

Fertility and Family Policies in Nordic Countries, 1960-2000

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This paper examines fertility changes and family policies from 1960 to 2000 in four Nordic countries--Sweden, Denmark, Norway, and Finland. Specifically, the paper first examines the patterns of fertility changes by looking at changes in: (1) the level of fertility, (2) age patterns of fertility, (3) timing of childbearing, and (4) completed family size.

The paper next examines the major proximate determinants of fertility, by looking at changes in: (1) marriage and cohabitation; and (2) contraception and induced abortion. We then analyze major socioeconomic factors related to fertility and family formation, focusing on gender differences in educational attainment and in the levels and patterns of employment and earnings. We also examine changes in gender relations at home in the four Nordic countries by looking at the trends and factors of the gender division of household labor.

Finally, the paper examines changes and current contents of policies for families with small children (referred hereafter as "family policies"), focusing on three major components: (1) child allowance, (2) parental leave, and (3) child care services. We conclude the final section by summarizing similarities and differences in the family policies of the four Nordic countries, and also discussing the relationship between fertility and policy change.

1. Fertility Changes

(1) Changes in the Level of Fertility

From the mid-1960s to the early 1970s, the four Nordic countries all experienced rapid fertility decline from well-above replacement to below-replacement levels. From 1965 to 1975, the total fertility rate (TFR) per woman dropped from 2.42 to 1.77 in Sweden, from 2.61 to 1.92 in Denmark, from 2.95 to 1.98 in Norway, and from 2.48 to 1.68 in Finland (see Figure 1). The fertility in the three Scandinavian countries continued to decline further until the early 1980s: in 1983, the TFR was 1.61 per woman in Sweden, 1.38 in Denmark, and 1.66 in Norway. In Finland, fertility increased modestly during the early 1980s, followed by a downturn, recording the postwar lowest TFR of 1.59 per woman in

1987.

<Figure 1 about here>

In the 1980s, however, fertility in the four Nordic countries began to increase, and this upturn trend continued until the early to mid-1990s. In 1995, the TFR recovered to 1.80 per woman in Denmark, to 1.87 in Norway, and to 1.89 in Finland. During the late 1990s, the TFR in these three countries, though declined modestly, have been at relatively high levels as industrialized countries: in 2001, the TFR is 1.78 per woman in Norway, and 1.73 in both Denmark and Finland (Statistics Finland 2002; Statistics Norway 2002). The exception is Sweden, where fertility showed ups and downs similar to a "roller-coaster" during the 1980s and 1990s (Hoem and Hoem 1996). Sweden's TFR increased rapidly from the early 1980s to the early 1990s--from 1.61 per woman in 1983 to 2.13 in 1990-- followed by a dramatic downturn, reaching 1.50 per woman in 1999, and 1.55 in 2000 (Statistiska centralbyrån 2002).¹

Altogether, the trends of fertility changes in the four Nordic countries from 1960 to 2000 are summarized as follows: (1) rapid declines from above-replacement levels in the mid-1960s to well below-replacement levels in the early/mid-1980s; and (2) substantial recovery in the late 1980s and mid-1990s to levels that are considered as relatively high as industrialized countries.

(2) Age Pattern of Fertility

How did the age pattern of fertility and family building change under the rapid declines in the level of fertility from the mid-1960s to the early 1980s, and then the increases from the mid-1980s to the 1990s? Table 1 shows changes in the age-specific fertility rates from 1960 to the late 1990s in the four Nordic countries. We can see that, in the early 1960s, fertility was highest among women in their 20s with the peak childbearing years being women's early 20s in all four countries. Teenage fertility rate was also relatively high as industrialized countries.

<Table 1 about here>

Then, from the mid-1960s to the early 1980s, the fertility rate among women aged 20-24 (and that of women in the upper teens) plummeted in all four countries under consideration. Though not as dramatic as the decline among women in their early 20s, the birth rates of women aged 25-29 and women in their 30s also declined considerably during the same period.

After the mid-1980s, however, the fertility rate among women in their 30s (especially those aged 30-34) showed notable increases, and the birth rate of women aged 25-29 also increased modestly. Meanwhile, the fertility rate of women aged 20-24 (and also that of teenagers) kept declining steadily. Whereas the birth rate of women aged 25-29 again showed a modest decline in the late 1990s, the

¹ For details on the trends and factors of Sweden's "roller-coaster" fertility, see Andersson (1999), Hoem and Hoem (1996), and Lesthaeghe and Moors (2000).

decline in fertility among women aged 20-24 and the increase in fertility among women in their 30s continued.

Hence, the declines in the level of fertility from the mid-1960s to the early 1980s in the four Nordic countries were caused mainly by decreases in the birth rate of younger women, especially those aged 20-24. On the other hand, the fertility increase after the mid-1980s was brought about mainly by increases in the birth rates of women in their late 20s and 30s, especially those aged 30-34. This in turn implies that the earlier declines of fertility to below-replacement levels were due primarily to the increasing delay of family formation among young women, whereas the subsequent fertility recovery was made possible by the "catch-up" in childbearing among women in their late 20s and 30s.

(3) Timing of Family Formation and Completed Family Size

The delay of family formation and the subsequent catch-up in childbearing are confirmed by examining changes in the timing of first birth and completed family size. Table 2 shows changes in the mean age of women at first birth and also at all childbirths. Although we cannot be certain about the trend in the 1960s owing to the lack of comparable data in some of the countries, the mean age at first birth increased rapidly in the 1970s and 1980s in all four countries. This clearly indicates the delay of the beginning of family building among women in Nordic countries. Further, after modest declines until the mid-1970s, the mean age of women at all childbirths increased steadily in all four countries, suggesting the delay of childbearing in general in Northern Europe.

<Table 2 about here>

Despite the increasing delay of family formation and childbearing in general, however, the mean completed family size does not show clear signs of decline among women who were born after the mid-1940s (i.e., women who went through their peak childbearing years in the 1970s to the early 1990s). As shown in Table 3, the mean completed cohort fertility among women in the four Nordic countries declined from the 1930s birth cohorts to the early 1940s birth cohorts. However, the average completed family size for women born after the mid-1940s has remained relatively stable at about the replacement level in Norway, and at levels slightly below replacement in the other three countries.

<Table 3 about here>

Therefore, these findings indicate that, unlike Japan and many Southern European countries, the increasing delay of family formation among women in Nordic countries did not result in declines in completed cohort fertility to below-replacement levels. The findings further suggest that, despite the delay of the beginning of family building, the completed cohort fertility at sub-replacement levels was achieved by the subsequent increases in the tempo of childbearing, i.e., the "catch-up" of childbearing at later ages. Changes in the mean age of women at first and second births in some Nordic countries in fact show decreases in the

average birth intervals (Knudsen 1993; Tsuya 1996).

2. Proximate Determinants of Fertility

We next turn to the proximate determinants of fertility, i.e., behavioral and biological factors that directly influence fertility. This section focuses on the major proximate determinants that account for a large proportion of changes in the level of fertility in post-transitional populations: (1) women's union-formation behaviors including marriage, divorce, and cohabitation; (2) contraception and induced abortion.

(1) Marriage and Divorce

Table 4 presents the total and age-specific female first marriage rates, the mean age of women at first marriage, and the total divorce rate of women in the four Nordic countries. From changes in the total first marriage rate (TFMR) among women at reproductive ages, we can see that marriage was almost universal before the mid-1960s in Sweden and Denmark, and it was so until around 1970 in Norway and Finland.

<Table 4 about here>

After then, however, the prevalence of first marriage declined dramatically, cutting the rate by almost one half in about 15 years. The TFMR was roughly 0.5 in 1980 in both Sweden and Denmark, indicating that only about one half of women under age 50 would have been ever married if a cohort of women were to follow the age pattern of female first marriages of the two countries in 1980. The TFMR was approximately 0.6 in 1985 in Norway and Finland, implying that only around 60 percent of women would have been ever married if a cohort of women were to follow the age pattern of female first marriage of these countries in 1985.

The level of prevalence of first marriage did not show a notable change during the 1980s and 1990s in Sweden and Denmark, although it declined somewhat in Sweden while it increased modestly in Denmark. In Norway and Finland, the prevalence level of female first marriage remained stable at the level of TFMR being 0.6 since the mid-1980s.

In sum, dramatic retreat from first marriage occurred in the four Nordic countries during the 1970s and early 1980s, although such behavioral changes started a little earlier in Sweden and Denmark than in Norway and Finland. This was due mainly to a remarkable decline of first marriage among women aged 15-24. Declines were especially phenomenal among women in their early 20s, the peak ages of women's first marriage when marriage had been universal.

Furthermore, among women who get married, the postponement of first marriage is evident (see the mean age at first marriage in Table 4). Even after the declining prevalence was leveled off in the 1980s, the delay of first marriage accelerated. In the late 1990s, the mean age of women at first marriage is over 29 years old in Sweden and Denmark; it is around 27.5 in Norway and Finland.

In addition to the retreat from first marriage, divorce proliferated in the four Nordic countries in the 1970s and 1980s. For example, in 1970, the total

divorce rate, estimated based on the probability of divorce by duration of marriage, was roughly 0.2 in Sweden and Denmark, and it was at the range of 0.13-0.17 in Norway and Finland.² During the 1970s and 1980s, the rate increased dramatically, reaching almost 0.5 in the 1980s to 1990s in all four countries.

Altogether, the social institution of legal marriage became increasingly unstable and less significant in the four Nordic countries during the 1970s and 1980s. Dramatic retreat of young women from marriage coupled with the increasing instability of marriage has dramatically altered the nature of union formation in Nordic societies during the last three decades.

(2) Cohabitation and Non-marital Childbearing

Increases in delayed marriage and non-marriage do not necessarily mean declines in union formation between men and women. The four Nordic countries under consideration experienced phenomenal increases in cohabitation from the 1970s to 1990s. As shown in Table 5, the proportion of coresiding couples who are not married continued to increase during the last three decades in the four countries. The prevalence of cohabitation is especially high among young women. In the late 1990s, roughly 80 percent of Nordic women aged 20-24 who were living with a partner were unmarried, and the corresponding proportion was around one-half for women aged 25-29.

<Table 5 about here>

Related to these decreases in marriage and increases in cohabitation is a phenomenal increase in non-marital childbearing. In 1960, the proportion of babies born to unwed mothers was 11 percent in Sweden, 8 percent in Denmark, and only 4 percent in Norway and Finland (see Figure 2). The proportion of out-of-wedlock births increased dramatically and at an accelerated pace in the 1970s and thereafter in all four countries, reaching 54 percent in Sweden in 1997.³ The corresponding proportion of non-marital births is roughly 50 percent in Denmark and Norway, and 40 percent in Finland.

<Figure 2 about here>

² This implies that, if a marriage cohort were to go through its marital life course following a pattern of divorce by marriage duration in Sweden or Denmark in 1970, about one-fifth of marriages would be dissolved by divorce. If a marriage cohort were to follow the pattern of divorce in Norway or Finland in 1970, around one-seventh to one-sixth of marriages would be disrupted by divorce.

³ The proportion of non-marital births decreased (i.e., the proportion of marital births increased) temporarily in Sweden in 1990-93. This temporal dip is thought to have been due primarily to an upsurge in the first marriage rate among Swedish women at all ages in 1989, owing to the enactment of the New Family Law (Försäkringskassan 1992: 24-25). According to the Law, if a person got married within 1989, she/he was entitled to the pension of her/his spouse throughout life after the death of the spouse. After 1989, however, this old system of public pension for widows and widowers was replaced by the new system of survivors' pension, under which a widow/widower is entitled to the pension of the deceased spouse for only one year after the spouse's death. Consequently, many women (and men) in cohabiting relationship rushed to marry, resulting in a marriage boom in 1989.

These rapid increases in non-marital childbearing do not necessarily mean the erosion of family life in Nordic societies. According to existing studies and surveys, a large majority of unmarried parents live together and raise their children (Ministry of Social Affairs 2000; Nordic Social-Statistical Committee 1998, 2001; Statistiska centralbyrån 1989).⁴ Hence, the retreat from marriage and the increasing cohabitation and non-marital births in Nordic countries can be seen not only as the declining significance of legal marriage, but also as an emergence of new types of partnership and family formation.

Putting it differently, the level of fertility had recovered and then remained at relatively high levels in the four Nordic countries since the mid-1980s, in part because childbearing became increasingly separated from marriage. Unlike Japan and, to a lesser extent, many Southern European countries, childbearing and rearing are no longer tied closely to marital unions in Nordic societies.

(3) Contraception and Induced Abortion

Contraception is another major proximate determinant that strongly affects fertility (Bongaarts 1978, 1980). The rate of contraceptive use was already around 70 percent among sexually active women under age 45 in Nordic countries in the early 1970s (United Nations 2000: 162-163). This high contraceptive prevalence rate was due in large part to the "contraceptive revolution" in the 1960s that made the pill and IUD widely available (Westoff and Ryder 1977), and also to the concomitant legal changes in Nordic countries that gave women and men a freedom of choice in sexuality and reproduction (Kosunen 2000; Linnér 1967; Swedish Institute 1997; Wielandt and Knudsen 1997). The rate of contraceptive use increased further, reaching around 80 percent in the 1980s (United Nations 2000: 162-163).

Not only the prevalence but also the efficacy of contraceptive use is thought to have been high in Nordic countries. Although the patterns of contraceptive method mix differ across countries, the pill, IUD, and condom are the three most popular methods used in all four countries (Kosunen 2000; Nikander 1998: 70; Swedish Institute 1997; United Nations 2000: 162-163). While the overall prevalence of sterilization remains limited at around 5-15 percent in the four countries, the prevalence of sterilization is notably higher among women in their 30s and older (Kosunen 2000; Nikander 1998: 70; Swedish Institute 1997). Hence, these findings suggest that a large majority of Nordic women at reproductive ages who do not want to get pregnant have been allowed to and did practice contraception during the last three decades, using a modern method/methods with high efficacy.

Although the level of contraceptive efficacy is in general high, induced

⁴ According to a national survey conducted by Statistics Sweden in 1984-1985, approximately 80 percent of children aged 16 or younger lived with both of their biological parents (Statistiska centralbyrån 1989). A survey in Denmark in 1980 also showed that around 80 percent of children under age 18 lived with both of their biological parents (Ministry of Social Affairs 2000). According to surveys in the four Nordic countries in the late 1990s, around 75-80 percent of children under age 18 lived with both of their parents (Nordic Social-Statistical Committee 1998, 2001).

abortion is also practiced in Nordic countries. Based on the statistics on legal abortion in the four countries under consideration, the reported number and rate of induced abortion increased dramatically during the 1960s and the early 1970s (Swedish Institute 1997; Danmark Statistik 1999; Henshaw and Morrow 1990; Statistics Finland 2000). This phenomenal increase in the number and rate of legal abortion was due in large part to the liberalization of legal induced abortion that permitted young and unmarried women to have induced abortion.

Before 1960, in Nordic countries, an access to legal abortion was limited mostly to married women with a large number of children, or to pregnancies associated with medical and genetic problems (Kosunen 2000; Swedish Institute 1997; Wielandt and Knudsen 1997). This in turn meant that it was virtually impossible for a young and unmarried woman to have a legal abortion. However, in the context of the contraceptive revolution discussed above, the abortion law was revised in the 1960s and 1970s to allow all women to have an abortion during the early months of pregnancy (Kosunen 2000; Swedish Institute 1997; Wielandt and Knudsen 1997). This liberalization of the abortion law in turn resulted in a proliferation of the reported number of legal abortion in Nordic countries during the 1960s and the early 1970s.

However, the overall rate of induced abortion among women at reproductive ages has been on the gradual decline since the mid-1970s in all four Nordic countries. Further, the rate of induced abortion is higher among women under age 30 in these countries (Henshaw and Morrow 1990: 60-65). In the contexts of the increasing delay of childbearing and a high prevalence of safe and effective contraception, these findings in turn imply that, in Nordic societies, induced abortion is not widely used as a means for family limitation (i.e., stopping). Instead, it is primarily a means to control the timing of family formation. When young women get pregnant before they are ready to start a family, induced abortion is used as a back-up in the case of contraceptive failure.

(4) Fertility Changes and the Proximate Determinants

Let us summarize our findings on changes in union formation and family-planning behavior in the four Nordic countries in the context of fertility changes from 1960 to 2000. Fertility declined rapidly to below-replacement levels from the mid-1960s to the early/mid-1980s in all four Nordic countries. This fertility decline was due mainly to the increasing delay of childbearing, especially among women under age 25.

The findings of this section suggests that this postponement of the beginning of family building was associated in part with dramatic changes in women's union-formation behavior in the form of declining legal marriage and increasing divorce. The delay of family formation was also made possible by the rapid increases in the availability of safe and effective means of fertility control in the form of modern contraceptives and, in case of contraceptive failure, induced abortion to young unmarried women.

On the other hand, the recovery of fertility after the mid-1980s was brought about mainly by the catch-up of childbearing by women at older ages, especially those in their 30s. This was in turn due to the changing nature of

partnership and family relations in Nordic societies characterized by increasing separation of procreation from marriage.

3. Socioeconomic Factors Related to Fertility

Prior to and concomitant to rapid fertility decline and dramatic changes in marital and reproductive behaviors during the mid-1960s to the early 1980s, the levels and patterns of educational attainment and female employment also changed dramatically in the four Nordic countries. In this section, we look at two major socioeconomic factors that are known to affect fertility--women's education and employment. Examining the changing levels and gender differences in attainment of higher education as well as in employment and earnings, we seek to account for the relationship between changes in the socioeconomic status of women and fertility in Nordic societies.

(1) Attainment of Higher Education

Besides employment and the earnings it brings, education is the key factor that determines women's status in the society. It also affects family formation and family life in general in a variety of ways, influencing the parent-child relations and the gender relations at home. Table 6 shows the percentage of men and women with 13 or more years of education (i.e., some college or higher) by age in the four Nordic countries in 1990-1996.

<Table 6 about here>

First, we trace, for both men and women, changes in the percentage of those with at least some college education, starting with the oldest cohort of those aged 50-59 in 1990 to younger ones. We can see that the period in which attainment of higher education increased substantially was from the 1960s (when those in their 50s in 1990 was in their 20s) to the 1970s (when those in their 40s in 1996 were in their 20s) in all four countries. Although there are some country differences in the level of attainment of higher education in the late 1990s with Finland being somewhat behind the other three countries, such inter-country differences are relatively small.

Further, it is notable that there is little gender gap in the timing and pace of educational improvements in the four Nordic countries. Rather, among the cohorts who were in their 40s or younger in 1993, the level of attainment of higher education is higher for women than for men. The exception is Sweden where, except for the oldest cohort of those aged 50-59 in 1990, the percentage with 13 or more years of education is consistently and considerably higher for women than for men.

Hence, the overall level of education of men and women in the four Nordic countries improved in the 1960s and 1970s, with the proportion of those with higher education increasing substantially. Moreover, the gender gap in attainment of higher education disappeared by the mid-1970s; since then, the percentage with higher education has been consistently higher among women than among men.

(2) Level of Labor Force Participation

Nordic countries experienced a rapid economic expansion and economic boom in the 1960s, the decade called the "Golden 60s." Concomitantly with the economic expansion, Nordic countries experienced rapid changes in their industrial structures. With industrial structures shifting from secondary to tertiary industries, many new employment opportunities opened up for women, and women were increasingly drawn into the paid labor force.

Figure 3 shows changes from 1960 to 2000 in the labor force participation rate among population aged 15-64 by sex in the four countries under consideration. We can see that the female labor force participation rate increased dramatically from the 1960s to the early 1980s in these countries, except for Finland in which female labor force participation was already high in the 1960s with the rate being 60-65 percent.⁵ Nevertheless, Finland also experienced modest increases in the rate of female labor force participation in the 1970s and 1980s. In 2000, the labor force participation rate among women in the four Nordic countries is in the range of 72-76 percent. Being almost par with men's 78-85 percent, these levels of women's labor force participation in these Nordic countries are among the highest in the industrialized world (OECD 2001a).

<Figure 3 about here>

Although comparable data are not available for all countries, we can also see that the labor force participation rate among mothers of small children rose even more rapidly in some of the countries under consideration. In Sweden, the labor force participation rate of mothers of preschool children (under age 7) was 38 percent in 1963. It increased dramatically in the 1960s and 1970s, reaching 69 percent in 1978. In the 1980s, surpassing the rate of women aged 15-64 as a whole, the rate for mothers of preschool children rose further to 82 percent in 1983, and to 86 percent in 1988 (Tsuya 1996). Peaking at 87 percent in 1990, the labor force participation rate of mothers of preschool children is at around 78 percent in the late 1990s (Statistiska centralbyrån 1999: 224). Although the level of labor force participation among Swedish mothers of preschool children went down in the 1990s as a result of the economic recession, this downturn trend was not limited to mothers of small children but applies to all the labor force. Since the late 1980s until today, the labor force participation rate of women with preschool children has been virtually equivalent to that of men aged 15-64.

In Norway, labor force participation of mothers of small children was limited in the early 1970s. For example, the labor force participation rate of mothers of children under age 3 was 29 percent in 1973. The rate began to increase precipitously in the mid-1970s, reaching 46 percent in 1980. During the 1980s and

⁵ In Finland, women's labor force participation is said to have been traditionally high. As a main reason/an origin for this, a study argues that when the Finnish society was primarily agricultural, like men, women were expected, culturally and socially, to shoulder a responsibility to support the family by participating actively in agriculture (OECD 2001b). Being symbolic of this traditional orientation toward gender equality in economic and social activities, there is no gender-specific usage in the Finnish language.

1990s, it continued to increase rapidly, reaching 66 percent in 1987, 72 percent in 1993, and 75 percent in 1998. Since the early 1990s, the rate of mothers of children under age 3 has been par with that of all women at working ages (15-64).

Although comparable time-series data are not available for the other two countries, the level of labor force participation among mothers of small children is thought to be also high in the 1990s. In Finland, for example, the labor force participation rate of mothers of preschool children (under age 7) was 69 percent in 1991, and 73 percent in 1993 (Tilastokeskus 1993: 55, 1995: 49).

In sum, these findings imply that the normative and social "barrier" against employment of mothers of small children gave out to the pressures created by the economic and social needs of women and their families in the early 1980s in Sweden, and about a decade later in Norway. Similar changes are assumed to have taken place in Denmark although we cannot specify the timing and extent of such changes. Given the consistently high level of female labor force participation (and high level of women's full-time employment) in Finland, we are not certain whether the "barrier" against employment of mothers of small children had existed to begin with. Nonetheless, it seems certain that employment and child-rearing have become increasingly more compatible in Nordic countries during the last 20 years.

(3) Age Pattern of Labor Force Participation

Dramatic increases in women's employment, especially employment of mothers of small children, in the three Scandinavian are verified by changes in the labor force participation rates by women's age. As shown in Figure 4, in 1960 the pattern of female labor force participation by age was one-peaked, with women aged 20-24 having a highest rate. As the overall level of female labor force participation went up dramatically from the 1960s to the 1980s, this one-peak pattern by age disappeared almost completely by 1990. In Finland where the overall level of female labor force participation has been high throughout the postwar years, the one-peak pattern by age that we witnessed for the three other countries did not exist in 1960. Nonetheless, even in Finland, the rate increased considerably in the 1970s to 1980s at all reproductive ages except for that of women aged 15-19.

<Figure 4 about here>

We can therefore see that increases in the rate of labor force participation are phenomenal among women aged 25 and above, with the increases among women at peak childbearing and child-rearing ages (age 25-34) being especially impressive. And this was the case not only in the three Scandinavian countries, but also in Finland although the increases were not as dramatic as in its Scandinavian counterparts. By the early 1980s, Nordic women no longer pulled out of the labor force because of childbearing, but continued to stay in the labor force throughout their reproductive years. These changes are thought to have been due, at least in part, to changes in family policies, especially the expansion of parental leave programs and public childcare services. We will look at changes and contents of family policies later in the paper.

(4) Part-time Employment

Women's employment in the three Scandinavian countries is also characterized by a high level of part-time employment. As shown Table 7, the proportion of part-time workers among all employed women has been on the decline in the 1980s and 1990s in these countries. Yet, the proportion in 2000 still ranges from 21 percent in Sweden to 34 percent in Norway.⁶ Consequently, and as expected, a large majority (roughly 70-85 percent) of part-time workers are females in the 1990s.

<Table 7 about here>

According to Ellingsæter and Rønsen (1996), a major reason why part-time employment is traditionally high in Scandinavia, especially in Norway, is that, unlike many other industrialized countries, part-time employment has been considered not as marginalized labor, but as a type of regular employment in the Scandinavian societies. In fact, the levels of female part-time employment in the late 1990s in the three countries are some of the highest among the OECD countries (Ellingsæter and Rønsen 1996). Another reason for the persistence of part-time employment in Scandinavia may lie in the development of generous parental leave systems. Especially in Norway and Sweden, parents are allowed to combine part-time paid parental leave with part-time employment (specifics of the systems will be discussed later in the paper).

Regardless of reasons for its prevalence, it is important to note that part-time employment in the Scandinavian countries (and in most other industrialized countries) is defined almost solely in terms of the number of hours worked. Thus, when workers switch from full-time employment to part-time employment, they rarely lose pension and other social security benefits. Putting it differently, unlike in Japan where part-time employment, especially female part-time employment called "paato," usually mean the marginalized labor without employment insurance and other fringe benefits,⁷ part-time employment in the Scandinavian countries is a type of regular employment that enables women and men to combine work and family.

(5) Earnings

We next look at gender differences in earnings in the four Nordic countries. Table 8 shows changes the ratio of the mean wages of female workers to male

⁶ Unlike the three Scandinavian countries, women's part-time employment has been low in Finland. As for reasons for this low prevalence of part-time employment (i.e., high level of full-time employment) among Finnish women, Rønsen (1998) points out a severe labor shortage that the country experienced in the early postwar years. Unlike the other three Nordic countries, Finland suffered high casualty of World War II, and this resulted in a shortage of young male labor. This in turn created the needs for women to work full-time, helping the country rebuild its economy.

⁷ If a person is a "paato" worker in Japan, it is usually the case that she/he is paid only hourly wages (plus, sometimes, transportation costs) without any fringe benefits, regardless of the number of hours worked. Therefore, "paato" is defined basically in terms of employment status, not of employment hours.

workers in manufacturing industries from 1963 to 1998.⁸ We can see that in 1963 the ratio of the average wages of female manufacturing workers to their male counterparts was around 70 (ranging from 67 in Finland to 72 in Sweden), i.e., roughly 70 percent of the average wage of male workers.

<Table 8 about here>

Throughout the 1960s to 1970s, gender differences in the average wages in manufacturing industries (and probably many other industries) shrank steadily, reaching, in 1980, 90 in Sweden, 86 in Denmark, 82 in Norway, and 75 in Finland. In Norway and Finland, the two countries where the gender gap was larger, the differences continued to shrink further in the 1980s and 1990s. In 1998, the ratio is 91 in Sweden, 84 in Denmark, 88 in Norway, and 79 in Finland. These suggest that, under the dramatic increases in women's labor force participation from the 1960s to the 1980s, the gender gap in earnings also narrowed considerably in the four Nordic countries.

(6) Changes in the Socioeconomic Status of Women and Fertility

Let us summarize our findings on changes in socioeconomic characteristics of women in the four Nordic countries from 1960 to 2000, and discuss the relationship between these socioeconomic changes and the changes in fertility levels and patterns that we saw in the first section. Higher education spread among young women and men in the Nordic countries during the 1960s and the early 1970s, with the tempo of women's educational gain being more rapid than that of men's. Women's increasing attainment of higher education is thought to have resulted in increases in women's opportunity costs of childbearing. This may have been associated, at least in part, with the onset of the rapid fertility decline in the mid-1960s to the early 1970s.

Women's employment, especially employment of women in their 20s and early 30s, increased dramatically from the 1960s to the early 1980s in the three Scandinavian countries. Even in Finland where the overall level of female employment had already been high in 1960 and rose only modestly in the 1970s and 1980s, increases in employment among women at the peak reproductive age were impressive. Providing that the period of rapid fertility declines in the four Nordic countries correspond almost perfectly with these phenomenal increases in employment of women at peak childbearing ages, we can consider that the massive influx of young women into the labor market was chiefly responsible for the fertility decline. When the paid parental leave programs were limited and childcare services were not readily available during the 1960s to the early 1980s, increasing paid employment of women at reproductive ages is thought to have resulted in smaller family size.

Employment of women at peak reproductive ages continued to rise in the

⁸ When we examine gender differences in the average earnings, it is certainly more desirable to use data for all industries (or other industries in addition to manufacturing). However, data on average wages available consistently for the period under consideration (from the early 1960s to the late 1990s) were only those on manufacturing industries.

late 1980s and remained high in the 1990s, though the increase in the late 1980s was, unlike the increases in the previous decades, only modest. This achievement and subsequent maintenance of high levels of employment among women in their 20s and 30s is thought to have been made possible in large part by developments of public policies for parents with small children. We will look at these policies more closely in Section 5.

4. Gender Relations at Home

We saw in the previous section that women were increasingly drawn into paid employment from the 1960s to the 1980s in the four Nordic countries. Especially dramatic increases were seen among women in their 20s and 30s. The patterns and nature of partnership formation and family building also underwent profound changes during the same decades, as seen in Section 2 of this paper. These socioeconomic and family changes inevitably resulted in changes in traditional gender relations at home. In this section, we look at the trends of the gender division of labor at home and factors related to men's participation in household tasks.

(1) Trends of the Gender Division of Household Labor

Table 9 presents the mean hours spent on household tasks per week by sex and men's share in housework (household chores) and childcare in the four Nordic countries and Japan for the years on which data are available. In Norway where time-series data covering a fairly long period exist, the mean total hours that men spent on household tasks increased two to three folds--from 6.9 hours per week in 1972 to 18.3 hours per week in 1990--with the increase in the 1980s being especially notable. During the same period, Norwegian women's hours on household tasks decreased and then stabilized. Consequently, men's share in household tasks in Norway increased rapidly from 16 percent in 1972 to 37 percent in 1990. The pace of increase in men's share was more rapid in household chores, than in childcare.

<Table 9 about here>

Although comparable time-series data are not available, the level (and in Sweden the absolute average time) of men's participation in household tasks is also high in the other three Nordic countries--at the range of 33 to 38 percent in the late 1980s and early 1990s. These levels of men's share in household tasks are among the highest in the industrialized world (United Nations 1991, 1995). In contrast to Japan where the average men's share is less than 10 percent, a high level of Nordic men's participation in household tasks is especially notable. The share of men in household tasks in Nordic countries is also considerably higher, compared to Southern European countries such as Italy (19 percent in 1988-1989) and Spain (18 percent in 1991) (United Nations 1991, 1995).

In summary, men's time and share in household tasks in Nordic countries seem to have increased substantially during the 1970s and 1980s. Although the pattern of gender division of household labor is still far from equal in Nordic countries, it is much more gender-equal than in most other industrialized countries.

Nordic men share, on an average, one-third to 40 percent of household chores and childcare in the late 1980s to early 1990s. In terms of the absolute time spent on household tasks, Nordic men also mark some of the highest in the world (United Nations 1991, 1995). Thus, we can interpret these findings to imply that while women's employment increased dramatically in the 1960s to 1980s, gender relations at home have also undergone substantial changes in Nordic countries.

(2) Factors of Men's Participation in Housework

What factors are associated with men's participation in household tasks in Nordic countries? Using data from comparable national surveys conducted in Western countries in the early to mid-1980s, a study (Singelmann et al. 1996) analyzed the determinants of men's share in household chores among dual-earner couples in six industrial countries including the three Scandinavian countries.

Focusing on household chores traditionally gender-typed as female--cooking, cleaning-up after meals, laundry, cleaning, and grocery shopping, this comparative study found that, in the three Scandinavian countries, men's share in housework is significantly affected by both partners' income, education, and employment hours. Specifically, men's income was found to reduce men's share in household chores whereas women's income increased men's share in such chores; and these income effects were especially strong in Sweden and Norway. Second, education of both men and women also pushed up men's share in housework in all three countries. Third, men's employment hours reduced men's share in housework whereas women's employment hours increased men's share in household chores.⁹

Hence, given the narrowing of the gender gap (relative gain of female workers over male workers) in earnings in the four Nordic countries, the findings on the effects of couples' income on men's share in housework by the above study imply that gender relations at home in Nordic countries may become more equal. Providing that attainment of higher education increased substantially in the 1960s and 1970s among Nordic men and women, increases in men's time and share in household tasks may also have been due in part to these increases in educational attainment. Finally, as we saw in the previous section, since the proportion full-time among employed women has been increasing in the three Scandinavian countries, the findings of the study above also imply that men's housework share may rise further in these countries.

Under the dramatic increases in women's employment that resulted in proliferation of dual-earner couples, family policies in Nordic countries since the 1970s came to focus increasingly on gender equality in all aspects of society as a top policy priority, along with the well-being and welfare of children and the compatibility between work and family life (Ellingsæter and Rønsen 1996; Forssén 2000; Jacobsson and Alfredsson 1993; OECD 2001b; Rønsen and Sundström 1996; Swedish Institute 1993). Despite these policy efforts, as we saw in this section, gender relations at home are not yet equal. However, it is also true that gender relations in the Nordic home are much more equal than in most other industrialized

⁹ Men's non-egalitarian attitudes toward gender roles were also found to reduce men's share in housework in all three countries but women's gender role attitudes did not have statistically significant effects.

societies. Given the increases in women's full-time employment and the narrowing of gender gap in earnings, gender relations at home in Nordic countries are expected to become even more gender equal.

5. Family Policies

We now turn to changes and major features of family policies in the four Nordic countries. Specifically, in this section, we first discuss briefly the origins and features of the Nordic welfare state model in order to put our analysis in the larger historical and theoretical contexts. We next provide descriptive accounts on postwar changes and current contents of child allowance, parental leave, and childcare services in the four countries, respectively. We conclude this section by relating changes in major features of family policies to fertility changes in the four countries.

(1) Nordic Welfare State Model

Nordic countries are known for their comprehensive family policies with generous benefits. The evolution of these family policies is better understood in terms of the Nordic welfare state model. The origin of the Nordic welfare state goes back to the early 20th century; but their developments on the full scale began in the 1960s and 1970s, with the tempo of expansion accelerating after the 1970s (Dahl 1984; Forssén 2000). The expansions of family policies were caused in large part by rapid increases in employment of women at reproductive ages as well as by changes in gender relations in the Nordic home.

The Nordic welfare state model is characterized by a strong redistribution system (i.e., a wide scope of coverage with a high level of benefits), and extensive legislations to implement public policies, with individuals and families being the subject of redistribution and legislation (Esping-Andersen and Korpi 1987; Forssén 2000; Kosonen 1993). For example, Forssén (2000) classified selected Western welfare states in the late 1990s, by cross-tabulating: 1) level of legislation for families with dependent children, as measured by the scope of coverage and generosity of benefits; and 2) distribution of real income of families of children in 1997, as measured by the median real income of families of children in "poverty" (the lowest quartile) in a country of question, relative to the median income of US households in that year (see Table 10).

<Table 10 about here>

We can see that in most cases strong family policy legislation goes hand in hand with relatively good economic situation of children in the lowest quartile. Based on this cross-classification, all four Nordic countries under consideration belong to the group characterized by strong legislation related to policies for families with dependent children, and also by relatively better-off situations of families of children in poverty. This in turn suggests the effectiveness of Nordic family policies in redistributing economic resources for the well-being and welfare of children.

There are, in general, three primary means to implement family policies:

1) money, 2) time-off, and 3) services. In Nordic countries, these three 'pillars' of family policies are materialized in the form of: 1) child/family allowance, 2) parental leave, and 3) childcare services. These three major components of Nordic family policies developed in the time order as specified (Forssén 2000; Tsuya 2002). Child/family allowance (referred hereafter to child allowance for linguistic simplicity) began as an allowance payable for all children in the late 1940s to early 1950s. The systems of comprehensive paid maternity leave with a high level of income compensation started their full developments in the mid-1970s to the 1980s. And the full expansion of public childcare services became evident in all four Nordic countries in the 1980s and 1990s. In the subsequent subsections, we will look more closely at the development and contents of each of these three components of family policies in the four Nordic countries.

(2) Child Allowance

In all four Nordic countries, child allowance is payable to all children, tax-free, and independent of parents' income (Nordic Social-Statistical Committee 2001: 50-52).¹⁰ This universal, tax-free, and non-income-tested nature of child allowance has been unchanged since the creation/legislation of the system in 1947 in Sweden, in 1951 in Denmark, 1947 in Norway, and 1948 in Finland (European Union 2001; Gauthier 1996; Swedish Institute 2001a).¹¹

Since the beginning of the systems of child allowance, the four Nordic countries have increased the amount of allowance by adjusting it to price changes, and added features such as supplements for additional children, and extra child allowance for single parents. Basic features of the child allowance systems in the four countries as of December 1999 are compared in Table 11.

As mentioned above, the coverage of the allowance is universal, i.e., payable to all "children" regardless of parental income. As of the end of 1999, the age of "children" to whom the allowance is payable is under 16 (i.e., it is payable until children reach age 16) in Sweden, under 18 in Denmark, under 16 in Norway,¹² and under 17 in Finland. In Sweden, if children are enrolled in schools, extended child allowance is payable until the spring of the year when they become 20 years old (Swedish Institute 2001a).

<Table 11 about here>

In Denmark and Norway, the amount of allowance payable also differs according to children's age. In Denmark, family allowance is higher for preschool children (under age 7) than for older children; among preschool children, those

¹⁰ In Denmark, the universal allowance payable to all children regardless of parental income is called "general family allowance." This allowance is payable to all tax-paying families of children under age 18 who are Danish citizens or foreigners living in Denmark for at least one year (Social Security Administration 1999).

¹¹ For details on the evolution of child allowance and other cash benefits for children, see Tsuya (2002).

¹² As of 2000, child allowance became payable until children reach age 18 in Norway (European Union 2001; Ministry of Children and Family Affairs 2000).

under age 3 are paid higher allowance than children aged 3-6 (Ministry of Social Affairs 2001). In Norway, a supplement is payable for children aged 1-3, as well as for children living in selected northern counties (Finnmark and certain municipalities in Troms) (Ministry of Children and Family Affairs 2000). In all countries except for Denmark, supplements are also available for additional children. In all countries, with the exception of Sweden, extra child allowance is paid to single parents.

Since the specific rules governing these supplements are complex and differ across countries, the annual amount of child allowance in December 1999 in the four Nordic countries are summarized in Table 12. The base amount of allowance per child per month was 850 SEK in Sweden, 850 DKK in Denmark, 926 NOK in Norway, and 535 FIM in Finland.¹³ The average amount of child allowance paid per child in the four countries was therefore in the range of 73.5 to 110 Euro per month. Though these amounts are by no means sufficient to fully support dependent children, they are considerable in the sense that they are tax-free and universal. Because of its universal coverage, generous benefits, and extra supplements to children with economic disadvantage, child allowance in Nordic countries has made possible effective re-distribution of financial resources for the sake of children's well-being and welfare.

<Table 12 about here>

(3) Parental Leave

Among different components, paid parental leave system is the mainstay of public policies for families with small children in the four Nordic countries during the last 25 years. Parental leave systems are indispensable in enabling women and men to balance childbearing and employment in the Nordic societies today.¹⁴ Current Nordic parental leave programs are characterized by long duration of paid leave, high level of income compensation, flexibility of usage, and variety of options available for taking a leave (Gauthier 1996; Rostgaard, Christoffersen and Weise 1999, 2000; Rønsen 1998; Sundström and Stafford 1992; Swedish Institute 1992, 1993; Tsuya 2002).

Although the origins of maternity leave in the four Nordic countries go back to before World War II (Foressén 2000; Gauthier 1996; Hoem and Hoem 1996; Rostgaard, Christoffersen and Weise 1999), the expansion of parental-leave schemes covering all women (or all working women) with a high level of income substitution occurred relatively recently--in the mid-1970s in Sweden, in the late 1970s to early 1980s in Finland, and in the late 1980s in Norway and Denmark (see

¹³ In Sweden, the basic amount of child allowance was 750 SEK per child per month from January 1998 until December 1999. It increased to 850 SEK per child per month as of January 2000; and it further rose to 950 SEK per child per month in January 2001 (National Social Insurance Board 2000).

¹⁴ In Nordic countries, paid leave systems (and their components) associated with childbirth and adoption are referred to with a variety of names such as "maternity leave," "paternity leave," "parental leave," and "childcare leave." In this paper, these systems are all referred to "parental leave" for linguistic simplicity.

Figure 5). Men's share in parental leave became legally mandated even later--in the mid- to late 1990s.¹⁵

<Figure 5 about here>

Figure 5 shows changes in the duration (in weeks) of paid parental leave applicable to all working parents in the four Nordic countries. In Sweden, a notable expansion of the duration of paid parental leave occurred in the mid- to late 1970s, owing to the introduction of parental insurance scheme in 1974. Replacing the previously existed maternity leave of 24 weeks (6 months) with a low level of income compensation, parental insurance gave all women and men 24 weeks of parental leave with a generous (90 percent) income compensation (Hoem and Hoem 1996; Sundström and Stafford 1992; Swedish Institute 1992, 1993).¹⁶ The duration of paid parental leave was extended to 28 weeks next year (1975), then increased drastically to 44 weeks in 1978, and further to 48 weeks in 1980. Since 1989, the duration of paid leave has been 60 weeks (during which 48 weeks are with a high level--75 to 90 percent--of compensation and the remaining 12 weeks are with the minimum guaranteed amount). During the late 1990s, the rate of income compensation for the first 48 weeks of paid leave changed many times: it was reduced from 90 percent to 80 percent in 1995, and further to 75 percent in 1996, and then returned to 80 percent in 1998 (Tsuya 2002).¹⁷

In Denmark, 14 weeks of paid maternity leave had been given to all working women from 1960 (Knudsen 1999). After a long interval, the duration was extended to 18 weeks in 1981, and to 20 weeks in 1984 with men becoming eligible for part of the leave, and then to 24 weeks in 1985. Since 1992, the duration has been 30 weeks, with an alternative of 18 weeks of paid parental leave following childbirth, plus 13 consecutive weeks of "childcare leave" per parent to be taken some time before the child reaches age 8 (Council of Europe 1999b; Rostgaard, Christoffersen and Weise 2000).¹⁸ Although the duration of paid leave in Denmark

¹⁵ Men have been allowed to share paid parental leave since 1974 in Sweden, 1984 in Denmark, 1977 in Norway, and 1978 in Finland (Christoffersen 1990; Rønsen 1998; Swedish Institute 1992; Tsuya 2002). However, by designating a portion of entitled paid leave exclusively to fathers, men's share in paid parental leave became mandatory in 1995 in Sweden, in 1999 in Denmark, and in 1993 in Norway (Council of Europe 1999c; Rostgaard, Christoffersen and Weise 2000; Swedish Institute 1996). In Finland, there is still no such legal mandate.

¹⁶ Since its foundation in 1974, the parental insurance scheme in Sweden includes an item called "eligibility interval," a unique feature that is not seen in the parental leave schemes in the other Nordic countries. Under this clause, if a woman bears a next child within this interval, she is eligible for exactly the same benefits that she received in association with her previous childbirth (J. Hoem 1990; Swedish Institute 1992). The eligibility interval was 12 months from 1974-1977; it expanded to 18 months in 1978, and to 24 months in 1980, and further to 30 months in 1986. Lesthaeghe and Moors (2000) suggested that the fertility fluctuations like a roller-coaster ride in Sweden in the late 1980s to 1990s were due in part to these changes in this provision in the 1980s, which produced a strong period effect on fertility.

¹⁷ According to B. Hoem (1998), together with rising unemployment, these cut-backs in the level of income compensation were responsible in part for the down-swing in Swedish fertility in the 1990s.

¹⁸ If an agreement is reached with her/his employer, childcare leave can be extended up to 52 weeks. Nonetheless, the leave is at least 13 consecutive weeks; and no matter how long it is, childcare leave

is not as long as that in Sweden, the level of income substitution in Denmark is higher--90 to 100 percent. However, the Danish parental leave scheme is only applicable to *working* women and men since its creation because, unlike the other three countries, it is operated under the employment insurance system (Tsuya 2002).

In Norway, the universal parental leave scheme started in 1956 with the duration of paid leave being 12 weeks; but the level of income substitution was low at that time (Rønsen 1998). After a long interval, the duration was extended modestly to 18 weeks in 1977 with men becoming eligible for sharing the leave. Then, in the late 1980s to the early 1990s, a series of rapid improvements occurred with the duration of paid leave extended to: 20 weeks in 1987, 22 weeks in 1988, 24 weeks in 1989, 28 weeks in 1990, 32 weeks in 1991, 35 weeks in 1992, and 42 weeks in 1993 (Rønsen 1998).¹⁹ Further, while the level of income substitution was raised dramatically to almost 100 percent in 1978 (and it has remained at the full compensation level since then), since 1991 it became possible to stretch the duration of the leave by accepting, instead of 100 percent, 80 percent of income compensation.²⁰ Thus, since 1993, the duration of paid parental leave is 42 weeks if the level of income compensation is 100 percent, or 52 weeks with the compensation level of 80 percent.

In Finland, the paid parental leave system for all women began in 1964, with the duration of leave being 9 weeks and the level of income compensation being 40 percent (Rønsen 1998).²¹ Throughout the 1970s, whereas the level of income substitution remained the same, the duration of paid leave continued to be extended: to 12 weeks in 1971, dramatically to 29 weeks in 1974, then to 32 weeks in 1978, and further to 35 weeks in 1979. During the 1980s, the duration of paid leave and the level of income substitution both improved further. In 1981, the duration of paid leave increased to 43 weeks (with the income compensation level remaining at 40 percent). Then, in 1982, the level of income substitution jumped to 80 percent for the first 105 days and 70 percent for the remaining period. The duration of paid leave was again extended to 44 weeks in 1987. During 1991-1992, the duration of paid leave was temporarily extended to 46 weeks. However, in 1993 it was reduced back to 44 weeks (Rønsen 1998). Since 1993, the duration of paid

has to be taken consecutively (Rostgaard, Christoffersen and Weise 2000).

¹⁹ In Norway, it is also possible to take unpaid leave following the end of paid parental leave. This system began in 1977 when the duration of paid leave was 18 weeks, taking the form of extra 30 weeks of unpaid leave until children reached their first birthday (Rønsen 1998). In 1995, the duration of unpaid parental leave was extended to 48 weeks (12 months) at the maximum per parent. Consequently, after 12 months of paid leave, if each parent was to take another 12 months of unpaid leave, parents can altogether take time-off until children reach age 3.

²⁰ In 1991, when this stretching was first permitted, if the leave was taken with 80 percent of income compensation, the duration was 35 weeks. In 1992 when the duration with 100 percent compensation was extended to 35 weeks, the duration with 80 percent compensation correspondingly became 40 weeks. It further extended to 52 weeks in 1993 when the duration with 100 percent compensation rose to 42 weeks.

²¹ In Finland, an unpaid maternity leave system for working women began in 1917. Although a paid maternity system began in 1937, its scope was limited to a small portion of working women, its paid duration was short, and its income compensation level was very low (Gauthier 1996).

parental leave has been 44 weeks with 70 percent of income substitution.²²

In summary, let us compare the current features of the parental leave schemes in the four Nordic countries. Table 13 presents the rules governing income-substituting cash benefits associated with childbirth (and adoption) in the four countries in December 1999. As shown in the table, in these countries, the duration of paid parental leave is in general extensive (30-60 weeks) and the level of income substitution is generous (70-100 percent). In Denmark the coverage is relatively limited because, unlike the other three countries, its parental leave scheme was operated under the employment insurance system. Accordingly, non-working parents are not eligible for any parental-leave benefits associated with childbirth in Denmark. In the other countries, even if parents are not working, they are eligible for the minimum amount of benefits specified under the scheme (420 SEK per week in Sweden, 618 NOK in Norway, and 360 FIM in Finland).

<Table 13 about here>

In all countries with the exception of Finland, a portion of paid parental leave is designated exclusively to fathers (4 weeks in Sweden and Norway and 2 weeks in Denmark), as a policy measure to increase men's sharing of childcare and child-rearing (Ellingsæter and Rønsen 1996; Forssén 2000; Jacobsson and Alfredsson 1993; OECD 2001b; Rønsen and Sundström 1996; Swedish Institute 1993). In all four countries, there is also a provision in the parental leave system that allows fathers to spend time-off together with mothers following (or prior to) childbirth. In all four countries, these income-substituting cash benefits associated with childbirth are taxable.

As a measure of policy effectiveness, we also look at changes in the percentage of men among all recipients as well as the percentage taken by men in total days of cash benefits associated with childbirth in the four countries during the 1990s. As shown in Table 14, the actual number of male recipients does not show any notable change, except for dramatic increase in Norway from 1990 to 1993 for uncertain reasons. However, the percentage of male recipients shows consistent increases in all four countries, with especially notable increases in Sweden from 1993 to 1995, in Denmark from 1996 to 1999, in Norway from 1993 to 1995, and in Finland from 1990 to 1993. These increases are thought to have been due in part to the policy provisions that designated a portion of the paid parental leave to fathers, and in Sweden and Finland to economic downturn that resulted in rising unemployment among young men (European Parliament 1996; B. Hoem 1998; ILO 2000).

<Table 14 about here>

²² Similar to Norway, in 1985 Finland also added a provision/alternative for unpaid parental leave upon the completion of paid leave. From 1985 to 1990, this unpaid leave system was expanded and, since 1990, all parents are entitled to have a leave until children reach age 3 while receiving child home-care allowance (Tsuya 2002). The base amount of child home-care allowance was 1,210 FIM in 1989 (Rønsen 1998).

Similar to the trend in the percentage male in the number of recipients, the percentage male in benefit days also increased steadily in all four countries. Compared to the male percentage of recipients, however, the male share in benefit days is much lower--from one-third to less than one-seventh--in all four countries. This shows that even though men take parental leave, the duration of such leave tends to be much shorter than that of women.

(4) Childcare Services

Together with paid parental leave, childcare services play a very important role in helping working women and men raise their children. In Nordic countries, throughout the postwar years, the municipal governments have been chiefly responsible for providing childcare services. Because the types of services offered and the ways of providing services differ across municipality even within a country (for specifics of childcare services in each country, see Tsuya 2002), it is difficult to give a concise comparison of features of public childcare services in the four Nordic countries. Thus, in this subsection, we first describe briefly the evolution of public childcare services in each country, followed by a comparison of the usage of these services in the four countries in the 1990s.

a) Evolutions

In Sweden, public childcare services for preschool children started to develop in 1944 when the state institutionalized childcare facilities by providing public subsidies to day-care centers and kindergartens (Socialstyrelsen 1992). In the 1960s and 1970s when Swedish economy expanded rapidly and women's paid employment outside the home increased dramatically, the needs for childcare services proliferated and, consequently, the shortage of such services became a serious social issue (Tsuya 1996). Under such a situation, childcare services were expanded substantially in the late 1970s and 1980s, via the legislations of the Child Care Act of 1977 and the Social Service Act of 1982 (Tsuya 1996). In 1985, it became a legal mandate for all municipalities to provide some forms of childcare services for all preschool and school-aged children of employed parents, with the date of achieving this policy target being set for 1991 (Socialstyrelsen 1992).

Despite these active policy efforts and resulting considerable increases in the number of slots at childcare facilities, however, the shortage in the supply of childcare services remained a major social concern in the 1970s to 1980s (Tsuya 1996).²³ In spite of the economic downturn in the 1990s, however, childcare services continue to be expanded. Childcare services in Sweden have been provided mainly through preschools (day-care centers) for preschool children, and leisure-time centers for school-aged children, with family day-care being available

²³ The Social Service Act was revised in 1995 to clarify the rules governing training requirements for childcare staff, childcare facilities, and number and age compositions of children cared (Swedish Institute 1996). In 1998, the jurisdiction of childcare services in the central government was shifted from Ministry of Health and Social Affairs to National Agency for Education. Consequently, with clauses on childcare services moving from the Social Service Act to the Education Act, all children at age 6 were guaranteed enrollment in preschool classes free of charge (National Agency for Education 2000).

for both preschool and school-aged children (Skolverket 2001; Swedish Institute 2001b).

In Denmark, provision of childcare services for preschool children by municipalities started in the late 1960s under the supervision of the central government (Knudsen 1999; Ministry of Social Affairs 2000). Despite the policy efforts to expand the scope and type of childcare services during the 1970s and 1980s, and the legislations of the Social Assistance Act of 1976 and the Social Services Act of 1987 that moved the jurisdiction and responsibility completely to municipalities, the shortage of childcare services continued to persist in the Danish society throughout those decades (Tsuya 2002).

In the late 1980s and 1990s, active policy efforts to increase the supply of public childcare services finally started paying-off, with the number of children enrolled in childcare facilities rising rapidly. The expansion of coverage of public childcare services continues to increase for children at all age groups under age 11 throughout the 1990s (Nordic Social-Statistical Committee 2001: 55-58). In 1995, all children under age 6 were given a right to be enrolled in public childcare services. Danish public childcare services for preschool children have been provided mainly by crèches and family day-care for children under age 3, by kindergartens for children aged 3-6, and also by age-integrated institutions for children aged 6 months to 6 years (Janson 1997; Ministry of Social Affairs 2000; Polakaw 1997). Childcare services for school-aged children are given primarily by after-school centers.

In Norway, public childcare services began their expansion in the early 1970s (Rønsen 1998). Despite these policy efforts, however, developments of public childcare services have been limited in Norway, compared to the other three Nordic countries (Statistics Norway 1995), although the number and proportion of preschool children in public childcare services increased in the 1970s and 1980s.²⁴ In 1990, the proportion of preschool children enrolled in childcare centers (including family day-care) was still 30 percent, the lowest among the four Nordic countries (Nordic Social-Statistical Committee 2001).

Even after the enactment of the Day Care Institutions Act of 1995, rights of all preschool children to receive public childcare services have not yet been materialized in the country.²⁵ In order to compensate the shortage of childcare services by enabling parents to stay home to care for small children, especially those under age 3, the Norwegian government began in 1998 the program of cash support for families with children aged 1-2 who were unable to find placement in day-care centers or family day-care. The amount of this cash support for families with small children is 3,000 NOK per month in 2000 (Council of Europe 1999c).

²⁴ In Norway, the proportion of preschool children receiving any form of public childcare services was merely 5 percent in 1973 (Statistics Norway 1995). It went up substantially to 21 percent in 1980, and then to 33 percent in 1990 (Nordic Social-Statistical Committee 2001).

²⁵ Such right are given only to handicapped children. However, the Norwegian government made it a policy priority to provide childcare services to all preschool children if parents desire to receive such services by 2000 (Council of Europe 1999c). However, the situation does not appear to be promising. For example, a study in 1996 shows that whereas 70-75 percent of children aged 1-5 desired to be enrolled in childcare centers, only 55 percent were actually enrolled (Kalish, Aman and Buchele 1998).

Nonetheless, childcare services in Norway today are not sufficient for preschool children, and childcare services for school-aged children seem to be even more limited.²⁶

Like in Norway, public childcare services in Finland experienced rapid expansion after the enactment of the Act on Children's Day Care of 1973. Compared to Norway, however, the pace of this expansion was much more rapid in Finland. The proportion of preschool children in public childcare services increased from 10 percent in 1973 to 28 percent in 1980, and further to 45 percent in 1985. In 1985, the Finnish government gave the right for all children under age 3 to receive public childcare services at daycare centers or family day-care centers; and the right was further extended to all preschool children under age 7 in 1995 (Forssén 2000; OECD 2001b).

However, due mainly to the proliferation in unemployment caused by the economic slump associated with the collapse of the Soviet Union with whom the country had close economic ties (European Parliament 1996), and also in part to the introduction of childcare leave with child home-care allowance in 1990, the proportion of preschool children in public childcare decreased in Finland in the early 1990s. Moreover, because provisions of public childcare services for preschool children are legally mandated since 1985, public childcare services for school-aged children suffered a crunch. To compensate the severe shortage of childcare for school-aged children, after-school activities for school-aged children organized by Christian Churches and NGOs came to play an increasingly important role in Finland in the 1990s (European Parliament 1996; OECD 2001b).

b) Usage of services

Let us next look at the degree and patterns of usage of these childcare services in the four Nordic countries in the 1990s. Table 15 shows changes in the numbers and proportions of children enrolled in day-care centers and family day-care by children's age group in the four countries from 1990 to 1999. We can first see that there are differences across countries in the rate (proportion) of enrollment, with Sweden and Denmark being in general higher than Finland and Norway. Second, in the three Scandinavian countries, the rate of enrollment increased consistently in the 1990s, with the achievement of Denmark being especially impressive.²⁷ Third, in contrast, in Finland the rate of enrollment declined in the early 1990s, although it showed a modest recovery in the late 1990s. As explained in the previous subsection, the deterioration of Finnish public childcare services was due mainly to the severe economic slump caused by the fall of the Soviet Union in the early 1990s.

<Table 15 about here>

²⁶ In Norway, childcare services for school-aged are given to children aged 6-10 at daycare centers before and after school, but systematic national data are not found on provision of childcare services for school-aged children.

²⁷ This rapid expansion of childcare services may have been necessary because the coverage of the Danish parental leave system is limited to working parents, and encourages them to return to employment in 6-7 months after childbirth.

Among the three Scandinavian countries, the enrollment rate in Norway is notably low among children under age 3. Although national data are unavailable for school-aged children, the rate of their enrollment in public childcare services is thought to be very limited as well. For example, a study found that, in 1997, among approximately 105,000 school-aged children who applied for enrollment in day-care centers, roughly 70,000 children (two-thirds) were placed in such centers (Kalish, Aman and Buchele 1999). Yet, if we are to use the population age 6-10 in 1 January 1999 (305,059) as the denominator, the proportion enrolled in day-care centers among all school-aged children at the end of 1998 is only around 23 percent.

(5) Nordic Family Policies and Fertility

We now summarize the three major components of the Nordic family policies by comparing their main features, and discuss their relations with fertility. Child allowance in the four Nordic countries has been relatively generous, of long duration, and universal (provided for all children) without conditions on parental income since the early postwar years. Although child allowance and other cash allowances are certainly important for the financial well-being and welfare of children, its effects on fertility may not be as strong as the other components, because the substantive nature of the allowance has not changed since its foundation.

By contrast, the policy factor that is thought to be most important for the fertility recovery in the late 1980s to early 1990s and the subsequent maintenance at relatively high levels is the expansion of paid parental leave. Although the pace and timing of the expansion differ across countries, the duration as well as the level of income compensation of paid leave increased substantially (or even dramatically) in the late 1970s to early 1990s in all four Nordic countries. Although the gender equality in participation in parental leave that the Nordic governments seek is still far from reality, the fertility-enhancing effects of improvements in the paid parental leave schemes seem to be undeniable.

Following the rapid expansion of paid parental leave schemes, public childcare services also developed rapidly during the 1980s and 1990s in the four Nordic countries, although the expansion in Denmark and Sweden was much more rapid and extensive than Finland and, especially, Norway. These improvements in provisions of childcare services may also be related to the fertility recovery from the mid-1980s to early 1990s. Since the expansion in childcare continued in the late 1990s despite some cut-backs in the early 1990s (Kautto et al. 2001; Kuhnle 2001), childcare services may also have played a role in the maintenance of fertility at relatively high levels.

6. Conclusions

In this final section, we discuss our findings on changes in the proximate determinants, socioeconomic factors, and family policies in the context of fertility changes from 1960 to 2000. In all four Nordic countries, fertility declined rapidly to below-replacement levels from the mid-1960s to the early/mid-1980s, due mainly

to the increasing delay of childbearing, especially among women under age 25. This delay of family formation was associated in part with dramatic changes in women's marriage behavior in the form of declining marriage and increasing divorce. The delay was also made possible by the rapid increases in the availability of safe and effective means of fertility control in the form of modern contraceptives and, in case of contraceptive failure, induced abortion to young unmarried women.

Women's increasing attainment of higher education in the 1960s to early 1970s may have been responsible in part for the delay of childbearing, by increasing women's opportunity costs associated with family formation. Even more directly influential were dramatic increases in employment among women at peak childbearing ages from the 1960s to the early 1980s. This is thought to be especially the case in the 1960s and 1970s, as paid parental leave programs and childcare services were limited at that time.

On the other hand, the recovery of fertility after the mid-1980s was brought about mainly by the catch-up of childbearing among women in their 30s. This may have been due in part to the changing nature of partnership and family relations characterized by increasing separation of procreation from marriage, and increases in men's participation in household tasks.

Our findings on socioeconomic and policy factors also suggest that the factors chiefly responsible for this fertility recovery and the subsequent stabilization were the rapid expansion of parental leave schemes with generous benefits, together with improvements in childcare services, because employment of women at peak reproductive ages continued to rise in the late 1980s and remained high in the 1990s. Although improvements were not linear (i.e., there were some set-backs) and forms of implementation have become diversified, the expansions of paid parental leave programs and childcare services continued in the late 1990s. This in turn implies that the levels of fertility in Nordic countries will remain relatively high in the foreseeable future as long as provisions and benefits of family policies remain stable and gender equality in the marketplace and at home continues to improve.

Table 1. Changes in the Fertility Rates by Women's Age in Four Nordic Countries, 1960-1998/2000

Country/year	15-19	20-24	25-29	30-34	35-39	40-44	45-49	TFR
Sweden								
1960	38	129	137	84	40	12	1	2.20
1965	46	143	153	90	40	10	1	2.42
1970	33	119	128	69	28	6	0	1.92
1975	29	115	123	64	21	4	0	1.78
1980	16	96	124	71	25	4	0	1.68
1985	10	82	132	87	31	5	0	1.74
1990	14	97	156	111	42	7	0	2.13
1995	8	66	125	98	41	7	0	1.73
2000	5	42	101	101	49	10	1	1.55
Denmark								
1960	46	172	157	88	39	11	1	2.57
1965	47	176	163	87	39	9	1	2.61
1970	32	130	131	66	25	5	0	1.95
1975	27	137	137	62	18	3	0	1.92
1980	17	102	118	55	16	2	0	1.55
1985	9	77	118	64	18	3	0	1.45
1990	9	71	135	87	27	4	0	1.67
1995	8	62	139	109	39	5	0	1.80
1998	8	54	128	108	41	6	0	1.72
Norway								
1960	40	171	173	114	62	20	2	2.91
1965	40	182	177	112	58	18	1	2.95
1970	46	166	149	88	41	11	1	2.50
1975	40	135	129	64	24	5	0	1.98
1980	25	108	122	63	22	4	0	1.72
1985	18	94	126	71	23	4	0	1.68
1990	17	93	145	95	32	5	0	1.93
1995	13	78	134	103	40	6	0	1.87
1998	12	69	128	105	43	7	0	1.81
Finland								
1960	31	162	159	103	62	25	2	2.72
1965	34	150	146	93	52	20	2	2.48
1970	32	119	109	65	31	9	1	1.83
1975	27	106	114	60	25	6	0	1.68
1980	19	92	115	68	27	6	0	1.63
1985	12	97	143	79	30	7	0	1.64
1990	12	72	133	94	37	8	0	1.78
1995	10	66	130	105	42	8	0	1.81
1998	9	60	116	101	44	9	1	1.70

SOURCES: Council of Europe (1999) *Recent Demographic Developments in Europe*, 1999; Statistiska centralbyrån (2002) *Statistisk Årsbok för Sverige 2002*.

Table 2. Changes in the Mean Age of Women at First and All Births in Four Nordic Countries, 1960-1998

Country/year	Mean age at:	
	First birth	All births
Sweden		
1960	25.5 ^a	27.5
1965	25.2 ^a	27.2
1970	25.9 ^a	27.0
1975	24.4	26.7
1980	25.3	27.6
1985	26.1	28.4
1990	26.3	28.6
1995	27.2	29.2
1998	27.7	29.5
Denmark		
1960	23.1	26.8
1965	22.7	26.8
1970	23.8	26.7
1975	23.9	26.4
1980	24.6	26.8
1985	25.7	27.7
1990	26.4	28.5
1995	27.4	29.2
1998	--	29.4
Norway		
1960	--	27.9
1965	--	27.7
1970	23.6	27.0
1975	24.2	26.4
1980	25.2	26.9
1985	26.1	27.5
1990	25.5	28.1
1995	26.5	28.8
1998	27.2	29.3
Finland		
1960	24.7	28.3
1965	24.6	28.0
1970	24.4	27.1
1975	24.9	27.0
1980	25.6	27.7
1985	25.9	28.4
1990	26.5	28.9
1995	27.6	29.3
1998	27.8	29.5

NOTE: a--Mean age at first birth within current marriage.

SOURCES: Council of Europe (1999) *Recent Demographic Development in Europe, 1999*; Statistiska centralbyrån (1998) *Befolkningsstatistik 1997, Del. 4.*

Table 3. Mean Completed Fertility by Women's Birth Cohort in Four Nordic Countries

Country	Women's birth cohort							
	1930	1935	1940	1945	1950	1955	1960	1965
Sweden	2.12	2.14	2.05	1.98	2.00	2.03	2.03	1.98 ^a
Denmark	2.36	2.38	2.24	2.06	1.91	1.84	1.90	1.89
Norway	2.48	2.57	2.45	2.21	2.09	2.04	2.07	
Finland	2.46	2.29	2.04	1.88	1.85	1.90	1.95	1.93 ^b

NOTES: a--Figure for the 1963 birth cohort. b--Figure for the 1962 birth cohort.

SOURCES: Council of Europe (1999) *Recent Demographic Developments in Europe*, 1999; Central Statistical Office of Finland, unpublished data.

Table 4. Total and Age-specific Female First Marriage Rates, Mean Age of Women at First Marriage, and Total Divorce Rate of Women in Four Nordic Countries, 1960-1995/1998

Country/ year	First marriage rate per 1,000 women at age:							Total first marriage rate	Mean age at first marriage	Total divorce rate ^a
	<20	20-24	25-29	30-34	35-39	40-44	45-49			
Sweden										
1960	32	102	37	11	5	2	1	0.95	23.9	--
1965	36	107	34	9	3	1	1	0.95	23.5	--
1970	17	72	26	6	2	1	1	0.62	23.9	0.23
1975	11	65	36	9	3	1	1	0.63	24.8	0.50
1980	6	43	38	12	3	1	1	0.53	26.0	0.42
1985	4	34	42	18	5	2	1	0.53	27.2	0.45
1990	4	34	45	19	6	2	1	0.55	27.5	0.43
1995	3	20	35	19	7	3	1	0.44	28.7	0.50
1997	3	16	34	19	8	3	1	0.42	29.2	0.48
Denmark										
1960	49	113	28	7	3	1	1	1.01	22.8	0.19
1965	49	114	25	6	2	1	1	0.99	22.5	0.18
1970	34	99	21	5	2	1	1	0.82	22.8	0.25
1975	20	81	25	5	2	1	1	0.67	23.5	0.37
1980	9	57	30	7	2	1	1	0.53	24.6	0.40
1985	5	46	44	15	4	1	0	0.57	26.2	0.46
1990	3	35	50	21	7	2	1	0.60	27.6	0.44
1995	3	26	55	28	12	5	1	0.65	29.0	0.41
1997	3	23	54	29	12	5	2	0.64	29.4	0.40
Norway										
1960	47	104	35	12	5	3	2	1.04	23.7	--
1965	39	95	27	7	3	2	1	0.87	23.2	--
1970	47	107	26	7	2	1	1	0.96	22.8	0.13
1975	38	88	24	6	2	1	1	0.80	22.9	0.21
1980	21	73	26	6	2	1	0	0.65	23.5	0.25
1985	10	57	33	9	2	1	1	0.57	24.9	0.33
1990	5	47	43	14	4	1	0	0.58	26.2	0.43
1995	4	33	46	18	6	2	1	0.54	27.4	0.46
Finland										
1960	40	96	34	11	5	3	2	0.96	23.8	--
1965	43	94	32	10	4	2	1	0.93	23.4	--
1970	44	98	31	9	4	2	1	0.94	23.3	0.17
1975	29	74	26	7	3	1	1	0.70	23.4	0.26
1980	18	68	34	8	3	1	1	0.67	24.3	0.28
1985	11	54	36	10	3	1	1	0.58	25.1	0.28
1990	8	46	43	13	4	1	1	0.58	26.0	0.42
1995	5	38	45	17	6	2	1	0.57	27.0	0.48
1998	5	34	45	19	7	3	1	0.57	27.6	0.48

NOTE: a--Total divorce rate for each year is the sum of the divorce rates at different durations of marriage at that year.

SOURCE: Council of Europe (1999) Recent Demographic Developments in Europe, 1999.

Table 5. Percentages of Coresiding Couples Who Are Unmarried by Women's Age in Four Nordic Countries

Country/year	<20	20-24	25-29	30-34	35-39	40-44	45-49
Sweden							
1975	88	57	23	10	6	4	4
1980	91	69	37	18	10	7	6
1985	93	78	48	28	17	12	9
1990	91	75	46	25	17	13	10
Denmark							
1976-77	--	49	19	10	--	--	--
1980-81	--	64	32	13	--	--	--
1984-85	--	72	40	19	--	--	--
1986-88	--	77	44	21	--	--	--
1998	87	81	54	31	22	15	11
Norway							
1977	--	21	6	2	2	1	--
1988	--	63	31	14	7	8	--
1994	--	78	50	27	15	14	11
1998	--	83	55	34	22	16	10
Finland							
1999	92	78	49	31	23	18	14

SOURCES: Statistiska centralbyrån (1992) Folk-och bostadstrakningen 1990, Del. 2; Knudsen, Lisbeth B. (1993) Fertility Trends in Denmark in the 1980s; Danmarks Statistik (1999) Befolkningens bevægelser 1997; Statistisk sentralbyrå (1999) Statistical Yearbook of Norway 1999; Tilastokeskus (2000) Perheet 1999.

Table 6. Percentages of Persons with 13 or More Years of Education by Sex and Age in Four Nordic Countries, 1990-1996

Country/year	Women				Men			
	25-29	30-39	40-49	50-59	25-29	30-39	40-49	50-59
Sweden								
1990	19.6	28.5	25.9	16.8	19.5	25.8	23.3	16.9
1993	25.3	30.0	30.0	21.2	24.3	26.6	26.3	19.9
1996	29.9	30.8	32.5	24.6	28.0	28.0	28.1	22.5
Denmark								
1990	17.9	26.4	19.1	11.7	14.7	21.3	21.5	15.6
1993	18.0	26.1	22.7	13.5	15.9	20.8	22.9	17.2
1996	20.5	25.6	26.0	16.0	17.7	20.8	23.3	19.3
Norway								
1990	26.0	26.0	20.0	12.6	20.0	25.9	25.3	18.6
1993	29.1	27.8	23.0	15.4	23.4	25.5	27.1	21.7
1996	33.6	30.0	26.0	18.4	27.2	25.7	27.9	24.4
Finland								
1990	13.1	16.7	13.7	8.7	11.9	14.9	14.8	10.7
1993	18.4	19.0	15.1	10.6	15.7	16.1	15.0	12.7
1996	24.7	22.8	17.6	13.0	19.0	18.8	15.9	14.5

SOURCE: Nordic Council of Ministers (1998) *Nordic Statistical Yearbook*, edited by Inge Feldbæk, Copenhagen: Nordic Council of Ministers.

Table 7. Percentage Female of the Labor Force and among All Part-time Workers and Percentage of Part-time Workers in All Employed Women and in Four Nordic Countries, 1970-2000

Country/year	% female in		% part-time among employed women
	Labor force	Part-time workers ^a	
Sweden			
1970	40	90	38
1975	43	90	--
1980	45	87	--
1985	47	85	30 ^b
1990	48	84	25
1995	48	77	24
2000	48	73	21
Denmark			
1971	39	--	--
1976	41	--	--
1983	45	81	37
1986	46	76	33
1990	46	72	30
1993	47	70	29
2000	47	70	24
Norway			
1970	30	--	--
1975	38	77	48
1980	41	81	51 ^c
1984	43	77	48
1987	44	78	45
1990	45	82	40
1995	46	81	38
2000	47	77	34
Finland			
1976	47	73	10
1980	47	75	11
1984	48	72	13
1990	47	67	11
1993	47	63	12
1997	47	63	13
2000	48	64	14

NOTES: a--Referring to workers whose regular work hours less than 30 hours per week. b--Figure for 1987. c--Figure for 1979.

SOURCES: OECD, Labour Market Statistics, various years; Statistiska centralbyrån, Statistisk Årsbok för Sverige, various years.

Table 8. Ratio of the Mean Wages of Female Workers to Male Workers (Male=100) in Manufacturing Industries in Four Nordic Countries, 1963-1998

Year	Sweden	Denmark	Norway	Finland
1963	72	69	70	67
1965	75	72	72	68
1970	80	74	75	70
1975	85	84	78	73
1977	87	86	80	74
1980	90	86	82	75
1982	90	85	83	77
1985	90	86	84	77
1987	90	84	84	77
1990	89	85	87	77
1992	90	85	87	78
1995	90	85	87	79
1998	91	84	87	79

SOURCES: ILO, Yearbook of Labour Statistics, various years; Statistiska centralbyrån, Statistisk Årsbok för Sverige, various years; Statistics Norway (1995) Historisk statistikk 1994.

Table 9. Mean Employment Hours per Week by Sex, Mean Hours Spent on Household Tasks per Week by Sex, and Men's Share in Housework and Childcare in Four Nordic Countries and Japan

Country/year	Employment hours		Household task hours		% Male share in:		
	Male	Female	Male	Female	Housework	Childcare	Total
Sweden 1990-91	41.1	27.3	20.2	33.2	39	29	38
Denmark 1987	35.0	21.8	11.2	22.5	34	27	33
Norway 1972	40.0	14.4	6.9	37.2	15	21	16
1980-81	34.2	17.1	9.2	29.8	22	29	23
1990	30.8	19.3	18.3	30.6	39	28	37
Finland 1979	30.0	21.8	11.7	25.6	32	23	31
1987	31.7	23.1	12.6	24.4	35	26	34
Japan 1976	42.4	23.5	0.9	23.1	4	--	4
1981	42.5	22.3	0.9	23.7	4	--	4
1986	41.8	21.2	1.3	24.3	5	6	5
1991	40.8	19.5	2.8	27.1	9	13	9

SOURCES: United Nations (1991) *The World's Women 1970-1990: Trends and Statistics*;
 ——— (1995) *The World's Women 1995: Trends and Statistics*.

Table 10. Typology of Selected Western Welfare States by the Level of Family-Policy Legislation and Real Income of Families of Children Living in Poverty in the Late 1990s

Level of family-policy legislation in 1996-1999	Ratio of median real income of families of children in poverty* to the US median income in 1997 (US median income=100)	
	45-60	30-44
Strong legislation	Finland Sweden Denmark Belgium Norway	France
Weak legislation	Germany Luxembourg	Italy Netherlands United States Australia United Kingdom

NOTE: 'Poverty' is defined as income of family of children in 1997 being in the lowest quartile in the distribution of family income in that year in the country of residence.

SOURCES: Forssén (2000) "Child Poverty in the Nordic Countries." University of Turku Department of Social Policy Series B: 22/2000, Turku: University of Turku.

Table 11. Rules Governing Child Allowance as of December 1999 in Four Nordic Countries

Rules/features	Sweden	Denmark	Norway	Finland
Child allowance income-adjusted?	No	No	No	No
Allowance payable until children reach age:	16 ^a	18	16 ^b	17
Child allowance exempt from tax?	Yes	Yes	Yes	Yes
Supplement for any additional children?	Yes	No	Yes	Yes
Same allowance granted for children of all age groups	Yes	No	No	Yes
Extra allowance for single parents?	No	Yes	Yes	Yes

NOTES: a--When children are enrolled in schools, allowance continues to be payable until the spring of the year when they become age 20.

b--As of 2000, allowance is payable until children reach age 18.

SOURCES: Nordic Social-Statistical Committee (2001) *Social Protection in the Nordic Countries 1999: Scope, Expenditure and Financing*, Copenhagen: Nordic-Social Statistical Committee; European Union (2001) *Norway: Family Benefits, Mutual Information System on Social Protection in the EU Member States and the EEA*; Ministry of Children and Family Affairs (2000) *The Rights of Parents of Small Children in Norway*, Oslo: Ministry of Children and Family Affairs.

Table 12. Annual Amount of Child/Family Allowance As of December 1999 in Four Nordic Countries

	Sweden SEK	Denmark DKK	Norway NOK	Finland FIM
Couple with:				
1 child	10,200	10,200	11,112	6,420
2 children	20,400	20,400	22,224	14,304
3 children	33,324	30,600	35,316	23,652
Single parent with:				
1 child	10,200	18,604	22,224	8,852
2 children	20,400	33,568	35,316	19,104
3 children	33,324	48,532	48,408	30,852
Average amount of allowance per child in own currency	9,568	10,688	13,764	7,723
Average amount of allowance per child in EURO	882	1,152	1,317	1,110

SOURCE: Nordic Social-Statistical Committee (2001) *Social Protection in the Nordic Countries 1999: Scope, Expenditure, and Financing*, Copenhagen: Nordic Social-Statistical Committee.

Table 13. Rules Governing Income-substituting Cash Benefits in the Event of Childbirth or Adoption as of December 1999 in Four Nordic Countries

	Sweden	Denmark	Norway	Finland
Working				
Number of weeks in which benefit is payable	60 weeks	30 weeks	42/52 weeks*	44 weeks
Percentage of income substitution	80%**	100%	100/80%	70%
Maximum benefit per week: In own currency In Euro	5,250 484	3,048 329	5,417 518	No maximum
Minimum benefit per week: In own currency In Euro	480 39	No minimum	618 57	360 52
Weeks of parental benefit designated to: Mothers only Fathers only Either mother or father	4 weeks 4 weeks 52 weeks	18 weeks 2 weeks 10 weeks	9 weeks 4 weeks 29/39 weeks	18 weeks -- 26 weeks
Additional number of weeks for father together with mother	2 weeks	2 weeks	2 weeks#	3 weeks
Benefit taxable?	Yes	Yes	Yes	Yes
Not working				
Number of weeks in which benefit is payable	60 weeks	None	Lump-sum benefit	44 weeks
Amount of benefit per week in own currency	420	Zero	32,138 (=618 per week)	360
Sharing benefit between mother and father?	Yes	NA	Conditional§	Yes§§
Benefit taxable?	Yes	NA	No	Yes

NOTES: *--42 weeks if the percentage of income-substitution is 100%; 52 weeks if it is 80%. **--80% for first 48 weeks, and the minimum guaranteed amount (60 SEK per day) for the remaining period. #--No income-substitution for these 2 weeks, but they can be taken not only after but also prior to childbirth. §--Father is entitled to benefit if a mother has died and/or he has assumed sole custody. §§--Maximum duration sharable is 26 weeks. SOURCES: Nordic Social-Statistical Committee (2001); Tsuya (2002).

Table 14. Numbers by Sex and Proportion Male of Recipients and Benefit Days of Cash Benefits Associated with Childbirth and Adoption in Four Nordic Countries in 1990-1999

	Sweden	Denmark	Norway	Finland
Number of recipients				
1990	399,436	114,607	52,594	137,856
1993	458,632	131,338	101,254	148,696
1996	424,632	124,227	108,211	139,411
1999	425,710	127,468	111,112	139,518
% male in recipients				
1990	26.1	30.1	1.2	19.8
1993	28.5	31.2	24.9	27.1
1996	32.4	32.1	28.9	29.0
1999	36.2	34.8	29.0	29.8
Number of benefit days (1,000s)				
1990	50,607	12,523	5,149	16,900
1993	52,212	14,385	10,699	16,947
1996	37,709	13,566	10,992	15,381
1999	37,438	13,506	10,989	15,313
% male in benefit days				
1990	8.8	4.1	--	2.4
1993	10.3	4.4	5.8	3.6
1996	11.6	4.8	7.0	3.9
1999	12.8	5.4	7.0	4.0

SOURCES: Nordic Social-Statistical Committee (2001) *Social Protection in Nordic Countries 1999*, Copenhagen: Nordic Social-Statistical Committee; National Social Insurance Board, *Social Insurance Statistics FACTS*, Stockholm: National Social Insurance Board, various years.

Table 15. Numbers and Proportions of Children Enrolled in Day-care Centers and Family Day-care by Children's Age Group in Four Nordic Countries, 1990-1999

	Sweden ^a	Denmark	Norway ^b	Finland ^c
Number of children enrolled				
1990				
Age 0-2	103	88	19	55
Age 3-6	263	161	120	141
0-6 total	367	248	139	196
Age 7-10	146	74	--	17
0-10 total	512	322	--	213
1995				
Age 0-2	123	101	39	34
Age 3-6	367	218	149	145
0-6 total	490	319	188	179
Age 7-10	198	123	--	11
0-10 total	688	441	--	190
1999				
Age 0-2	108	113	45	43
Age 3-6	350	255	142	178
0-6 total	458	368	188	221
Age 7-10	254	169	--	8
0-10 total	712	537	--	229
Percentage enrolled				
1990				
Age 0-2	29	48	11	31
Age 3-6	64	73	57	58
0-6 total	48	61	33	44
Age 7-10	38	34	--	7
0-10 total	44	52	--	30
1995				
Age 0-2	37	48	22	18
Age 3-6	74	83	61	55
0-6 total	59	68	44	39
Age 7-10	45	53	--	5
0-10 total	54	63	--	27
1999				
Age 0-2	40	56	25	25
Age 3-6	82	91	77	70
0-6 total	66	77	51	52
Age 7-10	51	64	--	3
0-10 total	62	72	--	33

NOTES: a--Since 1998 all children aged 6 are entitled to enrollment in preschool classes; consequently, unless children aged 6 are also enrolled in day-care centers or family-day care, they are not included in the figures for 1999. b--In 1999, only children age under 6 are included. c--Figures for 1999 include permitted private day-care centers receiving government subsidies.

SOURCES: Nordic Social-Statistical Committee (2001) Social Protection in the Nordic Countries 1999, Copenhagen: Nordic Social-Statistical Committee.

Figure 1. Changes in the Total Fertility Rate in Four Nordic Countries, 1960-2000

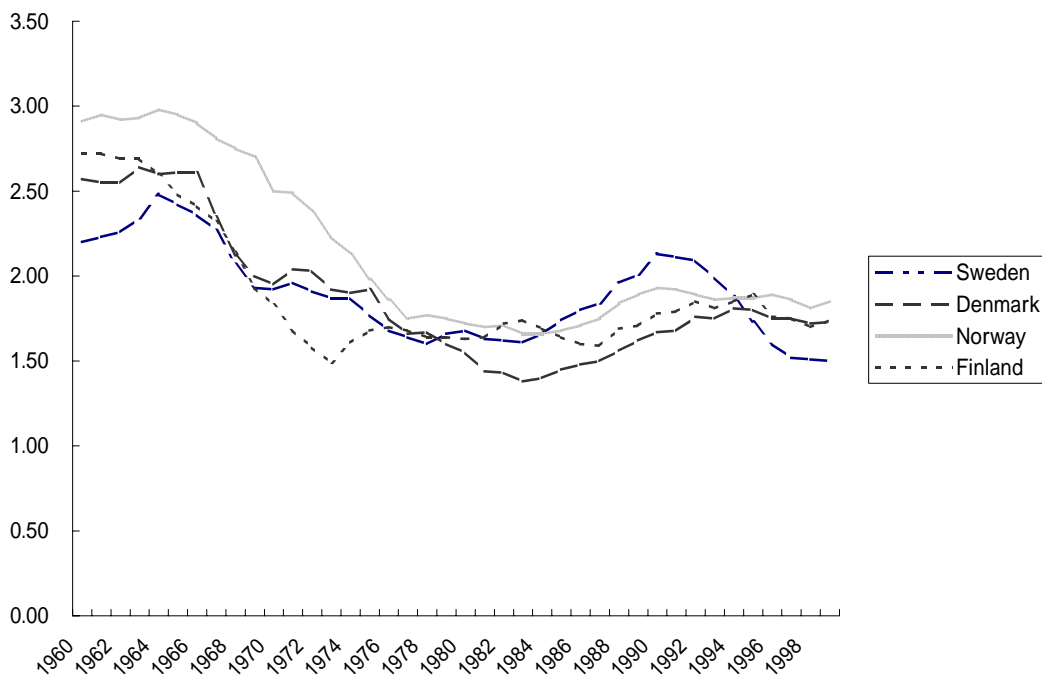


Figure 2. Changes in the Proportion of Our-of-wedlock Births in Four Nordic Countries, 1960-1998

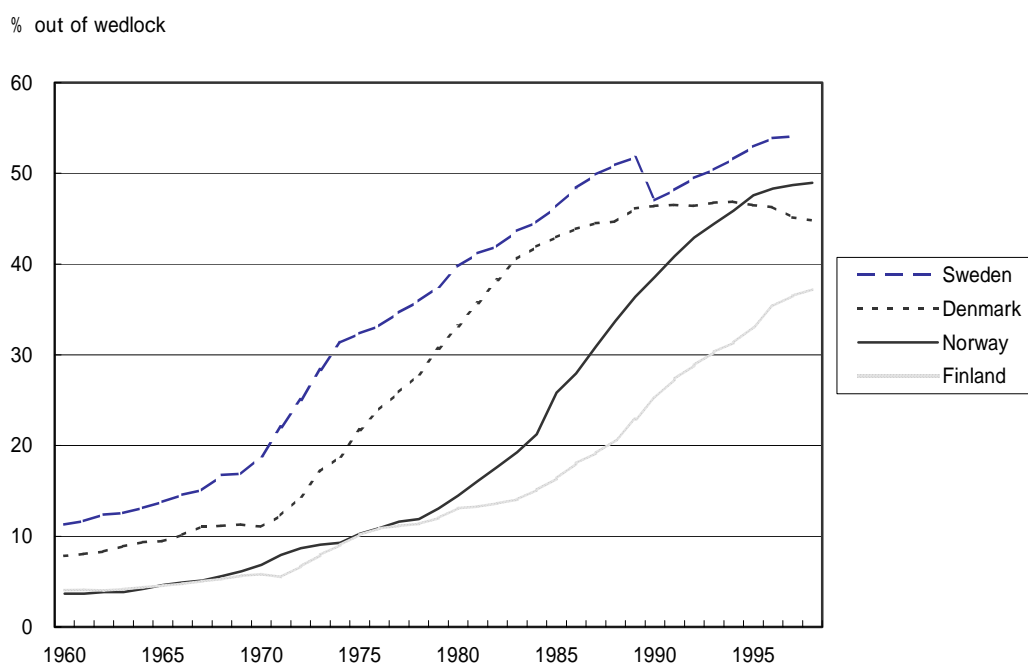


Figure 3. Changes in Labor Force Participation Rates of Men and Women Age 15-64 and Mothers of Preschool Children in Nordic Countries, 1960-2000

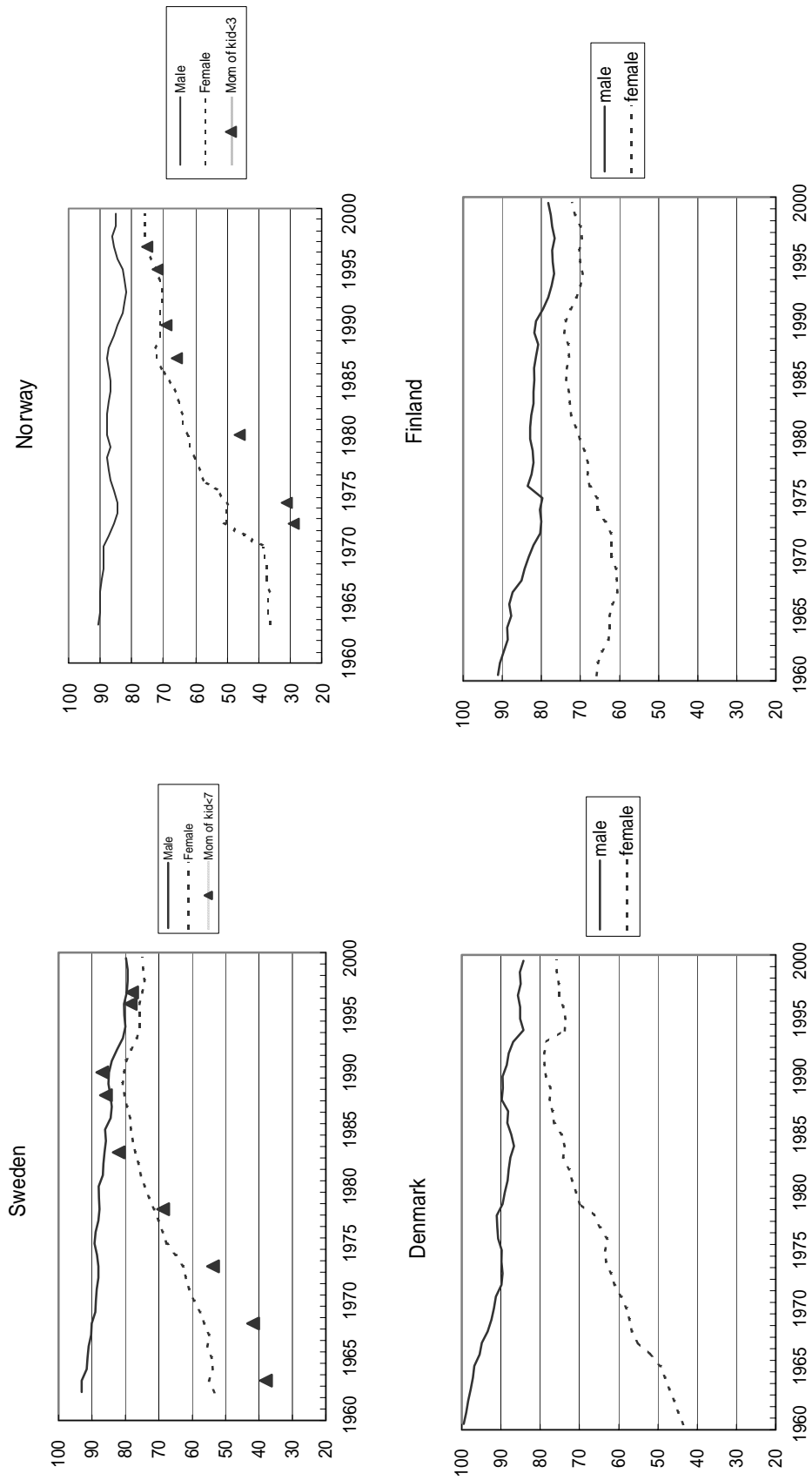


Figure 4. Changes in Female Labor Force Participation Rates by Age in Four Nordic Countries, 1960-2000

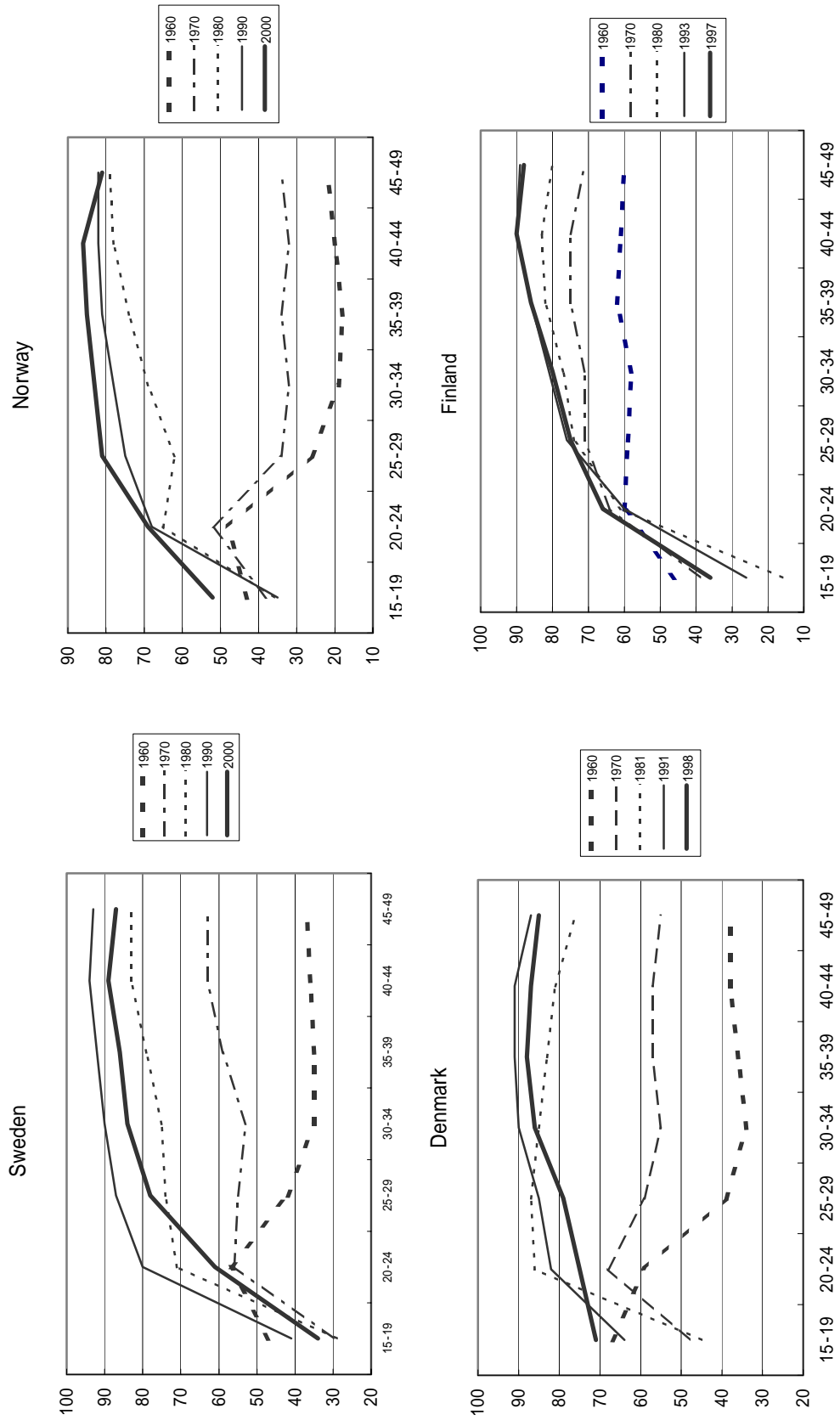
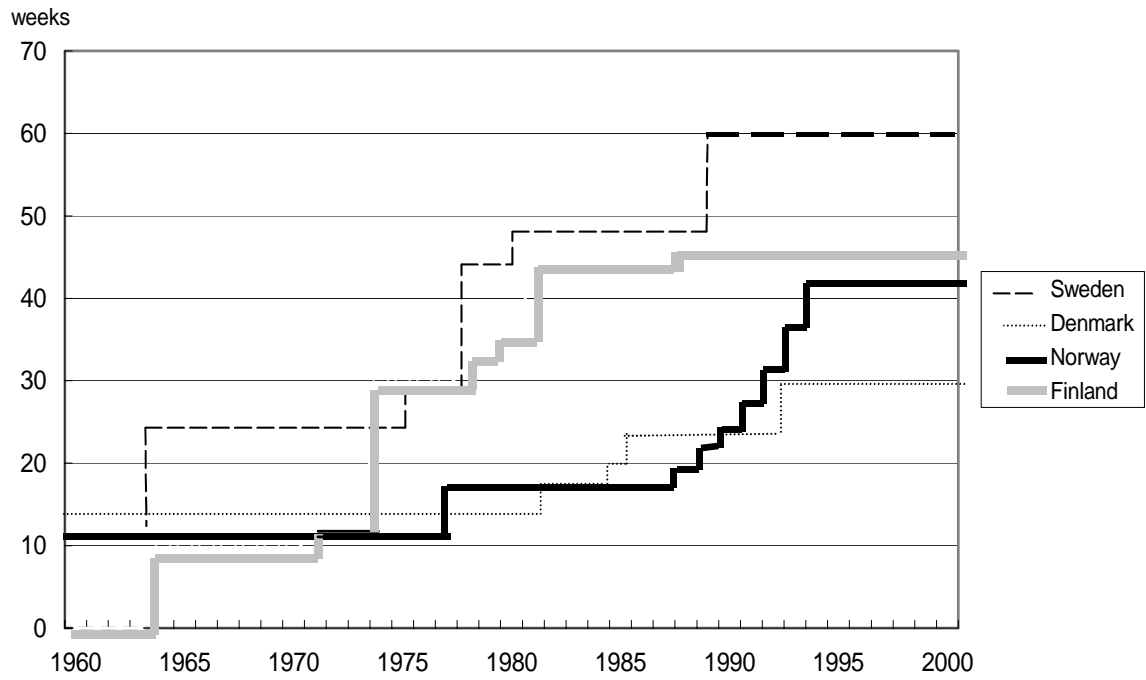


Figure 5. Changes in the Duration (in Weeks) of Paid Parental Leave for All Parents (or All Working Parents) in Four Nordic Countries, 1960-2000



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