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**SWEDISH PARENTAL LEAVE IN THE PERSPECTIVE
OF EUROPEAN INTEGRATION**

by

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Abstract

Recently, the issue of whether social protection is harmful to economic performance has been much debated among politicians and researchers. This paper sheds light on this issue by studying a particular form of social protection, namely maternal and parental leave programs, taking Sweden as a test case. The paper gives an overview of the maternal and parental leave programs and benefits of the EU and former EFTA-countries and compares these programs with the Swedish one. The Swedish system is described in detail. The paper also reviews and summarizes research findings on the use of benefits by Swedish mothers and fathers and on the effects of the program on work incentives, child spacing and wage growth.

1. Introduction

In the last few years there has been considerable interest among economists and politicians in how individuals respond to work related benefits such as welfare payments and unemployment benefits. Can such programs protect individuals from financial hardship without detriments to work incentives or do recipients become too reliant on these payments? One issue which has been extensively studied is, for example, whether the length of the unemployment benefit entitlement period prolongs the duration of unemployment (for a review see e.g. Atkinson & Micklewright 1991). Also, the effect of welfare payments on work incentives has attracted a lot of research interest (see e.g. Atkinson 1993). A more general issue discussed in the context of US versus European labor market flexibility is whether social protection harms economic performance (see Blank et.al. 1994). A related issue debated among EU-politicians is whether a country with a higher level of social benefits is at a competitive disadvantage, as the British government argues, or if social protection may increase productivity as the EU-majority and some researchers claim.¹⁾

Sweden, which for long has had one of Europe's most extensive family benefit systems, became a member of the EU on January 1, 1995 together with the other former EFTA-countries Austria and Finland while Norway chose not to join. Will Sweden be at a disadvantage in the EU because of its social programs? Could the Swedish programs be a model for the EU? Or do the Swedish programs have to be modified to conform with those of the EU? The answers to these questions can be expected to depend, in part, on how the Swedish programs compare to those in the old and new EU-countries

and, in part, on how the Swedish programs operate and what their effects are. In this article I will shed light on these issues using evidence from Sweden on usage and effects of a work related benefit which has attracted little research effort so far: maternal and parental leave benefits. In so doing I will summarize findings from a series of studies of the Swedish parental leave system based on national data as well as data from a large multibranch nationwide company (Sundström & Stafford 1992; Sundström 1993a; Sundström 1994a; Sundström 1994b; Stafford & Sundström 1994). More general discussions of effects of taxes and transfers on work incentives in Sweden can be found in Gustafsson & Klevmarken (1993) and Aronsson & Walker (1995).

Why should maternal/parental-leave benefits matter? First, such benefits may be important in shaping women's lifetime decisions on education, paid work and childbearing and may thereby affect women's long-run labor market productivity (Blank 1994 p. 14). In fact, one of the few cross-country studies that exists on the effects of maternity leave programs found that they do increase female labor force participation (Winegarden & Bracy 1994).²⁾ Also, such an effect, even for Canada and the US, is suggested in Trzcinski & Alpert (1994). Second, leave programs may affect the long-term productivity of the economy if they enhance the well-being and cognitive development of young children. Thus, Blau & Grossberg (1992) found that maternal employment during the child's first year had a negative impact on the cognitive development while the effects during the child's second and third year were positive. They conclude that: "... if maternal employment during this early period has deleterious effects, they are most likely centered in

the first year of life. This further suggests the desirability of public policies designed to improve the quality of alternative care during this time and/or to encourage greater opportunities for parental leaves during this period." Third, to all interested in gender equity these programs should matter since they affect male-female wage differentials (Stafford & Sundström 1994) as well as gender equality in the home (Haas 1992). The fourth reason why we should be interested in family leave programs is that government expenditures on such programs are rather high while our knowledge about their effects is limited. For example, in 1991/92 Sweden spent about 1.3 percent of its GDP on parental leave benefits (and another 5 percent on other family benefits) while unemployment benefits, which have received much more research interest, amounted to about 1.2 percent of GDP.

Next section presents and compares the maternal and parental leave programs of the old and new EU-countries as well as Norway. Section 3 gives a detailed presentation of the Swedish parental leave program. In Section 4 I present evidence on usage and effects on women's labor market activity, fertility and earnings of the Swedish program.

2. Maternal and parental leave in the EU and former EFTA-countries

In all EU and former EFTA-countries employed women have statutory rights to job-protected paid maternity leave at childbirth of at least 14 weeks (except Portugal which has 13 weeks) (Table 1). However, in the majority of the EU-countries between four (the Netherlands, Ireland) and nine (in Italy) of these weeks must be used (and more can be used) prior to expected delivery after which

Table 1. Statutory parental leave benefits in the old and new EU-countries plus Norway in 1994.

	Maternity leave max weeks	Weeks to be used before birth ^a	Replace- ment level %	Extended leave for child care
Austria	16	8	100%	2 years
Belgium	15	4	4.5w 82.5%+9.5w 60-75%	2 years ^b
Denmark	28	4	90% up to DKK2556/w	1 year ^c
Finland	49 ^d	5	80%	2 years
France	16-28 ^e	6-8 ^e	84%	2 years
Germany	14	6	100% - max DM750/m	18 months
Greece	15	6	100%	
Ireland	14	4	70%	
Italy	47	9	22w 80% + 25w 30%	
Luxembourg	16	8	100%	
Netherlands	16	4	100%	
Norway	42 (52)	3	100% (80)	
Portugal	13 ^f	0	100%	
Spain	16	6	75%	Three years
Sweden	65 ^g	0	10 mths 80% + 2 mths 90 % + 3 mths flat rate ^g	
UK	14 (40) ^h	0 (11)	6w 90% + 12w £52.50/w ⁱ	

Sources: Length of leave: Employment observatory No. 17, 1994.
Replacement level: Hallvarsson (1994), updated.

^a Minimum number of weeks that must be used prior to birth.

^b The employee has to be replaced by an unemployed person.

^c Leave with 80 % pay also for other reasons than child care.

^d 105 plus 170 working days.

^e The longer leave is for third (or higher order) births.

^f Portugal has 90 days of leave, 60 must be used after birth.

^g As from Jan 1, 1995 one month is reserved for the father.

^h Women who gets 40 weeks leave must use 11 weeks prior to birth.

ⁱ Women who only qualify for the 14 week leave will lose the last four weeks of pay if they go back to work.

there remains between eight (in Ireland) and 36 weeks (Italy) to be used after birth. Even if Italy and Denmark grant leaves beyond the fourteenth week, leaves are generally longer in the former EFTA-countries; Sweden has 15 months (one of which is reserved for the father) and Finland has almost 10 months after birth. In Norway

parents can choose between 42 weeks at 100 percent compensation or 52 weeks at 80 percent (in either case three weeks must be used prior to birth and four weeks are reserved for the father). Sweden does not require mothers to take any leave prior to birth, but those who wish to do so may start using benefits 60 days before anticipated delivery. Sweden also has a benefit for pregnant women who cannot continue to work due to health limitations or occupational hazards. However, this seem to be a case where Sweden might have to adjust to the norms of the EU. For example, from January 1, 1995 the need to protect pregnant and nursing women against occupational hazards has been given more emphasis as a consequence of the EU membership (Swedish Board of Occupational Safety and Health 1994).

While maternity leave is granted for all employed women, the eligibility requirements for full maternity pay are more strict and also vary across countries. Thus while most EC-countries require at least six months of employment and insurance contributions prior to birth for women to qualify for maternity benefits, Italy, Netherlands and Finland have no such requirements. By contrast, to qualify for pay during at least 14 weeks (18 weeks if she does not return to work) a British woman needs six months service with the same employer by the end of the 15th week before the baby is due (Maternity alliance 1994). To get 40 weeks leave (of which 11 weeks should be used before delivery) she must have worked 16 hours or more per week for the same employer for two years (five years if she worked 8-16 hours per week) by the end of the 12th week before the baby is due. Even so she will only receive maternity pay for 18 weeks.

To continue with maternity pay, it is clear that a majority of EU-countries have about the same replacement level as Sweden (or higher) but for a shorter period. All countries also apply income ceilings of varying levels. While the Swedish one is relatively high (about SEK 20,000 or \$2,600 per month taxable), the Danish one e.g. is rather low (DEK2556 is about \$400 net of taxes). (Benefits are taxfree in all countries except in Sweden and Finland, see Kamerman 1991 p.187). Another well-known difference is that employees in the EU (including Denmark) to a much greater extent than is the case in Sweden, Finland and Norway rely on private insurances and local collective bargaining agreements for their social security (see e.g. Esping-Andersen 1990). These arrangements grant leaves and earnings compensation beyond and above the legislated minimum of varying size for different groups. Therefore, although the statutory benefits are financed out of general taxes or social insurance contributions with no direct costs to the employer of the parent who takes leave, employers will in practise incur costs due to collective bargaining agreements and other arrangements. Table 2 provides a summary measure of the relative generosity of maternal and family benefits paid by the governments of the respective countries. However, since the value of tax credits and deductions for dependants are not included, the benefit level of Sweden which does not have such deductions will be overstated (see Wennemo 1994 pp. 75-81).

Still another difference between Sweden and the other EU countries is the extent to which the programs favor employed mothers in relation to those nonemployed. While most of the other countries pays a substantial cash benefit at childbirth to

nonemployed mothers, the Swedish system provides very low benefits to these mothers (see Euvrard & Neuret 1994). At the same time the Swedish benefits to employed mothers are extensive and therefore the system give young women strong incentives to establish themselves in the labor market before having a child.

Table 2. Government expenditures on maternity benefits and other family benefits as a share of GDP in the EU-countries plus Austria, Finland, Norway and Sweden in 1992. Percent.

	Maternity benefits	Family benefits
Austria	7.2 ^a	
Belgium	0.24	1.92
Denmark	0.55	3.12
Finland	0.83	3.5
France	0.41	2.24
Germany	0.22	2.12
Greece	0.12	0.19
Ireland	0.44	3.15
Italy	0.11	0.84
Luxembourg	0.41	2.60
Netherlands	0.11	1.58
Norway	0.47	2.88
Portugal	0.14	0.78
Spain	0.20	0.20
Sweden	1.34	5.0
UK	0.27	2.57

Source: EU and Finland Eurostat (1994). For Norway: Statistics Norway; for Sweden: Statistics Sweden.

^a Both family and maternity in 1987 according to Badelt (1991).

There are also considerable cross-country differences in the rights to leave subsequent to the statutory maternity leave and in the rights for fathers to take leave. In Austria, Belgium, Denmark, Finland, France and Spain parents are entitled to a leave for childcare of between one and three years beyond the regular

maternity leave; in Germany until the child is 18 months (Schiersmann 1991) and in Denmark one year for each parent before the child turns three (Arbejdsmarkedsstyrelsen 1994). These extended leaves, which can be shared by fathers, are with a rather low payment²⁾, or even unpaid as in Spain, except in Denmark where users get 80 percent pay. In Austria, Belgium and Denmark the extended leaves have been introduced as a work sharing or job creation instrument. Thus, Austrian parents have to be eligible for unemployment benefits to be entitled to extended leave. Specifically, for the first child they have to have been employed for 52 weeks within the two-years that precedes application and for second or higher order births 20 weeks (Badelt 1991). When a Danish employee takes leave ("orlov") the employer can receive government subsidies for employing a substitute. Belgium has a similar system. From a Swedish point of view the Danish, Belgian and Austrian systems seem to build on the notion that mothers of pre-school children who work take jobs away from others. Further, in all countries the parent receiving benefits must abstain from work or only work part time (e.g. in Germany at most 19 hours/week) and take care of the child by her/himself.

As to fathers rights to share the regular maternity leave, Ireland, Luxembourg and United Kingdom stands at one extreme with no such rights. On the other extreme, Swedish fathers can use as much of the leave as the couple prefers (at least one month). Also, Denmark, Finland and Norway which give fathers extensive rights of leave, even if not equal to the mothers'. Between these two strands we find the EU-majority which grants fathers unpaid leave, a short leave or a leave at low pay.

3. The Swedish parental leave program

Employed Swedish women have had the right to maternity leave at childbirth (3 months) with some earning related benefits since 1955, extended to six months in 1962. The current policy dates from 1974 when six months of parental leave was extended to fathers and the pay level was raised to 90 percent of gross earnings. Leave benefits can be shared by the parents. Since then the benefit period has been extended step-wise to cover fifteen months from 1989, of which the three last months are compensated at a flat rate of SEK60 per day equal for all recipients.

With the aim of reducing government expenditures while at the same time increasing fathers' participation in child care, the Swedish parliament in 1994 revised the program: The replacement rate was cut to 80 percent for ten months of the leave from January 1, 1995 but two months, one for each parent, are still compensated at 90 percent and cannot be transferred to the other parent. Single (non-cohabiting) parents get both months. As before, three months are compensated at the flat rate.

As of 1974 benefits can be used full time or part time any time before the child is eight years old. Multiple births give a right to six months' extra benefits for each additional child. Also, benefits are taxable, pensionable and entitles employed holders to paid vacation. Parents with no earnings prior to childbirth receive only the flat rate payment so the scheme provides women with a strong incentive to be employed prior to childbirth and even to postpone childbearing until earnings are sufficiently high.

There are, further, three benefits with income compensation for occasional care of children: pay for care of children when they are sick or when their normal keeper is sick (extended step-wise from 10 days in 1974 to 120 days per year and child from 1990);³⁾ ten days of leave at child birth for fathers exclusively, 'daddy days' (from 1980); and two days of benefit per year for parents' participation in day care and school activities, 'contact days' (from 1986). All benefit provisions are financed through general taxes with no direct costs to the employer of the parent who uses benefits. As mentioned, there is also, within the sick insurance system, a pregnancy benefit for women who cannot continue to work due to health limitations (from 1980). In addition, parents have been entitled to a job-protected unpaid leave (since 1979) until the child is 18 months (until 3 years from July 1, 1994). Further, parents employed full time have the right to reduce their working hours to 30 hours per week until the child is eight years old, with a corresponding cut in pay (since 1979). They also have the right to go back to full time after three months' notice to the employer and they get full, but proportional, social benefits. A prerequisite for reducing hours is that one has been employed full time with the employer for at least six months.

Another aspect of the Swedish parental leave system is the regulation of pay during parental leave for a subsequent child. Before 1980 the benefits for leave with a subsequent child were usually based on the earnings record in the interval between births (with some local variation in the eligibility interval of about 12 months). This led to incentives to return to work and reestablish an earnings history between births, inducing a wider birth

interval. Since 1980, the system has encouraged a closer spacing of children. This is because, beginning in 1980 the benefit level would be at least as high as for the previous child if the next child was born within 24 months; in 1986 this limit was extended to 30 months. Also, this rule became statutory and more widely known (Hoem 1993).

4. How does the Swedish parental leave system work?

4.1 Evidence from national data

4.1.1 Effects on work incentives

Sweden has for long had the highest female labor force participation rate in Western Europe, about 80 percent in 1992, closely followed by Denmark at a about 79 percent (Table 3). In particular, the labor market activity of mothers of young children is higher in Sweden than in most EU countries (European Commission 1993 p.157). Most likely this a result of the extensive Swedish child care provisions, the parental leave program, the separate taxation of married couples and other social policies in combination with the high levels of labor demand that prevailed until 1990 (Sundström and Stafford 1992). The parental leave program has contributed to the high level of employment among mothers of young children in at least three ways: First, it has encouraged young women to establish themselves in the labor market before having children in order to increase subsequent benefits. Second, the generosity and flexibility of the leave program (with all options) has facilitated for women to combine paid work with childrearing. Third, since by international convention employed

Table 3. Female labor force participation rates (FLFPR) ages 15-64 years and total fertility rate (TFR) 1992 in the EU and the former EFTA-countries.

	FLFPR %	TFR
Austria	56.3a	1.51
Belgium	53.2a	1.56
Denmark	78.9	1.77
Finland	73.0	1.85
France	58.5	1.73
Germany	57.0	1.30
Greece	43.5a	1.41
Ireland	43.4	2.11
Italy	44.6	1.26
Luxembourg	44.8a	1.65
Netherlands	55.5	1.59
Norway	71.9	1.88
Portugal	60.3	1.48
Spain	43.6	1.23
Sweden	80.0	2.09
UK	68.3	1.80

Source: FLFPR: OECD (1993), Employment observatory No. 19. TFR: Employment observatory No. 17, Council of Europe (1993).

^a Data are from 1991.

persons on leave of absence from work are classified as employed, any extensions of the parental leave period will increase the fraction recorded as employed. In the following we focus on the first point while the second point is illuminated in Section 4.2.3 and 4.2.4. As to the third point, about 110 thousand women were on parental leave during an average survey week in 1992 according to the Swedish Labour Force Surveys. If they had been classified as nonemployed the Swedish female labor force participation rate would have been about four percentage-points lower. On the other hand, if such adjustments were to be done, they would have to be performed for other countries as well and so the Danish rate would also be

lower. A more important source of potential discrepancy between participation rates and hours actually worked across countries is the female unemployment rate (included in the FLFPR) which is much lower in Sweden (6.6 percent) than in most EU-countries (the EU12 average was 12 percent in 1993, European Commission 1993 p. 42).

To examine policy influences on employment trends among women who had children we used specially compiled panels of female respondents from the Swedish labor force surveys over the years 1970/72-1988/90. Each panel contained observations for eight survey weeks three months apart (covering almost two years). Information in each survey round included respondents' employment status as well as presence and age of children. From these data we can observe changes in employment status also for women who gave birth during the time they were in the survey (Sundström & Stafford 1992; Sundström 1987).

Table 4. Fractions continuously full-time employed, part-time employed and nonemployed among women who gave birth during the designated periods 1970-90. Percent.

		Fractions continuously		
		full-time	part-time	nonemployed
Women giving birth to their first child	1970-72	25.4	2.4	7.8
	1980-82	40.3	9.5	2.5
	1984-85	39.2	11.8	6.1
	1988-90	47.8	8.4	1.9
Women having higher- order births	1970-72	7.7	8.7	31.4
	1980-82	11.9	36.1	12.4
	1984-85	16.2	37.4	7.7
	1988-90	19.9	25.6	5.9

Source: The panel of the Swedish labour force surveys.

Note: Continuously means for eight quarters (of 3 months) in a row. The percentages for the employment categories not included in this table and for other groups of women can be found in Sundström (1993b).

We see in Table 4 that the proportion of Swedish women who worked continuously full time up to, including and after the birth

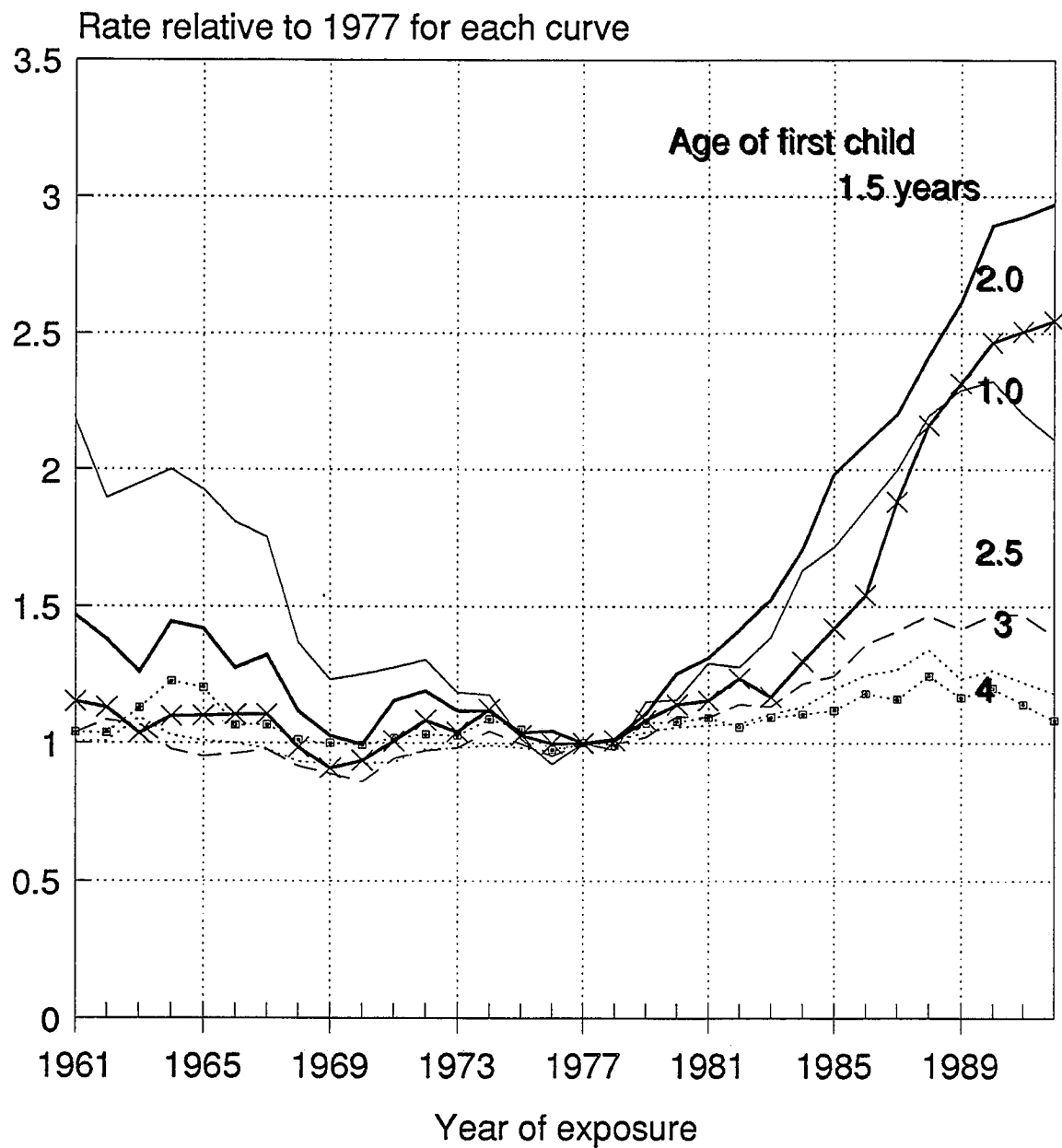
of their first child almost doubled over the twenty years studied. Also, the fraction of first-time mothers continuously nonemployed dwindled to insignificance. Further, among women who had higher-order births the proportion that worked continuously full time almost tripled and the rise was particularly steep in the late 1980s. We also see that among these mothers the fraction working continuously part time increased strongly while the fraction nonemployed declined dramatically.

4.1.2 Child spacing changes

Sweden is unique in European perspective for combining a high level of female labor force participation with the highest total fertility rate, next to Ireland's, in 1992 (Table 3). In fact, the Swedish level of fertility has never been as low as the current one in Italy, Spain and Germany. The record-low Swedish fertility rate was 1.6 in 1978 and 1983. As mentioned, the Swedish 'record' is likely to be the result of the comprehensive public policies, which encourage women to be employed while at the same time reducing the cost of having children. One factor which has stimulated period fertility strongly is the introduction of a 'speed premium' on closely spaced births in the parental leave program (Hoem 1993; Sundström and Stafford 1992).

As pointed out in Section 3, the interval between births that generates eligibility for at least as high maternity pay as for the previous child was extended to 24 months (and made statutory) in 1980 and further extended to 30 months in 1986. Many couples will find it manageable, or even attractive, to have children within an interval of two and a half years and thereby maintaining the

Figure 1. Second-birth rates by age of first child standardized for mother's age at first birth



Source: Swedish fertility register

initial benefit level. Staying within the interval is favorable because it means that the parent (most often the mother) could work part time or care for the previous child on unpaid leave without losing subsequent benefits. That is, she does not have to return to full-time work in order to establish a new earnings record if she has the next child within 30 months of the previous. Some couples will nevertheless have the next child too late, whether because the mother wants to establish a higher earnings record or because the couple overshoot the target. In any case, we should expect the next-order birth rate to get a special boost when the previous child is less than two and a half years. That is precisely what we see in Figure 1. The curves for second births to women whose first child is one to two years old are particularly steep during the 1980s while those for mothers of children 2.5 years or more are stable. Curves for third births show the same pattern (Hoem 1993). This rise in the tempo of childbearing in the late 1980s, in turn, contributed to the rise in total fertility. Simply, it is more likely that completed fertility will be higher with shorter birth intervals than with longer since with longer intervals birth can be offset by separation, sickness etc.

4.2 Evidence from company data

4.2.1 The Swedish Telephone Company data

Previous studies of women's work interruptions and leave for care of babies have relied on recall measures of work and leave history in combination with variables influencing program use (Haas 1992; Näsman 1993). By contrast, the data used for this article have been excerpted from personnel files of the Swedish national telephone

company, Televerket (now called Telia). I utilize two samples. One is a random 1 in 15 sample of 2,200 of all employees in 1983 and the other is of all female employees who had any parental leave in 1983. Both samples have complete leave records over the period of observation, January 1, 1983 to December 31, 1987. Upper management is excluded from both samples. The time period covered was one of tight labor markets, so that the diverse regional offices are assumed to have faced competitive labor markets, and the telephone company jobs are ones with substantial on-the-job training, as evidenced by the presence of company training programs.

The data have a limited set of variables for the employees themselves (age, education, tenure, monthly full-time salary, company training received) but in neither sample can we observe directly whether the employee has had a child or when it arrived, nor do we have any information concerning their family. Their greatest strength is the highly reliable wage information and their very accurate records of usage of the parental leave options.

4.2.2 Usage by mothers and fathers

By far the major share of leave benefits for care of newborn babies are used by mothers also in Sweden. Of all parents that used any benefits for care of babies in 1992 27 percent were fathers, as compared to 23 percent in 1986, and they had used 9.1 percent of all days in 1992 (6.2 percent in 1986) (National Insurance Board (NIB) 1994a). Looking at married parents only and longer than a year, the rate is higher and increasing, however; the fraction of fathers that had taken any leave during the child's first 18 months rose from about 27 percent for children born in 1981 to about 45

percent for children born in 1990 (NIB 1994b). On average mothers had used 338 days and fathers 59 days before the children born in 1990 were 18 months.

Table 5. Usage of family leave benefits among female and male employees of the Swedish Telephone Co. in 1983, 1984 and 1987. Percent and mean no. of days among users.

		Men		Women	
		Leave users, %	Mean days per user	Leave users, %	Mean days per user
Leave for care of newborn child					
	1983	6.2	13.5	15.8	114.9
	1984	6.6	16.3	15.0	89.8
	1987	3.9	18.7	15.3	83.0
	1983-87	14.6	28.7	30.9	226.0
Leave for occasional care					
	1983	28.5	7.8	29.0	7.6
	1984	26.6	7.5	28.4	7.1
	1987	24.9	7.9	28.3	7.2
	1983-87	42.3	24.7	40.7	27.6
Unpaid leave for care of children ^b					
	1983	2.8	53.6	28.9	250.0
	1984	1.6	60.8	17.2	180.6
	1987	1.0	18.6	14.9	68.3
	1983-87	5.6	57.3	37.8	414.8

Note: Year refer to the year the leave started and the means are calculated over the whole leave spell whether or not it ended in the same calendar year. Days of leave have been recalculated into full-time equivalents.

Table 5 displays the use patterns for the Telephone Company based on the random sample. We see that the average number of days used for care of newborn is surprisingly low for women. This is because some women have only used one day or even a fraction of a day of leave. Most likely they have used days saved for a child born in a previous year. While we do not know how the fraction of men that used leave for newborn compare to the national figures (since we do not know how many men are fathers), we observe that the average number of days per user in each year is lower than

nationally; Swedish fathers who used benefits for care of newborn were on leave for 29.3 days on average in 1987 (NIB 1989:24) (42.6 days in 1992 (NIB 1994a)).

Interestingly, benefits for occasional care are used more equally among female and male employees but men more often used them full time and for fewer periods than women (Sundström 1994b), implying longer leave periods for men since the average number of days used was equal. This reflects the fact that men and women use different options within the leave for occasional care; while for men it is mainly the ten 'daddy days', women more often use the leave to care for sick children and use it on a part time basis since they more often work part time or reduced hours. However, if we disregard the 'daddy days', leave benefits for occasional care of children are really more equally shared between mothers and fathers also nationally; in 1987 fathers used about 35 percent of the days, 'daddy days' and contact days excluded (NIB 1992 p.28). Men rarely took unpaid leave but both men and women who did use this option used it on a part-time basis, i.e. in the form of reduced hours (Sundström 1994b).

4.2.3 How long leave do mothers take?

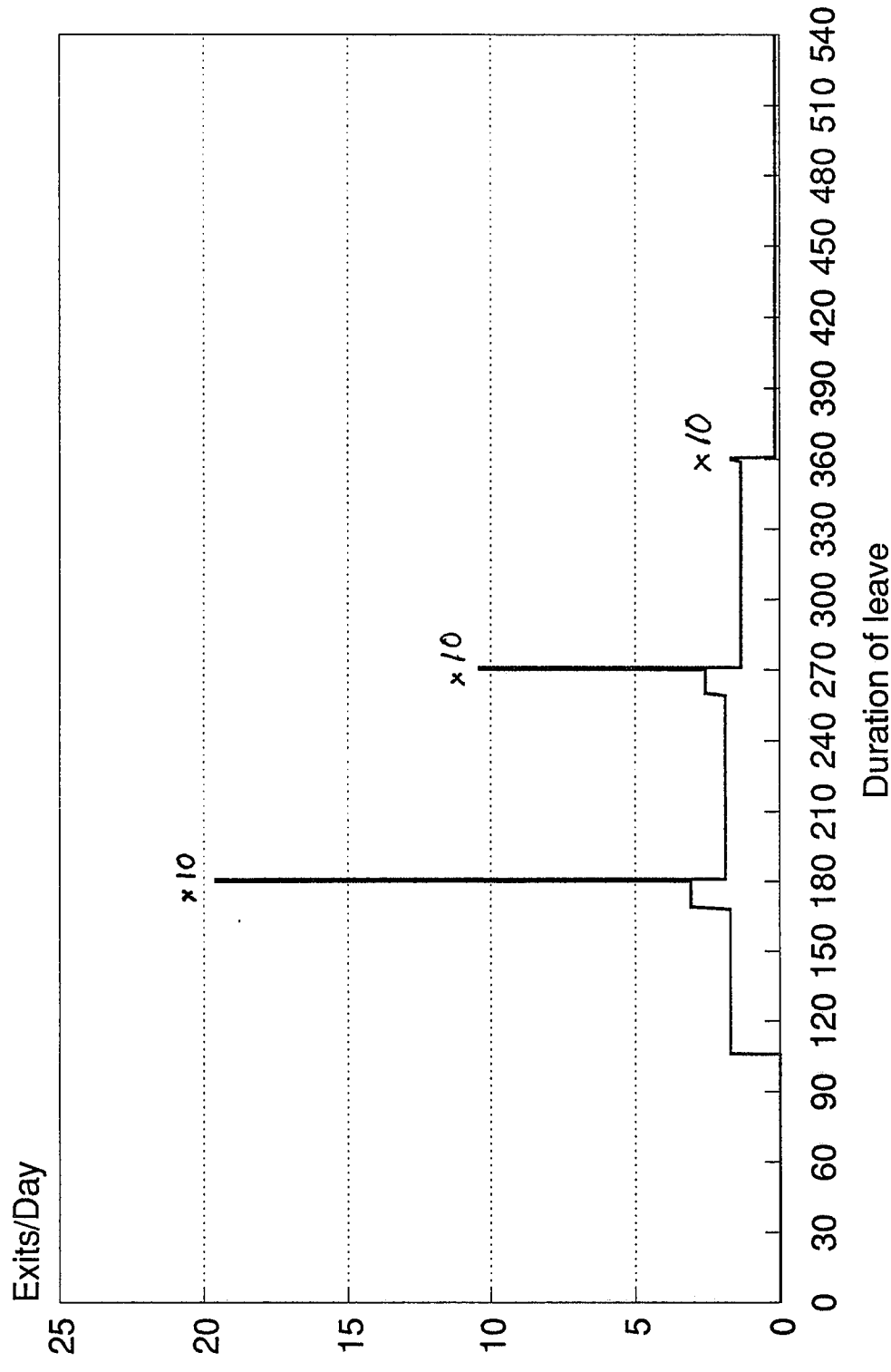
As mentioned, Swedish mothers used on average about 340 days of parental leave for care of a baby born in 1990. Do they use up all these days in one go? What happens when they have used up their eligibility - do they go back to work or do they remain at home? To study how long paid parental leave women took and whether at the end of leave they went to full-time work, part-time work or unpaid leave the female leave user sample was re-arranged into life-

histories (for details see Sundström 1993a). I estimated the 'risks' of exiting from full-time paid parental leave for care of newborn to full-time work, part-time work or unpaid leave as a function of education, working hours, year of birth, company training, salary and duration of leave.

The main finding is that use patterns are shaped very much by the eligibility rules of the program so that an overwhelming majority of women return to work within the child's first year. Figure 2 portrays the exit rates as a function of leave duration. We see that there are concentrated densities at the 180th, 270th and 360th day of leave duration and that it is really a minority that use up all their eligibility of 360 days in one go (6 percent). This pattern is likely to reflect convenience in scheduling combined with the benefit structure. Many users simply take a 6 or 9 month leave, possibly for purposes of work scheduling, i.e. they apply for a 6 or 9 month leave and another employee typically substitutes for them during this time. A large share of users end their spell at 270 days since up to that point leave was compensated at 90 percent of prior earnings in the period studied (1983-87). Beyond that point up to 360 days benefits were available only at the flat rate (see Section 3). One reason for ending the leave at 180 days is to allow the father to take leave. Another motivation for exit at 180 days is for purposes of 'benefit banking' since benefits can be saved until the child is eight.

The results showed that the most frequent first exit was to full-time work: the 'risk' of exiting to full-time work was 4.75 times that of exiting to unpaid leave, while the 'risk' of returning to part-time work was only 0.19 of that of exiting to

Figure 2. Exits from parental leave spells among employed Swedish women



Source: Leave user sample

unpaid leave (Sundström 1993 p 28). More educated women were less likely to exit to unpaid leave and prior part-time work predicted exit to part-time work. Further, older women were found to take shorter leaves than younger women. One possible explanation for this finding is that older women are more likely to have a previous child for which they already have a space in public child care. Once a child is enrolled, the Swedish public child care system gives priority to younger siblings.⁴⁾ Salary, tenure and company training did not have significant effects on the exit risks.

4.2.4 How do mothers combine parental leave and paid work?

To take advantage of the life-history data I have also analyzed women's complete patterns of leave and work episodes following a birth (see Sundström 1994a). The observed transitions between leave and work as well time spent working and on leave after a birth were classified into five different 'strategies': 1) A woman who used the benefit banking/sharing strategy returned to work relatively soon after birth (here within 215 days) and 'banked' days for later use or shared days with the father. 2) If she tried to make the leave last longer by using part-time benefits or completely unpaid leave, she used the leave-stretching strategy. 3) A woman who used the benefit stretching strategy tried to make benefits last as long time as possible by returning to work and combining part-time benefits with part-time work or by resuming full-time leave after a short period of work. 4) There was also the return to full-time work strategy which implies return to full-time work for a period of at least one year without any prior stretching or banking of benefits or leave. 5) The return to part-time work strategy as the previous but to part-time work. In addition, there is a rest group

of spells which could not be classified into any of the five strategies.

The most popular strategy among employed women of the Telephone Company who became mothers in 1983-87 was the leave stretching strategy at about 30 percent of the spells (Table 6). Next most frequent was the return to part-time work strategy. Return to full-time work and benefit stretching were more rarely used strategies. The leave stretching strategy was further more often used by women who had a subsequent birth, while women who had no more children more frequently returned to part-time work.

Table 6. Birth-leave-work strategies among female employees of the Swedish Telephone Company in 1983-87 according to number of subsequent births. Percent.

No. of subsequent births	0	1	All	N
Strategy:				
Return to full-time	7.1	5.1	6.7	54
Return to part-time	22.8	14.8	20.7	168
Benefit banking/sharing	15.7	13.3	15.0	122
Benefit stretching	6.4	4.6	5.9	48
Leave stretching	28.4	36.2	30.3	246
Rest group	19.6	26.0	21.4	174
Sum	100.0	100.0	100.0	812

I also analyzed women's choice of strategy by means of multinomial logistic regression (see e.g. Stata Reference Manual 1992). The results showed that a woman's fertility plans exerted a strong impact on the way she used the parental leave and combined it with paid work. Mothers who planned to have subsequent child within short (of whom the majority are likely to be first-time mothers) were more likely to use the leave-stretching strategy while those who did not bear another child (probably second-time

mothers) are more inclined to use the benefit stretching or return to part-time work strategies. Why did first-time mothers return to work later than those who had a second or third child? One reason has been pointed out in the previous section; those who already have a child enrolled in day-care get siblings priority for the younger child. Another explanation is the 'speed premium' discussed above, by which mothers could get at least as high maternity pay as for the previous child without returning to work if the next child is born within the eligibility interval. This regulation reduces the cost of nonwork in between births.

4.2.5 Wage effects of parental leave

Since people acquire work-related skills on the job, time out from work for childcare (or other reasons) may reduce future earnings. To assess the impact of parental leave (all options) on male and female wage growth we estimated a cross-section wage equation for 1988 as well as an equation for wage change 1983-88 using the one-in-fifteen sample (see Stafford & Sundström, 1994). The wage equation was of the standard human capital type where the logarithm of monthly full-time earnings was shifted by years of schooling, tenure, work experience prior to the company, total days of parental leave 1983-87 and company training days 1983-87. In the change equation (a so-called fixed-effects model), schooling, work experience and tenure cancelled out since they did not change or, as with tenure, change by the same amount for all.

We found that the impact of time out was to reduce earnings and that the effect per day of leave was larger for men than for women. From the change equation we obtained that one year of

parental leave would have had a cost of 1.7 percent slower wage growth for women and 5.2 percent for men.

Further, the wage impact of the different options within the parental leave system varied. A disaggregation of total days of parental leave into *care of newborn*, *occasional care of children* and *unpaid leave* showed that for women care of newborn and unpaid leave were the most costly leave types while for men it was the occasional care that had the largest impact per day of leave.

Finally, we addressed the issue of earnings 'rebound', i.e. whether the earnings penalty wanes some time after returning to work. To that end, we singled out the leave types with the strongest wage impact and compared the effect on wage change 1983-88 of recent time out (1987) with that of most distant time out (1983). For men we compared the wage effect of occasional care of children at these two points in time. For women we compared the wage effect of care of newborn and of unpaid leave at the same points in time. We controlled for other days of parental leave 1983-87. We found that there was a tendency for more recent leave spells to be more costly and for earnings indeed to rebound. The most pronounced difference was found for women in unpaid leave.

5. Concluding discussion

Sweden in late 1980s and early 1990s combined a high female labor force participation rate with one of the highest fertility rates in Europe. We have shown in this article that the Swedish system of parental leave benefits and the way it is designed is likely to have contributed to this outcome. All EU-countries and former EFTA-

countries have maternity leave benefits and though many countries have higher replacement levels than Sweden, the Swedish program is by far the most extensive in terms of length and benefits received as well as in terms expenditures by share of GNP. The Swedish 'record' is, however, not only the result of the relative generosity of the leave program but also of the way the program is designed. When it comes to the much debated issue of effects on work incentives, the Swedish program very strongly encourages young women to be employed full time and establish themselves in the labor market before childbirth. This reflects the fact that Swedish system of maternal and parental benefits favors employed mothers in relation to those nonemployed to a larger degree than is the case in the other European countries. This is because all subsequent benefits are based on the earnings record prior to birth.

Once a child is born the 'speed premium' on the next birth subsidizes nonwork in between births - the stretching out of leave as we have seen - but also encourages a closer spacing of children. The impact on fertility of the extensions, in 1980 to 24 months and in 1986 to 30 months, of the interval between births that generates eligibility for at least as high maternity pay as for the previous child is clearly visible. In the second half of the 1980s the second-order birth rate got a special boost when the first child was one or two years old.

Further, the combination of paid work and motherhood has been facilitated by the availability of subsidized child care and the flexibility of the leave program. That is, the fact that the parental leave benefits can be used part time (75, 50 or 25 percent of full time) and that days can be saved and used until the child

turns eight makes it easier to adjust labor market hours to the family situation. In addition, the availability of the options of leave for care of sick children and of reduced working hours enables mothers to have continuous employment when children are young. Last but not least, the fact that a large fraction of fathers in Sweden takes some parental leave facilitates for mothers to maintain a high level of labor market activity and contributes to a higher degree of gender equality in the labor market and in the home.

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NOTES

- 1) Abraham (1994) has demonstrated that different levels of social protection are one among several factors affecting the competitive position of partners in an economic union. Thus, well-designed income insurance can, for example, encourage productive division of labor and improve the performance of an economy (Stafford 1977, Milgrom and Roberts 1992). On the position of the British government see e.g. The United Kingdom Response. The views of the EU-majority can be found in European Commission (1994).
- 2) German parents get DM600 (\$387) per month taxfree the first six months after birth (employed mothers can only use the four last months). Benefits from the seventh to eighteenth month are means tested. Austrian parents receive a taxable amount of ATS 7,000 (\$643) per month for two years of which the second year can also be used on a half-time basis by both parents or by one parent half time for two years. Single mothers can get extra benefits (Stiegnitz & Kosinski 1992). Belgian parents obtain a cash benefit equal to about 20-25 percent of an average blue-collar worker wage, the higher amount for third births (Euvrard & Neuret 1994 p. 53). Finnish benefits are taxable and depend on family income and the number of children (Mikkola 1991). In addition, Austrian and Finnish parents may obtain supplementary allowances from the provincial and local government, respectively. In France parents may receive an income related cash benefit about equal to half the minimum wage (David & Starzec 1991). Parents may also work half-time and get half the benefit.
- 3) In March 1991 the income compensation for care of sick children was reduced to 80 percent for the first two weeks. After that 90 percent is replaced. If the child is sick more than six consecutive days a doctors certificate is needed.
- 4) Sweden has a comprehensive public day-care system: In 1987 about 70 % of children aged 1-6 years and 40 % of the 7-9 years had a place in public day care (day-mothers, day-care centers or after-school homes). The system is heavily subsidized, parents' fees cover on average 10 % of the running costs and there is excess demand at the going prices; there are queues and queue-time most often is the age of the child (see Sundström 1991 pp.183-85).

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