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**Premarital conceptions and their resolution.  
The decomposition of trends in rural and urban  
areas in Poland 1985-2009.**

**Anna Baranowska**

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Warsaw School of Economics

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# Premarital conceptions and their resolution. The evidence from rural and urban areas in Poland 1985-2009.

Anna Baranowska, Instytut Statystyki i Demografii SGH

## Abstract

The share of out-of-wedlock births used to be small in Poland till the beginning of the nineties, but within the last two decades it has increased fourfold. So far, there have been no attempts to identify the mechanisms beyond this change. This paper presents the first systematic evidence on changes in proportion of out-of-wedlock births in rural and urban areas of Poland in 1985-2009. The increase of proportion of out-of-wedlock births may be driven by two different processes. First, it may be a consequence of changing balance between marital and premarital conceptions. Second, the share of out-of-wedlock births may rise due to a drop in incidence of shotgun weddings. The aim of this paper is to compare the contribution of these two processes based data from Birth Register. The decomposition of trends in non-marital childbearing is carried out for rural and urban areas separately because the local community context can be expected to affect both fertility and nuptiality behaviour.

The results suggest that in the periods when the proportion out-of-wedlock births in Poland was increasing most rapidly, this increase was related mainly to a decline in the share of women marrying in the event of premarital conception. Specifically, between 2000-2003, in towns the declining propensity for legitimation was responsible for 87% of the rise in nonmarital childbearing, whereas in rural areas only 77% of change in proportion of out-of-wedlock births could be ascribed to this factor. Since the probability that a premarital conception led to a shotgun marriages remained higher in villages than in the towns, out-of-wedlock births were spreading at higher pace in urban than in rural areas.

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

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## I. INTRODUCTION

The changes in incidence of non-marital childbearing have attracted increasing attention among demographers. The decoupling of marriage and parenthood has occurred in most European societies, albeit to various extent. So far, Poland has been as a country where marriage remains a very strong institution and a precondition for childrearing (Matysiak and Mynarska 2010). Therefore, it is very striking to see that the proportion of out-of-wedlock births has increased from about 5% up to almost 20% just within last two decades. Out-of-wedlock births remain still an “atypical” family formation behaviour in Poland, when compared to Western Europe and also to most countries from Central and Eastern Europe. Currently in European Union, the average share of out-of-wedlock births amounts to about 35% (Eurostat 2010). Especially high proportions of nonmarital births are recorded in Scandinavian countries, where more than every second child is raised outside marriage. Nevertheless, the rapidly increasing incidence of out-of-wedlock births in the Polish society, which is known for very traditional, conservative norms and attitudes, calls for explanation.

The salient feature of the seemingly clear distinction between marital versus non-marital fertility in Poland pertains to the relatively large number of marital births that are a consequence of premarital conceptions (Tymicki 2010). Bolesławski (2001) estimates that the proportion of marriages formed by pregnant women amounted to 47% at the beginning of nineties and 38% in this decade. In fact, if it wasn't for legitimization of births through the so called shotgun weddings, the number of out-of-wedlock births observed in Poland at the beginning of late eighties would have been about four times as high. Shotgun wedding can be viewed as a behaviour that prevents both a pregnant unmarried woman and her partner from ostracism. It reflects as well the readiness of couples to subordinate their private life to the social norms. Indeed, a premarital conception as such may be a matter of private rather than public concern, but becoming a single mother definitely carries social stigma.<sup>1</sup>

A high prevalence of shotgun marriages observed in the late eighties suggest that most women who conceived their children while being unmarried used to avoid social condemnation.

The role of changes in the likelihood of single women legitimating their births has been so far hardly ever discussed in research on fertility and nuptiality behaviour in Poland. The level of nonmarital childbearing is often regarded as a function of the acceptance for informal unions

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<sup>1</sup>Extramartial births are actually named as “illegitimate births” in Polish official statistics. Legitimation not only allows to avoid disadvantages of nonmarital childbearing but also brings some benefits. Apart from avoiding ostracism, legitimization makes it easier for a man to be formally regarded as a father of the child. In principle In principle, we assume here that most marriages formed during pregnancy are well described by the term “shotgun marriage” – i.e. a marriage among women who did not intend to marry the father of a child before they realised that they are pregnant. But this assumption may be not always relevant, of course. In some cases couples that conceived a child might have remained unmarried before conception due to postponement of formalisation of their union and not because they did not plan to marry.

and the prevalence of use of modern contraceptives. But neither a retreat from marriage nor a decline in use of contraceptives seem a plausible explanation for increasing proportion of out-of-wedlock births in Poland. Cohabitation, although becoming more common, seems to be viewed still as a “probationary period” rather than “an alternative” to marriage (Mynarska and Bernardi 2007; Mynarska 2010; Kwak 2005). And the access to modern contraception has improved, although probably to various extent in specific social groups .

Declining propensity of unmarried couples to marry in the event of pregnancy may be related to declining stigma of single motherhood. The rising acceptance for lone parenthood are often argued to be important components of a broader socio-demographic change in Western countries (Van De Kaa 2001, Surkyn & Lesthaeghe 2004). According to the literature examining trends in legitimation in US, it could be also a response of women to economic incentives provided by the welfare state (Lundberg & Plotnick 1995; Parnell et al. 1994). It would be very interesting to see in which direction the changes in Polish societal relations follow. In this paper, we make a first step towards understanding the increasing incidence of nonmarital childbearing by a thorough examination of the role of legitimation. At this point , we only describe the possible impact of the cultural and institutional factors that might have contributed to the declines in the probabilities of legitimation over time. Rigorous evaluation of these influences is left for further research.

We carry out a decomposition of the increase in percentage of out-of-wedlock births which identifies two sources of growth of nonmarital childbearing. 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 legitimation. We compare the contribution of changing balance between marital and premarital conceptions as well as the impact of changing incidence of shotgun weddings separately in rural and urban areas. There are two reasons for introducing the rural-urban dimension. First of all, in demographic research there has been a reawakening of interest in analyses that place individuals in the environmental context (Weeks 2004; Voss 2007). We take the local community context under scrutiny because it determines the social control of individual-level behaviour. In particular, it shapes the conditions under which young women make decisions that affect the risk of premarital pregnancy and choices regarding entry into marriage while being pregnant. The rural-urban divide may matter not just for the differences in the level but also for the dynamics of any type of social change, including the spread of nonmarital childbearing. Due to higher openness of towns for variety of lifestyles, the diffusion of nonmarital childbearing may be expected to proceed at higher pace in urban areas. Thus, the decoupling of marriage and childbearing can be expected to proceed with higher dynamics among women in urban areas than in villages.

The second reason for introducing the rural-urban dimension is that Poland stands out among European societies as a country with non-negligible share of the rural population. Given that the inhabitants of villages represent about 38% of the Poles (CSO 2009), ignoring differences between trends in rural and urban areas could possibly lead to wrong inferences about the dynamics of the social changes that we examine in this paper. As emphasized by Warzywoda-Kruszyńska and Krzyszkowski (2000), unlike in most European countries, where the heterogeneity of social norms and behaviour is related to religion or ethnicity, in Poland it is the division between urban and rural areas that produces pronounced differences in socio-demographic trends.

This paper has a following structure. In Section 2 we present the theoretical background of our analyses. We focus on the concept of cultural differences in the social relations in rural and urban areas. We also describe the changes in institutional setting that may possibly play an important role for fertility and nuptiality behaviour in Poland. In particular, we focus on policies regarding reproductive health care, legal age for marriage and support for lone parents. These policies affect couples both in rural and urban areas, but the local community context may modify the impact of these changes. In Section 3, we describe data and methods of decomposition of trends in nonmarital childbearing. Section 4 presents the empirical results of our analysis and Section 5 provides a summary and conclusions.

## **II. THEORETICAL BACKGROUND**

In this section, we conceptualize rural-urban differences with respect to the social norms and social control of behaviour. Although demographic research has regarded social processes as embedded within a spatial context increasingly often (Weeks 2004; Voss 2007), few studies discuss its role for non-marital childbearing. Therefore, we refer to the theories that explain the influence of the local environment for individual-level conduct in a broader perspective. Based on these theories, we formulate our research questions regarding the impact of local community for differential family formation patterns. We derive our hypotheses on differences in general incidence of nonmarital childbearing in rural and urban areas as well as the pace of changes in the proportion of out-of-wedlock births in these two different environments.

The rural-urban distinction has been regarded as an important dimension of social relations. In the literature on social control of individual behaviour it has been framed in many different ways. Among the most well-known theories, researchers have referred to *Gemeinschaft* vs. *Gesellschaft* concept introduced by Tönnies (1887), the idea mechanical vs. organic solidarity (Durkheim 1893/1964), or folk-urban ideal types proposed by Redfield (1947). The rural areas are described in this literature as homogeneous, isolated communities with strong personal and

direct social bonds. The 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 2004).

On the contrary, urban areas provide a context for social relations which are “*rationalistic in structure, instrumental in form, individualistic in motivation, and exploitive in consequences*” (Christenson 1984). As external arbitration prevails self-regulations, social control is much weaker than in rural areas. Hence, a typical member of an urban society is a self-oriented rationalist subordinated to impersonal institutions and strictly separating public and private spheres of life. An important characteristic of urban social life is the variety of values and lifestyles.

Empirical research in Western Europe and United States has indicated that many of the historically grounded differences between urban and rural society have diminished during last couple of decades (Albrecht and Albrecht 1996). This convergence has been noted both in the sphere of values and attitudes (Larson 1978) as well as in family formation behaviour (Beale and Fuguitt 1990; Fuguitt et al. 1991; Johnson and Beale 1992). The reduction in both norms as well as actual behaviour is argued to result from the emergence of mass culture (Ewen and Ewen 1982). People in all residential settings were exposed to the same mass media influences, leading to the convergence in life styles. Furthermore, the progress in transportation technology intensified the social contact between inhabitants from rural and urban areas (Vidich and Bensman 1958). Increasing frequency of social interaction speeds up diffusion of new forms of behaviour, also in private sphere of life (Bongaarts and Watkins 1996.)

As long as the rural-urban dimension may no longer be relevant for demographic research in Western Europe, it is believed to remain an important source of variation in socio-demographic trends in Poland (Warzywoda-Kruszyńska and Krzyszkowski 2000). Sociological literature has emphasised the conservativeness of inhabitants of villages and more liberal attitudes of urban society (Janc 2006; Bukraba-Rylska 2009). Clear differences have been also observed in family formation behaviour (Kotowska et al. 2008; Slany 2002). For example, in urban areas the transition to marriage and parenthood is more delayed than in rural areas, and divorce rates are higher in towns. As discussed in Szukalski (2010) nonmarital childbearing is also less common among women in villages than in towns.

While the differences in incidence of nonmarital childbearing rural and urban areas of Poland have been already documented, **the key question addressed in this paper pertains to the pace of increase in proportion of out-of-wedlock births in towns and villages.** Declining propensity of unmarried couples to marry in the event of pregnancy may be related to declining stigma of single motherhood or rearing children in cohabiting unions. The rising acceptance for

family forms alternative to a marriage with children are often argued to be important components of a broader socio-demographic change in Western countries (Van De Kaa 2001, Surkyn & Lesthaeghe 2004). The acceptance for new family forms might increase more quickly in urban areas, since any type of social change proceeds quicker in towns than in conservative villages. As argued by Weinert (2002), cultural traditionalisms and lower tolerance for atypical forms of family life implies high degree of inertia in adopting new practices. Therefore, the acceptance and incidence of new family forms might increase more quickly in urban areas.

Furthermore, **we hypothesise that more dynamic increase in out-of-wedlock births in urban areas is driven mostly by declining propensity for shotgun weddings.** As argued in the introduction to this paper, deliberate decisions not to marry in the event of premarital conceptions can be seen as “swimming against the current”. In towns, due to the larger anonymity of urban life, personal interests may be more important than concerns over social norms and expectations, thus such deliberate decisions may be less penalised.

### **III. INSTITUTIONAL CONTEXT**

The discussion of changing incidence of out-of-wedlock births across the time requires considering institutional arrangements regarding reproductive health care and family policies. Institutional setting in these areas may affect the changes in proportion of out-of-wedlock rate by either preventing premarital conceptions or by affecting their resolution. Improving access to efficient contraceptives may contribute to the decline in premarital conceptions. The welfare state support for lone parents and as well as payment of state-funded alimonies may have impact the economic independence of mothers from the support of the biological fathers of children conceived out-of-wedlock.

In the following, we review the changes in reproductive health care, legal minimum age for marriage and family policies in the period 1985-2009. These policies do not vary across regions in Poland and concern rural and urban populations to the same extent. However, the local community context may moderate the effect of these policies. After description of each of the policies, we explain why the effects of policy changes might have a differential impact on individual-level behaviour depending on the place of residence.

#### *REPRODUCTIVE HEALTH CARE*

The state policy in area of reproductive healthcare may promote use of modern contraceptives in at least two ways: first, by means of including the sexual education into schooling programmes, and second, by subsidizing modern contraceptive medicines. In general, it could be argued that the availability of modern contraceptive methods has improved after

transition to market economy. As shown by Okólski (1981), before transition in Poland there was only one producer of contraceptive pills and only one producer of condoms, which obviously resulted in permanent shortages of these products. Currently, most contraceptives that are available elsewhere in Europe are also available on the shelves of Polish pharmacies and shops.

So far there have been no studies that examine the impact of increasing supply of contraceptives on the changes in level and structure of their use in Poland. Some insight on the structure of use of contraceptives can be gained based on the Family and Fertility Survey (FFS) from 1991 as well as Health Interview Surveys carried out in 1996 and 2004.<sup>2</sup> The comparison of indicators derived from these surveys suggests an increase in use of contraceptives. For example, FFS data from 1991 showed that almost half women in unions did not use any contraceptive method (Holzer and Kowalska 1997). The results from the survey in 2004 suggested that 65% women who were sexually active were using some kind of contraception. This implies that the availability and/or positive attitudes towards use of contraception improved in Poland. Importantly, apart from the fact that the use of contraception became more common, there was also a shift towards modern methods. FFS results suggested that in 1991 about 9% of women in unions used condoms, and only 5% used the pill. According to Health Interview Surveys in 1996, these proportions amounted to 22% and 8%, respectively. In 2004, a similar survey revealed that about 37% women aged 15-49 were using condoms and 27% women were taking a pill. Similar results were reported by Woynarowska and Tabak (2007).

Although the availability of modern contraceptives has improved after transition from the centrally planned to the market economy, the access to some modern contraceptive methods is restricted in some social groups due to limited knowledge as well as relatively high costs of contraceptives. As long as in many European countries the governments implement policies of promoting sexual education and subsidising the use of modern contraceptives, in Poland so far no such policies have been implemented (Matysiak and Wrona 2010). Instead, the state policy has been oriented at reducing support for making modern contraceptives more common (Mishtal 2009). Shortly after 1989, the Ministry of Education abolished sexual education from schools and withdrawing funding for national family planning organizations. In 1991 a policy known as the Conscience Clause allowed health care workers to refuse to prescribe contraceptives or provide information about family planning due to conscience-based objections. In 1999, the Ministry of Health withdrew contraceptive pills from the list of refunded

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<sup>2</sup> There are no regular studies or surveys that analyse this issue using comparable methodology (Mynarska 2009). The data from different surveys should be interpreted with care since in 1996 the question on the use of contraceptives was addressed only to women aged 15-49 who were or used to be married, whereas in 2004 all the "sexually active" women in this age range were asked. But given that in 2004 a broader group was targeted, it shows that an increase in use of contraceptives was indeed very pronounced.

prescription medications. This must have reduced the access to modern contraceptives in general, but people who live in rural, remote areas might have been more affected by this policy. In towns a high density of healthcare service allows a choice of an alternative provider to the one who refused to dispense the required contraceptives. Furthermore, rural population is poorer on average, so the increase in costs of contraceptives pills might have become of concern among women in rural areas.

### *WELFARE STATE SUPPORT OF LONE PARENTS<sup>3</sup>*

As for the welfare state support for lone parents, in Poland it comprises of family benefits (from 2004 including special supplements for single parents) as well as payments from the Alimony Fund. Both regulations on cash family benefits and alimonies were subject to quite many reforms in the period 1985-2009.

Regarding family benefits, before 1990 they were available based on sickness and maternity insurance. After 1990 a reform of family policy decoupled the receipt of family benefit from employment status. This was an important reform because as a matter of fact it gave access to the welfare support for lone mothers from lower social strata, who have poorer employment chances. The level of these benefits used to be relatively low till 1990, since they amounted to 50% of the minimum wage. In 1990 their level was raised to 100% of the minimum wage<sup>4</sup>.

In 1995, the means testing criterion was changed. It no longer concerned the income of the child but rather the income per capita in the household. The level of the means testing criterion was set at 50% of the average net wage. According to Piętka (2009) this reform raised the availability of family benefits among poor families and decreased eligibility among more well-off families.<sup>5</sup> Furthermore, it was transformed into a flat-rate scheme (Balcerzak-Parandowska et al. 2003). Next change in the means testing criterion for family benefits was introduced in 2002, since it was set at the level of the so called social minimum (which

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<sup>3</sup> Another institutional factors important in the context of legitimization of premarital births is the legal minimum age for marriage. It delineates opportunities to establish a formal union in the event of premarital conceptions among adolescents, among whom the risk of non-marital childbearing is especially high. Regarding the legislation on the minimum age for marriage, in accordance with the United Nations Convention on Consent to Marriage, Minimum Age for Marriage and Registration of Marriages from 1962, the minimum legal age to marry used to amount in Poland to 18 years for men and women. The regulations regarding minimum age for men were subject to changes twice in Poland: first the minimum age was raised from 18 up to 21 years in 1965 and then it was decreased again down to 18 in 1998. However, even in the period when the legal minimum age for marriage amounted to 21 for men, the law envisaged a possibility to refer to the Family Court which could give consent for marriage if it was justified by the conditions of the teenage couple. Hence, according to Szukalski (2010), in practice even if the father of the child was aged 18-21 the Family Court would allow such a marriage.

<sup>4</sup> Afterwards it was set at the level of minimum old age pension.

<sup>5</sup> It can be speculated that the access to the benefits of poor families remained unchanged. After the criterion was no longer related to the income of the child but rather the income per capita in the household, eligibility was no longer universal: children with parents receiving high income were cut off from the support. But the children with poor parents were in the same situation as before.

amounted then to 32% average net wage, but for lone parents it was more favorable and amounted to 36%). New arrangements for financial support to the family were defined by the reform implemented in 2004. Again, they shifted the financial support so that it targeted more low-income families (Kotowska et al. 2008). Currently the family benefits have been kept at a very modest level of 2.5 – 3.5 % of the average net wage (Piętka 2009). Hence, the reforms in the family policy were oriented at limiting the support to the group of poor parents and decreasing the level of benefits.

Apart from the support in the form of family benefits, unmarried mothers may receive transfers from the Alimony Fund, which was established in Poland in 1975 (Klos and Szymanczak 1997). In general, a lone mother is eligible for payment from this fund if the other parent is not contributing to the child's maintenance.<sup>6</sup> The benefits from Alimony Fund used to be means-tested till 1990, but after reforms of the social protection system the eligibility was granted regardless of the financial circumstances of the custodial parent (Butler 1995; Klos and Szymanczak 1997). Furthermore, the reforms in 1990 raised the maximum level of benefits from 25% up to 30% of the average wage. In 1999 means testing was introduced again, with the means testing threshold at the level of 60% of the average wage. In 2002 the reforms changed dramatically the means testing mechanism into a flat-rate system with the threshold set at the level of 612PLN (about 30% average wage).

In 2004 the reform of family policy replaced allowances from the Alimony Fund with a supplement to the family benefits for lone parents, with means-testing criterion based on regulations for family benefits. In practice, this meant decreasing the income criterion, but the maximum benefit level was also decreased. These regulatory changes were faced with large criticism, which led to further reforms in 2005. According to the amendment from 2005, single parents who could prove that they are not able to collect alimonies from the other parent of the child, would receive the so-called advance alimony payment. In 2008 r. the Alimony Fund has been reintroduced. The maximum level of the benefit was changed and the means-testing criterion was increased raising the number of potentially eligible persons.

According to Butler (1995) the social policy in the early nineties did not provide disincentives for young mothers to marry the fathers of their children. To the authors best knowledge, there has been no empirical evidence that uses recent data and methods in order to provide an up-to-date evaluation of family policy impact on the marital behaviour of women who become pregnant before marriage. It seems that especially the reforms in the very beginning of the nineties, which decoupled welfare state support from mothers' employment, might have had an important impact. After reforms introducing means testing of the family

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<sup>6</sup> A court order on eligibility for alimony was required. According to the law, the state was supposed to claim the money back from the fathers.

benefits, any changes regarding the level of these benefits was probably confined to the poorest women. It should be noted that for the purposes of means testing, the income of households maintained from agriculture is calculated in a different way than the income of other households.<sup>7</sup> Thus, the rural-urban dimension might filtered the impact of the welfare state. Perhaps for women who live in rural areas it is still easier to fulfill means-testing criterion and hence the changes of family policy affected them to more extent. In general however, it can be speculated that if a decline in propensity to legitimation indeed occurred in Poland in 1985-2009, it did so in spite of rather than due to the reforms of the welfare state support.

#### **IV. DATA AND METHODS**

##### *DATA*

We use data from the Polish Birth Register 1985-2009 created by the Central Statistical Office by means of combining files from regional registers established by the Civil Status Offices. According to the Polish Law the doctors assisting the birth are obliged to fill special forms that register the births. The information provided in these forms includes the characteristics of mother (her date and place of birth, place of residence, information on previous births), characteristics of a child (detailed date of birth, gender, weight etc.) and information on the father of a child (date of birth, place of residence, date of marriage in case if parents of the child were in a formal union). The data from the birth registration forms are provided by the Civil Status Offices to the Central Statistical Office which uses these data to produce vital statistics on fertility in Poland. From 1985 these data have been recorded in an electronic form and made available to the Institute of Statistics and Demography at Warsaw School of Economics, which allows in-depth analysis of fertility trends.

The Central Statistical Office classifies births into legitimate and illegitimate based on the definition specified in the Polish Law. A birth is considered to be a legitimate one if it was born in the period when a mother was married or within 300 days following the divorce of a mother. It is assumed that the husband of a mother is a father of the child. Additionally, in case if the parents of a child married after the birth but before the birth was registered, the birth is classified as legitimate (CSO 2009).

In this article, we adopt a different approach with respect to classification of births, because we would like to pay attention not just to the non-marital births but also to the events

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<sup>7</sup> Obviously, not all the women living in the rural areas are employed in agriculture. However, the Polish legal regulations are formulated in such way that even persons who are not employed in the agriculture but live in households that are regarded as deriving income from agriculture, can benefit from differential ways of income assessment.

that lead to incidence of non-marital births, i.e. premarital conceptions and their resolution. Hence, we distinguish three categories of births. The first group are births given by women who were unmarried at the time of birth. The second group are births resulting from conceptions that occurred after union formation of the mother of the child. Then, we distinguish a third group of women who were married at the time of birth, but their marriage took place within seven months preceding birth. It can be supposed that the decision to marry was actually driven by a will to avoid a nonmarital birth. We create time series of these three categories of births separately for women living in urban and rural areas.

## METHODS

Following Akerlof et al. (1996), the decomposition of increase in percentage of out of wedlock births identifies two sources of growth of nonmarital childbearing. 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 legitimation of premarital conceptions. We compare the contribution of changing balance between marital and premarital conceptions as well as the impact of changing incidence of shotgun weddings separately in rural and urban areas.

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

$$c_B = ((1 - s_t)(1 - m_{t+1}) - (1 - s_t)(1 - m_t)) / (w_{t+1} - w_t)$$

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

$$c_S = ((1 - s_{t+1})(1 - m_{t+1}) - (1 - s_t)(1 - m_{t+1})) / (w_{t+1} - w_t)$$

where:

$w_{t+1} - w_t$  is the change in fraction of out-of-wedlock births between periods t, t+1

$m_t, m_{t+1}$  is the fraction of marital conceptions at t and t+1

$s_t, s_{t+1}$  is the shotgun wedding ratio at t and t+1; i.e. the proportion of all premarital conceptions that are legitimated during pregnancy period

$(1 - s_{t+1})(1 - m_{t+1})$  is the fraction of out-of wedlock births at t+1

$(1 - s_t)(1 - m_t)$  is the fraction of out-of wedlock births at t.

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

## **V. EMPIRICAL RESULTS**

### *DESCRIPTIVE STATISTICS*

Across 1985-2009 Poland experienced a remarkable decline in the fertility. As long as the decline in the total fertility rate can be considered as a response to the profound change in economic and social conditions, this argument seems more relevant for decisions of the married couples. In turn, in most societies nonmarital fertility is often unplanned (Morgan 1996), and therefore the trends in nonmarital childbearing seem less susceptible to the macro-level influences. Indeed, the trends in numbers of births presented on Figure 1a and 1b clearly show that the total fertility rate declined mostly due to the dropping number of births that result from conceptions among married couples. In urban areas the number of marital births declined from nearly 288 thousands in 1985 down to about 161 thousands in 2009. In rural areas the drop in numbers of births was even deeper: from almost 250 thousands in 1985 down to about 120 thousands in 2009.

Figure 1a Out-of-wedlock births, shotgun weddings and marital births in urban areas

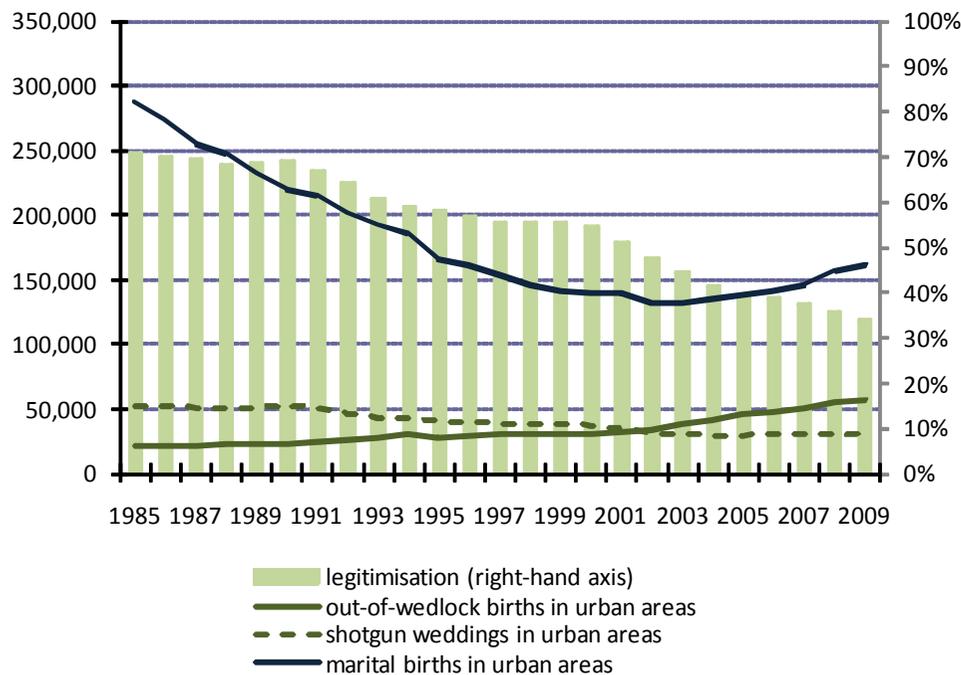
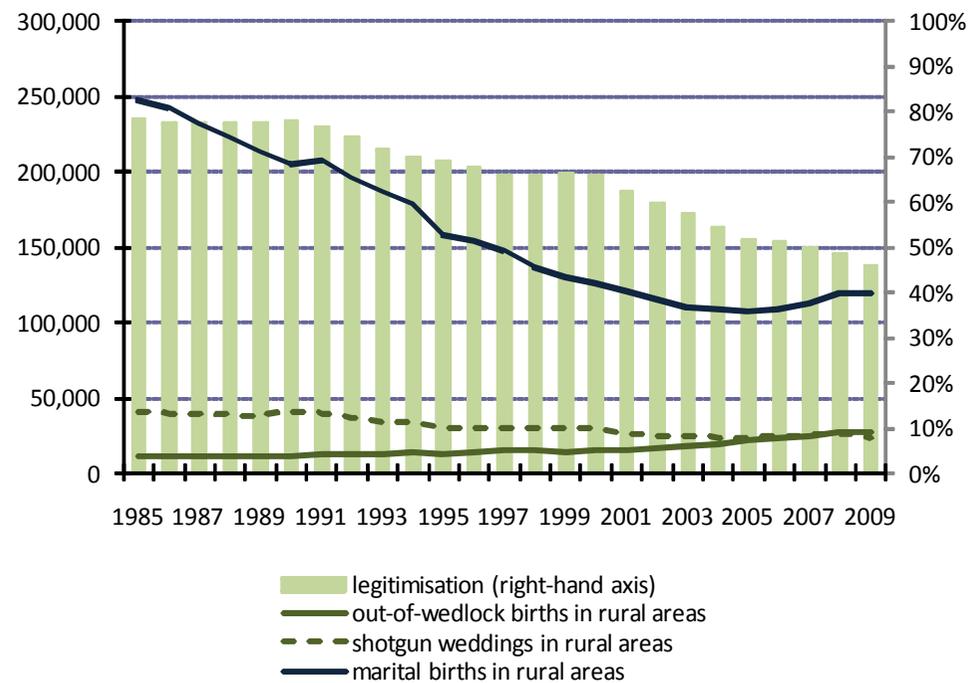


Figure 1b Out-of-wedlock births, shotgun weddings and marital births in rural areas



Source: own calculations based on data from Birth Register 1985-2009.

In the same time, the numbers of conceptions among unmarried women was rather stable.<sup>8</sup> It remained on the same level of about 40-50 thousands in rural areas. In urban areas they even increased slightly from about 75 up to about 85 thousands. As a result of these changes in the structure of births, in 2009 every third child born in rural areas was conceived before parents married. In urban areas non-marital childbearing was even more frequent, with the corresponding fraction amounting to 35%. It means that a large part of increase in proportion of out-of-wedlock births was simply a result of declining marital fertility.

A very interesting point that emerges from our analysis pertains to the similarity in the structure of conceptions in rural and urban areas that contrasts dissimilarity in the structure of births. The difference in proportion of out-of-wedlock births between rural and urban areas is to large extent a consequence of diverging propensity for legitimation. Already in 1985 in urban areas 71% pregnancies that occurred among unmarried women were followed by a wedding. In the same time in rural areas the corresponding proportion amounted to 78.3%. In 2009 in towns only 34% single women who became pregnant decided to marry, whereas in villages this share amounted to 46%. Hence, in general women in rural areas always tended to adopt behaviour that is more acceptable in a conservative, traditional society, since they are more likely to marry the father of their prospective child in the event of premarital pregnancy.

Obviously the decline in propensity for legitimation was not restricted to towns and could be observed in rural areas as well. However, Figure 1a and 1b demonstrate a marked difference between towns and villages with respect to the moment when the proportion of premarital conceptions ending a shotgun wedding declined below the level of 50%. Among women in urban areas, the share of premarital conceptions that triggered a wedding amounted less than half already in 2001, whereas in rural areas it took place with a five year lag. Summing up, the descriptive evidence shows that the trends in nonmarital childbearing observed in rural areas followed the developments in urban areas. However the diffusion of this new family form proceeded more dynamically in towns as compared to the villages due to lower propensity to legitimation in rural areas.

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<sup>8</sup> Obviously the numbers of premarital conceptions do not indicate of course how the risk of premarital conception was changing across the time. In order to get some insight about the changes in risk of premarital conception, we can refer to an indicator similar to the one proposed by Bolesławski (2001) where the number of conceptions occurring to unmarried mothers who married while pregnant was divided by the number of single women. Bolesławski has shown that a risk of marital birth that resulted from premarital conception decreased considerably in the period 1989-2000 (especially among young women – from nearly 80 conceptions per 1000 women aged 20-24 till 40). A particularly strong drop took place in 1989-1994. He also calculated a similar indicator with the number of out-of-wedlock births in the nominator. The level of this indicator increased slightly in 1989-1994 (from 10.2 to 12.9 births per 1000 women) but then declined again till 2000 to the level observed in 1989. Thus, his calculations allow to state that in general the risk of premarital conception did not increase in the period considered in his article. It even recorded some slight decline.

## *DECOMPOSITION*

Having stated this, we move on to comparison of contribution of decline in shotgun weddings to the growing incidence of nonmarital childbearing in rural and urban areas. Following Akerlof et al. (1996), we decompose the changes in the proportion of out-of-wedlock births in rural and urban areas into two components. The first component pertains to the changes of balance between marital and premarital conceptions.<sup>9</sup> It takes account of changes in the composition of all the conceptions in the given period according to their timing with respect to the eventual marriage. The second component distinguished in our analysis corresponds to the changes in the share of premarital conceptions that are legitimated.<sup>10</sup>

In general, it is clear that since the share of marital conceptions was on decline and legitimation was also becoming less frequent across 1985-2006, the contribution of both changes must have been remarkable. Only during 2006-2009 the trend in marital conceptions reversed - the number of conceptions among married couples grew leading to the increase in their share among all conceptions. Hence, within last three years the contribution of changes in marital fertility to the change in proportion of out-of-wedlock births was negative. The increase in proportion of marital conception was levelled off by further decline in propensity for legitimation, however. Therefore, the out-of-wedlock birth ratio did not decrease in spite of slight upturn in marital fertility (cp. Figure 1a).

The results of decomposition presented on Figure 1b show that in the second half of eighties in the urban areas the increase in proportion of out-of-wedlock births was driven mainly by the drop in marital fertility. On the contrary, the contribution of declining propensity for legitimation was more limited. This became even more evident in 1988-1991: the contribution of declining share of marital conceptions amounted to about 80% of the total increase in out-of-wedlock birth rate. The increase in proportion of out-of-wedlock births was also very slow back then. The remarkable role of dropping marital fertility is consistent with graphical intuition presented earlier on Figure 1b. Under stable numbers of premarital conception, declining numbers of births among married women led to increase in proportion of out-of-wedlock births in towns.

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<sup>9</sup> The first component distinguished in our decomposition corresponds to the change in the share of marital conceptions among all conceptions that occurred in the given period. This is because if the number of premarital conceptions remains constant, but the marital fertility drops, the share of out-of-wedlock births augments. As demonstrated on Figure 1a and 1b this was actually the case in Poland in 1985-2009: the number of marital births strongly declined whereas the total number of premarital conceptions remained roughly constant. Alternatively, the increase in percentage of out-of-wedlock births may be driven by a surge in number of premarital conceptions (which was not the case in Poland, though).

<sup>10</sup> The choice to decompose triennial changes in proportion of out-of-wedlock births is arbitrary. It is easier to capture any changes in indices that are to be decomposed in case of broader than annual time intervals, furthermore, graphical presentation becomes clearer.

The changes in the propensity for legitimation became more important in urban areas in the first half of nineties. In the period of 1991-1994 the dropping shotgun marriage ratio accounted for 73% of the total increase in proportion of out-of-wedlock births. As shown on Figure 2a, this was also the period when proportion of out-of-wedlock births in towns gained momentum. However, the role of propensity for legitimation diminished again in the following years. In 1994-1997 its decrease accounted for less than half of the change in proportion of out-of-wedlock births. In 1997-2000 the change in incidence of non-marital childbearing was driven almost in 70% by changing balance between marital and premarital conceptions. In other words, in the second half of nineties the increase in out-of-wedlock births was very small and simultaneously the negligible augmentation that did occur was mainly due to declining marital fertility.

After 2000, the incidence of nonmarital childbearing in towns started to spread very quickly and in the same time the role of declining propensity for legitimation regained importance. In 2000-2003 the proportion of out-of-wedlock births was rising by 7-10% annually. This dynamic increase was mainly driven almost entirely - in 87% - by the changes in resolution of premarital conceptions. As long as in 2000 about 55% pregnant single women had shotgun weddings, just three years later only 44% women would do so and in 2009 only 34% would take such decision. The decline in probabilities of legitimation continued to be an important driving force also after 2003. As shown on Figure 2b, this dramatic change in propensity for legitimation shaped the trend in nonmarital childbearing in towns within the whole last decade.

Regarding patterns in rural areas, they were similar to those observed in urban areas in many respects. Similarly as in towns, in villages the proportion of out-of-wedlock births was increasing very slowly till 1991 and the observed increase was mainly driven by declining marital fertility. Just as in urban areas, the role of legitimation became suddenly very important in the first half of nineties. Actually, in that very period, the role of this factor was larger in rural than in urban areas. While in towns about 72% of change in proportion of out-of-wedlock births could be explained by dropping 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 increase in incidence of nonmarital childbearing.

In the second half of nineties, the trend in nonmarital childbearing in villages flattened. Just as in towns, this was due to lack of further changes in resolution of premarital conceptions. The share of premarital conceptions that ended in shotgun weddings stabilised at the level of 66-70%. But at the turn of the centuries, the downward trend in legitimation that has been already described in urban areas took also place in villages, only that with remarkably lower pace. After 2000, the overall proportion of out-of-wedlock births was increasing as quickly as in

urban areas – by 10% annually. However, much lower part of this increase could be attributed to the fact that women in rural areas did not marry the men with whom they conceived their children before giving birth.

As long as in towns declining propensity to legitimation was responsible for 87% of the rise in nonmarital childbearing, in rural areas only 77% of change in proportion of out-of-wedlock births could be ascribed to this factor. The contribution of declining propensity to legitimate premarital conceptions remained 10 percentage points lower in villages than in towns till the end of the period observed in this analysis.

To summarise, between 1985-1991, both rural and urban areas recorded some increase in proportion of out-of-wedlock births, but it was in a way a statistical artefact (“denominator effect”). Both in towns and in villages married women responded to the profound changes in economic conditions by postponing first births or resigning from having another child. Since the number of (probably mostly unplanned) premarital conceptions remained stable, this 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. A more important change in fertility and nuptiality behaviour took place in the first half of nineties and after 2000. In that periods the proportion of out-of-wedlock births was increasing not because of dropping marital fertility but rather due to declining share of women marrying in the event of premarital conception. The trends in nonmarital childbearing in villages paralleled the tendencies observed in towns, however with a remarkable time lag. The probability that a premarital conception ends up with shotgun marriages was higher by 11-13 percentage points during 2000-2009 in rural areas as compared to the towns. As a result, nonmarital childbearing, which remains an atypical family form in Poland, was spreading at higher pace in towns than in rural areas.

Figure 2a Proportion of out-of-wedlock births

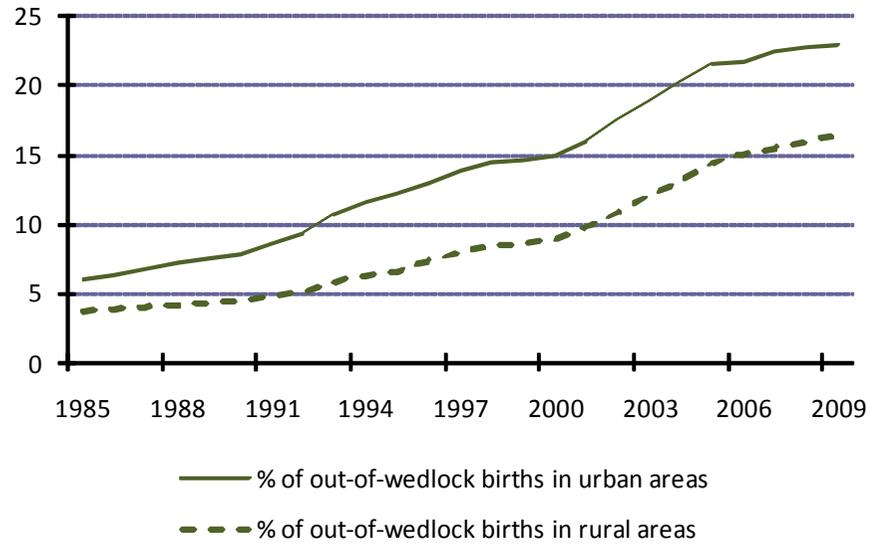
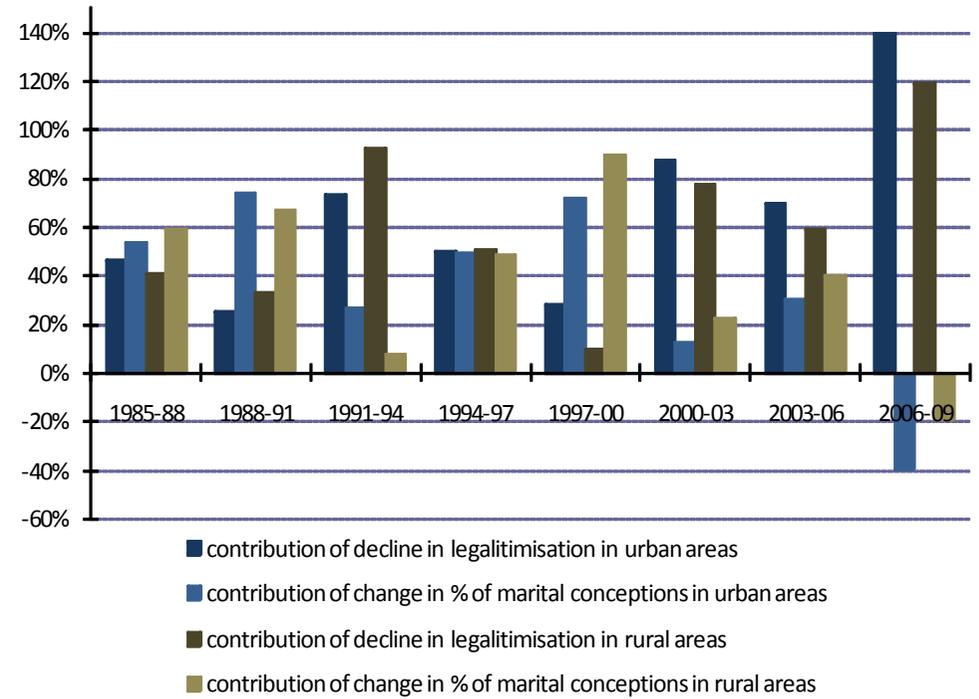


Figure 2b Decomposition of increase in out-of-wedlock births rate



Source: own calculations based on data from Birth Register 1985-2009.

## **VI. 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. The increase in the share of out-of-wedlock births may be driven by different processes. It may be a consequence of changing balance between marital and premarital conceptions. Alternatively, the share of out-of-wedlock births may be also raised due to changes in the incidence of shotgun weddings. We disentangle the relative impact of these two processes, comparing the developments in rural and urban areas.

We demonstrate that till the beginning of the nineties a rapid drop of fertility among married couples had a non-negligible influence on changing proportion of out-of-wedlock births both in rural and urban areas. As the marital fertility dropped, the share of out-of-wedlock births augmented even though the risk of premarital conceptions remained roughly constant. This finding is important given the meaning ascribed to the growth of proportion of out-of-wedlock births in the demographic literature. Many studies interpret a rising proportion of out-of-wedlock births as a direct indicator of ideational change. The result presented in this paper can be viewed as an example of why such interpretation of macro-level indicators may in some cases lead to wrong inferences.<sup>11</sup> Furthermore, since the increasing proportion of out-of-wedlock births was driven mostly by declining marital fertility, it leads to conclusion that till the early nineties, there has been no dramatic behavioural change with respect to the nonmarital childbearing.

The behavioural change did occur later - first, the fertility of married couples loss influence relative to decisions regarding resolutions of premarital conceptions in 1991-1994 and then again after 2000-2009. In 2000-2009 about 91% of the increase in share of out-of-wedlock births in towns and 81% of the increase in the corresponding share in rural areas resulted from decline in propensity for shotgun marriages. Especially during last three years, the proportion of out-of-wedlock births would have fallen if it wasn't for decreasing propensity for legitimation.

The family formation patterns in rural areas followed the developments in urban areas, but with a substantial time lag. Hence, it does not seem that rural and urban areas are becoming the polar opposites when it comes to the family formation patterns, at least when it comes to nonmarital childbearing. It can't be excluded that similarly as in Western countries, the family formation patterns in rural areas will converge to what is observed in towns. However, it is clear that currently the changes regarding the diffusion of nonmarital childbearing proceed with

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<sup>11</sup> This concerns also international comparisons of proportion of out-of-wedlock births – in countries where married couples postpone entry into parenthood to more extent the share of out-of-wedlock births is likely to be relatively high even if the risk of premarital pregnancy is the same as in other countries.

higher dynamic in towns rather than in villages. Consistently with predictions of theories of social control of behaviour, in towns the new types of family formation behaviour are becoming common more rapidly. On the contrary, villages seem to preserve more traditional forms of family behaviour. Interestingly, the rural-urban differentials are manifested not only in the speed of changes in family formation patterns but also in the mechanisms behind the increase in nonmarital childbearing. In urban areas the increase in proportion of out-of-wedlock births was driven to higher extent by declining propensity for shotgun marriages than in rural areas. In rural areas, still a relatively larger part of increases in proportion of out-of-wedlock births results from changes in balance between marital and premarital conceptions.

The results presented in this paper reveal an interesting temporal variation in decline of likelihood of legitimation. In general the nuptiality behaviour of pregnant unmarried women might have been to some extent a response to institutional changes, but given the complexity and large number of reforms that have been introduced in 1985-2009, in this paper it is impossible to point out which reforms might have led to specific changes in propensity to legitimation. Given the fierce debate surrounding family policy changes regarding welfare support for single mothers, it seems essential to provide more in-depth analysis of this issue. However, considering that especially in most recent years the state support was decreasing rather than increasing, women with relatively high earning potential (or those with well-off partners) rejected shotgun wedding despite rather lack of than due to incentives created by the family policy changes.

Another issue that requires additional, more in-depth analysis is definitely the form of living arrangements of women who did not decide to marry the fathers of their prospective children. As a matter of fact, it is not clear whether they remain single and raise their children as lone parents or live in cohabiting unions. As it has been mentioned in this article, previous studies have shown that in Poland marriage used to be considered as the most appropriate form of living arrangement for rearing children. Still, perhaps this attitude has been also modified in the dynamically changing Polish society.

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## ANNEX

The basic idea of the decomposition proposed by Akerlof et al. (1996) is very similar to other decomposition techniques which identify the contribution of one factor that drives changes in the given indicator holding other factors constant. In this paper we decompose  $w_{t+1} - w_t$ ; i.e. the change in 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, which were followed by a shotgun wedding, i.e. they became legitimated.

We can write down  $m_t$  ( the fraction of marital conceptions at t ) and  $s_t$  ( the shotgun wedding ratio at t ) in the following way:

$$w_t = \frac{(p_t - l_t)}{n_t} \text{ and } s_t = \frac{l_t}{p_t} \text{ and } m_t = \frac{(n_t - p_t)}{n_t}$$

We can prove that  $(1 - s_t)(1 - m_t)$  is the fraction of out-of wedlock births at t:

$$\begin{aligned} (1 - s_t)(1 - m_t) &= \left(1 - \frac{l_t}{p_t}\right) \left(1 - \frac{(n_t - p_t)}{n_t}\right) = \left(\frac{p_t}{p_t} - \frac{l_t}{p_t}\right) \left(\frac{n_t}{n_t} - \frac{(n_t - p_t)}{n_t}\right) = \left(\frac{p_t - l_t}{p_t}\right) \left(\frac{p_t}{n_t}\right) = \\ &= \frac{(p_t - l_t)}{n_t} = w_t \end{aligned}$$

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

$$c_B = \frac{((1 - s_t)(1 - m_{t+1}) - (1 - s_t)(1 - m_t))}{w_{t+1} + w_t}$$

because  $(1 - s_t)(1 - m_t)$  is equal to  $w_t$  and  $(1 - s_t)(1 - m_{t+1})$  is equal to  $w_{t+1}$  providing that  $s_t = s_{t+1}$ . In other words, we calculate what  $w_{t+1} - w_t$  would amount to if  $s_t$  did not change and only  $m_t$  was changing.

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

$$c_S = \frac{((1 - s_{t+1})(1 - m_{t+1}) - (1 - s_t)(1 - m_{t+1}))}{w_{t+1} + w_t}$$

And derivation of this formula proceeds in analogy to the  $c_B$ . Here, we keep  $m_t$  constant and we calculate what  $w_{t+1} - w_t$  would amount to if only  $s_t$  did change.