

Hiilamo, Heikki

**Working Paper**

## Family Policy Changes at the Micro-Level in Sweden and Finland during the 1990s

LIS Working Paper Series, No. 291

**Provided in Cooperation with:**

Luxembourg Income Study (LIS)

*Suggested Citation:* Hiilamo, Heikki (2002) : Family Policy Changes at the Micro-Level in Sweden and Finland during the 1990s, LIS Working Paper Series, No. 291, Luxembourg Income Study (LIS), Luxembourg

This Version is available at:

<https://hdl.handle.net/10419/160963>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

**Luxembourg Income Study Working Paper No. 291**

**FAMILY POLICY CHANGES AT THE  
MICRO-LEVEL IN SWEDEN AND FINLAND  
DURING THE 1990S**

**Heikki Hiilamo**

**January 2002**

## **Family Policy Changes at the Micro-Level in Sweden and Finland during the 1990s**

Heikki Hiilamo  
University of Turku  
Department of social policy  
Finland

### Introduction

1. Previous simulations
2. Selecting the family types
3. The concept of disposable income and operationalisation of the concept
4. Results from the simulation
5. Comparison with results from LIS
6. Conclusions

### Reference

Publishes sources  
Unpublished sources

## Introduction

Up to the 1990s the development of family policy was an integral part of the success story of the Nordic welfare state. Nowhere else had the state assumed such wide-ranging responsibilities in supporting family welfare as in the Nordic countries. As late as in the 1960s these countries were lagging behind many other OECD countries in areas such as the development of maternity benefits. Families with children were granted child benefits and in some cases tax allowances but this kind of policies existed outside the Nordic countries, too. However, starting in the 1970s family policies in the Nordic countries witnessed steady and rapid growth both in terms of institutional features and absolute expenditure levels. This expansion gathered pace in the 1980s as childcare services became part of the welfare system and of the everyday lives of most families.

The Nordic model had surely its heyday in the late 1980s after which dark clouds gathered rapidly on the sunny sky and the Nordic model went through a rough period (ch. Kalela et al 2001). This holds true especially for Sweden and Finland. The economy collapsed, budget deficits soared and unemployment got out of hand. In Finland output was reduced by more than 10 per cent and the unemployment rate quadrupled to almost 17 percent (Kalela et al. 2001, 3). The situation was almost as bad in Sweden as it was in Finland (cf. SOU 2000:3). Ever since the Second World War the welfare state had granted more generous benefits and social rights to citizens. It was a process of continuous improvements.

The early years of the 1990s did not only mean a mental break with the past. The whole existence of the model, which was based on full employment, was endangered as unemployment rose to extremely high levels and income transfers related to it increased social protection expenditures dramatically. The development of the Nordic version of the welfare state ended with abruptly. All areas of social policy experienced cuts and adjustments. Huge budget deficits and problems in raising loans to cover the increased expenditures necessitated them. Family policy did not remain untouched. Among other measures child allowances were cut, compensation level of parental benefits was reduced and childcare fees were raised. The changes in 1990s give grounds to challenge the view of Sweden and Finland as oasis of social justice in a world of inequalities (cf. Hernes 1987; Olofsson 1988; Lindberg 2001).

This article aims to evaluate the impact of legislative amendments to family policy at the micro-level in Sweden and Finland during the 1990s. We want follow the micro-level development of family policy and to assess whether the changes in family policy during the 1990s led Finland and Sweden away from the Nordic model.

The main question is how to capture the policy changes over time at the micro-level in two different countries. The traditional approach suggests the use of micro datasets that represent the outcomes of social policy legislation, the tax/benefit system and income development. Two main problems are connected with the use of micro datasets: comparability and time lags. National statistics, for instance from the income distribution survey or socio-economic panel surveys, cannot be utilised because of differences in terms. Another problem is that when the results from surveys or from panels are completed they describe the situation as it was two or three

years ago, i.e. the databases are not totally up-to-date. We are not totally lacking databases including micro datasets from different countries, which are made commensurable with each other (e.g. LIS). The problem with time lags prevails, though. For instance, the most current datasets in the LIS database (the IV wave) for many countries date from 1995. However, both Finland and Sweden collect income data that is based on tax records and is to some degree comparable between the countries.

In this case, the reason for employing an alternative approach is not that we are lacking comparable datasets. Even with the most current microdata the analysis of the impacts of legislative amendments upon family policy poses several problems. The main challenge is that it is very difficult to distinguish between different factors that affect the incomes of families. Changes in disposable income can be caused by several factors besides legislative amendments. For instance, the development of wages, the number of hours of paid labour, the propensity to apply benefits and demographical factors may lie behind changes in incomes and changes revealed by microdata. Moreover, income from paid work is affected by individual choices made possible by public policy, such as support for home care of children or day care arrangements of pre-school children. In addition, some of legislative changes may be concealed due to the fact that micro datasets do not always contain adequate variables to capture changes in laws. This holds true for instance for day care fees, which in Finland and Sweden are set at the municipal level.<sup>1</sup>

If we give up analysing the outcomes and focus on outputs, i.e. the structural features of the tax/benefit system, there are ways of trying to overcome some difficulties attached to micro datasets. The so-called fictitious microsimulation (or the model family technique or the model family method) offers some fruitful possibilities of isolating the impact of legislative amendments on the economic well-being of families. It is possible to focus on particular institutions and to analyse their development together with the economic context. This method or simulation is applied in this article. The purpose of this article is two-fold: first, to illustrate the impact of legislative amendments on type families and second, to evaluate the method, i.e. to assess how the method captures changes over time.

The purpose of microsimulation is to create a model of changes actually taking place by simulating units that constitute the group affected by the changes (NATSEM 1999). The word 'micro' refers to the micro-level data employed in the method, while 'simulation' refers to imitation of reality. From the very beginning, American researcher Guy Orcutt, the inventor of microsimulation, tried to develop a method which would provide a way of assessing the consequences of economic and social policy initiatives proposed by governments (Orcutt 1957; 1990, 25). Different simulation models have been extensively employed in the analysis of social policy, particularly in the Anglo-Saxon world and in the Nordic countries (Harding 1993, 1994, 1996b; Sutherland 1995; Citro and Hanushek 1991; Eardley et al. 1996a, 1996b; Immervol et al. 1999; Palme 1994; Haataja 1995, 1998, 2000; Honkanen 1995; Kangas and Ritakallio 2000; Parpo 2001).<sup>2</sup>

---

<sup>1</sup> Day care fees can be inputted into micro datasets. The process requires several assumptions and the results are not always satisfactory.

<sup>2</sup> A review of paper from the IARIW Special Conference on Microsimulation and Public Policy (Harding 1996b) gives a comprehensive review of different applications of microsimulation. They include microsimulation of direct taxes and fiscal policy, consumption expenditure and welfare services, demand for day care, behavioural response to commodity tax reforms

Microsimulation based on micro-level data combines models of tax and social security benefits with empirical data on individual cases. The model comprises representative micro data (family structure and income level) and a separate model of legislation. The legislation model includes the calculation rules for taxation and distribution of income as well as the bases of deductions and benefits as parameters of the model. Microsimulation based on micro-level data comes into its own in analyses that study the impact of rules of the present system and the proposed or actual changes in these systems. If policy reforms are analysed, models give information on potential winners and losers, as well as on the total costs to the government and the total income of whole demographic groups. In such cases, the study usually comprises just two phases: before and after the changes in tax-benefit structures. Dynamic microsimulation tries to model also the behavioural effects by using statistical data on population (Sutherland 1995; Harding 1996b; Klevmarken 1997).<sup>3</sup>

The simplest form of microsimulation is called fictitious microsimulation.<sup>4</sup> We make the distinction between “fictitious microsimulation” and “model family technique/method” by using the term “model family technique/method” for cross-sectional simulations and the term “fictitious microsimulation” for simulations across time. The method is based solely on models of income development, taxation and social security. The “fiction” part of the method is the selection of cases. Microsimulation based on population data is done on microdata representing real population, that is actual income earners, whereas fictitious microsimulation focuses on fictitious cases, be it an individual person, household or a family. Fictitious microsimulation actually requires a model with all the rules and regulations of the tax/benefit systems as parameters. In this way the model allows actual simulations for different cases. This feature distinguishes microsimulation from databases, which include institutional data (e.g. Social Citizenship Indicators Project, SCIP). They contain information on for instance compensation levels for typical cases. However, the data is static by nature and does not allow year by year comparisons across countries with different cases. They also lack information on how institutions are connected in granting benefits at the micro-level. Fictitious microsimulation goes a step further by facilitating comparisons with all the interconnections between the institutions. However, fictitious microsimulation can also be considered an extension of type case database where the focus is not on a single programme but rather on a set of programmes. The fictitious model can also include information on household expenditures. The idea is to describe economic well-being as extensively as possible.

In fictitious microsimulation the cases are selected either to represent typical cases or more exceptional ones. Due to lack of microdata, it is obvious that the results of fictitious simulation cannot be applied to demographic groups or macro-level phenomena and therefore we cannot evaluate changes in the poverty rate, distribution of income or government expenditure on the basis of fictitious microsimulation. The method does not reveal how the income of a specific group of families with children – for instance all families receiving housing allowance – has developed or how expenditure on a specific aspect of family support has changed. The simulation gives only

---

and public pensions.

<sup>3</sup> The more choices are made on the behavioural estimates, the more these choices affect the results and the less clear it is what the effect of policy changes is (Sutherland 1995). Dynamic microsimulation models are very complicated and involve a lot of programming.

<sup>4</sup> It makes sense to speak about fictitious microsimulation since the incomes of “real families” can also be simulated.

an estimate of how the income of a particular model family changed due to given rules. Therefore, we can only estimate what legislative amendments to family policy do for our cases. In sum, the results as such cannot be brought to the population level but they are tightly linked to the cases we have constructed. However, the comparison of cases across countries will reflect differences in the institutional setting of social policy as well as illustrate different programme structures. In this way the method can be used as a tool to capture changes over time.

Moreover, this method describes how the system should work rather than how it actually works (Eardley et al. 1996a, 1996b). For instance, it assumes implicitly that all those entitled to benefits are actually claiming them. Again, we have to keep in mind that the method does not take into account the effect of behavioural changes. This means that fictitious microsimulation does not take into account for instance that an increase in day care fees may result in lower levels of female employment or that cutting child allowances may lead to a decrease in the number of children or more hours of paid work.

The lack of data and its static nature, i.e. the lack of behavioural effects make fictitious microsimulation seem somewhat trivial. Especially the lack of connections to “real” micro-level data has been seen as a serious shortcoming in fictitious modelling, and this kind of microsimulation has not received unanimous approval (Parpo 2001, 30; Sallila and Kosunen 1998, 4; Haataja 1995, 26). According to critics of the method, the representativeness and reliability of the results suffer if it cannot be shown how large the groups to which the results of the simulation apply are, in other words, how real the changes that the models describe are. This shortcoming can be partly eliminated by making comparisons to population or income distribution statistics. However, again, it must be stressed that the method only simulates the structural features of the tax/benefit systems (outputs), not the outcomes for actual families (Early et al. 1996a, 116).

Furthermore, fictitious microsimulation models have not been tested as widely as microsimulation models based on dynamic and static data. Models are often created *ad hoc* for a temporary need, and no proper time series have been constructed of the models. The method has also been criticised because the selection of the model cases influences the results (Hiilamo 2000b).<sup>5</sup> Very often basic premises are poorly described. There are no criteria for drawing reliable conclusions from the calculations. This makes analysing and comparing the results more difficult.

Comparing the eligibility criteria for different benefits reveals directly the changes in income caused by changes in legislation. For instance, cutting housing allowance will reduce the incomes of families receiving housing allowance. Why do we then need simulation? The fact is that changes in the eligibility criteria for different benefits do not allow us to calculate directly by how much the disposable income of a family will decrease. For

---

<sup>5</sup> The credibility of fictitious microsimulation has been eroded by the fact that various interest organisations have selected “representative types” for their calculations although the representativeness has been dependent on the interests promoted by the organisations (Hiilamo 2000b, 505-506). Fictitious microsimulation can be used as an ideological tool by withholding the information on the selection of the types and the selection of the assumptions. In some cases, it has been used for semi-commercial purposes. E.g. the bank corporation Nordea (2001) has compared the economic situation of different family types in Sweden and Finland.

instance, a sharp rise in wages or tax cuts can compensate for the decreases in housing allowance. In addition, simultaneous changes in other family benefits, such as child allowance, can influence the economic situation of a family. Fictitious microsimulation that takes into account several factors influencing the economic situation is more revealing than calculations that only include changes in the eligibility criteria for different benefits. Fictitious microsimulation describes the system, with its various internal dependencies as it appears to a typical family. After all, despite all the criticism simulation offers fruitful possibilities – as long as we bear its limitations in mind.

The illustrative nature of the calculations offers an opportunity to compare social security systems in different countries. The method is fairly new but it has been employed in some previous studies of family policy. Kamerman and Kahn (1982) used model families in comparing childcare policies in different countries. Since 1991, the OECD (1991, 1992, 1993, 1997, 1998, 1999b, 2001b) has used type families to analyse tax/benefit positions in the OECD member countries. The choice to employ the method was to a large extent determined by the need for comparable data from all the OECD member countries (OECD 1991, 13). A simulation of fictitious families was conducted at the University of York, UK, in order to compare benefits and allowances in 15 countries (Ditch et al. 1996). The outcomes were simulated for one year only. The method was also applied in a study comparing social assistance systems in different OECD countries (Eardley et al. 1996a, 1996b). Case families have also been used in comparing the results and characteristics of social policies in different Nordic countries by the NOSOSCO (Nordic Social-Statistical Committee) (Social Protection 1999). The Danish National Institute of Social Research compares annually the elements of social security with the help of case families (Hansen 2000). A comparative study of income support in the UK, the Netherlands and Finland was based on case families (Toimeentulotuki..1997). All the above-mentioned examples showed that the model is well suited to its purpose: it allows us to conduct international comparisons and produces up-to-date information. This is the most important use of fictitious microsimulation.

In order to introduce changes over time, fictitious microsimulation can be performed on the same family types or individuals for different years. This allows us to study the effects of social policy (income transfers, taxation and social services) changes more dynamically and purely social policy-related effects can be separated from other factors influencing the development of incomes. In this way fictitious microsimulation models can accurately predict the economic situation of a case family for one year or even two years in advance and, thus, allow us to study the effects of the proposed changes before final decisions are taken. In such cases, the basis is formed by the proposed changes in the income transfer system and/or wage setting. One of the advantages of microsimulation is that it is not bound to real time in the way empirical research is (Haataja 1998, 61).<sup>6</sup>

Fictitious microsimulation is well suited to the purposes of this analysis. Our goal is to study the impact of both legislative amendments and income developments of some family types in Finland and Sweden during the

---

<sup>6</sup> With the help of basic premises, the examination can be stretched even further. In addition to research, the results may serve to inform the public debate and the financial planning by individuals or families and thus help individuals to gain control over their lives in general. Another advantage of fictitious microsimulation is that it allows the analysis of income development or poverty risk for different types of families. Aggregate data do not tell us how far different types of families with children are for instance at risk of poverty.



1990s. Unfortunately, we lack a current and comparable microsimulation model for Finland and Sweden. Furthermore, it is easier to build a more robust model of fictitious microsimulation to allow cross-national comparisons than to work with more complicated microsimulations based on micro-level datasets. By building a model of our own we are able to control the whole process of income formation. This is also a way of ensuring comparability over time and between countries.

We will apply the approach sketched above in the following analysis of family policies in Finland and Sweden.<sup>7</sup> First, we will select the family types and define the concept of disposable income (“living margin”). After that we will present the results of the simulation and evaluate the extent to which they are associated with different features of the Nordic family policy model. Finally, in order to evaluate the relevance of our ‘fictional’ results we will compare the findings with “reality”: results from the simulation are compared with outcomes from LIS micro datasets representing outcomes for “real families”. The aim is to test whether the results on family policy outputs are in correspondence with the results on family policy outcomes. To facilitate a valid comparison, the analysis of LIS datasets is made for similar households as the ones used in fictitious microsimulation.

Finland and Sweden represent interesting cases for fictitious microsimulation and micro datasets. In the 1990s there were many important amendments in legislation in both countries, and therefore it is interesting to see how these changes are captured by different approaches. This task is both methodologically and substantially challenging.

## 1. Previous simulations in Finland and Sweden

Various applications of type families became popular in Finland in the 1990s (Haataja 1995, 25), when cuts in public spending caused a great number of changes in the economic situation of different income groups. However, the earliest models were developed already in the early 1980s (Heikkilä et al. 1980). Their aim was to capture the effects of the tax/benefit system at the level of individual families.

During the 1990s various interest groups and other organisations began to employ type family studies in debates on taxation and income transfers (Virén 1994; SAK 1994, 12-14; Hiilamo 1994, 1998, 2000c; Haataja 1995, 7 and sources mentioned in it; TT 1995; Kosunen 1997c; Autio and Kurjenoja 1998). These calculations share some of the pros and cons described above, for instance they highlight how important the selection of types is. Some of the calculations have described extreme cases, for instance in finding cases where there is no incentive at all to work. Usually these studies concentrate on low-income families living in rental accommodation and drawing all possible social benefits.

Other calculations, for example, described situations that were more or less deliberately planned to be as representative as possible by the interest groups. The Confederation of Unions for Academic Professionals in

---

<sup>7</sup> Our model is constructed with the help of the spreadsheet programme Excel. The model includes rules for taxation, child allowances, housing allowances, day care fees etc. for every year during 1990s in both countries. The detailed

Finland (Akava) that represents the upper white-collar workers made numerous calculations on “typical families“ simulating wages and salaries, taxation, income transfers and day care fees. The premises and case families varied from year to year. The case families in the calculations by Akava had high levels of educational attainment, were living in owner-occupied houses and had exceptionally high incomes (Akava 1995, 1996, 1997). In a similar way the blue-collar workers’ central organisation (SAK) constructed a model to represent its typical workers. SAK used significantly lower income and educational attainment levels than Akava (e.g. SAK 1993, 1997). Akava and SAK probably gave up using case families because family policy tax deductions were abolished (Pentti 1999), the economy picked up, and there were no proposals to raise taxes and/or cut benefits.

The Taxpayers' Association of Finland (TAF) made case calculations on the taxation of income earners in Finland and other OECD countries (Jantunen 1995; Lehtinen 1995, 1996; Laakkonen and Lehtinen 1997; Laakkonen 1997, 1998a; Autio 1999; Kurjenoja 2000, 2001) and the taxation of pensioners (Laakkonen 1998b; Autio 2000a). The case families in the TAF calculations have also formed the basis of studies on the cost of living in different municipalities (Helin et al. 1994, 1996; Helin and Jantunen 1997; Hyypiä and Jantunen 1998, 1999; Jantunen and Pekonen-Sjöblom 1996).

A more balanced model (KOTO) was developed in the early 1990s to facilitate analysis of the outputs of housing subsidies. Rönkkö (1992) has used KOTO to analyse income transfers for families with children. The ministry of social affairs as well as National Research Centre for Welfare and Health (Stakes) have used the KOTO-model to calculate the incomes of case families (e.g. Kosunen 1997c). In this model each year is a separate file. In this respect it is not designed to analyse incomes over time.

In Sweden, the Central Statistical Office SCB (Statistiska Central Byrå) has developed a similar programme that allows calculations on the disposable incomes of case families (STATUS 1998).<sup>8</sup> The STATUS program was updated from 1994 to 1998. In 1999 it was replaced by a microsimulation model that includes population data (Haataja 1995, 45-49; Fasit 1999).<sup>9</sup>

Several researchers used STATUS to calculate changes in incomes over time. The research unit of Stockholm City has used the program to calculate disposable incomes for four different case families during 1991-1995 (Sjöholm 1996). All the case families had two small children (aged 3 and 5 respectively) but the number of providers and the forms of tenure were different. The calculation aimed at describing the combined effect of “external factors“ on the disposable incomes of families with children when income development followed the average development in the Stockholm area and family structure remained unchanged. External factors included housing costs and day care fees.

---

information on tax/benefits systems is gathered from various governmental and municipal sources (e.g. Kelan etuudet.. 1990-1999; Tulot ja vähennykset 1999; Riskförsäkringsverk 2000).

<sup>8</sup> There are some problems in comparing results from STATUS over time (Hedlund 2001).

<sup>9</sup> Ever since 1984 the Central Statistical Office and the Ministry of Finance in Sweden have been working with the Fasit project (Haataja 1995, 45-49). LO used Fasit to analyse the income distribution effects of the 1992 tax reform.

It seems that interest groups especially in Finland have selected their basic premises with their members and the interests promoted by their organisation in mind. Their aim has been and still is to serve the special interests of the organisation, not to assess income development impartially. This can be one reason for their suspicious attitude towards fictitious microsimulation. Calculations by TAF have endeavoured to demonstrate the (in their view) excessively heavy tax burden in Finland on people with average or high incomes: this served the objectives of the organisation's tax policy programme in its lobbying activities (cf. Riihimäki 1999; Riihimäki and Autio 1999; Hiilamo 2000b). Calculations by the trade unions aimed at showing the development of real wages in their own field. The results could then be used in collective bargaining. In Sweden, interest groups and other organisations have not developed their own models but have rather used STATUS from the SCB.<sup>10</sup>

## 2. Selecting the family types

In order to analyse the outputs of family policy systems the inputs have to be defined. Clearly, the inputs include all the different family policy instruments created by legislation, such as child allowances and housing allowances. In addition, general factors such as development of prices and wages have to be included. They are external variables where assumptions have to be made in order to simulate typical cases. Once inputs are defined, outputs of the family policy system can be described with reference to their structural features. These features include for instance the rules governing the child allowance system and day care fees as well as income taxation with deductions for families with children.

In order to illustrate the functions of the tax/benefits systems we have to make assumptions on the typical cases. Constructing the model starts with choosing the basic premises about the family types. As indicated above these are critical choices that partly dictate our results since calculations are usually very sensitive to the basic premises. Once the model has been constructed, it is possible to obtain preliminary results very quickly. However, the reliability and comparability of the results as well as the statistical representativeness of the models can be weak if the premises are not properly set and justified. When making calculations about families with children, it is necessary to define:

- 1) the numbers of providers as well as the number and age of the children,
- 2) alternatives for caring for the children and the grounds for determining day care fees (if the family has small children),
- 3) the incomes of both parents or the single parent, income levels and the basis for income development (e.g. wages or salaries, capital income),
- 4) labour market position of providers,
- 5) taxation of income (basis for communal and church taxes, work-related standard expense deduction, deduction for costs incurred in travelling to and from work, deduction for home and study loans, targeting the deductions to one of the spouses or a single parent),

---

<sup>10</sup> STATUS has been used to check the results from our model. We have compared the results for years 1994 to 1998, i.e. the period covered in STATUS. OECD (1991, 1992, 1998, 1999b, 2001b) publications on the Tax/Benefit Position of

- 6) other income and income transfers (e.g. family policy income transfers, housing allowance and income support),
- 7) other expenditure (e.g. interest and loan repayments and rent).

This list is not exhaustive. Each item would require numerous additional premises on the period of paying the benefits, previous earnings and so on.

In our study the cases are selected to illustrate the workings of the family policy system at the micro-level, and therefore we first make first assumptions on the number of providers and children, as well as on the age of children. We continue by making assumptions on the sources of income and income levels of type families. After that we discuss the labour market position as well as the housing costs of the type families. The idea is to produce near-identical circumstances for all type families both in Finland and Sweden.

The number of providers and children has an important impact on the economic situation of a family with children. The fewer providers and the more children, the lower the family's income per consumption unit. Below, the aim has been to define family types, which would help describe, as clearly as possible, changes made in family policy benefits simultaneously with a certain income development. The aim is to keep the number of family types so low that information about changes in legislation would not become lost among too many cases, i.e. we try to see the forest for the trees, while still being able to separate out some trees.

We will utilise two basic types of families with children: two-parent and single-parent households. This is to capture the difference between these family types. No further assumptions concerning the marital status of two-parent families are needed as taxation and social security rules in Finland and Sweden do not differentiate between married couples and cohabiting couples with children.

The number and the age of children affects family support because many benefits -- most importantly child allowance -- are bound to the number of children, and therefore limiting the number of children is also justified for the sake of ensuring the comparability of the calculations. The starting point is that both two-parent and single-parent families have two children.<sup>11</sup> Families with one or two children are by far the most common type of family with children in Finland and Sweden. In both countries, though by a narrow margin, most children live in two-parent families with two children. In Finland single parents most often have two children (Tilastokeskus 2000). However in Sweden, most children in single parent families live alone with a single parent, but again by a narrow margin (SCB 2000b).

Since some benefits are connected to the age of children, we must define the age of the children. Both children in our case study are under school age (7 years). Due to age-specific child allowance supplements in Finland, we

---

Average Production Workers/Employees have been used to compare results for both countries over the whole period of comparison, i.e. 1990-1999.

<sup>11</sup> The number of children corresponds to the type family used in the OECD publication series the Tax/Benefit Position of Employees (OECD 1998, 1999b, 2001b), previously Tax/Benefit Position of Average Production Workers (OECD 1991, 1992).

assume one of the children to be 1,5 to 3 years old and the other to be 3 to 7 years old. The rationale is to exclude maternal and paternal benefits which would require more assumptions and make the case more difficult to compare.<sup>12</sup> It goes without saying that defining the type families in this way is a severe limitation in relation to all families with children, but this is not a major problem with regard to the purpose of this analysis. The definition is justified by the fact that parents with small (under school age) children are the most important target group of family policy measures both in Finland and Sweden. According to the features of the dual-earner model (Korpi 1999), most family policy income transfers and services are targeted to families with small children.<sup>13</sup>

Families have various options for caring for their children. The possible care alternatives have, in turn, effects on the family's net expenditure (day care fees) and income transfers (home care allowance) as well as on the labour market positions of the spouses. However, since there was hardly any support for homecare of small children in Sweden in 1990-1999 and there were very few mothers or fathers at home taking care of their own child/children, only day care options (i.e. care outside the home) are examined.<sup>14</sup> In this way we adapt our model to actual circumstances. This also means that all our single parents are breadwinners, i.e. they are in paid employment.

When it comes to incomes, we have to define not only the sources of income but also the income levels and the basis of income development. Broadly speaking, household income has three different sources: earned income, income transfers and capital income. Because the share of capital income in the income packages of families with children is very small on average, income is assumed to originate from wages and salaries only, while entrepreneurial or agricultural income has not been included (see OECD 1991, 1992, 1998, 1999b, 2001b).

There are at least two different ways of analysing the basis of income development. In principle, we can reveal the effects of legislative amendments on type families if we ignore wage increases. This approach is justified if the time period is not very long. In this case, we want to analyse developments over 10 years, and therefore assume that some wage increases have taken place. The chosen approach means that we are interested not only in the effects of legislative amendments on type families, but also want to see the effects of the amendments on the economic situation of our families, i.e. in "real life".

Next we have to decide both the basis for wage increases and the income levels. To allow comparisons between countries we must have a uniform and comparable indicator for wages. For earned income we have used the

---

<sup>12</sup> There are significant differences between Finland and Sweden in parental benefits. They concern e.g. the maximum number of weeks the benefits are payable.

<sup>13</sup> According to Troedsson (2000, 67) the cost of family policy in Sweden for year 2000 was 83 billion Swedish crowns while 52,7 billion were targeted to families with small children. The calculation ignored the cost of day care.

<sup>14</sup> Day care fees in both countries were set at the municipal level from 1990 to 1997. In 1997 a national schedule of day care fees was introduced in Finland while Sweden continued to apply the previous system. In both countries variations between municipalities were great in the level of day care fees (SOU 2000:3, 117-118; Forssén 1998, 80-83). To allow comparability the day care fees in our cases are set according to the rules applied in Stockholm (Sweden) and Helsinki (Finland). This does not, however, mean that we assume that our type families live in Stockholm and in Helsinki. The fee schedules are only selected as a point of reference in the absence of national data. We assume that the development of day care fees in Stockholm and Helsinki reflects development at the national level. Fees are collected for eleven months a year.

average production worker's (APW) income as defined by the OECD (1991, 1992, 1998, 1999b, 2001b).<sup>15</sup> This indicator reflects the average income level of production workers in a country. APW-income is used both as a basis for income development and as a yardstick for income levels. All the income levels (APW100%, APW 75%, APW 50%, APW125% and APW150%) are expressed with the help of APW-income. The premise is that in all the cases -- regardless of the differences in income levels -- income development corresponds to the development of APW. Moreover, we will assume that female incomes also follow the development of APW. Another option would have been to use national indexes on wage development. However, there are differences in the structures of these indexes between Sweden and Finland.

Three different income levels are established: high income families (APW150% + APW125% for two-parent family, APW125% for single-parent family), average income families (APW100% + APW75% for two-parent family, APW75% for single-parent family) and low income families (APW75% + APW50% for two-parent family, APW50% for single-parent family).<sup>16</sup> No gender-related assumptions are needed as in neither country have wives received special treatment when in gainful employment.

In the Finnish case, 50 percent of APW is a very low income since part-time work among the mothers of small children is fairly rare in this country.<sup>17</sup> In Sweden part-time work is much more common. This is not taken into consideration since we are not seeking to establish the average income of families with small children. Instead we try to compare the same levels of APW-income between the two countries.

As the final step, a type family representing childless couples (APW100% and APW75%) will be constructed. The type family of childless couples is used only to compare the development of disposable income for families with and without children.

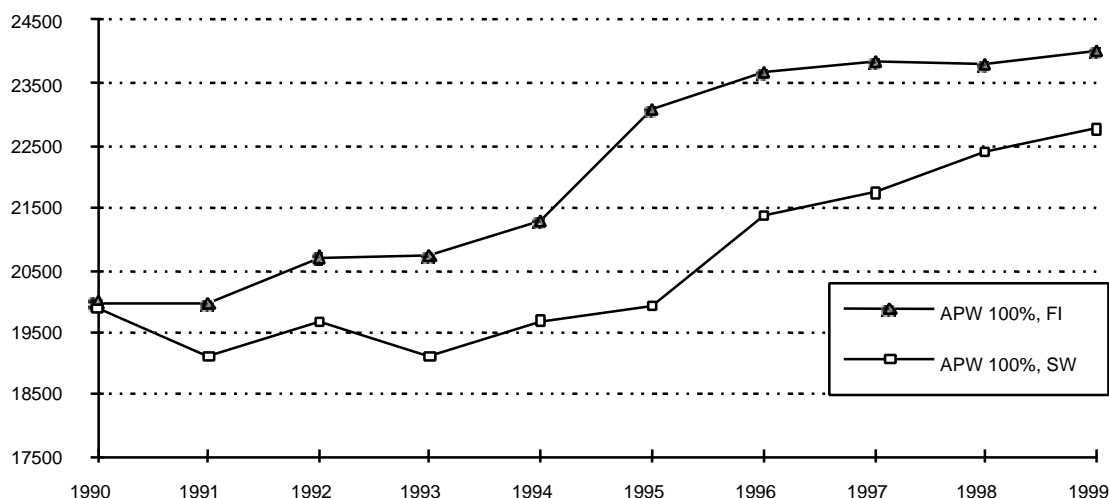
---

<sup>15</sup>Kamerman (1986), Bradshaw et al. (1993), Ditch et al. (1996) and Hansen (2000) used APW-income as a baseline for income level and/or as a basis for income development.

<sup>16</sup>Nososco (Social...2000) utilised two-parent families with incomes APW100% and 75% respectively, APW75% and APW50%, APW125% and APW100% and finally APW150% and APW125% ). OECD (2001b) calculates the tax/benefit position of married couples by using wage level APW100% and APW67%. However, the gender gap in earned income in full-time employment both for Finland and Sweden was around 20 percent during the 1990s.

<sup>17</sup> It is, however, assumed that children spend the whole day in day care in all type families.

Figure 1. Real Term APW Income in USD-PPP's per Year.



The level and the development of APW-income during the 1990s does not make a big difference between Finland and Sweden if only nominal increases in APW-income are studied.<sup>18</sup> The APW-income in Finland rose between 1990 and 1999 by 40.1 per cent. The corresponding figure in Sweden was 42,7 percent. However, the causes behind the development of APW-income may differ.<sup>19</sup> If we look at the development of APW-income in real terms – as it is shown in Figure 1 – we can see a very different picture. The APW-income in USD-PPP was almost at the same level in 1990 but subsequently it developed much faster in Finland than in Sweden.<sup>20</sup> This is due to a higher rate of inflation in Sweden. In Finland consumer prices rose between 1990 and 1999 by 16,4 per cent while in Sweden they rose as much as 24,7 per cent. Figure 1 provides the background for the analysis of development in the living margin for type families in both countries.<sup>21</sup> If there is not a substantial decrease in taxes and/or increase in income transfers for families with children and/or a substantial reduction in day care fees

<sup>18</sup> Due to problems in data collection the APW-income for Sweden in 1995 is constructed by using information from the previous year. APW-income for 1994 has been adjusted with the help of the wage index (“Genomsnittlig timlön, alla näringsgrenar”). The way APW-income was calculated for Finland changed in 1998 (OECD 1998, 2001b). Before 1998 the APW-income was calculated on the basis of annual gross earnings per hour multiplied by the average number of hours worked. From 1998 onwards the APW-income was calculated at an individual level on the basis of hours usually worked, average hourly pay for the fourth quarter and the amount of annual bonuses. Due to the change in the way APW-income was calculated the figures for 1998 and 1999 based on the new system were somewhat lower than they would have been under the old system.

<sup>19</sup> In the early 1990s the APW-income rose in Finland due to changes in the industrial structure. The recession wiped out a large part of the low-wage textile and clothing industries. This, in turn, increased APW-incomes (Hinta- ja palkkatiedote 1993).

There are minor differences between Finland and Sweden in the share of employers’ social security contributions (Eardley et al 1996a, 112). The share has been somewhat higher in Sweden than in Finland, which distorts the picture. The higher share of employers’ social security contributions in Sweden means that the level of deferred wages has been higher.

<sup>20</sup> Comparisons are made by using OECD Purchasing Power Parities (PPPs) for the year 1999 throughout the period from 1990 to 1999 (OECD 2001a) and a consumer price index for deflating the value of the living margin. The corresponding index for Finland is Elinkustannusindeksi (1990=100) and for Sweden Konsumentprisindex (1980=100). The index values used are annual averages. PPPs are a method of comparing the actual value of a currency in terms of its purchasing power against a standardised basket of goods and services. There are several problems attached to the use of PPPs (see Bradbury and Jäntti 1999, 77-80 for the pros and cons of PPPs). The similarities in tax/benefit structures between Finland and Sweden give grounds for arguing that the PPPs are the best available way of comparing the value of income packages between these two countries.

<sup>21</sup> The difference in the development of APW-income causes some problems in assessing the impact of family policy changes on the living margin. Luckily, from 1996 onwards the APW-income developed in a very similar manner.

in Sweden, we may expect that the part of income that is available for consumption (or the “living margin“ as defined later on) will towards the end of the 1990s rise to a higher level in Finland than in Sweden.

In addition to the number of providers, the number of children, care alternatives and income levels, labour market position also influences the material situation of a family. Previous studies suggest that the economic situation of families that suffered unemployment developed very differently from that of families with continuous participation in the labour market (e.g. Kosunen 1997c; SOU 2000:40; Gähler 2001). Unemployment benefits are not, however, family policy specific benefits.<sup>22</sup> Therefore, only families with incomes from paid work are looked at and we neglect unemployed families for reasons of space restrictions.

Income transfers received by the two-parent type families consist of only child allowances and housing allowances. For single-parent families alimonies are also included. The level of alimony is set in accordance with the level of maintenance support for single-parent families. The general means-tested income transfers such as income support/social assistance or special income transfers such as disability allowance or care allowance for a sick child are ignored. They would require more assumptions and make the cases more complex. It is also questionable if income support/social assistance can be considered part of family policy even though it is a vital part of the income packages of poor families.<sup>23</sup>

Housing allowances involve the most difficult definitions and assumptions in formalising our cases (Ditch et al. 1996, 72-76). Housing costs vary within and between countries according to the tenure, size, age, location, amount of mortgage and interest rate for housing. However, the effects of housing costs cannot be ignored (cf. Ritakallio 2001). Both in Finland and Sweden housing costs and housing allowances based on them are a critical element in income packages which means that levels of disposable income differ substantially before and after taking housing costs into account. While housing costs call for a complex set of assumptions, which might be subject to criticism, including housing in our simulation gives us an advantage over measurements that are based on incomes only. To make the case more simple we assume like Eardley et al. (1996a, 112-113) that the type families live in rented accommodation which also is the situation in reality. However, it is good to remember that for instance in Finland most families own their dwelling.<sup>24</sup>

---

<sup>22</sup> Unemployment benefits in Finland have some features that take into account the number of children in the family. They concern e.g. child supplements in unemployment benefits.

<sup>23</sup> Some of our type families might qualify for social assistance. The aim of the present study is, however, not to focus on poverty or deprivation. This is another reason for excluding social assistance.

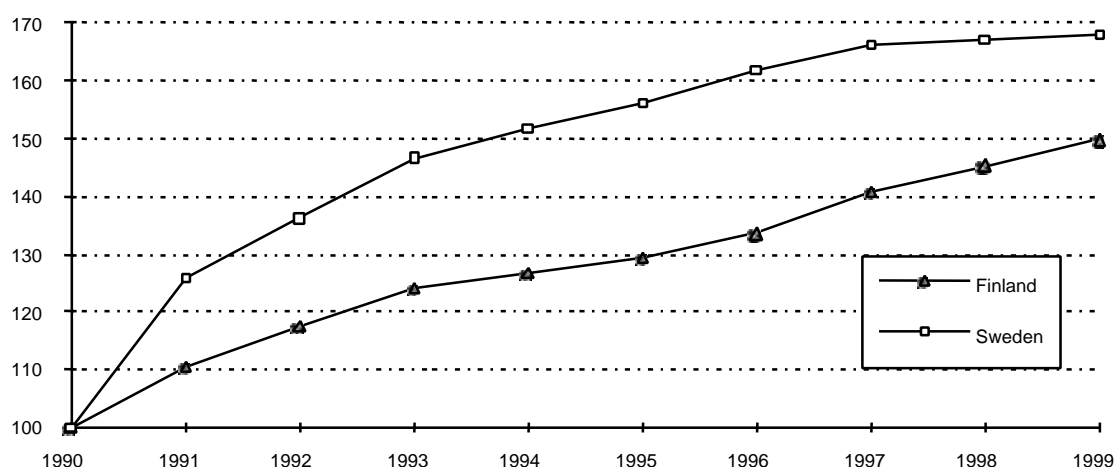
<sup>24</sup> Since the size of the dwelling has an effect on the level of housing allowance it is assumed that single parents live in apartments of 70 square meters and two-parent families (including childless couples) live in apartments of 90 square meters. The rent for Sweden has been calculated by using an index on apartments annual rent for three room apartments, average annual rent in crowns per sq. meters (“hyreslänheter och samtliga ägarekategorier”) (Bostads... 2000). Average annual rent per square meter is multiplied with by the size of the dwelling. It is assumed here that the level of income does not affect the cost of housing. The cost of housing in Finland is set at the same level as in Sweden in 1990 in relation to wage income. This means that families with average income spent an equal amount of gross income on rent in 1990 in both countries. From 1990 the housing cost in Finland follow the index on average rents (Keskimmäiset vuokrat, Vuokratilasto 2000).

In Finland the location of the dwelling had an effect on housing allowance. It is assumed that the type families live in the second area (“II kuntaryhmä”).

In reality, the number of families with unsatisfactory housing conditions has been much higher in Finland than in Sweden (e.g. Jakobsson 1988, 166-167).



**Figure 2. The Development of Estimated Housing Costs,  
1990=100.**



Rent is set at the average level for both family types and adjusted with indexes. Housing costs rose in Finland by 49,8 per cent between 1990 and 1999 while in Sweden the corresponding increase was almost 70 per cent (Figure 2). This means that compared with Finland, the living margin in Sweden will drop if the higher housing costs are not compensated by a corresponding increase in housing allowance. Furthermore, the development of housing costs in Sweden is uneven compared to Finland. The costs rose dramatically in the beginning of the decade while they were kept almost on the previous level in 1998 and 1999. In Finland, housing costs rose steadily every year without sudden changes. It is assumed that all type families that qualify for housing allowance apply for it and that the allowance is granted in accordance with the current rules. The means test is based on the most recent income in the ongoing year and that there are neither overpayments nor underpayments.<sup>25</sup>

When it comes to income taxation some assumptions have to be made. Both in municipal taxation and in church taxation national average rates for each year are followed (the individuals in the type families are members of the church as is the clear majority of the population in general). The income taxes and employees' social security contributions are deducted in a procedure where the effect of non-standard tax reliefs is not taken into account.<sup>26</sup> In Finland, families with children were up to 1993 entitled to tax allowances on dependent children. In Sweden, there was a tax credit for single parent families in 1990. It is assumed that all parents are trade union members.<sup>27</sup>

<sup>25</sup> This is an important assumption especially for Sweden. Up to 1994 Sweden had a means test for housing allowance which was based on the taxable income from previous year. From 1994 the allowance was granted on income information supplied by the applicant only. This led to high levels of housing allowance while there was up to 1997 no obligation to repay excessive allowances (Redovisar 1995, 11).

<sup>26</sup> This mean for instance that no tax allowances or credits are granted for expenses incurred travelling to and from work. These expenses were not deductible in Finland and Sweden if they were below a certain limit. However, there was a standard tax allowance for work-related expenses in Sweden from 1990 to 1992, which is included in the calculation. So is the wage allowance in Finland. There was a tax allowance for medical expenses in Finland for 1990 and 1991 that has also been included while in Sweden there have not been any tax reliefs for medical expenses.

<sup>27</sup> For Sweden, the average membership fee and unemployment fund payments were for all the years during the 1990s 1,5 per cent of the salary up to a ceiling of 3000 SEK (LO 2001). For Finland the payments are estimated by using income tax records. The level of payment varied a little during the 1990s. The trade union fees (average membership fee and

To clarify, the type family calculations we will utilise are made only for two family types: a family with two earners and a single parent family with two small children. Three income levels have been calculated for both cases: high income, average income and low-income families. Thus, the calculations have been prepared for seven different family types as listed in Table 1.

Table 1. Description of the Type Families.

### **A) 2 working parents**

#### 1. High income family

- income of one spouse APW 150%, the other APW 125%

#### 2. Average income family

- income of one spouse APW 100%, the other APW 75%

#### 3. Low income family

- income of one spouse APW 75%, the other APW 50%

### **B) 1 working single parent**

#### 4. High income family

- income of single parent APW 125%

#### 5. Average income family

- income of single parent APW 75%

#### 6. Low income family

- income of single parent APW 50%

### **C) 2 working spouses, no children**

#### 7. Average income family

- income of one spouse APW 100%, the other APW 75%

In order to evaluate the representativeness of our typical cases, two working parents and one working single parent with two small children (between one and seven years of age) we utilise LIS data to see the actual distribution of these families into different categories.<sup>28</sup> The distribution is displayed in Table 2.

---

unemployment fund payments) were deductible without an upper limit in Finland. In Sweden, trade union fees gave entitlement to a tax credit in 1990 and 1991.

<sup>28</sup> The unweighted sample size for FI91 was 11 749 households and 9 262 households for FI95. The weighted sample sizes were 2 200 190 for FI91 (population 5 041 033) and 2 290 100 for FI95 (population 5 121 511). The unweighted sample size for SW92 was 12 482 households and 16 260 households for SW95. The weighted sample sizes were 4 665 882 for SW92 (population 8 722 498) and 4 677 281 for SW95 (population 8 825 417).

Table 2. The Share of Type Families in LIS Datasets (Weighted Number of Households).

	1991	1992	1995
<b>Finland</b>			
Share of two-parent families			
- of all households	5.1%		3.6%
- of households with children	16.4%		14.2%
Share of single-parent families			
- of all households	1.4%		0.7%
- of households with children	4.5%		2.8%
<b>Sweden</b>			
Share of two-parent families			
- of all households		4.2%	4.3%
- of households with children		18.7%	19.6%
Share of single-parent families			
- of all households		2.0%	2.5%
- of households with children		9.0%	11.5%

As can be seen from Table 2, the share of two-parent families of all households and all families with children is fairly similar in both countries. However, the share of single-parent families is much larger in Sweden than in Finland. This is also the case if we examine population statistics. The figures show that our cases cover a more significant part of families with children in Sweden than in Finland. The share of families in Finland is, however, large enough to allow analysis of the effects of family policy changes during the 1990s. We may conclude that our family types represent a population of families with children that is relevant as a target group of family policy measures under inspection.

### 3. The concept of disposable income and operationalisation of the concept

In order to analyse outputs from the perspective of type families, we have to define the concept of disposable income. Traditionally disposable income has been defined by deducting income taxes from factory incomes and adding non-taxable income transfers. In this case, we want to find as broad a concept as possible for describing the cash amount that the family is able to allocate freely.<sup>29</sup> In analysing changes in the economic situation of families with children we use the amount of disposable income labelled “living margin”. The concept excludes all items that are not disposable in the sense that the family cannot exercise a free choice over the allocation of these resources. Several expenditure items included in conventional concepts of disposable income are therefore subtracted from the living margin. They include for example trade union fees, day care fees and housing expenditure.

---

<sup>29</sup> At this point we want to focus on family income rather than individual income, as the primary object of the study is family policy. Combining the financial resources of each family member is most likely in families with children (cf. e.g. Korpi and Palme 1998, 673).

When calculating the living margin, we first take into account the taxable income of each spouse or the single parent. Taxable income includes wages and salaries from paid work (see Table 3). Taxes and contributions are subtracted from the income. Following this child allowance is added to the net income (child allowance is not taxable). After this, voluntary trade union fees (membership fees and unemployment fund payments) and day care fees are subtracted and the resulting sum is called “the living margin”.<sup>30</sup>

Table 3. Definition of Living Margin.

#### Living margin

Gross income of the family (factory income)

- State income taxes (no deduction for costs incurred in travelling to and from work)
- communal tax, average rate
- church tax, average rate
- mandatory social security contribution
- mandatory health insurance contribution
- mandatory employee pension insurance contribution
- mandatory employee unemployment insurance contribution

= Net income of the family

- trade union fees, average membership fee and unemployment fund payments
- day care fees
- housing costs (rent)
- + housing allowance
- + child allowances
- + allowance for single mothers (single parent families)
- + maintenance support (single parent families)

= Living margin of the family

The living margin reveals directly how changes in the level of benefits (in national currencies), the basis for granting benefits, and service fees (day care) relate to the economic situation of type families each year, when the basis for income development is APW-income. Thus, the living margin enables us to assess the effects of several aspects of family policy on each type family.

The living margin is expressed by using OECD Purchasing Power Parities for year 1999 (OECD 2001a). Real-term changes are calculated by deflating the living margin in national currency by the consumer price index.<sup>31</sup>

---

<sup>30</sup> We will include only housing and day care costs as household expenditures. The selection is defensible. It is also possible to make assumptions concerning health care costs, food, hobbies etc. However, they call for further assumptions and make the cases more complicated.

<sup>31</sup> Comparisons are made by using OECD PPPs for year 1999 throughout the period from 1990 to 1999 (OECD 2001a) and consumer price index for deflating the value of the living margin. The corresponding index for Finland is Elinkustannusindeksi (1990=100) and for Sweden Konsumentprisindex (1980=100). The index values used are annual averages.

The analysis is basically conducted by evaluating the change in the real-term living margin of the selected type families or in relation to the objectives of the Nordic family policy model.

The characteristics of the Nordic model were defined at the outcome level by Hiilamo (2002). In the following analysis these characteristics are utilised with some modifications. The two features that pose problems on output level are income equality among families with children and high level of female income. As we do not have actual incomes of families with children or actual incomes of women we cannot make any comparisons on those grounds. Instead, we will examine income development of families with different income levels. We want to know if there are differences in the income development of families with low, average or high incomes and if so, to what extent these differences are created by changes in family policy-related benefits. With reference to earlier discussion on the topic we will redefine the characteristics concerning female income from paid work by focusing on a programme that facilitates female employment and thereby high incomes from paid work. This is the low cost of day care.<sup>32</sup> The absence of day care or high cost of it is a major obstacle to female labour force participation (cf. Powell 1998; Kimmel 1998). This is especially the case for women with small children and low incomes. If day care fees absorb a major part of the living margin paid employment is not a feasible option.

To proceed in a logical order we will first look at income development of families with children. The analysis includes the following features of the Nordic family policy on output level:

- 1) Income development of families with children,
- 2) relative importance of child allowances,
- 3) single parents' economic position,
- 4) relative incomes of families with children,
- 5) cost of day care and
- 6) absence of child allowance premiums.

The goals of the model are very difficult to operationalise. Therefore, we are not suggesting that the objectives of the model be fully covered by our indicators. They are used only as tools to analyse changes in family policy outputs from different angles. Here the income development of families with children is analysed by comparing the development of the living margin of type families with different income levels. The share of child allowance of the living margin (living margin including child allowance) measures the relative importance of child allowances. As for instance wage increases and taxes have an effect on the share of child allowance of the living margin, it is supposed that governments assess the importance of child allowances in relation to net incomes. The economic position of single parents is measured by comparing the development of the real-term living margin of single parent type families. Relative incomes of families with children are analysed by comparing the development of the living margin of a childless couple and a family with children. The estimate for the cost of day care is arrived at by analysing the relative cost of day care for low-income families. Child allowance premiums are calculated on family level without assumptions on family's income.

---

<sup>32</sup> On output level we cannot make any comparisons on the availability of day care. However, there were hardly any differences between the countries in this respect as both countries granted subjective right to a place in public day care at the end of the period.

## 4 Results of the simulation

### Income development of families with children

We will now discuss changes in the incomes of (fictitious) families with children at different income levels during the 1990s. We will also try to analyse the role of legislative amendments to family policy in the development of incomes. Firstly, we have calculated the real-term value of the family benefits package (FBP) for all type families.<sup>33</sup> The family benefits package includes child allowance, housing allowance, tax deductions and day care<sup>34</sup>. The family benefits package for single parents includes additionally maintenance support. Secondly, we wanted to know which portion of the combined gross wage of the family was constituted by the family benefit package in 1990 and 1999. We also calculated real-term changes in the value of the family benefits package from 1990 to 1999. Finally, real-term changes in living margin were evaluated over the same period.

Table 4. Share of Real-Term Family Benefit Package (FBP) of Gross Wage in 1990 and in 1999, Change in the Real-Term Value of FBP and in the Living Margin from 1990 to 1999 for Different Family Types and Income Levels, %.

#### **Two-parent families**

	FBP of Gross Wage in 1990	FBP of Gross Wage in 1999	Change in the Value of FBP	Change in Living Margin
APW 150+125, FI	6.2	3.6	-30.5	10.6
APW 100+75, FI	10.2	5.6	-34.2	4.9
APW 75+50, FI	25.7	7.8	-63.4	-19.0
APW 150+125, SW	6.2	3.0	-45.3	6.7
APW 100+75, SW	9.8	4.7	-45.3	-7.3
APW 75+50, SW	10.0	8.8	1.4	-5.0

<sup>33</sup> Calculations are made on the basis of the value of money in 1999. The corresponding index for Finland is Elinkustannusindeksi (1990=100) and for Sweden Konsumentprisindex (1980=100). The index values used are annual averages.

<sup>34</sup> The value of day care was set at zero for 1999 whereby the value of day care in 1990 was calculated by deducting the amount of day care fees in 1999 from the real-term amount of day care fees in 1990. If the day care fees were higher in 1999 than in 1990 the difference was interpreted as a positive factor in the value of the family benefit package whereas lower day care fees in 1999 than in 1990 were seen as a negative factor in the value of the family benefit package.

**Single-parent families**

	FBP of Gross Wage in 1990	FBP of Gross Wage in 1999	Change in the Value of FBP	Change in Living Margin
APW 125, FI	30.7	18.8	-26.3	-4.6
APW 75, FI	67.2	45.5	-18.6	-11.9
APW 50, FI	104.8	82.7	-5.0	-6.2
APW 125, SW	18.7	31.7	16.2	4.0
APW 75, SW	41.1	45.1	26.1	9.6
APW 50, SW	69.8	76.4	25.1	8.7

Table 4 shows that the share of the family benefits package of gross wages is determined by the income level. The lower the income level, the higher the share of the family benefit package. When we look at the development of the family benefits package of gross wages we mostly observe devaluation. As can be seen from Table 4., with the exception of single parents the family benefits package constituted a smaller share of gross wages in 1999 than in 1990. This indicates that incomes from paid employment have become a more important source of income.

In the same way, the value of the family benefits package has decreased. In fact, there were substantial changes. It seems that cuts in family benefits have greatly decreased the value of family benefits packages at the output level. When it comes to two-parent type families only one type family witnessed positive development in the value of the family benefit package.<sup>35</sup> This indicates that the cutback in family policy had a negative impact on the income development of families with children. All single-parent type families in Finland experienced a decrease in the value of the family benefit package while the contrary holds true for Sweden. Also in Finland the decrease for single parents was smaller than for two-parent families. It seems that single parents were not hit as hard as two-parent families as far as the development of the family benefits package is concerned.

Table 4. displays a rather confusing picture if we look at changes in the living margin. Real-term changes vary a lot between the family types, income levels and countries. At first, it is difficult to see any logic behind the results. The variations can be attributed to the complex set of rules concerning taxation and family benefit package; there are a lot of factors both increasing and decreasing the living margin. Day care fees can cause the most unexpected results. They were determined by non-linear income brackets that create poverty traps where increases in wages are completely eaten up and sometimes reversed by increases in day care fees (and by decreases in housing allowance). It has actually happened that only a minor wage increase has moved a family to another fee category resulting in a loss of several thousand markkas or crowns.

As a slight simplification, it could be said – as Table 4 shows – that the lower the income level of the family in 1990-1999 and the less the family has earned income, the weaker the income development. However, there is an

---

<sup>35</sup> The value of the family benefit package increased only for two-parent low income families in Sweden. The reason behind the development was that in 1990, i.e. before the tax reform the type family did not qualify for housing allowance.

important exception to this rule which applies to single parents in Sweden. The positive income development of single parents in Sweden can be attributed to increases in the value of the family benefit package.

The two-parent high-income family had the highest increase in its living margin in Finland. This family type did not suffer from cuts in housing allowance. The reason is simple: this family did not qualify for it. Since there was no increase in day care fees -- in 1997 and 1998 they actually decreased -- and the case family was not affected by the cuts in child allowance in 1996 to the same extent as type families with lower levels of earned income, development was quite satisfactory for this family type.

The day care fees for two-parent families with average incomes increased in Finland more substantially than for high-income families. Also the family suffered much more from the devaluation of child allowance. The living margin for this family type, however, rose by 4,9 per cent. The low-income two-parent family suffered the most during the 1990s. In addition to increases in day care fees (they almost doubled), housing allowance was cut, and as income from work increased the family lost its right to housing allowance. In fact, this family type was stuck in a poverty trap. During the 1990s it lost almost 20 percent -- more than any other type family.

In Sweden, two-parent families show almost similar development compared to Finland. However, the larger increases in housing costs and the higher rate of inflation did mean that, in general, the development of the living margin in Sweden was worse than in Finland (with the exception of low-income family). Again, families with higher incomes did not lose as much as families with average income. The most important factor in explaining the difference were day care fees. Fees increased by an equal amount but had, of course, a much heavier impact on families with lower incomes. Low-income families with did not suffer as much as average-income families (or as much as low-income families in Finland). This is partly explained by the fact that families on low incomes did not qualify for housing allowance before the great tax reform of 1990, but did qualify for it in 1991, and remained recipients of this allowance until 1999.

The same pattern applies to single-parent families in Finland with a minor exception. Single-parent families with low incomes experienced a smaller decline in their living margin than families with average incomes. This is due to the fact that low-income families benefited from an improvement in housing allowance.<sup>36</sup> However, single parents with high incomes did not lose nearly as much as single parents with lower incomes. The living margin for all single parent families decreased from 4,6 to 11,9 per cent, which is more than with two-parent family types (with the exception of the two-parent low-income family).

---

Since then the family has received housing allowance.

<sup>36</sup> However, the overall family support package of 1994 meant a loss for average or low-income families receiving the single parent tax deduction. Previously, the child deduction and single parent deduction granted in municipal taxation for single parents with two children had decreased the taxable income in municipal taxation by FIM 33,500. The deduction was so big that it brought the taxable income below the income limit for the basic allowance in communal taxation FIM 54,000 and guaranteed a notably high basic allowance. Therefore, abolishing the child deduction and single parents deduction in 1994 increased the tax burden in two stages: abolishing the child deduction in communal taxation also led to a decrease in basic allowance. This is an example of the hidden effects of the tax system.



Quite surprisingly, it seems that single-parent families in Sweden had the most positive income development during the 1990s. In fact, the lower the income level of the family, the more positive was the income development. High-income families experienced an improvement of four per cent while families with average and low incomes experienced an increase of 9,6 and 8,7 per cent respectively. Single parents fared much better than two-parent families (or childless couples), too. At this point, we must emphasise that our analysis did concentrate on single-parent families that participate in the labour market.

As we already know, income transfers constitute a central part of the income packages of single parents. This was reflected in developments in the living margin. During the 1990s there were several legislative amendments that hit single parent families particularly hard in Sweden. They included abolition of the single parent's tax deduction and freezing of the level of maintenance support. The possible negative effects of these reforms were, however, not discovered. On the contrary, housing allowance for single parents increased dramatically.<sup>37</sup> It was mainly the result of the tax reform, and it is the most important explanation behind the positive development of the living margin.<sup>38</sup> Another positive factor was that in Stockholm the fee schedules for day care were changed in 1995 whereby the number of fee categories was increased. This meant lower day care fees for single parents. As can be seen from Table 4, the value of the family benefit package for single parent families in Sweden increased from 1990 to 1999 quite substantially. It seems that this is the most important factor behind the positive development of living margin of these families.

In Finland only two type families out of six experienced a positive development in their living margin during 1990s, and both of them were families with high or average incomes. It seems that income earned in the labour market has gained more significance in the living margin of the type families in Finland. This holds true also for two-parent families in Sweden. However, when it comes to low-income single-parent families they did better than the average or high-income single parent families. In conclusion, the results indicate that low-income families suffered in Finland while in Sweden such development could not be observed.

### The importance of child allowances

The share of child allowance in the living margin (including child allowances) is discussed below. To keep the picture simpler, only two families have been included: both two-parent and single-parent families with average incomes. Our yardstick measures the relative importance of child allowance as it is influenced not only by changes in the child allowance, but also by changes in other income (earned income, income transfers such as

---

<sup>37</sup> Research by Gähler (2001, 56) confirms that single parents had an increase in housing allowance from 1990/1991 to 1998/1999.

<sup>38</sup> Development of living margin for single parents in Sweden from 1992 to 1999, i.e. after the tax reform, would have showed a clearly smaller increase. Research by Sainsbury (2000) did not show that single-parent families with paid employment suffered more than other groups during the 1990s in Sweden. However, Gähler (2001) showed that single-parent families suffered in economic terms more than other household types during the 1990s. That was mainly the result of changes in the labour force participation of single parents.

housing allowance and maintenance support), day care fees and taxation.<sup>39</sup> In short, the calculation shows the share of child allowance in the part of the income that is available for consumption.

**Figure 3. The Share of Child Allowance of Living Margin in Different Family Types, %.**

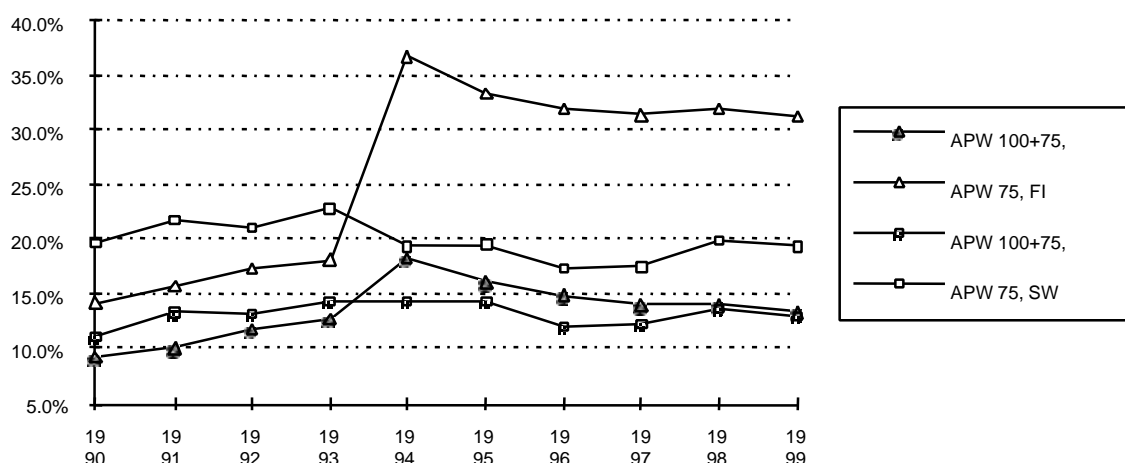


Figure 3 shows that during the 1990s child allowances have become a more significant source of income in Finland than in Sweden. In the early 1990s (up to 1994) the share of child allowances was somewhat higher in Sweden. However, in Finland, a dramatic change took place in 1994, when tax deductions were replaced by a substantial increase in child allowances and consequently the allowance became a more important source for the living margin. The impact is especially visible for single-parent families where child allowances are a more central part of the income package. Compared with two-parent families, the child allowances for single parents rose in absolute terms, too, while a specific tax allowance for single parents was replaced by the introduction of single parents' child allowance supplement.

After 1994, the role of child allowances began to lose importance slowly both in countries. In Finland, one reason for this development was the reduction in child allowances in July 1995. Another reason was the rise in the net income of families as pay rises and tax cuts increased the living margin. A third factor explaining the decreasing share is that no index increases were made to the child allowance after it was cut in 1995. The results demonstrate how the real value of a nominally determined benefit -- in particular in relation to the net income level -- decreases rapidly. However, child allowances were clearly a more important source of the living margin at the end of the 1990s than in the beginning of the decade.

A different picture emerges for type families in Sweden. The share of child allowance of the living margin increased in the early 1990s followed by a stagnation or decline in the mid-1990s. This was due to a substantial increase in child allowances in 1991. The allowance was cut in 1996 but the previous levels were restored in 1998. The restoration of child allowances emphasised its importance in the income package of the type families.

<sup>39</sup> Heavier tax burdens and decreases in earned income and/or income transfers emphasise the significance of the child allowance. Lighter taxes and increases in earned income and/or income transfers have the reverse effect.

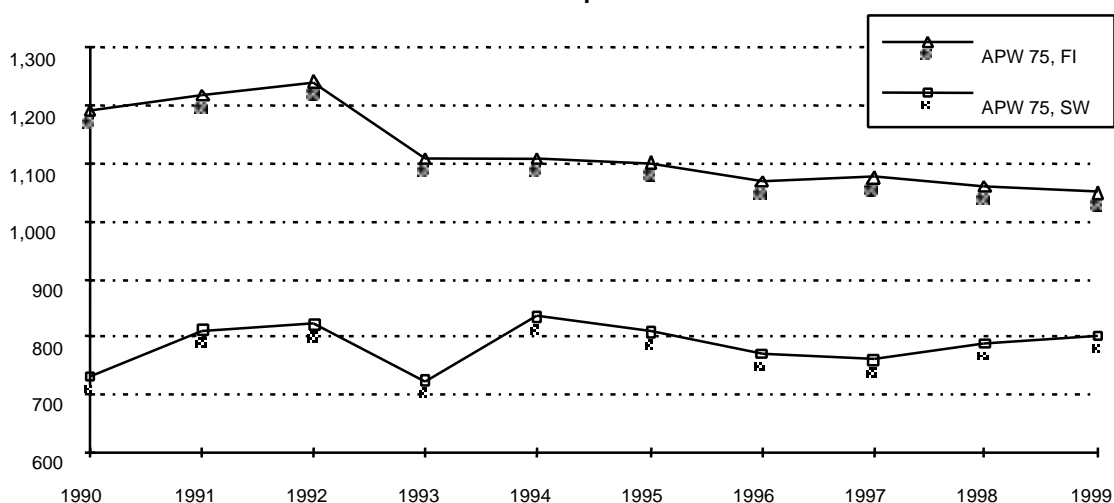
The share of child allowances of the living margin for two-parent type families was higher in 1999 than in 1990. For single-parent families the share was somewhat lower in 1999 than at the beginning of the decade. As can be seen from Figure 3., child allowance plays -- not surprisingly -- a crucial role in the income packages of single parents indicating that cuts in child benefits will hit these family types more severely.

In conclusion, it can be observed that the share of child allowances increased for three type families out of four. The result gives some indication that in micro-level outputs of family policy the importance of child allowances was strengthened.<sup>40</sup>

#### The economic position of single parents

In the following, we will assess single parents' economic position during 1990s by comparing the real-term development of the living margin (in USD-PPP's) for single-parent families with the average income (APW 75).

**Figure 4. Living Margin of Average Income Single Parent Family  
in USD-PPP's per Month.**



As Figure 4 shows, there was a substantial difference in the level of the living margin between Finland and Sweden in the early 1990s. The living margin of Swedish families was clearly lower and developed much more unevenly in 1990-1999 than in Finland. This is partly explained by three factors. Finnish families gained an advantage by receiving higher housing allowances in 1990. The tax burden for single-parent families was much heavier in Sweden than in Finland. Additionally, single parents had to pay a substantial amount in day care fees

<sup>40</sup> Again, this is a question of choosing the period of comparison. If we look at the situation in Sweden and Finland between 1994 and 1999 the importance of child allowances at the micro-level has decreased or remained at the previous level.

in Sweden throughout the period of 1990-1999. In 1990 day care fees amounted nominally to 12 760 SEK.<sup>41</sup> In Finland single parents paid a much smaller amount of day care fees; in 1990 the amount was 1 710 FIM.<sup>42</sup>

In 1991 the difference in the level of housing allowance shrank. Due to the tax reform in Sweden both child allowance and housing allowance were raised. At the same time income taxes were cut. All these factors led to an increase in the living margin. In Finland only child allowances were raised. In 1993, the living margin dropped in both countries. That was mainly a result of heavier taxes. However, the following year witnessed a substantial increase in Sweden due to higher housing allowances while in Finland the living margin remained unchanged.

The remaining period signified a steady decline in the economic situation for single-parent families in Finland. The living margin decreased even more in Sweden as housing costs rose and both housing allowance and child allowance were cut. However, year 1998 produced a slight upswing in Sweden while continuous deterioration characterised the Finnish case. All in all, the living margin for single-parent families in Sweden was in 1999 on a higher level than in 1990 while in Finland it was clearly lower in 1999 than in 1990. It seems that the tax reform played an important role in the Swedish case.

What then happened to the economic position of single parents during the 1990s? The results paint a conflicting picture. The living margin actually rose for type families in Sweden. In Finland the economic situation deteriorated. While the results are not unambiguous they give some grounds to arguing that the economic position of single weakened in Finland and improved in Sweden.

#### Relative incomes of families with children

The next step is to analyse the relative incomes of families with children. We will compare the development of the living margin for two adult families with and without children with average incomes (APW 100+75, APW 100+75, CL). We have to keep in mind that APW-income and housing costs are based on the same assumptions for both families with children and childless households. Therefore, the differences in the living margin are caused only by legislative amendments in family policy.

---

<sup>41</sup> For instance in 1992 and 1993 the average-income single-parent family in Finland did not pay any day care fees. In Sweden the same family paid 14 080 SEK and 14 850 SEK respectively in annual day care fees.

<sup>42</sup> The figures demonstrate that the income brackets applied to day care fees by municipalities had a significant effect on the development of the living margin. In so far as the income development of our type families corresponds to the average income development, it can be said that the changes in income brackets did not correspond to increases in income levels. Instead, they in fact made the fee burden much heavier.

**Figure 5. Living Margin of Families with and without Children  
in USD-PPP's per Month.**

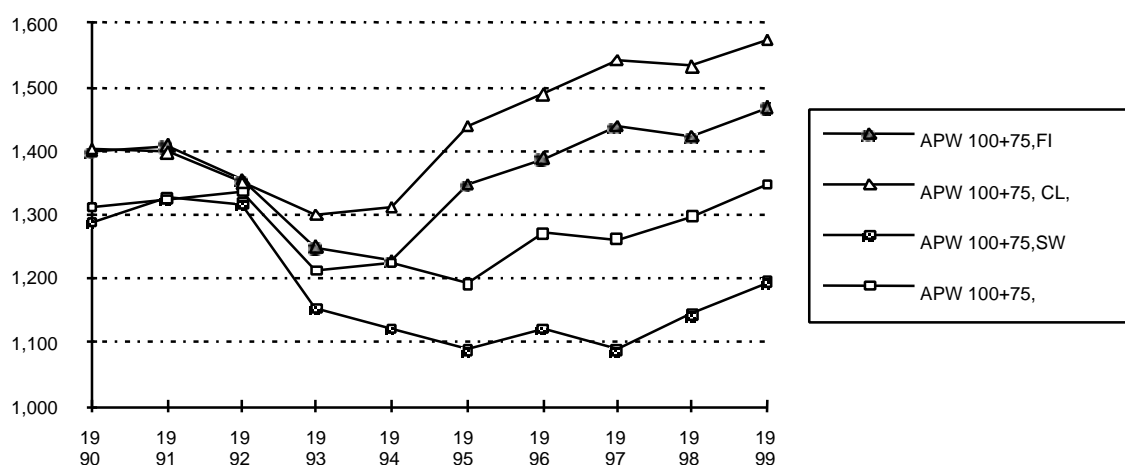


Figure 5 shows that, interestingly, the living margin for type families with and without children was almost at the same level in both countries at the beginning of the 1990s, and almost up to 1993. As there were no standard tax deductions for children in Sweden and the type family with average income did not qualify for housing allowance, the equal level of living margin for families with and without children means that the annual amount of child allowances covered the cost of day care.<sup>43</sup> For the Swedish case, the level of horizontal distribution of income by this measure is, therefore, a question of the relation between child allowances and day care fees.

Due to higher day care fees in 1993 the living margin for a families with children decreased more than for a childless couple in Sweden. At the same time, tax deduction for families with children was cut in Finland. However, the great family benefit reform of 1994 did not have a considerable effect on the relative incomes of families with children. In Sweden, the day care fees continued to increase which widened the gap between the family types. In 1996, the cut in child allowances decreased the incomes of families with children. The same happened in Finland one year earlier. Horizontal distribution in this sense was weakened also through increases in day care fees in 1997. The final observation shows that families with children gained some advantage as the cut in child allowances was restored in 1998.

In sum, during 1990s the living margin for childless couples in Sweden increased while it decreased for two-parent families with children. Childless couples' living margin improved by 5.9 per cent while the corresponding figure for families with children was -3.9 percent. The difference in the living margin was much smaller in Finland. However, the living margin grew higher for childless couples than for families with children. The growth rate for childless couples was 12,1 per cent from 1990 to 1999, and the corresponding increase for families with children was 4,9 per cent. The results indicate that families with children lost in terms of relative incomes during the 1990s in both countries.

### Cost of day care

We will examine the share of day care fees of the portion of income free for consumption for both two-parent and single-parent families with low income. The intention is to highlight the cost of day care as a factor that encourages or discourages female labour force participation.

**Figure 6. The Share of Day Care Fees of Low-Income Family's  
(Two Parent and Single Parent) Living Margin, %.**

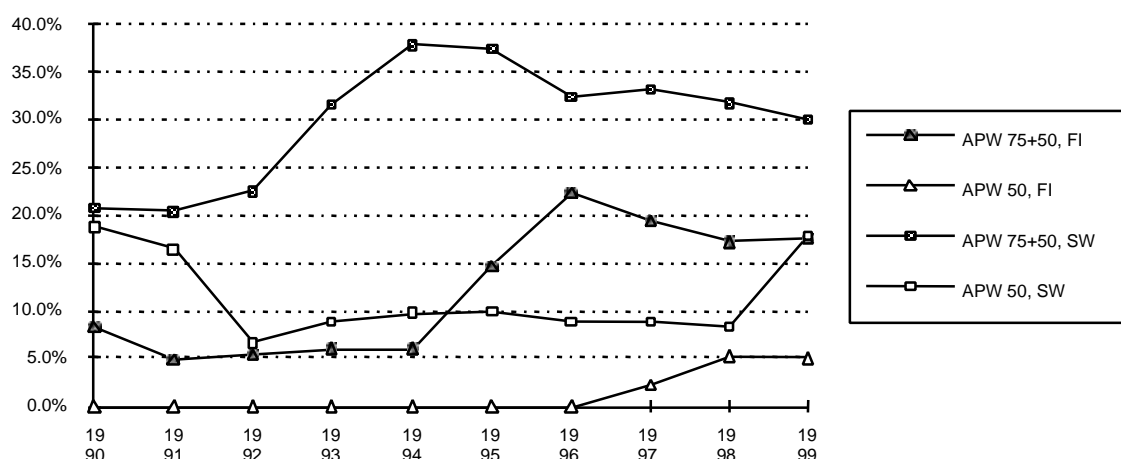


Figure 6 shows that day care has been clearly more expensive relative to the living margin in Sweden than in Finland throughout the 1990s.<sup>44</sup> This is particularly true in the case of single-parent families, as these did not pay any fees in Finland until 1997. However, if we look at the development in Finland for both family types we can see that the fees relative to the living margin were much higher in 1999 than at the beginning of the decade. This indicates, quite surprisingly, that it is less profitable for low-income families to have two working parents as day care fees consumes a greater part of the living margin.<sup>45</sup> This is also the case with two-parent low-income families in Sweden. For single-parent families there was hardly any change in day care fees in relation to the living margin. The results indicate that women's choices by this measure have become more limited in both countries during the 1990s.

### Child allowance premiums

Finally, we will assess child allowance premiums in terms of micro-level outputs. As above, pronatalism is defined as percent changes in the graduation of the child allowance (from the first to the second child and from the first to the third child). The income level does not have any effect on the amount of child allowance

<sup>43</sup> This does not, however, mean that family policy-related income transfers account for all the costs caused by children.

<sup>44</sup> In fact, our results indicate that day care fees were set on a higher level in Stockholm than in Helsinki until 1997. Thereafter national fee schedules were applied in Finland.

premiums. Therefore, the calculations are performed only at the family level without assumptions on family's income level.

**Figure 7. Child Allowance Premium from First to Second  
from First to Third Child in the Family, %.**

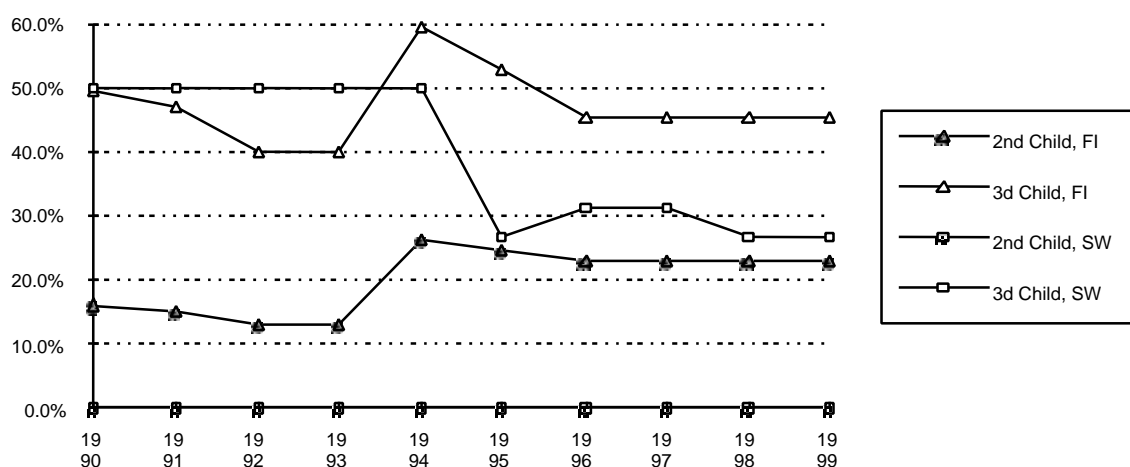


Figure 7 shows that the level of child allowance premiums in Finland has remained almost unchanged. The child allowance premium for the second child was somewhat higher in 1999 than in 1990. However, the premium for the third child was lower. The legislative amendments in child allowances in 1991 and 1993 decreased the level of child allowance premiums but the overall family package (including substantial changes in child allowances) in 1994 increased it substantially. In 1995, child allowances were cut in a way that also reduced the premiums.

When it comes to the second child in the family in Sweden Figure 7 shows a line which follows the horizontal axis. This means that Sweden did not pay child allowance premiums for the second child. The development of the child allowance premium for the third child is different than in Finland. The premium was kept at the same level until 1995 when it dropped dramatically to a level where it has since remained. In sum, the child allowance premiums in Sweden were lower than in Finland, and they further decreased during the 1990s while in Finland they remained nearly unchanged.

## 5. Comparison of results with LIS data

Before presenting our conclusions we want to briefly compare the results from fictitious microsimulation for type families with the results from LIS micro-datasets. The rationale is to test the “fictitious” approach against the “facts”. There are several problems connected to comparing the results on disposable income arrived at by different methods. In this case, one approach describes outputs whereas the other describes outcomes. The idea is only to look for similarities and differences, not to explain the results thoroughly.

<sup>45</sup> Throughout the latter part of the 1990s the government in Finland wanted to remove all such mechanisms that made it more attractive for people to stay at home and collect benefits rather than to choose paid employment (Sipilä and Korpinen

The first problem is that we have LIS datasets only for some years and therefore lack a complete time series. The datasets for Finland date back to 1991 and 1995, the datasets for Sweden to 1992 and 1995. That means they cover only half of the period analysed with the help of microsimulation. The number of household types in each dataset is limited which means that we cannot use exactly the same parameters that we have used for type families in microsimulation. This holds true especially for single parent families.

First, we must make sure that we are comparing exactly the same household types. In order to compare the living margin for two-parent type families we want to look at the disposable incomes for two-earner families with two children under the age of seven. This means that both in the type family and in the LIS parents are in paid employment.<sup>46</sup> When it comes to single parent type families we are looking for single parents who are earners at the same time and have children under the age of seven. Due to the limited number of single parents in the LIS datasets we cannot be more specific about the number of children.

Second, we have to find a uniform definition of disposable income.<sup>47</sup> As the LIS datasets do not include information either on day care fees or on rents, we have to redefine our concept of living margin to correspond with LIS measures. Therefore, we will exclude day care fees and housing costs from the expenditure side and housing allowance from the income transfers side of the living margin. Real-term changes are calculated by deflating the disposable income by the consumer price index.<sup>48</sup> Here only the median disposable incomes and the living margins for average income type families (two-parent and single-parent families) are compared.

---

1998, 271).

<sup>46</sup> This means that the results do not reflect the rise in unemployment among families with children as the result of the recession.

<sup>47</sup> The absence of equivalence scale does not have an effect on comparisons between two-parent families as both LIS households and type families consist of two adults and two children and comparisons are not made across countries. For single-parent families (parent in paid employment) the number of children on average is less than two. This means that the LIS single-earner households will receive less in child allowance than single parent type families. In other words, it is expected that the living margin for single parents is somewhat higher than disposable income.

<sup>48</sup> As above, the corresponding index for Finland is Elinkustannusindeksi (1990=100) and for Sweden Konsumentprisindex (1980=100). The index values used are annual averages.



**Figure 8. Disposable Income and Living Margin for Finnish LIS Households and Case Families, FIM/year.**

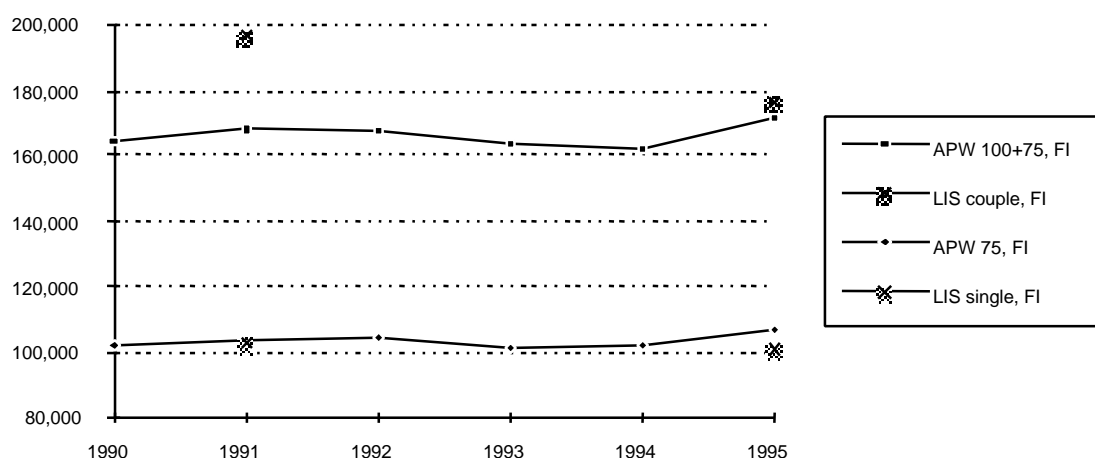


Figure 8 displays both the living margin and the median disposable income for two family types in Finland: two-parent and single-parent families with small children. As can be seen from the graph, correspondence between the different measures is fairly good. The only exception are with two-earner families in 1991. A possible explanation for this could be that before the recession in 1991 two-earner families in “real life“ earned on average more than 100 per cent and 75 per cent of the APW-income. In the early 1990s the “real life“ earned income for two-earner families did not develop as positively as the APW-income.<sup>49</sup>

**Figure 9. Disposable Income and living Margin for Swedish Case Families, SEK/year.**

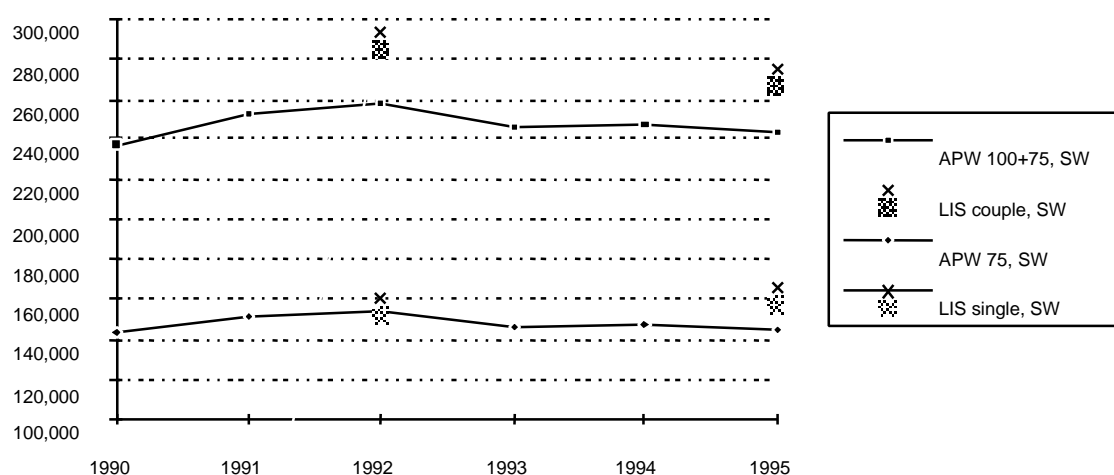


Figure 9 indicates that the living margin and disposable incomes were quite close also in Sweden for both two-parent and single-parent families. However, the direction of change from 1992 to 1995 is slightly different. The living margin for single-parent families dropped while disposable incomes rose. For two-parent families both our

indicators display a decrease from 1992 to 1995. The level of the living margin was somewhat lower than the level of disposable income. This was especially the case with two-parent families. It could be that the 100 per cent APW-income does not correspond to the average level of incomes for two-earner families with small children in Sweden.

There was almost a match between the disposable income and the living margin for single-parent families in both countries even though the LIS households were expected to receive less in child allowances. It could be that single-parent one-earner families earn more than 75 per cent of the APW-income on average but the difference in the living margin is consumed by smaller child allowances.

In sum, our preliminary results indicate that the outputs obtained by simulating incomes for type families reflect quite satisfactorily the “real life” changes in the incomes of corresponding households.

## 6 Conclusions

The purpose of this article was to describe the realisation of the characteristics of the Nordic model of family policy at the family level in family types representing Finnish and Swedish families with children. It is necessary to stress that the analysis presented only is indicative and no far-reaching conclusions can be drawn on the basis of it.

One central question concerned the possible divergence of family policies in Finland and Sweden from the objectives of the Nordic model. There is no clear-cut answer. Most notably the changes in the importance of child allowances took these countries closer to the ideal-typical Nordic model. In Sweden, positive developments were observed also in the economic position of single parents and in the absence of child allowance premiums. On the one hand, the higher cost of day care and the poor relative and absolute income development for families with children pushed Finland and Sweden away from the ideal model. At this point, the analysis is very limited due to problems associated with finding proper measures for all the characteristics of the ideal model at the output level.

The results can be interpreted so that the significance of earned income in the income formation of families with children has increased. The changes in earned income created substantial differences between different types of families with children. These differences influenced the economic position of single parents as well as the income development of all families with children. It is possible that using APW-income as a measure of income development exaggerates the significance of income earned in the labour market. Development of APW-incomes is also influenced by changes in the wage structure: decrease in the number of low-paid jobs in the early 1990s raised the APW-income (Hinta- ja palkkatiedote 1993). Comparison with the 1991 and 1995 data on Finland and the 1992 and 1995 data on Sweden in the LIS database shows that the incomes of working families with children have not necessarily developed as strongly as APW-income.

---

<sup>49</sup> The reasons behind the jump in APW-income in Finland in 1995 were discussed earlier.

A central question concerns the reliability of the results obtained from microsimulation based on type families? When displayed against actual income data derived from the LIS, the answer is positive: they are quite reliable and consistent with register data. The calculations are internally logical but changes in the behaviour of families as well as in demographic and family structures can distort the results. Because of this, fictitious microsimulation cannot be applied to study the poverty risk of families with children, distribution of income or qualitative changes in the family policy system, for instance. Interviews, macro-level data and data on demographic groups are needed for this purpose. However, output and outcome information should not be considered as substitutes for each other: rather they provide complementary information. Type family calculations illustrate changes in the tax and social security systems and their mutual dependency, if the income level is assumed to develop in line with the average production worker income. The calculations are well suited for this purpose. This information can be used to formulate hypotheses concerning the distribution effects of institutional changes, which can be later analysed at the outcome level.

## References

### Published sources

- Autio, S. (1999): Kansainvälinen palkkaverotusvertailu. Verotietoa 17. Veronmaksajat. Helsinki. (International comparison of income tax levels.)
- Autio, S. (2000a): Eläkkeet, verot ja ostovoima. Esimerkkilaskelmia verotuksesta ja eläketulojen ostovoiman kehityksestä vuosina 1991-2000. Verotietoa 20. Veronmaksajat. Helsinki. (Pensions, taxes and purchasing power. Example calculations on the development of disposable income from 1991 to 2000.)
- Autio, S. & Kurjenoja, J. (1998): Miten kävi kannustinloukun. Laskelmia verojen, tulonsiirtojen ja palvelumaksujen vaikutuksista esimerkkiperheiden käytettävissä oleviin tuloihin. Verotietoa 15. Veronmaksajat. Helsinki. (What happened with the income traps. Calculations concerning the effects of tax/benefits system and service fees on the disposable income.)
- Bostads- och byggnadsstatistisk årsbok (2000): Bostads- och byggnadsstatistisk årsbok. Statistiska centralbyrån. Stockholm. (Statistical yearbook on housing and construction.)
- Bradshaw, J. & Ditch, J. & Holmes, H. & Whiteford, P. (1993): Support for children: A comparison of arrangements in fifteen countries. HMSO. London.
- Bradbury, B. & Jäntti, M. (1999): Child Poverty across Industrialised Nations. Innocenti Occasional Papers. Economic and Social Policy Series no. 71. Unicef. Florence.
- Citro, C. F. & Hanushek, E. A. (1991) (eds.): The Uses of Microsimulation Modelling. Vol 1. Review and Recommendations. National Academy Press. Washington, D.C.
- Ditch, J. & Barnes, H. & Bradshaw, J. & Commaille, J. & Eardley, T. (1996): A Synthesis of National Family Policies 1994. Social Policy Research Unit. University of York. York.
- Eardley, T. & Bradshaw, J. & Ditch, J. & Gough, I. & Whiteford, P. (1996a): Social Assistance in OECD Countries: Volume I Synthesis Report. DSS 1283 Social Policy Research Unit. University of York. HMSO. London.
- Eardley, T. & Bradshaw, J. & Ditch, J. & Gough, I. & Whiteford, P. (1996b): Social Assistance in OECD Countries. Volume II Countries Reports. DSS 1274 Social Policy Research Unit. University of York. HMSO. London.
- Fasit (1999): Mikrosimuleringmodellen Fasit. Hur förbättra våra finanser, och vilka påverkas? Statistiska centralbyrån. Årebro. (Microsimulation model Fasit. How does our economic position improve and who are affected?)
- Forssén, K. (1998): Children, Families and the Welfare State. Studies on the outcomes of the Finnish family policy. Research reports 92. National Research and Development Centre for Welfare and Health. Helsinki.
- Gähler, M. (2001): Bara en mor – enstamstående mödrar ekonomiska levnadsvillkor i 1990-talets Sverige. Ofärd i välfärden. Forskarantologi från kommittén Valfärdsbokslut. SOU 2000:1:54. 15-99.
- Haataja, A. (1995): Tulonsiirtomallit sosiaalipolitiikan arvioinnissa. Sarja A: 7/1995. Sosiaalipolitiikan laitos. Turun yliopisto. Turku. (Tax/benefits model in the evaluation of social policy.)
- Haataja, A. (1998): Tasaetu, tarveharkinta vai ansioperiaate? Sosiaalipolitiikkamallit, mikrosimulaatio ja työttömien taloudellinen asema. Sarja C Osa 141. Turun yliopisto. Turku.
- Haataja, A. (2000): Ketkä hyötyisivät yhteiverotuksesta ja lapsilisien veronalaisuudesta? Vertailua mikrosimulaatiomenetelmällä. In Eriarvoisuutta paikantamassa. Juhlakirja Kari Salavuon täyttäessä 60 vuotta. Sosiaalipoliittisen yhdistyksen tutkimus 55. Turku. 110-131. (Who would benefit from joint taxation and taxable child allowances. Experiments with microsimulation model.)

Hansen, H. (2000): Elements of Social Security. A comparison covering: Denmark, Sweden, Finland, Austria, Germany, The Netherlands, Great Britain, Canada. The Danish National Institute of Social Research 00:7. Copenhagen.

Harding, A. (1993): Lifetime Income Distribution and Redistribution: applications of a microsimulation model. Contributions to Economic Analysis. Vol 221. North Holland. Amsterdam.

Harding, A. (1994): Income Inequality in Australia from 1982 to 1993: An Assessment of the Impact of Family, Demographic and Labour Force Change. Discussion paper No. 4. November 1994. National Centre of Social and Economic Modelling (NATSEM). University of Canberra.

Harding, A. (1996a) (ed.): Microsimulation and Public Policy. Selected papers from the IARIW Special Conference on Microsimulation and Public Policy Canberra, 5-9 December 1993. Contribution to Economic Analysis 232. Elsevier. Amsterdam.

Heikkilä, M. & Karjalainen, T. & Lihr, S. & Niinivaara, R. (1980): Perhekustannusten tasausjärjestelmä Suomessa. Lutama-projektin loppuraportti. Sosiaalihuollituksen julkaisuja 4:1980. Helsinki. (The system of levelling the costs of children in Finland.)

Helin, H & Hyypiä, M. & Jantunen, R. (1994): Valtio vai kaupunki helsinkiläisen kukkarolla? Helsingin kaupungin tietokeskuksen keskustelunaloitteita 1994:2. Helsinki. (The state or the city on the pocket of the citizens of Helsinki.)

Helin, H & Hyypiä, M. & Jantunen, R. (1996): Vero vai maksu? Verojen ja keskeisimpien maksujen vaikutus esimerkkiperheiden tuloihin 1996 suurissa kaupungeissa. Helsingin kaupungin tietokeskuksen keskustelunaloitteita 1996:2. Helsinki. (A tax or a fee. The effect of taxes and fees on the incomes of case families in big cities in 1996.)

Helin, H. & Jantunen, R. (1997): Kallis, kalliimpi, kotikaupunki. Verojen ja asumisen maksujen vaikutus esimerkkiperheen tuloihin 1997 suurissa kaupungeissa. Helsingin kaupungin tietokeskuksen keskustelunaloitteita 1997:1. Helsinki. (Expensive, more expensive, home town. The effect of taxes and housing costs on the incomes of case families in big cities in 1996.)

Hernes, H. M. (1987): Welfare State and Women Power. Essays in State Feminism. Norwegian University Press. Oslo.

Hiilamo, H. (1994): Lapsiperheiden tulot ovat laskeneet neljässä vuodessa jopa viidenneksellä. In Lapsiraportti. Mannerheimin lastensuojeluliitto. Helsinki. 67-77. (Incomes of families with children have dropped even by 20 percent in four years.)

Hiilamo, H. (1998): Taloudellinen ahdinko kasautuu työttömien perheisiin. Lapsen Maailma 57(1998):10. 22-25. (Families suffering from unemployment have the gravest economic problems.)

Hiilamo, H. (2000a): Suomen perhepoliittisen linjan kehittyminen vuosina 1990-1999. Sarja A:10/1999. Sosiaalipolitiikan laitos. Turun yliopisto. Turku. (The development of family policy in Finland 1990-1999.)

Hiilamo, H. (2000b): Perhepolitiikka mikrotasolla 1991-1999. Yhteiskuntapolitiikka 65(2000):6. 502-519. (Family policy at microlevel 1991-1999).

Hiilamo, H. (2000c): Lapsiperheet menettivät 1990-luvulla. Perhetuet heikkenevät edelleen indeksitarkistusten jäädettämisen vuoksi. Lapsen Maailma(2000)10. 32-34. (Incomes for families with children decreased during the 1990s.)

Hinta- ja palkkatiedote (1993): 1990-luvun ansiokehitys. Tilastokeskus. Helsinki. Hinta- ja palkkatiedote (1993):6. 5-7. (Income development in the 1990s.)

Honkanen, P. (1995): Julkinen sektori. Hanki ja jää. Hämeenlinna. (The public sector.)

Hyypiä, M. & Jantunen, R. (1998): Halpa, halvempi, kotikaupunki. Verojen ja eräiden maksujen vaikutus esimerkkiperheen talouteen 1998 suurissa kaupungeissa. Helsingin kaupungin tietokeskuksen keskustelunaloitteita 1998:3. Helsinki. (Cheap, cheaper, home town. The effect of taxes and housing costs on the incomes of case families in big cities in 1997.)

Hyypiä, M. & Jantunen, R. (1999): Kotikaupunki kuntalaisten kukkarolla. Verojen ja eräiden kunnallisten maksujen vaikutus esimerkkiperheen talouteen 1999 suurissa kaupungeissa. Helsingin kaupungin tietokeskuksen tutkimuskatsauksia 1999:7. Helsinki. (Home town on the pockets of the citizens. The effect of taxes and housing costs on the incomes of case families in big cities in 1999.)

Immervol, H. & Mitton, L. & O'Donoghue, C. & Sutherland, H. (1999): Budgeting for fairness? The distributional effects of three Labour budgets. Microsimulation Unit Research Note 32. March 1999. University of Cambridge. Cambridge.

Jakobsson, G. (1988): Familjer i välfärdsstaten. En undersökning av levnadsförhållanden och deras fördelning bland barnfamiljer i Finland och övriga nordiska länder. Åbo Akademis förlag. Åbo. (Families in welfare state. A study on the standards of living among families with children and the distribution of welfare in Finland and in other Nordic countries.)

Jantunen, R. (1995): Esimerkkiperheiden tuloverotus 1991-1995. Verotietoa 3. Veronmaksajain Keskusliitto. Helsinki. (Income taxation of case families 1991-1995).

Jantunen, R. & Pekonen-Sjöblom, M. (1996): Elinkustannusten sietämätön keveys? Tutkimus kunnallisten verojen ja maksujen vaikutuksista perheiden tuloihin KuntaSuomi 2004 kunnissa. Suomen Kuntaliitto. Helsinki. (The unbearable lightness of living costs? A study of the effects of municipal fees and taxes on the incomes of case families in the municipalities of KuntaSuomi 2004.)

Kalela, J. & Kiander, J. & Kivikuru, U. & Loikkanen, H. A. & Simpura, J. (2001): Down from heavens, up from the ashes. The Finnish economic crisis of the 1990s in the light of economic and social research. VATT Publications 27:6. Helsinki.

Kamerman, S. (1986): Women, Children and Poverty: Public Policies and Female-headed Families in Industrial Countries. In Gelpi, B. & Hartsock N. & Novac, C. & Strober, M. (eds.) Women and Poverty. The University of Chicago Press. Chicago. 41-63.

Kamerman, S. & Kahn, A. (1981): Child Care, Family Benefits and Working Parents. A Study in Comparative Policy. Columbia University Press. New York.

Kangas, O. & Ritakallio, V.-M. (2000): Socialpolitik eller social struktur? Inkomsttransfereringar, sociodemografiska faktorer och fattigdom i Frankrike och de nordiska länderna. Dansk sociologi 11(2000):3. 49-68. (Social policy or social structure. Income transfers, sociodemographical factors and poverty in France and in the Nordic countries.)

Kelan etuudet pätkinänkuoressa (1990): Tunne perusturvasi. Kansaneläkelaitos. Tiedotustoimisto. Kelan Kuntoutustutkimuskeskuksen Kirjapaino. Turku. (A description of social benefits.)

Kelan etuudet pätkinänkuoressa (1991): Tunne perusturvasi. Kansaneläkelaitos. Tiedotustoimisto. Vammalan Kirjapaino. Vammala. (A description of social benefits.)

Kelan etuudet pätkinänkuoressa (1992): Tunne perusturvasi. Kansaneläkelaitos. Tiedotustoimisto. Vammalan Kirjapaino. Vammala. (A description of social benefits.)

Kelan etuudet pätkinänkuoressa (1993): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotustoimisto. Hangon Kirjapaino. Hanko. (A description of social benefits.)

Kelan etuudet pätkinänkuoressa (1994): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Vammalan Kirjapaino. Vammala. (A description of social benefits.)

Kelan etuudet pähkinänkuoressa (1995): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Vammalan Kirjapaino. Vammala. (A description of social benefits.)

Kelan etuudet pähkinänkuoressa (1996): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Jetpoint. Vilppula. (A description of social benefits.)

Kelan etuudet pähkinänkuoressa (1997): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Jetpoint. Vilppula. (A description of social benefits.)

Kelan etuudet pähkinänkuoressa (1998): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Edita. Vantaa. (A description of social benefits.)

Kelan etuudet pähkinänkuoressa (1999): Tunne perusturvasi 1. Kansaneläkelaitos. Tiedotus. Edita. Vantaa. (A description of social benefits.)

Kimmel, J. (1998): Child Care Costs as a Barrier to Employment to Single and Married Mothers. The Review of Economics and Statistics 2(1998). 287-295.

Klevmarken, N. A. (1997): Modelling Behavioral Response in EUROMOD. DAE Working Papers. Number MU9702. Amalgamated Series No. 9720. Department of Applied Economics. The Microsimulation Unit. University of Cambridge. Cambridge.

Korpi, W. (1999): Ojämlikhetens ansikten: Genus, klass och ojämlikhet i olika typer av välfärdsstater. In Välfärdsstat i brytningstid: Historisk-samhällsvetenskapliga studier om genus och klass, ojämlikhet och fattigdom. Sociologisk Forskning: Supplement 1999. 40-92. (The faces of inequality: gender, class and inequalities in different types of welfare states.)

Korpi, W. & Palme, J. (1998): The Paradox of Redistribution and Strategies of Equality: Welfare State Institutions, Inequality, and Poverty in the Western Countries. American Sociological Review 63(1998):5. 661-687.

Kosunen, V. (1997b): Leikkaukset ja kotitalouksien toimeentulo. Esimerkkiperheitä koskeva simulaatiomalliin perustuva analyysi. In Heikkilä, M & Uusitalo, H. (toim.) Leikkausten hinta. Tutkimuksia sosiaaliturvan leikkauksista ja niiden vaikutuksista 1990-luvun Suomessa. Stakesin raportteja 208. Helsinki. 103-134. (Cuts and economic well-being of households. Analysis based on simulation with case families.)

Kurjenoja, J. (2001): Perhetuen kansainvälinen vertailu. Verotietoa 28. Veronmaksajat. Helsinki. (International comparison of family benefits).

Laakkonen, S. (1998a): Kansainvälinen palkkaverotusvertailu 1998. Verotietoa 12. Veronmaksajat. Helsinki. (International comparison of income taxes 1998.)

Laakkonen, S. (1998b): Eläkeverotuksen vuoristorata. Esimerkkilaskelmia eläkkeensaajien tuloverotuksen muutoksista 1991-1999. Verotietoa 14. Veronmaksajat. Helsinki. (The roller coaster of income taxes on pensions. Case family calculations on the changes in the income taxation of pensions 1991-1999.)

Laakkonen, S. & Lehtinen, T. (1997): Kansainvälinen palkkaverotusvertailu 1997. Verotietoa 8. Veronmaksajat. Helsinki. (International comparison of income taxes 1997.)

Lehtinen, T. (1995): Kansainvälinen palkkaverotusvertailu 1995. Verotietoa 2. Veronmaksajat. Helsinki. (International comparison of income taxes 1995.)

Lehtinen, T. (1996): Kansainvälinen palkkaverotusvertailu 1996. Verotietoa 6. Veronmaksajat. Helsinki. (International comparison of income taxes 1996.)

LO (2000): Barnen och jämlikheten. LOs välfärdprojekt. Landorganisationen i Sverige. Stockholm. (Children and equality.)

LO (2001): Information concerning trade union fees supplied by Landsorganisation (LO).

Natsem (1999): National Centre for Social and Economic Modelling. Homepage at [www.natsem.canberra.edu.au](http://www.natsem.canberra.edu.au).

OECD (1991): The Tax/Benefit Position of Average Production Workers 1990. Organization for Economic Co-operation and Development. Paris.

OECD (1992): The Tax/Benefit Position of Average Production Workers 1991. Organization for Economic Co-operation and Development. Paris.

OECD (1993): The Tax/Benefit Position of Average Production Workers 1989-1992. Organization for Economic Co-operation and Development. Paris.

OECD (1997): The OECD Jobs Strategy. Making Work Pay. Taxation, Benefits, Employment and Unemployment. Organization for Economic Co-operation and Development. Paris.

OECD (1998): The Tax/Benefit Position of Employees 1997. 1998 Edition. Organization for Economic Co-operation and Development. Paris.

OECD (1999a): Economic Outlook No. 65. Organization for Economic Co-operation and Development. Paris.

OECD (1999b): The Tax/Benefit Position of Employees 1997. 1999 Edition. Organization for Economic Co-operation and Development. Paris.

OECD (2001a): Purchasing Power Parities for OECD Countries. 1970-2000. Web-site at [www.oecd.org/std/ppp/pps.htm](http://www.oecd.org/std/ppp/pps.htm). 15.3.2001.

OECD (2001b): The Tax/Benefit Position of Employees 1999. 2001 Edition. Organization for Economic Co-operation and Development. Paris.

Olofsson, (1988): "Den stränge fadern och den goda modern": sociologiska perspektiv på den moderna svenska staten. In Himmelstrand, U. & Svensson, S. E. (eds.) Sverige: vardag och struktur. Norstedts. Stockholm. 585-615. (The strict father and the good mother: sociological perspective on the Swedish state.)

Orcutt, G. (1957): A New Type of Socio-economic System. Review of Economics and Statistics 58(1957). 773-797.

Orcutt, G. (1990): From Engineering to Microsimulation. An Autobiographical Reflection. Journal of Economic Behavior and Organization (1990):14. 5-27.

Palme, M. (1994): Income distribution effects of the Swedish 1991 tax reform: an analysis of a microsimulation using generalized Kakwani decomposition. Working paper series in economics and finance. Stockholm.

Parpo, A. (2001): Tulonsiirtojärjestelmän synnyttämät tuloloukut. STAKES raportteja 262. Helsinki. (Income traps created by the income transfer system).

Powell, L. (1998): Part-Time Versus Full-Time Work and Child Care Costs: Evidence for Married Mothers. Applied Economics 30(1998). 503-511.

Redovisar (1995:19): Bostadsbidrag till barnfamiljer m fl. Redovisar 1995:19. Riksförsäkringsverket. Stockholm. (Housing allowance for families with children.)

Riksförsäkringsverket (2000): Socialförsäkringen. Hänt i socialförsäkringen senaste åren. Förändringar i regelsystemen under de senaste 30 åren. [www.rfv.se/socfo/forreg](http://www.rfv.se/socfo/forreg). 7.9.2000. (Social security. Record on changes during the past 30 years.)

Ritakallio, V-M. (2001): The Importance of Housing Costs in Cross-National Comparisons of Welfare (State) Outcomes. Department of Social Policy. Series B:23/2001. University of Turku. Turku.



Rönkko, P. (1992): Perhekustannusten tasauksen arviointi. Sosiaali- ja terveysministeriön kehittämisosaston selvityksiä 1992:2. Helsinki. (Assessing the levelling of the costs of children.)

Sainsbury, D. (2000): Valfärdsutvecklingen för kvinnor och män på 1990-talet. Valfärd och försörjning. Antologi från Kommittén Valfärdsbokslut. Statens Offentliga Utredningar. SOU 2000:40. Stockholm. 87-128. (Development of welfare among men and women during the 1990s.)

SAK-TT (1997): Talouspoliittisen työryhmän raportti. Suomen Ammattijäjestöjen Keskusliitto sekä Teollisuus ja Työnantajat. Marraskuu 1997. (A report from a economic policy team.)

Sallila, S. & Kosunen, V. (1998): Arvailusta arviointiin? Esimerkki staattisen mikrosimulaatiomallin käyttömahdollisuuksista verotuksen ja sosiaaliturvan muutosehdotusten arvioinnissa. Aiheita 25/1998. Stakes. Helsinki. (From guessing to assessing? An example of the uses of static microsimulation model in evaluating tax and social benefit changes.)

SCB (2000b): Statistik årsbok 2000. Statistiska centralyrån. Stockholm. (Statistical yearbook 2000.)

Sjöholm, G. (1996): Flerbarnshushåll hårt drabbade under 90-talet. Hushållsekonomisk fallstudie visar. USD-aktuell. (1996):1.16-23. (Families with many children were hardy hit by the development in the 1990s.)

Sipilä, J. & Korpinen, J. (1998): Cash versus Child Care Services in Finland. Social Policy & Administration 32(1998):3. 263-277.

Social Protection in the Nordic Countries 1998 (2000): Scope, expenditure and financing. Nordic Social-Statistical Committee (NOSOSCO). Copenhagen.

Social Protection in the Nordic Countries 1999 (2001): Scope, expenditure and financing. Nordic Social-Statistical Committee (NOSOSCO). Copenhagen.

SOU (2000:3): Valfärd vid vägsäl. Kommittén Valfärdsbokslut -- Delbokslutet. Statens Offentliga Utredningar. Stockholm. (Welfare at a turning point. Preliminary report by the Balance Sheet for Welfare of the 1990s.)

SOU (2000:40): Valfärd och försörjning. Antologi från Kommittén Valfärdsbokslut. Statens Offentliga Utredningar. Stockholm. (Welfare and social care. The Balance Sheet for Welfare of the 1990s.)

Sutherland, H. (1995): Static Microsimulation Models in Europe: A Survey. DAE Working Papers. Number MU 9503. Amalgamated Series No. 9523. Microsimulation Unit. Department of Applied Economics. University of Cambridge. Cambridge.

STATUS (1998): STATUS. Användarhandledning. Statistiska centralbyrån. Stockholm. (STATUS. User instructions.)

Tilastokeskus (2000): Suomen tilastollinen vuosikirja 2000. Tilastokeskus. Helsinki. (Statistical yearbook of Finland.)

Toimeentulotuki (1997): Toimeentulotuki Britanniassa, Hollannissa ja Suomessa. Vertaileva tutkimus maiden vähimmäisturvajärjestelmistä. Suomen Kuntaliitto. Helsinki. (Social assistance in Britain, the Netherlands and Finland. A comparative study on the basic security arrangements in different countries.)

Troedsson, I. (2000): Frigör familjen. Timbro. Stockholm. (Emancipate the family.)

TT (1995): Työtä vai kansalaispalkkaa. Selvitys sosiaaliturvan ja verotuksen kannustinloukuista sekä ehdotukset ongelmien poistamiseksi. Teollisuuden ja työnantajan keskusliitto. Maaliskuu 1995. (A job or income transfers. A report on income traps created by social security and taxation together with propositions for solving the problems.)

Virén, M. (1994): Kannattaako työnteko? Laskelmia verotuksen ja sosiaalietujen vaikutuksesta kotitalouksien käytettävissä oleviin tuloihin. Kansantaloustieteellinen aikakauskirja 90(1994):4. 440-457. (Does work pay off? Calculations concerning the effects of tax/benefits system on disposable income).

Vuokratilasto (2000): Vuokratilasto. Tilastokeskus. Helsinki. (Statistics on rents.)

Vuornos, M. (1971): Lapsen asema Suomessa. WSOY. Porvoo. (The position of a child in Finland.)

### Unpublished sources

Akava (1995): Toimeentulon muutoksia 1991-1995. Moniste Akavan tutkimusyksikön (Saariaho, Immeli, Knuuttila) esimerkkilaskelmista. Tarkistettu 16.1.1995. Julkaisematon muistio. (A memorandum concerning the changes in the economic position of families 1991-1995.)

Akava (1996): Toimeentulon muutoksia 1995-1997. Moniste Akavan tutkimusyksikön (Saariaho, Immeli, Knuuttila) esimerkkilaskelmista. Päivätty 16.4.1996. Julkaisematon muistio. (A memorandum concerning the changes in the economic position of families 1995-1997.)

Akava (1997): Nettopalkkojen muutoksia 1997-1999. Moniste Akavan tutkimusyksikön laskelmista. Päivätty 16.12.1997. Katso myös [www.akava.fi/](http://www.akava.fi/) (A memorandum concerning the changes in the net wages 1997-1999.)

Hedlund, B. (2001): Email correspondence with Bodil Hedlund, the developer of STATUS, a simulation model from Statics Sweden.

Hiilamo (2002): Family policy models and family policy outcomes – a Nordic perspective. A manuscript for a LIS working paper.

Kurjenoja, J. (2000): Tuloverojen osuus veronalaisesta tulosta 1991-2001. Veronmaksajat ry:n laatima laskelma palkansaajien tuloverotuksen kehityksestä eri tulotasoilla. 23.8.2000. Julkaisematon muistio. (A memorandum concerning the share income tax of taxable income 1991-2001.)

Laakkonen, S. (1997): Esimerkkilaskelmia palkansaajien tuloverotuksen muutoksista 1991-1999. 26.11.1997. Veronmaksajat. Julkaisematon muistio. (A memorandum concerning the changes in income taxation of case families 1991-1999.)

Lindberg, I. (2001): Den nya familjens tid. Manus 3b. (The new family. A manuscript.)

LO (2001): Information concerning trade union fees supplied by Landsorganisation (LO).

Nordea (2001): Perhe-elämää Suomessa ja Ruotsissa. Miksi eläminen maksaa enemmän Helsingissä kuin Uumajassa. Moniste. Yksityisasiakkaan talous 30.3.2001. (Family life in Finland and Sweden. Why the costs of living are higher in Helsinki than in Uumaja.)

Pentti, H. (1999): SAK:n talouspoliittisen sihteerin Helena Pentin itse laatimiaan esimerkkiperhelaskelmia koskeva kirje. 10.11.1999. (A letter from Helena Pentti concerning her case family calculations.)

Riihimäki E. (1999): Veronmaksajien esimerkkiperheiden taustaoletuksia. Veronmaksajat 2.12.1999. Julkaisematon muistio. (A memorandum concerning basic assumptions of case family calculations.)

Riihimäki E. & Autio, S. (1999): Veronmaksajien esimerkkiperheiden taustaoletuksia. Veronmaksajat 3.8.1999. Julkaisematon muistio. (A memorandum concerning basic assumptions of case family calculations.)

SAK (1993): Palkansaajien verotus 1994. 25.5.1993. SAK:n talouspoliittisen yksikön/HP:n laatima moniste. (Income taxation of employees 1994.)

SAK (1994): Hallituksen budjettiesitys 1995: verotus. 25.8.1994. SAK:n talouspoliittisen yksikön/HP:n laatima moniste. (A proposal for the state budget of 1995: taxation.)

SAK (1997): SAK:laisen perheen nettotulojen muutos. 1.11.1997. Moniste SAK:n esimerkkiperhelaskelmista. (Changes in the net income of a family belonging to blue collar workers labour union.)

Tulot- ja vähennykset (1999): Tulot- ja vähennykset 3/1999. Kansaneläkelaitoksen etuusohjeet 2. Julkaisematon moniste. (Incomes and exemptions. Instructions concerning social benefits.)