

Female Employment and Family Formation in National Institutional Contexts (FENICs)

Final report to the European Commission

Project website: <http://www.warwick.ac.uk/ier/fenics>

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Structure of the final report

This report is structured in eight sections (plus an abstract designed to be placed on the Key Action website). Information on the outputs is shown in four annexes.

Abstract

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Abstract

The project had the following objectives:

- to examine the institutional context surrounding the processes of family formation, female employment patterns, opportunities at work and access to welfare across EU member states;
- to analyse the impact of historically patterned institutional structures on women's decisions in the areas of education, work and the family;
- to identify cross-national differences and similarities in demographic trends, focusing on non-traditional forms of living arrangements and transitions to social independence;
- to quantify the impact of change in the early stages of family formation on female transitions to work as a means of tracking converging or differentiating processes in European societies over the past 20 years.

From a methodological perspective, the project included:

- secondary analysis of European databases, including the European Community Household Panel (ECHP), Fertility and Family Survey (FFS) and the EU Labour Force Survey, to develop an explicit comparative research design;
- establishment of a detailed database cross-classifying information on demographic, family and education with employment characteristics;
- estimation of multivariate models relating variables such as time, cohort, age, education, age at first birth and number of children with the household and/or work situation;

A number of important policy relevant findings emerged:

- despite their variety and complexity, it does appear to be the case that the different institutional contexts are consistent with changes in the relationship between family formation and female labour supply as observed over the period 1992-1999. In other words, the various arrangements put in place to support motherhood and employment, many of which reflect traditional attitudes to women's work that are now no longer appropriate in the pan European labour market, do play a significant part in facilitating work and/or family life;
- significant changes in partnership formation are underway, specifically the formation of cohabitation arrangements between couples prior to and (in some countries) in place of marriage. A key finding is that cohabitation is indeed 'contagious' and that the shape of this influence varies across countries reflecting their institutional contexts and their phase along the diffusion process in the various countries studied (Germany (West and East Länder), Sweden, France, Italy and Spain). The policy implications are clear – countries should review the extent to which their family welfare policies discriminate in favour or against those couples who are legally married as opposed to those who choose to cohabit;

- policy makers need to be aware of the scale and diversity of recent changes in fertility. Some countries are likely to experience prolonged periods when population growth will be well below replacement levels. The impact of these trends in fertility, in terms of the demands for childcare, education and the availability of a more highly educated female workforce, are likely to continue to be felt over the next 10 to 20 years;
- major differences are observed between countries in terms of the economic impact of motherhood, not apparently linked to varying welfare regimes but to differences in labour market structures. Notable in this respect is the ‘family gap in pay’, the lower earnings of women which associates directly with motherhood. This gap is at its widest in the United Kingdom and Germany. Detailed investigation shows that it appears to associate with changes in working arrangements and occupational segmentation.

1. Executive summary

The aims and objectives of the project

The FENICs project was designed to analyse and shed light upon the connection between different processes in the core of family and employment relationships. These include: the transformation of family formation patterns, the pluralisation of patterns of transition from school to work, the multiplication of alternative living arrangements on the one hand, and the perceptions of a rising need for flexibility within the labour market and associated polarisation processes on the other. The approaches taken examined both the consequences of family formation on female labour supply and employment structure, and the feedbacks of work status on the dynamic of family formation.

The project examined the institutional context surrounding the processes of family formation, female employment, opportunities for paid work and access to related welfare provision across EU member states. The 'institutional context' refers to the body of rules and regulations, the nature of tax and benefit regimes and the provision of services associated with childcare, early years education, parental support and working time arrangements in different member states. The varying nature of the institutional contexts surrounding female employment and family formation and their interaction with these processes defined the scope of this research.

At its broadest level, the research sought to analyse the impact of historically patterned institutional structures on women's decisions in the areas of education, work and the family. The research teams identified cross-national differences and similarities in demographic trends, focusing on non-traditional forms of living arrangements and transitions to social independence and quantified the impact of change in the early stages of family formation on female transitions to work as a means of tracking converging or differentiating processes in European societies over the past 20 years.

The work programmes associated with these aims had five main points of focus. These were:

- To provide a picture of the cross-national differences and/or convergences in the demographic trends. Here the research would focus upon the rising rates of participation of women in the labour market and the associated decline in fertility.
- On the basis of the information revealed in via such a study, the research would investigate and seek to identify the connections between processes of family formation (or dissolution), employment situation and social integration. The intention was to contribute to knowledge about the relationship between welfare state policies, patterns of family building and female professional integration.

- To study, within a comparative framework, the link between family formation and the enrolment into education. The relationship between education and family formation remains a relatively under explored area.
- To study the possible links between interruptions in female labour force participation and consequences in terms of social exclusion.
- Last, but by no means least, to focus on and reveal the role of institutions in the different national contexts, as they facilitate, mediate or constrain the relationship between employment and family formation.

Methods

The general methodological approach adopted within the project was based upon secondary analysis of large cross-sectional and longitudinal European surveys, including the European Community Household Panel (ECHP), the UN Fertility and Family Survey (FFS) and the EU Labour Force Survey (EULFS). The multi-disciplinary teams include demographers, sociologists and economists, all of whom shared access to these detailed resources and pooled skills and knowledge to:

1. create a detailed database from the EU Labour Force Survey, cross-classifying information on demographic, family and education with employment characteristics;
2. identify a number of sub-projects as a means of sharing skills, following four steps: identification of key issues, data exploration, testing of hypotheses and development of policy implications;
3. estimate multivariate models relating variables such as time, cohort, age, education, age a first birth and number of children with the household and/or work situation.

Sub-projects established within the overall collaborative framework investigated trends in fertility and family formation (Barcelona team), the relationship between the institutional context, employment, hours worked and family structure (Nanterre team), occupational segmentation and hours worked (Erlangen/Nurnberg team), the changing institutional context (Utrecht team), the dynamics of employment around childbirth (Utrecht team), the diffusion of cohabitation (Bamberg team) and the impact of family formation on earnings (Warwick team).

The project commenced in February 2000 and was completed at the end of January 2003.

Policy-relevant findings

Institutional structures and the reconciliation of family life and female employment

Detailed investigation has shown that the links between institutional structures designed to reconcile paid work and family life are complex and varied. Perhaps the best-known work that has sought to characterise the different welfare regimes across the European Union is that of Esping-Andersen (1990, 1999, 2001). When the characteristics of the different institutions that, to a greater or lesser extent, support the combination of motherhood and paid work, were categorized according to leave and working-time arrangements, the tax system and childcare facilities, it was found that the traditional way of grouping countries according to Esping-Andersen's typology no longer looks appropriate if welfare regimes relating to women's employment and family life are taken into account. Some of the continental countries, especially Belgium and France, appear to deviate from the 'conservative' path in this respect due to the erosion of the 'male breadwinner' role of welfare support and the development of a wide variety of working patterns, which now places these regimes under scrutiny in terms of their ability to foster women's careers and to alleviate family poverty.

Despite their variety and complexity, the potential impact of the different institutional contexts does not appear to be wholly consistent with changes in the relationship between family formation and female labour supply, as observed over the period 1992–99. It is argued that the dividing lines between what are characterised as different regime types will fade through time. This reflects the fact that in all countries there has been a significant rise in female labour force participation, increasing flexibilisation of labour, a declining fertility rate and a movement away from the 'male breadwinner' model of household economic support. In all countries, leave arrangements have been developed or extended, and many states have invested heavily in publicly funded child-care facilities. Nonetheless, the historical legacy of the institutional regimes and the extent to which these reflect historically-rooted social and cultural differences between countries must be taken into account when developing EU-wide policies to assist both men and women in reconciling the demands of paid work and family life.

Marriage delay

Marital unions are increasingly being postponed by younger generations of women in the countries analysed, to an extent that goes beyond the effects produced by educational expansion or by increased labour force participation. This progressive postponement appears to go hand in hand with an increased degree of uncertainty in the life course (decreased life course predictability) and with rising difficulties in accessing and establishing a secure position in the labour market. In other words, the policy of labour market flexibilisation and policies fostering family and fertility appear to conflict. Indeed, increasing uncertainty brought about by flexibilisation translates into a delay in

partnership formation, which in turn leads to the postponement of subsequent transitions, like childbirth. This highlights the increasing demand for and potential advantages of less structured forms of unions like cohabitation, which may help young people to bridge the longer periods required to reach autonomy while allowing partnership formation to develop.

Cohabitation

In line with the decline in marital unions, significant changes in partnership formation are underway, specifically the formation of cohabitation arrangements between couples prior to and, sometimes, in place of marriage. What was previously thought to be a transient state between living in the parental home and living independently as a married couple is increasingly becoming the preferred and dominant state of partnership in certain European countries.

Through a detailed investigation of survey data describing the fertility and partnership histories of women in a number of European countries (Germany (West and East *Länder*), Sweden, France, Italy and Spain), it is shown that the move towards cohabitation among younger couples is driven by powerful diffusion mechanisms (the extent of peer group adoption of this type of living arrangement in its early phase, and intergenerational mechanisms at the later stage). For these reasons, the development and spread of cohabitation arrangements can be regarded as 'contagious', although the shape of this influence varies across countries, reflecting the institutional contexts in the countries studied and their phase along the diffusion process.

The policy implications of this remarkable and significant trend are clear: countries need to review the extent to which their family welfare policies discriminate in favour or against those couples who are legally married as opposed to those who choose to cohabit.

Trends in fertility

A detailed study of trends in fertility by birth parity reveals three main findings. Firstly, the differences in total fertility levels across countries are mainly accounted by the variations at parity three (birth rates for the third child). Secondly, there is a growing group of countries in which the level of childlessness is increasing to exceptionally high levels, with more than 20 per cent of women ending their childbearing years without having had a child. Finally, looking at the variation in total fertility for the recent period, the first two parities account for more than 50 per cent of the observed variation. In other words, differences in total fertility between countries are due mainly to differences in fertility at parity 3, but variations through time are dominated by what happen at parity 1 and 2.

Childlessness is becoming a major social issue, as surveys which include questions about desired fertility generally show that most women want to have

at least one child, or the proportion of women who want to stay childless is much lower than that which is observed. If we couple this with the observation that the recent variation in total period fertility is dominated by variation at parity one and two, this suggests that there is a clear need for strong social policies that help women to achieve their desire to have at least one child.

The main transitions of family formation (i.e. leaving home, forming a first partnership and having a first child) in Italy and Spain are highly connected. This fact reflects the importance of the so-called “family solidarity model” in these countries. Young adults remain in the parental home until they have accumulated sufficient resources to form an independent household, and they enter a new partnership soon after leaving the parental home. This family formation model, characteristic of Southern European countries, implies a long delay before entry into the first union and birth of the first child. Both aspects negatively affect fertility, because the long delay finally entails lower fertility rates and higher rates of unintended childlessness. Women in other central and Nordic European countries spend more time in between family transitions, partly because they can more easily form an independent household, and because there is a lower cost attached to motherhood in more “women friendly” welfare state regimes.

In Southern European countries it was also shown that women without a job have a higher likelihood of having a first child than women in employment. However, accumulated job experience slowly increases women’s chances of entering motherhood. This implies that, in countries with low female participation and high level of temporary contracts, as it is particularly the Spanish case, labour market uncertainty may play an important role in family decisions such as leaving the parental home, partnership formation and fertility decisions.

Human capital investment and family formation

The process of acquiring education is likened by economists to investment – as addition to the capital stock, termed human capital. With the general rise in women’s educational participation, there has been a significant increase in women’s investment in human capital in recent years in all EU countries. However, investigation shows that more prolonged education does not have the same impact on women’s behaviour in different countries with regard to other behaviour and outcomes that theory predicts should relate to these human capital investments, namely partnership, fertility and family formation.

Policy makers need to be aware of the scale and diversity of changes in fertility: some countries are likely to experience prolonged periods when population growth will be well below replacement levels. The impact of these trends in fertility, in terms of the demands for childcare, education and the availability of a more highly educated female workforce, are likely to continue to be felt over the next 10 to 20 years.

Educational attainment implies in most countries both a delay in motherhood and higher rates of childlessness. If this behaviour relates to different fertility orientations by educational groups, we could claim that there is no strong policy issue here. However, this does not appear to be the case. The fact is that most women, particularly those with a high level of education, must combine highly demanding occupational careers with long and inflexible working hours with family responsibilities. This places demands not just on the childcare system but also on the employer to encourage more 'family-friendly' ways of working. While there has been much discussion about the need to achieve such a goal via voluntary measures, competitive pressures on employing organisations mean that such measures will require a legal framework if they are to be implemented on a universal basis.

The economic impact of motherhood

Major differences are observed between countries in terms of the economic impact of motherhood, measured in this study as the difference in the hourly earnings of women with and without children.

The 'family gap in pay', the lower earnings of women which associates directly with motherhood, is found to be at its widest in the United Kingdom and Germany, where it cannot be attributed to differences, either observed or unobserved, between women who have children and those who do not. It appears to associate with the nature of working time arrangements for women with children and to the process of occupational segmentation. This finding suggests that careful consideration should be given to policies designed to induce higher rates of labour force participation among mothers. If the institutional context fails to support access to internal labour markets at and around the time of the birth of children, women may experience a significant and long-lasting economic penalty.

Gender segmentation

Gender specific occupational segregation is often regarded as one important cause of the status and income gap between the sexes and a concomitant of various other disadvantages which women experience in the working place. On the basis of the undertaken analyses in the FENICs project, we summarise the following policy related recommendations:

Firstly, the empirical analysis has clearly supported our theoretically founded perspective, that sex specific occupational segregation should be conceived as a multi-dimensional phenomenon. We differentiate between three dimensions of segregation ("sex typing of occupations", "occupational chances" and "sex specific inequalities"). For the measurement of these distinct dimensions, numerous traditional indices of segregation are already available. From this perspective, the search for the 'best' index for measuring segregation loses its importance. From this multi-dimensional perspective,

the surprising relationship between the extent of occupational segregation and high female employment rates becomes explainable. The different aspects of “segregation” are connected in various ways with measures of equality. For example, in the Nordic countries, measures of segregation show high values, whereas the status gap between the sexes shows that these countries are the most egalitarian ones. As a consequence, the use of only one single number index for the purpose of evaluation and for political recommendations concerning occupational segregation should be avoided.

A second recommendation relates to the pitfalls of the occupational classification systems. The transformation of country-specific occupational classifications into the ISCO88¹ classification should be improved because, in some countries and for certain time points, the resulting mapping merely fulfils minimum standards of validity and reliability. Furthermore, the occupational classification should be much more differentiated in specific sectors and occupations. For instance in the service sector, where many new occupations have arisen, jobs are only categorised into a few wide and heterogeneous groups. In addition, given that this sector is a female-dominated sector, the changing labour market conditions of women are not sufficiently represented by the traditional classifications.

Relationship between Part-time work and Occupational Segregation

Research undertaken by the Erlangen/Nurnberg team shows that part/marginal-time work is not the sole or the main reason for segregation between the sexes. The significance of part/marginal-time work for the amount of segregation is highly influenced by other variables, like country specific contexts and characteristics of the employees, such as age and qualification. Much more important than differences in the amount of segregation is the fact that the average status of women varies systematically between different working-time groups. Flexible working time arrangements allow women to enter into paid work but only rarely provide them with an income sustaining financial independence. Therefore, when creating flexible employment opportunities, more attention should be paid to the “quality” of these jobs, i.e. access to social security, other employment-related benefits and income.

The extent of occupational segregation is mediated by the existence of children. The age of the children and the existence of a partner play a major role for women’s chances to work in occupations that are comparable to the average occupations of men. In this context, it is important to point out that this is not so much a women’s but also a men’s or better a “parents’ ” issue. Therefore, all EU Member States should encourage the development of quality flexible working time arrangements and the adoption of care responsibilities by men.

¹ International Standard Classification of Occupations, 1988.

General

Our findings have important policy implications. They demonstrate that no universal process of labour market “flexibilisation” can be relied upon to explain the overall increase in female employment during the nineties. Despite a convergent trend towards an accrued participation of women in the labour market, countries have followed different paths. They imply different modes of intervention in the labour market and family nexus, different success in the balance between these two areas, and lead to different stratification in female labour force according to household characteristics. A positive reading of this is that efficiency of public policies is demonstrated as countries are found to display different patterns of female labour market behaviour – and more or less conflicting with fertility decisions – despite rather comparable labour market organisation. A consequence is that specific problems can be identified and should induce differences in the priorities settled by public authorities. Thus, universal labour market policy prescriptions must be avoided to exclude counterproductive effects. For example, the main issue in ‘conservative’ countries – i.e. Germany, Spain and Italy – is to prevent the risk of further polarisation between female (full-time) employment and fertility by sustaining further the access of women to ‘internal’ labour markets. Expanding part-time work in low skilled sectors (such as low paid service sector) would on the contrary encourage women to bear most of the burden of labour market segmentation. In the United Kingdom, the problem is not so much establishing access to the labour market but finding the appropriate mechanisms to ensure mothers have the possibility to retain their pre-motherhood labour market status.

The challenge facing the EU relates directly to the one of the targets set at the Lisbon Summit – an increase in female labour force participation from 51 per cent in 2000 to 60 per cent by 2010. The research conducted within this project has shown clearly how the different institutional contexts in member states have a profound yet complex impact upon the transitions young women make as they progress through the educational system, in leaving the parental home, in partnership formation, family building and in the ways in which paid work and family life are subsequently combined. In some countries (e.g. Spain, Italy, Germany), the goal of achieving further increases in labour force participation will require that careful consideration should be given to the access that women have to ‘internal’ labour markets. In the Southern European countries, the level of fertility is dropping so low that serious concerns are emerging relating to the issue of involuntary childlessness. Again, the problem appears complex and relates not just to the institutional setting (though this is undoubtedly important), but also to the relationship between labour market ‘risk’ and the operation of the housing market. In other countries (e.g. the UK), the growth of low-paid part-time jobs in the service sector may be assisted by measures to increase labour force participation among mothers with young children. The problem then becomes one of ensuring that this does not create a ‘career-trap’, in which women with children find themselves working in jobs that under utilise their education and previous work experience. Thus policies should not only aim at encouraging

women to increase their participation in paid work – by providing subsidised child care facilities and by strengthening policies to retain their attachment to internal labour markets –, but also to restrain the development of low paid (part-time) jobs especially in the service sector.

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Outputs

The national teams have published a number of working papers that are available on the project website.

Warwick

1. *The Determinants of Early Motherhood*. Gaëlle Pierre (2001)
2. *The Family Gap in Pay: longitudinal evidence from Germany and the UK*. Gaëlle Pierre (2001)
3. *Paid Employment around Periods of Family Formation: European comparisons*. Rhys Davies (2002)

Barcelona

1. *Family Formation across European Countries: the 1955–64 female cohort*, Papers de Treball 1. María José González (2002)
2. *Women's Entry into Motherhood in France, Sweden, East and West Germany, Spain and Italy*, Papers de Treball 2. María José González (2002)
3. *Trends in Fertility by Parity in Europe*, Papers de Treball 3. Daniel Devolder (2002)

Bielefeld

1. *The Diffusion of Cohabitation among Young Women in West Germany, East Germany and Italy*. Tiziana Nazio and Hans-Peter Blossfeld (2000).
2. *Globalization, Social Inequality and the Role of Country-specific Institutions. Open research questions in a learning society*. Hans-Peter Blossfeld (2000)
3. *A Causal Approach to Interrelated Family Events: a cross-national comparison of cohabitation, nonmarital conception, and marriage*. Hans-Peter Blossfeld with Melinda Mills (2000)
4. *Globalisation and the Transition to Adulthood in Italy*. Tiziana Nazio with Fabrizio Bernardi (2001)

Erlangen/Nurnberg

1. *Sex-specific Occupational Segregation in Different Labour Market Sectors*, I. Stefanie Steinmetz and Johann Handl (2001)
2. *The Measurement of Segregation: evaluations of different indices and classifications*, II. Stefanie Steinmetz, Frank Hedler, Johann Handl (2001)
3. *Part-time Work – improvement or impasse for women?* III. Stefanie Steinmetz, Frank Hedler, Johann Handl (2002)

4. *The Reconciliation of Work and Family Life – implications of motherhood on female labour market positioning*, IV. Frank Hedler, Stefanie Steinmetz and Johann Handl (2002)

Nanterre

1. *Patterns of family and Employment Combination in Europe: results from an analysis of the Labour Force Survey for the 1992–1999 period*. Olivier Thévenon, Jacques Zighera and Gerard Maubuleau (2001)
2. *Minimisation of Discrimination Information as a Tool for the Analysis of Massive Surveys – loglinear and logit modelling revisited*. Jacques Zighera (2001)

Utrecht

1. *Increases in Female Labour Supply: less children or less effect of children*, U-2001/1. Jan Dirk Vlasblom and Joop J. Schippers (2001)
2. *Employment patterns around childbirth*, U-2002/1. Jan Dirk Vlasblom and Joop J. Schippers (2002)
3. *Dynamics of Female Employment around Childbirth*, U-2003/1. Jan Dirk Vlasblom and Joop J. Schippers (2003)
4. *Increases in Female Labour Force Participation in Europe: are there common causes?* U-2003/2. Jan Dirk Vlasblom and Joop J. Schippers (2003)
5. *Institutional Arrangements Facilitating the Combination of Paid Work and Childcare: a comparison*. Ivy Koopmans (2001)

2. Background and objectives of the project

2.1 The original objectives

The FENICs project was designed to analyse and shed light upon the connection between different processes in the core of family and employment relationships. These include: the transformation of family formation patterns, the pluralisation of patterns of transition from school to work, the multiplication of alternative living arrangements on the one hand, and the perceptions of a rising need for flexibility within the labour market and associated polarisation processes on the other. The approaches taken examined both the consequences of family formation on female labour supply and employment structure, and the feedbacks of work status on the dynamic of family formation.

The work programmes associated with these aims had five main points of focus. These were:

- To provide a picture of the cross-national differences and/or convergences in the demographic trends. Here the research would focus upon the rising rates of participation of women in the labour market and the associated decline in fertility.
- On the basis of the information revealed in 1. above, the research would investigate and seek to identify the connections between processes of family formation (or dissolution), employment situation and social integration. The intention was to contribute to knowledge about the relationship between welfare state policies, patterns of family building and female professional integration.
- To study, within a comparative framework, the link between family formation and the enrolment into educational, apprenticeships or training schemes. The relationship between education, training and family formation remains a relatively under explored area.
- To study the possible links between interruptions in female labour force participation and consequences in terms of social exclusion.
- To focus on and reveal the role of institutions in the different national contexts, as they facilitate, mediate or constrain the relationship between employment and family formation.

The project was designed to take advantage of the recent availability of a number of new multinational comparative data sets, providing detailed information on processes of education and family formation and patterns of employment. These include the EU Labour Force Surveys, the UN Family and Fertility Surveys, the European Community Household Panel Survey and various national panel datasets which had been placed into a comparative format. No new data collection was envisaged.

2.2 Re-orientation of original objectives

Three teams (Nanterre, Warwick and Barcelona) experienced significant deviations from the original work plan. In this section we outline why these deviations arose and how they led to a refocusing of the research aims within these teams.

For Nanterre and, less directly, for all of the teams, the sudden and unexpected death of the co-ordinator, Professor Jacques Zighera at a point half way through the research programme was a huge blow. Professor Zighera had been the motivating force behind the design of the project, bringing the necessary research teams together to achieve the project's ambitious targets. The loss of Professor Zighera's unparalleled knowledge about the EU Labour Force Survey, together with his abilities to motivate and enthuse researchers, was a severe loss not just to the Nanterre team but to the project as a whole.

In the six month period following Professor Zighera's death, work continued without a project co-ordinator. In consultation with the European Commission, the University of Paris X (Nanterre) was advised that they were legally responsible for the continuation of project co-ordination and that, in executing this responsibility, they could invite another team member to take on the task of scientific coordination. Accordingly, six months after the death of Professor Zighera, Professor Elias (leader of the Warwick team) was invited to assume the role of scientific project co-ordination for. Administrative and contractual responsibilities remained with Nanterre. No additional resources were available to the Warwick team for the task of scientific co-ordination, due to the fact that Professor Zighera's time had been given freely to the project by the University of Paris X (Nanterre).

For Warwick, some re-orientation arose in the light of data availability. One of the stated aims of the Warwick team was to explore possible links between interruptions in female labour force participation and consequences in terms of social exclusion. The intention was that the Fertility and Family Surveys would be used to trace the occupational histories of cohorts of women as they pass through periods of family formation. Using occupation as a proxy for economic status, Warwick planned to define occupational groups which would allow us to examine the process of social exclusion for those who moved into, out of or remained within the lowest status groups. Examination of the coding of employment histories within the FSS revealed that the information was insufficiently detailed to facilitate this approach.

Consequently, the Warwick team moved the focus of its work to the ECHP and national panel data sources. Peter Elias had been involved in separate work with Eurostat to derive a draft social classification based upon ISCO88 (COM). The intention was to use this work to delineate a small set of social

categories that could be applied to ECHP data from the EU countries and would act as a proxy for earning opportunities associated with different types of work. However, a descriptive analysis of female employment around periods of family formation utilising employment history data from the ECHP indicated that available sample sizes were insufficient to study occupational mobility surrounding periods of family formation. The research team therefore decided to consider the employment consequences of motherhood through an analysis of earnings. This approach was illuminating and has provided some fruitful results, but did not provide the long-term perspective on social exclusion and motherhood we had originally hoped for when designing the project.

For Barcelona, a change in key personnel at the beginning of the project led to a revision of the objectives of the team. The title of the original research plan was: 'Changing patterns of family formation and dissolution: the new risks of social exclusion'. The main objective was to address the following two points:

1. First, to measure and explain the differences between groups of young adults in: age at leaving the parental home, age at entering a partnership and entering an independent household, comparing Southern European and Central or Northern European countries.
2. Second, to assess the impact of marital breakdown on the risk of spouse's employment and therefore social exclusion.

Due to a change in team leadership in June 2000, the Barcelona team dropped the second point and replaced it with a plan for the measurement and explanation of the differences in fertility behaviour, centring their analysis on the study of first, second, third and four births for women across Western European countries. The rationale for this change was in part due to the fact that the previous Barcelona team leader (Montserrat Solsona) is an expert on divorce, whereas the new team leader (Daniel Devolder) is a specialist on fertility. Another reason was the fact that it was difficult to find a unique and comparable dataset for various European countries, which would allow them to study the early, and the final stage of family formation, following the same individuals. In addition, it was evident that family formation and dissolution pertain to different fields of study, and have disjoint sets of determinants. On the contrary there are common determinants between early stage of family formation (leaving the parental home and forming a partnership) and fertility behaviour; the events are much closer in time.

The aims of the modified Barcelona research project were to assess the importance of the determinants of family formation, including immediate previous events like leaving the parental home and forming a first partnership and family events related to childbearing. To meet those aims, and partly in response to feedback received from other teams, the research plan for the Barcelona team was restructured into three main lines of investigation:

1. Review and assessment of the recent trends in period fertility by parity (i.e. different birth order) in selected countries of the European Union.

2. Measurement of the intensity (i.e. the number of individuals who experience certain family events) and tempo (i.e. the age at which most individuals tend to experience certain family events) of different transitions in the first stage of the family formation from a longitudinal perspective. This analysis, which was mainly descriptive, took also into account the effect that women's educational attainments have on the family formation process across countries.
3. Study of the determinants of family events around the first stage of the family formation using multivariate methods.

3. Scientific description of the project results and methodology

3.1 Developing research methods and resources

We knew at the outset that the research aims would present us with significant methodological challenges. While this was undoubtedly the case, we are pleased to report that we surmounted all such challenges and gained much useful experience with and insight into the use of large and complex multi-country harmonised data sources for empirical research.

The research methods we proposed were based upon a quantitative research design and were structured to take advantage of the development of significant large-scale survey resources across the European Union. While this approach was designed to avoid the high costs associated with the collection of new information, it presented a number of interesting challenges. First, access arrangements to these data resources were poorly developed. The resolution of such difficulties would be an immediate priority for the research teams. Secondly, the research problems and the ability of the teams to investigate these problems in detail would be constrained by the nature, quantity and quality of the available information. 'Quality' in this context includes the comparability of survey data collected by different agencies in the various member states of the European Union.

The major research resources utilised for the project were:

The European Labour Force Surveys, 1992-2000 (EULFS).

The European Community Household Panel Survey, 1994 – 1997 (ECHP).

UN Fertility and Family Surveys (FFS), various years, five EU member states included.

In addition, some teams took advantage of the fact that significant resources were also available at the national level for a number of countries. These include the *British Household Panel Study (BHPS)*, the *German Socio-economic Panel (GSOEP)* and the Dutch *Organisatie voor Strategisch Arbeidsmarktonderzoek (OSA) Labour Supply Panel*.

The general methodological approach adopted within the project was based upon detailed analysis of these large cross-sectional and longitudinal European surveys. The multidisciplinary teams include demographers, sociologists and economists, all of whom shared access to these resources and pooled skills and knowledge.

Specific objectives were:

- to create a detailed database from the EU Labour Force Survey, cross-classifying information on demographic, family and education with employment characteristics;
- to identify a number of subprojects as a means of sharing skills, following four steps (identification of key issues, data exploration, testing of hypotheses and development of policy implications); and
- to estimate multivariate models relating variables such as time, cohort, age, education, age at first birth and number of children with the household and/or work situation.

A wide variety of analytical techniques were employed, some of which involved 'state-of-the-art' developments in statistical modelling. These include the development of techniques to deal with different weighting systems for use in logistic regression analysis, the construction of cohort data series from event history data for use in diffusion models and the use of various treatments for residual heterogeneity in fixed and random effects models of earnings growth.

In all of the research teams, a considerable effort was expended in developing access to and sharing knowledge about the potential that existed within these complex data resources to address the research areas outlined above. The Labour Force Survey data are cross-sectional, and direct access to these data was not available. The ECHP is a true panel data survey, consisting of linked annual survey observations of individuals within households. Access to the individual level data was expensive, requiring teams to congregate in one location due to these access limitations. The UN Fertility and Family surveys contain much retrospective data on employment and fertility histories. While access to these data was not a particular problem, the data themselves required much reconstruction to place them in a form suitable for analysis.

The solutions to these problems involved research teams establishing and organising training sessions associated with particular data resources, with bilateral exchange between research teams, and with the dissemination of knowledge about potential sources of weakness within particular data resources. These procedures were time consuming, but were essential in terms of our ability to understand the evidence revealed via the complex analyses that were subsequently undertaken by the research teams. In certain areas, we discovered that the data were inadequate to enable us to pursue our original objectives as fully as we had hoped. In other areas, we are impressed by the ability that exists within these resources to address policy issues in a relevant and timely manner.

3.2 Main results and innovative aspects of the research

This project was remarkable in a number of ways. It was one of the first to make use of truly comparable data sources for the exploration of social and economic change, moving from the micro data to macro analysis of trends and tendencies across the European Union over the last ten years. Secondly, the focus was upon the evolution of change via the investigation of longitudinal data – information that reveals patterns of change at the individual and the household level. Third, it combined the theoretical perspectives of sociology and economics in a pragmatic approach to understanding the processes at work. Where appropriate it made use of multivariate statistical techniques to help understand the often-complex interactions between factors that shape the participation of women in paid work. Fourth, it stressed the role of institutions, the framework of rules and regulations, the structure of agencies and the cultural norms which moderate the behaviour of women in paid work through periods of family formation.

The following sub-sections describe the main results of the project, explaining how the state-of-the-art was advanced and indicating the research benefits gaining from a cross-national comparative perspective. Section four considers the policy implications of these various findings.

Female Employment and Family Formation – The Institutional Context

The institutional context surrounding employment in general and women's employment in particular, can have a profound influence upon the reconciliation of work and family life. To the extent that these institutions vary from one country to another the employment patterns of women will differ substantially. The institutional structures supporting the combination of paid work and care (particularly caring for and raising children) include different measures, provisions and arrangements. We categorised and described the characteristics of the different institutions that to a greater or lesser extent support the combination of motherhood and paid work and other career prerogatives. We distinguished *leave arrangements* and *working-time arrangements* as part of policies offering time management, the *tax system* as a part of the financial benefits and *childcare facilities* as the component of services. The central aim was to examine the main differences and similarities between European Union member states countries. To realise this aim we studied relevant rules and regulations as well as existing policy research.

The cross-national comparison shows the wide variety of institutional arrangements. It demonstrates that the traditional way of clustering countries according to the typology suggested by Esping-Andersen does not look very appropriate when welfare state arrangements concerning the reconciliation of work and family life are at stake. This conclusion may not come as a surprise, given the rapid developments concerning female employment and the major political changes in Europe throughout the nineties. Some of the continental countries (especially Netherlands, and France) appear to deviate from the conservative path and move in a direction that crosses different regime types.

In these countries changes, such as the erosion of the male breadwinner system and the de-standardization of the life course, have not induced the path dependent adjustments that regime theory would lead us to expect.

Trends in fertility by parity in Europe from FFS

We reviewed and assessed current trends and differences in fertility in European countries, and also the USA and Canada, with a particular emphasis on birth by order.

Fertility levels were estimated for 11 countries using FFS data. We use indicators known as the Period Parity Progression Ratios (P-PPRs). These offer a more detailed view of the family formation process than the traditional Total Fertility Rate (TFR). They also yielded better estimates of period total fertility intensity, because these ratios are free of the effects of changes in mean age at childbearing and in the distribution of births by order that affect the TFR.

Our first finding was the fact that the ranking of countries is different if we consider either total fertility or fertility by birth order. This led us to argue that the TFR is an aggregate measure that conceals the differences in fertility behaviour between countries that appear only when birth order is taken into account. The second finding is that for the recent period the first two birth orders are the most important one in explaining the variation in time of total fertility. The third finding is that there is a growing duality between two groups of countries, one with a relatively low proportion of childless women and another one where this proportion is significantly higher.

To summarise, the main innovative aspects of the research are:

- 1) The methodology has allowed us to draw a historical as well as a comparative picture of fertility behaviour by birth orders (i.e. first, second, third and fourth child) for about ten years period in several industrialised countries. The indicator estimated (PPR's described above) has proved to be a robust measure of fertility intensity over time in front of the fertility intensity obtained through the traditional Total Fertility Rate (TFR).
- 2) The study reveals the essential role played by parity zero (i.e. the proportion of childless women) and parity one (i.e. the proportion women with a first child) in explaining the trend towards a very low fertility levels in Western Europe in the 1990's. Most demographic studies simply look at the total fertility level which clearly fails to notice the fact that family formation operates at two levels: firstly, in the decision of becoming a parent and having a first child, and, secondly, in the decision of proceeding to have more children (i.e. second, third, fourths, and so on). It is by focusing on the study of fertility by birth orders that we are able to demonstrate that the trend over time is very particular according to the parity. This is a relevant finding because we can pinpoint the birth orders at which most policy actions should be

directed, namely, childless women and the transition from childless to motherhood.

- 3) Finally, we have here used the Fertility and Family survey for period based analyses (i.e. a collection of cross-sectional indicators over time) rather than the more traditional use from a longitudinal perspective.

Family Formation across European Countries: The 1955-64 Female Cohort (María José González-López)

The aim of this sub-project was to describe similarities and differences in the family formation process across a selected group of European countries. The analysis used a longitudinal perspective and focused upon the cohort of women born between 1955 and 1964. This is the youngest cohort for whom a complete life course can be reconstructed with the use of the Fertility and Family Surveys. Thus, they reflected the latest observable developments in completed family formation.

Three main transitions are studied through the use of the life table methodology: the process of leaving the parental home, the formation of the first partnership and the arrival of the first child.

The main finding is that the six countries studied reflect different degrees of 'defamilialisation' (i.e. the degree to which women and men are able to sustain themselves without having to depend on the family solidarity). Thus, in Southern countries the family still plays a major role in the society, whereas it is not so relevant for individual well-being in the Central and Nordic European countries. In the latter cases, individuals can rely in a further extent on public institutions. This would partly explain differences across countries concerning the timing of transitions and time lag between transitions. The analysis also shows the strong delay effect caused by women's educational attainment on motherhood entry. This poses new questions concerning the future of educated-women's reproductive behaviour and the role of social policies to facilitate the fulfilment of their occupational and fertility choices.

To summarise, the main innovative aspects of the research are:

- 1) The use of comparative longitudinal data to reconstruct *family formation trajectories* (i.e. family events of various generations from age 15 to their mid-thirties), these trajectories were also estimated according to the women's higher educational attainment.
- 2) The study reveals the narrow connection between early family transitions in Southern Europe (i.e. leaving home, entering a partnership and having a first child), which is interpreted as an indicator of strong family dependency. These patterns contrast very much with the spacing between these transitions in other Central and Northern European countries, where women leave the parental home much earlier and spend more time living alone or with friends before forming a partnership.

Women's Entry into Motherhood in France, Sweden, East and West Germany, Spain and Italy (María José González-López)

This sub-project extended the descriptive analysis described in the previous sub-section, to explore women's entry into motherhood in different national institutional contexts that are also characterised by distinct patterns of women's labour force participation and family formation. The focus on the first child reflects the assumption that there are specific processes operating in the decision to have a first child different from the decision of proceeding to have a second, a third or a fourth child.

The research was based on the Fertility and Family Surveys (FFS) which were conducted within the comparative program of the Economic Commission for Europe and embraces six case studies: Sweden, Spain, Italy, France, West Germany and East Germany. The sample of countries selected provides both similar and contrasting patterns of fertility behaviour as well as fairly different national institutional contexts as described in Chapter 1. The methodology used is hazard regression analysis to model the risk of conceiving a first child.

The research on fertility behaviour assumes that the increase in women's investment in human capital in the last decades has also augmented their expectations about the returns obtained from education. The incapacity of fulfilling these expectations, however, may result in the rejection or postponement of motherhood. Therefore, it is expected that women with higher education and limited occupational experience may display the lowest first birth rates.

The use of a multivariate framework for comparative analysis allowed us to determine whether similar individual characteristics, such as educational attainment, have different outcomes in terms of motherhood decisions across countries. It also facilitated investigation of the degree to which the time spent in the passage into adult life (finding a job, leaving the parental home and forming a union) explains subsequent decisions regarding motherhood. The research showed that educational attainment does not have the same effect on motherhood across countries. It also showed that a long-lasting experience in employment has eventually a positive effect on motherhood, which suggests new guidelines for social policy whereby women's economic security through a continuous occupational career should be supported alongside motherhood.

Interesting and innovative aspects of the research are:

- 1) The use of event history analysis with discrete time data to test the variables that determine the entry of women into motherhood (first child) from a comparative perspective. The FFS have allowed us to explore the impact of women's educational career, the importance of their relationship with the labour force, and influence of the partners' job situation.

- 2) One of the most interesting results is the significant and negative relationship between the number of years a woman has lived in the parental home and the likelihood of having a first child. In general, the risk of experiencing motherhood increases as soon as a woman forms a new partnership regardless of the age at which they left the parental home. However, in Southern countries like Italy and Spain, the age of leaving home appears to have a positive and significant negative effect on the arrival of the first child. This result supports the argument that the contemporary southern family model may eventually have a negative impact on motherhood entry.

Changes in partnership formation: the diffusion of cohabitation among young women in Europe (Hans-Peter Blossfeld and Tiziana Nazio)

In the early 1960s, marriage was considered a prerequisite in Europe when young men and women wanted to have an intimate sexual relationship, live together, or have children. Non-marital cohabitation was exceptional in most European countries and was even rare in Sweden, a country where cohabitation has old roots. During this period, cohabitation was practised mainly by older people who were divorced or widowed and, as for example in West Germany, did not want to lose their alimony or widow's pension by remarriage.

Today, forty years later, cohabitation has not only fundamentally changed its social meaning but has become a commonplace in most European countries, particularly among the younger generation. There are, however, also great differences in the extent and meaning of cohabitation among European countries. In Southern Europe, cohabitation is still rare and practised only by a small group, typically people living in urban areas, or, in the case of Italy, living in the northern parts of the country. In many Central European countries like West Germany and the Netherlands cohabitation has become a kind of a socially accepted, short-term prelude to marriage and it is typically transformed into marriage when couples have a child. In other countries such as (the former socialist) East Germany, Austria, France, Great Britain, Finland or Norway, cohabitation has developed into an accepted alternative to marriage connected with a high rate of extramarital births. And finally, in Denmark and Sweden, cohabitation and marital unions seem to have normatively and legally converged to such a degree that for young couples the choice between formal marriage and informal cohabitation seems to be solely a matter of private taste, even when children are involved.

The purpose of the research by Hans-Peter Blossfeld and Tiziana Nazio was to study the diffusion of cohabitation across successive generations of young women; in particular, its shift from a rare and deviant form of partnership to a common and socially accepted union - and the concomitant transformation of marriage from a socially prescribed choice to a mere option. Diffusion was considered here as an individual-level process by which the practice of cohabitation is communicated through certain channels and adopted or rejected over time among the members of a society. The focus of the

analysis was on cohabitation before women enter (if ever) into first marriage in order to get a better understanding of the dynamic shifts during the phase of family formation over time. In the 1960s, cohabitation was a social innovation. It was perceived as relatively new, at least in the phase of family formation, by most people in Europe. This form of union then gradually became integrated into the process of family formation in varying degrees in most of these countries. In this research, Blossfeld and Nazio were especially interested in analysing to which extent the conservative welfare-capitalist regimes of West Germany and France, the former socialist East Germany, the familialist Italy and Spain and the social democratic Sweden follow a uniform pattern of diffusion of cohabitation. They wanted to answer the question of what drives the diffusion of consensual unions among young women in these countries and, if there is convergence or divergence in the process across countries, which forces are responsible for it. Since entry into first cohabitation and first marriage are interrelated processes, they also studied the changes of leaving home and entry into first marriage.

Using longitudinal data from the Fertility and Family Surveys, Blossfeld and Nazio studied the spread of cohabitation among young women with innovative individual-level diffusion models. In these models the individual woman's rate of adoption of cohabitation can be estimated, among other factors, as a function of prior adoptions by other individuals in the social system. In methodological terms, these models are particularly attractive because they allow (1) estimate a flexible individual-level analogue of the relatively limited standard population-level models of diffusion; (2) incorporate the influence of time-constant and time-varying individual heterogeneity affecting the 'intrinsic' propensity of women to adopt the cohabitation practice in different stages of their life course; (3) take into account ideas about structures of communication, knowledge-awareness, and structural equivalence; and, (4) estimate more complex models of temporal variation in the process of diffusion.

Blossfeld and Nazio's description of the diffusion process across generations clearly showed that the diffusion of cohabitation in Sweden is already saturated. About 90% of women in Sweden have adopted cohabitation before they (eventually) start a first marriage. In East and West Germany as well as in France each successive birth cohort experienced not only an impressive rise in the proportions of cumulative pre-cohort adoption but also a steep increase in the cumulative proportions of peer group adoption at each age. This suggests that there has been an increasing social acceptance of cohabitation for each younger birth cohort in these three countries to the extent that cohabitation has become a normal form of partnership in the process of family formation. Among the youngest birth cohorts, about 70% of women in France, 50% of women in West Germany and about 40% in East Germany have adopted cohabitation before they eventually start a first marriage. In contrast, in Italy and Spain even among the youngest birth cohorts not more than about 10% of women have adopted cohabitation before eventually entering into first marriage.

The application of event-history methods to these data yielded more differentiated findings with regard to the decline of marriage and the diffusion of cohabitation. First, there has been a clear postponement of entry into

marriage in all six countries across cohorts. In West Germany, Italy, France and Sweden, this is partly the case because young women stay longer in school and therefore are simply 'ready' later for marriage. Further important factors in the decay of marriage are declining religiosity and growing urbanisation which weaken the importance of marriage as a social norm for many people. Finally, and beyond all these factors, there is an autonomous cohort trend of increasing postponement of entry into marriage for all three countries which to a large extent is connected with increasing uncertainties of the youth labour markets and employment relationships in the process of globalisation. In many countries, the growing tendency among young adults to opt for informal cohabitation instead of marriage might therefore be a rational answer to these new challenges. Cohabitation permits the postponement of long-term commitments without incurring the penalties of either heterosexual isolation or promiscuity. It also offers the pooling of resources and the economies of scale that living together provides.

However, Blossfeld and Nazio's empirical analysis also shows that the growing age gap that has been produced by an increased postponement of entry into marriage is not automatically filled by cohabitation. Young people can choose between various alternatives: they might stay longer in the parental home (mainly in Spain and Italy), live in a single household (often the case in West Germany) or cohabit. The degree to which cohabitation is perceived as being more advantageous than its alternatives is strongly determined by the cultural, structural and political setting.

Blossfeld and Nazio's analysis shows that cohabitation is indeed not an attractive choice in Italy and Spain. At first, young Spaniards and Italians have great difficulties to secure public housing. The rental market, which is squeezed by specific rental laws and distorted by a 'black housing market', is rather expensive in these countries. Thus, the best choice for young people would often be between staying with their parents or buying a house. But buying a house not only requires a huge financial investment, it is also a long-term binding decision. For this reason marital and cohabitational decisions would implicitly have very similar consequences for the life course of young Italians and Spaniards. Secondly, the Mediterranean welfare state provides only a weak protection against the increasing labour market risks of the young generation and the cohesive Mediterranean family is the relevant locus of social aid: parents are responsible for their children and vice versa. In other words, increasing youth unemployment and uncertainties of employment relationships together with the peculiarities of the Italian and Spanish housing market and Catholic familialism make an extended stay of young people in the parental home more attractive than cohabitation or living as a single person. As Blossfeld and Nazio's longitudinal analysis shows, cohabitation in Italy and Spain is therefore confined to small highly selective groups of women who have a good reason to break with traditional gender roles and family models. As a rule, these women are not religious, have left the educational system and work, grew up in an urban context, and – in the case of Italy – live mainly in the North.

In East Germany, the relatively low average age at marriage was the result of a comparatively high level of individual life course predictability in the socialist society and a consequence of a specific housing allocation policy. In the

historical period between the mid-1970s and 1989 there was a strong incentive to adopt cohabitation for young women - even when they were still in school. After the breakdown of the socialist society in 1989, a historical period that could not be covered very well with our data, the institutional framework of West Germany was introduced in East Germany and economic uncertainty and rising unemployment have increased dramatically. It is well-known that these changes resulted in rapidly declining nuptiality and fertility rates and have increased the rate of cohabitation and extra-marital births in East Germany.

In West Germany and France, the housing market has been accessible for young people for many decades. It has been easy to rent a flat and the prices are – with the exception of some few expensive cities – generally affordable. In cross-national comparative terms, the proportion of home owners is also relatively low in West Germany at 45%. If young people don't work, they are normally supported by the conservative welfare state or by their parents. Thus, given increasing unemployment and growing employment uncertainty, cohabitation or living as a single person are attractive options compared to staying with parents in West Germany and France.

An important result of Blossfeld and Nazio's study is that there is no autonomous cohort trend left on women's rate of entry into cohabitation, after controlling for cohort differences in educational participation and attainment levels as well as women's labour force participation. In addition, the diffusion analysis shows that the dissemination of abstract knowledge based on the cohabitation experiences of earlier generations does not seem to have any substantial influence on the diffusion of cohabitation in the population. Thus, the diffusion of cohabitation does not imply a mechanism that links the experiences across generations. Rather, cohabitation seems to be driven mainly by direct social modelling of peers. Concrete experiences of the same age group clearly constitute a sort of useful vicarious trial for the potential adopters. In East and West Germany, France and Sweden the relationship between peer group adoption and the individual adoption rate is S-shaped and monotonically increasing. Each new cohort seems to start with selected groups of early innovators with a specific interest in the adoption of cohabitation. Then with the accumulation of peer-group experience the diffusion spills over from these specific groups to broader parts of the entire birth cohort population. At the level of about 30% (in West Germany) to 40% (in East Germany and France) of cumulative peer group adoption the effect of direct social modelling then even increases at an accelerating rate. After these points direct social modelling clearly becomes one of the most important driving forces for the individual adoption rate of cohabitation. Although East and West Germany share the same overall S-shaped diffusion pattern, the diffusion process in East Germany proceeds at a slower pace and the accelerating phase is triggered at a comparatively later point. In the socialist East Germany there was obviously more resistance than in West Germany against the spread of cohabitation to the entire birth cohort population. In Italy and Spain, the diffusion of cohabitation to broader groups of the population appears to be blocked. Social forerunners who are practising cohabitation in Italy and Spain consist of very specific groups of people whose experiences obviously cannot serve as appropriate models for

their peers in other groups, so that the mechanism of the ‘strengths-of-weak-ties’ (Granovetter) does not work in the Italian diffusion process.

Trends in female education, employment and household structure (Olivier Thévenon)

This sub-project presented an overview of the main trends and cross-country differences that characterise the female labour force according to both employment and demographic situation. The *European Labour Force Surveys* were used to identify the main differences in the situation of women relating to work, the composition of employment and the evolution of participation through the 1990s.

The sub-project examined the role of the process of labour market flexibilisation as a factor that has led to an increase in women’s participation to the labour market. We show the evolution of employment rates and their changing composition with respect to part or full-time working, the development of temporary employment and trends in atypical working-time arrangements. Differences in labour market contexts are further explored via analysis of the intensity of transitions in and out of the labour markets, and by the incidence of job tenure or work experience on wages.

The second stage of the sub-project focused on the ‘supply side’ characteristics, presenting the main differences that affect the relationships between women’s level of education, family responsibilities and situation relating to work. Major trends are identified and used to established typologies, emphasising two gaps: the absence, at the descriptive level, of attention on the relationships between the timing of family formation process and female labour supply, whereas family and employment arrangement often firstly affects the timing of birth, and that important differences are observable from country to country.

The final stage of this analysis presented questions raised by these findings and relates these to the variation in welfare state regimes – a theme pursued in more detail in the following subproject.

Welfare state regimes and female labour supply: a comparison between France, Germany, Italy, the Netherlands, Spain and the United Kingdom (Olivier Thévenon)

This sub-project provided an analysis of the differences in the ‘embeddedness’ of female labour supply in six European countries, as referred by welfare regime paradigm. It is argued that the different welfare state regimes – as labelled by Esping-Andersen – provide varying sets of opportunities from which different patterns of female labour market behaviour are expected to emerge. Liberal, conservative (including Mediterranean countries), social-democrat contexts are shown to promote different patterns for combining family formation and paid work: the first promotes a strict adaptation of female labour market behaviour, the second favours a rather long interruption for family formation. At the opposite end of this spectrum, ‘social democrat’ welfare regimes promote a simultaneous combination of family formation and labour market participation. Log linear estimations of the

influence of individual and family formation characteristics on female labour supply in Germany, France, the Netherlands, Italy, Spain and United-Kingdom, based on detailed Eurostat Labour Force Survey data, were then used to 'test' the relevance of such a categorisation over the 90's.

It is shown that broad differences are in accordance with welfare regime typology. However, important intra-group differences are identified that limit the use of such categorisation in understanding country-specific evolutions. Basically, we observe the liberal countries – United-Kingdom and the Netherlands – to be characterised by a rather high development of part-time work, and that both participation and working time interact strongly with family constraints (births of children, age of the youngest). Conservative countries – such as Germany, Italy and Spain – are rather differentiated with a specific influence of the presence of a partner towards a division of labour and specific 'interrupted' profiles of female participation with the birth of first child. The entrance into the internal labour market seems also to require a postponement of family formation. Finally, France is identified as in an 'in-between' position with respect to conservative and social-democratic regimes. A consequence is that part-time work is maintained at a rather low level, and that women have a greater opportunity to combine full-time work with the arrival of the first child (participation is thus less reactive to the presence of a partner, of one child, to the age of the youngest and timing of birth). The postponement of the first birth has also a positive influence on female participation in the labour market.

We concluded that no universal process of labour market 'flexibilisation' can explain the overall increase in female employment during the 1990s. In terms of policy implications, we argue that it is important to avoid simple and broad characterisations of institutional influences on the reconciliation of female employment and family formation.

The dynamics of female employment around childbirth (Jan Dirk Vlasblom)

There is a strong interdependency between the presence of children in the household and female labour supply. Women who have children tend to work less than those without children. In addition, women who plan to have children show different behaviour on the labour market, even before the birth of the first child. A number of patterns in labour supply can be seen. Most patterns can be described by the fact that women lower participation, both in participation and in hours, as every child is born. In this chapter we turn to the dynamics of labour supply around childbirth and relate it to changes in the institutional context. We presented results for three European countries, The Netherlands, Germany and the United Kingdom, over the period 1985 to 2000.

The labour market dynamics around childbirth show similarities in these three countries. Women lower their labour market participation both in participation as well as in hours when a child is born. After some time, participation in paid work rises, with most women working part-time. These patterns differ between women, depending on their human capital. Women with more

human capital have higher participation rates at all stages of their life cycle than women with little. Based on this finding, and on the finding of others, that choices made with respect to timing and number of children have large effects on female economic independency, it is concluded that policies should be aimed not at general measures, but should be more targeted on 'subgroups' of women, for which the combination of work and children remains problematic.

The differences, already existing in the early 1980s, did not vanish to the end of the 1990s. On the contrary, in The Netherlands the percentage of women that do not leave the labour market increased, while it decreased in Germany and the UK. At the same time, in The Netherlands there has been a huge increase in the availability and affordability of day care, to ease the combination of work and family. In Germany there have been several reforms and adjustments in the tax deductions with respect to children and in the system of maternity leave, making being a full-time mother relatively cheaper compared to a situation of combining work and family. In the UK there was a tax reform towards a more individual system of taxation. We therefore concluded that the changes in behaviour can be explained by changes in the institutional context. Any institution that make the costs of combining work and family lower relative to being a full-time mother, will increase female participation. Therefore, it is important for both women and policymakers to be aware of the possible patterns, the 'ideal pattern' (from an economic point of view), and the ways the preferred patterns can be supported by the institutional context.

Equal but segregated? - Segregation, part-time work and family burdens (Stephanie Steinmetz and Johann Handl)

Modern societies are affected by various processes of social change, like the increase of formal education, the shift of demographic structures and the structural change of work. The last-mentioned phenomenon is often discussed as a crucial part of the social modernisation of societies in their transition from an industrial to a service-orientated economy. As a consequence of these ongoing processes, a high degree of role differentiation and specialisation is based on sex and age in all member states of the European Union. Policy debates commonly depict occupational segregation as a labour market imperfection or a problem that indicates sex discrimination and inequality. Accordingly, international organisations identified occupational segregation as the main barrier to women's full participation in the labour market and argued for policies that would integrate all occupations.

Against this background, the main goal of this sub-project was to study the patterns and changes of gender specific occupational segregation in the 1990s for selected countries of the European Union. Moreover it aimed to examine women's labour market situation in relation to (1) varying working time patterns, and (2) varying family burdens they have to care for, making comparisons between European Member States.

The research was based on cross-sectional data from the European Labour Force Survey, covering the period of the 1990s. Using advanced statistical techniques, different aspects of gender segregation were distinguished.

These were categorised as 'sex typing of occupations', differences in the 'occupational chances' of male and female employees and sex specific 'inequalities'. The empirical findings on the patterns of segregation were presented, firstly using the most common indices for measurement, namely the standardised and non-standardised index of dissimilarity, and secondly, the perspective was enlarged by reference to the concept of social status of occupations.

In the course of this work, our analyses have shown results, which partly corroborate the findings pointed out in literature. The Nordic countries showed the highest values with regard to both aspects of segregation (chances and sex-typing) and the values are very low in the Mediterranean countries where support for women is fairly low.

Moreover two important new findings should be pointed out. First we cannot find a consistent development of sex specific occupational segregation in the 1990s for all European member states, so that it is not possible to speak about a consistent trend of the changes in segregational structures. Secondly, the empirical analysis has clearly supported our theoretically founded perspective, that sex specific occupational segregation should be conceived as a multi-dimensional phenomenon. For most of the European member states the theoretical assumption that with a decrease in sex typing also the dimension of sex specific changes decrease is right but, as the analysis has demonstrated, there are some countries where contrary developments in the distinct dimensions could be observed.

The innovative aspects of this study are firstly, that it gives an actual overview of the situation of women on the European labour market in the 1990s. Secondly, the aspect of sex-specific occupational segregation is analysed at the most detailed level (ISCO88 3-digit) and with the consideration of different aspects like the influence of working time and the existence of children. Finally, it gives a new theoretical and methodological precision, which helps to clarify the long-lasting discussion and search for the best index for measuring the concept of gender segregation.

The family gap in pay (Rhys Davies, Gaëlle Pierre and Peter Elias)

The focus of this sub-project was to consider the qualitative aspects of female employment in further detail through an analysis of the penalty in pay associated with motherhood (the 'family gap') across the European Union. The sub-project was undertaken in two stages. Firstly, a comparative analysis for 11 Member States was conducted using micro data from Waves 1 to 5 of the European Community Household Panel Survey (ECHP). Cross sectional estimates indicated that across all countries, family gaps in pay are present among those women who became mothers before the age of 25. Despite controlling for measures of labour market attachment, residual elements often remain. This analysis revealed the high penalty in pay associated with motherhood in the United Kingdom and Germany compared to other Member States. The second part of the research then presented results of analysis for these 2 countries utilising more detailed data available from national panel data sets (the British Household Panel Survey and the

German Socio-Economic Panel). After controlling for unobserved heterogeneity through the utilisation of panel data techniques, significant family gaps in pay remain in both countries despite their diverging institutional contexts. However, both countries do exhibit high levels of part time employment and flexible working arrangements. Typologies of societies based upon formal institutional profiles are likely to be too broad to explain national differences in the pay penalties associated with motherhood.

An innovative aspect of this project related to the progressive focus which was adopted within the framework of a multivariate analysis of longitudinal data. Starting with the European Community Household Panel, the variation in the family gap in pay at and around the time of childbirth was established for all countries contributing to the ECHP data analysis. This indicated the need to focus in on two countries, the UK and Germany for which detailed panel data were available, facilitating a closer examination of this phenomenon given the richer and more detailed information available in these national longitudinal studies.

Female employment and family formation: regions or member states? (Muriel Moisy)

This sub-project dealt with a comparison of the interaction between family and professional spheres at both a national and a regional scale. The research covered four Mediterranean countries (Portugal, Spain, France and Italy) and eleven regions within these countries, using data from the Labour Force Survey. The research pursues two main objectives. First, we observed in a descriptive way whether the national trends outlined in the previous chapters hide various regional disparities. The objective was to determine which family or professional events are more dependent on the local context and which ones follow national tendencies. Secondly, we established potential explanatory factors for the regional differences observed by looking at the institutional structure at a regional level, particularly the housing market and the availability of child-care.

In the first stage of the sub-project, we explored family trajectories, from the independence of the parental home until the arrival of the first child. Two clearly opposed models are apparent. The Southern one, defined by a delay of the autonomy but an entry in cohabitation and motherhood in a very short time, is characterised by greater homogeneity between the countries. At the opposite, the French model, with more cross-regional disparities, presents a longer and less 'institutionalised' process. The low regional heterogeneity in the family sphere contrasts with the strong disparities concerning women's professional situations that we examine in a second section. Through the main indicators, women's position in the labour market appears quite similar in Portugal and France for one part and in Spain and Italy for the other part. Nonetheless, the examination of the attractiveness for women of each national and regional labour market's structure (level of unemployment, the share of part-time jobs, of temporary contracts...) revealed more national schemes and within them regional peculiarities.

The study of the 'family burden' effect on women's position (specifically the presence of children in the household and the age of the youngest child) reflects the same tendencies with national patterns. A strong negative effect of the first child in Spain, of the second child in Italy and of the third child in France and Portugal was found. Small cross-regional differences observed can be attributed for one part to differences in childcare opportunities but also to others determinants such as daily-time organisation or local cultural patterns in terms of social representation of women and children in societies.

4. Conclusions and policy implications

This project examined the institutional context surrounding the processes of family formation, female employment, opportunities for paid work and access to related welfare provision across EU member states. The 'institutional context' refers to the body of rules and regulations, the nature of tax and benefit regimes and the provision of services associated with childcare, early years education, parental support and working time arrangements in different member states. The varying nature of the institutional contexts surrounding female employment and family formation and their interaction with these processes defined the scope of the research.

At its broadest level, the FENICs project sought to analyse the impact of historically patterned institutional structures on women's decisions in the areas of education, work and the family. The research teams identified cross-national differences and similarities in demographic trends, focusing on non-traditional forms of living arrangements and transitions to social independence and quantified the impact of change in the early stages of family formation on female transitions to work as a means of tracking converging or differentiating processes in European societies over the past 20 years.

Sub-projects established within the overall collaborative framework investigated the changing institutional structures and the reconciliation of family life and female employment (Utrecht team, covering all EU countries), the diffusion of cohabitation (Bielefeld team, covering France, Spain, Germany, Sweden and Italy), trends in fertility and family formation (Barcelona team, covering the same five countries), the relationship between the institutional context, employment, hours worked and family structure (Nanterre team, covering all EU countries), occupational segmentation and hours worked (Erlangen/Nürnberg team, covering all EU countries), the dynamics of employment around childbirth (Utrecht team, covering UK, The Netherlands and Germany), and the impact of family formation on earnings (Warwick team, all EU countries). In the preceding section of this report we have given an overview of the main findings from these sub-projects. The short summaries below focus particularly upon the *policy implications* of the main findings from the sub-projects, drawing together conclusions on some of the crosscutting themes.

Institutional structures and the reconciliation of family life and female employment

Detailed investigation has shown that the links between institutional structures designed to reconcile paid work and family life are complex and varied. Perhaps the best-known work that has sought to characterise the different welfare regimes across the European Union is that of Esping-Andersen (1990, 1999, 2001). When the characteristics of the different institutions that,

to a greater or lesser extent, support the combination of motherhood and paid work, were categorized according to leave and working-time arrangements, the tax system and childcare facilities, the project team found that the traditional way of grouping countries according to Esping-Andersen's typology no longer looks appropriate if welfare regimes relating to women's employment and family life are taken into account. Some of the continental countries, especially Netherlands and France, appear to deviate from the 'conservative' path in this respect due to the erosion of the 'male breadwinner' role of welfare support and the development of a wide variety of working patterns, which now places these regimes under scrutiny in terms of their ability to foster women's careers and to alleviate family poverty.

Despite their variety and complexity, the potential impact of the different institutional contexts does not appear to be wholly consistent with changes in the relationship between family formation and female labour supply, as observed over the period 1992–99. It is argued that the dividing lines between what are characterized as different regime types will fade through time. This reflects the fact that in all EU countries a significant rise has been recorded in female labour force participation (with the exception of the candidate countries which were not included in this investigation), together with increasing flexibilization of labour, a declining fertility rate except France and Sweden and a movement away from the 'male breadwinner' model of household economic support. In all the countries studied, leave arrangements have been developed or extended, and many states have invested heavily in publicly funded childcare facilities. Nonetheless, the historical legacy of the institutional regimes and the extent to which these reflect historically rooted social and cultural differences between countries must be taken into account when developing EU-wide policies to assist both men and women in reconciling the demands of paid work and family life.

The diffusion of cohabitation

In line with the decline in marital unions, significant changes in partnership formation are underway, specifically the formation of cohabitation arrangements between couples prior to and, sometimes, in place of marriage. What was previously thought to be a transient state between living in the parental home and living independently as a married couple is increasingly becoming the preferred and dominant state of partnership in certain European countries.

A detailed investigation of survey data describing the fertility and partnership histories of women in a number of European countries, including Germany (West and East Länder), Sweden, France, Italy and Spain, showed that the move towards cohabitation among younger couples is driven by powerful diffusion mechanisms, determining the extent of peer group adoption of this type of living arrangement in its early phase, and intergenerational mechanisms at the later stage. For these reasons, the development and spread of cohabitation arrangements can be regarded as 'contagious',

although the shape of this influence varies across countries, reflecting the institutional contexts in the countries studied and their phase along the diffusion process.

The policy implications of this remarkable and significant trend are clear: countries need to review the extent to which their family welfare policies discriminate in favour or against those couples who are legally married as opposed to those who choose to cohabit.

Marriage delay

Marital unions are increasingly being postponed by younger generations of women in the countries analysed (France, Spain, Germany, Sweden and Italy), to an extent that goes beyond the effects produced by educational expansion or by increased labour force participation. This progressive postponement appears to go hand in hand with an increased degree of uncertainty in the life course (decreased life course predictability) and with rising difficulties in accessing and establishing a secure position in the labour market. In other words, the policy of labour market flexibilization and policies fostering family and fertility appear to conflict. Indeed, increasing uncertainty brought about by flexibilization translates into a delay in partnership formation, which in turn leads to the postponement of subsequent transitions, like childbirth. This highlights the increasing demand for and potential advantages of less structured forms of unions like cohabitation, which may help young people to bridge the longer periods required to reach autonomy while allowing partnership formation to develop.

Trends in fertility

A detailed study of trends in fertility by birth parity reveals three main findings. Firstly, the differences in total fertility levels across countries are mainly accounted by the variations at parity three (birth rates for the third child). Secondly, there is a growing group of countries in which the level of childlessness is increasing to exceptionally high levels, with more than 20% of women ending their childbearing years without having had a child. Finally, looking at the variation in total fertility for the recent period, the first two parities account for more than 50% of the observed variation. In other words, differences in total fertility between countries are due mainly to differences in fertility at parity three, but variations through time are dominated by what happen at parity one and two.

Childlessness is becoming a major social issue, as surveys which include questions about desired fertility generally show that most women want to have at least one child, or the proportion of women who want to stay childless is much lower than the level observed. Coupled with the observation that the recent variation in total period fertility is dominated by variation at parity one and two, this suggests a clear need for strong social policies that help women to achieve their desire to have at least one child.

The main transitions of family formation (leaving home, forming a first partnership and having a first child) in Italy and Spain are highly connected, reflecting the importance of the so-called 'family solidarity model' in these countries. Young adults remain in the parental home until they have accumulated sufficient resources to form an independent household, and they enter a new partnership soon after leaving the parental home. This family formation model, characteristic of southern European countries, implies a long delay before entry into the first union and birth of the first child. Both aspects negatively affect fertility, because the long delay finally entails lower fertility rates and higher rates of unintended childlessness. Women in other central and northern European countries spend more time in between family transitions, partly because they can more easily form an independent household, but also because there is a lower cost attached to motherhood in more 'women-friendly' welfare state regimes.

In southern European countries, it was also found that women without a job have a higher likelihood of having a first child than women in employment. However, accumulated job experience slowly increases women's chances of entering motherhood. This implies that, in countries with low female participation and high level of temporary contracts, as it is particularly the Spanish case, labour market uncertainty may play an important role in family decisions such as leaving the parental home, partnership formation and fertility decisions.

Human capital investment and family formation

The process of acquiring education is likened by economists to investment: it serves as an addition to the capital stock, termed human capital. With the general rise in women's educational participation, a significant increase has occurred in women's investment in human capital in recent years in all EU member states. However, investigation shows that more prolonged education does not have the same impact on women's behaviour in different countries with regard to other behaviour and outcomes that theory predicts should relate to these human capital investments, namely partnership, fertility and family formation.

Policy makers need to be aware of the scale and diversity of changes in fertility: some countries (particularly Italy and Spain) are likely to experience prolonged periods when population growth will be well below replacement levels. The impact of these trends in fertility, in terms of the demands for childcare, education and the availability of a more highly educated female workforce, are likely to continue to be felt over the next 10 to 20 years.

The higher levels of educational attainment being achieved by women in the EU imply both a delay in motherhood and higher rates of childlessness. If this behaviour relates to different fertility orientations by educational groups, no strong policy issue could be claimed. However, this does not appear to be

the case. In fact, most women, particularly those with a high level of education, must combine highly demanding occupational careers with long and inflexible working hours with family responsibilities. This places demands not just on the childcare system but also on the employer to encourage more 'family-friendly' ways of working. While much discussion has taken place about the need to achieve such a goal via voluntary measures, competitive pressures on employing organizations mean that such measures will require a legal framework if they are to be implemented on a universal basis.

Gender segmentation

Gender specific occupational segregation is often regarded as one important cause of the status and income gap between the sexes and a concomitant of various other disadvantages that women experience at the work place. On the basis of the analyses undertaken in the FENICs project, a number of policy-related recommendations can be suggested on this topic.

Firstly, the empirical analysis clearly supported the theoretically founded perspective in the subproject that sex specific occupational segregation should be conceived as a multidimensional phenomenon. Three dimensions of segregation were differentiated: sex typing of occupations, occupational opportunities and sex specific inequalities. Numerous traditional indices of segregation are already available for the measurement of these distinct dimensions. From a multidimensional perspective, the search for the 'best' index for measuring segregation thus loses its importance, and the surprising relationship between the extent of occupational segregation and high female employment rates becomes explicable. The different aspects of 'segregation' are connected in various ways with measures of equality. For example, in the Nordic countries, measures of segregation show high values, whereas the status gap between the sexes shows that these countries are the most egalitarian ones. As a consequence, the use of a numerical index for the purpose of evaluation and for policy recommendations concerning occupational segregation should be avoided.

A second recommendation relates to the pitfalls of the occupational classification systems. The transformation of country-specific occupational classifications into the International Standard Classification of Occupations, 1988 (ISCO88) classification needs to be improved because, in some countries and for certain points in time, the resulting mapping meets only minimum standards of validity and reliability. Furthermore, the occupational classification needs to be much more differentiated in specific sectors and occupations. For instance in the service sector, where many new occupations have arisen, jobs are only categorized into a few broad and heterogeneous groups. In addition, given that this sector is a female dominated, the changing labour market conditions of women are not sufficiently represented by traditional classifications.

The relationship between part-time work and occupational segregation

Research undertaken by the Erlangen/Nürnberg team showed that part/marginal-time work is not the sole or the main reason for segregation between the sexes. The amount of segregation is highly influenced by other variables, like country specific contexts, and employee characteristics such as age and qualification. Much more important than differences in the amount of segregation is the fact that the average status of women varies systematically between different working-time groups. Flexible working-time arrangements allow women to enter into paid work but only rarely provide them with an income sustaining financial independence. Therefore, when creating flexible employment opportunities, more attention should be paid to the 'quality' of jobs in terms of access to social security, other employment-related benefits and income.

The extent of occupational segregation is mediated by the presence of children. The age of the children and the existence of a partner play a major role for women's opportunities to work in occupations that are comparable to the average occupations of men. In this context, it is important to point out that this is not only an issue for women but also for men, and even more so for parents. All EU member states, therefore, need to encourage the development of quality in flexible working-time arrangements and the adoption of care responsibilities by men.

The economic impact of motherhood

Major differences are observed between countries in terms of the economic impact of motherhood, measured in this study as the difference in the hourly earnings of women with and without children. The 'family gap in pay', the lower earnings of women which associates directly with motherhood, is found to be at its widest in the United Kingdom and Germany, where it cannot be attributed to differences between women who have children and those who do not. The presence of a 'family gap in pay' is particularly evident among those women who gave birth to their first child at a relatively young age.

The presence of a 'family gap in pay' appears to associate with the ability of women to maintain a continuous employment profile around periods of family formation, the availability of childcare and to the process of occupational segmentation. This finding suggests that careful consideration should be given to policies designed to induce higher rates of labour force participation among mothers. If the institutional context fails to support access to internal labour markets at and around the time of the birth of children, women may experience a significant and long-lasting economic penalty. These issues are likely to be of increased importance among those women who become mothers at a relatively young age.

Overall findings

Our findings have important policy implications. They demonstrate that no universal process of labour market ‘flexibilization’ can be relied upon to explain the overall increase in female employment during the 1990s. Despite a convergent trend towards an increased participation of women in the labour market, countries have followed different paths, which imply different modes of intervention in the labour market and family nexus, different success in the balance between these two areas, and lead to different stratification in the female labour force according to household characteristics. It is found in particular that significant differences appear in the extent to which countries intend to and succeed in supporting the combination of female labour market participation with the first stage of family formation – the arrival of the first child. These differences are shown to have strong consequences in terms of the ability for women to reconcile fertility and labour supply decisions that occur at a later stage of their life cycle.

The challenge facing the EU relates directly to one of the targets set at the Lisbon Summit: an increase in female labour force participation from 51% in 2000 to 60% by 2010. The research conducted within this project shows clearly how the different institutional contexts in member states have a profound yet complex impact upon the transitions young women make as they progress through the educational system, in leaving the parental home, in partnership formation, family building, and in the ways in which paid work and family life are subsequently combined. In some countries (for example Spain, Italy, Germany), the goal of achieving further increases in labour force participation will require that careful consideration should be given to the access that women have to ‘internal’ labour markets. In the southern European countries, the level of fertility is dropping so low that serious concerns are emerging about the issue of unplanned childlessness. Again, the problem appears complex and relates not just to the institutional setting (though this is undoubtedly important), but also to the relationship between labour market ‘risk’ (especially the risk of unemployment) and the operation of the housing market. In other countries (for example the UK), the growth of low-paid part-time jobs in the service sector may be assisted by measures to increase labour force participation among mothers with young children. The problem then becomes one of ensuring that this does not create a ‘career-trap’, in which women with children find themselves working in jobs that underutilize their education and previous work experience. Thus policies should not only aim at encouraging women to increase their participation in paid work, by providing subsidized childcare facilities and by strengthening policies to retain their attachment to internal labour markets, but also to restrain the development of low-paid (part-time) jobs especially in the service sector.

To conclude, the lack of any coherent policy framework regarding the relationship between the private and public spheres of women lives, combined with the inappropriate use of female labour force participation rate targets for policy purposes, has created a tension between role of women as mothers and as providers of economic resources within the household. Little

attention has been paid to the significant demographic trends which are now rapidly becoming evident, the strong cultural shifts in patterns of household formation, the widening gulf between Europe South and North in this respect, and the important part played by national institutional structures in moderating these influences.

4. Dissemination and exploitation of results

Plans for a proposed book

We have developed plans for a proposed book, to be published in 2004. Our plans are well advanced and the teams are now circulating draft chapters. We have prepared an outline plan of the publication and submitted this to potential publishers for review.

5. Recommendations to DG Research for future project management

5.1 Accessing and sharing data resources

Perhaps the most important lesson learnt in this area relates to the pooling of knowledge and expertise associated with access to and use of large and complex data resources. Junior research staff in particular benefited from the sharing of knowledge in this area and from the creation of a 'team-based' and interactive approach to learning about the data. We strongly recommend that, in future, all projects that require comparative analysis of these resources should establish mechanisms to promote the sharing of resources. This should extend to include the indexing and archiving of syntax written in the statistical meta languages (e.g. Stata or SPSS) and the documentation of difficulties encountered in the exploration and preparation of these data.

We remain sceptical about the procedures established by Eurostat to promote access to the main resources available for research purposes. We suggest that serious consideration be given by Eurostat to make these resources freely available for *bona fide* research purposes. This will have resource implications for Eurostat, but we fail to see how the idea of a truly European research area can be promoted while the access to some of the most important and rich research resources for socio-economic research remains difficult, untimely and expensive.

5.2 Linking research to policy

Three events were incorporated within the project that, with hindsight, proved to be extremely beneficial in terms of linking the research findings to the policy agenda. First, we requested the Commission (DG Social and DG Research) to host all of the junior researchers for a day in Brussels, meeting with the researchers and presenting short summaries of new and evolving policy issues that they considered relevant to the research teams. This event was enthusiastically received both by the EU officials who participated and by the research teams. The event took place approximately 18 months in to the life of the project – a time that was critical in terms of the directions the research was taking. The researchers perceived the need for policy relevant findings – a need that added fresh impetus and direction to their research efforts.

Second, we organised with other Framework V research teams to spend two days together presenting our research findings and deliberating the validity of findings, the problems experienced with data sources and the complementarity between our findings and those of other research teams working in the same general area. This event helped us to place our research findings within the context of other current and evolving research evidence in the area of employment and family life.

Third, we participated in two *Family and Welfare Dialogue Workshops*, designed to draw out the policy relevant findings from our research and to expose these to open debate within the Commission.

These three events have kept the policy relevance of our research at the forefront of our agenda, rather than appearing as an afterthought (or completely absent). We recommend that the Commission should incorporate such mechanisms into future research projects and programmes.

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7. The research teams

Co-ordinators

2000 – 2001: Professor Jacques Zighera, Forum, Université de Paris X (Nanterre)

2001 – 2003: Professor Peter Elias, Institute for Employment Research, University of Warwick

Peter Elias is a labour economist. He has degrees from the Universities of Manchester and Sheffield in England and the University of California at Berkeley. His main research interest is in occupational mobility and gender differences in labour market behaviour. He has contributed to the development of the major longitudinal data resources within the UK.

Deputy co-ordinator

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Olivier Thévenon is a research fellow at FORUM in the University of Paris X-Nanterre. He gained his PhD here in 2003. His main research interests include international comparative analysis of employment regimes, with particular emphasis on female employment and its connection with family formation.

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Johann Handl has received degrees in Sociology, Economics and Statistics at the Universities of Vienna and Mannheim. He is currently Professor of Sociology at the Friedrich-Alexander University, Erlangen-Nuremberg. He has especially worked in different areas of social structural analysis using large data sets from statistical offices (i.e. social demography, social inequality and mobility, labour market research).

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Stephanie Steinmetz has received a degree in social sciences at the University of Mannheim. After that she worked as a junior researcher at the Friedrich-Alexander University, Erlangen-

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Hans-Peter Blossfeld has a chair in sociology at the University of Bamberg. He was professor of sociology at the European University Institute in Florence (1989-92), the University of Bremen (1992-98) and the University and Bielefeld (1998-02). Since 1990 he has been editor of the European Sociological Review. He has published 14 books and over 100 articles in journals on social inequality, youth, family, educational sociology and the sociology of the labour market as well as longitudinal data analysis.

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Tiziana Nazio has graduated in Political Science at the University of Turin (1998), where she was research scientist in several research projects. She has been awarded a post-graduate Diploma in Social Sciences Data Analysis and Collection at the University of Essex (2001). She obtained her Ph.D. in Sociology at the University of Bielefeld in January 2004. Her interests are social diffusion processes, longitudinal data analysis, welfare, gender and social inequality.

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Jan Dirk Vlasblom got his degree in econometrics at Erasmus University Rotterdam in 1991. In 1998 he finished his Ph.D. at Utrecht University, studying the effects of the taxation system on female labour supply. From April to October 1994, when he was employed as researcher at the Deutsches Institut für Wirtschaftsforschung in Berlin. From October 1997 till August 2000, he was employed at the Research Centre for Education and the Labour Market (ROA) in Maastricht. From August 2000 he is appointed to Utrecht School of Economics, his research interests being the effect of institutions on (female) labour supply, mainly from a life course perspective.

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Warwick, UK

Rhys Davies, Institute for Employment Research, University of Warwick (2002 – 2003)

Rhys Davies has degrees in Economics from the University of Wales (Bangor) and the University of Leeds. He joined the Institute for Employment Research at the University of Warwick in 1998, where he is currently a research fellow. Recent projects have considered the incidence of workplace injuries, the causes and consequences of skill deficiencies, geographical variations in public sector pay and early withdrawal from higher education.

Gaëlle Pierre, Institute for Employment Research, University of Warwick (2000 – 2002)

Gaëlle Pierre holds a MSc. in Economics from the London School of Economics and a Ph.D. in Economics from the University of Warwick. She was a research fellow at the Institute for Employment Research of Warwick and is currently working as a consultant for the World Bank. She is a labour economist and her research interests include the impact of human capital formation, social capital, and labour market institutions on labour market outcomes.

Annex 1: Working papers and papers submitted for publication

Warwick

1. The Determinants of Early Motherhood. Pierre, G. (2001). FENICs Working Paper Series
2. The Family Gap in Pay: longitudinal evidence from Germany and the UK. Pierre, G. (2001). FENICs Working Paper Series
3. Paid Employment around Periods of Family Formation: European comparisons. Davies, R. (2002). FENICs Working Paper Series
4. Estimates of the Family Gap in Pay: Evidence from the ECHP. Davies, R. (2002). FENICs Working Paper Series
5. European Estimates of the Family Gap in Pay: Evidence from the ECHP, BHPS and GSOEP. Davies R. and Pierre G. (2003). FENICs Working Paper Series

Barcelona

1. Family Formation across European Countries: the 1955–64 female cohort, Papers de Treball 1 María José González (2002)
2. Women's Entry into Motherhood in France, Sweden, East and West Germany, Spain and Italy, Papers de Treball 2. María José González (2002)
3. Trends in Fertility by Parity in Europe, Papers de Treball 3. Daniel Devolder (2002)
4. González, M.J. (2001) 'A portrait of western families: new models of intimate relationships and timing of life events'. In Carling, A., Duncan, S. & Edwards, R. (Eds.) *Analysing Families: Morality and Rationality in Policy and Practice*. London: Routledge.

Bielefeld

1. The Diffusion of Cohabitation among Young Women in West Germany, East Germany and Italy. Tiziana Nazio and Hans-Peter Blossfeld (2000). FENICs Working Paper Series
2. Globalization, Social Inequality and the Role of Country-specific Institutions. Open research questions in a learning society. Hans-Peter Blossfeld (2000) FENICs Working Paper Series To appear in: Pedro Conceicao, Manuel V. Heitor, and Bengt-Aake Lundvall (Eds.), *Towards a*

learning society: innovation and competence building with social cohesion for Europe. Oxford: Oxford University Press (forthcoming)

3. A Causal Approach to Interrelated Family Events: a cross-national comparison of cohabitation, nonmarital conception, and marriage. Hans-Peter Blossfeld with Melinda Mills (2000) FENICs Working Paper Series and forthcoming in *Canadian Journal of Population*.
4. Globalisation and the Transition to Adulthood in Italy. Tiziana Nazio with Fabrizio Bernardi (2001) FENICs Working Paper Series
5. Blossfeld, H.P., (2001) A causal approach to interrelated family events: A cross-national comparison of cohabitation, nonmarital conception, and marriage (together with Melinda Mills). In: *Canadian Studies in Population*, 28(2): 409-437.
6. Blossfeld, H.P., (forthcoming) Globalization, social inequality and the role of country-specific institutions. In: Pedro Conceição, Manuel V. Heitor and Bengt-Åke Lundvall (Eds.), *Innovation, competence building, and social cohesion in Europe: Towards a learning society*. Cheltenham/Lyme: Edward Elgar.
7. Nazio, T. and H.-P. Blossfeld (2003), The diffusion of cohabitation among young women in West Germany, East Germany and Italy, in *European Journal of Population*, 19: 47-82.
8. Blossfeld, H.-P., (under review) Educational systems as marriage markets in modern societies. A conceptual framework (together with Andreas Timm). In: Blossfeld, H.-P. and A. Timm (Eds.), *Who marries whom? Educational systems as marriage markets in modern societies*. Dordrecht: Kluwer Academic Publishers.
9. Blossfeld, H.-P., (under review) The losers in a globalizing world: becoming an adult in uncertain times (edited together with Erik Klijsing). Routledge Publishers.

Erlangen/Nürnberg

1. Sex-specific Occupational Segregation in Different Labour Market Sectors, Working Paper I. Stefanie Steinmetz and Johann Handl (2001)
2. The Measurement of Segregation: evaluations of different indices and classifications, Working Paper II. Stefanie Steinmetz, Frank Hedler, Johann Handl (2001)
3. Part-time Work – improvement or impasse for women? Working Paper III. Stefanie Steinmetz, Frank Hedler,

Johann Handl (2002)

4. The Reconciliation of Work and Family Life – implications of motherhood on female labour market positioning, Working Paper IV. Frank Hedler, Stefanie Steinmetz and Johann Handl (2002)
5. Steinmetz, S. (2002). 'Part-time Work - improvement or impasse for women?' Oslo Summer School in Comparative Social Science Studies.
6. Steinmetz, S. (2003): Geschlechtsspezifische Arbeitsmarktsegregation in den 90er Jahren – ein europäischer Vergleich, in Allmendinger, Jutta (Hg.): Entstaatlichung und soziale Sicherheit. Verhandlungen des 31. Kongresses der Deutschen Gesellschaft für Soziologie in Leipzig 2002, Opladen, Leske+Budrich

Nanterre

1. 'Patterns of family and Employment Combination in Europe: results from an analysis of the Labour Force Survey for the 1992–1999 period'. Olivier Thévenon, Jacques Zighera and Gerard Maubuleau (2001).
2. 'Minimisation of Discrimination Information as a Tool for the Analysis of Massive Surveys – loglinear and logit modelling revisited'. Jacques Zighera (2001).
3. 'Comparison of British and French Labour markets' Thévenon, Olivier January September 2001: workshop organised the Centre d'Etudes de l'Emploi on the theme, which has concluded with the publication of the book: Bessy, C., Eymard-Duvernay, F., Larquier, G., Marchal, E. (eds.), *Des marchés du travail inégalitaires : une comparaison France/Grande-Bretagne*, P.I.E.-Peter Lang, Bruxelles.
4. 'Welfare State Regime and female labour supply in a European context', 15th Annual Meeting of the Society for the Advancement of Socio-Economics, Aix-en-Provence, 26-28 June, and submitted for publication in the *Socio-Economic Review*.
5. 'Régime d'Etat-Providence et emploi féminin: quelles perspectives pour la Stratégie Européenne pour l'emploi', submitted for publication in the *Revue de l'OFCE*..

Utrecht

1. Koopmans, I. and J.J. Schippers (2001) Institutional arrangements facilitating the combination of paid work and childcare: A comparison. Working paper presented at the FENICS meeting in October 2001.

2. Koopmans, I., J. Plantenga and J.J. Schippers (2001) Betaald langdurig zorgverlof. Binnenlandse discussies – buitenlandse ervaringen. Rapport in opdracht van en uitgebracht aan de PvdA Tweede Kamerfractie, Universiteit Utrecht/Economisch Instituut/CIAV, pp. 27.
3. Schippers, J.J., Gender-mainstreaming in the European employment strategy: the case of the Netherlands, in: U. Behning & A. Serrano Pascual (Eds.), Gender-mainstreaming in the European employment strategy, ETUI, Brussel, 2001, pp. 11-127.
4. Vlasblom, J. D. and J. J. Schippers (2001) Increases in female labour supply: less children or less effect of children?, working paper.
5. Koopmans, I. and J.J. Schippers (2002) Female employment and Family Formation. The Institutional Context. Working Paper presented at the FENICS meeting in November 2002.
6. Koopmans, I. and J. Plantenga, Is sociale zekerheid zorgresistent? In: Over.Werk. Tijdschrift van het Steunpunt WAV, nr.4/2002, p. 124-128.
7. Plantenga, J. & I. Koopmans (2002), Freistellungsregelungen für Sorgearbeit und ihre praktische Bedeutung im Internationalen Vergleich, in: WSI-Mitteilungen, nr. 3/2002, p.161-169.
8. Remery, C., A. van Doorne-Huiskes & J.J. Schippers (2002), Zorg als arbeidsmarktgegeven: werkgevers aan zet, Organisatie voor Strategisch Arbeidsmarktonderzoek, , Publicatie A188, Tilburg: OSA, 2002, 136 p.
9. Vlasblom, J. D., Y. K. Grift and J. J. Schippers (2002) Stromen en Transities, In Levensloop en Arbeidsmarkt: wensen, knelpunten en verwachtingen, (Ed, Schippers, J. J.) SZW werkdocument no. 255, Den Haag, pp. 44-82.
10. Vlasblom, J. D. and J. J. Schippers (2002) Increases in labour supply: do children matter? working paper.
11. Vlasblom, J. D. and J. J. Schippers (2003) The dynamics of female employment around childbirth, working paper.
12. Koopmans, I., T. Jaspers, T. Knijn & J. Plantenga (2003), Zorg in het huidige stelsel van sociale zekerheid en pensioen. Een vergelijking in zes landen, Rapport in opdracht van het Ministerie van Sociale Zaken en Werkgelegenheid, Utrecht: de Graaff.
13. Vlasblom, J. D. and J. J. Schippers (forthcoming) Increases in female labour force participation in Europe: are there common causes?, working paper.

14. Koopmans, I. T. Jaspers, T. Knijn & J. Plantenga
Levenslopen tussen zorg en zekerheid. Zorg in het
pensioenstelsel internationaal vergeleken, forthcoming.
15. Schippers, J.J., C. Remery & A. van Doorne-Huiskes,
Family friendly policies in the Netherlands: the tripartite
involvement, Personnel Review, June 2003, forthcoming.

Annex 2: Conference presentations

Warwick

Davies, Rhys presented 'European Estimates of the Family Gap in Pay', at 'Researching family, employment and welfare issues in Europe: the quantitative approach'. Brussels 18th-20th February 2003.

Davies, Rhys presented 'European Estimates of the Family Gap in Pay', at 'The Joint BHPS-2003 and EPUNet-2003 Conferences'. University of Essex, Colchester 3rd-5th July 2003.

Barcelona

González, M.J. (2002) 'Women's Fertility Behaviour in Comparative Perspective: Gender, Human Capital and Occupational Stability'. Paper presented at the conference 'Reshaping the Social'. British Sociological Association. Annual Conference, University of Leicester, UK.

González, M.J. (2002) 'Ageing and Gender'. Paper presented at the meeting 'Il Jornades de les dones: Noves realitats de Gènere. Propostes per unes respostes com dones'. Organised by the City Council of Mollet del Vallès, Barcelona.

González, M.J. (2003) presented "A socio-demographic study on childlessness in the regions of Germany, Italy, France and Spain" together with Teresa Jurado (UNED) at *The Second Demographic Transition in Europe: Euro Conference on Implications of Family and Fertility Change for Individuals, Families and Society*, Euresco Conference, 19th-24th of June, Spa, Belgium.

González, M.J. (2003) presented "Approaching the forties and no babies: a socio-demographic study on childlessness in the regions of Germany, Italy, France and Spain" together with Teresa Jurado (UNED) at the 6th *European Sociological Association (ESA) Congress, "Ageing Societies, New Sociology"* 23rd-26th of September, Murcia, Spain.

Devolder, D. (2003) presented (in French) "Southern European countries as a model for Eastern European one in the recent evolution of fertility. A study based on Fertility and Family Surveys" at the 29th *Chaire Quetelet 2003 Congress on "Enlargement of the European Union. Socio-demographic issues and implications"*, 21-24 October 2003 Louvain-la-Neuve, Belgium

Bielefeld

Blossfeld, Hans-Peter lectured on 'The educational system as a marriage market: an international comparative study' at the EURESCO conference 'European Societies or European Society?' (Topic: 'Education'), Giens, France, 16-21 September 2000.

Blossfeld, Hans-Peter lectured on 'Life courses in the globalization process' at Nuffield College, Oxford, England, 7 March 2001.

Blossfeld, Hans-Peter presented paper on 'A conceptual framework for comparative analysis' (together with Erik Klijzing) at the international comparative workshop 'Globalization and the transition from youth to adulthood: the role of country-specific institutions', GLOBALIFE, Bielefeld University, 23-24 March 2001.

Nazio, Tiziana presented paper on 'Globalisation and the transition to adulthood in Italy' (together with Fabrizio Bernardi) at the international comparative workshop 'Globalization and the transition from youth to adulthood: the role of country-specific institutions', GLOBALIFE, Bielefeld University, Germany, 23-24 March 2001.

Blossfeld, Hans-Peter lectured on 'Processes of globalization in modern societies' at the Dipartimento di Sociologia e Ricerca Sociale, Università di Milano, Italy, 25 May 2001.

Blossfeld, Hans-Peter presented paper on 'Diffusion of consensual unions as new living arrangement' (together with Tiziana Nazio) at the Euroconference 'The Second Demographic Transition in Europe', Bad Herrenalb, Germany, 23-28 June 2001.

Blossfeld, Hans-Peter lectured at the Faculty of Sociology, State University of St. Petersburg, on 'Life Courses in the Globalization Process', 9-22 September 2001.

Blossfeld, Hans-Peter presented paper (together with Melinda Mills) on 'Globalization, Increasing Uncertainty and Changes in the Transition to Adulthood in Modern Societies', EURESCO Conference, Kerkrade, The Netherlands, 6-10 October 2001.

Nazio, Tiziana presented on 'Contesti, azioni individuali e modelli di analisi longitudinale: esperienze di ricerca', Social Sciences Department, Turin University, 4-5 April 2002.

Nazio, Tiziana presented paper 'The diffusion of cohabitation in Europe' at the 10th Workshop of 'European research network on transitions in youth', IUE Florence, 5-7 September 2002.

Erlangen/Nürnberg

Steinmetz, S. (2002). 'Part-time Work - improvement or impasse for women?' Oslo Summer School in Comparative Social Science Studies.

Steinmetz, S. (2003): Geschlechtsspezifische Arbeitsmarktsegregation in den 90er Jahren – ein europäischer Vergleich, in Allmendinger, Jutta (Hg.): Entstaatlichung und soziale Sicherheit. Verhandlungen des 31. Kongresses der Deutschen Gesellschaft für Soziologie in Leipzig 2002, Opladen, Leske+Budrich (forthcoming).

Handl, Johann; Steinmetz, S. (2002) Participation in the 31th Congress of Sociology October 2002 in Leipzig, Germany: presentation of the paper: "Geschlechtsspezifische Arbeitsmarktsegregation in den 90er Jahren – ein europäischer Vergleich" in the course of the adhoc group "gender segregation".

Handl, Johann; Steinmetz, S. (2003): Geschlechtsspezifische berufliche Segregation in den Ländern Europas: Methodische Probleme und inhaltliche Ergebnisse. Paper presented at the 3. user-conference: „Forschung mit dem Mikrozensus: Analyse zur Sozialstruktur und dem Arbeitsmarkt“, ZUMA Mannheim, October.

Nanterre

Moisy, Muriel, (2002), 'Participation féminine au marché du travail et contextes familiaux: des comportements homogènes en Europe méridionale?' June 2002, 15p. to be published in the collection Dossiers et recherches edited by INED and presented during the seminar CERPOS (Paris X) - POPINTER (Paris V) (20th of May 2002) and in the 'Colloque International Jeunes Chercheurs 2002' in Paris (2 October 2002).

Moisy, Muriel, (2002), 'La conciliación entre la vida familiar y el empleo femenino', december 2002, 24p. Paper presented in a seminar in Barcelona (20 April 2002)

Thévenon, Olivier September 1999 European Association of Labour Economics Conference in Regensburg (Germany), where he has presented the paper: 'Female labour supply and family formation: a comparative study of female behaviours in the Netherlands, France, Germany, Spain and United-Kingdom'

Thévenon, Olivier January 2000, Conference young researchers in Demography : new fields, new researchs, University of Paris X-Nanterre (France); Paper: 'Formation de la famille et offre féminine de travail : une analyse comparative des comportements en Allemagne, Espagne, France, aux

Pays-Bas et au Royaume Uni'

- Thévenon, Olivier September 2000, XXèmes Journées de l'Association d'Economie Sociale on the theme 'Efficiency versus equity in social economics', Toulouse (France)
.Paper presented: 'Les relations Emploi/Famille en France et au Royaume-Uni : entre convention familiale et convention d'Etat'
- Thévenon, Olivier January-September 2001: participation in workshop organised the Centre d'Etudes de l'Emploi on the theme 'Comparison of British and French Labour markets', which has concluded with the publication of the book: Bessy, C., Eymard-Duvernay, F., Larquier, G., Marchal, E. (eds.), *Des marchés du travail inégalitaires: une comparaison France/Grande-Bretagne*, P.I.E.-Peter Lang, Brussels.
- Thévenon, Olivier 'Welfare State Regime and female labour supply in a European context', presented in:
15th Annual Meeting of the Society for the Advancement of Socio-Economics, Aix-en-Provence, June 2003
European Association of Labour Economists, Seville, September 2003.
- Thévenon, Olivier 'Régime d'Etat-Providence et emploi féminin: quelles perspectives pour la Stratégie Européenne pour l'emploi', XXIIIème Conference of the Association d'Economie Sociale, Grenoble, September 2003.
- Thévenon, O., (2003), « Welfare State Regime and female labour supply », paper for the Conference « Family, employment and welfare issues in Europe ; the quantitative approach, » 18-20 février, Brusells ; to be presentend at the 15th annual meeting on socio-economics, *Society for the Advancement of Socio-Economics*, Aix-en-Provence, 27-30 of june 2003.
- Moisy, Muriel, (2002), "Female employment and family formation: regions or Member States ? », third draft version, December, 33p, presented in FENICs meeting in Nuremberg.
- Moisy, Muriel, (2002), "Participation féminine au marché du travail et contextes familiaux: des comportements homogènes en Europe méridionale?", juin 2002, 15p., published soon in the collection *Dossiers et recherches edited by INED* and presented during the seminar CERPOS (Paris X) - POPINTER (Paris V) (20th of May 2002) and in the « Colloque International Jeunes Chercheurs 2002" in Paris (2 of October, 2002).
- Moisy, Muriel, (2002), "La conciliacion entre la vida familiar y el empleo femenino", december 2002, 24p. paper presented

in a seminar in Barcelona (20 April 2002), to be published.

- Thévenon, O., (2002), « Les relations emploi/famille en Europe : fondements socio-économiques des comportements féminins en Allemagne, Espagne, France, aux Pays-Bas et Royaume-Uni », *Thèse pour le doctorat en Sciences Economiques*, Université Paris X-Nanterre, <http://forum.u-paris10.fr/fr/membres/pgmembres/thevenon/index.asp>.
- Thévenon, O., (2001), « La place des femmes sur les marchés du travail britannique et français », in Bessy, C., Eymard-Duvernay, F., Larquier, G., Marchal, E. (eds.), *Des marchés du travail inégalitaires : une comparaison France/Grande-Bretagne*, P.I.E.-Peter Lang, Bruxelles, pp 51-88.
- Thévenon, O., Zighera, J., Maubuleau, G., (2001), Patterns of family and employment combination in Europe : *Results from an analysis of the Labour Force Survey for the 1992-1999 period*, Working Paper, Fenics.
- Thévenon, O., (2000), « Les relations Emploi/Famille en France et au Royaume-Uni : entre convention familiale et convention d'Etat », in Alcouffe, A. et al. (eds), *Efficacité versus équité en économie sociale*, XX^{èmes} Journées de l'Association d'Economie Sociale, L'Harmattan, coll. Logiques sociales, pp 245-256.
- Zighera, J., (2001), « Minimisation of discrimination information as a tool for the analysis of massive surveys – loglinear and logit modelling revisited », document de travail Fenics, Université de Paris X-Nanterre.

Utrecht

- Vlasblom, J. D (2001), Increases in female labour supply: less children or less effect of children? 15th Annual Conference of the European Society for Population Economics (ESPE), Athens.
- Koopmans, I. (2002), Presentatie lezing 'Zorg in socialezekerheidsstelsels' voor De Denktank Anders denken over Sociale Zekerheid. Expert meeting 1 februari 2002 De gezinsfase in de levensloopbenadering.
- Koopmans, I. (2002), Rotterdam, Presentatie paper Levenslopen tussen zorg en zekerheid, Zorg in het stelsel van sociale zekerheid en pensioen internationaal vergeleken voor het derde Vlaams-Nederlandse arbeidsmarktcongres, "De diversiteit in levenslopen: consequenties voor de arbeidsmarkt"
- Vlasblom, J.D. (2003), The dynamics of female employment around childbirth, Annual meeting of the European

Association of Labor Economists, Presentation of (, 2003)

Koopmans, I. (2003) Female employment and Family Formation. The Institutional Context, 6th ESA-Conference, 2003, Murcia, Gender Relations in the Labour Market and the Welfare State.

Annex 3: Improving human capital: *training of researchers*

All research teams paid particular attention to the training needs of the junior research staff engaged on this major European project. This was seen not just in terms of the scientific gains that would accrue to the project in terms of the sharing of knowledge and the efficiency gains from access to the complex data resources employed, but also in terms of the wider development of the European research Area, the common stock of high level and integrated research skills available for research at a truly European level. We list the following among the activities that relate to these goals:

- ? A first training session, led by Professor Jacques Zighera, was organised in Nanterre during the first FENICs meeting to present the aims and the technical approach used by the Nanterre team. Specific attention was placed the nature of the resources demonstrated by the European Labour Force Surveys, and to improvement of log-linear modelling based on Information theory.
- During the project, the FENICs team at Barcelona was fortunate enough to attract the collaboration of various young researchers, which have contributed at different stages to the advance of the project. Several young researchers came to the Centre for Demographic Studies (CDS) in Barcelona for short periods of time, either through direct funding by the project or using their own funding mainly through the European Community Marie Curie Fellowships. These include Muriel Moisy, Rhys Davies, Stephanie Steinmetz, Tiziana Nazio,
- Peter Elias and Jacques Zighera organised a visit by all junior research staff to meet with policy officers within the European commission. This meeting was designed to allow the junior members of the research teams to meet with EU policy officials, thereby improving the researchers understanding of the policy implications of their research.
- The Barcelona junior researcher, María José González also participated in the PACO Workshop 2002: Course Programme. Training in Cross-National Research with Longitudinal Household Panel, which was held in Ceps/Instead, Luxembourg, during June 12 - 21, 2002.
- Peter Elias organised a FENICs training course at the Centre for Demographic Studies in Barcelona. This course related to analysis of the ECHP. The ECHP dataset is complex and analysis of these data requires a good understanding of the layout of the data and some knowledge about basic data manipulation. The 4-day workshop, held in Barcelona from the 9th to the 12th of October 2001, was devoted to an evaluation of the relevance of the ECHP for research issues addressed in the FENICs project. It was also the occasion for the juniors to share

their knowledge and to discuss collectively various questions about their current work for the project. Young researchers from the Centre for Demographic Studies and other universities in Barcelona were also invited to participate and benefit from the training course on Panel Data Analysis. This allowed us to enhance the exchange between juniors FENICs researchers and other European young researchers who were progressing towards the completion of their PhD.

- Karine Gavino and Muriel Moisy both from Université Paris X Nanterre obtained a financement from the Marie Curie project for their stay at Barcelona. Muriel later joined the Nanterre FENICs team.
- Other young researchers directly involved in the FENICs project have also obtained Marie Curie Fellowships to complete their doctoral dissertation at the CDS and expand their collaboration with other researchers of the network: Tiziana Nazio from the Bielefield Team and Stephanie Steinmetz from the Erlangen Team.
- Tiziana Nazio attended the ECSR Summer School at the Department of Sociology and Nuffield College, Oxford, 12-15 September 2000.
- Tiziana Nazio took part in two international workshops for the training of doctoral students organised by EPIC (European Political Economy Infrastructure Consortium) in 21-29 May 2001 (Corfu) and 16-19 May 2002 (Florence).
- In April 2001 Tiziana Nazio has been awarded the Post-Graduate Diploma in Social Science Data Analysis and Collection, Essex Summer School, Department of Government, Essex University, UK.
- To improve our knowledge on the relation of 'Gender, Employment and European Policies' Stephanie Steinmetz participated in the OSLO Summer School in Comparative Social Sciences 2002 (Course 'Gender and Comparative Employment Systems' presented by Jill Rubery in Aug. 2002). She has also taken part in the European Congress 'Implementation of Gender Mainstreaming in Europe - a Challenge for Political Education' in Leipzig/Germany (Sep. 2002).
- On the basis of the work in the FENICs project, Stephanie Steinmetz also commenced writing a PhD-thesis. Due to the contact with and the possibilities of our research partner in Barcelona (Centre for Demographic Studies) she was able to obtain a Marie Curie fellowship and will continue her PhD studies in Barcelona at the beginning of March.
- Two students at Erlangen/Nürnberg have written larger research reports for their final examination in Sociology (Magisterarbeiten). Both works have received excellent grades.

- Olivier Thévenon achieved his European PhD on ‘family formation and female employment in Europe: socio-economic foundation of female labour market behaviour in France, Germany, Spain, the Netherlands and the United-Kingdom. Peter Elias was invited as a member of the Jury, beside Danièle Meulders (Brussels University), Catherine Sofer (Sorbonne University), Jerome Gautié (Reims University), François Eymard-Duvernay (Nanterre University), Olivier Favereau (Nanterre University). His Ph D. dissertation has been awarded by the French “Association d’Economie Sociale”: Prize “Jacques Tymen” 2003.
- Ivy Koopmans started her PhD on care arrangements within social security systems. This work is carried out in a project titled “Life courses, transitions and the combination of labour and care”. This program elaborates on the work of the FENICs project. Jan Dirk Vlasblom is also working as a researcher within this program.
- Tiziana Nazio gained her PhD (with distinction) at Bielefeld University in January 2004 for her comparative research on the diffusion of cohabitation in various European countries.

Annex 4: Software and datasets

Two of the FENICs teams (Nanterre and Erlangen/Nurnberg) made much use of the European Labour Force Surveys. These data are not available to researchers at the detailed individual level. Consequently, a considerable effort was made to create and distribute large sparse tables which teams would find useful for their analyses. This work was realised in co-operation with Larus Blondal from Eurostat. Basically, three data sets were made available for FENICs participants:

One dataset of information provided for each country on female labour market situation in connection with individual and household characteristics, covering the period from 1992 to 1999.

One dataset of regional information on female labour market situation in connection with household characteristics.

One dataset focusing on the connection between household characteristic and the structure of occupation.

The development of a software devoted to log-linear modelling, realised by Prof. Jacques Zighera and G. Maubuleau during the year 2000-2001 also contributed to the achievement of FENICs project.