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## **The other side of the coin? Recent changes in family policy, men's family roles, family formation and family dissolution in Norway \*)**

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**Abstract:** In recent decades, the economic autonomy of women has increased markedly in Norway. This change derives in part from Norwegian family policies, but the economic autonomy of women is also supported by income transfer policies, such as the economic safety net for single parents established from the late 1960s. A central question in the paper is if the increased female empowerment has increased the selectivity of partner selection, with respect to family formation as well as family dissolution. In addition to findings from previous studies the paper presents preliminary findings from a new research project that analyses family formation for men on the basis of data from the birth and population registers for selected male birth cohorts 1940–80.

### **Introduction**

The aim of this paper is to trace effects of changes in Norwegian family policy over the later decades with regard to men's family formation, family roles and family dissolution. Norway is an interesting country for a case study

for several reasons. The Nordic countries are generally characterised by substantial transformations of the societal and economic role of women during the post WWII period, with a more pronounced role of public policy in these transformations than in most other industrialised countries. At present the Nordic countries share a common characteristic through an explicit integration of gender equality as a general goal in family policy, combined with extensive allocation of economic resources to policy measures supporting this policy in terms of parental leave programmes, publicly supported kindergarten facilities etc. However, compared to the other Nordic countries, the Norwegian expansion of the gender equality oriented family policy measures is a more recent phenomenon, which again facilitates an analysis of possible policy effects through a cohort/ life course approach. So far, there have been several studies of possible effects of family policy on fertility and labour market behaviour of women, while possible effects on these processes on the men's demographic behaviour have received less research attention. A central question in the paper is if increased female empowerment has led to increased selectivity with respect to partner selection, both with respect to family formation (both selection to recognised fatherhood and to marriage/cohabital union) and with respect to family dissolution (of marriage or cohabital union). With regard to the latter, the Norwegian family policy regime also has particularly contextual interest, due to relatively good economic safety net for single parents established in the late 1960s /early 1970s. The paper is divided into three sections:

Section I summarises the changes that have taken place in the economic role and opportunity structures of younger generations of Norwegian women over the later decades, and discusses the role of public policy in shaping the changed opportunity structures. Section II presents the main findings in from a recently completed research project that analysed differences in income by educational attainment, gender and family status of younger birth cohorts in Norway (born 1961- 1975), while Section III presents preliminary findings of a recently launched research project dealing with the family formation process of men, based on analyses of register data for selected male birth cohorts, born over the period from 1940 to 1980.

## **I. Norway in the Nordic context : Substantial changes in the economic role of women and in the opportunity structures of younger generations of women**

The economic role of women has undergone substantial changes during the last decades practically everywhere in the western-industrialised world. Norway is no exception in this respect, but compared to the other Nordic countries the strong growth of married women in the paid labour force came relatively late in Norway (Skrede 1986). By 1970, Norway was among the “back – benchers” with regard to married women's employment rates also in a broader international context. Only Ireland, the Netherlands and Italy ranked lower in a table including most of the industrialised countries of Western Europe, US and Canada around 1970 (UN 1980: 12-13). Three decades later however, Norway together with the other Nordic countries are characterised by both generally high levels of employment and almost equal labour force participation rates for women and men in all age groups below 55 years (OECD 1998, TemaNord 1999). The productive life courses of women in the generations growing up after WWII have gradually become more similar to men's life courses, with a continuous participation in paid employment. Women have also become more similar to men with respect to the responsibility for economic support of their families, in two-parent families and as lone parents. At present, the Nordic countries also share common characteristics with respect to integrating gender equality measures into family policy measures. It is stated as a general goal for family policy to facilitate the combination of family and reproductive tasks with occupational activity for both women and men. Occupational benefits for working parents and provision of day-care facilities for children are the cornerstones of these policies.

This Nordic convergence with regard to gender equality and family policy measures is on one hand hardly surprising, given the many similarities that the Nordic countries share in their development of social welfare policies. Broader comparative analyses of welfare states/systems often place the Nordic countries in a common category based on criteria from present structures of welfare systems. Gøsta Esping-Andersen's (1990) distinction between three different types of welfare state regimes, with the Nordic socialdemocratic welfare regime as a common denominator for the Nordic countries, was an important contribution in this respect. However, as pointed out by other researchers, i.e. Lewis (1992,1993) and Sainsbury (1994), Esping-Andersen's analysis did not include the gender relations aspects. By focusing mainly work as paid work and on welfare policies that relate to paid work (as incentives and disincentives for decommmodification of labour), his analysis missed the important aspects of unpaid work and welfare produced within the families. In addition, his analysis also overlooked considerable differences between countries within each of the three types of welfare regimes in his model. Although the Nordic countries at present appear relatively homogeneous with regard to incentives towards choosing a dual breadwinner model with symmetrical responsibilities as the family life style, there is considerably more variation at country level with regard to what extent the family policies present the dual

bread-winner model as a norm or as an option. Several studies have documented that there are considerable differences between the Nordic countries with regard both to their historical development with regard to the integration gender equality as a common platform for family policy, and the extent to which present family policies also aim at accommodating other political goals, (Leira 1989,1991, 1992, 1993; Borchorst 1994; Sainsbury 1999; Skrede 1986, 1993, 1999d).

In an earlier article (Skrede 1999d, op.cit) we have described Norway as both as a late-comer to the Nordic model and as a less firm supporter of the present basic ideology of the model as presented above. Within the Nordic context, Norway's atypical development may be explained by two major factors; both by relative late urbanisation and modernisation and by a more ambiguous (schizophrenic) development of family policy in relation to gender equality aspects. On one hand, the post WWII development of the Norwegian welfare state undoubtedly has been an important driving force behind the changes that have taken place in the economic role of women with respect to labour force participation. In this respect, Norway shares with the other Nordic countries the institutional roots in the ambitious distributive welfare policies that were formed during the first decades of the post WWII period with regard to equalisation of educational opportunities. Policy measures to secure extended access to education after compulsory school combined with formal right for girls as well as for boys, were important foundations for the later more explicit formulation of gender equality as an area and aim for political concern (Jonung 1979; Skrede 1986,1994a, 1999b; Leira 1993).

With regard to the considerable changes in the economic role of women, there can be no doubt that the recognition of women's equal access to education and acceptance of gender equality a general goal for educational policies, was an important and necessary step towards more equal opportunity structures for women and men, in the labour market as well as in the family. Public policy changes also contributed on the demand side of the labour market. It is generally recognised that the growth in the education, health and service sector had an important role in the increase in women's paid employment in the 1970s and the 1980s, especially in countries where these services to a large extent are located within the public sector (Jonung and Thordarson 1980, Jonung 1983, Borchorst and Siim 1984, Skrede 1984, Rein 1985, UN 1986). Moreover, the increase in women's educational activities and attainment also prepared the ground for broader modernisation processes and to demographic changes that also contributed to the changed opportunity structures. By and large however, these demographic changes came later in Norway than in the other Nordic countries, and contributes to a picture of Norway as relatively late modernised country within the Nordic and North-European context. (Skrede 1999d, op cit.).

On the other hand, this late economic modernisation can also partly be understood and explained by a equally late modernisation in political terms. In a historical perspective, Norway for a longer period than the other Nordic countries kept the single breadwinner model as the dominating frame of reference for social policy. The early 1970s mark a change with regard to the integration of gender equality concerns into public policy, both at the at the institutional level as well as within political parties. However, although gender equality of education and married women's right to choose paid employment was recognised at a general level by most political parties by 1970, the policy measures to support these goals may safely be described as rather mediocre at that time – at least in a Nordic context. Standard maternity leave was 12 weeks (since 1956) and the coverage of kindergartens relative to the size of the pre-school child population was approximately 6 per cent in 1972. Compared to the other Nordic countries, Norway was definitely the junior partner with respect to family policy measures to support the reconciliation of family and working life policy until the end of the 1980s. However, during the late 1960s and early 1970s, there were other significant changes in public policy that contributed to a stronger integration of family policy issues and a stronger focus on women as primary producers of care and reproductive work within families. These changes meant that Norwegian family policy to a larger extent than the other Nordic countries have strengthened women's economic autonomy through direct transfers. The policy changes also illustrate that Norwegian politics of the 1970s could be described as rather “double track” oriented- where the single bread-winner model and married women's right to choose *not* to be in paid employment still were considered as important points of reference for policy measures.

### **Integration of reproductive issues in welfare state policies**

The establishment of the general National Insurance Scheme (NSI) in 1967 meant an improvement of women's citizen rights through the individual right to receive pensions and benefits, as well as a transfer from family responsibility for economic support to the welfare state as an alternative provider. The right to a minimum old age pension was universal, while the supplementary pension was dependent upon previous employment. However, the regulations of the NSI also demonstrate that the single bread-winner model at that time served as the main reference for the model. Two years earlier (1965) a universal widows' pension scheme had been

established, and this scheme was integrated and extended in the NSI by the transfer of the right to a supplementary pension also to widows (and several years later also to widowers).

The single breadwinner model was also an important frame of reference for the regulations of the rights of single parents to income support from the state. In 1967 unmarried mothers were granted right to a transitory allowance (at level with the minimum old age pension) from birth up to age ten of the child. From 1974 the right to transitory allowance was extended to divorced and separated single parents. Through the integration of these rights within the Norwegian NSI and the relative liberal definition of caring-need period of the child these statutory rights for single parents in Norway were more in the form of a guaranteed minimum income than the support systems for single parents in the other Nordic countries. The discussion prior to the establishment of the transitory benefit for unmarried mothers and the regulations of the benefit, demonstrate that the single breadwinner model and married women's right to choose *not* to be in paid employment still were seen as the main reference for the regulations (Terum 1993, Skevik 1999).

Women's command over economic resources was also strengthened through the policy changes that took place with the tax reform in 1970. The former system of income related tax reductions and deductions for providers of children (by definition the father if he was employed and living with the family) was replaced by an extended child benefit scheme with fixed rates. Initially, the Ministry of Finance proposed to replace the former deduction system with a scheme of tax credits for providers, with equal rates by family size, regardless of income. The Ministry also suggested that the child benefit transfers should be integrated into the tax credit rates. The child benefit was introduced in 1946 and had since then been transferred directly to the mother. However, through a well organised women's protest across the established party lines (inside Parliament as well as on grass root levels of political parties), the system with direct transfers to mothers was maintained also for the extended benefit scheme. This also increased women's control over money within the family (Kjeldstad and Skrede 1988).

These changes in welfare state policies and institutions have been labelled the transition from private to public dependence (Dahl 1982; Hernes 1982, 1984, 1987). The policy changes made women less dependent on family support and created a closer link between women and the welfare state. In this respect, the development during the 1960s and the 1970s resulted in a more "women-friendly" welfare state with regard to recognising women's reproductive work (Hernes 1987). These changes were followed by more pronounced changes towards more a more gender equality oriented family policy.

During the 1980s and the early 1990s the Norwegian «slow pace politics» changed radically. Over a relative short period there was a substantial lift in the economic resources allocated to family policy, both with respect to occupational benefits promoting gender equality and with respect to direct transfers to families with children. The expansion of the direct transfers came first. From 1980 to 1992 the child benefit rates more than doubled in real value. From the late 1980s there was also a substantial expansion of the occupational benefits to families with small children, both in terms of an increase in the general coverage of kindergarten places and in terms of extended parental leaves at childbirth, with respect to duration of leave and level of wage compensation. The most recent expansion of the parental leave in 1993 to 42 weeks with full pay also introduced the "daddy quota" - with four weeks of the parental leave reserved for the father. The introduction of the daddy quota was also an important innovation to the Nordic model, as Norway was the first country to introduce an obligatory father share of the parental leave.

By and large, Norway's present family policy may be characterised as influenced by a political agenda where gender equality as a political goal frequently have been questioned and balanced against other political goals, as freedom to choose the family life style, distributional equity between different models of motherhood and equal treatment and rights of children regardless of whether their parents have chosen one breadwinner model or the other (Skrede 1999d, op.cit). The considerable increase in direct transfers and occupational benefits to families with children can be taken as concrete examples of divergent priorities finding a common platform in practical politics. Divergent priorities with respect to different types of measures to families with children, relate to different "models of motherhood" (Leira 1989, 1991) and different distribution strategies (selectivity and targeting versus incentives) (Skrede 1993, 1995). These different strategies did however, find a common platform in increased redistribution towards the reproductive sphere.

In this respect, Norway may be described as a country with a "family friendly" welfare regime. After the expansion of the parental leave programs and the introduction of the daddy quota, Norway also appears as a country with strong incentives for a dual-breadwinner model. However, through the relative high level of direct transfers the present family policies of Norway may also be characterised as a policy regime where the gender equal, dual

breadwinner model to a larger extent than for the other Nordic countries the family policies present is presented as an option and not as a norm. The introduction of the new *cash benefit reform* ("kontantstøttereformen")<sup>i</sup> in 1998 is a recent and obvious example that gender equality as a "single track" goal still is challenged in Norwegian politics (Leira 1998).

### **Educational attainment and formation of opportunity structures - socio-demographic changes in an inter-cohort perspective.**

Educational attainment is a key variable in economic and sociological theories focusing on the formation of individual opportunity structures in the labour market. The development of theories of individual human capital formation following the seminal works of Mincer (1958) and Becker (1964) is a well-established tradition in economics. The central assumption of this theory is that the costs of educational activities (among others the income foregone by time spent in educational institutions) are rewarded and compensated by higher wages at the later entrance to the labour market. In sociology, individual educational attainment plays an equally important role in the research tradition focusing on social mobility and formation individual life chances, as well as a resource for social change and modernisation (see for instance Blau and Duncan (1967) and Coleman (1971)). In this respect, women's access to educational attainment on level with men was regarded as an important aspect of the equalisation of educational opportunities in the Nordic countries, also prior to the integration of gender equality as an explicit goal of public policy (Skrede 1994a, 1999b, 1999d). However, women's access to education has also contributed to considerable changes in women's opportunity structures in a broader context. The "deferred gratification" perspective with respect to entrance in the labour market, has relevance also for the family formation process and the considerable changes that have taken place in socio-demographic structures over the later decades.

#### ***Changes in family formation***

The process of family formation and childbearing has undergone major changes in virtually all Western industrialised countries over the last two to three decades. The social phenomenon labelled the second demographic transition is characterised by a transition from traditional family patterns with marriage and children early in the life course, to postponed marriages and later births, combined with a marked decline in the average number of children (van de Kaa 1987). In some countries, particularly the Nordic countries with Sweden as a forerunner, this development is also combined with increasing proportions of couples cohabiting without formal marriage, both prior to formal marriage and increasingly also as more permanent alternative to marriage<sup>ii</sup>. The growth in women's educational attainment and women's increased participation in the paid labour market, also in periods when they have small children, have taken place parallel to the demographic changes.

Different theories and perspectives to explain these socio-demographic changes tend to assume a linkage between the growth in women's educational attainment and the demographic changes. Theorists do not however, agree on the closer relationship between the processes. According to Lesthaeghe (1995,1997) the second demographic transition has been explained from three angles: (i) via the theory of increased female autonomy (Becker 1981), (ii) via the theory of relative economic deprivation (Easterlin 1976, Easterlin et al. 1990, 1991) and via (iii) the theory of ideational shifts (e.g. Preston 1986; Lesthaeghe and Meekers 1986; Thornton et al. 1987; Lesthaeghe and Surkyn 1988; Bumpass 1990). Although these theories highlight different perspectives, they are however not mutually exclusive. Regardless of angle increased educational attainment for women is integrated directly or indirectly in the theories.

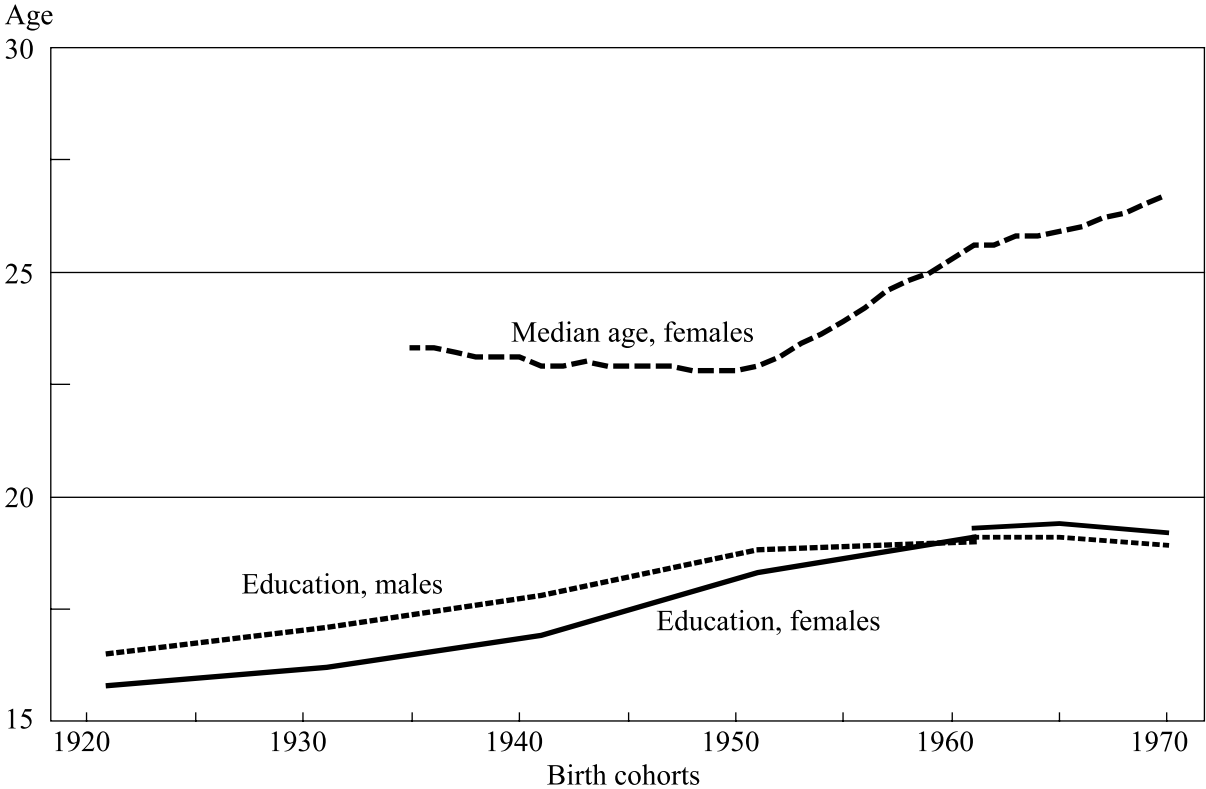
The introduction of new and female- administered birth control technology in the 1960s was beyond doubt an important factor for the timing of the transition process at country level. Empirical analyses from different countries also indicate that women's increased educational attainment contributed to the demographic changes. Norway was not a particular early country in terms of transitional shifts, at least not in a Scandinavian context. The tendencies towards postponing marriages and first birth did not appear at cohort level until the birth cohorts from the early 1950's started this process in the early 1970's, whereas the corresponding tendencies according to Lesthaeghe appeared in Sweden at cohort level already in the 1946 birth cohort (Lesthaeghe 1995). However, seen in a longer time perspective, the tendency for well-educated women to defer births was present also in earlier cohorts of Norwegian women. Analyses of the Norwegian Fertility study of 1977 indicate that the process of postponing first birth started among well-educated women of the cohorts born in the 1940's. This was before the new reproductive technology was generally available, and at a time when the median age at marriage and first birth still were falling in the birth cohorts that these women belong to compared with older birth cohorts (Noack and Østby 1981, Skrede and Sørensen 1983).

#### ***Deferred gratification and increased autonomy***

In this respect, the development for well-educated women falls in line with processes that also are present for well-educated men. With men's longstanding lead with regard to educational attainment, the development for men may also be studied in a longer time perspective. Natalie Rogoff Ramsøy (1978) discusses an observed deferred gratification pattern among well educated men in a survey of three cohorts Norwegian men (born in 1921, 1931 and 1941 respectively) in a longer historical perspective. She finds historical support of a similar pattern towards deferred gratification among young women and men with relatively good economic standing, in the writings of Eilert Sundt from the 19th century (Sundt 1855,1857,reprinted 1967,1976) as well as in Richard Easterlin's theories (Easterlin 1976). In this respect, Ramsøy sees the tendencies towards deferred gratification as a means to ease the life cycle squeezes that early marriages and early childbirth often led to for the young starters.

The deferred gratification pattern is also a relevant approach to understand the relationship between increased educational attainment for women and delayed births, at least in societies where women are allowed to combine child-rearing with paid work in the labour market. In principle, women born in the 1930s and 1940s cohorts were allowed this possibility. However, as shown above, the family policy to support a labour market career for women with small children, was not present to any great extent at the Norwegian arena until the late 1970's. Consequently, for the well-educated women from the 1930 and 1940 cohorts postponement of childbirth may be seen as a "virtue of necessity". By postponing the child-bearing period to later phases of the life course, the chances for some gains in terms of increased individual autonomy were larger. Completed education increased the possibility for a stronger foothold in the labour market and prospects of higher income, which in turn would increase the possibility for combining child-rearing and paid employment, for instance by hiring help for child care.

**Figure 1 Median age at first birth for female birth cohorts 1935 -1970 and estimated average duration of completed education by gender for selected birth cohorts born 1921 - 1970**



Education: Age-standardized estimated average duration of highest completed education (compulsory schooling included).  
 Sources: Lappegård 1998, Populational and Housing Census 1990. Register of income 1995 (for birth cohorts 1961-1970), Statistics Norway.

*Changed opportunity structures in younger generations*

The increase in women's educational attainment and the changes in the family establishment processes, have changed the opportunity structures of the present young generations of women compared to their predecessors. The changes in family policy measures has also contributed to more open opportunity structures. Compared to the opportunity structures for older generations of women, the present young generations of Norwegian women have better possibilities to form their opportunity structures and to lay a solid foundation for a combination of family responsibilities with continuous participation in the labour market. There are also considerable changes in the direction of more equal opportunity structures for young women and young men. Figure 1 illustrates that the important goal of gender equality of education is reached within the present young generations. Together with incentives for a larger involvement by the father in the child rearing, equality of educational attainment is expected to contribute towards more equal parental sharing of family tasks and responsibilities. Traditionally, the presence of children has affected the mothers' labour market careers more than the fathers'. As long as mothers on the average had lower educational attainment and corresponding lower labour market value than fathers, both economic rationality and traditional gender roles worked towards reduced labour market activity by mothers rather than fathers.

The Nordic model of family welfare may also be described as a successful endeavour by the fact that women in the Nordic countries have proved that it is possible to combine a high level of labour force participation with family and children. In contrast to most other European countries, the Nordic countries are generally characterised by increasing and relative high total levels of fertility over the period from the mid-1980's to the beginning of the 1990's. Although trends over the later years have diversified the picture of uniform development somewhat, the present fertility level of the Nordic countries must be considered high in a broader European context (Eurostat 1998). This development has also led to an increased attention to the possible impacts of family policy on fertility, especially to what extent the relative generous family policies of the Nordic countries have contributed to the positive development of fertility. In a recent paper Rønson (2001) summarises the analyses that has been carried out so far on basis of Family and fertility surveys from the late 1980s and early 1990s in Norway, Sweden and Finland. The research results so far indicate that there is a certain impact, but that the direct effects from policy changes are not very strong. An exception in this respect is the so-called "speed-premium" effect in Sweden, where a change in the parental leave program in the 1980s encouraged a closer spacing of births (Hoem 1993). However, as also demonstrated by the Swedish fertility trend in 1990s, a generous family policy program is no guarantee for a high fertility level. The sharp decline in the Swedish fertility in the mid-1990s, following the economic recession in Sweden in the early 1990s demonstrate that economic cycles and economic prospects also are important for the fertility (Hoem 2000, Rønson 2001, op.cit).

Previous research on the effect of family policies in Norway does not include data from the period with the substantial extensions of the parental leave in the late 1980's and the early 1990s<sup>iii</sup>. On one hand, this strong expansion of the resources allocated to family policy measures makes it reasonable to expect stronger policy effects on fertility.<sup>iv</sup> The relative high and stable level of fertility in Norway during the 1990s is often taken as an indicator of such effects. On the other hand, the development of fertility trends in Norway in the 1990s also show more divergent fertility patterns among younger cohorts of women from the, both with respect to timing of first births and with respect to number of children born (Lappegård 2000). Consequently, the research on effects of family policy should also include a closer focus on factors that may contribute to a closer understanding of this increasing diversification.

The possible effects of family policy on men's family formation and development has received less attention in the research carried out so far, although it is often assumed that the general climate towards more equal gender roles and the expectations of a more active involvement of the father in child care and family tasks in the Nordic countries might be contributing factor behind the relative high levels of fertility in these countries compared to countries where traditional gender roles still prevail to a larger extent (UN 2000)<sup>v</sup>. An interesting finding from Sweden that supports this assumption, is that women are more likely to have a second child if the father took parental leave with the first child, suggesting that features that encourage an active participation from the father in child care may stimulate fertility (Sz.Oláh 1996). In this respect, the present family policies in the Nordic countries give a strong incentive for a more active involvement by the fathers and have contributed to both to a more open opportunity structure and a broader set of challenges also for men. However, the Norwegian experiences with men's use of parental leave prior to and after the introduction of the "daddy quota", also indicate that men taking more than the minimum quota of parental leave, to a large extent were men with female partners characterised by a good foothold in the labour market, strong occupational involvement and equally strong norms and expectations about gender equality in sharing of family tasks. In this respect, the female partner's occupational status and involvement was a better predictor of the amount of parental leave taken by the father than the father's own occupational status (Brandt and Kvande 1999).

This illustrates that the changes in family policy also have contributed to broader opportunity structures and challenges for young generations of men. However, despite the changed opportunity structures that young men today meet compared to their fathers and grandfathers, the traditional provider role still represents a challenge for younger cohorts of men in their family formation and adjustment. Although women with children today to a large extent also participate in the economic provision of their families, the level of part time work is also relatively high in some of the Nordic countries, and Norway tops the list in this respect (TemaNord 1999, op.cit.). Consequently, men still have the role of main provider in the majority of Norwegian families with children.<sup>vi</sup> In addition, since family policy measures and welfare policies also has contributed to a stronger economic autonomy for women, we would expect that expectations and challenges to men to fulfil the traditional provider role to still be relatively strong and even increasing in a longer time perspective.

The role of the transitory benefit for the early births and the diversification of fertility and family formation, as well as for the income formation patterns is of particular interest in this context. Since women today to a larger extent can rely on themselves or the welfare state as alternative providers<sup>vii</sup>, it is reasonable to assume that this economic empowerment also represents a lower threshold with respect to breaking out of a marriage or a cohabital union, in case the partner does not fulfil the expected obligations, to the provider role as well as to sharing household and care work. In this respect, it is of interest to look closer into the possible impact of family policy both on the family formation and family dissolution process and on labour market adjustment and earnings, from the perspective of both genders. A central question is whether the increased female empowerment has increased the selective of partner selection, with respect to family formation as well as family dissolution. In section II we report the main results from an earlier analysis of income development and family formation in early adulthood by gender and educational attainment for Norwegian birth cohorts 1961 - 1975, based on an analysis of register data at aggregate level, while section III reports preliminary findings from a recently launched project that addresses these questions more specific by micro level analysis of register data of male cohorts.

## **II. "Life chances in the melting pot": Family formation and income development by gender and educational attainment for Norwegian birth cohorts born 1961-75.**

The empirical analysis in the project "*Life chances in the melting pot*" focused on income development 1990-1995 and income returns by gender and educational attainment (level of highest completed education) for Norwegian birth cohorts born 1961 -1975. The analysis was based on register data for the total population from the tax and income registers, including register data on marital status, children and educational attainment. By observing young generations at the time of their entrance to the labour market and during the early phases of family formation, this project intended to evaluate the present state of the process towards gender equality in Norway at two levels: The returns to education in the labour market for women and men, and the effects of educational attainment at the formative processes of early adulthood, when young people form their lives for the later life course. In this perspective, the analysis could also provide some preliminary answers to the question on the effects of the changes in family policies in Norway over the later decades. The cohorts born in the 1960s and the 1970s have to a greater extent than earlier generations benefited from an extensive expansion of the amount of resources allocated to family policy measures directed at the reconciliation of family and working life from the mid 1980s. They have also been met by societal expectations of more equal gender roles in the formative period of their life courses.

The analysis was based on register data from the Income and Tax Register, supplemented with data from the Education Register linked at individual level. The aim of this project was to describe the development at aggregate level and not to go into in-dept analyses of processes at micro level. However, since the data set comprised the total population, the project could also to some extent deal with the aggregated effect of such processes. Cohort analysis of complete population data for consecutive years is a powerful tool for monitoring changes in social structures and processes also at the simple descriptive level, since it allows both inter-cohort and intra-cohort comparison of structural aspects, stability and changes. On the other hand, analyses of register data have limitations with regard to data content and definitions, which have to be limited to data that may be extracted from the categories given in the register.

In the presentation here we shall mainly deal with the results of two sets of analyses from the project:

i) The analysis at aggregate level of family formation by educational attainment, which shed some light on the extent that earlier observed trends towards differential family establishment and postponement of first birth seem to stabilise or be reinforced within the present young generations of Norway, as well as differences by gender in these processes. ii) The main results of the analyses of income development by educational attainment, family status and gender, which intended to monitor the present state of the process towards gender equality in the labour market and the effects of family status and educational attainment on labour market adjustment. It is not possible to present the outline of the project and the data structure in any detail here. Readers are referred to Skrede (1999a, 1999c, 2000 and 2001) for a broader presentation of data sources and results from the project.

### **Data: Sources and definitions**

**Income:** *Gross income* (in Norwegian: «toppskattgrunnlag») in each of the selected years was used as measure of income per year. In addition to income from work, this income concept also include social security income (pensions and taxable income substitute). For the young cohorts focused in the analysis the most important non-market income included will be unemployment benefit and the transitory benefit (social security income) for lone parents. This means that gross income is not a direct measure of income from work, as it also includes public transfers. However, for the analysis of income development we were also interested in the effects of income from social security for the development and distribution of income, especially the effects of the transitory benefit.

**Family status:** We used two criteria for family status: marital status and parental status.

**Marital status** was defined by formal marital status by 1 November of income year (date used for tax report). By combining the rates for married and previously married (divorced and separated) at cohort level, we also got the *cohort state of transition to first marriage* (ever married) by November 1 of that particular year. Unfortunately, data on cohabitation could not be obtained from the Tax and Income Register<sup>viii</sup>. Both cohabiting persons and previously cohabiting persons may be included in the share unmarried or in the share previously married (dependent upon their formal marital status).

#### **Parental status**

Register information about recipients of transfers and tax subsidies related to support and care of children by November 1 of income year were used as criteria for parental status. For women we used information about whether or not they had received child benefit as measure of parental status, whereas the corresponding criterion for men was whether or not they had received tax credit for child support (of children that are living in the same household - i.e. own children or step-children). These measures give valid and relevant information about certain types of family obligations by income year.

For women, the information about the transfer of child benefit is also a relative reliable estimate of the motherhood status.<sup>ix</sup> The child benefit for a particular child is a direct transfer that normally is paid directly to the mother, as long as the child is under 16 and living with the mother (or with mother registered as main care person).<sup>x</sup> A priori we assumed that the recipient shares of the female cohorts in focus would differ relatively little from the mother shares, as the share of small children not living with their mothers is relatively low. The later study of timing of first birth of the full range of Norwegian female cohorts born from 1935 to 1978 based on data from the birth register confirmed this assumption (Lappegård 1998, op.cit.). There are close correspondence between the proportions of cohorts with at least one birth and the shares of child benefit recipients for all female cohorts that could be compared at the same age.

For men, the information about tax deduction for child support for men could be used as an indicator of parental status in that particular year. This measure cannot, however, be used correspondingly as an indicator of biological fatherhood, as the deduction is restricted to parents (or step-parents) living with and supporting a child under 18. The deduction is given as tax credit, with fixed rates according to number and age of children (under 18 years of age). The tax credit may also be transferred as a negative tax for recipients with taxable income below the level for deduction. It is divided among the parents if they are living together or have joint custody with shared support of the child. Children supported may also be stepchildren, whereas parents that do not live together with their children (or have joint custody with shared support) will not benefit from the tax deduction, even if he or she (as required by law) contributes to the support of the child through alimony or paternity order.<sup>xi</sup> However, although tax credit for child support cannot be taken as indicator of biological fatherhood, it is still an interesting variable in the context of family establishment and prevailing family patterns, as it instead may be taken as an indicator of selection to *social fatherhood* (Skrede 1999b, 2001a).

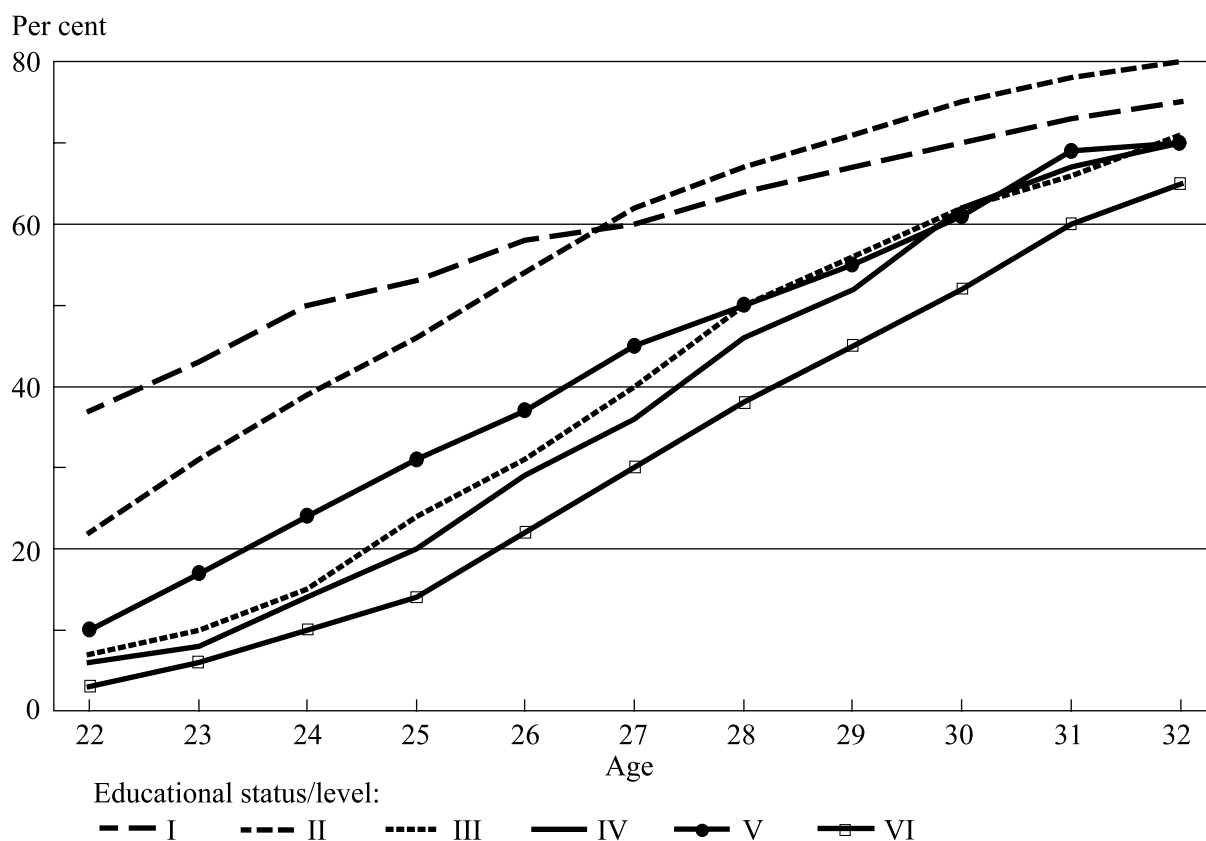
### **Educational attainment and family formation**

The analysis confirmed that accumulation of educational attainment was a long and time-consuming process for these generations. Considerable proportions of the older cohorts were also under education in their late twenties and their early thirties. With increasing age there are also pronounced gender differences in educational attainment. Women have a higher share with education at university or college level, while the male cohorts have a higher share with education at secondary level, at least for the cohorts that to a large extent had completed their educational activities by the mid 1990s. By 1995 21.1 per cent of the men in the oldest cohort (born 1961) had education at college level or higher, while the corresponding share for women was 25.7 per cent. However, the analysis also showed that in spite of the strong growth of young people seeking education at college and university level during the 1980s and the early 1990s, the majority of the older cohorts stopped with an education at secondary school level or lower, and substantial shares of the cohorts born in the early 1960s have no qualifying education above compulsory level. By 1995, respectively 36.1 per cent (men) and 38.3 per cent (women) of the 1961 cohort had *no* qualifying education above compulsory level.

With increasing shares of young people starting their family establishment by cohabiting without formal marriage and with close to fifty percent of present birth cohorts born by mothers that are not married, marital status by age is a less valid indicator of the timing of family establishment than it was a couple of decades ago. However, entrance into marriage can be analysed symmetrically by gender by the type of data that was utilised in the project. Although the process towards postponed marriages continues, the development also demonstrated that entry into matrimony still prevails as an important part of the family establishment process. In the oldest cohort, close to three fourths of the females and more than sixty per cent of the males in the 1961 cohort had married at least once by the age of 34.

The analysis also demonstrated that a complete picture of increasing dispersion and social differentiation of the family formation process educational attainment should include the effects of *dissolution of early marriages*, as well as cohabital unions if possible. Like other West-European countries Norway has experienced a strong increase in marriage dissolution rates over the last three decades. The increase in divorce rates have been particularly strong for marriages of relatively short duration (4 - 8 years) (Mamelund, Brunborg and Noack 1997). The early grooms and brides from the cohorts born after 1960 are no exception in this respect. By age of 32, 12.4 per cent of the men and 14.0 per cent of the women of the 1961 cohort were separated or divorced. This corresponds to roughly one in five of those who had married within this age, irrespective of gender. The majority of those who had divorced or separated by 1993 had relative low educational attainment. Measured by the shares of the different educational groups that had married by age 32, respectively 22 and 21 per cent of women and men with educational attainment at secondary level or lower had divorced, while the corresponding shares were 10 and 7 per cent for women with education at college or university level. This illustrates that the differential divorce pattern in these stages of the life course contributes towards increased differentiation of the family formation process by educational attainment. In this respect, it is also worth noting that neither the increased propensity to start the family establishment by cohabitation nor the higher risk of break up of cohabiting unions observed by Jensen and Clausen (1997), seem to have removed the high risk of divorce of early marriages that characterised the marriages formed in the 1970s and the early 1980s (Kravdal and Noack 1988).

**Figure 2a. Share of female birth cohorts receiving child benefit in 1993 by age and educational status/level<sup>1</sup> by 1 October 1993. Birth cohorts 1961 - 1971.**



<sup>1</sup> Educational status/level:

I: Not under education in 1993, highest completed education at compulsory level or short vocational training ( equivalent to 9-10 years of schooling). Include also education not reported.

II: Not under education in 1993, highest completed education at secondary school level or vocational school certificate (equivalent to 12 years of schooling).

III: Not under education in 1993, highest completed education at college or university level, first stage (equivalent to 13-15 years of schooling).

IV: Not under education in 1993, highest completed education at university level, second stage or higher (equivalent to at least 16 years of schooling).

V-VI: Under education in 1993

V: At secondary or vocational school level or at college level.

VI: At university level (at least second stage)

Source: Register of income 1993, Statistics Norway

### ***Entrance into parenthood -increasing differences by educational attainment, gender and age***

With the high levels of children born to non-married but cohabiting parents, age at entrance into parenthood was considered a better indicator of timing of family establishment than age at marriage. Responsibility for children is also a better indicator of family obligations than marital status. The data on transfers of child benefit and tax subsidies for children from the Tax Register gave relevant but not perfect information about parental status by income year, since we were not able to distinguish

between parents sharing their responsibilities with the other parent (or an acting parent) and parents living as single parents. To some extent however, intracohort differences in parental status according to age within educational groups for women and men respectively, could be used to shed light on intra-cohort differences in transition to parenthood by educational attainment and gender.

We utilised the register information of the transfers for the analysis of respectively entrance into motherhood for women and development of social fatherhood shares for men by age and educational attainment. Figure 2a and 2b show the state of these processes by 1993 for female and male birth cohorts respectively. The processes and the intra-cohort development from 1993 and 1995 are discussed more in detail in Skrede (1999b). For women, the rates for first births follow a similar pattern by educational attainment as the rates for entrance into marriage. The distributions indicate that young women on their way up in the educational system postpone entrance into

motherhood to a greater extent than young women with low educational attainment do. For men, the development of social father shares by educational attainment and age points towards an even more differential selection process to social fatherhood by educational attainment.

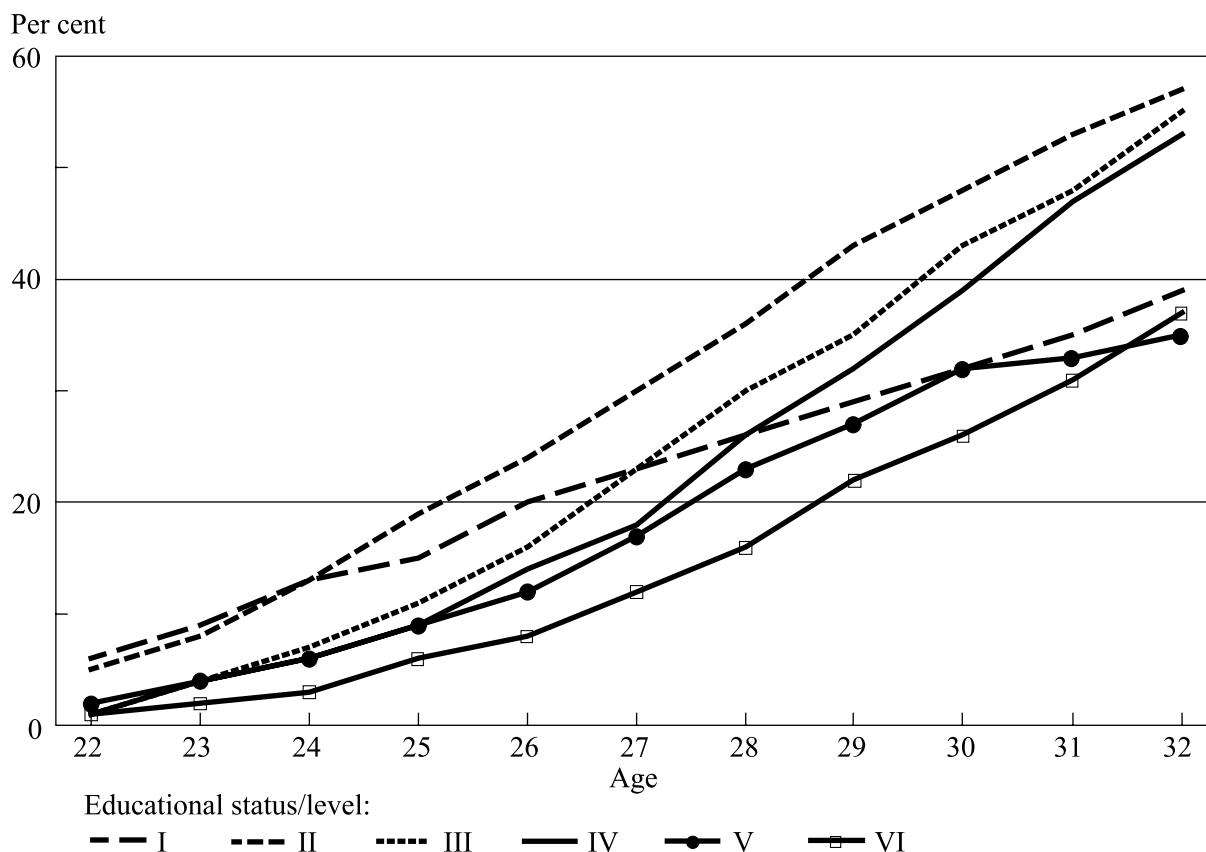
### ***Selection to social fatherhood – aggregate of several selection processes***

The share of social fathers by age is neither a measure for a single, not-reversible transition (like the ever-married rate), nor a proxy for a single, not-reversible transition- as is the case with the share of women receiving child benefit (transition into motherhood). The cohort share of social fathers at a particular age is a temporary, age-related measure of the proportion of men within the cohort who received tax credit for child support in that particular year. Changes in the level from one year ( $t$ ) to another ( $t + 1$ ) are affected both by transitions *into* the group over the period  $t - t+1$  and by transitions *out of* the group over the same period. Transitions into and out of the group are both aggregates of several separate transition rates, and a man's status as social father or not, may in principle be subject to change over the whole grown-up life course.

In practice however, the most important *inflow* to the group of social fathers at the ages in focus of this analysis, will be (registered) biological fathers of new-born children who also are living with and supporting the child (provided that the man was not already a social father prior to the birth of the child). All (registered) biological fathers who live together with the mother of the child in marriage or cohabitational union, will automatically qualify for tax credit and be included in the share of social fathers, whereas fathers of children living with their mothers only at the time of the birth will not be included in the inflow of new social fathers. Correspondingly, the most important outflow from the group of social fathers will be fathers that do not longer live with their children due to divorce, separation or break up of cohabiting union<sup>xii</sup>. Consequently, the three most important selection and self-selection processes behind the proportion of men that are *not* selected to social fatherhood are that i) some men are not selected *to* (declared) biological fatherhood, and that declared biological fathers may be refusing or excluded from social fatherhood either ii) prior to birth of the child or iii) by divorce/separation or break up of cohabiting union after the child is born.

The data available from the Tax and Income Register does not allow a distinction between the three major types of selection processes. It is likely however, that all three types of selection processes are at work behind the observed proportions. With respect to the selection to biological fatherhood, analyses from the earlier Family and Occupation study from 1988 indicated a shift in the transition process to (reported) fatherhood for men, from the older 1945 cohort to the younger 1960 cohort. Men from the 1945 cohort followed a clear "deferred gratification-pattern" by educational attainment, where young men with low educational attainment had the earliest transitions into fatherhood. The 1960 cohort presented a different pattern. Men with high educational attainment maintained a deferred gratification pattern compared to men with educational attainment at medium level. However, within the 1960 cohort also men with low educational attainment were lagging somewhat behind in the transition to fatherhood (Skrede 1995). It is a reasonable hypothesis that this type of changes also will apply to younger cohorts following after the 1960 cohort. The analyses at aggregate level in the "Life chances in the melting point" did not include data that could be used as an explicit test of this hypothesis, but in section III of this paper we present the preliminary findings of a new project that focus these selection processes at the individual level and from a longer time perspective.

**Figure 2b. Share of male birth cohorts receiving tax deduction for child support in 1993 by age and educational status/level<sup>1</sup> by 1 October 1993. Birth cohorts 1961- 1971**



<sup>1</sup> Educational status/level, see note 1, figure 2a.

Source: Register of income 1993, Statistics Norway

### ***Where have all the fathers gone ?***

Figure 2b points towards a differential selection process to social fatherhood by educational attainment, where men with relatively short educational attainment have the highest proportions of social fathers in the young cohorts under 25 years of age. However, in the older cohorts the proportion of social fathers among men with only compulsory education appear to be lagging distinctively behind with increasing age, compared to the development for the three other groups with completed education. Through the data from the Income Register it was not possible to determine to what extent the lower shares of social father for men with low educational attainment are caused by each of the different types of selection described above. As a starting point however, it is reasonable to assume that the (declared) biological father share is higher than the social father share within all educational groups. Other analyses also give some indications that selection from social fatherhood prior to childbirth or shortly after the birth of the child, probably are higher for biological fathers with relative low education, than for biological fathers with higher educational attainment. A recent study of single parents in Norway, indicate that women who become single mothers early in the life course and not are living with the father of the child at the time of the birth, on average have low educational attainment and modest labour market experience (Kjeldstad 1998, 2000). Given the general tendencies towards homogamous mating processes, it seems a reasonable assumption that with access to relevant data, we probably will find that young men with low educational attainment are disproportionate represented within the excluded/refusing father group<sup>xiii</sup>.

In addition, as the analysis of family formation showed that young men with low educational attainment are early starters both with respect to entrance into marriage and with respect to divorce or separation, it is also a realistic assumption that a substantial part of the selection from social fatherhood did take place as exit from formal marriages of relative short duration. With respect to formation and dissolution of cohabiting unions, it also realistic to assume that the structural characteristics of break up from early cohabiting unions with children do not differ very much from the break up of early marital unions, apart from the break-up rate. The analysis of Jensen and Clausen (1997, op.cit.) indicated that break-up rates of cohabiting unions are higher than divorce rate of formal marriages, also when controlling for the presence of children.

Since young children to a very large extent continue to live with their mothers after the break up of marital or cohabiting unions, one consequence of these processes is that single parents of small children to a large extent are women. In addition, a considerable "social father deficit" accumulates at cohort level as a cohort ages. Of course, the shares of single mothers and the shares of social fathers are subject to change also by the transitions into new marriages and cohabiting unions. However, under the assumption that average age differences between married and cohabiting couples with children do not differ substantially from the average age differences between married couples, a roughly estimated share of lone mothers (and the corresponding social father deficit) could be obtained by comparing the cohort share of mothers at a particular age with the share of social fathers of the cohorts 2 to 3 years older.<sup>xiv</sup>

These comparisons showed that both the estimated share of lone mothers and the estimated social father deficit increased rapidly for the young cohorts under 27 years of age in 1993 and more slowly after that age (Skrede 1999c, 2001). As an illustration, the estimated share of lone mothers at age 22 in 1993 was close to seven per cent, while corresponding share increased to respectively 16, 17 and 17.6 per cent for the cohorts at ages 27, 28 and 29 in the same year. Although we cannot claim these rough estimates to be much more than qualified guesses, it is worth noting that they indicate cohort levels of lone mothers in the older cohorts that are relatively close to the observed share of lone mothers in the total population of families with children (Statistics Norway 1998b)<sup>xv</sup>. By and large, these figures also indicate that the disproportionate distribution of lone mothers and "not selected fathers" by educational attainment are factors that must be taken into account in the analysis of income differences by educational and parental status.

### **Income development by educational level, gender and parental status**

By and large, the analyses of income development by age and gender demonstrated that we still are a considerable distance away from gender equality of income in the present young generations of Norway. The only cohorts that represented an exception from this statement were the young cohorts under twenty-five, where average incomes were very low for both women and men and the gender differences negligible in all three years of analysis. In these age groups however, substantial proportions of the cohorts were still under education. With increasing age, there were also increasing gender difference in average income, both at inter-cohort level for each year of analysis and at intra-cohort level for the period 1990- 1995.

The closer analysis of income distribution by educational attainment, age and gender, indicated that differential returns to educational attainment by gender contributed to the persistent gender differences. On one hand, educational attainment clearly matters with respect to income returns, for women as well as for men. However, although average income differences between different educational groups increased by age both for women and for men, these increases were considerably stronger within the male cohorts than within the female cohorts (Skrede and Ryen 1997, Skrede 1999a, 1999c). In addition, the analysis of income differences by educational attainment and marital status showed that part of the average income differences between women and men could be related to strong prevailing patterns of traditional breadwinner models within these young generations, in particular among the cohort shares with relatively short education.

Married women with low education accounted for a substantial proportion of the higher shares with low income in the female cohorts, regardless of whether the threshold for low income was set at a very low level or closer to a level corresponding to a minimum pension for a single old age pensioner. Moreover, the analysis also indicated that the differential risks for low income within the female cohorts to a large extent appear as generated by other processes than the differential risks within the male cohorts. For men, low income to a large extent is a direct measure for low integration in the labour market, since the transfers included in gross income to a large extent reflect previous integration in the labour market (unemployment benefits and disability pension). The analysis showed that the differential risks for low income in the older male cohorts to a large extent were concentrated to separated and divorced men with low educational attainment. For women, the shares with low income by educational and marital status reflect that women's integration in the labour market still are affected by the possibility for economic provision by other sources than own labour market income. In this respect, both economic provision by social security income (transitional benefit for single parents) and traditional economic provision by marriage reduce the need for economic provision by work in the labour market (Skrede 2000).

### ***Relative income differences by educational attainment, parental status and gender***

To get a synthesised picture of the income differences, we chose to present the income variation by educational attainment at the detailed level, by a set of age-standardised indices representing the *relative income differences* between different groups (women/men, mothers/non-mothers, "social fathers"/"non-social fathers"). These

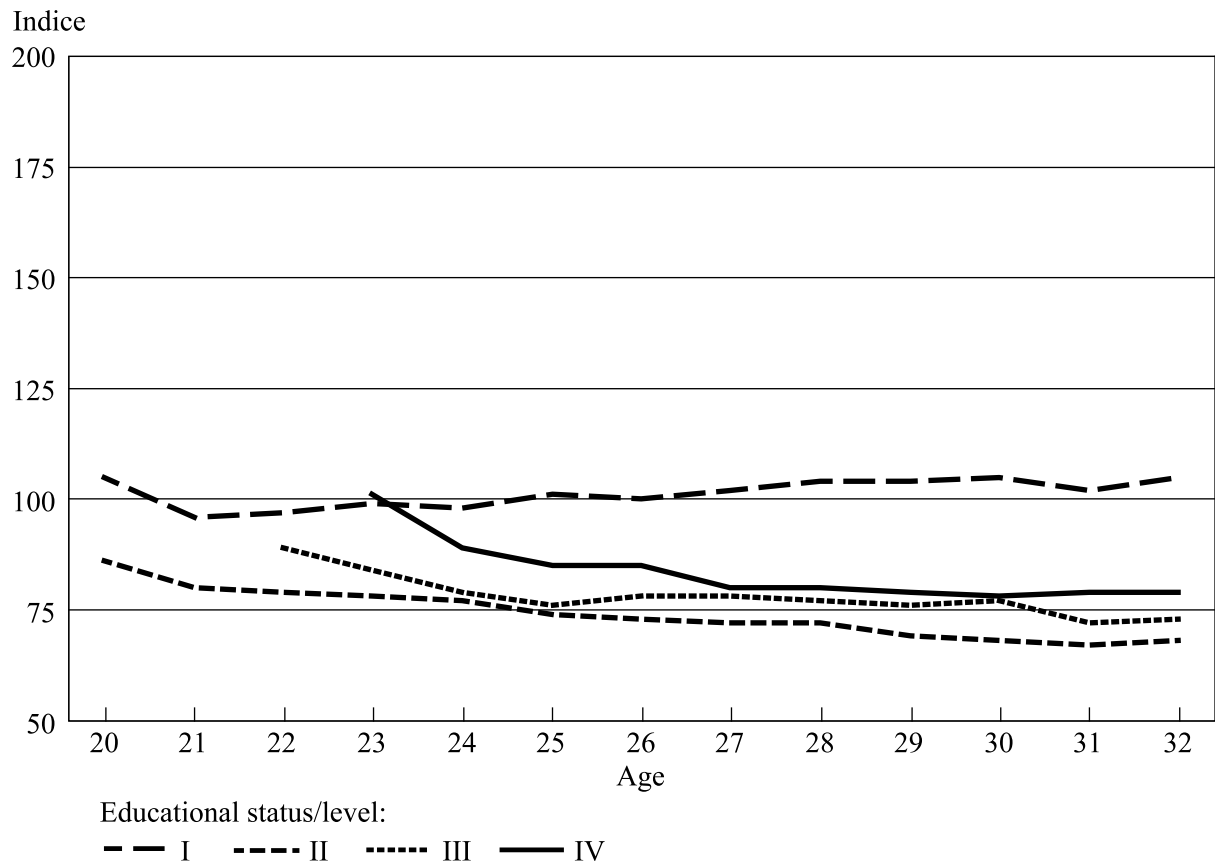
indices are also suitable for comparing observations for consecutive years, since they measure relative and not absolute differences in income<sup>xvi</sup>.

The analysis indicated that educational attainment and family formation/status are decisive determinants of earned income for both genders. Generally, total income increases with higher levels of educational attainment for both genders, but considerably more for young males than for young females, also when childless women and men at comparable levels of educational attainment/age are compared. Family formation and family obligations still act differently on the labour market behaviour and income potential of young men and young women. In the presentation here we include only the relative income differences related to parental status for women and men respectively. As illustrated by Figure 3a and 3b, at all levels of educational attainment men who were *social fathers* (living with children that they support (own or stepchildren) have considerable higher average incomes than men who are not social fathers, whereas mothers earn considerably less than non-mothers among women with education above compulsory level.

The structure of these differences however, indicated that the educational attainment/family formation/labour market behaviour interaction process acts differently for the two genders. The difference in average earned income for social fathers relative to the income of men not living with children is larger for men with low educational attainment than for men with high educational attainment, whereas differences in average earned income between mothers and non-mothers decrease with increased educational attainment. These differences also indicate that family policy measures may have led to increased female empowerment and partner selectivity with respect to the selection to social fatherhood in these birth cohorts.

Figure 3a indicates a considerable «mummy's loss» for mothers in most of the educational groups. Women with only compulsory education are an exception in this respect, as well as women still under education (not pictured in the figure). That mothers come out relatively well compared to non-mothers in these two educational groups is to a large extent explained by the fact that a substantial proportion of the mothers in these two groups are recipients of transitory benefit as lone parents (Skrede 1999b, 2000). An earlier analysis of single parents' social and economic adjustment before and after the transition to single parenthood (Kjeldstad 1998, 2000) documented that both single parents' use (take up) of the benefit and the duration of the support period, was largely dependent on the parents' labour market resources (education and labour market experience) and the family situation prior to the transition to single parenthood. Although the benefit is of relatively modest size compared to average income for women with education at higher levels working full time, figure 3a shows that the income level of the benefit is well able to compete with average income for non-mothers with only compulsory education. In this statement we also take account of the findings that a substantial proportion of the married women with relatively short educational attainment had very low income. If we had been able to calculate the average income of married and cohabiting mothers and lone mothers separately, we would probably have found relative income differences between lone mothers and non-mothers in educational group I larger than those pictured in figure 3a. In this respect, it is a puzzle for reflection that the «lone mother opportunity» for young women with low educational attainment seems to be a better alternative than to be a non-mother in the labour market.

**Figure 3a: Average income from work<sup>1</sup> for mothers relative to non-mothers (index:  $m_{ij}$ : "mummy's loss")<sup>2</sup> by age and educational status/level<sup>3</sup>. Birth cohorts 1961 - 1973.**



<sup>1</sup> Gross income from work, see text in section II for detailed definition.

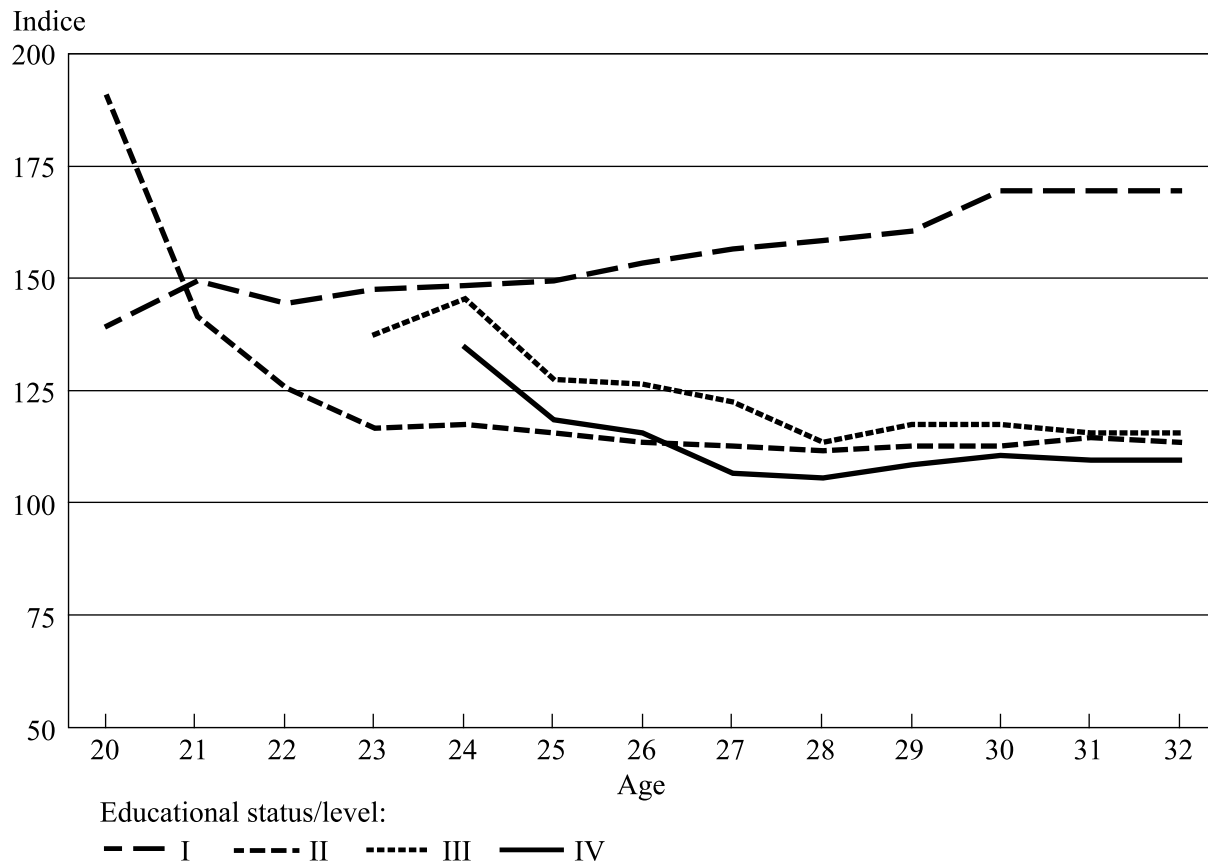
<sup>2</sup> Indice  $m_{ii}$  : "mummy's loss", see text in section II for detailed definition.

<sup>3</sup> Educational status/level, see note 1, figure 2a for detailed definition.

Source: Register of income 1993, Statistics Norway

Mothers with long education (educational status IV) have on average the lowest losses relative to non-mothers. An average mummy's loss of about 20 per cent to non-mothers in the oldest cohorts is however, by no means negligible. It indicates that the earlier findings by Kravdal (1994) on the price of childbirth on basis of longitudinal income data and birth history from the Family and Occupation survey still prevail in younger cohorts of Norwegian women, even though the family policy measures directed at the reconciliation of family and working life have improved considerably since the late 1980s.

**Figure 3b. Average income from work <sup>1</sup> for " social fathers" relative to "non- social fathers" ( $d_{pi}$  "daddy's premium")<sup>2</sup> in 1993 by age and educational status/level <sup>3</sup>. Birth cohorts 1961-1971**



<sup>1</sup> Gross income from work, see text in section II for detailed definition.

<sup>2</sup> Index  $d_{pi}$  : "daddy's premium", see text in section II for detailed definition.

<sup>3</sup> Educational status/level, see note 1, figure 2a for detailed definition.

Source: Register of income 1993, Statistics Norway

With respect to social fatherhood, figure 3b indicates a considerable «daddy's premium» for social fathers within all educational groups. On one hand, this is not surprising, given the well-established findings from numerous empirical analyses that married men tend to have higher incomes than unmarried, when other differential factors are controlled. This differential pattern is also confirmed in recent labour market studies (see e.g. the review by Jäntti and Sundquist (1996)). It can be explained both by a sociological *selection* theory (that the more able men are selected as marriage partners), or by an economic theory of increased productivity induced by *breadwinning obligations*.

It is not surprising that we find a similar pattern for income difference between social fathers and men that are not social fathers, since both types of theoretical explanations may be similarly applied for these groups. The relative differences according to educational attainment are however, not so obvious. In the older cohorts "daddy's premium" show a decreasing trend by increasing educational attainment. The index values are by far highest among fathers with low educational attainment, and there is also a pronounced tendency to increasing values with age. This indicates that the combined effects of selection and productivity probably is strongest for fathers with low education - which also is a puzzle to thought given the simultaneous tendency that a relative low share of young men with low education are selected to social fatherhood.

In this comparison one should also bear in mind that this «premium» is related to yearly income and not to wages. Previous Norwegian surveys of working time have shown that fathers of small children tend to work overtime more than other men do. In this respect, part of «daddy's premium» might well be explained by a higher input of work. However, from the indication that selection processes to social fatherhood seem to work with stronger effects for men with low educational attainment, it is reasonable to conclude that selection effects also contribute to the relative income differences between men that are "social fathers" and men that are not social fathers. This statement is also supported by other findings from the project "*Life chances in the melting pot*". Previously married men with low education have on average considerable lower incomes than married and

unmarried men, and also higher shares of unemployed and recipients of social assistance at all age levels represented in the register analyses (Skrede 1999a, 2000). These results point towards a complex interaction pattern between educational attainment, labour market problems and family problems, where research in progress presented in Section III, hopefully will provide some further answers to these questions in the next couple of years.

### **III. Preliminary findings from the project " Family formation and breadwinner models: More gender equality and increasing social disparities?"**

This project is designed to provide a broader understanding of the processes where the analyses at aggregate level from the project "Life chances in the melting pot" only could give preliminary indications and intimations. This recently launched project is based on further analysis of register data, and intends to combine a focus on the family formation development as it appears at individual level with an analysis at the level of the couple. The new project also provide a broader frame of analysis with registered fatherhood histories for selected cohorts over a longer period of analysis. Through this approach we aim at a closer understanding of family formation and fertility as gendered processes, where the structure and the outcome of the processes may appear different, depending upon whether we focus on the couple or the individual as unit of analysis, and whether we see the process from a female or a male perspective.

In the present phase we analyse the family formation process from a male perspective, based on register data on life course events, activities and statuses for selected male birth cohorts. This analysis supplements the on-going analyses of the structural development of family formation and fertility as it appears from the female perspective through the on-going analysis of female cohorts mention in section I above (cf. note 4). One of the main advantages of the data base that are currently being build up for the male cohorts by information extracted from different registers, is that the information on tax credit for child support in combination with the information of registered childbirth, allows a symmetrical treatment of family formation and family dissolution at the individual level, irrespective of whether the man's first child was born within or outside marriage or within a cohabital union.

#### **Data**

The main data source is register data from the Norwegian Central Population Register, comprising event data of all registered births in Norway (recognised fatherhood), for selected male birth cohorts (every fifth birth cohort) born 1940 - 1980. Most children born in Norway have registered fathers. There are no regular published statistics of the share of the births where the father's identity is unknown or the mother refuses to give the identity of the father. According to the Division for Population Statistics at Statistics Norway, the share of births where father's identity is not known, has been relatively stable at a level around 1.0 to 1.5 per cent of total number of births over the later decades.

The population of analysis is composed of two sub populations: (A): All men born in Norway in the selected years and (B) Immigrants born in the selected years and resident in Norway December 31 2000. Demographic movements (in - and out migration and deaths) from birth to December 31 2000 are registered in the Central Population Register for population A. Information about in-migration (date) and citizenship status are recorded for population B. Table A1 in the Appendix gives the size of the original birth cohorts of population A and the aggregated reduction of the cohorts by accumulated deaths and registered out-migration by December 31 2000, as well as the size of population B by December 31 2000 for each birth cohort.

Linked information from registers will include:

- complete marital history (marriages, separations, divorces and death of spouse)
- educational history (completed education, by level), status by 1970 and 1980 (Census data), yearly up date from 1982. For men with register information on parental background <sup>xvii</sup> educational status of mother and father by 1970 (census data) will also be included.
- yearly income from work (pensionable income) from 1967
- information on tax credit for child support (yes/no) by year from 1970 - defines '*social fatherhood*' status - will include also cohabiting men who live with and support children under 18 years (could be own children or stepchildren).
- corresponding information on educational history, yearly income from work and tax credit for spouses and registered mothers

### **Analyses in progress**

In the initial stages we are dealing with the following events and statuses.

- (i) The transition into (registered) fatherhood by birth of first child, age, educational status and cohort
- (ii) Selection from registered fatherhood to social fatherhood at time of first birth (social fathers will here include cohabiting fathers at the year of first childbirth in addition to married fathers), by age, educational status and cohort. For births prior to 1970, information on social fatherhood status defined by tax credit is not available. However, as the number of children born to cohabiting parents was very low in Norway prior to 1970, our a priori assumption is that the distinction between births in marriage and births to unmarried parents gives adequate information on fatherhood status for births prior to 1970.
- (iii) Fatherhood status (registered and social) and parity status at age forty

Later on we will deal with the family development after the birth of the man's first child; including transitions to higher parities, as well as differential risks for family dissolution by parity for men that were social fathers (married or cohabiting) by the time of the first birth. This analysis will also contribute to the analysis at couple level, through the socio-economic information of data on spouses and registered mothers in addition to the information available for the men. In the second phase however, the focus of analysis will shift completely to the level of the couple. The plan is to carry out a corresponding analysis of family development in a population of couples comprising all married and cohabiting couples that had their first child together after January 1 1987<sup>xviii</sup>.

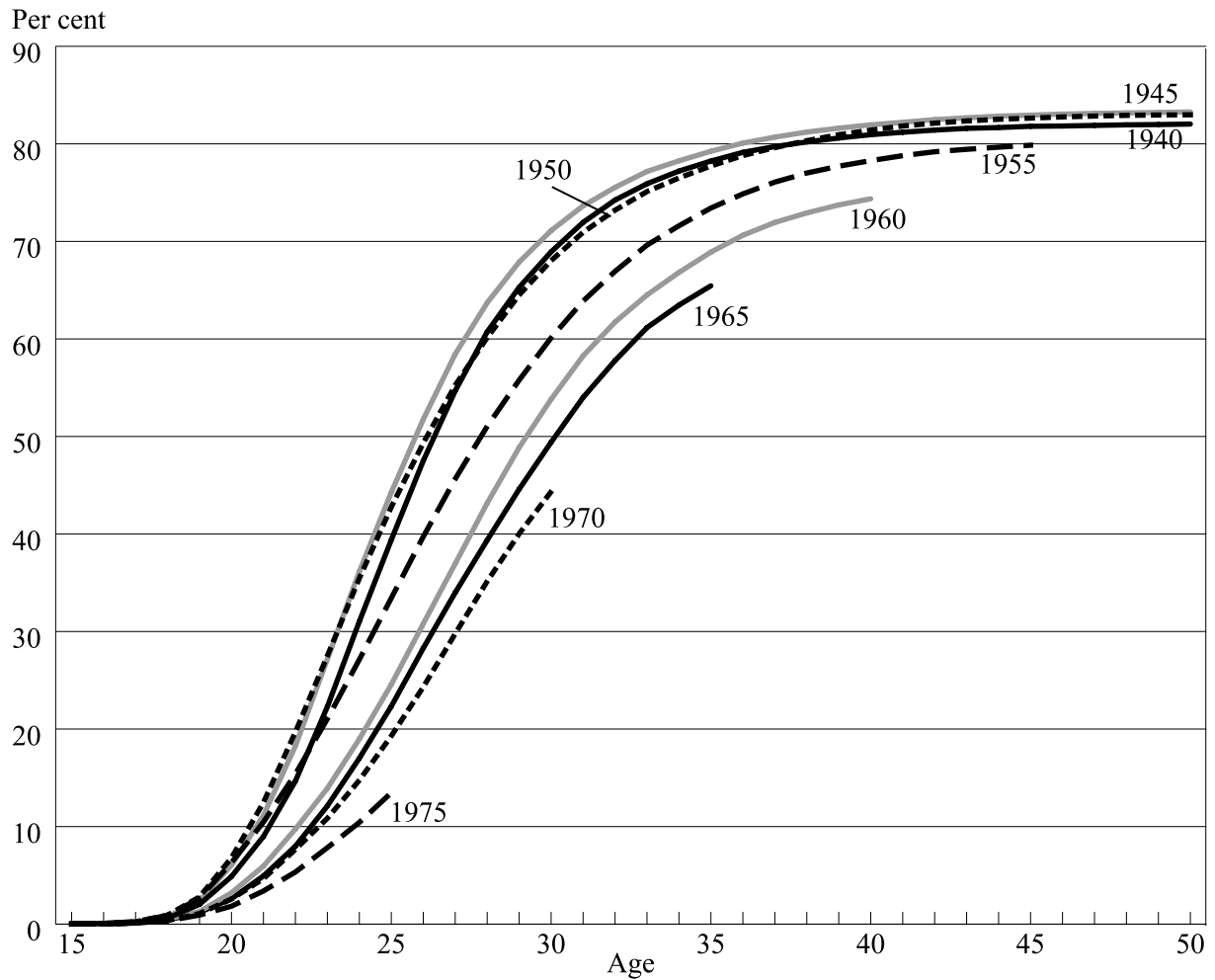
#### **Main hypotheses and preliminary findings from the early stages of analysis.**

Our main hypotheses for the analyses presently in progress are:

- (1) The transition into registered biological fatherhood have become more socially selective with women's postponement of first birth. This hypothesis rest on the assumption that women who have postponed family formation and childbirth over the period when they are building up their educational attainment and a foothold in the labour market, will tend to seek their partners among men that at least could be consider their equals with respect to education and position in the labour market. If this is the case, we would expect that "resirculation" of the more eligible men with dissolved cohabital unions or marriages for a second round of family formation, would be preferred to an "unused" man with poorer resources. Under this assumption, we would expect the selection effect transparent as a higher level of childlessness among men in the younger cohorts, and more differential patterns of childlessness among men according to educational level.
- (2) The social selectivity effect of registered biological fatherhood is further reinforced through the selection from registered fatherhood to social fatherhood (including married and cohabiting fathers) at the time of first birth and later development of family history by registered events (births, marriage/union stability or dissolution, and reestablishment in new marital or cohabital unions).

So far, we still are in the relatively time- consuming process of establishing the full data base for the project, and the results presented here can only give preliminary indications about the findings of a closer analyses of the full data base. We have also chosen to confine the results presented here to population A, the Norwegian born birth cohorts, as the initial analysis of the level of childlessness in the respective population/cohorts (Table A2 in the Appendix) showed that the aggregated number of

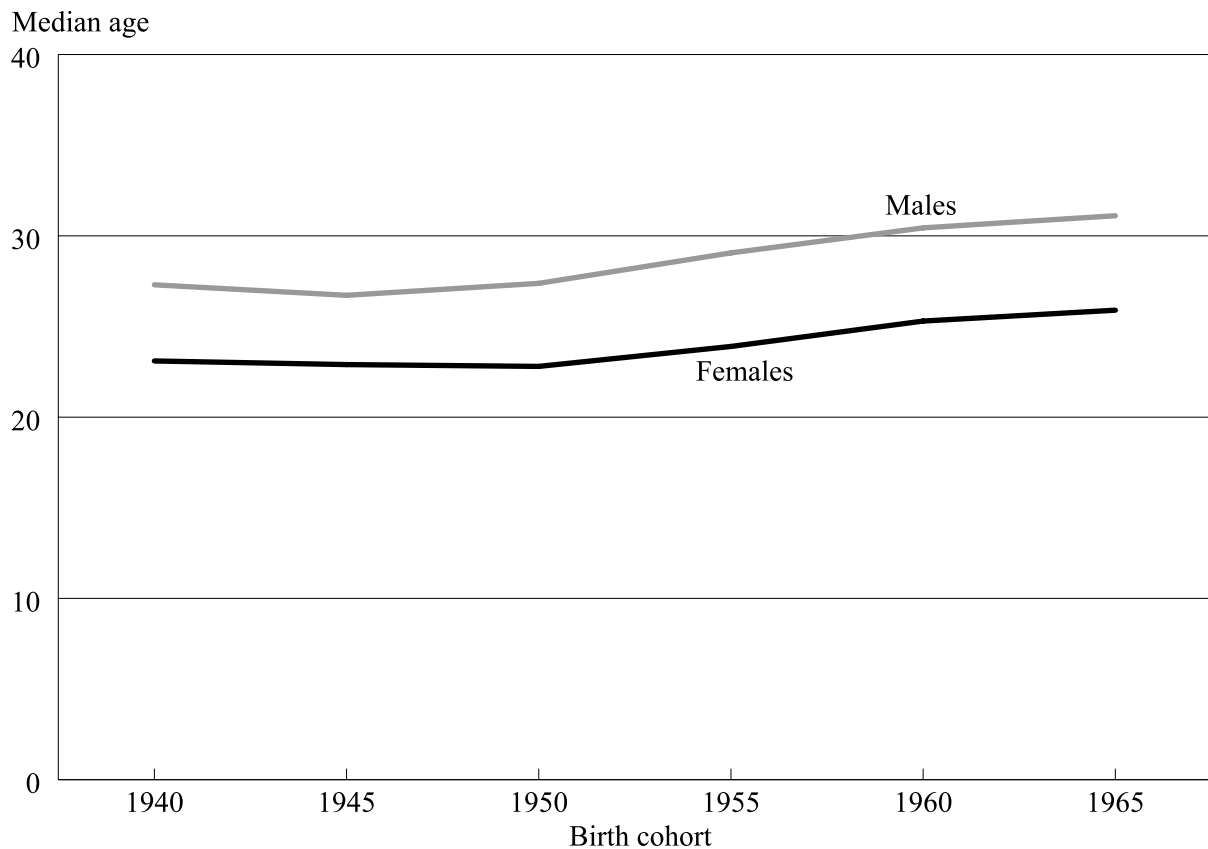
#### **Figure 4 Age at first childbirth (registered fatherhood). Selected birth cohorts, Norwegian born males**



Source: Population Statistics System, Norway.

registered births in Norway are much lower for the immigrant population than for the Norwegian born men. This indicates that the analyses of the transition to first birth for the immigrant population should wait until we can control for duration of stay in Norway and age at (last) immigration.

**Figure 5. Median age at first childbirth/registered fatherhood. Selected birth cohorts, females and males 1940 -1980.**

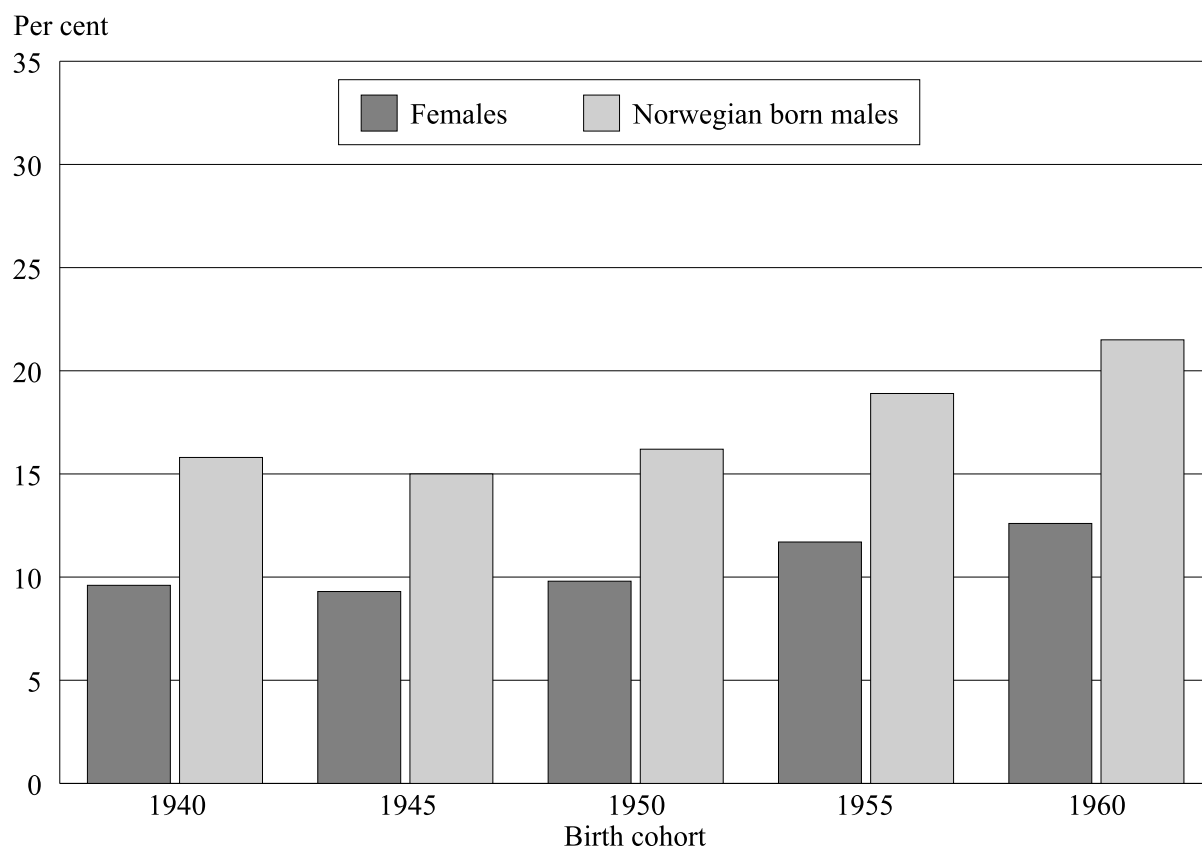


Source: Population Statistics System, Norway.

Figure 4 and figure 5 confirm that there is a pronounced trend towards postponed first birth also among the male cohorts. In addition, it is also worth noting that at the cohort level, the shift towards postponement of first birth became transparent earlier for the male birth cohorts than for females. Among the selected male cohorts in Figure 5, median age at first (registered) childbirth was at its lowest in the 1945 cohort, while median age at first childbirth in the female cohorts continued to decline until the 1950 cohort. For the female cohorts, the closer analysis at single cohort level shows that median age at first childbirth for the 1950 cohort (22.8 years), also marked an "all time low" for the declining period, as the first signs of a shift towards higher median age was present already in the 1951 cohort (Lappegård 2000). The difference in the timing of the shift between the male and the female cohorts, should by itself not be taken as a sign of a stronger selection effect for the male cohort following the transitional shift, but more as an effect of the fact that that women tend to find their partners among men that on average are two to three years older. However, for the postponing cohorts we also observe a shift towards larger differences between median age at first childbirth for females and males from the same birth cohorts, which could be taken as an indication of a stronger selection effect. For the 1945 cohort the gender differences in median age at first childbirth was down to 3.1 years, while this difference increased to a stable level around 4.0 years for the cohorts born from 1955 to 1965.

However, with regard to signs of a stronger selection effect in the male cohorts after the transitional shift, the level of childlessness at age forty is a better indicator of such selection. Although age does not represent the same biological bottom line for fatherhood as for motherhood, figure 4 shows that the share of new registered fathers after the age of forty was relatively low in the cohorts born 1950 and earlier. At present, we cannot exclude the possibility of a stronger catch-up effect for late registered fatherhood in the cohorts born 1955 and later. So far however, the development for 1955 cohort points towards a relative modest catch-up effect of late first childbirth between forty and forty-five. In this perspective it is reasonable to take the level of childlessness at age forty as an indicator of the development at intercohort level.

**Figure 6. Proportion childless at age 40. Selected birth cohorts 1940 - 1960, females and Norwegian born males.**



Source: Population Statistics System, Norway.

Figure 6 shows that the level at the proportion childless men at age forty has increased substantially more than the proportion childless women at the same age over the cohorts from 1945 to 1960. For the cohorts presented in figure 6, the 1945 cohort has the lowest level of childlessness at age forty, both for females and for males. While the share of childless women at age forty increased from 9.3 per cent in the 1945 cohort to 12.6 per cent in the 1960 cohort, the corresponding increase for the male cohorts was considerably stronger, from 15.0 per cent to 21.5 per cent in the 1945 and 1960 cohort respectively.

The presence of a stronger selection effect for registered fatherhood in the younger cohorts is more pronounced if we compare differences in median age at first childbirth and proportion childless at age forty, by educational status in 1998 (highest level of completed education) in respectively Table 1 and Table 2. Again, the presence of a selection effect by educational status is more pronounced with respect to the level of childlessness at age forty than for the differences in median age at first childbirth. Table 1 shows that apart for the development for the cohort share with education at compulsory level or lower, the structural differences in median age at first childbirth has not changed much from the 1940 to the 1965 cohort. Within all educational groups the median age was at its lowest in the 1945 cohort. The trend towards postponed births is present within all educational groups, and the differences in median age between the groups with relatively short educational attainment (group II) and the group with educational attainment at the highest level (VI) has not changed much from the 1945 cohort to the 1965 cohort (from 2.7 to 3.0 years). The development for the group of men with only compulsory school (or lower), show however a much slower transition to fatherhood in the younger cohorts than in the older cohorts.

**Table 1. Median age at first registered childbirth by educational status<sup>1</sup> (1998) and birth cohort. Norwegian born males 1940-1970**

Birth cohort	Educational status (1998)							N <sup>2</sup>
	I	II	III	IV	V	VI	All	
1940	26.5	25.7	25.8	26.6	26.9	27.9	26.3	23 519
1945	25.7	24.9	25.2	26.5	26.6	27.6	25.8	33 839

1950	26.1	25.3	25.4	27.2	27.5	28.5	26.3	35 181
1955	28.5	26.7	26.8	28.8	29.3	30.1	27.9	36 520
1960	30.5	28.3	28.3	30.0	30.2	30.6	29.2	36 879
1965	31.6	28.8	28.9	30.9	31.3	31.8	29.9	39 162
1970	-	29.6	-	-	-	-	-	37 156

<sup>1</sup> Educational status - highest level of education registered by October 1, 1998:

I: Compulsory or lower, including unspecified education

II: Junior high school (1 year high school or short vocational training)

III: Senior high school or vocational training (2-3 years after compulsory school)

IV: Short university or college education (1-2 years after completed high school)

V: Education at college level, lower professional education (3-4 years after completed high school)

VI: University education at high level (5+ years after completed secondary education)

<sup>2</sup> Size of birth cohort by January 1, 2001 (deaths and outmigrated excluded).

The differences between educational groups are more pronounced when we turn to the level of childlessness at age forty in Table 2. Table 2 shows that the level of childlessness at age forty is considerably higher in the groups with low educational attainment than for men with educational attainment at the level of secondary school and higher. However, table 2 also shows that this selection effect already was present in the 1940 and the 1945 cohort. In these cohorts, the groups with relatively short education also comprised a considerably higher share of the total cohort than in the 1960 cohort. Even though the increase in the level of childlessness from the 1940 cohort to the 1960 cohort is considerable stronger for men in educational group II than for men in the groups with educational status at level III or higher, we should not draw any conclusions with regard to the level of selectivity in the transition to registered fatherhood in younger cohorts compared to the older, until we have looked closer into the differences at intracohort level.

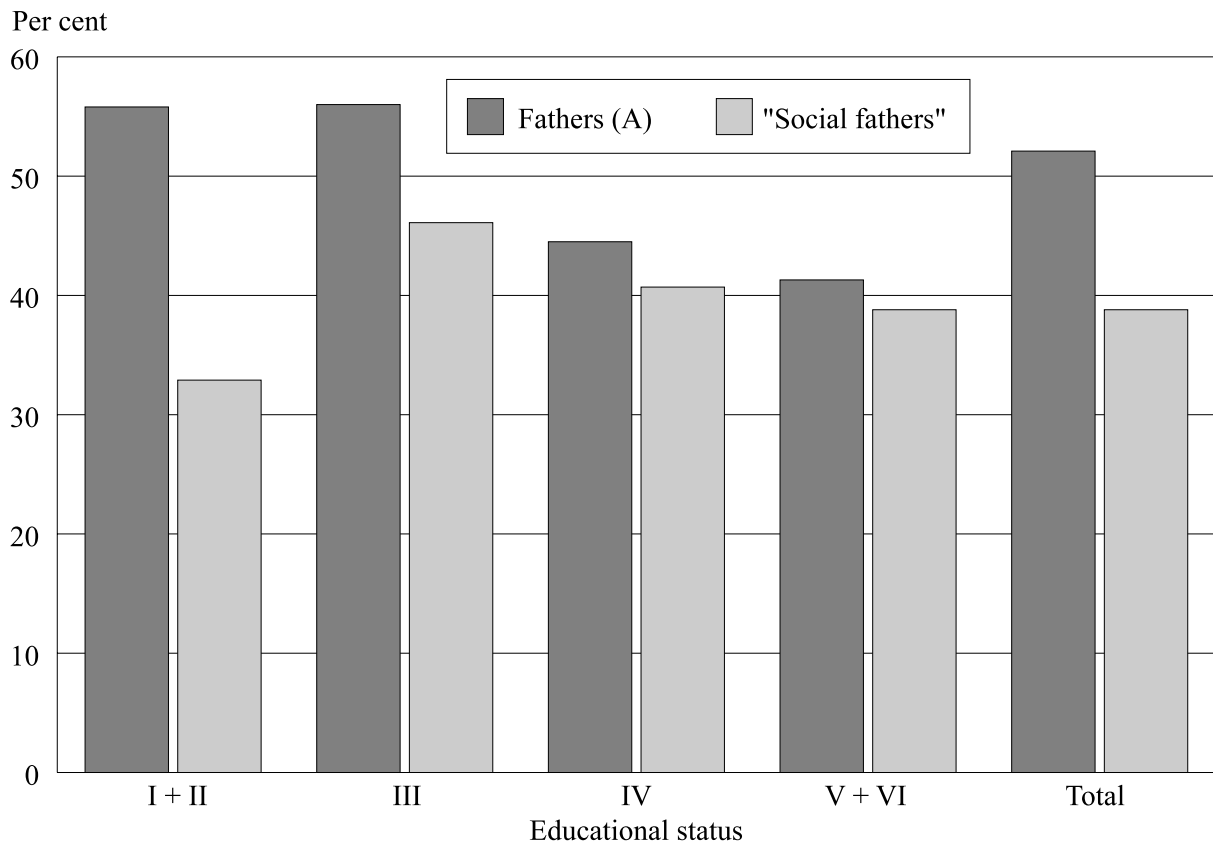
**Table 2. Proportion childless (no registered births) at age 40 by educational status<sup>1</sup> and birth cohort. Norwegian born males 1940-1960**

Birth cohort	Educational status						All
	I	II	III	IV	V	VI	
1940	21.7	14.9	11.5	10.9	10.2	11.1	15.8
1945	20.6	15.7	11.9	12.2	11.3	12.4	15.0
1950	20.6	17.4	14.0	15.0	14.4	12.7	16.2
1955	24.9	21.9	15.7	18.1	17.3	16.8	18.9
1960	26.3	25.8	19.5	20.3	19.3	18.0	21.5

<sup>1</sup> See note 1, table 1.

However, returning to the hypothesis of an increased social selectivity effect following the increased economic autonomy of women in the younger cohorts, our a priori expectations were that this selectivity effect should be even stronger with respect to the transition to social fatherhood and the stability in this status after the transition to registered fatherhood. This hypothesis had also preliminary support in the findings from the project "*Life chances in the melting pot*" referred to in section II, where the income differences between the social fathers and the non-social fathers were considerably higher for the men with relatively short education than for men with higher educational attainment. In this case, we could not compare the share of social fathers within each educational group with the shares of registered (biological) fathers at corresponding ages. In the present project, this hypothesis will be looked closer into at intra-cohort and inter-cohort level. So far, we have not completed the linking of the individual birth records for each of the cohorts to the records of income history and information of tax credit from the Tax and Income Register. However, since both the present project and the former project are based on complete cohorts, the data from the former project allow us to compare the social father shares registered for the 1965 cohort at age 30 by educational status with the share of (registered) biological fathers by educational status at the same age, if we collapse the more detailed educational classification in to the categories used in the former project (presented in Figures 3a - 4b)

**Figure 7 Proportion fathers and "social fathers" by educational status at age 30, birth cohort 1965**



Source: Population Statistics System, Norway.

The distributions in figure 7 demonstrate a considerable stronger accumulated selection from the group of biological registered fathers to social fatherhood for the groups with relatively low educational attainment than for registered fathers with higher educational attainment. Although this observation is limited to one cohort at age 30, it gives strong support both to the hypothesis presented above and to tentative discussion and conclusions based on the results from the project "*Life chances in the melting pot*" presented in Section II. It also demonstrates that closer analysis of the family formation and family dissolution for men probably will contribute both to a broader understanding of these processes as they appear from the female perspective, as well as of the role of these processes in social diversification in interaction with policy effects.

## VI. Discussion and tentative conclusions

An analysis carried out at aggregate level has strong limitations with respect to conclusions about processes at micro level. In this respect, several of the conclusions drawn from the project "*Life chances in the melting pot*" must be regarded as tentative and followed up by closer analysis at the micro level. Generally, the findings from this project confirmed that educational attainment and family formation/status are decisive determinants of earned income for both genders. Earned income increases with higher levels of educational attainment for both genders, but considerable more for young males than for young females, also when childless women and men at comparable levels of educational attainment/age were compared.

The results do not render reason to great optimism for a rapid acceleration of the gender equality process in the labour market. On one hand, the substantial income differences between men and women with low educational attainment indicate that educational attainment above the minimum level probably is more important for young women than for young men with regard to getting foothold in the labour market. In this respect, we may safely conclude that educational attainment matters. On the other hand - that women with high educational attainment at average appear to have the greatest relative income differences compared to men at the same educational level, is another indication that there still are some distances to walk before gender equality is reached within the Norwegian labour market. Gender equality of educational attainment is a necessary condition for gender equality in the labour market, but certainly not sufficient by itself. It is a reasonable hypothesis that these differences by closer analysis at the micro level, probably to a substantial extent will be explained by gender structures and the

gender segregation of the Norwegian labour market. Women with college and university education are to a great extent employed in the (relatively low-paid) public sector, whereas well educated men to a much larger extent work in the private sector. That gender differences of income at present are most disadvantageous for well-educated women with at least four years of university education, give signals both about achievements for women with secondary and college education, and about challenges that still prevail.

### ***Dual breadwinner responsibilities -but differential patterns still prevail***

Family formation and family obligations still act differently on the labour market behaviour and income potential of young men and young women. At all levels of educational attainment, men with responsibility for support of children have considerable higher average incomes than men without such responsibilities, whereas mothers earn considerable less than non-mothers, apart from non-mothers with only compulsory education. The structure of these differences indicates that the educational attainment/family formation/labour market behaviour interaction processes act differently for the two genders. The differences in average earned income for fathers relative to the income of non-fathers are on average larger for men with low educational attainment than for men with high educational attainment, whereas the differences in average earned income between mothers and non-mothers decrease with increased educational attainment.

### ***Increased autonomy for women- empowerment at family level***

The present state of the process indicates that the gains of the gender equality process so far have been relatively meagre with respect to income returns in the labour market. However, although patterns of traditional gender division of work still has considerable impact on the participation in the labour market, there are also signs that point towards stronger empowerment of women at the family level. Even if gender equality in the labour market still may be some distances away, the strong selection effects for social fathers indicate that the power to select partners give women considerable autonomy. The results from the present analysis indicate that the welfare state as an alternative provider for women has contributed to this autonomy, especially for women with relatively low educational resources. It is however, also reasonable to assume that the empowerment of women at family level has increased parallel to women's increased participation in the labour market and increased provider responsibility in the family. The preliminary results from the recently launched project reported in section III support this assumption, even though the results so far only have dealt with results of processes at an aggregate level. So far, these findings must be taken as indications that men on average may expect gains from a stronger involvement at family level. In this respect, the "second phase" of the gender equality process may be closer at hand than indicated by the present gender differences in income development.

By and large however, the preliminary findings indicate that the family formation process is very important for the individual shaping of life chances and formation of opportunity structures for the later life course. Moreover, the findings also indicate that the interaction between individual resources and the diversification of family formation patterns also contribute to shaping more intricate patterns of social diversification with respect to class and gender in the present young generations. One way or the other, this increased diversification also represents a considerable challenge at the political level in the years to come, not in least in a country where distributional concerns and reduction of class differences still are central issues at the political agenda.

## **References**

- Becker, G. S. (1964): *Human Capital. A theoretical analysis with special reference to education*, Columbia University Press (for the N.B.E.R.), New York
- Becker, G. S. (1981): *A Treatise on the Family*, Harvard University Press, Cambridge
- Blau, P. M. and O. D. Duncan (1967): *The American Occupational Structure*, Wiley, New York
- Borchorst, A. (1994): "Welfare State Regimes, Women's Interests and the EC" in Sainsbury, D. (ed): *Gendering Welfare States*, Sage Publications, p. 26- 44
- Borchorst, A. and B. Siim (1984): *Kvinder i velferdsstaten - mellem moderskap og lønarbejde gennem 100 år. Serien om kvindeforskning nr. 16*, Aalborg Universitetsforlag
- Brandth, B. and E. Kvande (1999): Refleksive fedre, in Jensen, A.M., E. Backe-Hansen, H. Bache-Wiig and K. Heggen (eds): *Oppvekst i barnets århundre - Historier om tvetydighet*, Ad. Notam Gyldendal, Oslo: 81-97
- Brunborg, H. and S.-E. Mamelund (1994): *Kohort-og periodefruktbarhet i Norge 1820-1993*, Reports 94/27, Statistics Norway
- Bumpass, L.: "What's happening to the family? Interactions between demographic and institutional changes", *Demography*, 27: 483-498

- Coleman, J. S. (1971): *Resources for Social Change*, John Wiley & Sons, New York
- Dahl, T. S. (1982): «Kvinnens rett til penger - et husmorrettslig perspektiv» in Haukaa, R., Hoel, M. and H. Haavind (eds.): *Kvinneforskning: bidrag til Samfunnsteori*, Scandinavian University Press, Oslo.
- Demeny, P. (2000): Policy interventions in response to below-replacement fertility, in Special Issues 40/41 1999, *Population Bulletin of the United Nations*, (UN 2000): 183-196
- Easterlin, R. (1976): "The conflict between aspirations and resources", *Population and Development Review*, 2: 417-426
- Easterlin, R. et al. (1990): "How have American baby boomers fared? Earnings and economic well-being of young adults", *Journal of Population Economics*, 3:277-290
- Easterlin, R et al. (1991): "Private materialism, personal self-fulment, family life and public interest: the nature, effects and causes of recent changes in the values of American youth", *Public Opinion Quarterly*, 55: 499-533
- Esping-Andersen, G. (1990): *Three Worlds of Welfare Capitalism*, Princeton University Press, Princeton.
- Eurostat(1998): *Statistics in Focus: Population and social conditions*, 1998/9
- Hernes, H. M. (1982): "Offentliggjøring av familien" in Runa Haukaa, Marit Hoel og Hanne Haavind (eds.): *Kvinneforskning: Bidrag til samfunnsteori*, Scandinavian University Press, Oslo
- Hernes, H. M. (1984): "Women and the Welfare State. The transition from private to public dependence" in Harriet Holter (ed.): *Patriarchy in a Welfare Society*, Scandinavian University Press, Oslo
- Hernes, H. M. (1987): *Welfare State and Woman Power. Essays in State Feminism*, Scandinavian University Press, Oslo.
- Hoem, B. (2000): Utan jobb -inga barn? Fruktamhetsutvecklingen under 1990-talet, in SOU 2000:37, Socialdepartementet, Stockholm
- Hoem, B. and J.M. Hoem (1988): "The Swedish family - Aspects of contemporary developments" in A. Cherlin and F. Furstenberg (eds): *The European Family*, special issue of *Journal of Family Issues*, 9: 397-424
- Hoem, B. and J.M. Hoem (2000): Fertility Trends in Sweden up to 1996, in Special Issues 40/41 1999, *Population Bulletin of the United Nations*, (UN 2000): 318-333
- Hoem, J. M. (1993): Public policy as the fuel of fertility. *Acta Sociologica* 36: 19-31
- Jäntti, M. and C. Sundquist (1996): Why do married men and unmarried women earn more? Empirical evidence from Finland, Paper to X. Annual meeting of the European Society for Population Economics, Uppsala, June 1996
- Jensen, A. M. and S. E. Clausen (1997): *Barns familier. Samboerskap og foreldrebrudd etter 1970*, Prosjektrapport nr. 21, Norsk institutt for by- og regionforskning (NIBR), Oslo
- Jonung, C. (1979): Konsuppdelingen på arbeidsmarknaden" i *Kvinnens levekår*, en seminarrapport, NAVFs sekretariat for kvinneforskning, NAVF, Oslo
- Jonung, C. (1983): *Patterns of Occupational Segregation by sex in the Labor Market*, Report 1983:89, University of Lund, Lund, Sweden, also printed in Schmid, G. (ed.): *Discrimination and Equalization in the Labor Market: Employment Politics for Women in Selected Countries*, Wissenschaftszentrum Berlin
- Jonung, C. and B. Thordarson (1980): "Women returning to work. Sweden", in Alice Yohalem, (eds): *Women Returning to Work*, Allenheld, Osmun, Montclair
- van de Kaa, D.J. (1987): Europe's second demographic transition", *Population Bulletin*, 42 (1): 1-59
- Kjeldstad, R. (1998): *Enslige forsørgere: Forsørgelse og levekår før og etter overgang til en ny livsfase*, Social and Economic Studies (SES), 100, Statistics Norway
- Kjeldstad, R. (2000): Employment Strategy Policies and Lone Parenthood: The Case of Norway, in *Social Politics*, Vol 7: 343-371
- Kjeldstad, R. and K. Skrede (1988): Inntekt og overføringer: Mot økt likhet mellom kvinner og menn?", in Kjeldstad R., Lorentzen H. and A. Ringen (eds.): *Fra ansvarsdeling til delt ansvar?* INAS-rapport 1988:5: 113-148
- Koren, C. (1997): *Trygd og omsorgsarbeid*, NOVA Report 17/97, NOVA, Oslo
- Kravdal, Ø. (1994): "The Importance of Economic Activity, Economic Potential and Economic Resources for the Timing of First Birth in Norway", *Population Studies*, 48: 249-267
- Kravdal, Ø. and T. Noack (1988): *Skilsmisser i Norge 1965 -1968. En demografisk analyse*, Reports 88/66, Statistics Norway
- Lappegård, T. (1998): 'Større ulikheter i barnetall' i *Samfunnsspeilet*, 12(5), Statistics Norway: 42-48
- Lappegård, T. (2000): New fertility trends in Norway, [www.demographic-research.org/Volumes/Vol2/3](http://www.demographic-research.org/Volumes/Vol2/3)
- Leira, A. (1989): *Models of Motherhood. Welfare State Policies and Everyday Practices*, Report 7:89, Institute for Social Research, Oslo

- Leira, A. (1991): "Mor og far - stat og marked" i Haukaa, Runa (ed): *Nye Kvinner, nye menn*, Ad Notam, Oslo
- Leira, A. (1992): *Welfare States and Working Mothers. The Scandinavian Experience*, Cambridge University Press, Cambridge England
- Leira, Arnlaug (1993): "The "Woman-Friendly" Welfare State? The case of Norway and Sweden", in Lewis J. (ed) *Women and Social Policy in Europe*, Edward Elgar Publishing Ltd, Aldershot, England
- Leira, Arnlaug (1998): "Caring as Social Right: Cash for Child Care and Daddy Leave", *Social Politics*, Vol 5, (Fall 1998)
- Lewis, J. (1992): "Gender and the Development of Welfare Regimes", *Journal of European Social Policy*, vol 2, No 3
- Lewis, Jane (ed) (1993): *Women and Social Policy in Europe*, Edward Elgar Publishing Ltd, Aldershot, England
- Lesthaeghe, R. (1995): "The second demographic transition - An interpretation" in K. Oppenheimer and A.-M. Janssen (eds.): *Gender and family change in industrialized countries*, Oxford: Clarendon Press, pp 17-62
- Lesthaeghe, R. (1997): Imre Lakatos' views on theory development: applications to the field of fertility theories. Paper presented at the Annual Meeting of the Population Association of America, Washington DC, March 1997
- Lesthaeghe, R. and D. Meekers (1986): "Value changes and the dimensions of familism in the European Community", *European Journal of Population*, 2: 225-268
- Lesthaeghe, R. and J. Surkyn (1988): "Cultural dynamics and economic theories of fertility change", *Population and Development Review*, 14: 1- 45
- Mamelund, S.E., H. Brunborg and T. Noack (1997): *Skilsmisser i Norge 1886-1995 for kalenderår og ekteskapskohorter*, Reports 97/19, Statistics Norway
- Mincer, J. (1958): "Investment in Human Capital and Personal Income Distribution", *Journal of Political Economics*, 66
- Noack, Turid (1996): "Familieutvikling i demografisk perspektiv", in B. Brandt and K. Moxnes (eds): *Familie for tiden. Stabilitet og endring*, Tano-Aschehoug, Oslo: 11-29.
- Noack, T. and L. Østby (1981): *Fruktbarhet blant norske kvinner. Resultater fra Fruktbarhetsundersøkelsen 1977*, Social and Economic Studies (SES), 49, Statistics Norway
- Noack, T. and L. Østby (1996): *Fertility and family surveys in countries of the ECE Region: Standard Country Report Norway*, Economic Studies No. 10 a, Economic Commission for Europe, United Nations, Geneva
- OECD (1998): *Economic Outlook*, OECD, Paris, June 1998
- Preston, S. (1986): "Changing values and falling birth rates", *Population and Development Review*, 12, supplement
- Ramsøy, N.R. (1978): Do the Well-educated Still Defer Gratification? Memorandum No 17 from the Occupational History Study, Institute of Applied Social Research (INAS), Oslo
- Rein, M. (1985): *Social Policy and Labor Markets: The Employment Role of Social Provision*. Paper presented at the IPSA World Congress, Paris 1985 (Session III.5.1: The Welfare State in perspective)
- Rønsen, M. (2001): Fertility and family policy in Norway - Is there a connection? Paper presented at the IUSSP Seminar on International Perspectives on Low Fertility: Trends, Theories and Policies, Tokyo, Japan 21-23 March 2001
- Sainsbury, D. (ed) (1994): *Gendering Welfare States*, London, Sage Publications
- Sainsbury, D. (1999): "Gender and the making of the Norwegian and Swedish welfare states", in Palier, B. and D. Bouquet (eds.) (1999): *Comparing Social Welfare Systems in Nordic Countries and France*, MIRE Vol 4, Maison des Sciences de l'Homme, Ange-Guépin, Nantes: 153-168
- Skevik, A. (1998): *Mothers, carers, wives and workers: Lone mothers in Norwegian Social Policy*, in Palier, B. and D. Bouquet (eds.) (1999): *Comparing Social Welfare Systems in Nordic Countries and France*, MIRE Vol 4, Maison des Sciences de l'Homme, Ange-Guépin, Nantes: 223-240
- Skrede, K. (1984): *Occupational and Industrial Segregation in the ECE Region, Part I and II* (Papers prepared as consultant to Economic Commission for Europe), UN, Geneva (ECE/SEM 6/R4), 1984
- Skrede, K. (1986): "Gifte kvinner i arbeidslivet", in L. Allén, N.R. Ramsøy and M. Vaa (eds.): *Det norske samfunn III*, Gyldendal, Oslo, pp 145-168
- Skrede, K. (1993): «Family Policy and the Costs of Reproduction» (mimeo.) Paper for Conference on Welfare States in Transition, Research Committee 19 (ISA) on Poverty, Social Welfare and Social Policy, Oxford, 9-12 September 1993

- Skrede, K. (1994a): "Kvinnerens utdanning og yrkesliv" in I. Frønes. and A.Hompland (eds): *Den nye barne- og familieboke*, Scandinavian University Press, Oslo, pp 67 -79
- Skrede, Kari (1994b): *Turbulens eller stabilitet? Levekårsendringer 1980-1990 i et livsløps- og generasjonsperspektiv*. INAS report 1994-1, Oslo
- Skrede, K. (1995): "The Nordic Model for Family Welfare- Major Trends and Present Challenges" i B. Arve-Parès (red): *Building Family Welfare - Contributions from a Seminar on Family, Gender and Welfare Policies in the Nordic Countries*, Sosialdepartementet/ Norstedts, Stockholm, pp: 127-145
- Skrede, K. (1999a): "Generasjonsforskjeller i levekår" i E. Birkeland (red): *Forskjeller i levekår*. Hefte 2: *Levekår og helse*, Notater 23/99, Statistics Norway: 83-106
- Skrede, K.(1999b): "Drømmen, dyden og belønningen" in G.E. Birkeland, A-K. Broch-Due and A. Nilsen (eds.): *Ansvar og protest. Kjønn, klasse og utdanning i senmoderniteten*, Institute of sociology, University of Bergen, Bergen: 281- 308
- Skrede, K (1999c): Gender Equality in the Labour Market - still a Distant Goal?, *Documents 1999/20*, Statistics Norway
- Skrede, K.(1999d): "Shaping gender equality - the role of the state: Norwegian experiences, present policies and future challenges", in Palier, B. and D. Bouget (eds.) (1999): *Comparing Social Welfare Systems in Nordic Countries and France*, MIRE Vol 4, Maison des Sciences de l'Homme, Ange-Guépin, Nantes: 169-199
- Skrede, K(2000): Low income heterogeneity in early adulthood - who are the losers? (mimeo) Paper to X Nordic Social Policy Seminar, Oslo 17-19 August 2000
- Skrede, K.(2001a): Gender structures, breadwinner models and demographic change in a generational perspective: Approaching the second phase at the turn of the millennium? (mimeo) Paper to 14th Nordic Demographic Symposium, Tjøme, Norway 3-5 May , 2001
- Skrede, K. (2001b): *Levekår i støpeskjeen. Utvikling i utdanning, familiedannelse og materielle levekår i perioden 1990 - 1995 for fødselskullene 1961- 1975* Work in progress, to be published in the series Statistical Analyses, Statistics Norway
- Skrede, Kari and Mette Ryen (1997): Educational attainment, family formation and income differences in early adulthood - still a gendered melting pot for younger generations? Paper presented at the European Society for Population Economics (ESPE), 11<sup>th</sup> Annual Meeting, June 1997, Colchester
- Skrede, K. and A. Sørensen (1983): "På spor av en ny kvinnerolle?" in K. Skrede and K. Tornes (eds.): *Studier i kvinners livsløp*, Scandinavian University Press, Oslo : 198- 240
- Statistics Norway (1998a): *Women and Men in Norway*
- Statistics Norway (1998b): *Social Survey 1998*, Statistical Analyses 22
- Statistics Norway (2000): *Statistical Yearbook of Norway 2000*
- Sundt, E. (1967): *Om giftermål i Norge*, Scandinavian University Press, Oslo (1. edition 1855)
- Sundt, E. (1976): *Om Sædeligheds-tilstanden i Norge*, Gyldendal, Oslo (1. edition 1957)
- Sz. Oláh L.(1996): *The Impact of Public Policies on the Second-Birth Rates in Sweden: A Gender Perspective*. Stockholm Research Reports in Demography No. 98, Stockholm
- TemaNord (1999:514): *Women and Men in the Nordic Countries. Facts and figures 1999*, Nordic Council of Ministers, Copenhagen
- Terum, L.I. (1993): *Stønad, samliv og sjølvforsørging. Om korleis eineforsørgarane brukar overgangsstønaden frå folketrygda*. INAS-rapport 93:1. Oslo: Institutt for sosialforskning
- Thornton et al. (1987): "The influence of the family on premarital sexual attitudes and behavior", *Demography* 24: 323-340
- United Nations(1980): *The Economic Role of Women in the ECE Region*, United Nations Publications, Sales No. E.80. II.E.6., New York
- United Nations(1986): *The Economic Role of Women in the ECE Regional. Developments 1975/85*
- United Nations (1999): *Below Replacement Fertility*. United Nations Publications, Sales No. E.99.XIII.13, New York



**Table A1. Total population Norwegian born and immigrants by December 31 2000**

Year	A. Norwegian born						B. Immigrants, resident in Norway by Dec 31 2000			Total population A+B		
	Cohort size at birth	Deaths (accumulated by Dec 31 2000)		Out-migrated (by Dec 31 2000)		Cohort size by Dec 31 2000	Per cent of birth cohort	Country at birth <sup>1</sup>			Total	Per cent B/(A+B)
		Total	Per cent	Total	Per cent			I	II	Total size		
1940	27 238	2 619	9.6	1 100	4.0	23 519	86.3	3 174	929	4 103	27 622	14.9
1945	37 561	2 560	6.8	1 162	3.1	33 839	90.1	4 954	1 195	6 149	39 988	15.4
1950	37 640	1 791	4.8	668	1.8	35 181	93.5	4 970	1 912	6 882	42 063	16.4
1955	38 670	1 420	3.7	730	1.9	36 520	94.4	4 766	2 157	6 923	43 443	15.9
1960	39 169	1 391	3.6	899	2.3	36 879	94.2	4 665	3 150	7 815	44 694	17.5
1965	41 880	1 612	3.8	1 106	2.6	39 162	93.5	4 076	3 503	7 579	46 741	16.2
1970	39 311	1 244	3.2	911	2.3	37 156	94.5	3 031	2 782	5 813	42 969	13.5
1975	33 389	772	2.3	614	1.8	32 003	95.8	2 310	2 130	4 440	36 443	12.2
1980	29 593	451	1.5	385	1.3	28 757	97.2	1354	347	1 701	30 458	5.6

<sup>1</sup> Country at birth:

I: Western Europe, USA, Canada, Australia and New Zealand

II: Other countries



**Table A2. Proportion without registered births (in Norway) at age forty by birth cohort and country at birth. Male birth cohorts 1940-1960**

Birth cohort	Norwegian born	Country group I <sup>1</sup>	Country group II <sup>1</sup>	Total
1940	15,8	75,3	49,1	24,3
1945	15,0	69,6	48,2	23,7
1950	16,2	71,6	38,9	25,0
1955	18,9	72,1	38,4	26,9
1960	21,5	70,7	38,3	29,1

<sup>1</sup> Country at birth:

I: Western Europe, USA, Canada, Australia and New Zealand

II: Other countries

<sup>i</sup> The prime objective of the reform was to compensate parents that did not receive public support through use of publicly supported kindergartens with a lump sum of money corresponding roughly to the support from the state per child in the kindergartens. The transfer came into force from August 1, 1998 for children between one and two years of age and was extended to the two to three year olds from January 1 1999.

<sup>ii</sup> Data from the Norwegian Medical Birth Register indicate that the strong growth of births for unmarried mothers from the mid-1980s are explained by the growth in cohabiting mothers. At present close to fifty percent of annual births are by unmarried mothers. The share of mothers not reporting that they are cohabiting with the father at the time of the birth has remained relatively constant around ten per cent of the annual number of births from the late 1980s to the mid 1990s (Noack 1996).

<sup>iii</sup> From 1987 the total duration of the parental leave at childbirth has been extended several times. With the 1993 extension (from 33 weeks to 42 weeks with income replacement at approximately 100 per cent (up to a given level of income)), four weeks of the leave was reserved for the father. See Koren (1997) for details.

<sup>iv</sup> The questions are focused in on-going research projects at Statistics Norway, especially in the recently started project "Fertility, education and social change : Increased diversity in life course strategies", which analyse the observed trend towards increasing diversification of fertility patterns at individual level in younger cohorts of women (Lapegård 1998).

<sup>v</sup> Several of the contributions in this Special Issue (40/41/1999) of the Population Bulletin on Below Replacement Fertility raise this issue, in particular Demeny: pp 183-166, Hoem and Hoem pp: 318-334 and the report from the expert group meeting on below replacement fertility: pp 4 -30.

<sup>vi</sup> At present women contributes with approximately one third of the total income in families with children measured at aggregate level, whereas men contribute with the other two thirds. Women's lower wage levels relative to men explains part of these differences in income, but larger shares of part time work among women is the most important factor behind the income differences (Skrede 1994b).

<sup>vii</sup> From 1.1. 1998 the normal duration of the transitory period is limited to three years, alternative five years under education. It is likely that these policy changes will have implications for the processes discussed in this paper. However, as the data analysis in the paper refer to the period prior to these changes, we do not discuss assumptions about the effects of the changes here.

<sup>viii</sup> Data on cohabital unions in general can only be collected through surveys. There are however, work in progress on the possibility to utilise reported information in the Medical Birth Register of Norway about cohabital status of unmarried mothers by the time of the birth of the child, cf. the paper by Noack et al. to the 14 Nordic Demographic Symposium 2001.

<sup>ix</sup> Adopted children are treated as biological children; both in the Tax and Income register and the Birth register. This is appropriate as long as the focus is on the social effects of motherhood.

<sup>x</sup> The child benefit may be divided among parents not living together if they have joint custody for a child, but in that case both parents will be registered as recipients. This implies that mothers will be eligible for this transfer as long as they have at least one child under 16 in their care.

<sup>xi</sup> The alimony or paternity order paid will however, be deducted from the contributor's income prior to taxation and be subject to taxation on the recipient's hand (who also will receive the fixed deduction for child support).

<sup>xiii</sup> Technically speaking the cohort share of social fathers will also be reduced by age, as the share of men supporting children less than 18 years will decrease with the ageing of the cohort. Of course, we cannot exclude the possibility that young men in their early thirties also may experience this type of "natural" transition out of

the group of social fathers, as support of stepchildren also qualify for tax deduction. It is however, a realistic assumption that this type of "natural" outflow does not contribute substantially to the outflow from shares of social fathers for men at the stages of the life course in focus of this analysis.

<sup>xiii</sup> For future analyses, information from the Medical Birth Register may be utilised for a closer analysis of these processes, cf. also note 2 above.

<sup>xiv</sup> The average age difference between first married (previously unmarried) women and men have been relatively stable around 2.6 years from the mid-1980's (Statistics Norway 2000, table 101).

<sup>xv</sup> The share of single mothers measures as share of all families with children under 18, was respectively 18.4 and 19.0 per cent in 1993 and 1995 (Statistics Norway 1998b).

<sup>xvi</sup> The three indices are formally defined as:

$$(i) : g_{diat} = 100 * R_{non-mothers, iat} / R_{men, not social fathers, iat}$$

$$(ii) : m_{liat} = 100 * R_{mothers, iat} / R_{non-mothers, iat}$$

$$(iii) d_{piat} = 100 * R_{social fathers, iat} / R_{men, not social fathers, iat}, \text{ where}$$

i (educational groups) = I, II,.....VI

a (age) = 18, 19,....., 32 (or 34, dependent on year of observation)

t (year of observation) = 1993, 1995

R = average gross income from work and income substitute, ("toppskattgrunnlaget")

<sup>xvii</sup> Information on parents' educational status will be available for all men that either were born after 1.1. 1964, or were living with their parents by this date, which marks the establishment date of the Population Register of Norway. We expect the coverage of parental background to be reasonably good for the cohorts born 1950 and later.

<sup>xviii</sup> From January 1 1987 cohabiting parents with at least one common child are registered as a separate family type in the Population Statistics System of Norway. This allows a symmetrical analysis of family formation by register data for married and cohabiting couples that had their first common child after this date.