlock births between periods t, t+1

μ_t, μ_{t+1} is the fraction of marital conceptions at t and t+1

λ_t, λ_{t+1} is the legitimation rate at t and t+1; i.e. the proportion of all conceptions that were legitimated during pregnancy

$(1-\lambda_{t+1})(1-\mu_{t+1})$ is the fraction of out-of wedlock births at t+1

$(1-\lambda_t)(1-\mu_t)$ is the fraction of out-of wedlock births at t.

⁸ With the reservations described in the first footnote in this paper.

⁹ Decomposition of non-marital fertility rates can be carried out in many different ways (e.g. Raley 2001, Smith et al 1996; Gray et al. 2006; Ermisch 2009; Martin 2009; Wu 2009; Gray et al 2009). These methods could not be applied because as explained in Annex 2, time series of the stock of women according to marital status are unavailable for Poland.

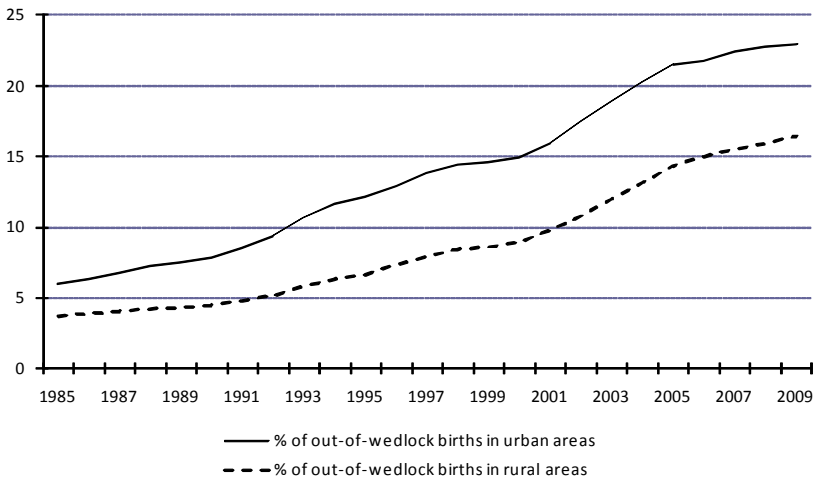
Details of the derivation of the formulas presented above are described in the Annex. The decomposition is conducted for the whole period of 1985-2009, separately for women living in rural and in urban areas.

6. EMPIRICAL RESULTS

6.1 DESCRIPTIVE STATISTICS

In 1985-2009, both urban and rural areas recorded a remarkable increase in NFR (cp. Figure 3). The proportion of out-of-wedlock births was increasing at higher pace in urban rather than in rural areas, and therefore the gap in the level of this indicator reflecting previously atypical family form widened. In the urban areas, the share of children born to unmarried mothers amounted to 6% in 1985, but in 2009 it was on the level of 23%. In rural areas the corresponding proportion amounted to 3.7% and in 2009 amounted to 16.4%. These trends indeed make an impression that urban areas created an environment for more dynamic changes of family formation patterns.

Figure 3 Proportion of out-of-wedlock births in urban and rural areas



Source: Birth Register 1985-2009, own calculations.

Figures 4a and 4b present the numbers of births given by women who became pregnant after they got married and the numbers of births among women who were unmarried when they conceived a child. The trends presented on Figure 4a and 4b show a pronounced decrease in number of births among married women. At the same time, the numbers of conceptions among unmarried women were rather stable. In urban areas such conceptions even increased slightly (from 75 to about 85 thousands) at the end of last decade. These statistics show that both in rural and urban areas a part of the increase in NFR must have been simply a result of declining

numbers of births among married women. With stable numbers of nonmarital births, decreasing denominator of NFR translated into growth of proportion of out-of-wedlock births.

Figure 4a Conceptions among married and unmarried women in urban areas

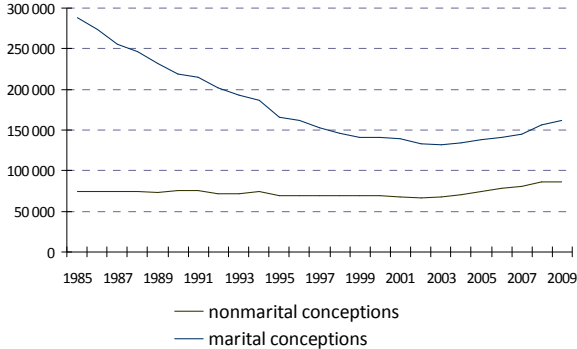
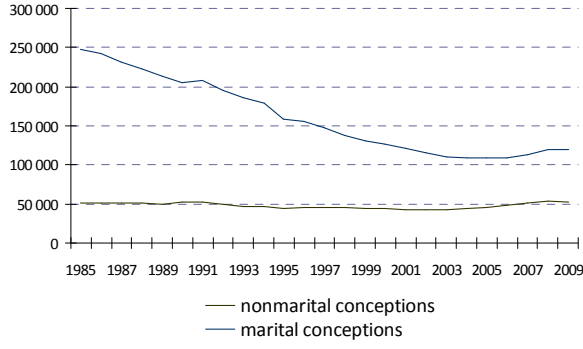


Figure 4b Conceptions among married and unmarried women in rural areas



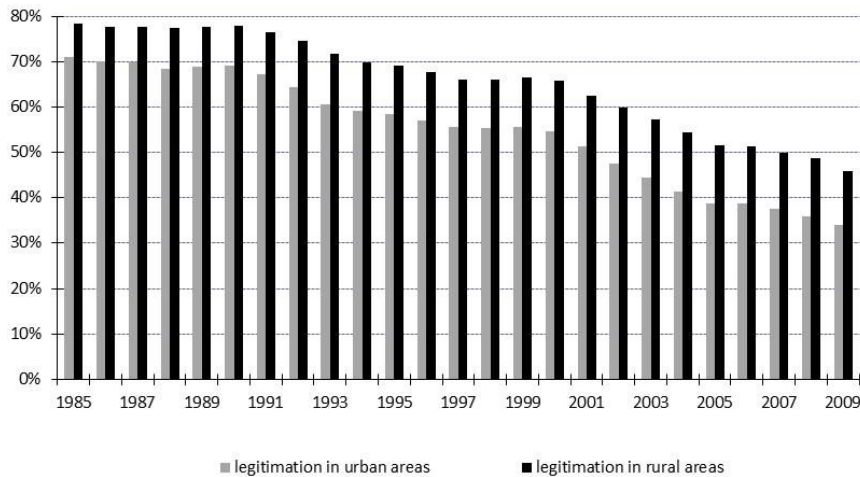
Source: Birth Register 1985-2009, own calculations

However as shown on Figure 5, although the numbers of births given by women who became pregnant while unmarried remained stable, the structure of these births changed in an important way. Both rural and urban areas saw a decline in the proportion of births which resulted from pregnancies among unmarried women and were legitimated by a marital contract before the arrival of the child. The propensity for shotgun marriages was rather stable till 1990 in both rural and urban areas. After 1990 it started to decrease, at somewhat higher pace in towns. This decline in propensity of pregnant women to marry the fathers of their children could be a consequence of reforms in the welfare state support for lone parents described in the Section 3. After 1990, the family policy was reformed in a way that gave single mothers better chances for economic independence. After 1995, the decline in propensity for legitimation slowed down and gained momentum only after 2000. Interestingly, in that period the decline occurred although there were no reforms in the system of support for lone parents that would favour choices to remain unmarried.

Also after 2000 there was a difference between rural and urban areas in the pace at which the propensity for shotgun weddings was decreasing – this decline was slower in villages. As shown on Figure 5, the proportion of births legitimated by shotgun weddings fell below the level of 50% already in 2001, in urban areas, whereas in rural areas it took place with a five year lag. The decline was also sharper in towns: the percentage of conception that were followed by a shotgun wedding decreased by 52% in urban areas and by 42% in rural areas between 1985 and 2009. A difference in the pace of decline in propensity for legitimation in rural and urban areas

is consistent with the idea that urban areas constitute an environment favourable for a more dynamic diffusion of new forms of family formation behaviour.

Figure 5 Legitimated births as a percentage of all births among unmarried women in rural and urban areas.



Source: Birth Register 1985-2009, own calculations.

6.2 DECOMPOSITION OF TRENDS

The discussion above shows that both factors may have played a role for increasing share of nonmarital births: the decreasing numbers of births given by married women and the declining propensity for legitimation. However, based on the observation of trends presented on the graphs, it is difficult to assess the relative contribution of these two factors. Having stated this, we move on to quantify the impact of these two components of growth of NFR in rural and urban areas. Using the decomposition method proposed by Akerlof et al. (1996), the changes in NFR in rural and urban areas are separated into two parts. The first component pertains to the changes of balance between births according to the marital status at the time of conception. The second component corresponds to the changes in the share of conceptions that are legitimated. The results of the decomposition carried out for urban and rural areas are presented on Figure 6a and Figure 6b. For the clarity of graphic presentation of results, the graphs concern decomposition of triennial changes in the proportion of out-of-wedlock births.¹⁰

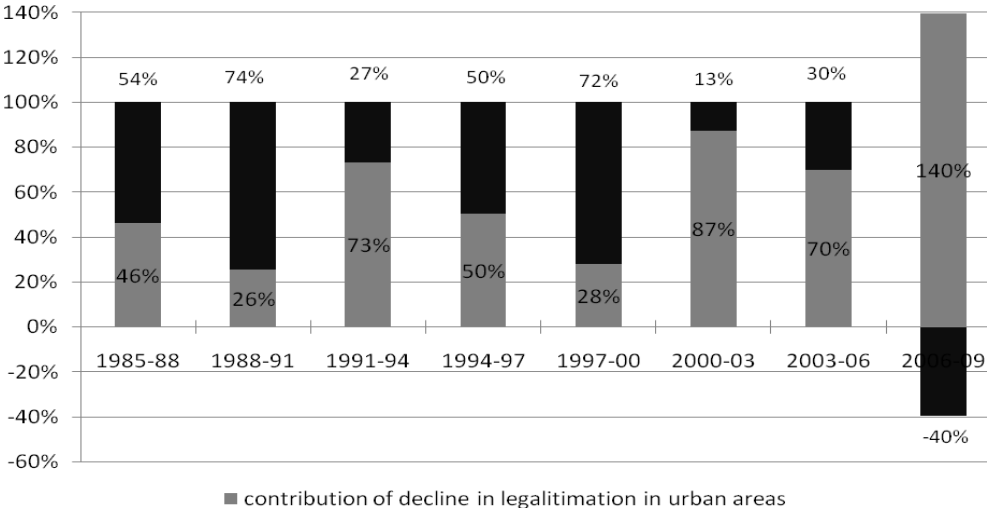
The results of decomposition presented on Figure 6a show that in the second half of the eighties, in urban areas the increase in NFR was driven mainly by the declining numbers of births among married women. Conversely, the contribution of the declining propensity for

¹⁰ The choice to decompose triennial changes in the proportion of out-of-wedlock births is arbitrary. It is easier to capture changes in indices that are to be decomposed when using time intervals which are broader than annual.

legitimation was rather limited. This became even more evident in 1988-1991: the contribution of the declining share of marital conceptions amounted to about 74% of the total increase in NFR. The changes in the propensity for legitimation became more important in urban areas in the first half of the nineties, that is in the period of reforms that increased the welfare state support for single mothers. In the period 1991-1994 the falling propensity for shotgun weddings accounted for 73% of the total increase in the proportion of out-of-wedlock births. However, the role of propensity for legitimation diminished again in the following years. In 1994-1997 declining propensity for shotgun weddings accounted for less than half of the change in NFR. In 1997-2000 the change in NFR was driven in 72% by the changing balance between births according to the marital status of women at the time of pregnancy (i.e. by “denominator effect”).

After 2000, the role of legitimation regained importance. The rapid increase in NFR between 2000-2003 was driven almost entirely - in 87% - by the changes in resolutions of conceptions among unmarried women. The decline in the probability of shotgun weddings continued to be an important driving force till 2009. Since during 2006-2009 the trend in births among married women reversed, leading to an increase in their share in all conceptions, between 2006 and 2009, the contribution of changes in numbers of marital births to the change in NFR was negative. The increase in the proportion of marital conceptions was levelled off by a further decline in the propensity for legitimation, though. Therefore, the proportion of out-of-wedlock births did not decrease in spite of the slight upturn in the number of marital births. Overall, the change in propensity for legitimation shaped the trend in nonmarital childbearing in towns for all of the last decade.

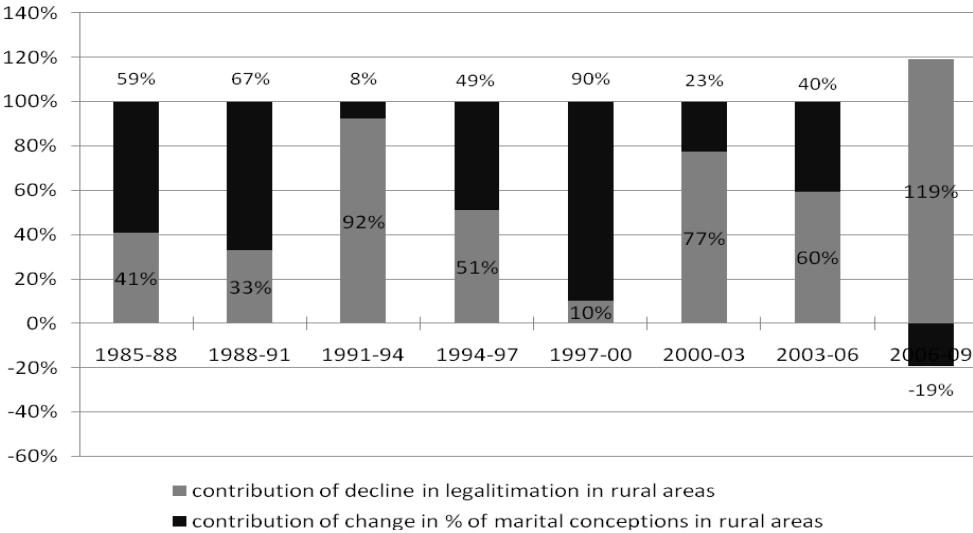
Figure 6a Decomposition of increase in out-of-wedlock birth rate in urban areas



Source: Birth Register, own calculations

As shown on Figure 6b, the patterns in rural areas were similar to those observed in urban areas in many respects. Like in towns, the proportion of out-of-wedlock births in villages increased very slowly until 1991 and the observed increase was driven mainly by declining marital fertility.¹¹ Just as in urban areas, the role of legitimation suddenly became very important in the first half of the nineties, under institutional conditions which made it easier for pregnant unmarried women to decide to remain single. In fact, in that very period the role of this factor was larger in rural than in urban areas. While in towns about 73% of the change in the proportion of out-of-wedlock births could be explained by the diminishing willingness of single women to marry the fathers of their prospective children (or vice versa), in rural areas this factor was responsible for about 92% of the increase in the incidence of nonmarital childbearing. Like in towns, in the second half of the 90ies, the trend in proportion of out-of-wedlock births in villages flattened. And at the turn of the century, the downward trend in legitimation already described for urban areas also appeared in villages. However, a much smaller part of this increase could be attributed to the fact that women in rural areas did not marry the fathers of their children before giving birth. While in towns the declining propensity for legitimation was responsible for 87% of the rise in nonmarital childbearing, in rural areas only 77% of the change in the proportion of out-of-wedlock births could be ascribed to this factor. The contribution of the declining propensity for shotgun marriages remained over 10 percentage points lower in villages than in towns until the end of the period under observation in this analysis.

Figure 6b Decomposition of increase in out-of-wedlock birth rate in rural areas



Source: Birth Register, own calculations

¹¹ Figure 6b to which this sentence refers shows the dropping numbers of births, but the falling numbers of marital births translated into declining marital fertility rate (cp. Bolesławski 2001).

Summing up, this decomposition reveals two important facts. First of all, it shows that there was a qualitative difference between the increase in NFR before and after 2000. Till 2000, the increase in proportion of out-of-wedlock births could be observed in Poland simply because there was a large drop in the number of births among married women, with the numbers of births resulting from conceptions among unmarried women remaining constant. The only important behavioural (rather than compositional) change occurred in first half of nineties, i.e. in the period when reforms that improved the financial supports for single parents were introduced. In that very period, the probability of marriage among pregnant single women decreased considerably, leading to increase in NFR. But apart from that, in 1985-2000 the increase in NFR was driven mainly by declining marital fertility.¹² In contrast to that, decreasing probability of legitimation was much more important for the growth of NFR after 2000. Interestingly, in the last decade, the decline in propensity for shotgun weddings seem to have occurred in spite of implementation of reforms which aimed at restricting the financial support for lone parents. It seems that during the previous decade, conditions of state support for lone parents did not encourage single women to take decisions not to marry the fathers of their children. What seems plausible instead is that the gradually diminishing social stigma could make it easier for them to take such steps. The second interesting conclusion is that the rate at which legitimation was declining and its contribution to the increase in NFR in the previous decade was higher in urban rather than in rural areas. This is consistent with a notion that urban context facilitates diffusion of “new” forms of family formation behaviour.

7. SUMMARY

This paper presents the first systematic evidence on changes in the proportion of out-of-wedlock births in rural and urban areas of Poland in 1985-2009. In this period, the proportion of out-of-wedlock births has increased from about 5% up to over 20%. In general, the share of out-of-wedlock births may be raised by two different processes. First of all, it may be a consequence of the changing balance between conceptions among married and unmarried women. Specifically, if the numbers of births among married women drop, while the numbers of births resulting from nonmarital conceptions remain constant, then the proportion of out-of-wedlock births rises even if there is no change in the propensity for raising children outside marriage. Alternatively, the share of out-of-wedlock births may also rise due to changes in the propensity of unmarried pregnant women to have shotgun weddings. The analyses presented in this paper disentangle the relative impact of these two processes, comparing the developments in rural and urban areas.

¹² See comments in the previous footnote.

According to the results presented in this paper, Poland has indeed recorded a deep drop in the numbers of births among married women. Since the numbers of unmarried women becoming pregnant remained rather stable, decreasing numbers of marital births translated into a change in the structure of all births in total, and led to an increase in the proportion of out-of-wedlock births. The contribution of this factor to the overall increase in the share of out-of-wedlock births was large in both rural and urban areas till the beginning of the nineties and also in the second half of nineties.

However, the rise in proportion of out-of-wedlock births recorded in the whole period 1985-2009 was not merely a statistical artefact driven by a decline in marital fertility. Especially in years when the share of out-of-wedlock births was increasing more rapidly, it was rising not because of dropping marital fertility, but rather due to the declining share of women who married after they became pregnant. This analysis shows that declining propensity to shotgun weddings might be an important driving force of the increase in proportion of out-of-wedlock births in some countries. It applies particularly to societies, where the share of nonmarital births is increasing although informal unions are not widespread and cohabitation is not considered to be a suitable family arrangement for raising a child.

The results of analysis also show that in the whole period 2000-2009, legitimation was declining at higher pace in towns than in villages. Moreover, the contribution of decreasing propensity for legitimation to the increase in proportion of out-of-wedlock births was larger in towns than in rural areas. These observations are consistent with lower declines in religiosity and somewhat lower increase in social acceptance for raising a child outside marriage in rural areas. It seems that villages preserve more traditional forms of family behaviour than towns. It cannot be excluded that similarly to a number of Western countries, the family formation patterns in rural areas will eventually converge to what is observed in urban areas. However, currently the trends in proportion of out-of-wedlock births in towns and in villages differ not only in terms of dynamics but also in terms of the mechanisms behind the increase in nonmarital childbearing.

The rising proportion of out-of-wedlock births has been often interpreted as an evidence for weakening of traditional norms and decreasing importance of the institution of marriage. Still, in Poland the proportion of nonmarital births was rising in spite of persistent social attachment to the value of marriage. The results on the impact of declining propensity for shotgun marriages on nonmarital childbearing trends, combined with the findings of Styrac (2011), who demonstrates that in Poland marriages precipitated by a pregnancy are characterised by remarkably elevated risk of divorce, may be helpful with resolving this puzzle. It could be argued that *because* marriage is treated seriously in Poland, single pregnant women are reluctant to marry, especially that nowadays financial and social consequences of such

decisions seem to be less severe than they used to be two decades ago. Unmarried women, who become pregnant, may prefer to remain single rather than to set up formal unions of low quality, which will eventually break up anyway.

Such interpretation is relevant providing that pregnant women, who decide not to marry, indeed remain single after giving birth. In many Western European countries children born out-of-wedlock are in fact raised by cohabiting couples, and not by single women. According to the most recent available empirical studies on cohabitation in Poland, currently childbearing among cohabiting couples is still very rare (Matysiak 2009, Matysiak and Mynarska 2010). Nevertheless, it would be interesting to see if cohabitation is to remain perceived as unsuitable for raising children in Poland. Hence, it would be of merit to follow the trends in nonmarital childbearing in various union contexts in this country. Moreover, it would be very interesting to see how nonmarital childbearing among single women and among cohabiting couples is spreading according to the social status. Given the limitations of the data available to date, these and other interesting questions are left for future research.

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ANNEX

The basic idea of the decomposition proposed by Akerlof et al. (1996) is to identify the contribution of one factor that drives changes in a given indicator while holding other factors constant. In this paper the decomposed quantity is $\omega_{t+1} - \omega_t$, i.e. the change in the fraction of out-of-wedlock births between periods t, t+1. Let us denote:

n_t, n_{t+1} is the number of all conceptions at t and t+1 and

p_t, p_{t+1} is the number of all premarital conceptions at t and t+1 and

l_t, l_{t+1} is the number of premarital conceptions at t and t+1 that were legitimated.

We can write ω_t - the fraction of out-of-wedlock births, μ_t - the fraction of marital conceptions at t) and λ_t - the legitimation rate (proportion of all premarital conceptions that were followed by a marriage in the pregnancy period) at t, in the following way:

$$\omega_t = \frac{(p_t - l_t)}{n_t} \text{ and } \lambda_t = \frac{l_t}{p_t} \text{ and } \mu_t = \frac{(n_t - p_t)}{n_t}$$

We can demonstrate that $(1 - \lambda_t)(1 - \mu_t)$ is the fraction of out-of wedlock births at t:

$$(1 - \lambda_t)(1 - \mu_t) = \left(1 - \frac{l_t}{p_t}\right) \left(1 - \frac{(n_t - p_t)}{n_t}\right) = \left(\frac{p_t - l_t}{p_t}\right) \left(\frac{p_t}{n_t}\right) = \frac{(p_t - l_t)}{n_t} = \omega_t$$

Hence, the contribution of changes in the structure of conceptions to the total change in the proportion of out-of-wedlock births can be expressed as :

$$C_B = \frac{((1 - \lambda_{t+1})(1 - \mu_{t+1}) - (1 - \lambda_t)(1 - \mu_t))}{\omega_{t+1} - \omega_t}$$

because $(1 - \lambda_t)(1 - \mu_t)$ is equal to ω_t and $(1 - \lambda_{t+1})(1 - \mu_{t+1})$ is equal to ω_{t+1} providing that $\lambda_t = \lambda_{t+1}$. In other words, we calculate what $\omega_{t+1} - \omega_t$ would amount to if λ_t did not change and only μ_t changed.

The contribution of changes in the propensity for legitimation to the total change in the proportion of out-of-wedlock births can be written as:

$$C_S = \frac{((1 - \lambda_{t+1})(1 - \mu_{t+1}) - (1 - \lambda_t)(1 - \mu_{t+1}))}{\omega_{t+1} - \omega_t}$$

Derivation of this formula proceeds in analogy to that of c_B . In this instance, we keep μ_t constant and we calculate what $\omega_{t+1} - \omega_t$ would amount to if only λ_t changed.